Roland®

GENERAL MIDI

SUPER JV 64 VOICE SYNTHESIZER MODULE

JV-1080

4x EXPANSION

OWNER'S MANUAL

Before You Begin...

Thank you, and congratulations on your choice of the Roland JV-1080 Expandable Synthesizer Module. The JV's high-quality sounds and outstanding ease of operation are sure to satisfy every musician, from absolute beginner to accomplished pro. And thanks to its enhanced multi-timbral sound generating capabilities, creating complex ensemble pieces has never been easier!

To ensure proper operation and years of trouble-free service from your new JV-1080, it is important that you take the time to read this manual carefully.

■ Features

● High-Quality Sounds

The JV includes a wide variety of preset Patches (sounds) and Rhythm Sets, ranging from amazingly realistic acoustic sounds to completely synthesized timbres.

● 64-Voice Polyphony and 16-Part Multi-Timbral Capability

With 16 Parts and 64 voices available at any one time, the JV will effortlessly recreate even the most demanding of ensemble performances.

● Complete Effects Selection

The JV's state-of-the-art DSP (Digital Signal Processor) section creates an amazing array of the most stunning digital effects, including shimmering chorus and warm, natural reverb.

● Outstanding Expandability

In addition to conventional DATA and PCM cards, the JV-1080 can also house up to four Wave Expansion cards simultaneously. With the addition of raw wave data, the sonic palette of the JV is expanded dramatically.

● Multiple Outputs

The JV-1080 has three sets of stereo outputs — MIX OUT, OUTPUT 1, and OUTPUT 2. These independent output jacks let you add different external effects to different sounds for sophisticated mixing.

● Easy Operation

Each operational mode is directly activated by its own button, while Function Select buttons also simplify operation.

● General MIDI System Supported

The JV features a General MIDI System mode that makes playing music with other MIDI modules, devices and computers a breeze.

* **The General MIDI System** is a recommended standard for the functions of MIDI sound modules. It was designed for the creation of music data that is not restricted to a particular manufacturer or model. Sound modules and song data that conform to the General MIDI System carry the GM logo (GENERAL MIDI). Any song data bearing the GM logo can be played on any sound module also bearing the GM logo.

■ About the Conventions Used in This Manual

In order to explain the JV's operation as clearly and concisely as possible, this manual makes use of the following symbols and conventions.

- Words or numbers enclosed in [square brackets] indicate panel buttons or controls. For example, [PATCH] refers to the "Patch" button, and [ENTER] means the "Enter" button.
- A slash between buttons names — such as [◄]/[►] or [INC]/[DEC] — means that either of the two buttons indicated may be pressed.
- A plus sign (+) between two button names means that the two buttons should be pressed at the same time. For example, [SHIFT]+[ENTER] means "hold down the [SHIFT] button and then press [ENTER]."
- A reference such as "☞ p. **" means refer to the indicated page number.

● Starting in Chapter 3, parameters are expressed as follows.

Screen abbreviation ↓ Full name ↓ Permissible values ↓

<Rat> Chorus Rate —— 0 to 127

<Typ> FilterType — OFF/LPF/BPF/HPF/PKG [PALETTE]

↑ This means that the Palette Edit screen is displayed.

■ About the Screen Displays

Please be aware that some of the display screens shown in this manual may differ from what you actually see. Displays depend upon the unit's configuration (the addition of wave cards, etc.) and internal settings.

Table of Contents

Chapter 5 — Multi-Effector EFX

Chapter 6 — Supplementary Materials

■ How to Use This Manual

Quick Start

This section explains the basic operation of the JV-1080. It covers topics such as setup, methods of play, editing sounds, and saving your data. Be sure to read this section before using your JV-1080.

Chapter 1 — Overview of the JV-1080

This chapter explains the structure of the JV-1080's sound module, as well as Patches, Performances, and Rhythm Sets. Be sure to read this chapter too!

Chapter 2 — Basic Operation

This chapter explains the basic operation of the panel controls, including how to choose sounds and change parameter settings. This chapter is also required reading.

Chapter 3 — Modes and Parameters

This chapter describes the various modes and parameters. Refer to it as necessary.

Chapter 4 — Other Functions of the JV-1080

This chapter describes how to use the JV-1080 as a Gereral MIDI compatible sound module, how to change its sounds remotely, and how to make use of a variety of controllers. Again, refer to this chapter as necessary.

Chapter 5 — Multi-Effector EFX

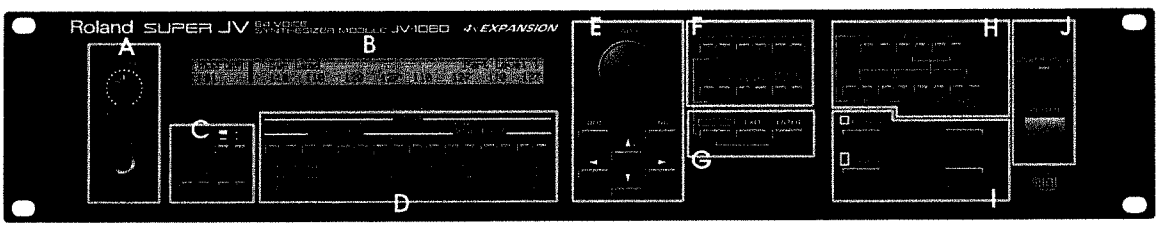
This chapter explains the effects processors (EFXs) and their parameters. This is another chapter that you can refer to when necessary.

Chapter 6 — Supplementary Materials

This chapter contains information such as an error message list, data lists, MIDI Implementation, and an index. This is a reference section.

Panel Descriptions

Front Panel



A.

○ [VOLUME] Knob

This knob adjusts the overall volume output from the MIX OUT and PHONES jacks. The volume from the OUTPUT 1 and OUTPUT 2 jacks cannot be adjusted.

○ PHONES Jack

Connect stereo headphones (Roland RH-20/80/120 or similar) to this jack. (Be sure the headphones you use have an impedance between 8 and 15 Ohms.)

B.

○ Display

The display indicates a variety of information (selected sounds, parameter values etc.) and operational instructions.

C.

○ [1-8/9-16] Button

This button switches you between the Part Groups (1—8 or 9—16) that can be selected in the Performance mode or GM mode.

○ [PALETTE] Button

Pressing this button during editing displays a number of Tone (or Part) values for a single parameter.

○ [PARAMETER] Button

Once this button has been pressed, the [FUNCTION SELECT] buttons can be used to select the parameter group you wish to edit.

D.

○ [FUNCTION SELECT] Buttons

When the [PARAMETER] button is dark, these buttons can be used to select the Tone or Part to be played (TONE SWITCH and PART SWITCH), or to select the Tone or Part to be edited (TONE SELECT and PART SELECT). When the [PARAMETER] button is lit, these buttons can be used to choose a parameter group for editing.

E.

○ [VALUE] Knob

This knob is used to change the value of a parameter. Rotating the knob while pressing it in causes the parameter value to change more rapidly.

○ [INC] and [DEC] Buttons

These buttons are used for 'fine-tuning' the value of a parameter. Pressing [INC] increases the selected parameter by 1, and each press of [DEC] decreases the value by 1.

○ PAGE Buttons ([▲] and [▼])

Pressing either of these buttons while "↑" or "↓" is shown on the left side of the display causes the display (page) to change. [▲] shows the previous page and [▼] shows the next page.

○ CURSOR Buttons ([◀] and [▶])

These buttons are used to move the cursor (underline) that appears in the display, or to select a command. Press [◀] to move to the left or [▶] to move to the right.

F.

○ [PERFORM] Button (GM Button)

Press this button to select the Performance mode. Pressing this button while holding down the [SHIFT] button selects the GM mode.

○ [PATCH] Button

Press this button to select the Patch mode. Pressing this button while holding down the [PERFORM] button calls up the Patches assigned to the selected Part.

○ [RHYTHM] Button

Press this button to select the Rhythm Set mode.

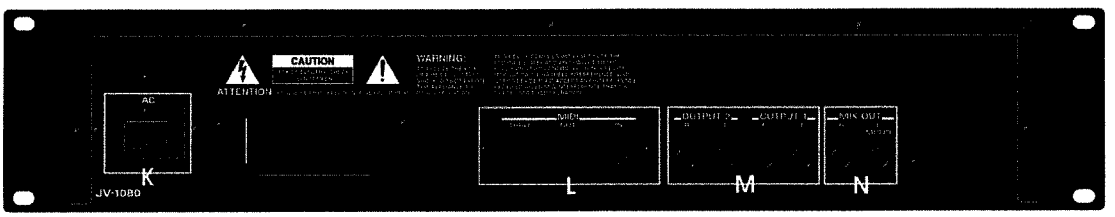
○ [SYSTEM] Button

Press this button to set functions that affect the entire JV-1080.

○ [UTILITY] Button

Press this button to write, copy, or perform a bulk dump of data.

Rear Panel



○ **[EFFECT ON/OFF] Button**

Pressing this button displays the effect status (EFX, Chorus, and Reverb ON/OFF). You can use this screen to switch these effects on or off.

G.

○ **[SHIFT] Button**

This button is always pressed in combination with another panel button; together they access an additional function.

○ **[EXIT] Button**

Press this button to return to the previous screen or to 'escape' from the Edit mode to the Play mode.

○ **[ENTER] Button**

This button is used to confirm or execute a command.

H.

○ **[SOUND GROUP] Buttons**

These buttons are used to select the Tone Memory Group; User, Card, Preset, or Expansion.

I.

○ **PCM Card Slot**

This slot is for inserting a PCM card (containing additional PCM waveforms).

○ **DATA Card Slot**

This slot is for inserting a DATA card (for storing or loading Patch data).

J.

○ **MIDI Message Indicator**

This indicator lights when MIDI messages are being received.

○ **[POWER] Switch**

This switch turns the JV on and off.

K.

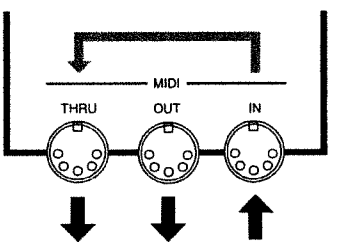
○ **AC Inlet**

Connect the included power cord to this inlet.

L.

○ **MIDI Jacks (IN/OUT/THRU)**

These jacks are used to connect the **JV-1080** to other MIDI devices when exchanging MIDI messages. (Special MIDI cables are used.)



MIDI IN: Receives messages from external MIDI devices.
MIDI OUT: Transmits messages from the **JV-1080** to external MIDI devices.
MIDI THRU: Re-transmits the messages received via MIDI IN.

M.

○ **OUTPUT 1 and OUTPUT 2 Jacks**

These jacks are for stereo output of sounds; dry sounds (without effects) or effect sounds only.

N.

○ **MIX OUT Jacks**

These jacks are for stereo (L/R) output of the JV's audio signals to an amp or mixer. For monaural output, connect the external device to the L jack.

Important Notes

In addition to the items listed under Safety Precautions inside the front cover, please read and observe the following:

■ Power Supply

- Before connecting this unit to other devices, turn off the power to all units; this will help prevent damage or malfunction.
- Do not use this unit on the same power circuit with any device that will generate line noise; an electric motor or variable lighting system, for example.
- Avoid damaging the power cord: do not step on it, place heavy objects on it, etc.

■ Placement

- Do not subject the unit to temperature extremes (e.g., direct sunlight in an enclosed vehicle). Avoid using or storing the unit in dusty or humid areas, or areas that are subject to high levels of vibration.
- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum.
- 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 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.

■ Additional Precautions

- Protect the unit from strong impact.
- Do not allow objects or liquids of any kind to penetrate the unit. In the event of such an occurrence, discontinue use immediately. Contact qualified service personnel as soon as possible.
- Never strike or apply strong pressure to the display.
- A small amount of heat will radiate from the unit during normal operation.
- Before using the unit in a foreign country, consult with qualified service personnel.
- Should a malfunction occur, or if you suspect there is a problem, discontinue use immediately. Contact qualified service personnel as soon as possible.
- A small amount of noise may be heard from the display during normal operation.
- To avoid the risk of electric shock, do not open the unit.

■ Memory Backup

- This unit contains a battery which powers the unit's memory circuits while the main (AC) power is off. The expected life of this battery is 5 years or more.
- When the battery becomes weak the following message will appear in the display:

  "Internal Battery Low."

  Please change the battery as soon as possible to avoid the loss of memory data.
- Please be aware that the contents of memory may at times be lost; when the unit is sent for repairs or when by some chance a malfunction has occurred. Important data should be stored on a RAM card, in another MIDI device (e.g., a sequencer).
- 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.

■ Expansion Board

- Never install any circuit board which has not been manufactured and/or approved by Roland.
- Always turn the unit off and unplug the power cord before attempting any circuit board installation.
- Do not touch any of the printed circuit pathways or connection terminals.
- Remove only the specified screws. Carefully handle the components as instructed.
- 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, check your work.

Quick Start

This section explains basic operation so that you can have the JV-1080 up and running in a very short time. It should take about an hour to work through the explanations in this section.

1. Getting Ready to Play

■ Connecting with Audio Equipment

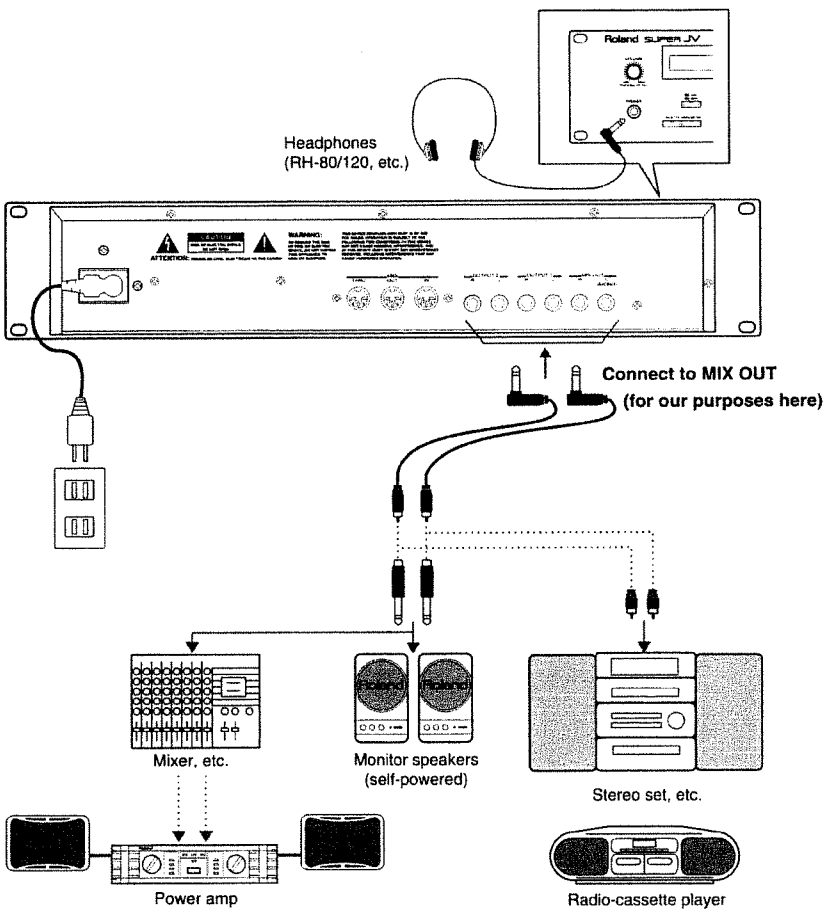
The JV-1080 has no built-in amp or speakers, so in order to produce sound you'll have to use a keyboard amp or audio system, or at least a pair of headphones. Refer to the following connection diagram.

* *No connection cables (such as the PJ-1M) are included with this product. These cables must be acquired separately.*

1 **Before making any connections, make sure that all the devices are turned off. This will help prevent damage or malfunction.**

2 **Connect the included AC cord to the inlet on the back of the unit, and plug the other end into an electrical outlet.**

3 **Hook up the audio cables as shown below. If you're going to use headphones, plug them into the PHONES jack on the front panel.**

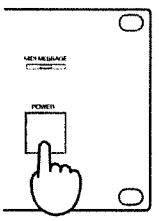


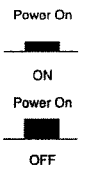
● About the Output Jacks

These jacks are for the output of audio signals. You can connect them to monitor speakers, a PA system, or other audio equipment (Ordinarily, you can connect with MIX OUT). To get the best sound from the JV-1080, we recommend that you use its output in stereo. But if you want monaural output, connect a cable to the L (MONO) jack.

■ Turning On the Power

1. Press the [POWER] switch.



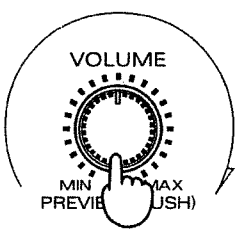


In a few seconds the following display will appear:

2. Turn on the stereo, amp, or other audio equipment you've got connected.

* *The JV-1080 contains circuitry protection which momentarily mutes the output stage during power up. The unit will function normally in a few seconds.*

3. Play something on the JV-1080 and adjust the volume of your equipment. You can play a test (preview) sound by pressing the [VOLUME] knob.



Rotate clockwise to increase the volume

Press to play a test sound

* *You can also change the sound that's played when you press the [VOLUME] knob (☞ p. 69).*

* *Take care when setting volume levels; excessive levels can damage your hearing and equipment.*

■ Turning Off the Power

1. Before switching off the power, confirm the following:
   - Are all volume controls set to zero?
   - Has all important Tone or Patch data been saved?

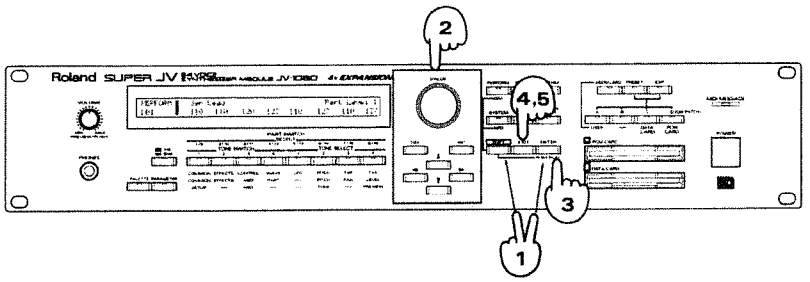
   (For an explanation on how to save data, ☞ p. 18.)
2. Switch off any amps and other external equipment.
3. Switch off the JV-1080.

2. Playing the Demo Songs (ROM Play)

The JV-1080 contains three demonstration songs in its permanent memory. Playing back these demo songs is called "ROM Play." These songs were included to highlight the unit's outstanding sounds and performance capabilities.

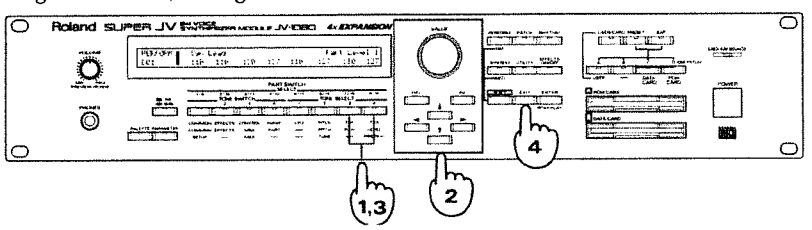
* *For song names and profiles of their composers, see page 129.*

■ How to Listen to the Demo Songs



1. **Hold down the [SHIFT] button and press [ENTER] to select the ROM Play screen.**
2. **Rotate the [VALUE] knob or press [INC]/[DEC] to pick the song you wish to hear. (You can also select "CHAIN PLAY" to hear all of the songs in sequence.)**
3. **Press [ENTER] to start playback.**
4. **Press [EXIT] to stop playback and return to 2.**
5. **Pressing [EXIT] again (while play is stopped) clears the ROM Play screen.**

During playback of the demo songs you can change the volume of each Part, as well as the Pan (sound image orientation) settings.



1. **Pressing the FUNCTION SELECT [LEVEL] button during playback displays the volume level of each Part.**

   * *The eight values on the upper row are for Parts 1-8, while those on the lower row correspond to Parts 9-16.*

   Press [PAN] to display each Part's stereo (left/right) position. (The pan effect is produced only when the JV-1080 is hooked up for stereo output.)
2. **Use [1-8/9-16] or [◀]/[▶] to move the cursor to the Part you want to change. You can then use the [VALUE] knob or the [INC]/[DEC] buttons to change the parameters. Note, however, that you cannot save your changes.**

   * *Press [1-8/9-16] to toggle the cursor's position between the upper row (Parts 1-8), and lower row (Parts 9-16). Use [◀]/[▶] to move to the desired Part within the row the cursor is in.*
3. **After you've changed the volume or pan settings for the Parts, press [LEVEL] or [PAN] again to return to the ROM Play screen.**
4. **Press [EXIT] to stop playback.**

   * *None of the panel buttons — except those described here — will work during ROM Play. Note also that no demo song data is output from the MIDI OUT port.*
   * *These demo songs are protected by applicable copyright laws. None of these songs may be used in any way — except for demo purposes/personal enjoyment — without the permission of the song's copyright holder.*

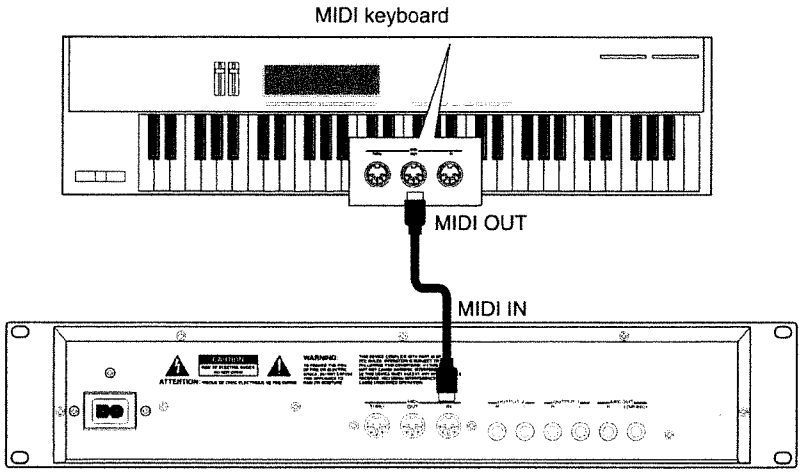
3. Auditioning the Sounds

One of the best ways to play the JV-1080 is to connect a MIDI keyboard. That way you have all the JV's great sounds at your finger tips!

** MIDI cables are not included with this product and must be purchased separately.*

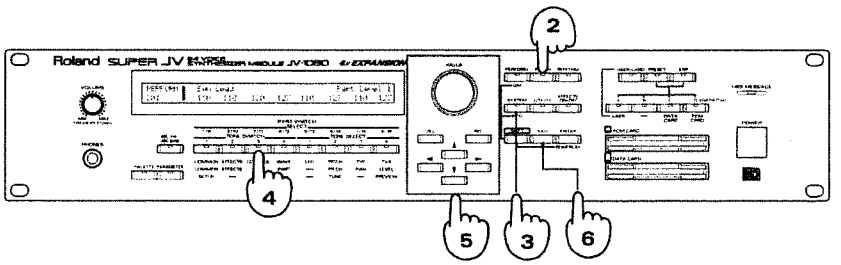
■ Connecting a MIDI Keyboard

Switch off the power to all equipment before connecting any MIDI device.



■ Selecting the MIDI Channel for Playing the Keyboard

In order for the JV-1080 to receive instructions (MIDI messages) from your MIDI keyboard, the two devices must be set to the same MIDI channel. In this example, let's set both the JV and the keyboard to MIDI channel 1.



1. **Set the 'send' channel on the MIDI keyboard to "1."**

   ** If you don't know how to do this, take a look at the manual for your MIDI keyboard.*

2. **On the JV-1080, press the [PATCH] button (so the indicator lights).**

3. **Press the [SYSTEM] button on the JV-1080 (so its indicator lights too).**

4. **Press the FUNCTION SELECT [MIDI] button to display the following screen:**

   ** If this screen doesn't appear right away, press [▲] until it does.*

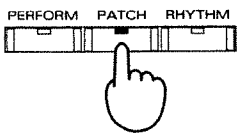
5. **Use [◄]/[►] to move the cursor (the flashing underline) to the number under "Receive Channel." Then use the [VALUE] knob or the [INC]/[DEC] buttons to change the value to "1."**

6. **After you've made the setting, press [EXIT].**

■ Playing the Keyboard

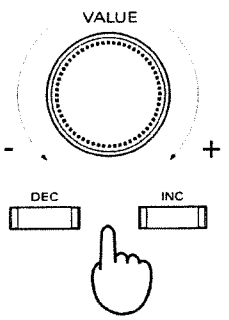
The JV-1080 has many on-board sounds. Try listening to some of these sounds by changing the Tones (Patches) during normal play.

1 **Press [PATCH] (so the indicator lights).**



2 **Play a key on the MIDI keyboard to hear a sound.**

3 **Rotate the [VALUE] knob or press [INC]/[DEC] to switch to the next sound.**



** The sound groups are: User, Card, Preset (A to D), and EXP (A to D). You can use the SOUND GROUP buttons on the left side of the front panel to select a wide range of sounds (☞ p. 29).*

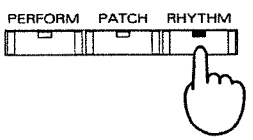
■ Playing a Variety of Percussion Instruments on the Keyboard

The JV-1080 also has a number of Rhythm Sets that contain a wide array of percussion sounds. If you set the keyboard's MIDI send channel to "10" while in the Rhythm Set mode, you can use the keyboard to play percussion instruments and other special sounds!

1 **Set the send channel on the MIDI keyboard to "10."**

** If you don't know how to do this, take a look at the manual for your MIDI keyboard.*

2 **On the JV-1080, press the [RHYTHM] button (so the indicator lights).**



3 **You can now hear a wide range of percussion sounds when you play the MIDI keyboard! (You'll notice that a different sound has been assigned to each key.)**

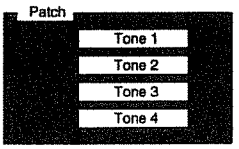
4 **You can switch between Rhythm Sets by rotating the [VALUE] knob or pressing [INC]/[DEC].**

** To find out what sound is assigned to each key in each of the Rhythm Sets, refer to the "Rhythm Set List" in the chapter six.*

In addition, you can use the JV-1080 to play Performances made up of a number of Patches. Take a look at "2. Play" (☞ p. 29) in Chapter 2 and try out for yourself the many possible sound combinations.

4. Changing Sounds (Patches)

A "Patch" is the normal unit of play for the JV-1080. A Patch is made up of a combination of up to four "Tones." Quite a few Patches are made up of three or four Tones. To change the various parameters that form a Patch (this is called "Patch editing"), you need to consider the Patch in two ways — as a single entity, and as something made up of individual Tones.



For instance, let's say that you're editing the sound of a Patch composed of a single Tone. When you call up the Tone and edit it, then in most cases the sound of the Patch changes just as you expect it to.

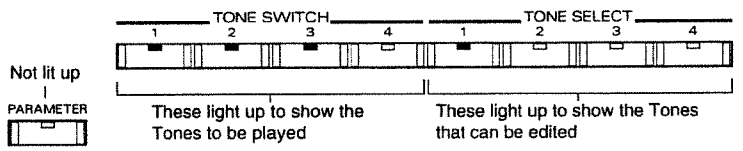
But what happens when you edit a Patch composed of a number of Tones? Even when you call up and edit one of the Tones making up the Patch, the overall sound may hardly change at all. In cases like this, you need to call up and edit the remaining Tones one by one, and keep checking the overall sound as you're editing to make sure that the Tones all balance with each other.

Keeping this in mind, let's pick a Patch and try editing it.

1 Use the procedure described in "■ Playing the Keyboard" (☞ p. 14) to call up a Patch.

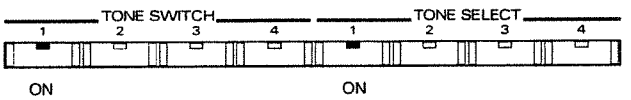
2 Decide on the Tone that you want to edit.

Make sure that the PARAMETER indicator is not lit up. Here's how the FUNCTION SELECT buttons work: the four buttons on the left are used to choose the Tones to be played ("TONE SWITCH"), and the four on the right choose the Tones to be edited ("TONE SELECT").



You can press the TONE SWITCH [1] to [4] buttons to toggle the four Tones on and off. Listen to each Tone in turn to check out how it sounds.

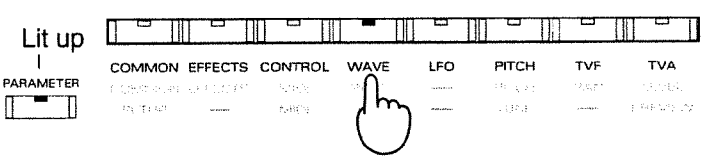
In this example we'll edit only Tone 1 as we play it, so press TONE SWITCH [1] and TONE SELECT [1] to light up each of their indicators.



3 Choose the Parameter Group that you want to edit.

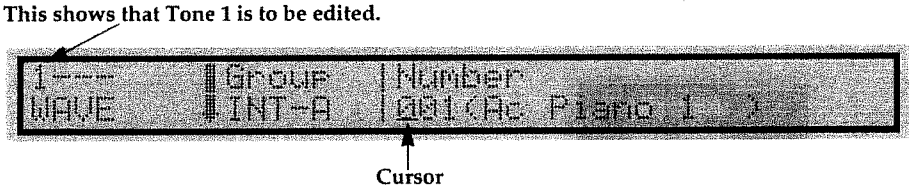
Press the [PARAMETER] button to light up its indicator. Now you can use the FUNCTION SELECT buttons to choose the Parameter Group you want to edit.

4 Try changing the waveform for Tone 1. Press the FUNCTION SELECT [WAVE] button.



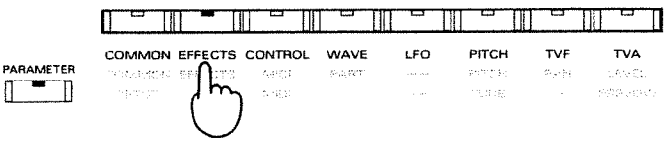
Make sure that the screen shown below appears in the display. If you don't see it, press the [▲] button until it appears.

This shows that Tone 1 is to be edited.

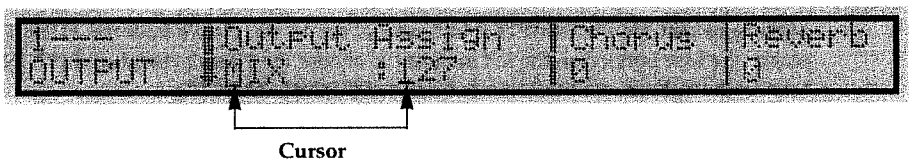


Press [◀]/[▶] to move the cursor to the number underneath "Number." Play the MIDI keyboard to check the sound as you vary the value with the VALUE knob or the [INC]/[DEC] buttons. You will hear sounds with a wide range of waveforms.

5 **Now try changing the effect sounds. Press the FUNCTION SELECT [EFFECTS] button.**

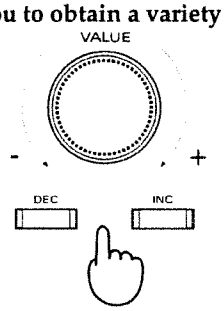


Confirm that the next screen has appeared. If it hasn't, press [▲] until it does.



Press [◀]/[▶] to move the cursor to the position shown in the figure, then use the VALUE knob or the [INC]/[DEC] buttons to choose either "EFX" or a number from 1 to 127.
Then press [▼].

Turn the VALUE knob or press [INC]/[DEC] as you play the MIDI keyboard. This allows you to obtain a variety of effects.



** If you don't hear any effects, pick another Patch. Note that you won't hear the effect if the master switch for the effect is not turned on (☞ p. 38).*

In this way, you can pick Tones and use the FUNCTION SELECT and [▲]/[▼] buttons to call up Parameters, then use the VALUE knob or the [INC]/[DEC] buttons to change the value at the cursor.

6 **To escape from the Edit screen, press [EXIT] or [PATCH].**

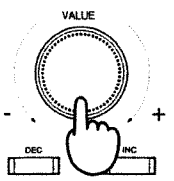
** If you want to save the sound that you've made, follow the procedure in "5. Saving Sounds and Settings" (☞ p. 18).*

The JV-1080 has a wide variety of other editing functions and other handy features. Here are some of the basic ones.

If you want to do this:	The parameter to change is:	The page to see is:
Change the volume of each Tone	Tone Level	☞ p. 55
Change the placement of each Tone in the stereo field	Tone Pan	☞ p. 55
Change the Pitch of each Tone	Coarse/Fine Tune	☞ p. 52
Make a sound harder or softer	Cutoff Frequency	☞ p. 54
Add a stronger "character" to each Tone	Resonance	☞ p. 54
Change the attack time for each Tone	TVA Envelope T1	☞ p. 56
Change the release time for each Tone	TVA Envelope T4	☞ p. 56
Produce an analog synth sound	Analog Feel Depth	☞ p. 56
Change the name of a Patch	Patch Name	☞ p. 42
Return the settings for the JV-1080 to their factory defaults	Factory Preset	☞ p. 74
Make the screen display easier to see	LCD Contrast	☞ p. 66

● If You Want to Return a Change to Its Original Value...

If you're not happy with a change you've made with the VALUE knob or the [INC]/[DEC] buttons, you can return a setting to the value first indicated by the cursor by quickly pressing the VALUE knob two times. Each press of this knob toggles the setting between the values before and after the change. This is called the "Undo/Redo" function.



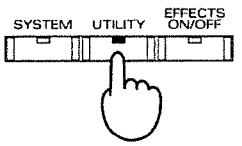
Each press of the knob toggles between the values before and after change
Press twice

** If you want to know more about other operations, see the list of operations at the end of this manual, or turn to the explanations of the parameters starting in Chapter 3.*

5. Saving Sounds and Settings

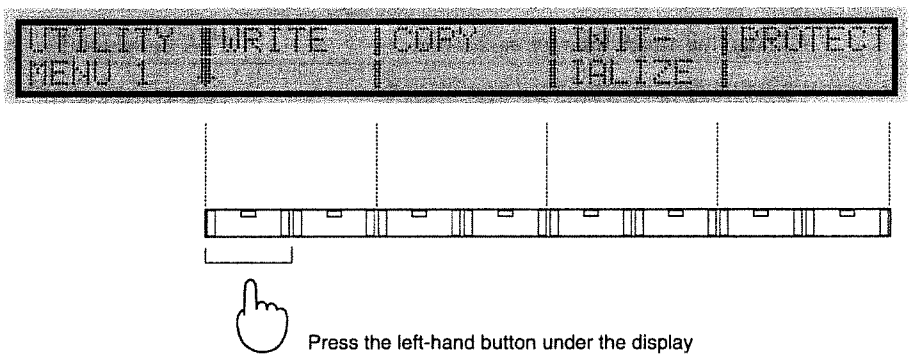
Any sound you've created will be lost if you turn off the power or switch to a different sound. You can save the sounds you've made in the built-in User Memory or on a DATA Card (sold separately). The process of saving a sound is called a "write operation."

1 **Press the [UTILITY] button to light up the indicator.**

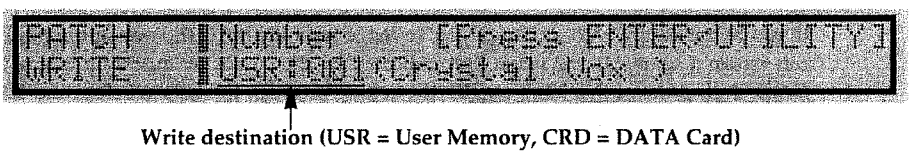


2 **Utility Menu 1 appears in the display.**

Press the FUNCTION SELECT button that is under "WRITE" in the display to call up the Write screen.



3 **Use the VALUE knob or the [INC]/[DEC] buttons to choose the write destination.**



Turning the VALUE knob while pressing it inward causes the value to change more rapidly.

** If you press [UTILITY] while at step 3, the following screen appears.*

While this screen is shown, you can play a MIDI keyboard to confirm the sound for the write destination.
Press [UTILITY] again to return to the Write screen.

4 **Press the [ENTER] button to perform the write operation.**

To cancel, press [EXIT].

** The message "User Memory Write Protected" may appear when executing a write operation. This message means that the write destination is write-protected, and cannot be written to (☞ p. 72). If this happens, you can press [UTILITY] to override the write-protect and force the data to be written.*

5 **When the write operation is finished, the message "COMPLETE" appears, and you will then see the Play screen for the write destination.**

Chapter 1

Overview of the JV-1080

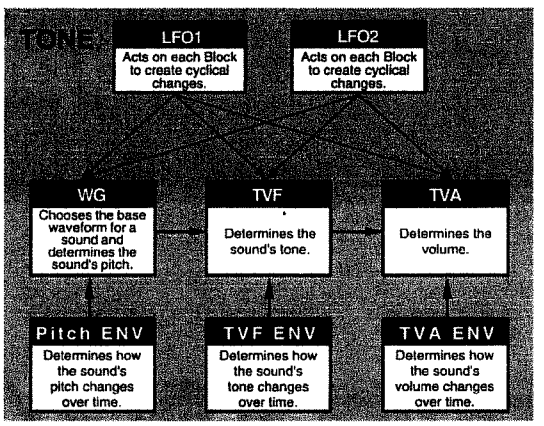
This chapter will give you a good understanding of the organization and terminology of the JV-1080 before getting into the actual details of parameters.

1. Units of Sound

The JV-1080 has a wide array of functions and a large number of parameters. In order to provide more efficient control over the variety of sound types, they are grouped into several units.

■ The Smallest Units of Sound — Tones

The smallest unit of sound on the JV-1080 is called a "Tone." A single Tone functions much like a conventional synthesizer. However, you can't play individual Tones. The smallest unit of sound that can be played on the JV-1080 is the Patch, and Tones should be viewed as the "sound ingredients" that make up a Patch.



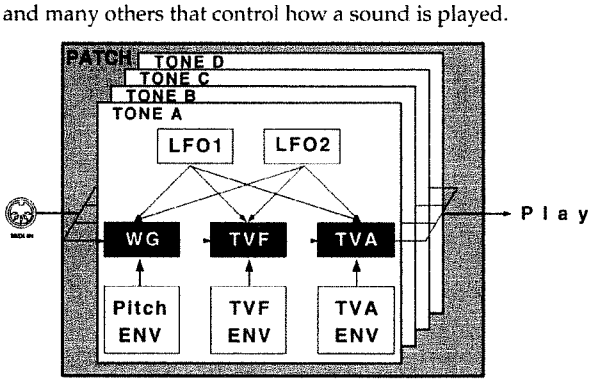
The PCM waveforms (or "waves") stored in internal memory are acted upon in different ways depending on the settings for the filters and envelopes. Waves come from a variety of sources — from acoustic instruments like a piano or saxophone, from vintage synthesizers like the D-50 or JP-8, or from drums and other percussion instruments. Some can originate as sawtooth or rectangular waveforms, while others are looped sounds or are special effects containing certain components of instrument sounds (such as guitar fret noise, piano hammer sounds, and so on). In addition to these, you can install a PCM Card (available separately) or Expansion Board (also sold separately) to obtain new waves.

■ Combinations of Tones That Make Sounds — Patches

The unit of sound for normal play on the JV-1080 is the Patch.

One Patch is a combination of up to four Tones. This means that editing a Patch involves not just making a single sound, but also requires combining a number of sound ingredients to make the sound.

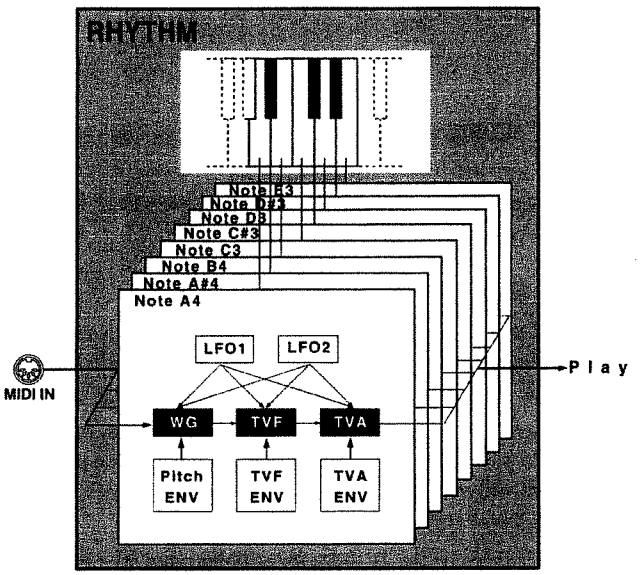
A Patch can be made up of only a single Tone, but fresher, more complex sounds can be created by using a number of Tones. The Preset Patches included when the JV-1080 was shipped from the factory contain not only fat sounds created by layering several Tones, but also a large number made through sophisticated sound creation, including those that play different Tones in different registers, and those that play different Tones depending on how hard the keyboard is struck. The Patch Parameters also include a full set of "tools" to make the best use of these components, including effects, output panning, and many others that control how a sound is played.



With the JV-1080, you can also use a parameter called "Structure" to create sounds with pairs of Tones. See "1. Patch Edit Mode" in Chapter 3 (☞ p. 43) for details.

■ Play Percussion Instruments Assigned to Each Key — Rhythm Sets

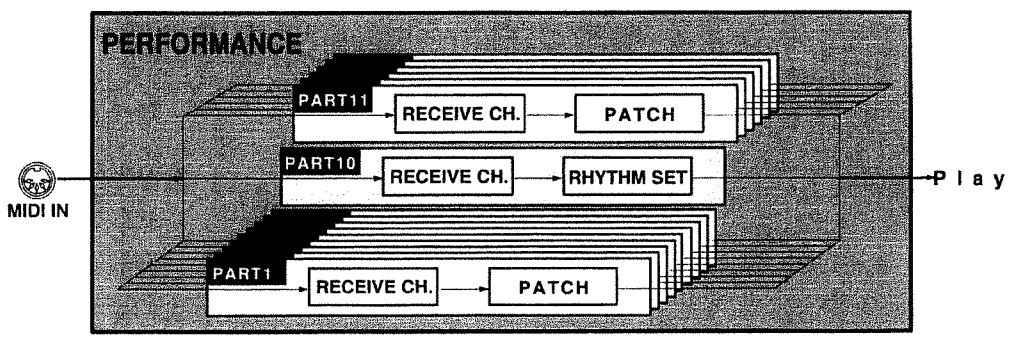
Each Rhythm Set has a number of percussion instrument sounds assigned to it. Each of these percussion sounds is called a "Rhythm Tone." Because there is no need for a Rhythm Set to control high and low pitch, as with ordinary sounds, a Rhythm Tone is assigned to each key (in other words, each MIDI note message).



When you play keys on the synthesizer or other instrument connected to the JV-1080, you'll hear the same sound at different pitches if you're using a Patch, but if you're using a Rhythm Set then each key plays a Rhythm Tone with a completely different sound. Rhythm Tones in a Rhythm Set differ from the Tones of a Patch in a very important way — you can't combine them to create a single percussion sound.

■ Assigning Patches and a Rhythm Set Equivalent to 16 Devices — Performances

A Performance is composed of 16 Parts, each of which is in turn assigned a Patch or Rhythm Set. These 16 Parts can be used in combination for ensemble play. One of these 16-Parts is for the exclusive use of a Rhythm Set, and the other 15 are assigned with Patches. What this means is that you can use the JV-1080 like 16 different sound modules. This kind of synth, one that can function like a number of different sound modules, is called a "multi-timbral sound module."



** Patches are assigned to Parts 1 to 9 and 11 to 16, and a Rhythm Set is assigned to Part 10.*

Another important role of a Performance is to perform some of the overall functions of sound mixing, such as determining how to balance the audio output with effects from the various Patches, and deciding which jacks to use for output.

● Performers of Patches and a Rhythm Set — Parts

You can think of a Part as one of 16 boxes in a Performance that is used to hold a Patch or Rhythm Set. These Parts can be used to turn the JV-1080 into a multi-timbral sound module.

It may help to think of the Parts as performers, and the Performance as the entire orchestra. The orchestra (Performance) can play different works by having different instruments (Patches and Rhythm Sets) assigned to the different performers (Parts).

■ Using Performances

You've been told that the JV-1080 orchestra has 16 performers. Then who is the conductor of this orchestra?

It's you — the live-stage keyboard player! You can also have a sequencer or computer (DTMS) substitute for you. This section explains a typical method of using Performances.

● Using the JV-1080 Live on Stage

On a live stage, there aren't all that many occasions for ensemble play with multiple Parts. Normally just one Part is used, often with changes in the Patches used for playing made during the performance. In cases like this, there is no special need to be aware that the JV-1080 is a multi-timbral sound module.

Sometimes, though, you may want to use a keyboard that can control more than one sound module Part. For instance, you might want to play the bass line with the left hand and the piano part with the right. Or even if you control just one Part with the keyboard, you might want to have a sequencer control the other Parts to make your setup a one-man band.

If you want to use the Performances of the JV-1080 for sophisticated live play, see "Live Performance Techniques" (☞p. 79).

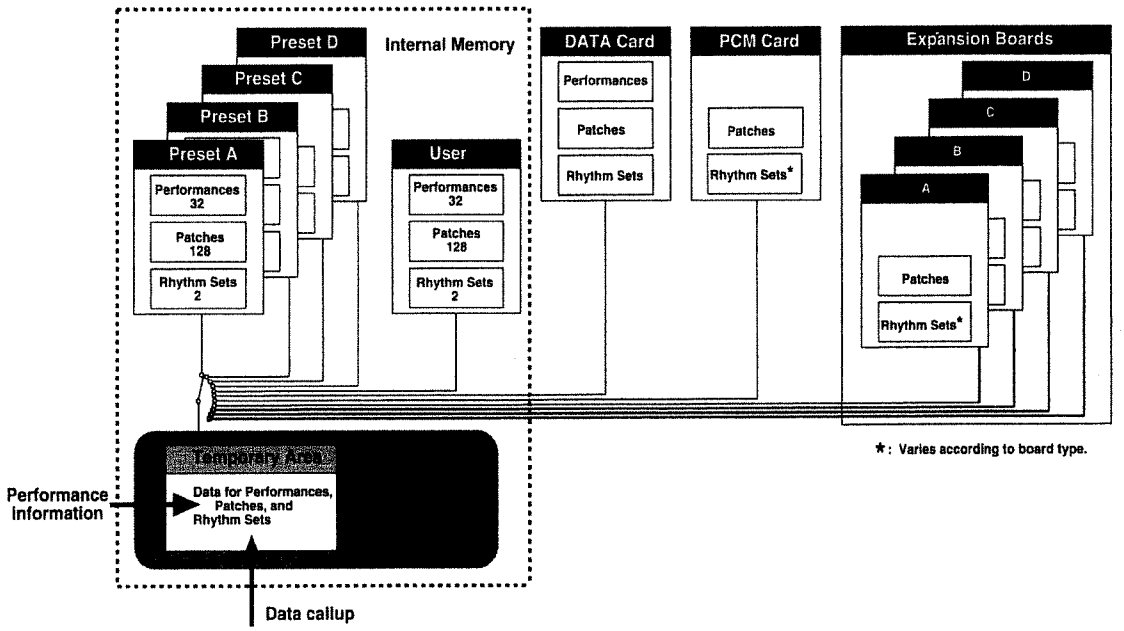
● Using the JV-1080 as a Sound Module Expanding a Desktop Music System (DTMS)

One big obstacle that probably every DTMS user runs into is an inadequate number of sounds that can be played at the same time. The JV-1080 can play 64 sounds simultaneously, which is double that of many previous DTMS sound modules. This ensures ample response for majestic orchestrations and piano keyboard runs with the damper pedal depressed. The JV-1080 also supports the General MIDI System, the de- facto standard for DTMS sound modules. This means that you can play back any of the rich array of existing music data (GM scores) with even better sound quality.

If you want to use your unit with DTMS, see "Using the JV-1080 with a DTMS" (☞p. 76).

2. Sound Module and Memory

The preset memory stores 32 types of Performances, 128 Patches, and two Rhythm Sets (the preset C/D has only Patches and Rhythm Sets). There are also PCM Cards and Wave Expansion Boards available separately that contain data for more Patches and Rhythm Sets. You can't rewrite the contents of these memory devices, but you can read the data stored on them and store it in User Memory or on a DATA Card.



The sound data stored in these memory devices is first read into a temporary area and then played. When editing as well, the sound data called into the temporary area is changed.

* *The data in the temporary area is lost if you change Patches or switch off the power. If you want to save this data, you need to perform a write operation (☞ p. 70).*

3. Modes on the JV-1080

Parameters on the JV-1080 are grouped into various blocks depending on their function. These are called "modes." If you want to change the style or sound of what you play, you need to choose the right mode.

■ Patch Modes

Patch Play Mode (☞ p. 30)
This is the mode for calling up and playing a single Patch. Choose this when you want to play using a single sound.

Patch Edit Mode (☞ p. 42)
This is the mode for synthesizer sound creation. Choose this mode to set various parameters that determine the sound and create your own original Patches.

■ Performance Modes

Performance Play Mode (☞ p. 30)
This is the mode for calling up and playing a single Performance. Choose this mode if you want to hook up a sequencer for automatic ensemble play, or if you want to play fat sounds with multiple Patches.

Performance Edit Mode (☞ p. 57)
This mode is used to allocate Patches and a Rhythm Set to the 16 Parts. Choose this mode to create thick sounds with multiple layered Patches or to make settings for ensemble play.

■ Rhythm Set Modes

Rhythm Play Mode (☞ p. 30)
This mode is for calling up and playing the Rhythm Set assigned to Part 10 of a Performance. Choose this mode when you want to hook up a MIDI keyboard and play it as a percussion instrument.

Rhythm Edit Mode (☞ p. 61)
This mode is for changing the settings for the Rhythm Set assigned to Part 10 of a Performance. Choose this mode when you want to change the sequence or sound of a rhythm, or to create a new Rhythm Set.

■ GM Modes

GM Play Mode (☞ p. 30)
This mode is for playing that uses GM sounds. Choose this mode if you want to connect a computer or sequencer and play back GM scores (song data for GM sound modules).

GM Edit Mode (☞ p. 77)
This mode is for changing the settings for GM Parts. Choose this mode to determine the sounds assigned to each of the 16 Parts and make settings for volume, effects, and so on.

■ System Mode (☞ p. 66)

This mode is for tuning the JV-1080, adjusting the brightness of the display, manipulating MIDI receive switches, and setting common parameters for the Patch, Performance, Rhythm Set, and GM modes.

■ Utility Mode (☞ p. 70)

This mode is for managing the data used in the Patch, Performance, Rhythm Set, and GM modes. It lets you do things like store sounds that have been edited and copy portions of data.

4. About the Effects

The effects built into the JV-1080 are grouped into the following three systems.

A. EFX (a multi-effector with 40 effect types)
B. Chorus (an effect that makes sound fatter and broader)
C. Reverb (an effect that adds lingering reverberations to a sound)

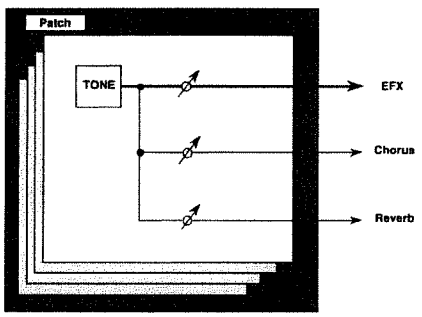
The EFX provides distortion, delay, and many other effect types, including combinations of single effects. The EFX also has effect types named "Chorus" and "Reverb," but these can be applied separately from the Chorus (B) and Reverb (C) listed above.

Here's how to use the effector in the different modes:

● In the Patch Mode

You can set EFX, Chorus, and Reverb for each Patch. Also, by changing the level of the signal sent to each effect (the "send level"), you can vary the amount of effect applied to the Tone (see Fig. 1).

Figure 1– In the Patch Mode



● In the Performance Mode or GM Mode

This lets you set EFX, Chorus, and Reverb for each Performance or the GM mode. The amount of effect applied is set for each Part (Fig. 2), and you can make the send level of a Tone effective by changing the settings (Fig. 3). The effect settings for the Patches assigned to each Part are ignored, but you can take the EFX applied to a Patch in a certain Part and apply it to the entire Performance.

Figure 2 – When Output Assign is set to "EFX" in the Performance mode (the output settings for Tone are ignored)

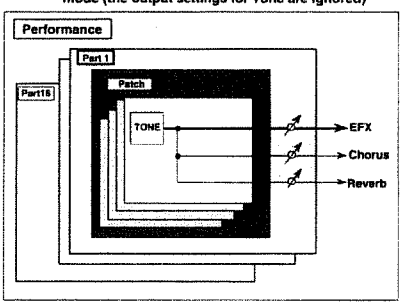
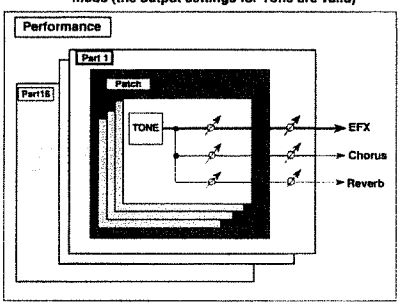


Figure 3 – When Output Assign is set to "Patch" in the Performance mode (the output settings for Tone are valid)



● In the Rhythm Set Mode

Because the Rhythm Set mode calls Part 10 of the Performance to the screen, the effect settings reference the settings for the Performance in the temporary area.

5. Concerning Tone Editing

The JV-1080 provides the tools which allow you to create some excitingly realistic sounds. However, it is important to remember that a complex PCM waveform serves as the foundation for every sound, and if you attempt to edit without regard for the characteristics of the original waveform, you may not obtain the results you expect.

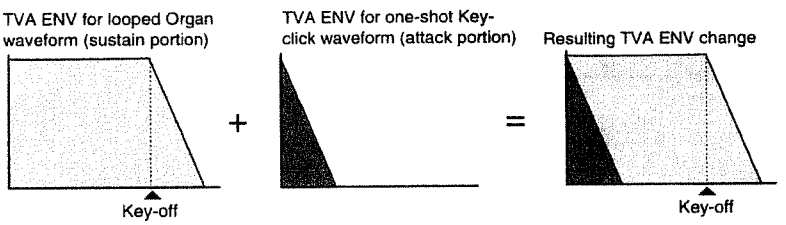
● Types of Waveforms

The waveforms in the internal memory of the JV-1080 can be classified into the following two types.

One-shot Waveforms: These waveforms contain sounds that have short decays. A one-shot waveform records the initial rise and fall of the sound. Some of the JV-1080's one-shot waveforms are sounds that are complete in themselves, such as percussive instrument sounds. The JV-1080 contains many other one-shot waveforms that are only partial elements of sounds, however. For example, attack components such as the sound of a piano hammer or the fret noise of a guitar.

Looped Waveforms: These waveforms contain sounds that have long decays. With looped waveforms, the latter part of the sound is generated repeatedly over a specified portion of the waveform for as long as the note is held. (Looping allows the wave memory to be used more efficiently.) The looped waveforms in the JV-1080 provide the sustain portion (i.e., the main body of the sound) for many different instruments.

The following diagram shows an example of a sound (electric organ) that consists of a one-shot waveform used together with a looped waveform.

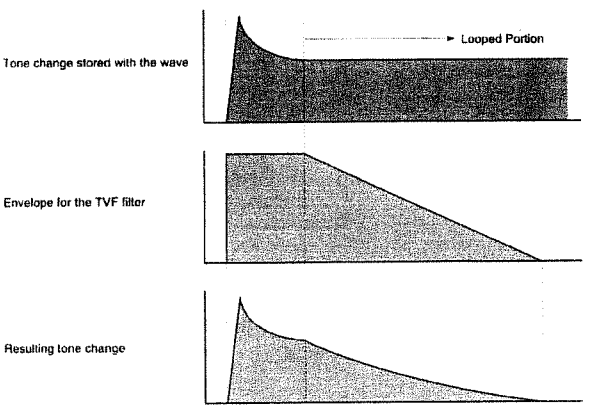


● Caution when editing a Tone that uses a one-shot waveform

An envelope cannot be used to give a one-shot waveform a longer decay than the original waveform, or make it a sustaining sound. Even if you made such envelope settings, you would simply be controlling a non-existent portion of the sound, so such settings would have no meaning.

● Caution when editing a Tone that uses a looped waveform

With many instruments (including piano or sax) the timbre changes dramatically during the first few moments of the note. It is this initial "attack" that defines much of the character of the instrument. The JV-1080 provides a variety of waveforms containing lifelike acoustic instrument attacks. To obtain the maximum realism when using these waveforms, it is best to leave the filter completely open during the attack. That way, all the complex timbral changes can be heard. For the sustain and decay portion of the sound, you can use the envelope to produce the desired changes. Should you use the envelope to modify the attack portion as well, the natural attack contained in the waveform itself will not be heard to full advantage, and you may not achieve the result you expect.



You also need to keep the timbral character of the original waveform in mind when you wish to use the TVF filter to brighten just the attack or subdue only the decay. In particular, if you hope to brighten part of the sound to a brightness greater than the original waveform (refer to "FXM" ☞ p.50), you will have to create new upper-range partials that were not present in the original waveform. If you wish to make the entire sound brighter than the original waveform, you should start by adjusting the enhancer or equalizer before you edit the TVF parameters.

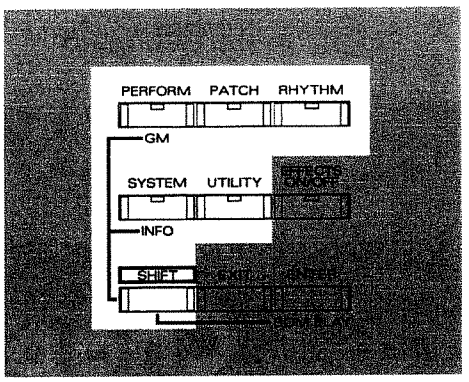
Chapter 2

Basic Operation

This chapter explains the basic operations you need to use the JV-1080.

1. Choosing a Mode

The JV-1080 has several MODE buttons that are used differently depending on what you want to do.



[PERFORM]	**Performance mode**
[PATCH]	**Patch mode**
[RHYTHM]	**Rhythm Set mode**
[SYSTEM]	**System mode**
[UTILITY]	**Utility mode**
[SHIFT]+[PERFORM]	**GM mode**

When you press a MODE button and the indicator lights up, the corresponding screen appears on the display.

* *See "3. Modes on the JV-1080 in Chapter 1 (☞ p. 24) for a description of the different modes.*

See the pages listed below for explanations of the parameters used by each of the modes.

Performance mode	**(☞ p. 57)**
Patch mode	**(☞ p. 42)**
Rhythm Set mode	**(☞ p. 61)**
System mode	**(☞ p. 66)**
Utility mode	**(☞ p. 70)**
GM mode	**(☞ p. 77)**

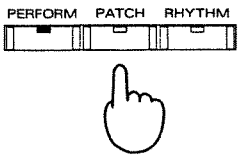
2. Play

This section describes how to work with the sounds built into the JV-1080 as you play.

■ Choosing a Sound

Here's how to call up a sound.

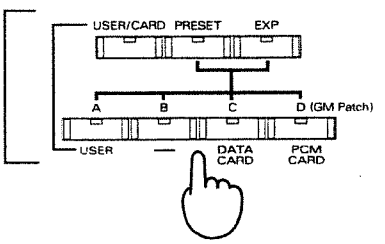
1 Press the MODE button to select the mode you want.



** If you press [RHYTHM], it selects the Rhythm Set assigned to Part 10 of the Performance currently in the temporary area.*

2 Use the SOUND GROUP buttons in combination to choose the sound group.

SOUND GROUP buttons



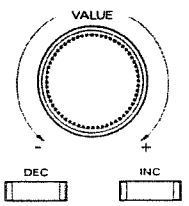
	Top line		Bottom line
● User Memory	[USER/CARD]	->	[USER]
● Preset Memory	[PRESET]	->	[A] to [D]
● DATA Card (only when installed)	[USER/CARD]	->	[DATA]
● PCM Card (only when installed)	[USER/CARD]	->	[PCM]
● Expansion Boards (only when installed)	[EXP]	->	[A] to [D]

** When the JV-1080 is purchased, the User Memory and Preset contain the same sounds. In addition, the sound mapping in Preset D conforms with GM Instruments.*

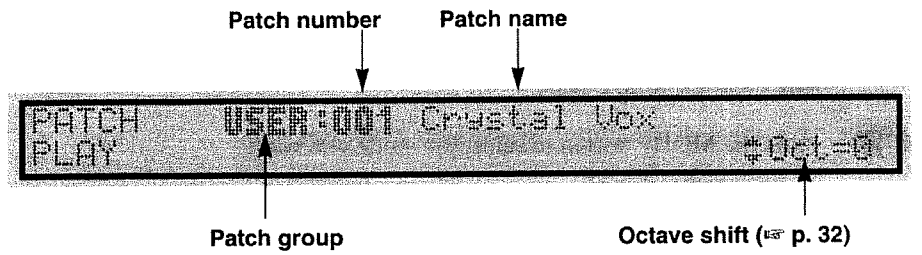
** Presets C and D do not function in the Performance mode.*

3 Turn the VALUE knob or press [INC]/[DEC] to pick a sound.

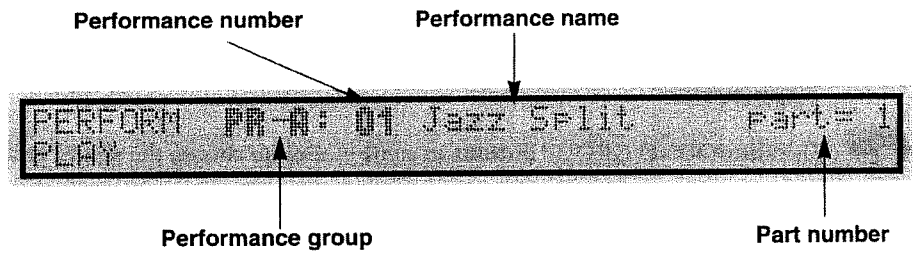
Turning the VALUE knob while pressing it inward causes the value to change more rapidly.



● Patch Play Mode Screen

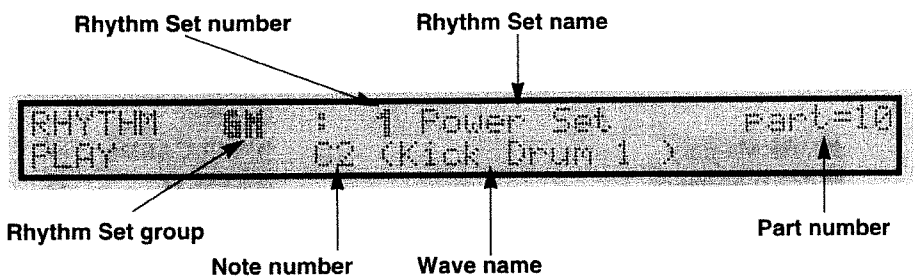


● Performance Play Mode Screen



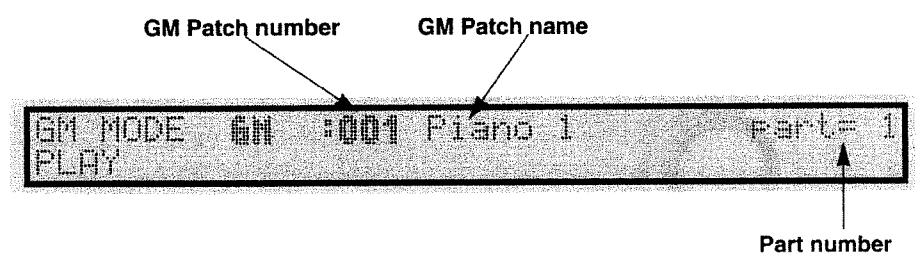
** You can use the [◀]/[▶] buttons to change the Part number.*

● Rhythm Play Mode Screen



** When playing a Rhythm Set, see the Performance "CONTROL" page (☞ p. 59) to set the Receive switch and MIDI channel for Part 10.*

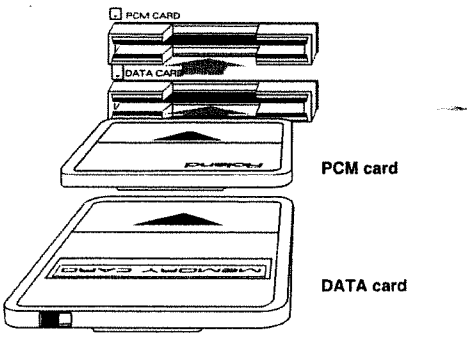
● GM Play Mode Screen



** You can use the [◀]/[▶] buttons to change the Part number.*

■ Using Cards and Expansion Boards

When using a separately available PCM Card (SO-PCM1 series) or DATA Card (PN-JV80 series, M-256E, or M-512E), be sure to insert the card face-up into the appropriately labelled slot.

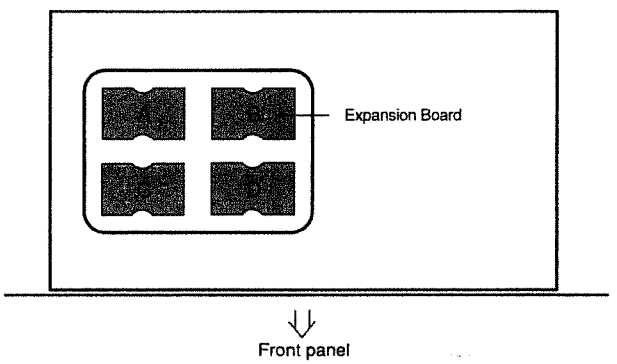


** Never pull a DATA Card or PCM Card out of the slot while you are playing.*

● Important Notes on Installing Wave Expansion Boards

When using a Wave Expansion Board (SR-JV80 series, sold separately), be sure to first turn off the power to the JV-1080 before taking off the top cover and installing or removing the board. When doing this, take care to avoid injury when working with the unit while it is opened.

The installation locations "A" through "D" in the figure correspond to EXP buttons [A] through [D].



** Some DATA Cards (such as the PN-JV80 series) may contain patches that use Expansion Board waves. To use such DATA cards when you have multiple Expansion Boards, be sure to install the board that corresponds to the card in the location with the lowest letter of the alphabet.*

** The JV-1080 can also read patch and rhythm set data stored on DATA cards by the JV-1000/JV-90, JV-80, JV-880. However, while reading in such data the unit also performs a conversion, since there are differences in the way the parameters are organized. As a result, some of this data may sound slightly different than the way it did on the earlier JV unit.*

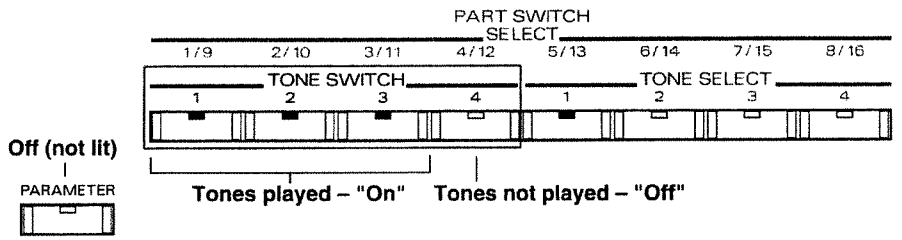
■ Choosing the Tones and Parts to Play

To choose the Tones and Parts to be played, first make sure that the indicator for the [PARAMETER] button is not lit up, then use the TONE SWITCH and PART SWITCH buttons under the display.

● In the Patch Mode

When the [PARAMETER] button indicator is dark, you can use the TONE SWITCH [1] to [4] buttons to toggle the sound for each Tone on and off.

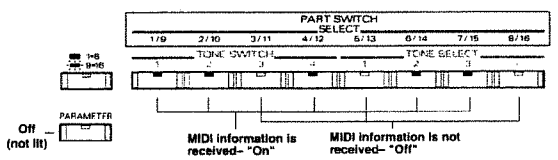
This is handy when you want to check what Tones the currently selected Patch consists of.



The indicators for the buttons are illuminated when on and dark when off. Each press of a button toggles it on or off.

● In the Performance Mode or GM Mode

When the [PARAMETER] button indicator is not lit up, you can press the PART SWITCH [1/9] to [8/16] buttons to select whether each Part receives and plays MIDI information.



** The PART SWITCH buttons work only in the Play mode.*

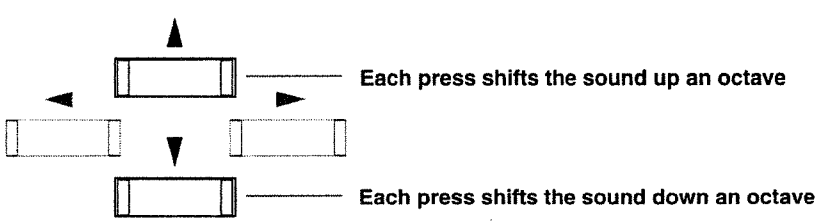
The indicators for the buttons are illuminated when on and dark when off. Each press of a button toggles it on or off.

If you want to switch Parts 9 to 16 on or off, first illuminate the indicator for the [1-8/9-16] button, then use the PART SWITCH buttons.

** During a write operation, the on/off settings for the TONE SWITCH and PART SWITCH buttons are stored respectively as Patch and Performance settings (☞ p. 70).*

■ Changing the Pitch of a Sound — Octave Shift

In the Patch Play mode, you can easily change the pitch of an entire Patch. Each press of the cursor [▲]/[▼] buttons shifts the sound up or down by one octave. You can vary the settings by three octaves up or down.



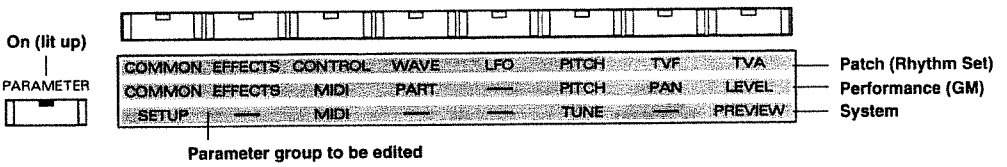
** When you write a Patch, this parameter is stored as a common parameter.*

3. Editing

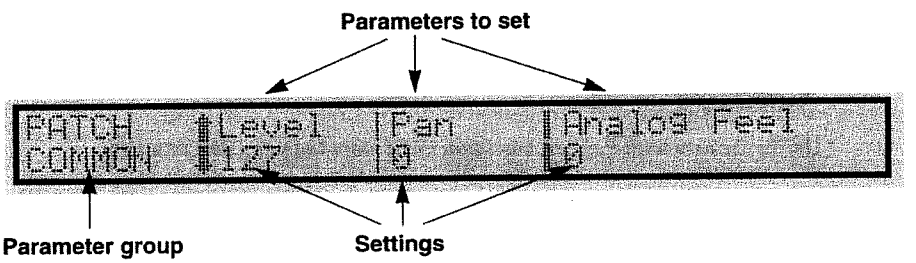
This section explains the operations you'll need to know when editing sound data.

■ Entering the Edit Mode

After pressing the [PARAMETER] button and confirming its indicator has lighted, you can use the FUNCTION SELECT buttons to choose a parameter group for editing. When you press the button to select any single parameter group, you enter the Edit mode and the Edit screen for the selected parameter appears.



Edit Screen



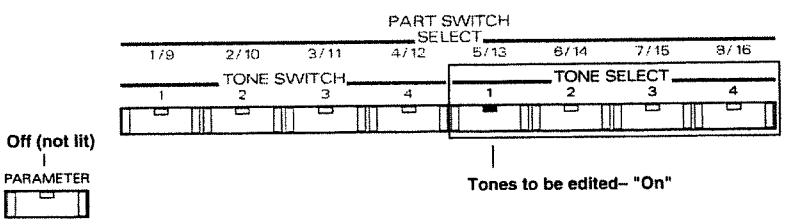
To return to the Play mode from the Edit mode, press [EXIT] or a MODE button.

■ Choosing the Tones and Parts to Edit

To choose a Tone or Part to be edited, first make sure that the [PARAMETER] button indicator is not lit up. Then use the TONE SELECT or PART SELECT buttons under the display to make your selection.

● In the Patch Mode

At the Patch Edit screen, a display such as "1—" appears in the upper left part of the screen showing the page for setting the parameters for each Tone. This shows the number of the Tone currently called to the screen. To change the Tone that is called up, press the [PARAMETER] button to make the indicator go dark and then use the TONE SELECT [1] to [4] buttons.



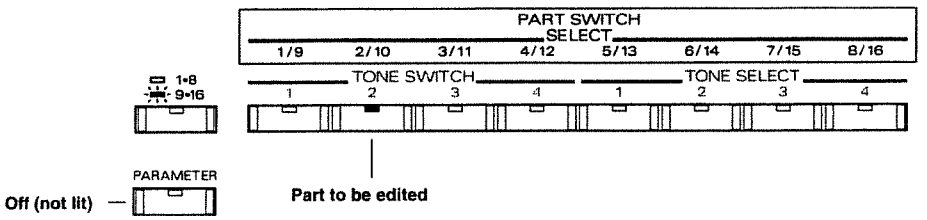
The indicators for the buttons are illuminated when on and dark when off.

If you want to edit more than one Tone at a time, then hold down the button for one of the Tones to be edited and press the button for another Tone at the same time. When you do this, the number for the first Tone selected appears in the upper left part of the screen, and the other tone is indicated by a " *." This makes it possible to change more than one Tone at the same time while maintaining the differences in their respective values.

● In the Performance Mode or GM Mode

At the Performance or GM Edit screen, a display such as "PART 1" appears in the upper left part of the screen showing the page for setting the parameters for each Part. This shows the number of the Part currently called to the screen. To change the Part that is called up, press the [PARAMETER] button to make the indicator go dark and then use the PART SELECT [1/9] to [8/16] buttons.

** The PART SELECT buttons are active only when the Edit mode is selected.*



The indicators for the buttons are illuminated when on and dark when off.

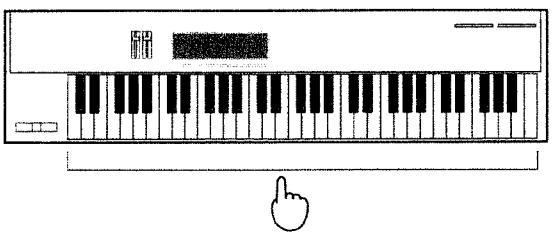
If you want to edit a Part from 9 to 16, illuminate the indicator for the [1-8/9-16] button, then use the PART SELECT buttons.

** Unlike the case with Patches, you cannot edit more than one Part at a time.*

● In the Rhythm Set Mode

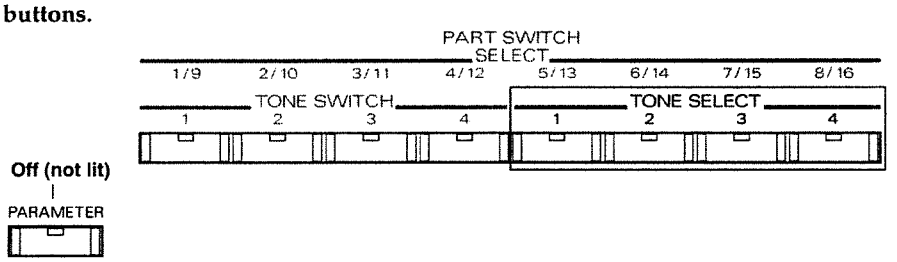
At the Rhythm Set Edit screen, a display such as "C4" appears in the upper left part of the screen showing the page for setting the parameters for each Rhythm Tone. This shows the number of the Rhythm Tone currently called to the screen. To change the Rhythm Tone that is called up, use either of the two methods described below.

❍ Use the keys on a MIDI keyboard connected to the JV-1080 to make the selection.



** If you are using a MIDI keyboard to make your selection, set the System Parameter for Rhythm Edit Key to "PANEL&MIDI(☞ p. 66)."*

❍ After making the [PARAMETER] button indicator go dark, use the TONE SELECT [1] to [4] buttons.



TONE SELECT [1]:
Each press of the button changes the note currently displayed to a note one octave lower.

TONE SELECT [2]:
Each press of the button changes the note currently displayed to a note one half-step lower.

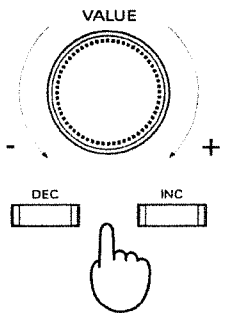
TONE SELECT [3]:
Each press of the button changes the note currently displayed to a note one half-step higher.

TONE SELECT [4]:
Each press of the button changes the note currently displayed to a note one octave higher.

** The indicators for the TONE SELECT buttons are always dark in the Rhythm Set Mode.*

■ Moving the Cursor and Changing Settings

Use the [◄]/[►] buttons to move the cursor to the parameter you want to change, then use the VALUE knob or [INC]/[DEC] buttons to change the value.



The VALUE knob...

Turning the VALUE knob while pressing it inward or while holding down the [SHIFT] button causes the value to change more rapidly.

The [INC] button...

Each press of the button increments the number by one (in other words, it takes the number to the next higher value).

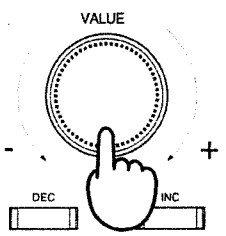
The [DEC] button...

Each press of the button decrements the number by one (it takes the number to the next lower value).
If you hold down [INC]/[DEC], the number changes continuously. The values change by larger steps if you hold down the [SHIFT] button and press [INC]/[DEC]. The values can also be changed rapidly by holding down one of these buttons and pressing the other one.

** If you change a value and then return to the Play mode without executing a write operation, a "*" appears next to the sound group name on the screen.*

● The Handy Undo/Redo Function

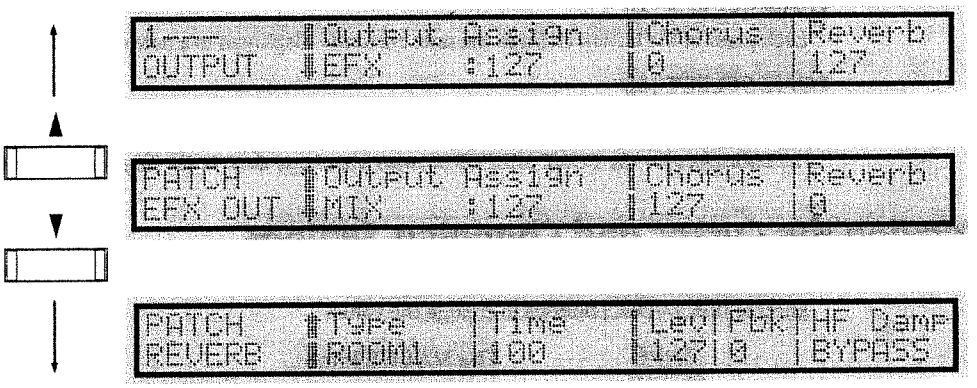
If you're not happy with a change you've made, you can return a setting to the value first indicated by the cursor by quickly pressing the VALUE knob two times. Each press of this knob toggles the setting between the values before the change ("undo") and after ("redo").



Each press of the knob
toggles between the values
before and after change
Press twice

■ Changing Pages

On the JV-1080, each screenful of parameter settings is called a "page."
On screens that show a "▮" or "▮" symbol, you can press the [▲]/[▼] buttons to change pages.



But that's not all. If you hold down the [SHIFT] button and...

...Press [▲], you move to the top page of the selected parameter group.

...Press [▼], you move to the last page of the selected parameter group.

...Press [◀], you move to the page for the parameter group found one to the left of the FUNCTION SELECT buttons.

...Press [▶], you move to the page for the parameter group found one to the right of the FUNCTION SELECT buttons.

There are two types of Edit screens:

Single Edit Screen

Multiple parameters are displayed for a single Tone (or Part, in the case of a Performance)

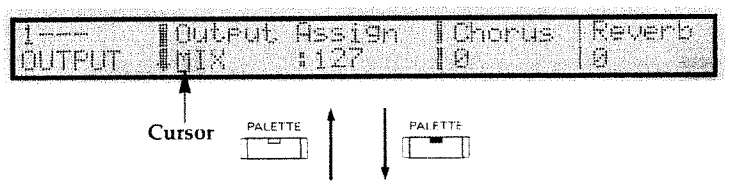
This is convenient for in-depth editing of a single Tone.

Palette Edit Screen

The values for four Tones (or Parts) are displayed for a single parameter.

This is convenient for editing while keeping an eye on the balance between several Tones.

When you press [PALETTE] and light up the button's indicator, you move to the Palette Edit screen for the parameter currently indicated by the cursor. Each press of the [PALETTE] button toggles between the Single Edit and Palette Edit screens.



Single Edit Screen

Palette Edit Screen

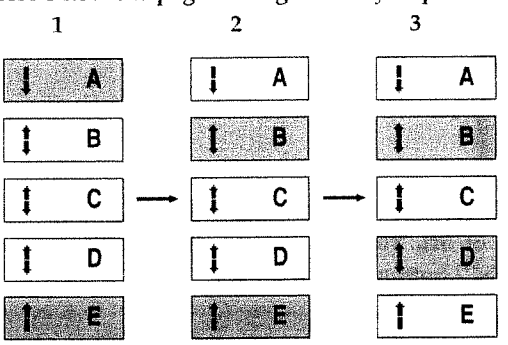
** The Palette Edit screen does not show anything except the parameters for each Tone (or Part) to be edited. Additionally, no Palette Edit screen is displayed in the Rhythm Set mode.*

● The Handy Page Changing Function

Several pages are allocated to the FUNCTION SELECT buttons under the display. Each press of the FUNCTION SELECT button (for which the button indicator is currently lit) will toggle you between two of these pages.

You can take advantage of this to compare the parameters of two pages as you edit; or for often-used pages you can press the [▲]/[▼] buttons to switch pages instantly without having to flip through any intervening pages.

Here's how the pages change when you press the FUNCTION SELECT buttons.



1. When the power is first turned on, each press of the FUNCTION SELECT button toggles you between the first page (A) and the last page (E).
2. If you press [▼] at page A to change to page B, then each press of the FUNCTION SELECT button toggles you between B and E.
3. If you press [▲] at page E to change to page D, then each press of the FUNCTION SELECT button toggles you between D and B.

■ Editing a Patch While in the Performance Mode

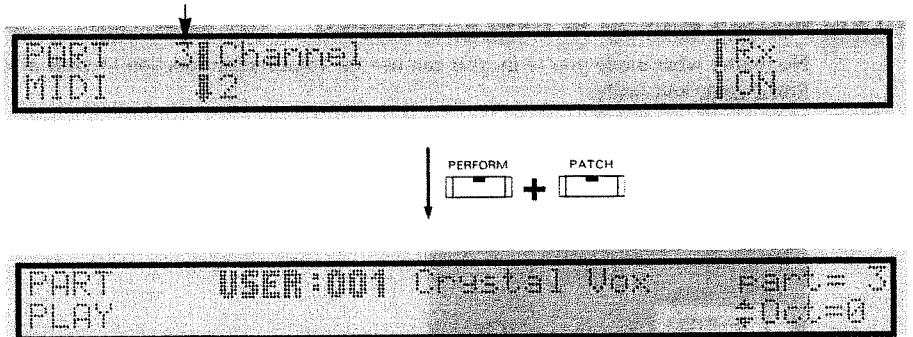
When editing a Performance, it is easy to call up and edit the Patch assigned to a Part. This is handy when moving back and forth between the Performance mode and the Patch mode to edit a Patch.

1 Let's say that you are now editing Part 3 of a Performance.

If you want to edit the Patch assigned to Part 3, hold down the [PERFORM] button and press [PATCH].

The indicators for the [PERFORM] and [PATCH] buttons light up at the same time, and the Play screen for the Patch selected for Part 3.

Part 3 is being edited



Play screen for the Patch selected for the Part

** You can use the [◀] / [▶] buttons to change the Part.*

2 Edit the Patch just as you would during normal Patch editing.

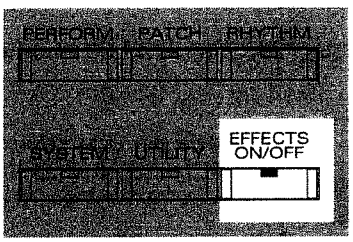
3 Press [EXIT] to return to the Performance screen.

■ Switching Effects On and Off

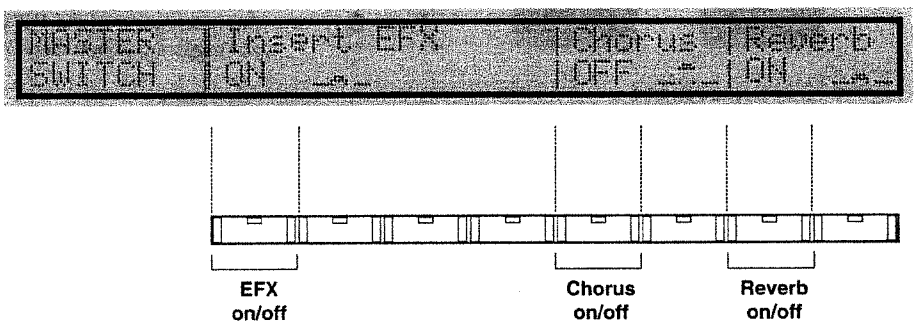
This is the switch which determines whether the built-in effects (EFX, Chorus, and Reverb) will be used. You can turn this switch on or off regardless of what mode you may happen to be in.

1 **Press [EFFECTS ON/OFF] to illuminate the indicator.**

The on/off status for the three effects is displayed.



2 **Press the FUNCTION SELECT button corresponding to the location of the effect on the display to switch that effect on or off. You can also use the CURSOR [◄]/[►] buttons, the VALUE knob, or the [INC]/[DEC] buttons for switching.**

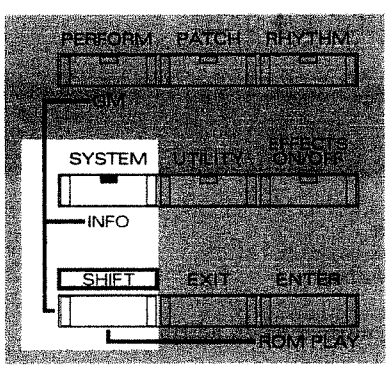


3 **Press [EXIT] or [EFFECTS ON/OFF] to make the indicator go dark and return to the original screen.**

■ Confirming Current Settings or MIDI Information — The Information Function

No matter what mode you're in, you can use the Information function to view a wide range of information quickly and easily.

1 **Hold down the [SHIFT] button and press [INFO].**

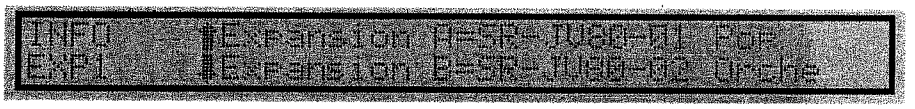


2 **Use the CURSOR [▲]/[▼] buttons to move to the screen containing the information you want to see.**

The following pages are displayed consecutively:

● **INFO CARD (names of any inserted DATA or PCM cards)**

● **INFO EXP 1 (names of any A or B expansion boards installed)**

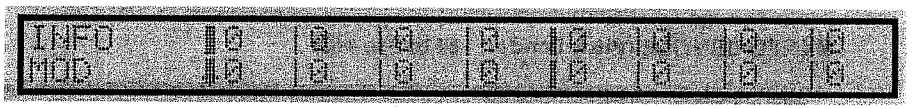


● **INFO EXP 2 (names of any C or D expansion boards installed)**

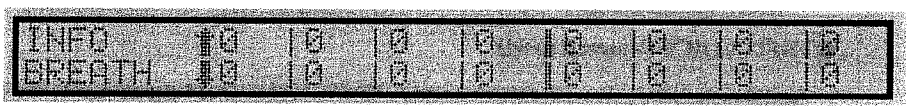
● **BATTERY CHECK (status of JV-1080 and DATA card batteries: LOW or OK)**

Also, if you're in the Performance, GM, or Rhythm Set modes, you can check the following MIDI information being received by the Parts. This is useful if you need to check why a sound doesn't change even though MIDI messages should be coming in, or for other MIDI troubleshooting.

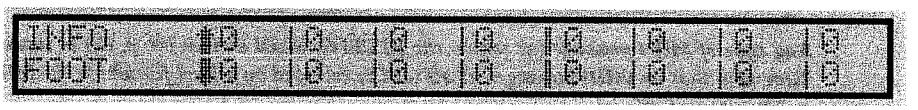
● **INFO MOD (Modulation: 0 to 127)**



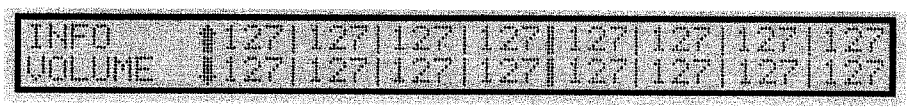
● **INFO BREATH (Breath: 0 to 127)**



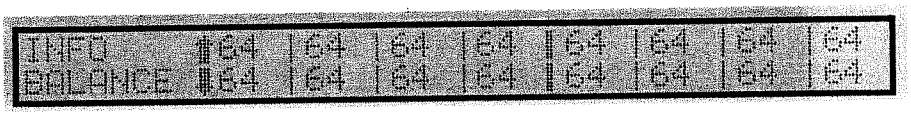
● **INFO FOOT (Foot: 0 to 127)**



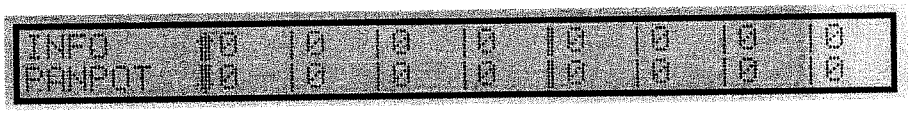
● **INFO VOLUME (Volume: 0 to 127)**



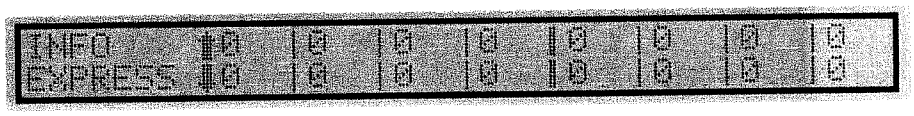
● INFO BALANCE (Balance: 0 to 127)



● INFO PANPOT (Panpot: L64 to 0 to 63R)

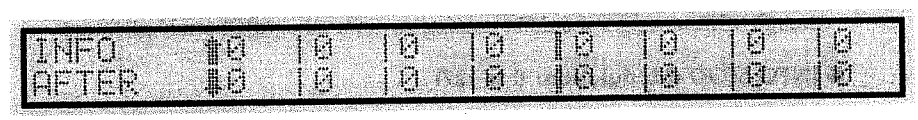


● INFO EXPRESS (Expression: 0 to 127)

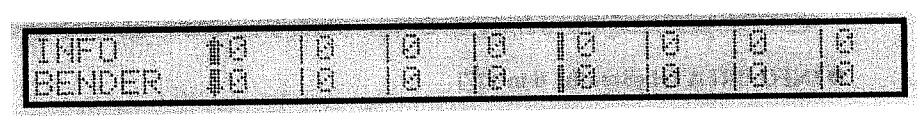


● INFO HOLD-1 (Hold-1: OFF/ON)

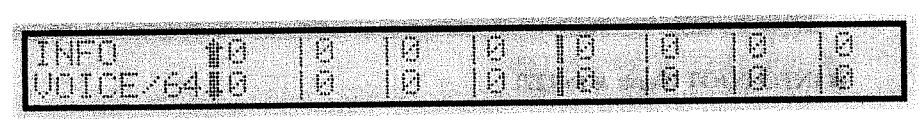
● INFO AFTER (Aftertouch: 0 to 127)



● INFO BENDER (Pitch Bender: -64 to 0 to +63)



● INFO VOICE (Voice: 0 to 64)



* *Any type of MIDI message for which the RECEIVE MIDI switch (☞ p. 67) is turned off will be ignored. Note also that no MIDI messages at all will be received by a Part for which the MIDI Receive switch (☞ p. 59) is turned off.*

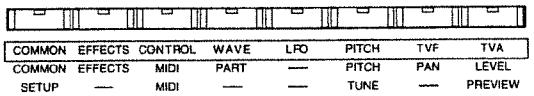
3 Press [EXIT] to go back to where you were before pressing [INFO].

Chapter 3

Modes and Parameters

This chapter explains the various parameters that you work with while editing.

1. Patch Edit Mode



■ Making Settings for an Entire Patch (COMMON)

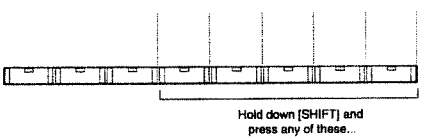
The following parameters are all related to a single Patch.

● PATCH NAME

You can give a Patch a name of up to 12 characters.
Use the [◄]/[►] buttons to move the cursor to the proper position, and then rotate the [VALUE] knob or press [INC]/[DEC] to select the desired character.

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

Pressing [SHIFT] displays the following in the bottom right corner of the screen.



You can execute the following commands by holding down the [SHIFT] button and pressing the FUNCTION SELECT button that corresponds to the function displayed:

TOP:
Press this button to successively go to the first character of the character groups ("A," "a," "0," or "+").

END:
Press this button to successively go to the final character of the character groups ("Z," "z," "9," or "_").

DEL:
Pressing this button erases the character under the cursor and shifts the following text forward.

INS:
Pressing this button inserts a space at the cursor location and shifts any following text backward.

CHG:
Pressing this button switches the character under the cursor from upper to lower case and vice versa.

● PATCH COMMON

<Level> Patch Level — 0 to 127
This parameter sets the overall volume for the entire Patch.

<Pan> Patch Pan — L64 to 0 to 63R
This parameter sets the stereo position of the entire Patch: L64 is far left, 0 is center, and 63R is far right.

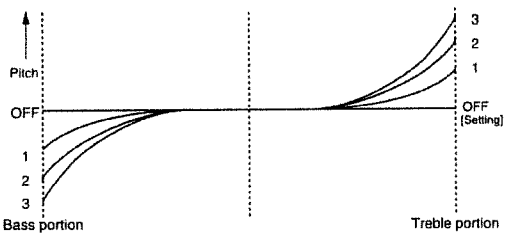
* *Although a separate Pan setting is made for each of the Tones that make up a Patch, the stereo position of these Tones is shifted by this overall Pan setting.*

<Analog Feel> Analog Feel Depth — 0 to 127
This parameter adds a very subtle (yet pleasing) pitch fluctuation to the basic waveform. This helps create a sound that is more natural in nature. (This is also called the "1/f fluctuation").

<Octave> Octave Shift — -3/-2/-1/0/+1/+2/+3
This parameter changes the pitch of the Patch in one-octave steps. You can raise or lower the pitch by up to three octaves.

* *When Octave Shift is used in the Patch Play screen, this setting also changes automatically.*

<Stretch> Stretch Tune Depth — OFF/1/2/3
This parameter changes the pitch using the 'stretch tuning' method typically used on acoustic pianos. This makes high-range sounds slightly higher in pitch, and low-range sounds slightly lower in pitch.
A diagram that illustrates the actual changes in pitch is called a "tuning curve." Changing the tuning curve causes subtle alterations in the resonance of harmonics.



<Priority> Voice Priority — LAST/LOUDEST
This setting determines the order or priority of sounds to be played when the maximum number of voices (64) is exceeded.

LAST:
The voices played last are given priority, with earlier voices being cut sequentially.

LOUDEST:
The voices with the highest volume are given priority, with quieter voices being cut sequentially.

<Velocity Range> Velocity Range Switch — OFF/ON
This setting determines whether the Velocity Range setting is enabled ("ON") or disabled ("OFF").

<Default Tempo> Default Tempo — 20 to 250 bpm
This parameter determines the tempo clock setting, which controls the parameters for Tones and Effects.

With the JV-1080, you can control Delay Time (and other time-related parameters) with the internal tempo clock or with an external device. When no external tempo clock is used, the tempo set here is used for such control.

* *When using the internal tempo clock, set the clock source system parameter (☞ p. 67) to "INT"*

* *The internal tempo clock data is not output through the MIDI OUT port.*

● VELOCITY (Velocity Range)

<Lower> Velocity Range Lower — 1 to 127 [PALETTE]
This parameter determines the maximum range of sound when playing softly. Sound is heard only when playing velocity exceeds the threshold (value) set here.

* *If you try to make this value higher than the setting for Velocity Range Upper, the value for Velocity Range Upper changes at the same time.*

<Upper> Velocity Range Upper — 1 to 127

PALETTE

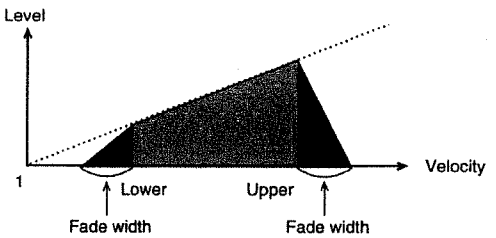
This parameter determines the maximum range of sound when playing forcefully. Sound is heard only when playing velocity does not exceed the value set here.

* *If you try to make this value lower than the setting for Velocity Range Lower, the value for Velocity Range Lower changes at the same time.*

<X-Fade> Velocity Cross Fade Depth — 0 to 127

PALETTE

This parameter sets the fade 'width' between the upper and lower velocity ranges.



● KEY RANG (Key Range)

<Lower> Key Range Lower — C-1 to G9 PALETTE

This parameter sets the key for the lowest playable sound.

* *If you try to make this value higher than the key set for Key Range Upper, the value for Key Range Upper changes at the same time.*

<Upper> Key Range Upper — C-1 to G9 PALETTE

This parameter sets the key for the highest playable sound.

* *If you try to make this value lower than the key set for Key Range Lower, the value for Key Range Lower changes at the same time.*

● STRUCT (Structure)

This parameter determines the structure of the Tones in the Patch. Differences in structure can make the sound vary greatly.

* *With Structure, two Tones are edited as a set. This means that it doesn't matter whether you press TONE SELECT [1] or [2]; in either case, "12—" appears in the left-hand corner of the screen. (With TONE SELECT [3] or [4], "—34" appears.)*
* *If you switch off one of the Tones in a pair while TYPE 2-10 is selected, the other Tone is played as TYPE1.*

<Struct> Structure — 1 to 10 PALETTE

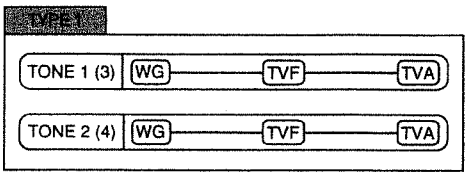
This parameter determines how Tones 1 and 2 or Tones 3 and 4 are combined. The following combination types are possible.

* *Because of space considerations, the characters on the screen are abbreviated. Here's what these abbreviations mean:*

W1 or W2: WG (Wave Generator) 1 or 2
F1 or F2: TVF 1 or 2
A1 or A2: TVA 1 or 2
B: Booster
R: Ring Modulator

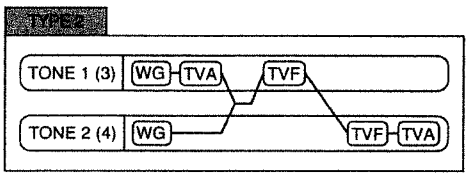
Type 1

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



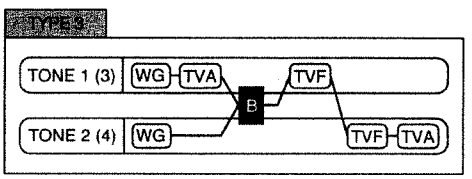
Type 2

This type combines two filters to enhance filter response. The TVA for Tone 1 (or 3) controls the volume balance of the two Tones.



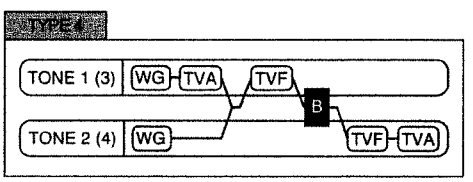
Type 3

This type combines two filters and distorts the waveforms by passing them through the booster (☞ p. 44). The TVA for Tone 1 (or 3) controls the volume balance of the two Tones and adjusts the amount of effect that the booster has.



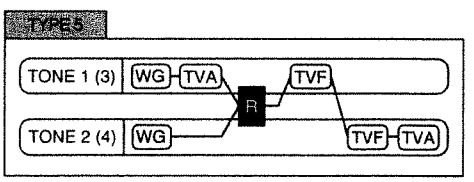
Type 4

This type applies a filter to the mixed sound of Tone 1 (or 3) and Tone 2 (or 4), and distorts the waveforms by passing them through the booster.



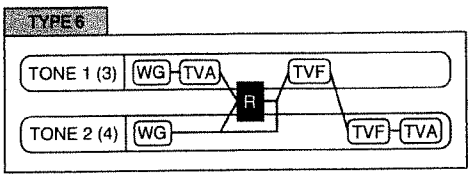
Type 5

This type combines two filters and boosts the upper harmonics by passing the sound through the ring modulator (☞ p. 44). The TVA for Tone 1 (or 3) controls the volume balance of the two Tones and adjusts the depth of the ring modulator.



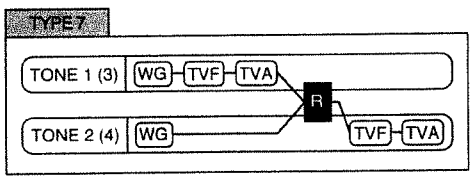
Type 6

This type combines two filters, boosts the harmonics by passing the sound through the ring modulator, and mixes in the sound of Tone 2 (or 4).
Because the sound from the ring modulator and Tone 2 (or 4) can be mixed, the TVA for Tone 1 (or 3) can adjust the amount of ring sound.



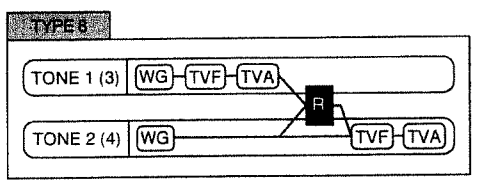
Type 7

This type sends the filtered sound of Tone 1 (or 3) and the sound of Tone 2 (or 4) through the ring modulator to boost the harmonics.



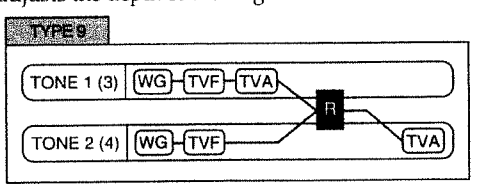
Type 8

This type sends the filtered sound of Tone 1 (or 3) and the sound of Tone 2 (or 4) through the ring modulator, then mixes it with Tone 2 (or 4) and filters the result.



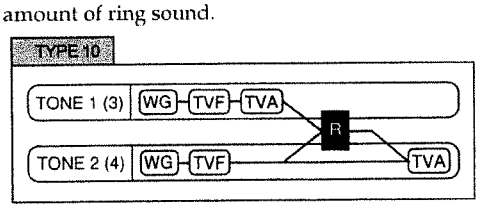
Type 9

This type sends the filtered sounds of the Tones through the ring modulator to boost the harmonics. The TVA for Tone 1 (or 3) controls the volume balance of the two Tones and adjusts the depth of the ring modulator.



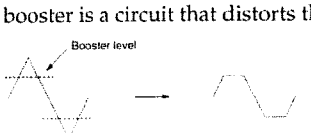
Type 10

This type sends the filtered Tones through the ring modulator to boost the harmonics, then mixes the result with Tone 2 (or 4). Because the sound from the ring modulator and Tone 2 (or 4) can be mixed, the TVA for Tone 1 (or 3) can adjust the amount of ring sound.

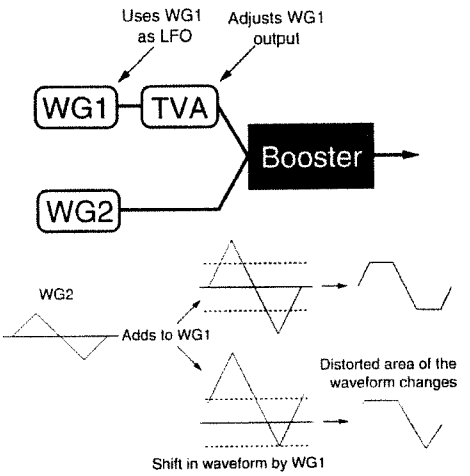


○ What is a Booster?

The booster is a circuit that distorts the input signal.

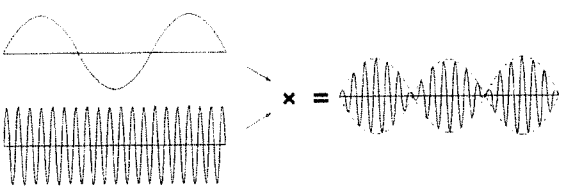


In addition to using this for distortion, effects similar to PWM (Pulse Width Modulation; where the harmonic structure changes continuously) can be obtained by setting the waveform for one Tone (WG1) to a subsonic frequency and shifting the waveform for the other Tone (WG2) up and down. It is also interesting to amplify the waveform with Wave Gain (☞ p. 50).



○ What is a Ring Modulator?

By combining the waveforms of the two Tones, a ring modulator can produce many harmonics (inharmonic partials) not contained in either of the waveforms. (As long as one of the waveforms is not a sine wave, virtually no frequency components sound at regular intervals.) Because differences in the pitch of the waveform cause the harmonic structure to change, a toneless metallic resonation occurs. This works well when creating metallic timbres, such as for bells.



<Booster> Booster Level — 0 /+6 / +12 / +18 [PALETTE]

This parameter sets the booster level; a larger value results in greater distortion of the sound.

■ Selecting Effects for a Patch (EFFECTS)

* *When editing the parameters for an effect, an "x" may appear on the left side of the screen. This indicates that the parameters for the effect are being edited while the effect's switch (☞ p. 38) is off. Because this makes it impossible to check the results of the effect, press the [EFFECTS ON/OFF] button to turn the effect on.*

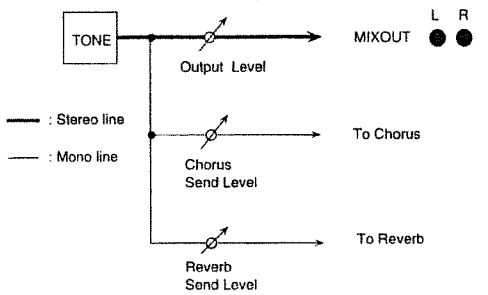
● OUTPUT

<Output Assign> Output Assign — MIX/EFX/OUTPUT1/OUTPUT2 [PALETTE]

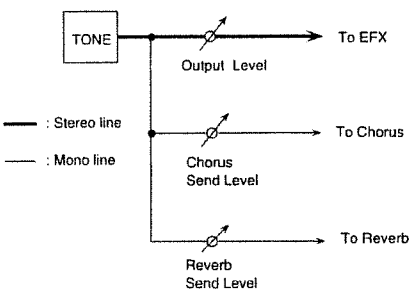
Output Level — 0 to 127 [PALETTE]

Output Assign determines the output destination for each Tone, and Output Level sets the level of the output signal.

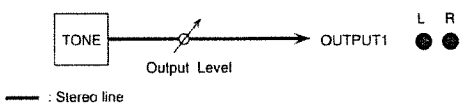
MIX:
This parameter sends the original sound to MIX OUT. The sound is also simultaneously sent to Chorus and Reverb.



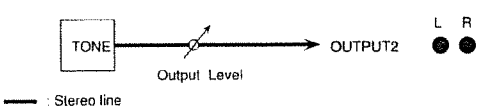
EFX:
This parameter sends the original sound to EFX. The sound is also simultaneously sent to Chorus and Reverb. The output destination of the sound passing through EFX follows the Output Assign setting for PATCH EFX OUT.



OUTPUT1:
This setting sends the original sound to OUTPUT1.



OUTPUT2:
This setting sends the original sound to OUTPUT2.



* *When OUTPUT1 or OUTPUT2 is selected as the output destination, all settings for Chorus and Reverb are ignored.*

* *When TYPE 2 to 10 is selected with Structure (☞ p. 43), the settings for Tone 1 (or Tone 3) are ignored.*

<Chorus> Chorus Send Level — 0 to 127 [PALETTE]

This parameter sets the level of the signal sent to Chorus for each Tone.

<Reverb> Reverb Send Level — 0 to 127 [PALETTE]

This parameter sets the level of the signal sent to Reverb for each Tone.

● PATCH EFX TYPE

<Type> EFX Type
This parameter determines the type of EFX applied to the Patch.
For a description of the EFX types, check out "Chapter 5 — Multi-Effector EFX (☞ p. 83)."

● PATCH EFX PRM (Patch EFX Parameter)

This setting selects the parameter for the EFX chosen with EFX Type. The parameters that can be set vary from one EFX to another.
For a description of EFX parameters, see "Chapter 5 — Multi-Effector EFX (☞ p. 83)."

● PATCH EFX OUT (Patch EFX Output)

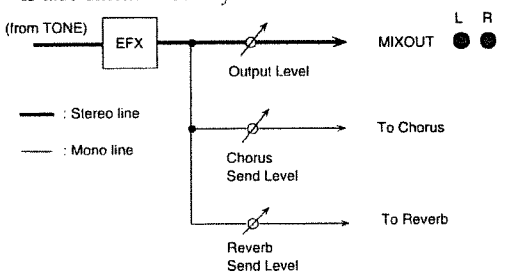
This parameter determines how sound will be output when "EFX" is selected with Output Assign for OUTPUT.

<Output Assign> Output Assign — MIX/OUTPUT1/OUTPUT2

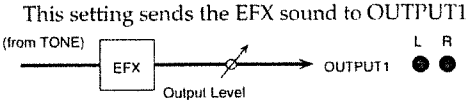
Output Level — 0 to 127

Output Assign determines the output destination for the EFX sound, and Output Level sets the level of the output signal.

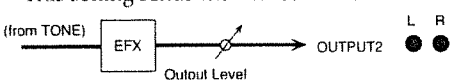
MIX:
This setting sends the EFX sound to MIX OUT. The sound is also simultaneously sent to Chorus and Reverb.



OUTPUT1:
This setting sends the EFX sound to OUTPUT1.



OUTPUT2:
This setting sends the EFX sound to OUTPUT2.



* *When OUTPUT1 or OUTPUT2 is selected as the output destination, all settings for Chorus and Reverb are ignored.*

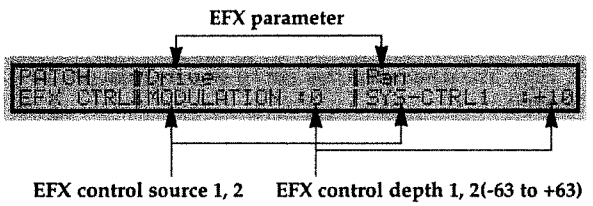
<Chorus> Chorus Send Level — 0 to 127
This parameter sets the signal level sent to Chorus from EFX.

<Reverb> Reverb Send Level — 0 to 127
This parameter sets the signal level sent to Reverb from EFX.

● PATCH EFX CTRL (Patch EFX Control)

The JV-1080 lets you use any one of a number of MIDI Controllers to vary EFX parameters in real time.

* *The number and type of EFX parameters that can be changed is predetermined according to the EFX type. One or two EFX parameters are shown on the top line of the screen, and these vary according to the type of EFX that you choose. For details on the EFX parameters that can be changed, see "Chapter 5 — Multi-Effector EFX (☞ p. 83)."*



Use EFX Control Source for each of the EFX parameters (that appear on the top line of the screen) to choose a Controller, and set the degree of action of the Controller with EFX Control Depth.
You can choose any of the following as the EFX Control Source:

OFF:
No Controller is used.

SYS-CTRL1:
The Controller set with System Control Source 1, a system parameter, is used (☞ p. 68).

SYS-CTRL2:
The Controller set with System Control Source 2, a system parameter, is used (☞ p. 68).

MODULATION:
Modulation (Control Change # 1)

BREATH:
Breath (Control Change # 2)

FOOT:
Foot (Control Change # 4)

VOLUME:
Volume (Control Change # 7)

PAN:
Pan (Control Change # 10)

EXPRESSION:
Expression (Control Change # 11)

BENDER:
Pitch bend

AFTERTOUCH:
Aftertouch

* *Choose "SYS-CTRL1" or "SYS-CTRL2" if there is no need to use a different Controller for each Patch, or if you want to perform control with something other than the control changes described here. Use the system's Control Assign 1 page to set the Controller (☞ p. 68).*

● PATCH CHORUS

<Rat> Chorus Rate — 0 to 127

This parameter sets the speed of the Chorus effect.

<Dpt> Chorus Depth — 0 to 127
This parameter sets the depth of the Chorus effect.

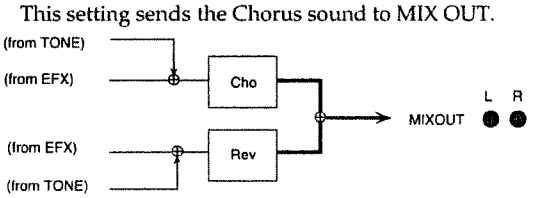
<Dly> Pre delay — 0 to 127
This parameter determines the time interval between when the original sound is heard and when the effect sound is heard. Larger values result in longer delays (creating a broader sound).

<Fbk> Chorus Feedback — 0 to 127
This parameter determines the amount of Chorus sound that is returned (fed back) to the Chorus unit. Larger values result in more complex Chorus effects.

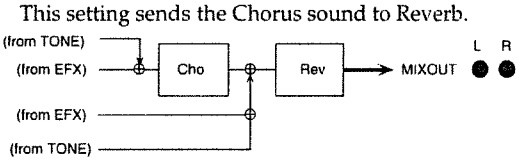
<Level> Chorus Level — 0 to 127
This parameter sets the volume of the Chorus sound.

<Output> Chorus Output Assign — MIX/ REVERB/ MIX+REV
This setting determines how the Chorus sound is output.

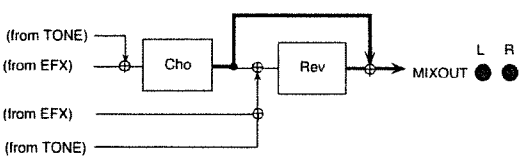
MIX:
This setting sends the Chorus sound to MIX OUT.



REVERB:
This setting sends the Chorus sound to Reverb.



MIX+REV:
This setting sends the Chorus sound to both MIX OUT and Reverb.



● PATCH REVERB

<Type> Reverb Type
This parameter selects the type of reverberation.

ROOM1:
Short, high-density reverb

ROOM2:
Short, low-density reverb

STAGE1:
Reverb with many late reflections

STAGE2:
Reverb with strong initial reflection

HALL1:
Sparkling reverb

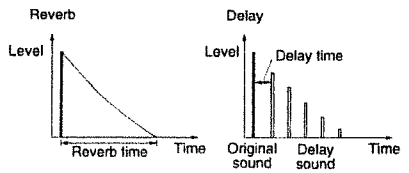
HALL2:
Richly resounding reverb

DELAY:
Standard delay

PAN-DLY:
A delay that pans (moves) the reflections to left and right.

<Time> Reverb Time — 0 to 127

For a type from "ROOM1" to "HALL2," this parameter sets the reverb time (i.e., how long the reverb continues). For "DELAY" or "PAN-DLY," this parameter sets the delay time. Larger values produce a greater sense of spaciousness.



<Lev> Reverb Level — 0 to 127

This parameter sets the volume of the reverb sound.

<Fbk> Delay Feedback — 0 to 127

When "DELAY" or "PAN-DLY" has been selected as the type, this parameter sets the amount of delayed sound that is returned (fed back) to the Delay unit. Larger values result in longer delay times.

<HF Damp> High-frequency Damp-200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS

This parameter sets the point (frequency) at which the high-frequency components of the reverb sound are cut off.

The HF Damp (high-frequency damp) parameter is used to simulate the acoustic properties of different materials. (For example, glass reflects more high frequencies than heavy carpeting.)

A lower cutoff frequency results in a "darker" sound, and a higher frequency produces a "brighter" sound. When set to "BYPASS," no high frequencies are cut.

■ Using Controllers to Change How Sounds are Played (CONTROL)

This selects the functions of the JV-1080's Controllers.

● KEY MODE & BENDER

<Assign> Key Assign Mode — POLY/SOLO

This parameter determines whether the Patch is played as a polyphonic (POLY) or monophonic (SOLO) sound. Harmonies can be played when set to "POLY," and when "SOLO" is selected, only one sound at a time can be played.

<Legato> Solo Legato — ON/OFF

This parameter determines whether the Legato function is used (ON) or not (OFF). However, the Legato function cannot be used when the Key Assign Mode is set to "POLY."

○ What is Legato?

When you hold down one key and play another, the Legato function preserves any envelope or LFO, and changes only the pitch played. This makes it possible to emulate guitar techniques such as hammering-on or pulling-off.

<Bend Range> Bend Range — -48 to 0 (Down)/0 to 12 (Up)

Bend Range Down lets you set how far the pitch drops when the Bender lever is moved to the left (or when the wheel is lowered). You can set a pitch drop of up to four octaves, in semitone increments. Bend Range Up lets you set how far the pitch rises when the Bender lever is moved to the right (or when the wheel is raised). You can set a pitch rise of up to one octave (in semitone increments).

● PORTAMENTO

Portamento is an effect that causes pitch to change smoothly when one played key is followed by another.

<Sw> Portamento Switch — OFF/ON

This parameter determines whether the Portamento effect is ON or OFF.

Portamento can be used in the SOLO Key Assign Mode to achieve a smooth 'sliding' effect.reminiscent of a violin playing style. Portamento can also be used in the POLY Key Assign Mode (when playing chordal accompaniments).

<Tm> Portamento Time — 0 to 127

This parameter determines the time required for the pitch to change from one note to the next when using the Portamento function.

<Mode> Portamento Mode — NORMAL/LEGATO

This parameter selects the Portamento mode. Portamento is always applied when "NORMAL" is selected, but when set to "LEGATO," Portamento is applied only when you play in a legato style (with the notes smoothly connected).

<Type> Portamento Type — RATE/TIME

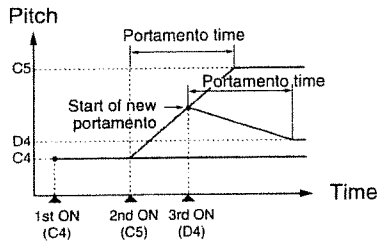
This parameter selects the type of Portamento effect. When set to "RATE," the time required to move from the first pitch to the second is proportionate to the distance between the two pitches. When "TIME" is selected, the change takes places over a fixed amount of time (regardless of the pitch interval).

<Start> Portamento Start — PITCH/NOTE

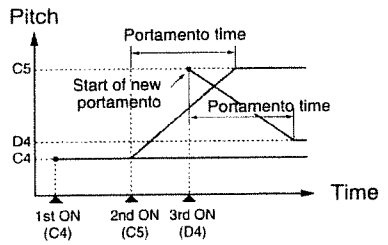
This parameter sets the point at which the Portamento effect begins.

This setting controls what happens when a new key is played while a change to another pitch is already in progress.
When set to "PITCH," the new portamento sweep starts at the pitch in effect when the new key is played. When set to "NOTE," the new portamento sweep starts from the pitch in effect when the original pitch change is complete.

When Portamento Start is set to "PITCH"



When Portamento Start is set to "NOTE"



● RxSWITCH (Receive Switch)

<Volume> Volume Control Switch — OFF/ON

[PALETTE]

This parameter determines whether volume changes (ON) or not (OFF) when MIDI volume messages for the Tones are received.

* *This setting is ignored when the Volume setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).*

<Pan> Pan Control Switch — OFF/CONT/KEY-ON

[PALETTE]

This parameter determines how MIDI pan messages are received for each of the Tones.

OFF:
The stereo position does not change when a pan message is received.

CONT:
Pan messages are received and the stereo position changes.

KEY-ON:
The stereo position changes when a key is played according to received pan messages. However, even if a new pan message is received while a sound is being played, there is no change in the pan position until the next time a key is played.

* *This setting is ignored when the Control Change setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).*

<Bender> Bender Control Switch — OFF/ON [PALETTE]

This parameter determines whether pitch changes (ON) or not (OFF) when MIDI bender messages for each of the Tones are received.

* *This setting is ignored when the Bender setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).*

* *Ordinarily, volume messages control volume, pan messages control the stereo position, and bender messages control the pitch being played. With the JV-1080, however, you can use these messages to control other Tone parameters and effects (☞ p. 49). If you attempt this kind of use when the Receive Switches are set to "ON," then the volume, panning, or pitch may change along with the parameter you want to control. To avoid this, be sure to set these switches to "OFF."*

● DAMPER

<Hold-1 Switch> Hold 1 Control Switch — OFF/ON

[PALETTE]

This parameter determines whether a sound is held (ON) or not (OFF) when MIDI Hold 1 messages are received for the Tones.

* *This setting is ignored when the Hold 1 setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).*

<ReDamper> Re-damper Control Switch — OFF/ON

[PALETTE]

This setting determines (for each of the Tones) whether a decaying sound (the key has been released) is held (ON) or not (OFF) when a Hold 1 message is received.

* *When the Hold 1 Control Switch is set to "OFF," no Re-damper effect takes place even if the Re-damper Control Switch is set to "ON." This setting is also ignored when the Hold 1 setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).*

● PEAK & HOLD

With the JV-1080, you can use the hold pedal to sustain not only note messages, but also Control messages (such as modulation or aftertouch) when a Hold message is received.

<EfxCtrl> EFX Control Hold/Peak — OFF/HOLD/PEAK

This setting determines how the value of an EFX parameter (to be changed with the EFX Control Source; ☞ p. 46) is maintained when a Hold message is received.

OFF:
Hold messages are not received.

HOLD:
The parameter value is maintained when a Hold message is received.

PEAK:
The parameter value is revised and maintained each time it changes to a new maximum value, even after a Hold message is received.

* **When you select the HOLD or PEAK settings, you will also need to specify what hold pedal information you will be using by means of these System parameters: Hold Control Source, and Peak Control Source (☞ p. 67). Also, you will need to turn ON the Hold 1 Control switch and Receive MIDI switch (System parameter) so you are set for the hold pedal you are using (☞ p. 68).**

<Ctrl1> Control 1 Hold/Peak — OFF/HOLD/PEAK

This setting determines how the value of a Tone parameter to be changed with the Patch Control Source 1 (Modulation) is maintained when a Hold message is received. The setting values are the same as those for the EFX Control Hold/Peak setting.

<Ctrl2> Control 2 Hold/Peak — OFF/HOLD/PEAK

This setting determines how the value of a Tone parameter to be changed with the Patch Control Source 2 is maintained when a Hold message is received. The setting values are the same as those for the EFX Control Hold/Peak setting.

<Ctrl3> Control 3 Hold/Peak — OFF/HOLD/PEAK
This setting determines how the value of a Tone parameter to be changed with the Patch Control Source 3 is maintained when a Hold message is received. The setting values are the same as those for the EFX Control Hold/Peak setting.

● CONTROL SOURCE

The JV-1080 lets you use a variety of MIDI Controllers to change sounds in real time. This setting selects the Controller used to change the Tone parameters.

* *Patch Control Source 1 is set to Modulation (Control Change 1) and cannot be changed.*

<Control2> Patch Control Source 2
<Control3> Patch Control Source 3
The Controllers assigned to Patch Controllers 2 and 3 can be selected from the following list.

OFF:
No Controller is used.

SYS-CTRL1:
The Controller set with System Control Source 1 , a system parameter, is used (☞ p.68).

SYS-CTRL2:
The Controller set with System Control Source 2 , a system parameter, is used (☞ p.68).

MODULATION:
Modulation (Control Change # 1)

BREATH:
Breath (Control Change # 2)

FOOT:
Foot (Control Change # 4)

VOLUME:
Volume (Control Change # 7)

PAN:
Pan (Control Change # 10)

EXPRESSION:
Expression (Control Change # 11)

BENDER:
Pitch bend

AFTERTOUCH:
Aftertouch

LFO1:
The rate for LFO1 (The LFOs for Tones 1-4 act with respect to parameters within the same Tone.)

LFO2:
The rate for LFO2 (The LFOs for Tones 1-4 act with respect to parameters within the same Tone.)

VELOCITY:
Velocity

KEYFOLLOW:
Keyfollow (the parameter value changes according to the position on the keyboard, with C4 as "0")

PLAY-MATE:
Playmate (the parameter value changes according to the interval between Note On and Note Off)

* *Choose "SYS-CTRL1" or "SYS-CTRL2" if there is no need to use a different Controller for each Patch, or if you want to have control with something other than the Control Changes described here. Use the System's Control Assign 1 page to set the Controller (☞ p. 68).*

* *When the setting for Receive MIDI, a system parameter, is set to "OFF," then there is no effect when any Controller is used.*

● CONTROL 1 to 3

<Destination> Control Destination 1 to 4 [PALETTE]
This parameter lets you simultaneously set up to four parameters for the Tone changed by Patch Control Sources 1/2/3.

<Depth> Control Depth 1 to 4 — -63 to +63 [PALETTE]
This parameter sets the amount of change for any parameters set with Control Destination.
Assignable Tone parameters (and ranges) are as follows:

Destination (controlled parameter)		Depth (setting range)
Display	Meaning	
OFF	No parameters are controlled	—
PCH	Pitch	-63 — +63 (*1)
CUT	Cutoff frequency	
RES	Resonance	
LEV	Level (volume)	
PAN	Pan (stereo position)	
MIX	Volume output from MIX OUT	
CHO	Chorus depth	
REV	Reverb depth	
PL1	Depth of LFO1 applied to pitch	-63 — +63 (*2)
PL2	Depth of LFO2 applied to pitch	
FL1	Depth of LFO1 applied to cutoff	
FL2	Depth of LFO2 applied to cutoff	
AL1	Depth of LFO1 applied to volume	
AL2	Depth of LFO2 applied to volume	
PL1	Depth of LFO1 applied to panning	
PL2	Depth of LFO2 applied to panning	
L1R	LFO1 rate	-63 — +63 (*3)
L2R	LFO2 rate	

*1 Change is larger (higher) for positive (+) values and smaller (lower) for negative (-) values.
*2 The LFO phase is reversed for positive and negative values.
In either case, however, depth increases as the value moves farther from 0 (zero).
*3 The LFO cycle is shorter for positive values and longer for negative values.

■ Selecting Waveforms (WAVE)

This function lets you select the waveform that serves as the basis for a Tone, apply effects to the waveform, and control its pitch.

● WAVE

<Group> Wave Group — INT-A or B/CARD/EXP-A to D [PALETTE]

This parameter determines the memory from which a waveform is selected.

INT-A or B:
Selects a waveform stored in the JV-1080.

CARD:
Selects a waveform stored on a PCM Card.

EXP-A to D:
Selects a waveform stored on Expansion Board A, B, C, or D.

<Number> Wave Number — 1 to 255 [PALETTE]

Selects the waveform that forms the basis of a Tone. Along with the wave number, the wave name appears in the display (in parentheses).

<Gain> Wave Gain — -6/0/+6/+12 [PALETTE]

This parameter changes the gain of a waveform and is effective when adjusting the level of a Tone (or using an amplified waveform after sending it through the Booster (☞ p. 44). The value is displayed in decibels (dB).

<Switch> Tone Switch — OFF/ON [PALETTE]

This parameter determines whether each Tone is to be played (ON) or not (OFF).

* *When TONE SWITCH [1] to [4] is used to switch a Tone on or off, this setting also changes automatically.*
* *The number of Tones played can be limited by switching off unused Tones.*

● FXM (Frequency Cross Modulation)

FXM combines a specified wave with another waveform to create a third waveform. This is useful for generating metallic timbres or making special effect sounds.

<Switch> FXM Switch — OFF/ON [PALETTE]

This parameter determines whether FXM is used (ON) or not (OFF).

<Color> FXM Color — 1 to 4 [PALETTE]

This parameter determines the ambience of FXM. A larger value results in a 'rougher' sound, and a smaller value makes the sound more metallic.

<Depth> FXM Depth — 1 to 16 [PALETTE]

This parameter sets the depth of FXM application.

● TONE DELAY

This parameter sets the delay applied to each Tone. Tone Delay is different from the Effector's delay because it can also be used to change the tone of the delayed sound and play one-key arpeggios while changing the pitch of each Tone.

The delay time can also be made to synchronize with the internal or external MIDI clock.

<Mode> Tone Delay Mode [PALETTE]

Any of the following can be selected for Tone Delay.

NORMAL:
The Tone is always played according to the delay time.

HOLD:
The delay effect is applied only while the note is on. No Tone is played if the note switches off before the end of the delay time.

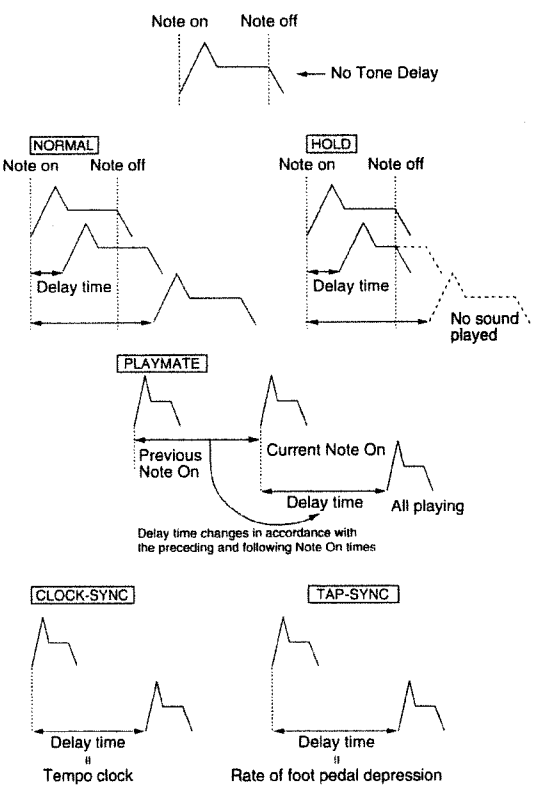
PLAY-MATE:
If the time interval between the previous Note On and the current Note On is less than two seconds, the Tone is played with that interval taken as the delay time.

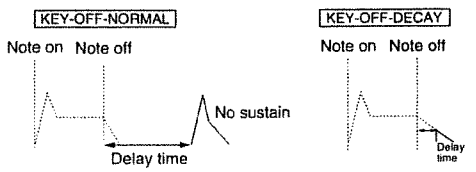
CLOCK-SYNC:
The Tone is played using the on-board (or external) tempo clock (☞ p. 67) setting.

TAP-SYNC:
The Tone is played with the interval set by tapping the foot pedal (Tap Control Source ☞ p. 67).

KEY-OFF-NORMAL:
The Tone is played with the delay time after the note is off.

KEY-OFF-DECAY:
The TVA envelope starts from the time the note is on (during which time nothing is played), and the Tone is played with the delay time after the note is off.





<Time> Tone Delay Time — 0 to 127/0 to 880 (Note Display) PALETTE

This parameter sets the time interval between a Note On and when sound is actually heard (or from a Note Off if KEY-OFF-NORMAL or KEY-OFF-DECAY has been selected).
If "PLAYMATE" has been selected, setting this to "64" causes the interval between the previous Note On and the current Note On to be taken as the delay time. When set to "127," an interval approximately twice as long as for "64" is set as the delay time.

* *When "CLOCK-SYNC" or "TAP-SYNC" has been selected as the mode, the setting value is displayed as a Quarter-note resolution. A note corresponding to this is displayed next to the setting value. For instance, if set to 96= ♩, the delay time would be 0.5 seconds at a tempo of 120.*

Note setting value	Quarter-note resolution
𝅜 (Double note)	768
𝅗𝅥. (Dotted whole note)	576
𝅜 (Double-note triplet)	512
𝅝 (Whole note)	384
𝅗𝅥. (Dotted half note)	288
𝅗𝅥 (Whole-note triplet)	256
𝅗𝅥 (Half note)	192
♩. (Dotted quarter note)	144
𝅗𝅥 (Half-note triplet)	128
♩ (Quarter note)	96
♪. (Dotted eighth note)	72
♩ (Quarter-note triplet)	64
♪ (Eighth note)	48
𝅘𝅥𝅯. (Dotted sixteenth note)	36
♪ (Eighth-note triplet)	32
𝅘𝅥𝅯 (Sixteenth note)	24
𝅘𝅥𝅯. (Dotted thirty-second note)	18
𝅘𝅥𝅯 (Sixteenth-note triplet)	16
𝅘𝅥𝅰 (Thirty-second note)	12

* *When any of Type 2 to 10 has been selected with Structure (☞ p. 43), the Tone Delay setting for Tone 2 is used for TONEs 1 & 2, and Tone Delay setting for Tone 4 is used for TONEs 3 & 4*

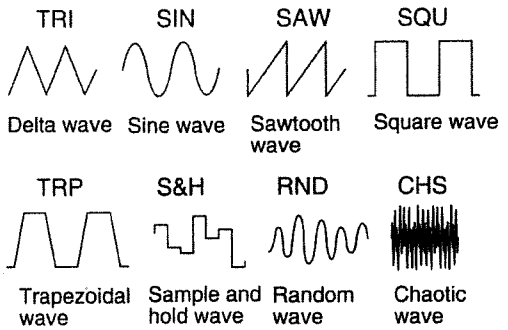
■ Adding Vibrato to a Sound (LFO)

An LFO (low-frequency oscillator) cyclically changes the pitch, cutoff frequency, and level to produce modulation effects such as vibrato, wow, and tremolo.
The JV-1080 has two independent LFOs, called LFO1 and LFO2.

● LFO1

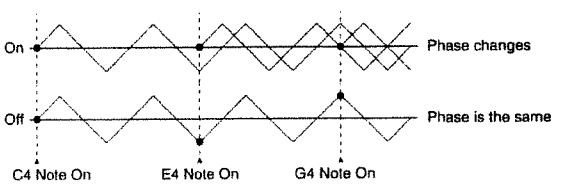
<Form> LFO Waveform PALETTE

Any of the following LFO waveforms can be selected.



<KeyTrig> Key Trigger — OFF/ON PALETTE

This parameter determines whether the timing with which the keyboard is played matches (ON) the LFO cycle or not (OFF).



<Rate> LFO Rate — 0 to 127/0 to 880 (Note Display)

This parameter sets the speed of the cycle of the LFO.
When "CLOCK" or "TAP" has been selected with LFO External Sync, the setting value is displayed as a Quarter-note resolution. A note corresponding to this is displayed next to the setting value.

See the Tone Delay Chart on the left side of this page for information on note resolution.

* *When "CHS" has been selected for LFO Waveform, LFO Rate has no effect.*

<ExtSync> LFO External Sync — OFF/CLOCK/TAP

This parameter determines whether the LFO cycle is synchronized with the on-board (or external) tempo clock (CLOCK), or with the depression rate of the foot pedal (TAP).
No synchronization takes place when set to "OFF."

* *When set to "CLOCK," use the system parameter Clock Source (☞ p. 67) to choose whether the internal or external tempo clock is to be used.*

* *When set to "TAP," use the system parameter Tap Control Source (☞ p. 67) to select the foot pedal.*

<Mode> Fade Mode [PALETTE]

This parameter selects how the LFO is applied.

ON-IN:
The LFO is applied gradually after the key is played.

ON-OUT:
The LFO is applied after the key is played, then gradually fades away.

OFF-IN:
The LFO is applied gradually after the key is released.

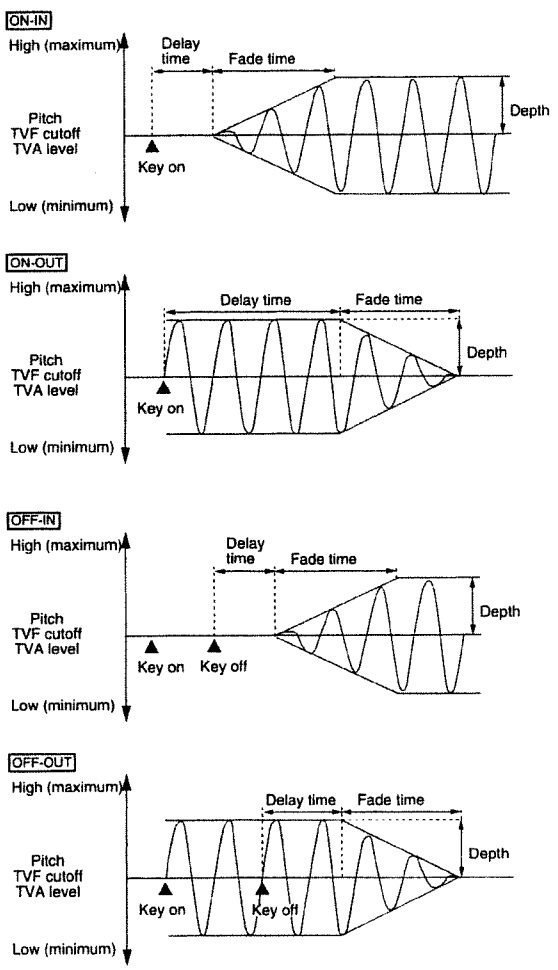
OFF-OUT:
The LFO is applied from the time the key is played until it is released, and after the release, it fades away gradually.

<Delay> Delay Time — 0 to 127 [PALETTE]

For ON-IN, this parameter sets the interval from the time the key is played until the LFO starts to be applied (for ON-OUT, the hold time). For OFF-IN, this parameter sets the interval from the time the key is released until the LFO starts to be applied (for OFF-OUT, the hold time).

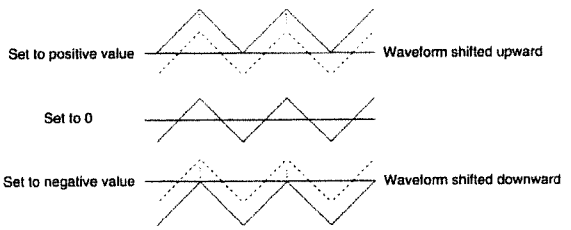
<Fade> Fade Time — 0 to 127 [PALETTE]

This parameter sets the interval after the delay time until the LFO amplitude reaches its maximum (or minimum) value.



<Offset> Level Offset — -100/-50/0/+50/+100 [PALETTE]

This parameter shifts the LFO waveform up or down from the central values (pitch, cutoff frequency, and level). Positive values cause the waveform to shift for undulations above the central values, and negative values cause the waveform to shift for undulations below the central values.



● LFO 2 Pages

These make settings for LFO2.

* *The parameters that can be set are identical to those for LFO1.*

● LFO DEPTH 1:2 (LFO Depth)

<Pitch> Pitch LFO Depth 1 or 2 — -63 to +63 [PALETTE]

This parameter sets the extent of application when LFO1 or LFO2 is applied to the pitch.

<TVF> Filter LFO Depth 1 or 2 — -63 to +63 [PALETTE]

This parameter sets the extent of application when LFO1 or LFO2 is applied to the cutoff frequency.

<TVA> Amplitude LFO Depth 1 or 2 — -63 to +63 [PALETTE]

This parameter sets the extent of application when LFO1 or LFO2 is applied to the level (volume).

<PAN> Pan LFO Depth 1 or 2 — -63 to +63 [PALETTE]

This parameter sets the extent of application when LFO1 or LFO2 is applied to the pan (stereo position).

* *Negative and positive values for depth have opposite effects on the changes in pitch and volume. For example, if a positive depth value is set for one Tone and a negative value of the same magnitude is set for another Tone, the phase of the undulations is reversed. This makes it possible to alternately sound different Tones and shift panning cyclically.*

■ Changing the Pitch (PITCH)

This function sets parameters related to the pitch of a Tone.

● PITCH

<Coarse> Coarse Tune — -48 to +48 [PALETTE]

This parameter raises/lowers the pitch of a Tone by up to four octaves (in semitone steps).

<Fine> Fine Tune — -50 to +50 [PALETTE]

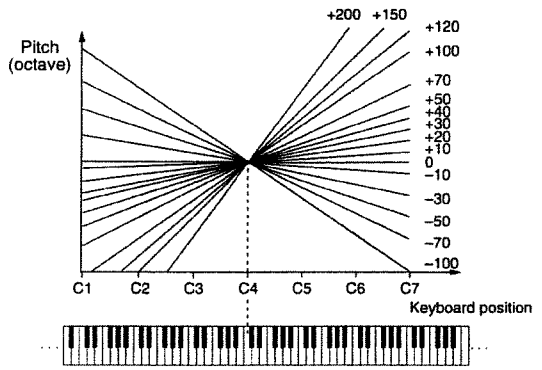
This parameter raises/lowers the pitch of a Tone in increments of one cent (1/100th of a semitone). You can fine-tune the Tone by up to a quarter-tone in either direction.

<Random> Random Pitch Depth — 0 to 1200 [PALETTE]

This deliberately causes the pitch of the Tone being played to fluctuate irregularly. The value is displayed in hundredths of a half-step.

<KeyFlw> Pitch Key Follow — -100/-70/-50/-30/-10/0/+10/+20/+30/+40/+50/+70/+100/+120/+150/+200 [PALETTE]

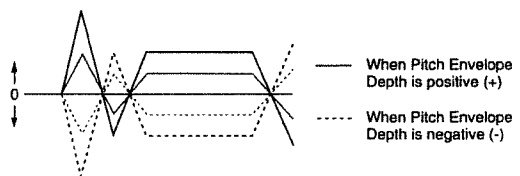
This sets how high the pitch rises when the keyboard has been shifted up an octave (12 keys). When set to "+100," then when shifted upward one octave like an ordinary keyboard instrument, the pitch also rises by one octave. When set to "+200," however, the pitch rises two octaves, and when set to "-100" it drops an octave. When set to "0," every key plays at the same pitch. This is normally left set at "+100."



● PCH ENV DPT (Pitch Envelope Depth)

<Envelope Depth> Pitch Envelope Depth— -12 to +12 [PALETTE]

This sets the extent of the effectiveness of the Pitch Envelope. Larger values, either positive or negative, result in a greater range of change for the Pitch Envelope. Negative values reverse the form of the envelope.



<Velocity Sens> Pitch Envelope Velocity Sensitivity — -100 to +150 [PALETTE]

This changes the level of the Pitch Envelope according to velocity. When the value is positive, a larger velocity value results in a larger Pitch Envelope level. When negative, a larger velocity value results in a smaller Pitch Envelope level.

● PCH TIME ENV (Pitch Time Envelope)

<V-T1> Velocity Time 1 Sensitivity — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100 [PALETTE]

This varies the Pitch Envelope T1 according to velocity. When the value is positive, a larger velocity value results in faster change for T1. The change is slowed when the value is negative.

<V-T4> Velocity Time 4 Sensitivity — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100 [PALETTE]

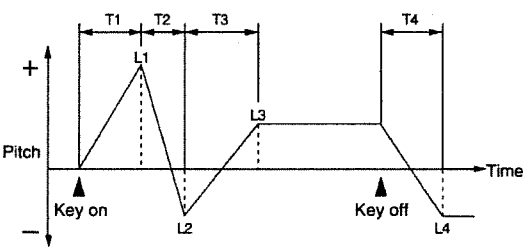
This varies the Pitch Envelope T4 according to the key off velocity. When the value is positive, a larger velocity value results in faster change for T4. The change is slowed when the value is negative.

* *This effect is not applied when connected to a keyboard that cannot send key off velocity.*

<Time Keyfollow> Envelope Time Key Follow — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100 [PALETTE]

This varies the Pitch Envelope according to the keyboard position. The envelope time of the C4 key is used as the reference. When the value is positive, keys farther to the right side of the keyboard (the high range) produce shorter times up to T2 to T4. Negative values result in longer times.

● PCH ENVELOPE (Pitch Envelope)



<T1, T2, T3, or T4> Pitch Envelope Time 1, 2, 3, or 4 — 0 to 127 [PALETTE]

This sets the time T1, T2, T3, or T4 for the Pitch Envelope. Larger values result in longer times until the next pitch is reached (for instance, T2 controls the time from L1 until L2 is reached).

<L1, L2, L3, or L4> Pitch Envelope Level 1, 2, 3, or 4 — 0 to 127 [PALETTE]

This sets the level L1, L2, L3, or L4 for the Pitch Envelope. It determines how much the pitch changes from the reference pitch (set with Coarse Tune or Fine Tune) at each point. The change is higher than the reference pitch when this value is positive and lower than the reference pitch when negative.

■ Changing the Sound (TVF)

You can manipulate Tones with a TVF (Time Variant Filter), changing the brightness, thickness, and other aspects of the sound.

● FILTER

<Typ> Filter Type — OFF/LPF/BPF/HPF/PKG

PALETTE

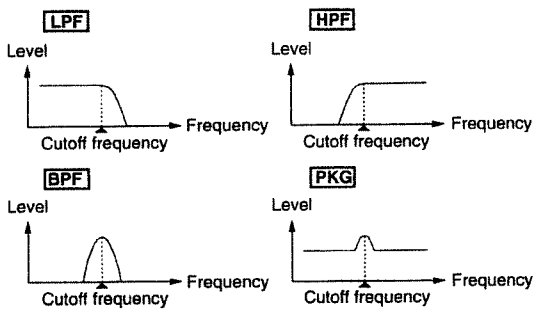
This selects the type of filter. A filter is a function that cuts off a specific frequency band to change a sounds brightness, thickness, and other qualities. If you don't want to use a filter, set this to "OFF."

LPF (Low-pass Filter):
Components higher than the cutoff frequency are eliminated. High-range frequencies are cut off, so the sound is rounder. This is the most often-used filter.

BPF (Bandpass Filter):
Only components near the cutoff frequency are allowed to remain — all others are eliminated. This is good for making highly distinctive sounds.

HPF (High-pass Filter):
Components lower than the cutoff frequency are eliminated. This filter is good for making percussion instruments with distinctive high ranges.

PKG (Peaking Filter):
The components near the cutoff frequency are emphasized. This expresses the special sound of a drum, and can even be used to create a wow effect.



<Cut> Cutoff Frequency — 0 to 127 PALETTE

This specifies the frequency at which the filter effect starts (the cutoff frequency) with respect to the frequency components of a waveform.
When using LPF, lowering the cutoff frequency reduces high harmonics for a "rounder" sound, and a higher cutoff frequency produces a brighter sound.

With BPF, the harmonic components that you hear vary according to the value for the cutoff frequency. This is good for making highly distinctive sounds.

When using HPF, raising the cutoff frequency reduces the low harmonics, so the bright components of the sound are emphasized.

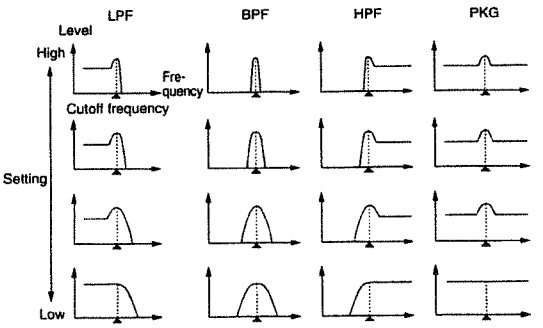
With PKG, the emphasized harmonics that are played vary according to the value of the cutoff frequency.

* *The effects of the filters and cutoff frequencies vary greatly from one type of waveform to another.*

<Res> Resonance — 0 to 127 PALETTE

This lifts up the components of the sound near the cutoff frequency, making the sound more distinctive.

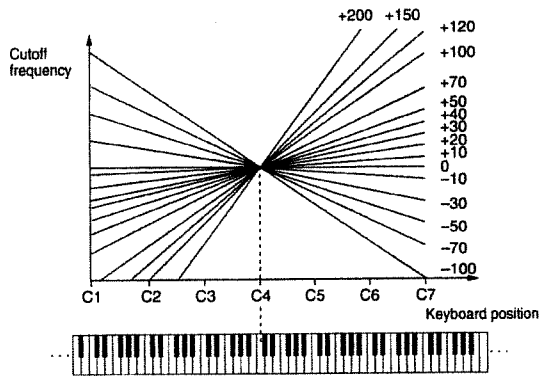
* *Setting this value too high may cause vibration and distortion of the sound.*



<KeyFlw> Cutoff Key Follow — -100/-70/-50/-30/-10/0/+10/+20/+30/+40/+50/+70/+100/+120/+150/+200

PALETTE

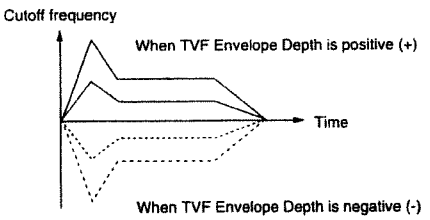
This makes the cutoff frequency change according to the position of the key played on the keyboard.
The cutoff frequency for the C4 key is used as the reference. When the value is positive, keys farther to the right side of the keyboard (the high range) result in higher cutoff frequencies, and negative values give lower cutoff frequencies.



<Env Dpt> TVF Envelope Depth— -63 to +63

PALETTE

This sets the extent of the effectiveness of the TVF Envelope (☞p.55). Larger values, either positive or negative, result in a greater range of change for the TVF Envelope. Negative values reverse the form of the envelope.



● TVF VELOCITY

<V-Sens> TVF Envelope Velocity Sensitivity — -100 to +150 PALETTE

This changes the level of the TVF Envelope according to velocity.
When the value is positive, a larger velocity value results in a larger TVF Envelope level for a brighter sound. When negative, a larger velocity value results in a smaller TVF Envelope level for a darker sound.

<V-Curve> TVF Envelope Velocity Curve — 1 to 7 [PALETTE]

This chooses the curve used when changing the cutoff frequency with velocity. The shape of the curve corresponding to the curve number (1 to 7) appears on the screen.

<V-Resonance> Resonance Velocity Sensitivity — -100 to +150 [PALETTE]

This changes the amount of resonance applied according to the velocity.
When the value is positive, a larger velocity produces greater resonance. When negative, resonance is reduced. The effect is not applied when the value is zero.

● TVF TIME ENV (TVF Time Envelope)

<V-T1> Velocity Time 1 Sensitivity — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100 [PALETTE]

This varies the TVF Envelope T1 according to velocity. When the value is positive, a larger velocity value results in faster change for T1. The change is slowed when the value is negative.

<V-T4> Velocity Time 4 Sensitivity — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100 [PALETTE]

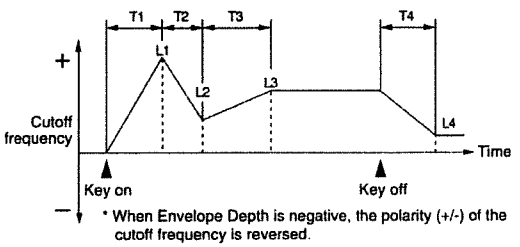
This varies the TVF Envelope T4 according to the key off velocity. When the value is positive, a larger velocity value results in faster change for T4. The change is slowed when the value is negative.

* *This effect is not applied when connected to a keyboard that cannot send key off velocity.*

<Time Keyfollow> Envelope Time Key Follow — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100 [PALETTE]

This varies the TVF Envelope according to the keyboard position. The envelope time of the C4 key is used as the reference. When the value is positive, keys farther to the right side of the keyboard (the high range) produce shorter times up to T2 to T4. Negative values result in longer times.

● TVF ENVELOPE



<T1, T2, T3, or T4> TVF Envelope Time 1, 2, 3, or 4 — 0 to 127 [PALETTE]

This sets the time T1, T2, T3, or T4 for the TVF Envelope. Larger values result in longer times until the next cutoff frequency is reached (for instance, T2 controls the time from L1 until L2 is reached).

<L1, L2, L3, or L4> TVF Envelope Level 1, 2, 3, or 4 — 0 to 127 [PALETTE]

This sets the level L1, L2, L3, or L4 for the TVF Envelope. It determines how much the cutoff frequency changes from the reference cutoff frequency (set with Cutoff Frequency) at each point. The change is higher than the reference cutoff frequency when this value is positive and lower than the reference cutoff frequency when negative.

■ Changing the Volume (TVA)

You can use a TVA (Time Variant Amplifier) to select the change in volume for each of the Tones.

● TVA

<Level> Tone Level — 0 to 127 [PALETTE]

This sets the volume of the Tone. It is mainly used to balance the volume with other Tones.

* *The volume of an entire Patch is determined by the Patch Common Patch Level (☞ p. 42).*

<Pan> Tone Pan — L64 to 0 to 63R

Sets the panning (localizes sound image) for each of the Tones. L64 is leftmost, 0 is centered, and 63R is rightmost.

<V-Sens> TVA Envelope Velocity Sensitivity — -100 to +150 [PALETTE]

This changes the level of the TVA Envelope according to velocity.
When the value is positive, a larger velocity value results in a larger TVA Envelope level for a louder sound. When negative, a larger velocity value results in a smaller TVA Envelope level for lower volume.

<V-Curve> TVA Envelope Velocity Curve — 1 to 7 [PALETTE]

This chooses the curve used when changing the cutoff frequency with velocity. The shape of the curve corresponding to the curve number (1 to 7) appears on the screen.

● BIAS

<Bias> Bias Level — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100 [PALETTE]

When you want to make the volume change according to the keyboard position, this sets how much the volume changes as you move away from the bias point. When you set a positive value, the volume gets louder as you move from the bias point. A negative value makes the volume grow softer.

* *Even when set to a positive value, the level will not exceed the maximum.*

<Point> Bias Point — C-1 to G9 [PALETTE]

This sets the key used as the reference for varying the volume when you want to change the volume according to the keyboard position.

<Direction>BiasDirection—LOWER/UPPER/LOWER &UPPER/ALL [PALETTE]

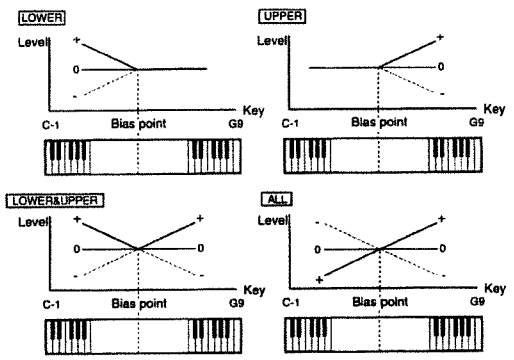
This sets the level for the direction to be changed — left or right — when you want to change the volume according to the keyboard position.

LOWER:
The volume changes when you move to the left (lower register) from the bias point.

UPPER:
The volume changes when you move to the right (upper register) from the bias point.

LOWER&UPPER:
The volume changes symmetrically when you move in either direction from the bias point.

ALL:
The volume changes linearly as you move from the lower register to the upper register, with the bias point at the center.



● PAN MODULATION

<KeyFlw> Pan Key Follow — -100/-70/-50/-30/-10/0/+10/+20/+30/+40/+50/+70/+100 PALETTE

This makes the panning change according to the position of the key played on the keyboard. The C4 key is used as the reference. When the value is positive, keys farther to the right side of the keyboard (the high range) result in panning to the right, and negative values give panning to the left.

<Random> Random Pan Depth — 0 to 63 PALETTE

Panning changes irregularly each time a key is played. The value you set for this determines the range of change. There is no change when set to zero.

<Alternate> Alternate Pan Depth — L63 to 0 to R63 PALETTE

The sound image is panned alternatingly to the right and left each time a key is played. The changes are made with the value set for Tone Pan at the center. There is no change when set to zero. If you set two Tones respectively to L and R, the stereo position is swapped each time they are played.

● TVA TIME ENV (TVA Time Envelope)

<V-T1> Velocity Time 1 Sensitivity — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100 PALETTE

This varies the TVA Envelope T1 according to velocity. When the value is positive, a larger velocity value results in faster change for T1. The change is slowed when the value is negative.

<V-T4> Velocity Time 4 Sensitivity — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100 PALETTE

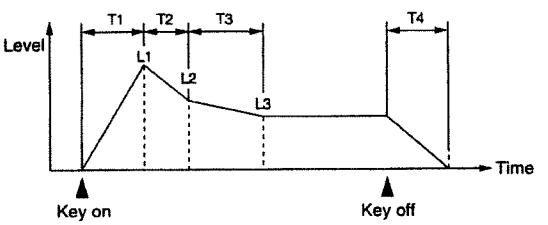
This varies the TVA Envelope T4 according to the key off velocity. When the value is positive, a larger velocity value results in faster change for T4. The change is slowed when the value is negative.

* ***This effect is not applied when connected to a keyboard that cannot send key off velocity.***

<Time Keyfollow> Envelope Time Key Follow — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/ +40/+50/ +70/+100 PALETTE

This varies the TVA Envelope according to the keyboard position. The envelope time of the C4 key is used as the reference. When the value is positive, keys farther to the right side of the keyboard (the high range) produce shorter times up to T2 to T4. Negative values result in longer times.

● TVA ENVELOPE



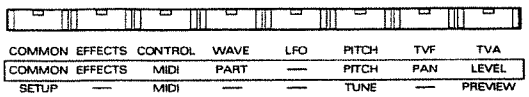
<T1, T2, T3, or T4> TVA Envelope Time 1, 2, 3, or 4 — 0 to 127 PALETTE

This sets the time T1, T2, T3, or T4 for the TVA Envelope. Larger values result in longer times until the next volume is reached (for instance, T2 controls the time from L1 until L2 is reached).

<L1, L2, or L3> TVA Envelope Level 1, 2, or 3 — 0 to 127 PALETTE

This sets the level L1, L2 or L3 for the TVA Envelope. It determines how much the volume changes from the reference volume (set with Tone Level) at each point.

2. Performance Edit Mode



■Making Settings for an Entire Performance (COMMON)

These set parameters and key ranges for an entire Performance.

● PERFORM NAME (Performance Name)

You can give a Performance a name up to 12 characters in length.

The same procedure that you use to change a Patch name can be used to change a Performance name.

Available characters:
Space, A to Z, a to z, 0 to 9, +-*/ |=?<>()[]{}:;.,"'`#%&$¥@^_

● PERFORM TEMPO (Performance Tempo)

<Default Tempo> Default Tempo — 20 to 250
This sets the speed of the tempo clock built into the unit, which controls the parameters for Tones and Effects.
The Patch parameters also have a Tempo Clock setting, but in the Performance mode the Default Tempo values for the Patches in each Part are ignored, and the parameters for the Parts are controlled by the Default Tempo you set here.

* *When using the internal tempo clock, set the Clock Source system parameter (☞ p. 66) to "INT."*

* *The internal tempo clock is not output from MIDI OUT.*

● PERFORM KEY MODE (Performance Key Mode)

<Key Range> Key Range Switch — OFF/ON
This selects whether the setting for Key Range is enabled (ON) or disabled (OFF).

● KEY RANG (Key Range)

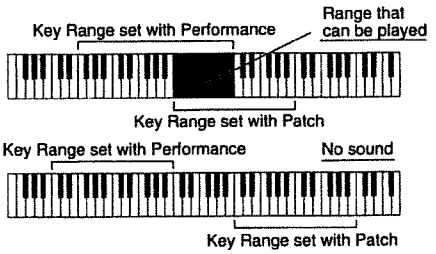
<Key Lower> Key Range Lower — C-1 to G9 PALETTE
This sets the key of the lowest sound played for the Parts.

* *If you try to make this value higher than the key set for Key Range Upper, the value for Key Range Upper changes at the same time.*

<Key Upper> Key Range Upper — C-1 to G9 PALETTE
This sets the key of the highest sound played for the Parts.

* *If you try to make this value lower than the key set for Key Range Lower, the value for Key Range Lower changes at the same time.*

The relationship with Key Range set with Patch Common is as shown below.



● RESERVE (Voice Reserve)

<Voice Reserve> Voice Reserve — 0 to 64 PALETTE
This setting determines the number of voices set aside for each Part during a performance that has more than 64 voices. Because each time a Patch is played it uses a number of voices equal to the number of Tones that make up the Patch, you should set this to a number of voices equal to the number of Tones multiplied by the number of played sounds that are required. However, the total of Voice Reserve settings for each Part cannot be higher than 64. The number in parentheses indicates the number of voices that are left and are available for setting.

* *The number of sounds that the JV-1080 can play simultaneously varies by the number of Tones in the Patches. Using one Tone means using one voice. The JV-1080 can use up to 64 voices. This means that if a Patch uses only one Tone, 64 sounds can be played at the same time. But if a Patch uses two Tones, then only 32 sounds can be played simultaneously.*

■ Selecting Effects Added to the Performance (EFFECTS)

● OUTPUT

<Output Assign> Output Assign — MIX/EFX/OUTPUT1/OUTPUT2 PALETTE
Output Level — 0 to 127 PALETTE
Output Assign determines the output destination for each Part, and Output Level sets the level of the output signal.

MIX:
This sends the original sound to EFX. The sound is also simultaneously output to Chorus and Reverb.

EFX:
This sends the original sound to MIX OUT. The sound is also simultaneously output to Chorus and Reverb. The output destination of the sound passing through EFX follows the Output Assign setting for PERFORM EFX OUT.

OUTPUT1:
This sends the original sound to OUTPUT1.

OUTPUT2:
This sends the original sound to OUTPUT2.

PATCH:
This sends the original sound according to the output destinations of the Output Assign settings made for the Patches selected for the Part (☞ p. 45). When this setting is made, the Output Level, Chorus Send Level, and Reverb Send Level values are added to the corresponding values for the Patch.

* *When OUTPUT1 or OUTPUT2 is selected as the output destination, the settings for Chorus and Reverb are ignored.*

* *If you want to keep the Output settings for each of the Tones, set this to PATCH. If you set it to something else other than PATCH, the Output settings for the Tones (Output Assign, Output Level, Chorus Send Level, and Reverb Send Level) are disabled, and the Output settings for the Part become effective.*

<Chorus> Chorus Send Level — 0 to 127 [PALETTE]
This sets the level of the signal sent to Chorus for each Part.

<Reverb> Reverb Send Level — 0 to 127 [PALETTE]
This sets the level of the signal sent to Reverb for each Part.

● PERFORM EFX TYPE (Performance EFX Type)

<Type> EFX Type
This determines the type of EFX applied to the Performance. For a description of the EFX types, check out "Chapter 5 — Multi-Effector EFX" (☞ p. 83).

* *This is disabled when EFX Source is set to 1-9/11-16.*

<Source> EFX Source — PERFORM/1-9/11-16
This selects whether the EFX set for the Performance is applied to the entire Performance (PERFORM), or whether one of the EFXs set for the Patches of the Parts is selected and applied to the entire Performance (1-9/11-16).

* *The EFX set for a Patch and the EFX set for the Performance cannot be used at the same time.*

* *When set to 1-9/11-16, the settings for the EFX Type and the following Performance EFX Parameter, Performance EFX Output and Performance EFX Control are disabled, and the settings for the Patch EFX are enabled.*

● PERFORM EFX PRM (Performance EFX Parameter)

This selects the parameter for the EFX chosen with EFX Type. The parameters that can be set vary from one EFX to another. For a description of EFX parameters, see "Chapter 5 — Multi-Effector EFX" (☞ p. 83).

* *This setting is ignored when EFX Source is set to 1-9/11-16.*

● PERFORM EFX OUT (Performance EFX Output)

This sets how sound through EFX will be output when "EFX" is selected with Output Assign for OUTPUT.

* *This setting is ignored when EFX Source is set to 1-9/11-16.*

<Output Assign> Output Assign — MIX/OUTPUT1/OUTPUT2
Output Level — 0 to 127
Output Assign determines the output destination for the EFX sound, and Output Level sets the level of the output signal.

MIX:
This sends the EFX sound to MIX OUT. The sound is also simultaneously output to Chorus and Reverb.

OUTPUT1:
This sends the EFX sound to OUTPUT1.

OUTPUT2:
This sends the EFX sound to OUTPUT2.

* *When OUTPUT1 or OUTPUT2 is selected as the output destination, all settings for Chorus and Reverb are ignored.*

<Chorus> Chorus Send Level — 0 to 127
This sets the level of the signal sent to Chorus from EFX.

<Reverb> Reverb Send Level — 0 to 127
This sets the level of the signal sent to Reverb from EFX.

● PERFORM EFX CTRL (Performance EFX Control)

The JV-1080 lets you use any of a variety of MIDI Controllers to vary EFX parameters in real time.

Just as with Patch EFX Control, you use EFX Control Source to choose a Controller, and set the degree of action of the Controller with EFX Control Depth (-63 to +63).

You can choose any of the following as the EFX Control Source.

OFF:
No Controller is used.

SYS-CTRL1:
The Controller set with System Control Source 1 , a system parameter, is used (☞ p. 68).

SYS-CTRL2:
The Controller set with System Control Source 2 , a system parameter, is used (☞ p. 68).

MODULATION:
Modulation (Control Change # 1)

BREATH:
Breath (Control Change # 2)

FOOT:
Foot (Control Change # 4)

VOLUME:
Volume (Control Change # 7)

PAN:
Pan (Control Change # 10)

EXPRESSION:
Expression (Control Change # 11)

BENDER:
Pitch bend

AFTERTOUCH:
Aftertouch

* *Choose "SYS-CTRL1" or "SYS-CTRL2" if there is no need to use a different Controller for each Performance, or if you want to perform control with something other than the control changes described here. Use the system parameter's Control Assign 1 page to set the Controller (☞ p. 68).*
* *When the switch for Receive MIDI, a system parameter, is set to "OFF," then there is no effect when any Controller is used.*
* *This setting is ignored when EFX Source is set to 1-9/11-16.*

● PERFORM CHORUS (Performance Chorus)

<Rat> Chorus Rate — 0 to 127
This sets the speed for the undulations of the Chorus sound.

<Dpt> Chorus Depth — 0 to 127
This sets the depth of the undulations of the Chorus sound.

<Dly> Pre delay — 0 to 127
This sets the time from the playing of the original sound to the playing of the Chorus sound. Larger values result in broader sounds.

<Fbk> Chorus Feedback — 0 to 127
This sets the amount of sound from Chorus that is returned (fed back) to Chorus. Larger values result in Chorus effects of greater complexity.

<Level> Chorus Level — 0 to 127
This sets the volume of the Chorus sound.

<Output> Chorus Output Assign — MIX/REVERB/MIX+REV
This setting determines how the Chorus sound is output.

MIX:
This outputs the Chorus sound to MIX OUT.

REVERB:
This outputs the Chorus sound to Reverb.

MIX+REV:
This outputs the Chorus sound to both MIX OUT and Reverb.

● PERFORM REVERB (Performance Reverb)

<Type> Reverb Type
This parameter selects the type of reverberation.

ROOM1:
Short, high-density reverb

ROOM2:
Short, low-density reverb

STAGE1:
Reverb with many late reflections

STAGE2:
Reverb with strong initial reflection

HALL1:
Sparkling reverb

HALL2:
Richly resounding reverb

DELAY:
Standard delay

PAN-DLY:
A delay that pans (moves) the reflections to left and right.

<Time> Reverb Time — 0 to 127
For a type from "ROOM1" to "HALL2," this sets the reverb time (i.e., how long the reverb continues). For "DELAY" or "PAN-DLY," this sets the delay time. Larger values produce a feeling of greater space.

<Lev> Reverb Level — 0 to 127
This sets the volume of the reverb sound.

<Fbk> Delay Feedback — 0 to 127
When "DELAY" or "PAN-DLY" has been chosen as the type, this sets the amount of delayed sound that is returned (fed back) to the delay. Larger values result in a delay sustained for a longer time.

<HF Damp> High-frequency Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.

A lower cutoff frequency results in a "darker" sound, and a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

■ Setting the MIDI Channel for a Part (MIDI)

These set the MIDI message receive switch and receive channel for each of the Parts.

● CONTROL

<Channel> MIDI Channel — 1 to 16 [PALETTE]
This sets the MIDI receive channel for each Part.

* *Be careful when using this setting, because if you set it to the same channel as "Control Channel," a system parameter (☞ p. 66), then the Control Channel setting takes priority and when a program change message is received the Performance will be switched, too.*

<Rx> MIDI Receive Switch — OFF/ON [PALETTE]
This determines whether MIDI messages for each Part are received (ON) or not received (OFF).

* *The setting you make here changes automatically if you switch PART SWITCH [1/9] to [8/16] on or off while in the Performance Play mode.*

● Rx MIDI (Receive MIDI)

<Volume> Receive Volume — OFF/ON [PALETTE]
This determines whether MIDI volume messages for each Part are received (ON) or not received (OFF).

* *This setting is ignored when the Volume setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).*

<Hold-1> Receive Hold 1 — OFF/ON [PALETTE]
This determines whether MIDI hold 1 messages for each Part are received (ON) or not received (OFF).

* This setting is ignored when the Hold 1 setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).

<Program Change> Receive Program Change — OFF/ON [PALETTE]
This setting determines whether MIDI program change messages for each Part are received (ON) or not received (OFF).

* *This setting is ignored when the Program Receive setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).*

■ Selecting the Patch Assigned to a Part (PART)

This assigns a Patch or Rhythm Set to each of the Parts.

● PATCH

<Group> Patch Group [PALETTE]
This selects the group of the Patch (or Rhythm Set, for Part 10) to assign to each Part.

USR:
User Memory Patch

CRD:
DATA Card Patch

PCM:
PCM Card Patch

PRA to PRC:
Patch from Preset Memory A to C

GM:
Patch from Preset Memory D (GM sound)

XPA to XPD:
Patch from Expansion Board A to D

<Number> Patch Number — 001 to 255 [PALETTE]
This selects the number of the Patch to assign to each Part. The name of the selected Patch appears on the display in parentheses.

* *For USR, PRA to PRC, and GM, you can choose a number from 001 to 128. For CRD, PCM, and XPA to XPD, you can choose any Patch number up to the number of Patches stored on the device.*

* *You can't select a Patch from a DATA Card, PCM Card, or Expansion Board unless that device is installed in your JV-1080.*

■ Setting the Pitch for a Part (PITCH)

This makes settings related to the pitch of each Part.

● PITCH

<Pitch Coarse> Pitch Coarse Tune — -48 to +48 [PALETTE]
This shifts the pitch of a Part by up to four octaves up or down, in semitone steps.
The pitch varies relatively, with the pitch of the Patch taken to be zero.

<Pitch Fine> Pitch Fine Tune — -50 to +50 [PALETTE]
This shifts the pitch of a Part up or down in increments of one cent (1/100th of a semitone).
You can fine-tune the Tone by up to half a half-step (one quarter-tone) in either direction.

■ Setting the Stereo Position for a Part (PAN)

This sets the panning (localizes sound image) for each of the Parts.

● PAN

<Part Pan> Part Pan — L64 to 0 to 63R [PALETTE]
Sets the panning (localizes sound image) for each of the Parts. L64 is leftmost, 0 is centered, and 63R is rightmost.

* *Because panning is also set within each Patch, the stereo position of each Patch is shifted from its current position by the value you set here.*

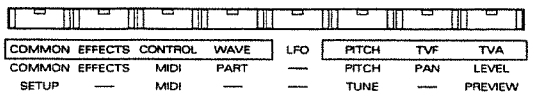
■ Setting the Volume for a Part (LEVEL)

This sets the level (volume) for each Part.

● LEVEL

<Level> Part Level — 0 to 127 [PALETTE]
This sets the volume of the Part. It is mainly used to balance the volume with other Parts.

3. Rhythm Edit Mode



■ Naming a Rhythm Set (COMMON)

● RHYTHM NAME (Rhythm Set Name)

You can give a Rhythm Set a name up to 12 characters in length.

The same procedure that you use to change a Patch name can be used to change a Rhythm Set name.

Available characters:
Space, A to Z, a to z, 0 to 9, +-*/ | =?<>()[]{}:;.,"'`#%&$¥@^_

■ Selecting Effects Added to the Rhythm Set (EFFECTS)

* *The parameters at the pages for the Effects you set here, except for the OUTPUT page, are Performance parameters currently called up to the temporary area. This means that if you want to save the data for these parameters, you must first change over to the Performance mode and save it as Performance data. However, if you've called this Rhythm Set from another Performance, then its Effect settings belong to that Performance.*

● OUTPUT

<Output Assign> Output Assign — MIX/EFX/OUTPUT1/OUTPUT2
Output Level — 0 to 127
Output Assign determines the output destination for each Rhythm Tone, and Output Level sets the level of the output signal.

MIX:
This sends the original sound to MIX OUT. The sound is also simultaneously output to Chorus and Reverb.

EFX:
This sends the original sound to EFX. The sound is also simultaneously output to Chorus and Reverb. The output destination of the sound passing through EFX follows the Output Assign setting for PERFORM EFX OUT.

OUTPUT1:
This sends the original sound to OUTPUT1.

OUTPUT2:
This sends the original sound to OUTPUT2.

* *When OUTPUT1 or OUTPUT2 is selected as the output destination, the settings for Chorus and Reverb are ignored.*

<Chorus> Chorus Send Level — 0 to 127
This sets the level of the signal sent to Chorus for each Rhythm Tone.

<Reverb> Reverb Send Level — 0 to 127
This sets the level of the signal sent to Reverb for each Rhythm Tone.

● PERFORM EFX TYPE (Performance EFX Type)

<Type> EFX Type
This determines the type of EFX applied to the Performance.

For a description of the EFX types, check out "Chapter 5 — Multi-Effector EFX" (☞ p. 83).

* *This is disabled when EFX Source is set to 1-9/11-16.*

<Source> EFX Source — PERFORM/1-9/11-16
This selects whether the EFX set for the Performance is applied to the entire Performance (PERFORM), or whether one of the EFXs set for the Patches of the Parts is selected and applied to the entire Performance (1-9/11-16).

* *The EFX set for a Patch and the EFX set for the Performance cannot be used at the same time.*

* *When set to 1-9/11-16, the settings for the EFX Type and the following Performance EFX Parameter, Performance EFX Output and Performance EFX Control are disabled, and the settings for the Patch EFX are enabled.*

● PERFORM EFX PRM (Performance EFX Parameter)

This selects the parameter for the EFX chosen with EFX Type. The parameters that can be set vary from one EFX to another. For a description of EFX parameters, see "Chapter 5 — Multi-Effector EFX" (☞ p. 83).

* *This setting is ignored when EFX Source is set to 1-9/11-16.*

● PERFORM EFX OUT (Performance EFX Output)

This sets how sound through EFX will be output when "EFX" is selected with Output Assign for OUTPUT.

* *This setting is ignored when EFX Source is set to 1-9/11-16.*

<Output Assign> Output Assign — MIX/OUTPUT1/OUTPUT2
Output Level — 0 to 127
Output Assign determines the output destination for the EFX sound, and Output Level sets the level of the output signal.

MIX:
This sends the EFX sound to MIX OUT. The sound is also simultaneously output to Chorus and Reverb.

OUTPUT1:
This sends the EFX sound to OUTPUT1.

OUTPUT2:
This sends the EFX sound to OUTPUT2.

* *When OUTPUT1 or OUTPUT2 is selected as the output destination, all settings for Chorus and Reverb are ignored.*

<Chorus> Chorus Send Level — 0 to 127
This sets the level of the signal sent to Chorus from EFX.

<Reverb> Reverb Send Level — 0 to 127
This sets the level of the signal sent to Reverb from EFX.

● PERFORM EFX CTRL (Performance EFX Control)

The JV-1080 lets you use any of a variety of MIDI Controllers to vary EFX parameters in real time.

Just as with Patch EFX Control, you use EFX Control Source to choose a Controller, and set the degree of action of the Controller with EFX Control Depth (-63 to +63).

You can choose any of the following as the EFX Control Source.

OFF:
No Controller is used.

SYS-CTRL1:
The Controller set with System Control Source 1 , a system parameter, is used (☞ p. 68).

SYS-CTRL2:
The Controller set with System Control Source 2 , a system parameter, is used (☞ p. 68).

MODULATION:
Modulation (Control Change # 1)

BREATH:
Breath (Control Change # 2)

FOOT:
Foot (Control Change # 4)

VOLUME:
Volume (Control Change # 7)

PAN:
Pan (Control Change # 10)

EXPRESSION:
Expression (Control Change # 11)

BENDER:
Pitch bend

AFTERTOUCH:
Aftertouch

* *Choose "SYS-CTRL1" or "SYS-CTRL2" if there is no need to use a different Controller for each Performance, or if you want to perform control with something other than the control changes described here. Use the system parameter's Control Assign page to set the Controller (☞ p. 68).*
* *When the switch for Receive MIDI, a system parameter, is set to "OFF," then there is no effect when any Controller is used.*
* *This setting is ignored when EFX Source is set to 1-9/11-16.*

● PERFORM CHORUS (Performance Chorus)

<Rat> Chorus Rate — 0 to 127
This sets the speed for the undulations of the Chorus sound.

<Dpt> Chorus Depth — 0 to 127
This sets the depth of the undulations of the Chorus sound.

<Dly> Pre delay — 0 to 127
This sets the time from the playing of the original sound to the playing of the Chorus sound. Larger values result in broader sounds.

<Fbk> Chorus Feedback — 0 to 127
This sets the amount of sound from Chorus that is returned (fed back) to Chorus. Larger values result in Chorus effects of greater complexity.

<Level> Chorus Level — 0 to 127
This sets the volume of the Chorus sound.

<Output> Chorus Output Assign — MIX/REVERB /MIX+REV
This setting determines how the Chorus sound is output.

MIX:
This outputs the Chorus sound to MIX OUT.

REVERB:
This outputs the Chorus sound to Reverb.

MIX+REV:
This outputs the Chorus sound to both MIX OUT and Reverb.

● PERFORM REVERB (Performance Reverb)

<Type> Reverb Type
This parameter selects the type of reverberation.

ROOM1:
Short, high-density reverb

ROOM2:
Short, low-density reverb

STAGE1:
Reverb with many late reflections

STAGE2:
Reverb with strong initial reflection

HALL1:
Sparkling reverb

HALL2:
Richly resounding reverb

DELAY:
Standard delay

PAN-DLY:
A delay that pans (moves) the reflections to left and right.

<Time> Reverb Time — 0 to 127
For a type from "ROOM1" to "HALL2," this sets the reverb time (i.e., how long the reverb continues). For "DELAY" or "PAN-DLY," this sets the delay time. Larger values produce a feeling of greater space.

<Lev> Reverb Level — 0 to 127
This sets the volume of the reverb sound.

<Fbk> Delay Feedback — 0 to 127
When "DELAY" or "PAN-DLY" has been chosen as the type, this sets the amount of delayed sound that is returned (fed back) to the delay. Larger values result in a delay sustained for a longer time.

<HF Damp> High-frequency Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.

A lower cutoff frequency results in a "darker" sound, and a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

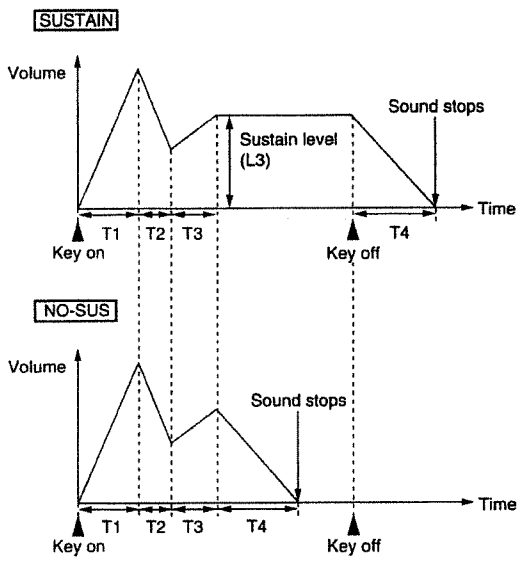
■ Using Controllers to Change How Sounds Are Played (CONTROL)

These make settings for the Controllers and for how Rhythm Tones are played.

● CONTROL

<Bender> Bender Range — 0 to 12
This lets you set how far the pitch changes when the Bender lever is moved to the right or left (or when the wheel is turned). You can set a range up/down to one octave in semitone increments.

<EnvMode> Envelope Mode — NO-SUS/SUSTAIN
This sets whether the time of the sustain level (L3) for the Pitch/TVF/TVA Envelope is ignored (NO-SUS) or recognized (SUSTAIN). With one-shot sounds this is effective when set to "NO-SUS."



<Mute Group> Mute Group — OFF/1 to 31
This lets you assign numbers to Rhythm Tones and differentiate by groups so that rhythm sounds with identical numbers are not played simultaneously. Up to 31 groups can be set. There is no muting when set to "OFF."

● RxSWITCH (Receive Switch)

<Volume> Volume Control Switch — OFF/ON
This determines whether the volume changes (ON) or doesn't change (OFF) when MIDI volume messages are received for the Rhythm Tones.

* *This setting is ignored when the Volume setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).*

<Pan> Pan Control Switch — OFF/CONT/KEY-ON
This sets how MIDI pan messages for each of the Rhythm Tones are received.

OFF:
The stereo position does not change when a pan message is received.

CONT:
Pan messages are received and the stereo position changes.

KEY-ON:
The stereo position changes according to pan messages when the key is on, but even if a new pan message is received while the sound is played, there is no change in the stereo position until the next time the key is on.

* *This setting is ignored when the Control Change setting for Receive MIDI, a system parameter, is set to "OFF" (☞ p. 68).*

<Hold-1 Switch> Hold 1 Control Switch — OFF/ON
This determines whether a sound is held (ON) or not held (OFF) when MIDI hold 1 messages are received for the Rhythm Tones.

* *This setting is ignored when the Hold 1 setting for Receive MIDI, a System parameter, is set to "OFF" (☞ p. 68).*

■ Selecting Waveforms for a Rhythm Tone (WAVE)

This lets you select the waveform that serves as the basis for a Rhythm Tone, apply effects to the waveform, and control its pitch.

● WAVE

<Group> Wave Group — INT-A or B/CARD/EXP-A to D
This determines the form of memory from which a waveform is to be chosen.

INT-A or B:
Selects a waveform stored in the JV-1080.

CARD:
Selects a waveform stored on a PCM Card.

EXP-A to D:
Selects a waveform stored on Expansion Board A, B, C, or D.

<Number> Wave Number — 1 to 255
Selects the waveform that forms the basis of a Rhythm Tone. Along with the wave number, the wave name appears on the display in parentheses.

<Gain> Wave Gain — -6/0/+6/+12
This changes the gain of a waveform, and is effective when adjusting the level of a Rhythm Tone. The value is displayed in decibels (dB).

<Switch> Tone Switch — OFF/ON
This determines whether each Rhythm Tone is to be played (ON) or not played (OFF).

■ Changing the Pitch of a Rhythm Tone (PITCH)

This sets parameters related to the pitch of a Rhythm Tone.

● PITCH

<Coarse> Source Key — C-1 to G9
This sets the pitch of the key in which the Rhythm Tone is to be played.

<Fine> Fine Tune — -50 to +50
This shifts the pitch of a Rhythm Tone up or down in increments of one cent (1/100th of a semitone).
You can fine-tune the Rhythm Tone by up to half a half-step (one quarter-tone) in either direction.

<Random> Random Pitch Depth — 0 to 1200
This deliberately causes the pitch of the Rhythm Tone being played to fluctuate irregularly. The value is displayed in hundredths of a half-step.

<Env Dpt> Pitch Envelope Depth— -12 to +12
This sets the extent of the effectiveness of the Pitch Envelope. Larger values, either positive or negative, result in a greater range of change for the Pitch Envelope. Negative values reverse the form of the envelope.

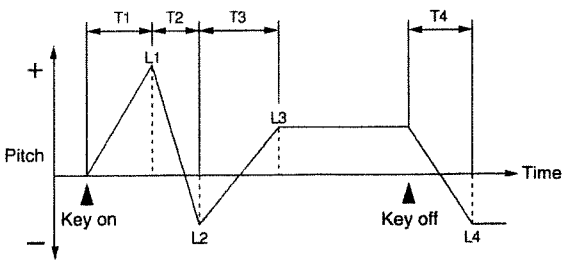
● PCH VELOCITY (Pitch Velocity)

<Velocity Sens> Pitch Envelope Velocity Sensitivity — -100 to +150
This changes the level of the Pitch Envelope according to velocity. When the value is positive, a larger velocity value results in a larger Pitch Envelope level. When negative, a larger velocity value results in a smaller Pitch Envelope level.

<Velocity Time> Velocity Time Sensitivity — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100
This varies the entire Pitch Envelope time according to velocity.

When the value is positive, a larger velocity value results in faster change in the Pitch Envelope time. The change is slowed when the value is negative.

● PCH ENVELOPE (Pitch Envelope)



<T1, T2, T3, or T4> Pitch Envelope Time 1, 2, 3, or 4 — 0 to 127
This sets the time T1, T2, T3, or T4 for the Pitch Envelope. Larger values result in longer times until the next pitch is reached (for instance, T2 controls the time from L1 until L2 is reached).

<L1, L2, L3, or L4> Pitch Envelope Level 1, 2, 3, or 4 — 0 to 127
This sets the level L1, L2, L3, or L4 for the Pitch Envelope. It determines how much the pitch changes from the reference pitch (set with Coarse Tune or Fine Tune) at each point. The change is higher than the reference pitch when this value is positive and lower than the reference pitch when negative.

■ Changing the Sound of a Rhythm Tone (TVF)

You can manipulate Rhythm Tones with a TVF (Time Variant Filter), changing the brightness, thickness, and other aspects of the sound.

● FILTER

<Type> Filter Type — OFF/LPF/BPF/HPF/PKG
This selects the type of filter. If you don't want to use a filter, set this to "OFF."

LPF (Low-pass Filter):
Components higher than the cutoff frequency are eliminated. High-range frequencies are cut off, so the sound is rounder. This is the most often-used filter.

BPF (Bandpass Filter):
Only components near the cutoff frequency are allowed to remain — all others are eliminated. This is good for making highly distinctive sounds.

HPF (High-pass Filter):
Components lower than the cutoff frequency are eliminated. This filter is good for making percussion instruments with distinctive high ranges.

PKG (Peaking Filter):
The components near the cutoff frequency are emphasized. This expresses the special sound of a drum, and can even be used to create a wow effect.

<Cutoff> Cutoff Frequency — 0 to 127
This specifies the frequency at which the filter effect starts (the cutoff frequency) with respect to the frequency components of a waveform.

* *The effects of the filters and cutoff frequencies vary greatly from one type of waveform to another.*

<Res> Resonance — 0 to 127
This lifts up the components of the sound near the cutoff frequency, making the sound more distinctive.

<Env Dpt> TVF Envelope Depth— -63 to +63
This sets the extent of the effectiveness of the TVF Envelope. Larger values, either positive or negative, result in a greater range of change for the TVF Envelope. Negative values invert the shape of the envelope.

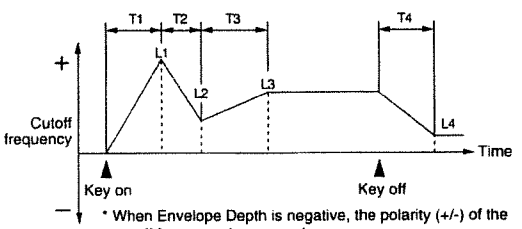
● TVF VELOCITY

<V-Sens> TVF Envelope Velocity Sensitivity — -100 to +150
This changes the level of the TVF Envelope according to velocity.
When the value is positive, a larger velocity value results in a larger TVF Envelope level for a brighter sound. When negative, a larger velocity value results in a smaller TVF Envelope level for a darker sound.

<V-Time> Velocity Time Sensitivity — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100
This varies the entire TVF Envelope time according to velocity. When the value is positive, a larger velocity value results in faster change in the TVF Envelope time. The change is slowed when the value is negative.

<V-Resonance> Resonance Velocity Sensitivity — -100 to +150
This changes the amount of resonance applied according to the velocity.
When the value is positive, a larger velocity produces greater resonance. When negative, resonance is reduced. The effect is not applied when the value is zero.

● TVF ENVELOPE



* When Envelope Depth is negative, the polarity (+/-) of the cutoff frequency is reversed.

<T1, T2, T3, or T4> TVF Envelope Time 1, 2, 3, or 4 — 0 to 127
This sets the time T1, T2, T3, or T4 for the TVF Envelope. Larger values result in longer times until the next cutoff frequency is reached (for instance, T2 controls the time from L1 until L2 is reached).

<L1, L2, L3, or L4> TVF Envelope Level 1, 2, 3, or 4 — 0 to 127
This sets the level L1, L2, L3, or L4 for the TVF Envelope. It determines how much the cutoff frequency changes from the reference cutoff frequency (set with Cutoff Frequency) at each point. The change is higher than the reference cutoff frequency when this value is positive and lower than the reference cutoff frequency when negative.

■ Changing the Volume of a Rhythm Tone (TVA)

You can use a TVA (Time Variant Amplifier) to select the change in volume for each of the Rhythm Tones.

● TVA

<Level> Tone Level — 0 to 127
This sets the volume of the Rhythm Tone.

<Pan> Tone Pan — L64 to 0 to 63R
Sets the panning (stereo position) for each of the Rhythm Tones.
L64 is leftmost, 0 is centered, and 63R is rightmost.

<Random> Random Pan Depth — 0 to 63
Panning changes irregularly each time a key is played. The value you set for this determines the range of change. There is no change when set to zero.

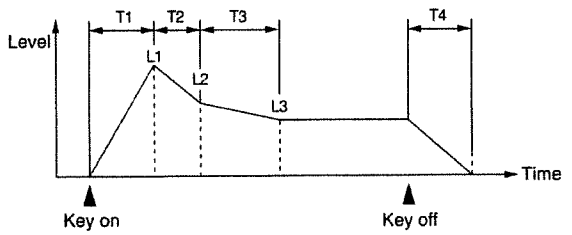
<Alt> Alternate Pan Depth — L63 to 0 to R63
The sound image is panned alternatingly to the right and left each time a key is played. The changes are made with the value set for Tone Pan at the center. There is no change when set to zero. If you set two Tones respectively to L and R, the stereo position is swapped each time they are played.

● TVA VELOCITY

<Velocity Sens> TVA Envelope Velocity Sensitivity — -100 to +150
This changes the level of the TVA Envelope according to velocity. When the value is positive, a larger velocity value results in a larger TVA Envelope level for a louder sound. When negative, a larger velocity value results in a smaller TVA Envelope level for a softer sound.

<Velocity Time> Velocity Time Sensitivity — -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100
This varies the entire TVA Envelope time according to velocity. When the value is positive, a larger velocity value results in faster change in the TVA Envelope time. The change is slowed when the value is negative.

● TVA ENVELOPE

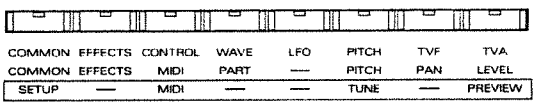


<T1, T2, T3, or T4> TVA Envelope Time 1, 2, 3, or 4 — 0 to 127
This sets the time T1, T2 or T3 for the TVA Envelope. Larger values result in longer times until the next volume is reached (for instance, T2 controls the time from L1 until L2 is reached).

<L1, L2, or L3> TVA Envelope Level 1, 2, or 3 — 0 to 127
This sets the level L1, L2, L3, or L4 for the TVA Envelope. It determines how much the volume changes from the reference volume (set with Tone Level) at each point.

4. System Mode

Pressing the [SYSTEM] button calls up the parameters for the System mode, no matter what mode you may be in at the time. The parameters you set here affect the entire JV-1080, so they remain effective even if you switch to the Patch mode or Performance mode, etc.(except for some parameters for the GM mode) These settings remain in memory even if you end your session without performing a write operation.



■ Making Selections for Settings and the Display (SETUP)

This lets you make various settings for the JV-1080, and also adjust the brightness of the display.

● SYSTEM SETUP

<LCD> LCD Contrast — 1 to 10
This adjusts the contrast (brightness) for the display. A larger value results in a brighter screen.

<PowerUp> Powerup Mode — DEFAULT/LAST
This selects the screen displayed when you turn on the power.

DEFAULT:
The Patch "USER: 001" Play screen is displayed.

LAST:
The Play screen for the Patch, Performance, or GM mode selected before you last switched off the power is displayed.

<Patch Remain> Patch Remain Switch — OFF/ON
This selects whether the sounds of a previously played Patch or Rhythm Set are kept (ON) or not kept (OFF) when you change the Patch or Rhythm Set.

● RHYTHM EDIT KEY

<Source> Rhythm Edit Source — PANEL/PANEL &MIDI
This sets whether Rhythm Tones to be edited are to be chosen by operating the controls on the JV-1080 (PANEL), or whether they can also be chosen with the keys on a MIDI keyboard connected to the unit (PANEL&MIDI).

PANEL:
Rhythm Tones can only be selected with the TONE SELECT buttons on the JV-1080.

PANEL&MIDI:
Rhythm Tones can be selected with the TONE SELECT buttons on the JV-1080, or by pressing the corresponding key on a MIDI keyboard connected to the JV-1080 (☞p. 34).

■ Making Settings for MIDI (MIDI)

This makes settings for MIDI receive channels and controllers.
The screen that is displayed depends on the mode you were in before you pressed the [SYSTEM] button.

● PERFORM MIDI (Performance MIDI)

This screen is displayed when you press [SYSTEM] while in the Performance mode.

<Control Channel> Control Channel — 1 to 16/OFF
This sets the channel for switching a Performance, which is different from the channels for the Parts of the Performance. If this channel matches the receive channel for any of the Parts, then Performance switching takes priority. Nothing is received when set to "OFF."

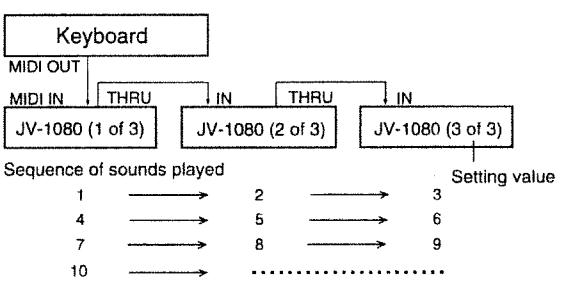
* *The MIDI receive channels for the Parts are set with Performance parameters.*

<Clock> Clock Source — INT/MIDI
When controlling Tone or EFX parameters (such as Delay Time or LFO Rate) with the tempo clock, this selects whether the unit's built-in clock (INT) or the clock for an external MIDI device (MIDI) will be used.

* *The internal tempo clock is determined by the Default Tempo Performance Common parameter (☞p. 57). However, this tempo clock is not output from MIDI OUT.*

<Stack> Stack — OFF/1 of 2/2 of 2/1 of 3/.../8 of 8
The Stack function lets you combine two or more JV-1080 units and increase the number of sounds that can be played simultaneously. You can hook up and use up to eight units.

[Usage with Three Connected Units]



When set to "OFF," the Stack function is disabled and each JV-1080 plays in sequence all of the note messages that are received.

* *The Stack function does not work with Patches or Rhythm Tones for which Solo or Portamento has been turned on.*

Rhythm Sets are played on the first JV-1080, and Patches for which Solo or Portamento has been turned on are played on the second JV-1080.

● PATCH MIDI

This screen is displayed when you press [SYSTEM] while in the Patch mode.

<Receive Channel> Patch Receive Channel — 1 to 16
This sets the MIDI receive channel in the Patch Play mode.

<Clock> Clock Source — INT/MIDI
When controlling Tone or EFX parameters (such as Delay Time or LFO Rate) with the tempo clock, this selects whether the unit's built-in clock (INT) or the clock for an external MIDI device (MIDI) will be used.

* *The internal tempo clock is determined by the Default Tempo Patch parameter (☞p. 42). However, this tempo clock is not output from MIDI OUT.*

<Stack> Stack — OFF/1 of 2/2 of 2/1 of 3/.../8 of 8
The Stack function lets you combine two or more JV-1080 units and increase the number of sounds that can be played simultaneously. See the description of the Performance MIDI Stack function.

● GM MODE MIDI

This screen is displayed when you press [SYSTEM] while in the GM mode.

<Clock> Clock Source — MIDI
Provides for control of EFX parameters (such as Delay Time) using the MIDI clock from an external device. In the GM mode, this parameter is always fixed to "MIDI". However, if no MIDI clock has arrived, the parameters will be controlled in accord with a calculation which converts a note's duration to what it should be at a tempo of 120 bpm.

<Stack> Stack — OFF/1 of 2/2 of 2/1 of 3/.../8 of 8
The Stack function lets you combine two or more JV-1080 units and increase the number of sounds that can be played simultaneously. See the description of the Performance MIDI Stack function.

● SYS-EXC MIDI (System Exclusive MIDI)

MIDI messages such as Performance and Patch data that are specific to certain devices are called "exclusive" messages, or SysEx messages. This sets how the JV-1080 exchanges SysEx messages with external MIDI devices.

<Unit #> Unit Number — 17 to 32
This setting ensures a match with the device ID number of the other device when exchanging SysEx messages.

<Rx.Exc> Receive System Exclusive — OFF/ON
This setting determines whether SysEx messages from an external device are received (ON) or not received (OFF).

<Tx.Exc> Transmit System Exclusive — OFF/ON
When a Patch or Rhythm Set parameter has been changed, this setting determines whether that information is sent (ON) or not sent (OFF) as a SysEx message.

<Rx.GM> Receive GM Message — OFF/ON
This setting determines whether GM MIDI messages from an external device are received (ON) or not received (OFF).

* *Set Receive GM Message to "ON" when you want to play back a GM score, or if you want the JV-1080 to switch to the GM mode automatically.*

● CONTROL SOURCE

<Tap> Tap Control Source — OFF/HOLD-1/SOST/SOFT/HOLD-2
This setting determines what pedal information is used for control when the tempo of the MIDI clock is determined by how rapidly the pedal is depressed.

OFF:
No control

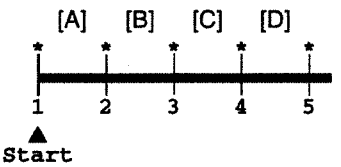
HOLD-1:
Hold 1 (Control Change # 64)

SOST:
Sostenuto (Control Change # 66)

SOFT:
Soft pedal (Control Change # 67)

HOLD-2:
Hold 2 (Control Change # 69)

When using Tap Control Source, the time intervals are calculated as shown below in order to determine what is recognized as being the duration of quarter notes. The tempo is altered to accord with this.



* : *Timing at which pedal is tapped*

First:	nothing occurs
Second:	interval of A
Third:	average of B and A intervals
Fourth:	average of C, B, and A intervals
Fifth:	average of D, C, B, and A intervals

From the fifth tap onwards, the value is always an average that includes the values for the four previous taps.

* *Note, however, that if the value for the current interval will cause a reduction of more than 10% in the tempo, the unit will begin a new record of the averages (as in the second tap above).*

<Hold> Hold Control Source — OFF/HOLD-1/SOST/SOFT/HOLD-2
This setting determines what pedal information is used for control when the pedal is used to maintain (hold) sound parameters. The settings are the same as for Tap Control Source.

<Peak> Peak Control Source — OFF/HOLD-1/SOST/SOFT/HOLD-2
This setting determines what pedal information is used for control when the pedal is used to hold the maximum values of sound parameters. The settings are the same as for Tap Control Source.

* *When each Control Source has been set to "HOLD-1," you should also set Hold 1 for Receive MIDI to "ON." When set to "SOST," "SOFT," or "HOLD-2," set Control Change for Receive MIDI (☞ p. 68) to "ON."*

● RECEIVE MIDI

<P.C Bnk C.C Vol Hld Bnd Mod Aft> — OFF/ON

This sets whether MIDI messages of each type are received (ON) or not received (OFF).

P.C:	Program Change
Hld:	Hold 1
Bnk:	Bank Select
Bnd:	Bender
C.C:	Control Change
Mod:	Modulation
Vol:	Volume
Aft:	Aftertouch

● CONTROL ASSIGN 1

<Control 1> System Control Source 1 — CC00 to CC95/BENDER/AFTERTOUCH

<Control 2> System Control Source 2 — CC00 to CC95/BENDER/AFTERTOUCH

These set two Controllers for making Tone and EFX parameters change in real time. You can assign a Control Change number (0 to 95), Bender, or Aftertouch.

Patches and Performances also have Controller settings, and when "SYS-CTRL1" is selected for them, the Controller set with System Control Source 1 is used. In the same way, choosing "SYS-CTRL2" causes the Controller set with System Control Source 2 to be used.

* *A Controller for which the switch for Receive MIDI, a System parameter, is set to "OFF" has no effect even if used.*

* *The Tone parameters to be changed are set with the Patch Control Destination (☞ p. 49). EFX parameters to be changed are predetermined according to the EFX type (☞ p. 83).*

* *Control Change messages contain predetermined functions, but the JV-1080 can assign and use functions that are different from these. You should be aware, however, that such usage does not conform to the operation of Control Change messages as prescribed by MIDI standards.*

● CONTROL ASSIGN 2

<Volume> Volume Control Source — VOLUME /VOL+EXP

This makes the volume of Patches and Performance Parts change according to Control Change messages.

VOLUME:
Change is effected only by Volume messages (Control Change # 7).

VOL+EXP:
Change is effected by the addition of Volume messages and Expression messages (Control Change # 11).

<Aftertouch> Aftertouch Source — CH-AFTER/ POLY-AFTER/CH&POLY

Aftertouch is a function that adds qualities such as vibrato, pitch bending, or other sound changes when a key that has already been played is then pressed with greater force. This setting lets you select the type of aftertouch to be received.

CH-AFTER:
Only Channel Aftertouch is received. (With Channel Aftertouch, the effect is applied to all the notes on the same MIDI channel.)

POLY-AFTER:
Only Polyphonic Aftertouch is received. (With Polyphonic Aftertouch, the effect is applied separately for each individual key.)

CH&POLY:
Both Channel Aftertouch and Polyphonic Aftertouch are received.

■ Adjusting the Tuning (TUNE)

These settings let you tune the unit or fine-tune the pitch of a scale.

The screen that is displayed depends on the mode you were in before you pressed the [SYSTEM] button.

● TUNE

<Master Tune> Master Tune — 427.4 to 452.6

This sets the overall tuning for the JV-1080. The frequency of the A4 key is displayed as the value.

<Scale Tune> Scale Tune Switch — — OFF/ON

This selects whether the Scale Tune function is to be used (ON) or not used (OFF).

Scale Tune Function

Scale Tune is a function for fine-tuning each pitch from C to B. Tuning the notes of a single octave causes the pitch of all octaves to be fine-tuned. By making the settings for Scale Tune, you can set a variety of pitch tunings other than equal temperament.

○ Equal Temperament

With this system, an octave is divided into 12 equal parts. This is the tuning system that is most widely used in Western music. The JV-1080 uses equal temperament when Scale Tune Switch is set to "OFF."

○ Pure Temperament (C is Tonic)

The three fundamental chords resound beautifully compared with even temperament. However, this effect can be obtained in only one key, and transposition makes the chord ambiguous. Some sample settings for keys that take C as the tonic are given here.

○ Arabian Scale

In this scale, E and B are a quarter-tone lower and C#, F#, and G# are a quarter-tone higher than in even temperament. The intervals from G to B, C to E, F to G#, A# to C#, and D# to F# have a neutral third (the interval between a major third and a minor third). With the JV-1080, you can enjoy the Arabian scale in three keys — G, C, and F.

Note	Even Temperament	Pure Temperament (C is Tonic)	Arabian Scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
D#	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
A#	0	+14	-10
B	0	-12	-49

● PART SCALE

This screen is displayed when you press the [SYSTEM] button while in the Performance mode.

Scale Tune C to B — -63 to +63 [PALETTE]
This sets the pitch of each note for the currently selected Performance Part. The setting is in increments of one cent (1/100th of a semitone). There are two screens — one for the black keys and one for the white keys.

● PATCH SCALE

This screen is displayed when you press the [SYSTEM] button while in the Patch mode.

Scale Tune C to B — -63 to +63 [PALETTE]
This sets the pitch of each note for the currently selected Patch. The setting is in increments of one cent (1/100th of a semitone). There are two screens — one for the black keys and one for the white keys.

* *Pressing a key from C to B on the MIDI keyboard causes the on-screen cursor to move to the selected key.*

■ Using the JV-1080's Controls to Play Test Sounds (PREVIEW)

Even when no MIDI keyboard is connected to the JV-1080, you can play test sounds by pressing the VOLUME knob. The settings you make here determine how these test sounds are played.

● PREVIEW MODE

<Mode> Preview Sound Mode — SINGLE/CHORD
This sets how the test sounds will be played. When set to "SINGLE," the sounds are played sequentially, one at a time. The sounds are played together when set to "CHORD." The sound itself is set with Preview Key described below.

● PREVIEW KEY

<Note 1-4> Preview Key Set 1 to 4 — C-1 to G9
This sets the pitches and note numbers for the test sounds. You can set up to four sounds.

● PREVIEW VELOCITY

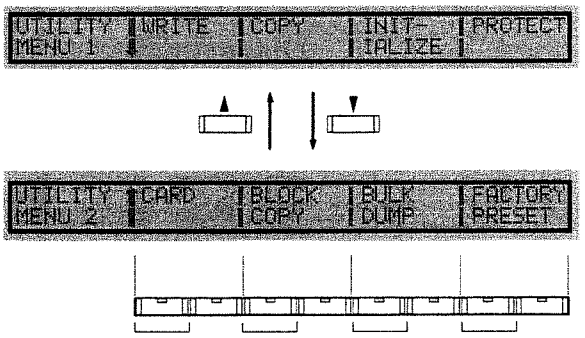
<Note 1-4> Preview Velocity Set 1 to 4 — 1 to 127
This sets the volume for the test sounds, with separate settings for notes 1 to 4.

5. Utility Mode

You can enter the Utility mode from any other mode simply by pressing the [UTILITY] button. The Utility mode lets you perform operations such as writing edited data to memory, copying data, or sending data to another device. In addition, the parameters you set in this mode remain in force even if you switch to another mode later.

Here's how to get around in the Utility mode.

1. Press [UTILITY] to make the indicator light up and display the menu screen.



Press the FUNCTION SELECT button on the left side under the display

2. Press the FUNCTION SELECT button corresponding to the position of the display menu items to call up the Parameter Setting screen for the selected menu item.
   Another way to get to the Parameter Setting screen is to use the [◄]/[►] buttons to move the cursor and make the desired menu item blink, then press the [ENTER] button.
3. Use the [◄]/[►] buttons to move the cursor to the desired parameter, then use the VALUE knob or the [INC]/[DEC] buttons to change the value. (The details of the settings are explained for each item.)
4. The message "[Press ENTER]" appears in the right-hand corner of the Parameter Setting screen. After making the setting, press [ENTER] to put it into effect. When the operation is finished, the message "COMPLETE" is displayed.

* *If you want to stop an operation that is in progress, press the [EXIT] button.*

* *If you press [UTILITY] while in the GM mode, only one GM Setup screen is displayed. For details, see "Chapter 4 — Other functions of the JV-1080 (☞ p. 76).*

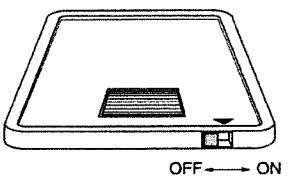
■ Saving the Data You've Created (WRITE)

This writes edited data to the unit's User Memory, or to a DATA Card. The screen that is displayed depends on the mode you were in before you pressed the [UTILITY] button.

* *If you want to write data to the User Memory, first make sure that Internal Protect (☞ p. 72) is set to "OFF." If you leave it on, then the following screen appears when you try to write the data.*

To cancel, press [EXIT]. Pressing [UTILITY] forces the data to be written.

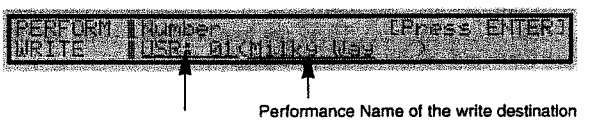
* *If you want to write data to a DATA Card, first insert a DATA Card into the DATA Card slot, and make sure that the DATA Card's protect switch is off. After writing the data, turn the protect switch back on to prevent data loss.*



When [UTILITY] is pressed while in the Performance mode...

● PERFORM WRITE (Performance Write)

This takes the Performance data in the temporary area and writes it to memory.
Use the VALUE knob, the [INC]/[DEC] buttons, or the SOUND GROUP buttons to select the Performance Number ("Number") for the write destination.



Performance Name of the write destination

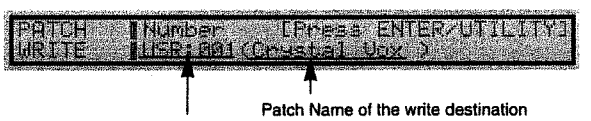
Performance Number of the write destination
(USR = User Memory, CRD = DATA Card)

The name of the selected Performance appears in parentheses.

When [UTILITY] is pressed while in the Patch mode...

● PATCH WRITE

This takes the Patch data in the temporary area and writes it to memory.



Patch Name of the write destination

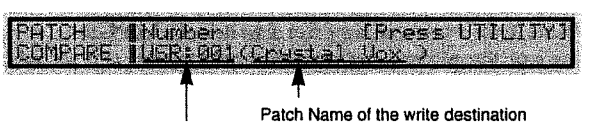
Patch Number of the write destination
(USR = User Memory, CRD = DATA Card)

Use the VALUE knob, the [INC]/[DEC] buttons, or the SOUND GROUP buttons to select the Patch Number ("Number") for the write destination.

The name of the selected Patch appears in parentheses.

If you want to check the sound of the write destination Patch...

When you're performing a Patch Write operation, pressing [UTILITY] before executing the write operation displays the Patch Compare screen. Patch Write is the only operation that lets you do this. When you've displayed this screen, you can play the MIDI keyboard to check the sound of the write destination Patch. This handy feature can help prevent the overwriting of important Patches.
You can also change Patches while at this screen. To return to the Patch Write screen, press [UTILITY].

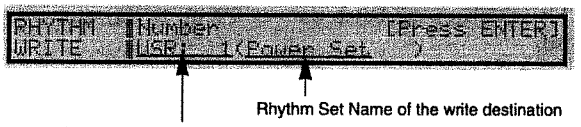


Patch Name of the write destination

Patch Number of the write destination
(USR = User Memory, CRD = DATA Card)

* *Note that from the Compare screen the sound may not always sound the same as it does in the Play mode.*

When [UTILITY] is pressed while in the Rhythm Set mode...



● RHYTHM WRITE (Rhythm Set Write)

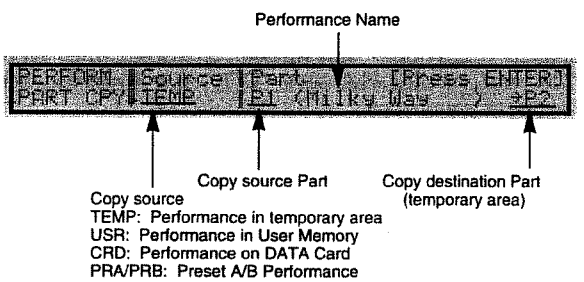
This takes the Rhythm Set data in the temporary area and writes it to memory.
Use the VALUE knob, the [INC]/[DEC] buttons, or the SOUND GROUP buttons to select the Rhythm Set Number ("Number") for the write destination.

The name of the selected Rhythm Set appears in parentheses.

■ Copying Data (COPY)

This copies Patch Performance, or Rhythm Set data to the temporary area. The screen that appears depends on the mode you were in before you pressed the [UTILITY] button.

When [UTILITY] is pressed while in the Performance mode...



● PERFORM PART CPY (Performance Part Copy)

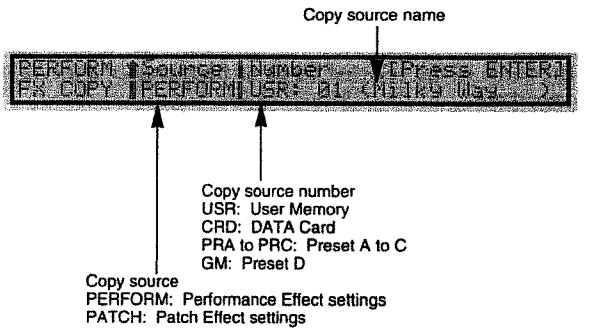
This copies the settings for one Performance Part to some other Performance Part in the temporary area.
Use the VALUE knob, [INC]/[DEC] buttons, or SOUND GROUP buttons to select the copy source ("Source").
Use the VALUE knob or [INC]/[DEC] buttons to choose the Parts ("Part") for the copy source and copy destination.

The name of the selected Performance appears in parentheses.

● PERFORM FX COPY (Performance Effect Copy)

This takes the settings for an Effect already in memory and copies them to a Performance in the temporary area. You can also copy Patch Effect settings.
Use the VALUE knob or [INC]/[DEC] buttons to select the copy source ("Source").

Use the VALUE knob, [INC]/[DEC] buttons, or SOUND



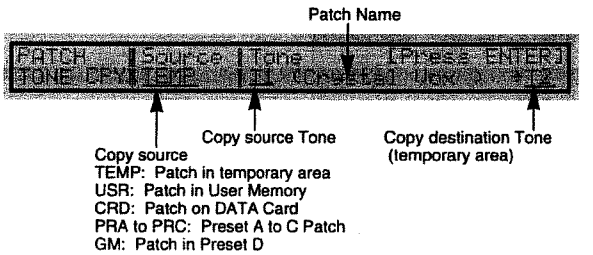
GROUP buttons to choose the copy source number ("Number").

The name of the selected Performance or Patch appears in parentheses.

When [UTILITY] is pressed while in the Patch mode...

● PATCH TONE COPY

This copies the settings for one Patch Tone to another Patch Tone in the temporary area.

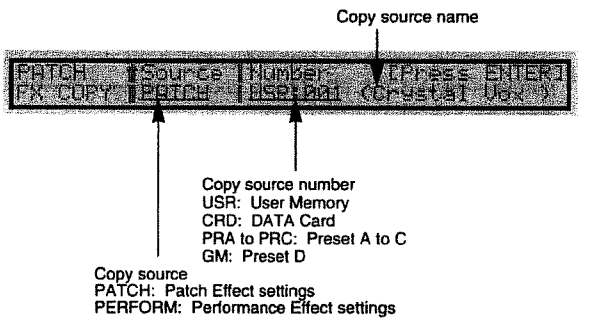


Use the VALUE knob, [INC]/[DEC] buttons, or SOUND GROUP buttons to select the copy source ("Source").
Use the VALUE knob or [INC]/[DEC] buttons to choose the Tones ("Tone") for the copy source and copy destination.

The name of the selected Patch appears in parentheses.

● PATCH FX COPY (Patch Effect Copy)

This takes the settings for an Effect already in memory and copies them to a Patch in the temporary area. You can also copy Performance Effect settings.



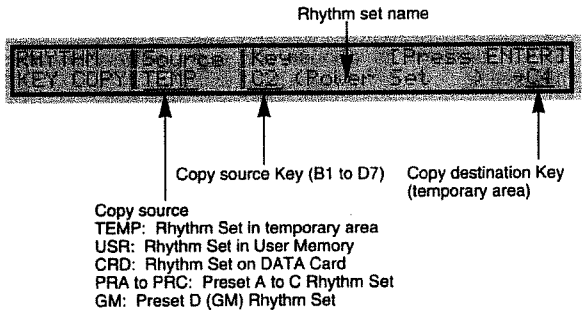
Use the VALUE knob or [INC]/[DEC] buttons to select the copy source ("Source").

Use the VALUE knob, [INC]/[DEC] buttons, or SOUND GROUP buttons to choose the copy source number ("Number").
The name of the selected Patch or Performance appears in parentheses.

When [UTILITY] is pressed while in the Rhythm Set mode...

● RHYTHM KEY COPY

This copies the settings for one Rhythm Key to some other Rhythm Key in the temporary area.



Use the VALUE knob, [INC]/[DEC] buttons, or SOUND GROUP buttons to select the copy source ("Source").
Use the VALUE knob, the [INC]/[DEC] buttons, or the keys on the keyboard to choose the keys ("Key") for the copy source and copy destination.

■ Initializing Data (INITIALIZE)

This returns Patch, Performance, and Rhythm Set parameters in the temporary area to their standard values and factory default data.
Because only data in the temporary area is initialized, data written to memory is not overwritten by the Initialize operation.
There are two methods for Initialize (Mode):

DEFAULT:
All parameters in the temporary area are returned to their standard values.

PRESET:
Only data in the temporary area is returned to the values of the data in the User Memory in effect when the unit was shipped from the factory (i.e., items with the same Program Numbers are affected). However, with Patches such as those on an expansion board, where the Program numbers exceed 128, all of them above number 128 will be given the values for USER: 128.

Use the VALUE knob or the [INC]/[DEC] buttons to make the Mode setting at the respective setting screens.

When [UTILITY] is pressed while in the Performance mode...

● PERFORM INIT (Performance Initialize)

This initializes the Performance data called up to the temporary area.

When [UTILITY] is pressed while in the Patch mode...

● PATCH INIT (Patch Initialize)

This initializes the Patch data called up to the temporary area.

When [UTILITY] is pressed while in the Rhythm Set mode...

● RHYTHM KEY INIT (Rhythm Key Initialize)

This initializes the data for the Rhythm Tones in the Rhythm Set called up to the temporary area that are assigned to specific keys..

* *Use the VALUE knob, [INC]/[DEC] buttons, or the keys on the keyboard to choose the keys (B1 to D7) to be initialized.*

● RHYTHM SET INIT (Rhythm Set Initialize)

This initializes the Rhythm Set data called up to the temporary area.

■ Protecting Data (PROTECT)

"Protection" means to prohibit writing to the JV-1080, thereby preventing valuable data from being mistakenly overwritten.

● WRITE PROTECT

<Internal> Internal Protect — OFF/ON
This prevents the contents of User Memory from being accidentally overwritten. This function is enabled when set to "ON" and cancelled when set to "OFF." It is always on when the power is turned on.

* *Set this to "OFF" when writing data for Patches or the like from a DATA Card or the temporary area to User Memory.*

<Exclusive> Exclusive Protect — OFF/ON
This prevents the contents of User Memory or a DATA Card from being overwritten by an Exclusive (SysEx) message from an external MIDI device. This function is enabled when set to "ON" and cancelled when set to "OFF." It is always OFF when the power is turned on.

* *When Exclusive Protect is set to "OFF," the internal memory can be overwritten by SysEx messages even if Internal Protect is set to "ON."*

■ Using a DATA Card (CARD)

This lets you perform operations such as copying the data in the JV-1080 to a DATA Card, or swapping data between the JV-1080 and a DATA Card.

● CARD FUNCTION

Four menu items for the DATA Card are displayed.

FORMAT:
Initializes a DATA Card for use by the JV-1080.

RENAME:
Changes the name of a DATA Card.

COPY:
Copies data from a DATA Card to User Memory, or from User Memory to a DATA Card.

SWAP:
Swaps data between a DATA Card and User Memory.

When you use the FUNCTION SELECT or [◀]/[▶] buttons to select a menu item and press [ENTER], the display changes to the setting screen for the menu item you've chosen.

● FORMAT

This formats (initializes) a new DATA Card or a DATA Card that has previously been used with a different model, thereby enabling it to be used by the JV-1080. When you format a DATA Card, you can give it a name up to 12 characters in length. The same procedure that you use to change a Patch name can be used to change a DATA Card name.

Available characters:
Space, A to Z, a to z, 0 to 9, +-*/ ! =?<>()[]{}:;.,"'`#%&$¥@^_

If the DATA Card had a previous name, it appears in parentheses.

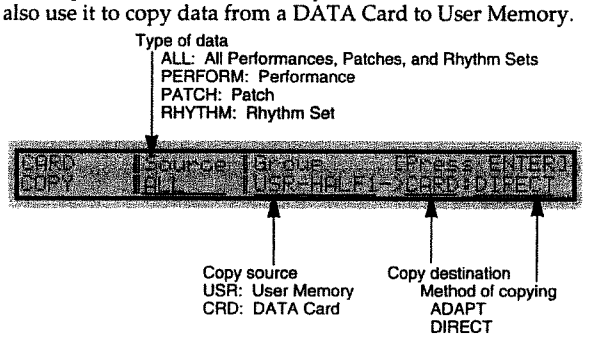
● RENAME

This overwrites the existing name of a DATA Card. You can give the card a new name up to 12 characters in length. The procedure is the same as when naming a new DATA Card.

The previous name of the DATA Card is displayed in parentheses.

● CARD COPY

This copies data in User Memory to a DATA Card. You can also use it to copy data from a DATA Card to User Memory.

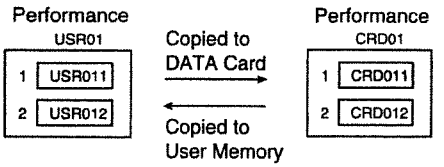


Use the VALUE knob, [INC]/[DEC] buttons, or SOUND GROUP buttons to select the type of data ("Source"), copy source and destination ("Group"), and method of copying.

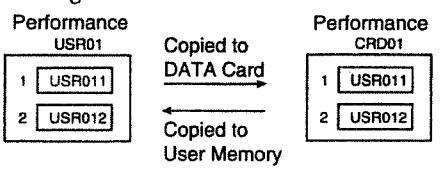
The JV-1080 can store 128 Patches, 32 Performances, and two Rhythm Sets in User Memory. However, the amount of data that can be contained in an M-256E DATA Card is 64 Patches, 16 Performances, and one Rhythm Set. As you can see, the M-256E has only half the storage space of User Memory. This means that when you exchange data with the M-256E, the data in User Memory is copied as a first half (USR-HALF1) and a second half (USR-HALF2).
When you select "ALL" for Source, the following methods of copying are used.

There are two methods of copying — ADAPT and DIRECT. The method of copying the Patches selected for the Performance Parts varies according to the setting.

ADAPT:
The Patches selected for the Parts are stored as "CRD" on the DATA Card or as "USR" in User Memory.



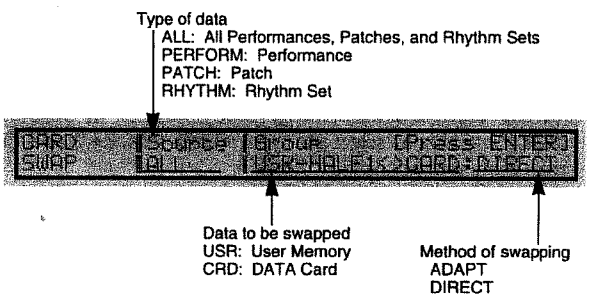
DIRECT:
Performances are stored as "CRD" on the DATA Card or as "USR" in User Memory, but the Patches selected for the Parts are stored under their own names, which remain unchanged.



* *When "ALL" has been selected for Source, please be aware that if a Performance using a Patch in the second half (No. 65 to 128) is copied to USR-HALF1, the Patches in the second half are not saved on the M-256E DATA Card. Similarly, if a Performance using a Patch in the first half (No. 1 to 64) is copied to USR-HALF2, the Patches in the first half are not saved on the M-256E DATA Card.*

● CARD SWAP

This takes Patch, Performance, and Rhythm Set data in User Memory and swaps it with the corresponding data on a DATA Card.

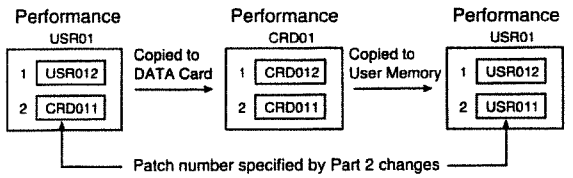


* *See CARD COPY for information on how to set each parameter.*

Important!
The JV-1080 lets you combine User Memory data and DATA Card data to create Performances. However, if set the Copy (SWAP) method to ADAPT, and you try to copy such data from User Memory to the DATA Card or from the DATA Card to User Memory, the following may occur.

Example:
Let's say that there is a Performance USR01, which specifies a Patch using USR012 for Part 1 and CRD011 for Part 2. When copying from User Memory to the DATA Card, this Performance is stored on the DATA Card as CRD01. At this time the Part 1 Patch is stored as CRD012, and Part 2 is stored without change as CRD011.

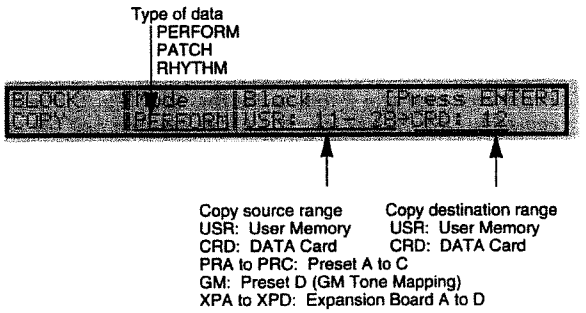
Thereafter, if you copy the data on the DATA Card to User Memory, the Performance is stored in User Memory as USR01 and Part 1 is stored as USR012, but Part 2 is stored as USR011. This means that even though the number of the Performance is the same as the original data, the Patch number specified by Part 2 has changed.



If you want to store data in User Memory just as it is, select DIRECT as the copy (or swap) method, or perform a Bulk Dump.

■ Copying a Specific Range of Data (BLOCK COPY)

This defines and copies a range of Performance, Patch, or Rhythm Set data.



● BLOCK COPY

Use the VALUE knob, [INC]/[DEC] buttons, or SOUND GROUP buttons to select the type of data ("Mode") and the range of data to be copied ("Block").

* *The following message will appear if you attempt to carry out the procedure when the amount of data at the source is larger than that at the copy destination.*

```
Block Copy Range is Overflow
```

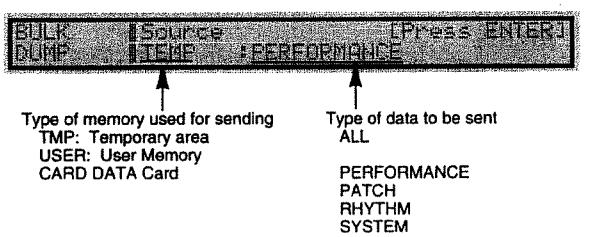
Should this happen, the JV-1080 will try to send each item of data in order until the copy destination reaches its capacity.

In the example shown above, there are eighteen Performances included in the copy source (USER: 11-28), and the first number at the copy destination is set as CRD: 12. However, since Performances can be stored on an M-256E card only up to the CRD: 16 location, the number of Performances that can be copied is five (CRD: 12-16).

■ Sending Data to an External MIDI Device (BULK DUMP)

This takes data in the JV-1080 or on a card and uses MIDI to send it to a sequencer or some other MIDI device. When you use this function, make sure that both the sending device and the receiving device are set to the same MIDI channel and device ID number (☞ p. 67).

● BULK DUMP



Use the VALUE knob, [INC]/[DEC] buttons to select the type of memory and data for sending ("Source").

The following types of data can be sent.

When TMP is selected:

PERFORM: Data for Performances or Patches/Rhythm Sets in Parts in the temporary area is sent.
PATCH: Data for Patches in the temporary area is sent.
RHYTHM: Data for Rhythm Sets in the temporary area is sent.
SYSTEM: System data is sent.

When USER is selected:

ALL: All data in user memory is sent.
PERFORM: All Performance data in user memory is sent. Data for Patches/Rhythm Sets in Parts is not sent.
PATCH: All Patch data in user memory is sent.
RHYTHM: All Rhythm Set data in user memory is sent.

When CARD is selected:

ALL: All data on a DATA card is sent.
PERFORM: All Performance data on a DATA card is sent. Data for Patches/Rhythm Sets in Parts is not sent.
PATCH: All Patch data on a DATA card is sent.
RHYTHM: All Rhythm Set data on a DATA card is sent.

While sending is in progress, the following message appears on the display:

```
Transmitting ******
```

When sending data is finished, the following message will appear:

```
COMPLETE
```

If you want to stop sending data, press [EXIT].

■ Returning Settings to Their Factory Defaults (FACTORY PRESET)

This returns all settings for the JV-1080 to the data in effect when the unit was shipped from the factory.

● FACTORY PRESET

Press [ENTER] to execute and return the data to its factory defaults.

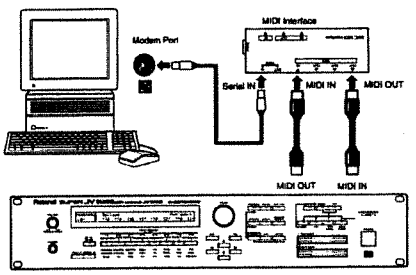
Chapter 4

Other functions of the JV-1080

This chapter explains various ways to take advantage of the JV-1080's functionality, such as using GM mode to play back performance data, selecting sounds from an external device, and using the built-in effects.

1. Using the JV-1080 with a DTMS (playing back GM scores)

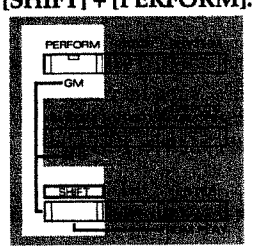
The JV-1080's GM mode allows it to be used as the sound source for a DTMS (Desk Top Music System). In GM mode, the JV-1080 can play back a GM score (performance data created for a GM sound generator) You can also modify the settings of various parameters as explained later in this section for even more musical expressivity.
The following diagram is an example of connections with a Macintosh.



■ Selecting GM mode

The sound source of the JV-1080 can be set to be compatible with the GM system standard. In GM mode, the sound source is organized in essentially the same way as for performance mode. GM patches are assigned to each Part from 1—16, and a GM rhythm set is assigned to Part 10.

If you wish to manually select GM mode, press [SHIFT] + [PERFORM].



As an alternative to the above procedure, the JV-1080 will automatically enter GM mode when it receives a GM System On message, for example when a GM score that contains a GM System On message at the beginning of the song is played back by a sequencer.

GM System On message:
This is a MIDI message that causes a sound source to put itself in GM mode and initialize itself to the settings appropriate for a GM sound source.

* *If the GM score is played back from the middle of the song, the playback may not be correct since the JV-1080 will not have switched to GM mode.*
* *To correctly play back a GM score, we recommend that you select GM mode manually.*
* *If the System parameter Receive GM Message (☞ p. 67) has been set "OFF," GM System On messages will not be received.*
* *In GM mode you can make following System parameter settings for GM mode that are independent of the Patch/Performance/Rhythm Set modes. System Parameter values that have been set for GM mode are preserved even when GM mode is exited, and will be restored when GM mode is entered once again.*

Receive MIDI page:
All of receive switch

CONTROL ASSIGN 1 page:
System Control Source 1

CONTROL ASSIGN 2 page:
Volume ControlSource

Aftertouch Source

SCALE TUNE page:
Scale Tune Switch

* *When the JV-1080 enters GM mode, the following System parameters will be automatically fixed at the following settings. It is not possible to change these settings.*

GM MODE MIDI Page:
Clock Source: MIDI

SYS-EXC MIDI Page:
Receive System Exclusive: OFF

RECEIVE MIDI Page:
Receive Bank Select: OFF

When you exit GM mode, these System parameters will be restored to their previous settings.

■ Initializing the GM mode

In order for a GM score to be played back correctly, the JV-1080 must be reset to the basic GM settings. This operation is called Initialize GM Mode, and will occur at the following times.

- When a GM System On is received from an external MIDI device.
- When a GM System On message has been recorded in the performance data being played back.
- When the JV-1080's power is turned on.
- When you execute the Utility mode command GM Setup.

When you press [UTILITY] while in GM mode, the utility display will be different than at other times. The following display will appear:

Press [ENTER], and the current GM mode settings will be initialized. Press [EXIT], and you will return to the previous display.

* *When you execute Initialize GM Mode, all previous GM mode settings will be overwritten.*
* *When you initialize GM mode, the following System parameters will be automatically set to the following values.*

RECEIVE MIDI Page:
Receive Bank Select: OFF
Other MIDI receive switches: ON

CONTROL ASSIGN1 Page:
System Control Source 1: AFTERTOUCH

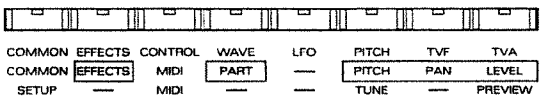
CONTROL ASSIGN2 Page:
Volume Control Source: VOL&EXP
Aftertouch Source: CH-AFTER

When you exit GM mode, these System parameters will be restored to their previous settings.

Playing back a GM score
GM performance data that is intended for playback on a GM system will carry the GM logo. Performance data carrying the GM logo is referred to as GM Score data, and can be played back with the same musical result on any sound source that carries the GM logo (i.e., any GM-compatible sound source). JV-1080 is a GM-compatible sound source, and can play back GM scores correctly.
However the JV-1080 also has a variety of enhanced functions which are not part of the GM system definition. Performance data created utilizing these functions may not play back correctly on other GM systems.

2. Enhancing Musical Expression in GM Mode

The JV-1080 provides parameters that can be edited for each GM part. By adjusting effect and sound parameters you can create a more musically expressive performance.



* *If you execute the Initialize command all these settings will be lost.*

■ Adjusting the Effects (EFFECTS)

● OUTPUT

<Output Assign> Output Assign — MIX/EFX/OUTPUT1/OUTPUT2/PATCH [PALETTE]
Output Level — 0 to 127 [PALETTE]
The Output Assign parameter specifies the output destination of each Part, and the Output Level sets the output level.

MIX:
The unprocessed sound will be sent to MIX OUT, and also sent to chorus and reverb.

EFX:
The unprocessed sound will be sent to EFX, and also sent to chorus and reverb. The output destination of the sound passing through EFX will depend on the Output Assign setting for the GM EFX OUT.

OUTPUT1:
The unprocessed sound alone will be sent to OUTPUT 1.

OUTPUT2:
The unprocessed sound alone will be sent to OUTPUT 2.

PATCH:
The unprocessed sound will be sent to the destination specified by the Output Assign (☞ p. 45) of the Patch selected for the Part. The output level, chorus send level, and reverb send level of the Part will be multiplied by the values of the Patch.

* *If you select OUTPUT 1 or 2 as the output destination, the chorus and reverb settings will be ignored.*

* *If you wish to use the output settings of each Tone, select PATCH. If you select a setting other than PATCH, the output settings of each Tone (output assign, output level, chorus/reverb send level) will be ignored, and the output settings of the Part will be used instead.*

<Chorus> Chorus Send Level — 0 to 127 [PALETTE]
This parameter sets the level of the signal sent to the chorus for each Part.

<Reverb> Reverb Send Level — 0 to 127 [PALETTE]
This parameter sets the level of the signal sent to the reverb for each Part.

● GM EFX TYPE

<Type> EFX Type
This parameter selects the type of EFX used in GM mode. For the available EFX types, refer to "Chapter 5. Multi-Effector EFX (☞ p. 83)."

● GM EFX PRM (GM EFX Parameter)

This is where you make parameter settings for the EFX that was selected in EFX Type.

The available parameters will depend on the EFX type.
For details on EFX parameters, refer to "Chapter 5. Multi-Effector EFX (☞ p. 83)."

● GM EFX OUT (GM EFX Output)

This is where you specify the output routing of the sound from the EFX when the OUTPUT parameter Output Assign has been set to EFX.

<Output Assign> Output Assign — MIX/OUTPUT1/OUTPUT2
Output Level — 0 to 127
The Output Assign parameter determines the output destination of the EFX sound, and the Output Level parameter sets the level of the output signal.

MIX:
The EFX sound will be sent to MIX OUT, and also to chorus and reverb.

OUTPUT1:
The EFX sound will be sent to OUTPUT1.

OUTPUT2:
The EFX sound will be sent to OUTPUT2.

* *If you select OUTPUT 1 or 2 as the output destination, the chorus and reverb settings will be ignored.*

<Chorus> Chorus Send Level — 0 to 127
This parameter sets the level of the signal sent from EFX to the chorus.

<Reverb> Reverb Send Level — 0 to 127
This parameter sets the level of the signal sent from EFX to the reverb.

● GM CHORUS

Chorus adds depth and spaciousness to the sound.

<Rat> Chorus Rate — 0 to 127
This parameter sets the modulation speed of the chorus.

<Dpt> Chorus Depth — 0 to 127
This parameter sets the modulation depth of the chorus.

<Dly> Pre Delay —0 to 127
This parameter sets the time delay from when the original sound begins to when the chorus sound begins. Higher values result in a more spacious sound.

<Fbk> Chorus Feedback — 0 to 127
This parameter sets the amount of sound returned (fed back) from the chorus output back into the chorus input. Higher values result in a more complex chorus sound.

<Level> Chorus Level — 0 to 127
This parameter sets the volume of the chorus sound.

<Output> Chorus Output Assign — MIX/REVERB / MIX+REV
This parameter sets the output routing of the chorus sound.

MIX:
The chorus sound will be output from MIX OUT.

REVERB:
The chorus sound will be output to the reverb.

MIX+REV:
Chorus sound output to both MIX OUT and reverb.

● GM REVERB

Reverb simulates the reverberation of a variety of acoustic spaces, adding spatial ambience to the sound.

<Type> Reverb Type
This parameter selects the type of reverb.

ROOM1:
A short reverb with high density reflections.

ROOM2:
A short reverb with low density reflections.

STAGE1:
A reverb with strong late reverberation.

STAGE2:
A reverb with strong early reflections.

HALL1:
A reverb with clear reverberation.

HALL2:
A reverb with rich reverberation.

DELAY:
A conventional delay.

PAN-DLY:
A delay that pans (moves) the reflections to left and right.

<Time> Reverb Time — 0 to 127
When the Type is ROOM1—HALL2, this parameter sets the time length of the reverberation. When the Type is DELAY or PAN-DLY, this parameter sets the delay time. Higher values result in a wider-sounding acoustic space.

<Lev> Reverb Level — 0 to 127
This parameter sets the volume of the reverberation.

<Fbk> Delay Feedback — 0 to 127
When the Type is DELAY or PAN-DLY, this parameter sets the amount of delayed sound that is returned (fed back) to the delay. Higher values result in more delay repeats.

<HF Damp> High-Frequency Damp — 200/250/315/400/500/630/800/100/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS
This parameter sets the frequency at which the high frequencies will be cut.
Higher settings will result in a brighter-sounding reverb. When BYPASS is selected, the high frequencies will not be cut.

Internal effects in GM sound sources
The references in this manual to "GM chorus" and "GM reverb" may have caused you to conclude that these are part of the General MIDI specification.
It is true that most recent GM-compatible sound sources do have internal effects such as chorus and reverb, but the use of effect units is not specified in the General MIDI System Level 1 guidelines. This means that performance data created for the GM mode of the JV-1080 may not play back correctly on other GM sound sources.

■ Selecting a Patch for each Part (PART)

<Number> Patch Number — 001 to 128 [PALETTE]
Select a GM patch number for each Part. The name of the selected GM patch will be displayed in parentheses ( ).

* *In GM mode, it is not possible to select User, Card, Preset A—C or Expansion Board patches.*

■ Adjust the pitch of each Part (PITCH)

These parameters adjust the pitch of each Part.

● PITCH

<Pitch Coarse> Pitch Coarse Tune — -48 to +48 [PALETTE]
This parameter adjusts the pitch of each Part in semitone steps over a range of +/-4 octaves.
This parameter adjusts the pitch relative to a Patch pitch setting of 0.

<Pitch Fine> Pitch Fine Tune — -50 to +50 [PALETTE]
This parameter is a further fine adjustment to the pitch specified by Pitch Coarse Tune, in steps of 1 cent (1/100th of a semitone) over a range of 1/2 semitone up or down.

■ Adjusting the pan position of each Part (PAN)

This parameter sets the pan position of each Part.

● PAN

<Part Pan> Part Pan — L64 to 0 to 63R
This parameter sets the pan (stereo location) of each Part.
A setting of L64 is full left, 0 is center, and 63R is full right.

* *There is also a pan setting inside each Patch, and the Part Pan setting of will adjust the Patch pan setting by the specified amount.*

■ Adjusting the volume of each Part (LEVEL)

This parameter sets the volume level of each Part.

● LEVEL

<Level> Part Level — 0 to 127 [PALETTE]
This parameter adjusts the volume level of each Part. You will use this parameter mainly to adjust the volume balance between Parts.

3. Live Performance Techniques

■ Selecting JV-1080 sounds from an external device

If you wish to select sounds or drum kits from an external MIDI device, use the following procedure.

On the JV-1080, Patches, Performances, and Rhythm Sets are selected by the values of the Bank Select (control changes # 0 and # 32) message and Program Change message. When you press a sound select button on a MIDI keyboard, these MIDI messages will be transmitted automatically. However if you wish to select JV-1080 sounds from a sequencer or personal computer, use the following procedure to transmit the appropriate MIDI messages.

1. **Set the transmitting and receiving devices to the same MIDI channel.**
2. **Transmit a Control Change # 0 (Bank Select MSB) message with the desired value.**
3. **Transmit a Control Change # 32 (Bank Select LSB) message with the desired value.**
4. **Transmit a Program Change message with the desired value.**

* *When the JV-1080 receives a Program Change message without having received a Bank Select message, it will select a sound only from the currently specified memory (Preset A, User, etc.).*

● Selecting a Patch

Bank Select MSB	LSB	Program Change	Patch Group	Patch Number
80	0	0—127	User	#1—#128
81	0	0—127	Preset A	#1—#128
81	1	0—127	Preset B	#1—#128
81	2	0—127	Preset C	#1—#128
81	3	0—127	Preset D (GM)	#1—#128
82	0	0—127	DATA card	#1—#128
83	0	0—127	PCM card	#1—#128
84	0	0—127	Expansion A	#1—#128
84	1	0—127	Expansion A	#129—#256
84	2	0—127	Expansion B	#1—#128
84	3	0—127	Expansion B	#129—#256
84	4	0—127	Expansion C	#1—#128
84	5	0—127	Expansion C	#129—#256
84	6	0—127	Expansion D	#1—#128
84	7	0—127	Expansion D	#129—#256

For example if you wanted to select Patch number 10 of Preset B, you would transmit the following data to the JV-1080.

(Numbers are given in decimal.)
Control Change # 0 (Bank Select MSB) value: 81
Control Change # 32 (Bank Select LSB) value: 1
Program Change value: 9

* *The Program Change number transmitted should be one less than the Patch number.*

● Selecting a Performance

Bank Select MSB	LSB	Program Change	Performance Group	Performance Number
80	0	0—31	User	#1—#32
81	0	0—31	Preset A	#1—#32
81	1	0—31	Preset B	#1—#32
82	0	0—31	DATA card	#1—#32

If you wish to select a Performance, set the transmitting MIDI device to the same channel as the Performance Control Channel (☞ p. 66). If you wish to select the Patch or Rhythm Set of a Part, set the transmit channel to match the receive channel of the Part. However if the Control Channel is the same as the receive channel of a Part, the Control Channel will take priority and a Performance (not a Patch) will be selected by the incoming program change message.

● Selecting a Rhythm Set

Bank Select MSB	LSB	Program Change	Rhythm Set Group	Rhythm Set Number
80	0	0, 1	User	#1, #2
81	0	0, 1	Preset A	#1, #2
81	1	0, 1	Preset B	#1, #2
81	2	0, 1	Preset C	#1, #2
81	3	0, 1	Preset D (GM)	#1, #2
82	0	0—127	DATA card	#1—#128
83	0	0—127	PCM card	#1—#128
84	0	0—127	Expansion A	#1—#128
84	1	0—127	Expansion A	#129—#256
84	2	0—127	Expansion B	#1—#128
84	3	0—127	Expansion B	#129—#256
84	4	0—127	Expansion C	#1—#128
84	5	0—127	Expansion C	#129—#256
84	6	0—127	Expansion D	#1—#128
84	7	0—127	Expansion D	#129—#256

If you wish to select a Rhythm Set, set the channel of the transmitting MIDI device to match the receive channel of Part 10 of the Performance. (With the factory settings, Part 10 is set to channel 10.)

■ Maximum simultaneous notes and Part priorities

● About maximum simultaneous notes

The JV-1080 is able to produce up to 64 notes simultaneously. However some Patches consist of two Tones, and when such Tones are played, only 32 simultaneous notes are possible. The Patch List at the end of this manual gives the number of Tones used in each Patch.

● About Patch note priority

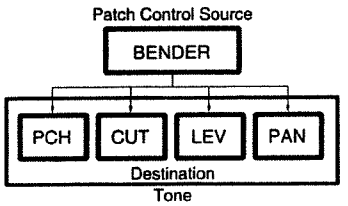
If the number of currently-requested notes exceeds 64, existing notes will be turned off to make room for the newly requested notes. The JV-1080's Patch note priority function will start turning off notes beginning with the lowest-priority Part. When you create a song, keep in mind the Part note priority order as you decide which Part to use for each musical part.

If there is an important Part in your song that you do not want notes to be "stolen" from, you can use the Voice Reserve function (☞ p. 57) to reserve notes for it.

■ Using MIDI Controllers

● Controllers and destinations

The JV-1080 allows you to use a variety of MIDI controllers to modify Tone and EFX parameters in real time. Parameters being controlled are referred to as Destinations, and you can specify four Destinations in each Tone (up to 16 Destinations for each Patch).
Controllers that are used to control Tone parameters are referred to as Patch Control Sources. For example if you make Patch Control Source and Destination settings as shown in the following diagram, moving the bender lever to left or right (or up/down if you are using a wheel) will simultaneously control four Tone parameters: PCH (pitch), CUT (cutoff frequency), LEV (volume) and PAN (stereo position).



For this example, make settings as follows.

1 Turn on the receive switches for the controllers you wish to use.
System parameter / RECEIVE MIDI Page
Receive Bender (☞ p. 68): ON

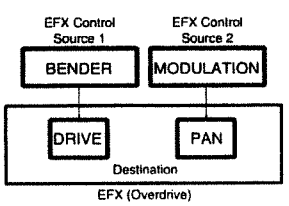
2 Select the controller you wish to use.
Patch parameter / CONTROL SOURCE Page
Patch Control Source 2 (☞ p. 49): BENDER

3 Set the Controller Destination (☞ p. 49) and Control Depth (☞ p. 49).
Patch parameter / CONTROL 2 Page
Control Destination 1: PCH
Control Destination 2: CUT
Control Destination 3: LEV
Control Destination 4: PAN
Control Depth 1: other than 0
Control Depth 2: other than 0
Control Depth 3: other than 0
Control Depth 4: other than 0

The JV-1080 has three Patch Control Sources. Patch Control Source 1 is fixed at Modulation (control change #01), but Patch Control Sources 2 and 3 can be freely assigned.

● Control EFX parameters

To control EFX parameters, use an EFX Control Source. Two types of controllers can be freely assigned to these EFX Control Sources as well. The destination will be determined by the type of EFX that is selected. For example if you select Overdrive for EFX, the destinations will be set to DRIVE (the degree of distortion) and PAN (stereo location).



To make settings for this example, use the following procedure.

1 Turn on the receive switch for the controller you wish to use.
System parameter / RECEIVE MIDI Page
Receive Bender (☞ p. 68): ON
Receive Modulation (☞ p. 68): ON

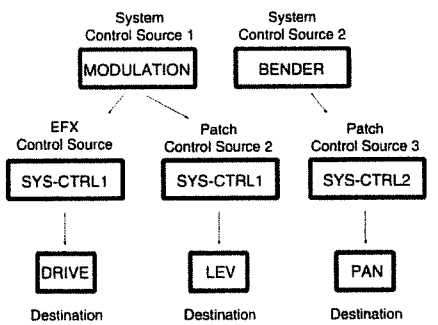
2 Select the EFX type.
Patch parameter / PATCH EFX TYPE Page
EFX Type (☞ p. 45): 2:OVERDRIVE

3 Select the controllers you wish to use
Patch parameter / PATCH EFX CTRL Page
EFX Control Source 1 (☞ p. 46): BENDER
EFX Control Source 2 (☞ p. 46): MODULATION

4 Set the controller depth.
Patch parameter / PATCH EFX CTRL Page
EFX Control Depth 1 (☞ p. 46): other than 0
EFX Control Depth 2 (☞ p. 46): other than 0

● Using controllers in System mode

Patch Control Source 2, Patch Control Source 3 and EFX Control Sources allow you to select the SYS-CTRL1 and SYS-CTRL2 settings. When these settings are selected, the Tone or EFX will be controlled as specified by the controller selections you make in System mode. In System mode, you can select any control change number (# 00 — # 95), bender or aftertouch as the two controller sources, System Control Source 1 and System Control Source 2.



It is convenient to use System controllers when you do not need to specify controllers independently for each Patch, or when you want to be free to use any control change number as the controller.

* *With some exceptions, the function of each MIDI Control Change message is predefined. For example the Bank Select message (control change # 00, # 32) is used to switch sound banks. However the JV-1080 allows you to assign control change messages to a variety of other functions, so that sounds can be controlled in realtime. If you do so, however, you should be aware that such uses are outside of the controller operations defined in the MIDI specification.*

● Controllers in Performance mode

In Performance mode, the control sources specified in the Patch used by each Part can apply various effects to each Part. However if you use the EFX settings of the Performance, the EFX controller settings of the Patch will be ignored, and the EFX controller settings of the Performance will be used. Also, if you wish to use controllers in Performance mode, the MIDI receive switch of each Part must be turned on.

4. Using Effects

The routing of the JV-1080's effects will depend on the settings of each Tone and on the effect output assign and level settings.

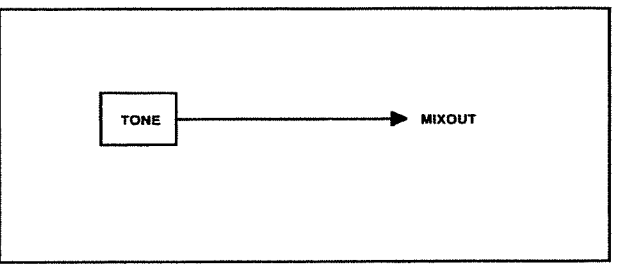
For each routing, you may think of a level setting of 0 as being disconnected, and a level setting of 1-127 as being connected. Effect routing is determined by the various level settings and output assign settings. The following diagrams are example settings in Patch mode which you may use as guidelines for your effect settings. The output assign and level settings shown at the left of each diagram will result in the effect routing shown in the diagrams at right. Parameter values listed as 1-127 can be set to any desired value.

* *Parameters listed as "--" will be ignored even if you set a value.*

* *Only the sound to which the effect has been applied will be output with chorus and reverb, while EFX contains the original sound as well.*

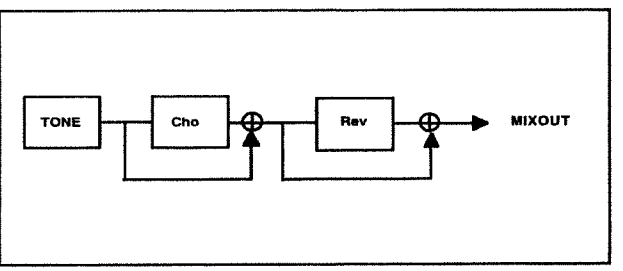
●Output the unprocessed sound from MIX OUT

OUTPUT	
Output Assign	MIX
Output Level	1—127
Chorus Send Level	0
Reverb Send Level	0
PATCH EFX OUT	
Output Assign	--
Output Level	--
Chorus Send Level	--
Reverb Send Level	--
PATCH CHORUS	
Chorus Level	--
Chorus Output Assign	--
PATCH REVERB	
Reverb Level	--



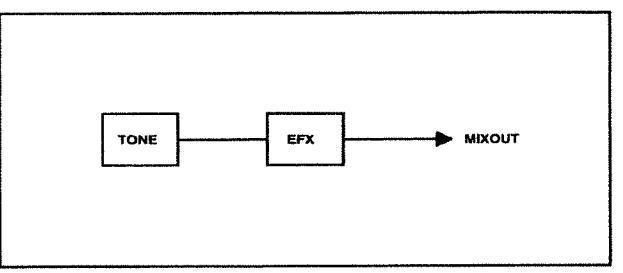
●Use chorus and reverb in series

OUTPUT	
Output Assign	MIX
Output Level	1—127
Chorus Send Level	1—127
Reverb Send Level	1—127
PATCH EFX OUT	
Output Assign	--
Output Level	--
Chorus Send Level	--
Reverb Send Level	--
PATCH CHORUS	
Chorus Level	1—127
Chorus Output Assign	MIX+REV
PATCH REVERB	
Reverb Level	1—127



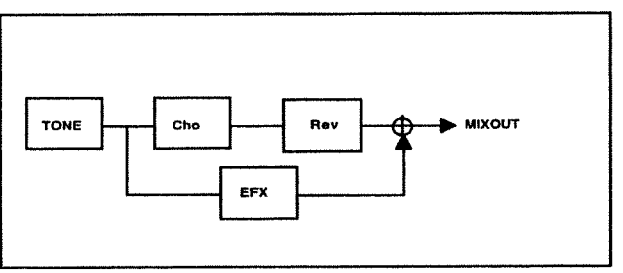
●Use only EFX

OUTPUT	
Output Assign	EFX
Output Level	1—127
Chorus Send Level	0
Reverb Send Level	0
PATCH EFX OUT	
Output Assign	MIX
Output Level	1—127
Chorus Send Level	0
Reverb Send Level	0
PATCH CHORUS	
Chorus Level	--
Chorus Output Assign	--
PATCH REVERB	
Reverb Level	--



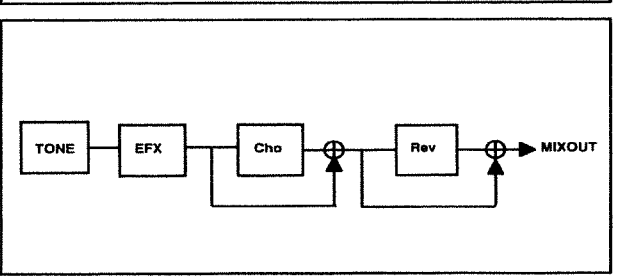
●Apply reverb only to the chorused sound and use in parallel with EFX

OUTPUT	
Output Assign	EFX
Output Level	1—127
Chorus Send Level	1—127
Reverb Send Level	0
PATCH EFX OUT	
Output Assign	MIX
Output Level	1—127
Chorus Send Level	0
Reverb Send Level	0
PATCH CHORUS	
Chorus Level	1—127
Chorus Output Assign	REV
PATCH REVERB	
Reverb Level	1—127



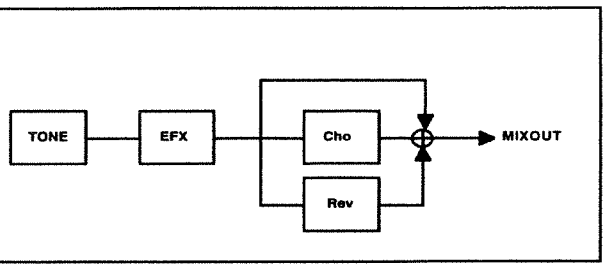
●Use EFX, chorus and reverb in series

OUTPUT	
Output Assign	EFX
Output Level	1—127
Chorus Send Level	0
Reverb Send Level	0
PATCH EFX OUT	
Output Assign	MIX
Output Level	1—127
Chorus Send Level	1—127
Reverb Send Level	1—127
PATCH CHORUS	
Chorus Level	1—127
Chorus Output Assign	MIX+REV
PATCH REVERB	
Reverb Level	1—127



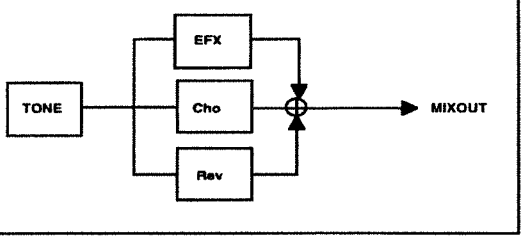
●Use chorus and reverb in parallel, and EFX in series

OUTPUT	
Output Assign	EFX
Output Level	1—127
Chorus Send Level	0
Reverb Send Level	0
PATCH EFX OUT	
Output Assign	MIX
Output Level	1—127
Chorus Send Level	1—127
Reverb Send Level	1—127
PATCH CHORUS	
Chorus Level	1—127
Chorus Output Assign	MIX
PATCH REVERB	
Reverb Level	1—127



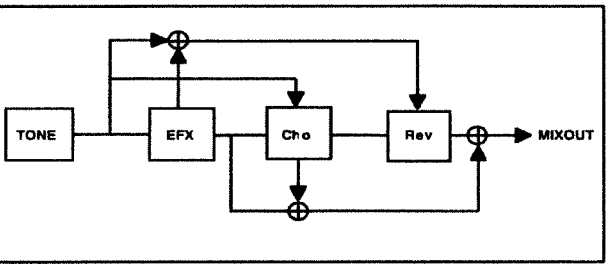
●Use EFX, chorus and reverb in parallel

OUTPUT	
Output Assign	EFX
Output Level	1—127
Chorus Send Level	1—127
Reverb Send Level	1—127
PATCH EFX OUT	
Output Assign	MIX
Output Level	1—127
Chorus Send Level	0
Reverb Send Level	0
PATCH CHORUS	
Chorus Level	1—127
Chorus Output Assign	MIX
PATCH REVERB	
Reverb Level	1—127



●Simultaneously use both parallel and series

OUTPUT	
Output Assign	EFX
Output Level	1—127
Chorus Send Level	1—127
Reverb Send Level	1—127
PATCH EFX OUT	
Output Assign	MIX
Output Level	1—127
Chorus Send Level	1—127
Reverb Send Level	1—127
PATCH CHORUS	
Chorus Level	1—127
Chorus Output Assign	MIX+REV
PATCH REVERB	
Reverb Level	1—127

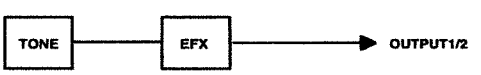


●Output the unprocessed sound from OUTPUT 1/2

OUTPUT	
Output Assign	OUT1/2
Output Level	1—127
Chorus Send Level	--
Reverb Send Level	--
PATCH EFX OUT	
Output Assign	--
Output Level	--
Chorus Send Level	--
Reverb Send Level	--
PATCH CHORUS	
Chorus Level	--
Chorus Output Assign	--
PATCH REVERB	
Reverb Level	--

●Use EFX and output from OUTPUT 1/2

OUTPUT	
Output Assign	EFX
Output Level	1—127
Chorus Send Level	--
Reverb Send Level	--
PATCH EFX OUT	
Output Assign	OUT1/2
Output Level	1—127
Chorus Send Level	--
Reverb Send Level	--
PATCH CHORUS	
Chorus Level	--
Chorus Output Assign	--
PATCH REVERB	
Reverb Level	--



The examples here use one Tone from the Patch mode. Since the Output Level, Chorus Send Level, and Reverb Send Level can be set independently for each Tone, you can make whatever settings you need for each one when using multiple Tones. Individual settings for the Tone level are basically ignored when in the Performance mode—the level is controlled by the settings for output made for each Part. (It may be helpful to substitute PART for TONE when viewing the illustration.)

Only when Output Assign is set to "Patch" will the balance for the level of individual Tones set for Patches be reflected in the Parts. Note also that if a different EFX type is set for Patches and Performances, unexpected effects could be obtained from Parts. To avoid this, you can either set Output Assign to MIX, or use only Patches which are specifically set for the way that the Performance is to be used.

Chapter 5

Multi-Effector EFX

The EFX is a multi-effects processor offering 40 types of effects. Combinations of effects and the sequence of the routes taken by their signals are predetermined for each effect type.

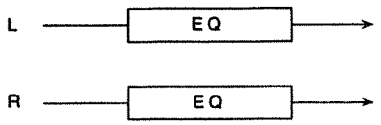
Some of the parameters described in this chapter are marked with an asterisk ("*") to the left. This asterisk means that the parameter can be controlled by EFX Control Source (☞ p. 46).

1. EFX Effect Types

The EFX has the 40 effect types described below.
Some of the effects types are compounds in which two kinds of effects are linked together.

■ 1: STEREO-EQ (Stereo Equalizer)

This is the Stereo Equalizer, which adjusts the sound quality for bass, midrange, and treble.



<LowFreq> Low Frequency — 200 Hz/400 Hz
This sets the reference frequency for emphasizing bass sound quality.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

<Hi Freq> High Frequency — 4 kHz/8 kHz
This sets the reference frequency for emphasizing treble sound quality.

<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

<P1 Freq> Peaking 1 Frequency — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz)
This sets the reference frequency for when emphasizing the sound quality of a specific frequency band.

<P1 Q> Peaking 1 Q — 0.5/1.0/2.0/4.0/9.0
This determines the bandwidth for the reference frequency set with Peaking 1 Frequency.
A larger value gives a greater width for the band emphasized with Peaking 1 Gain.

<P1 Gain> Peaking 1 Gain — -15 dB to +15 dB
This sets the sound quality for a specific frequency band. A larger positive value results in greater emphasis for the frequency band set with Peaking 1 Frequency and Peaking 1 Q.

<P2 Freq> Peaking 2 Frequency — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz)
This sets the reference frequency for when emphasizing the sound quality of a specific frequency band.

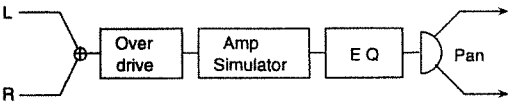
<P2 Q> Peaking 2 Q — 0.5/1.0/2.0/4.0/9.0
This determines the bandwidth for the reference frequency set with Peaking 2 Frequency.
A larger value gives a greater width for the band emphasized with Peaking 2 Gain.

<P2 Gain> Peaking 2 Gain — -15 dB to +15 dB
This sets the sound quality for a specific frequency band. A larger positive value results in greater emphasis for the frequency band set with Peaking 2 Frequency and Peaking 2 Q.

***<Level> Output Level — 0 to 127**
This sets the overall level for the effect sound.

■ 2: OVERDRIVE

This produces natural distortion like what you can get from a vacuum-tube amp.



***<Drive> Drive — 0 to 127**
This sets the strength of the sound distortion.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

* *Increasing the value for Drive also causes the overall volume to rise. It may be helpful to use Output Level to adjust for the difference in volume between when Overdrive is applied and when it is not applied.*

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

<Amp Type> Amp Type — SMALL/BUILT-IN/2-STACK/3-STACK
This simulates the characteristics of a guitar amp.

SMALL:
This simulates a compact amp.

BUILT-IN:
This simulates a built-in amp.

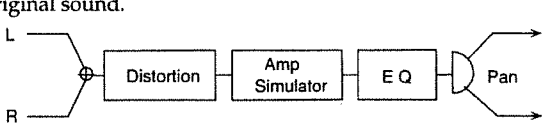
2-STACK:
This simulates a large two-stack amp.

3-STACK:
This simulates a large three-stack amp.

***<Pan> Output Pan — L64 to 0 to 63R**
This sets the stereo position where the effect sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

■ 3: DISTORTION

This increases odd harmonics to add strong distortion to the original sound.



***<Drive> Drive — 0 to 127**
This sets the strength of the sound distortion.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

* *Increasing the value for Drive also causes the overall volume to rise. It may be helpful to use Output Level to adjust for the difference in volume between when Distortion is applied and when it is not applied.*

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

<Amp Type> Amp Type — SMALL/BUILT-IN/2-STACK/3-STACK
This simulates the characteristics of a guitar amp.

SMALL:
This simulates a compact amp.

BUILT-IN:
This simulates a built-in amp.

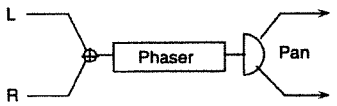
2-STACK:
This simulates a large two-stack amp.

3-STACK:
This simulates a large three-stack amp.

***<Pan> Output Pan — L64 to 0 to 63R**
This sets the stereo position where the effect sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

■ 4: PHASER

This takes the original sound and adds a phase-shifted sound to it to make the tone change over time, producing undulations in the sound.



***<Manual> Manual — 100 Hz to 8 kHz**
This selects the frequency band to which undulations are added.

100 to 290 Hz:	In 10 Hz steps
300 to 980 Hz:	In 20 Hz steps
1 k to 8 kHz:	In 100 Hz steps

***<Rate> Phaser Rate — 0.05 Hz to 10.0 Hz**
This selects the cycle for the phaser sound undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> Phaser Depth — 0 to 127
This sets the depth of the undulations.

<Res> Resonance — 0 to 127
This sets the amount of Phaser feedback. Larger values produce a more distinctive sound.

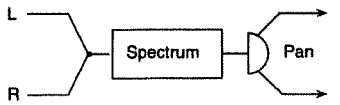
<Mix> Mix Level— 0 to 127
This sets the level of the phase-shifter effect sound with respect to the original sound.

<Pan> Output Pan — L64 to 0 to 63R
This sets the stereo position where the Phaser sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 5: SPECTRUM

This is a type of filter that raises and lowers the level of a specific frequency to change the tone.
Spectrum works like an equalizer, but because the frequency for each of the bands is set at an optimal position for adding distinctiveness, you can create sounds with more characteristics than just simple compensation.



The sounds are set with Bands 1 to 6.

<Band 1> Band 1 Level — -15 dB to +15 dB
This sets the frequency at 250 Hz.

<Band 2> Band 2 Level — -15 dB to +15 dB
This sets the frequency at 500 Hz.

<Band 3> Band 3 Level — -15 dB to +15 dB
This sets the frequency at 1000 Hz (1 kHz).

<Band 4> Band 4 Level — -15 dB to +15 dB
This sets the frequency at 1250 Hz.

<Band 5> Band 5 Level — -15 dB to +15 dB
This sets the frequency at 2000 Hz.

<Band 6> Band 6 Level — -15 dB to +15 dB
This sets the frequency at 3150 Hz.

<Band 7> Band 7 Level — -15 dB to +15 dB
This sets the frequency at 4000 Hz.

<Band 8> Band 8 Level — -15 dB to +15 dB
This sets the frequency at 8000 Hz.

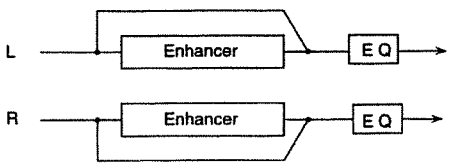
<Width> Bandwidth — 1 to 5
This setting, which is common for each Band, sets the width of the frequency band which is raised and lowered by the Level value.

***<Pan> Output Pan — L64 to 0 to 63R**
This sets the stereo position where the effect sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

***<Level> Output Level — 0 to 127**
This sets the overall level for the effect sound.

■ 6: ENHANCER

This controls the treble harmonic components to add modulation to the sound, thus enhancing it.



***<Sens> Sensitivity — 0 to 127**
This sets the depth to which the Enhancer is applied.

***<Mix> Mix Level — 0 to 127**
This sets the ratio for mixing the original sound with the generated harmonics.

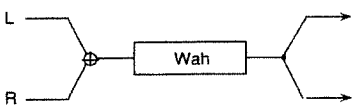
<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 7: AUTO-WAH

This lets you obtain an Auto-Wah effect in which the sound in changed cyclically by cyclic movement of the filter.



<Filter> Filter Type — LPF/BPF
This selects the type of filter to be used.

LPF (Low-pass Filter):
A wah effect is obtained for a wide frequency range.

BPF (Bandpass Filter):
A wah effect is obtained for a narrow frequency range.

<Sens> Sensitivity — 0 to 127
This sets the depth to which the effect is applied.

***<Manual> Manual — 0 to 127**
This sets the reference frequency for the wah effect.

<Peak> Peak — 0 to 127
This sets the extent to which the wah effect is applied near the reference frequency.
Using a smaller value results in a wah effect in a wider range near the reference frequency, and using a larger value produces the effect for a narrower range.

***<Rate> LFO Rate — 0.05 Hz to 10.0 Hz**
This sets the cycle for the undulations of the wah effect.

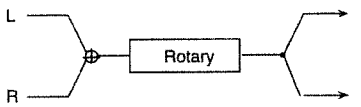
0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> LFO Depth — 0 to 127
This sets the depth of the undulations of the wah effect.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 8: ROTARY

This simulates an old-fashioned rotary speaker, which adds undulations to the sound by rotating the speaker as it plays. This has the greatest effect when used with an organ sound. The horn (the treble-range speaker) and the rotor (the bass-range speaker) can be combined to re-create these subtle effects.



<LowSlow> Low Frequency Slow Rate — 0.05 Hz to 10.0 Hz
This sets the speed of rotation for the rotor (the bass-range speaker) when the Speed setting is at "SLOW."

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<LowFast> Low Frequency Fast Rate — 0.05 Hz to 10.0 Hz
This sets the speed of rotation for the rotor (the bass-range speaker) when the Speed setting is at "FAST."

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<LowAccl> Low Frequency Acceleration — 0 to 15
This sets the time until the rotation cycle of the rotor (the bass-range speaker) reaches a steady state when the Speed setting is switched (SLOW <-> FAST). Smaller values result in longer times.

<LowLvl> Low Frequency Level — 0 to 127
This sets the volume for the rotor (the bass-range speaker).

<HiSlow> High Frequency Slow Rate — 0.05 Hz to 10.0 Hz
This sets the speed of rotation for the horn (the treble-range speaker) when the Speed setting is at "SLOW."

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<HiFast> High Frequency Fast Rate — 0.05 Hz to 10.0 Hz
This sets the speed of rotation for the horn (the treble-range speaker) when the Speed setting is at "FAST."

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<HiAccl> High Frequency Acceleration — 0 to 15
This sets the time until the rotation cycle of the horn (the treble-range speaker) reaches a steady state when the Speed setting is switched (SLOW <-> FAST). Smaller values result in longer times.

<HiLvl> High Frequency Level — 0 to 127
This sets the volume for the horn (the treble-range speaker).

<Separation> Separation — 0 to 127
This sets how widely the sound expands.

***<Speed> Speed — SLOW/FAST**
This toggles the rotation speed for the Rotary effect.

SLOW:
When switched from FAST, the speed of rotation slows down to a slow steady state (the value for LowSlow/HiSlow).

FAST:
When switched from SLOW, the speed of rotation speeds up to a fast steady state (the value for LowFast/HiFast).

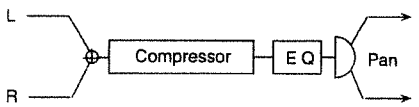
* *You can toggle between SLOW and FAST with any Controller assigned by the Source setting for EFX Control Source (☞ p. 46).*

For instance, if Source is set to FOOT, you can toggle between SLOW and FAST by sending a foot message (Control Change # 4) from an external Controller.

***<Level> Output Level — 0 to 127**
This sets the overall level for the effect sound.

■ 9: COMPRESSOR

This stabilizes the overall level by suppressing the high level and boosting the low level.



<Attack> Attack Rate — 0 to 127
This sets the force of attack when sound is input.

<Sustain> Sustain Rate — 0 to 127
This sets the time for boosting a low-level signal to a uniform volume.

<Post Gain> Post Gain — x1/x2/x4/x8
This sets the input level.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

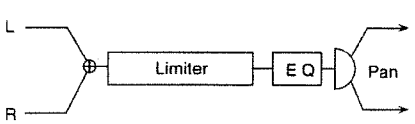
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

***<Pan> Output Pan — L64 to 0 to 63R**
This sets the stereo position where the effect sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

***<Level> Output Level — 0 to 127**
This sets the overall level for the effect sound.

■ 10: LIMITER

Whereas the Compressor acts on both low-level and high-level signals, the Limiter compresses only high-level signals that exceed a set level. You can eliminate unwanted distortion by setting this to work only on peak input.



<Thresh> Threshold — 0 to 127
This sets the level at which the Limiter effect appears. Input signals above the set level are compressed.

<Ratio> Ratio — 1.5:1/2:1/4:1/100:1
This sets how much the signals are compressed when the Limiter is applied.

<Release> Release Time — 0 to 127
This sets the interval from the time when the signal drops below the threshold level until the time the effect ceases.

<Gain> Post Gain — x1/x2/x4/x8
This sets the input level.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

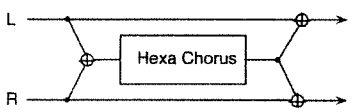
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

***<Pan> Output Pan — L64 to 0 to 63R**
This sets the stereo position where the effect sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

***<Level> Output Level — 0 to 127**
This sets the overall level for the effect sound.

■ 11: HEXA-CHORUS

Chorus is an effect that makes a sound thicker and broader. This applies a chorus to six sounds with different delay times (hexa-chorus).



<Pre Dly> Predelay Time — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the effect sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

***<Rate> Chorus Rate — 0.05 Hz to 10.0 Hz**
This sets the cycle for the chorus sound undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> Chorus Depth — 0 to 127
This sets the depth of the undulations of the chorus sound.

<Dly Dev> Predelay Deviation — 0 to 20
Predelay is the time interval from when the direct sound is played until the chorus sound is played. This parameter staggers the predelay for each hexa-chorus sound by the value set. A larger value results in a greater shift between each hexa-chorus sound.

<Dpt Dev> Depth Deviation — -20 to +20
This sets the deviated depth for the respective hexa-chorus sounds.
Larger values prcduce wider deviated depth for the chorus sound.

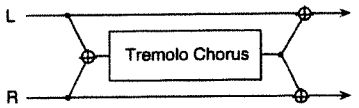
<Pan Dev> Pan Deviation — 0 to 20
This sets the spread in stereo position for the respective hexa-chorus sounds. Larger values produce wider stereo positions for the chorus sound. When set to zero, all chorus sounds are centered. At 20, the sounds are spaced at 30-degree intervals, starting from the center.

<Balance> Effect Balance — D100:0E to D0:100E
This sets the balance for the levels of the original sound and the effect sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 12: TREMOLO-CHORUS

This is a chorus with a tremolo effect, which adds cyclic undulations in volume.



<Pre Dly> Predelay Time — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the chorus sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<ChoRate> Chorus Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the chorus sound undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Cho Dpt> Chorus Depth — 0 to 127
This sets the depth of the undulations of the chorus sound.

<Phase> Chorus Phase — 0 to 180
This sets how the chorus sound is spread.

***<TrmRate> Tremolo Rate — 0.05 Hz to 10.0 Hz**
This sets the cycle for the undulations of the Tremolo effect. Larger values make for a faster cycle.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

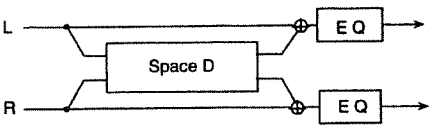
<Trm Sep> Tremolo Separation — 0 to 127
This sets how the Tremolo effect expands.

***<Balance> Effect Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the effect sound (chorus sound).

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 13: SPACE-D

This is a multiple chorus which applies two-phase modulation in stereo. One feature of this effect is that it produces a clear chorus effect with no feeling of discordance.



<Pre Dly> Predelay Time — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the chorus sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

***<Rate> Chorus Rate — 0.05 Hz to 10.0 Hz**

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> Chorus Depth — 0 to 127
This sets the depth of the undulations of the chorus sound.

<Phase> Phase — 0 to 180
This sets how the chorus sound is spread.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality for the chorus sound. A larger positive value results in greater emphasis of the lower band.

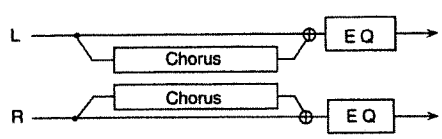
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality for the chorus sound. A larger positive value results in greater emphasis of the higher band.

***<Balance> Effect Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the effect sound (chorus sound).

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 14: STEREO-CHORUS

This is a chorus with full stereo output. It makes the sound thicker and broader.



<Pre Dly> Predelay Time — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the chorus sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

***<Rate> Chorus Rate — 0.05 Hz to 10.0 Hz**
This sets the cycle for the chorus sound undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> Chorus Depth — 0 to 127
This sets the depth of the undulations of the chorus sound.

<Phase> Phase — 0 to 180
This sets how the chorus sound is spread.

<Filter Type> Filter Type — OFF/LPF/HPF
This selects the type of filter applied to the chorus sound.

LPF (Low-pass Filter):
The band higher than the value set for the cutoff frequency is eliminated.

HPF (High-pass Filter):
The band lower than the value set for the cutoff frequency is eliminated.

<Cutoff> Cutoff Frequency — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz)
This sets the frequency that serves as the reference when a specific frequency band is cut off by a filter.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality for the chorus sound. A larger positive value results in greater emphasis of the lower band.

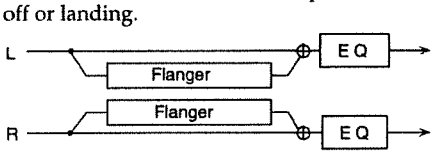
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality for the chorus sound. A larger positive value results in greater emphasis of the higher band.

***<Balance> Effect Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the effect sound (chorus sound).

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 15: STEREO-FLANGER

This is a Flanger with full stereo output (the left and right LFOs are in phase). The depth of the effect can be increased to obtain a sound that moves up and down, like a jet taking off or landing.



<Pre Dly> Predelay Time — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the flanger sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

***<Rate> LFO Rate — 0.05 Hz to 10.0 Hz**
This sets the cycle for the flanger undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> LFO Depth — 0 to 127
This sets the depth of the flanger undulations.

***<Fbk> Feedback — -98% to +98%**
This sets the percentage of the flanger sound output signal that is returned to the input signal.
When the value is positive, an output that is in phase is returned to the input signal. Entering a negative value causes a signal of inverted phase to be returned to the input signal. There is no feedback when the value is zero.
You can set a value from -98% to +98%, in steps of 2%.

<Phase> Phase — 0 to 180
This sets how the flanger sound is spread.

<Filter> Filter Type — OFF/LPF/HPF
This selects the type of filter applied to the flanger sound.

LPF (Low-pass Filter):
The band higher than the value set for the cutoff frequency is eliminated.

HPF (High-pass Filter):
The band lower than the value set for the cutoff frequency is eliminated.

<Cutoff> Cutoff Frequency — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz)
This sets the frequency that serves as the reference when a specific frequency band is cut off by a filter.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

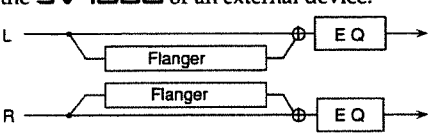
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

<Balance> Effect Balance — D100:0E to D0:100E
This sets the balance for the levels of the original sound and the effect sound (flanger sound).

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 16: STEP-FLANGER

This is flanger that makes step-wise changes in the pitch of the flanging. By setting the step rate to the length of a note, you can synchronize the changes in pitch to the MIDI clock of the JV-1080 or an external device.



<Pre Dly> Predelay Time — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the flanger sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<Rate> LFO Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the flanger undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> LFO Depth — 0 to 127
This sets the depth of the flanger undulations.

***<Fbk> Feedback — -98% to +98%**
This sets the percentage of the flanger sound output signal that is returned to the input signal.
When the value is positive, an output that is in phase is returned to the input signal. Entering a negative value causes a signal of inverted phase to be returned to the input signal. There is no feedback when the value is zero.
You can set a value from -98% to +98%, in steps of 2%.

<Phase> Phase — 0 to 180
This sets how the flanger sound is spread.

***<StepRate> Step Rate — 0.05 Hz to 10.0 Hz/**
This sets the cycle for the changes in pitch.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

* *When set with a note, the Step Rate is synchronized to the MIDI clock of the JV-1080 or an external device. Use Clock Source (☞ p. 66, p. 67), a system parameter, to select whether the MIDI clock of the JV-1080 or the external device is to be used for synchronization.*

* *When a numerical setting is made, the MIDI clock is ignored. If the setting is made with a note but no external MIDI clock is received, the changes in pitch are synchronized with the JV-1080's built-in default tempo (☞ p. 42, p. 57).*

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality for the flanger sound. A larger positive value results in greater emphasis of the lower band.

<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality for the flanger sound. A larger positive value results in greater emphasis of the higher band.

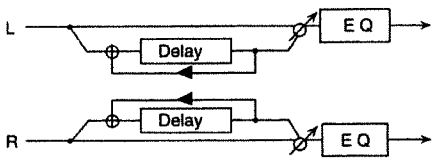
<Balance> Effect Balance — D100:0E to D0:100E
This sets the balance for the levels of the original sound and the effect sound (flanger sound).

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

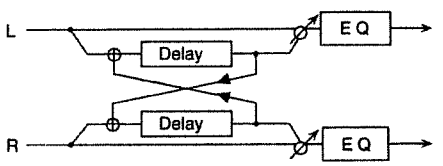
■ 17: STEREO-DELAY

This is a delay with full stereo specifications. This lets you make a thicker sound or achieve special effects by adding a delayed sound to the original sound.

When Feedback Mode is NORMAL



When Feedback Mode is CROSS



<Delay L> Delay Time Left — 0 ms to 500 ms
This sets the time until the left (L) delayed sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 39 ms:	In 1 ms steps
40 to 290 ms:	In 10 ms steps
300 to 500 ms:	In 20 ms steps

<Delay R> Delay Time Right — 0 ms to 500 ms
This sets the time until the right (R) delayed sound is played.

* The setting values are the same as for Delay Time Left.

***<Fbk> Feedback — -98% to +98%**
This sets the percentage of the delayed sound output signal that is returned to the input signal.
Larger values result in more repetitions of the delayed sound.
When the value is positive, an output that is in phase is returned to the input signal. Entering a negative value causes a signal of inverted phase to be returned to the input signal. There is no feedback when the value is zero.
You can set a value from -98% to +98%, in steps of 2%.

<Mode> Feedback Mode — NORMAL/CROSS
This sets the feedback mode.
When set to "CROSS," the delayed sound of each channel is fed back to the other channel, making the delayed sound jump back and forth from left to right.

<Phase L> Phase Left — NORMAL/INVERT
This sets the phase of the delayed sound on the left (L) side.

NORMAL:	No change in phase
INVERT:	Phase is inverted

<Phase R> Phase Right — NORMAL/INVERT
This sets the phase of the delayed sound on the right (R) side.

NORMAL:	No change in phase
INVERT:	Phase is inverted

<HF Damp> High-Frequency Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
A reverb sound is composed of an infinite number of reflected sounds.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding materials (such as the walls and the ceiling). HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, while a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality for the reverb sound. A larger positive value results in greater emphasis of the lower band.

<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality for the reverb sound. A larger positive value results in greater emphasis of the higher band.

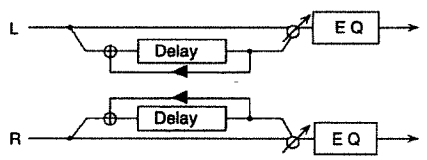
***<Balance> Effect Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the effect sound (reverb sound).

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

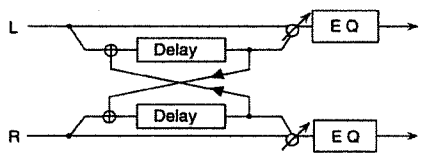
■ 18: MODULATION-DELAY

This lets you add modulation to a delayed sound to create an effect that resembles a flanger.

When Feedback Mode is NORMAL



When Feedback Mode is CROSS



<Delay L> Delay Time Left — 0 ms to 500 ms
This sets the time until the left (L) delayed sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 39 ms:	In 1 ms steps
40 to 290 ms:	In 10 ms steps
300 to 500 ms:	In 20 ms steps

<Delay R> Delay Time Right — 0 ms to 500 ms
This sets the time until the right (R) delayed sound is played.

* *The setting values are the same as for Delay Time Left.*

<Fbk> Feedback — -98% to +98%
This sets the percentage of the delayed sound output signal that is returned to the input signal.
Larger values result in more repetitions of the delayed sound. When the value is positive, an output that is in phase is returned to the input signal. Entering a negative value causes a signal of inverted phase to be returned to the input signal. There is no feedback when the value is zero.
You can set a value from -98% to +98%, in steps of 2%.

<Mode> Feedback Mode — NORMAL/CROSS
This sets the feedback mode.
When set to "CROSS," the delayed sound of each channel is fed back to the other channel, making the delayed sound jump back and forth from left to right.

***<Rate> Modulation Rate — 0.05 Hz to 10.0 Hz**
This sets the speed with which the modulation effect is applied.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> Modulation Depth — 0 to 127
This sets the depth of the modulation effect.

<Phase> Phase — 0 to 180
This sets how the modulation sound expands.

<HF Damp> High-Frequency Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding walls. HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, while a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

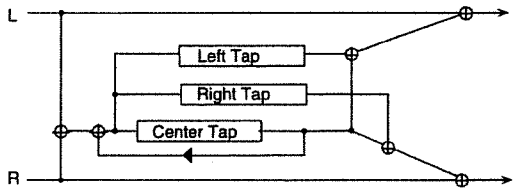
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

***<Balance> Effect Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the effect sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 19: TRIPLE-TAP-DELAY

This delay lets you set different delay times for three directions — center (C), left (L), and right (R).
By setting the delay time to the length of a note, you can synchronize the delayed sound to the MIDI clock signal from an internal or external device.
This effect is used when you want to apply a delay that is synchronized to the performance tempo of a sequencer or some other instrument.



<Delay C> Delay Time Center — 200 ms to 1000 ms/♪ /𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯/𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯./𝅘𝅥𝅯𝅘𝅥𝅯/𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯/𝅘𝅥𝅯𝅘𝅥𝅯./𝅘𝅥𝅯
This sets the delay time for the delayed sound that is output from the center (C).

200 to 545 ms:	In 5 ms steps
550 to 1000 ms:	In 10 ms steps

* *When set as a note value, the Delay Time can be synchronized with the module's internal clock or the MIDI clock arriving from an external device. You can use the Clock Source system parameter (☞ p. 66, p. 67) to select which source you want to use, either the internal clock or the MIDI clock.*

* *When set as a numeric value, the MIDI clock will be ignored. Note also that even if a note value has been set, the module's default tempo (☞ p. 42, p. 57) will be used for synchronization whenever the MIDI clock has not arrived from an external device.*

<Delay L> Delay Time Left
This sets the delay time for the delayed sound that is output from the left (L).

* *The setting values are the same as for Delay Time Center.*

<Delay R> Delay Time Right
This sets the delay time for the delayed sound that is output from the right (R).

* *The setting values are the same as for Delay Time Center.*

***<Fbk> Feedback — -98% to +98%**
This sets the amount of feedback for the delayed sound. "Feedback" refers to returning a portion of the output signal to the input signal.
This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

<Level C> Center Level — 0 to 127
This sets the volume for the center delayed sound.

<Level L> Left Level — 0 to 127
This sets the volume for the left delayed sound.

<Level R> Right Level — 0 to 127
This sets the volume for the right delayed sound.

<HF Damp> High-Frequency Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding walls. HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, while a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

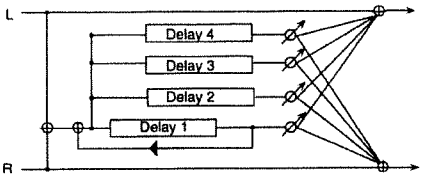
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

***<Balance> Effect Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the effect sound.

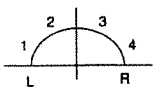
<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 20: QUADRUPLE-TAP-DELAY

This delay lets you set four independent delay times.
By setting the delay time to the length of a note, you can synchronize the delayed sound to the MIDI clock signal from an internal or external device.
This effect is used when you want to apply delays that are synchronized to the performance tempo of a sequencer or some other instrument.



* The stereo positions of the delayed sounds 1 to 4 are as you see at right.



<Delay1> Delay Time 1 — 200 ms to 1000 ms/♪/♪₃/♪./♪♪/♪♪₃/♪.♪/♩
This sets the interval from the time when the original sound is played until the delayed sound (1) is played.
200 to 545 ms: In 5 ms steps
550 to 1000 ms: In 10 ms steps

* *When set as a note value, the Delay Time can be synchronized with the module's internal clock or the MIDI clock arriving from an external device. For details, refer to "Triple Tap Delay."*

* *The setting values for Delay Time 2 to Delay time 4 are the same.*

<Delay2> Delay Time 2 — 200 ms to 1000 ms/♪/♪₃/♪./♪♪/♪♪₃/♪.♪/♩
This sets the interval from the time when the original sound is played until the delayed sound (2) is played.

<Delay3> Delay Time 3 — 200 ms to 1000 ms/♪/♪₃/♪./♪♪/♪♪₃/♪.♪/♩
This sets the interval from the time when the original sound is played until the delayed sound (3) is played.

<Delay4> Delay Time 4 — 200 ms to 1000 ms/ ♪/♪₃/♪./♪♪/♪♪₃/♪.♪/♩
This sets the interval from the time when the original sound is played until the delayed sound (4) is played.

<Level 1> Level 1
This sets the volume for the delayed sound (1).

<Level 2> Level 2
This sets the volume for the delayed sound (2).

<Level 3> Level 3
This sets the volume for the delayed sound (3).

<Level 4> Level 4
This sets the volume for the delayed sound (4).

***<Fbk> Feedback — -98% to +98%**
This sets the amount of feedback for the delayed sound. "Feedback" refers to returning a portion of the output signal to the input signal.
This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

<HF Damp> High-Frequency Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS

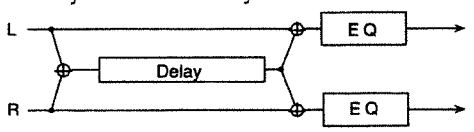
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding walls. HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, while a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

***<Balance> Effect Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the effect sound (delayed sound).

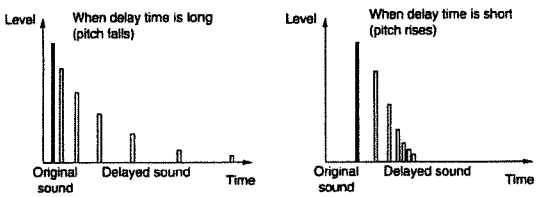
<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 21: TIME-CONTROL-DELAY

This lets you control a delay time in real time.



When the delay time has been made to change, the delay time and pitch of the delayed sound change at the speed set for Acceleration. Depending on the settings you use, you can achieve some really tricky effects with this.



You can use a Controller assigned with EFX Control Source (☞ p. 46) to control the delay time. For example, if you set Source to "Expression," you can control the delay time with the expression pedal as an external controller.

***<Delay> Delay Time — 200 ms to 1000 ms**
This sets the interval from the time when the original sound is played until the delayed sound is played.
200 to 595 ms: In 5 ms steps
600 to 1000 ms: In 10 ms steps

<Accel> Acceleration — 0 to 15
This makes the delay interval for the delayed sound approach the setting value from zero.

***<Fbk> Feedback — -98% to +98%**
This sets the amount of feedback for the delayed sound. "Feedback" refers to returning a portion of the output signal to the input signal.
This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

<Pan> Output Pan — 63R to 0 to L64
This sets the stereo position where the effect sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

<HF Damp> High-Frequency Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding walls. HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, while a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

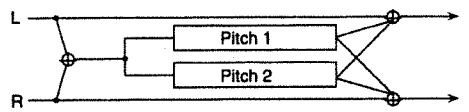
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

<Balance> Effect Balance — D100:0E to D0:100E
This sets the balance for the levels of the original sound and the effect sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 22: 2 VOICE-PITCH-SHIFTER

This changes the pitch of the original sound. You can make subtle changes in two different pitches.



***<CoarseA> Coarse Pitch A — -24 to +12**
This sets the amount of change in pitch for pitch-shifted sound A, in half-tone increments.
You can make a setting up to one octave higher or two octaves lower.

<FineA> Fine Pitch A — -100 to +100
This sets the amount of change in pitch for pitch-shifted sound A, in increments of 2 cents (a cent is 1/100th of a half-tone).

<Pan A> Output Pan A — L64 to 0 to 63R
This sets the stereo position at which pitch-shifted sound A is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

<PreDlyA> Predelay Time A — 0 ms to 500 ms
This sets the delay time for pitch-shifted sound A.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 39 ms:	In 1 ms steps
40 to 290 ms:	In 10 ms steps
300 to 500 ms:	In 20 ms steps

***<CoarseB> Coarse Pitch B — -24 to +12**
This sets the amount of change in pitch for pitch-shifted sound B, in half-tone increments.
You can make a setting up to one octave higher or two octaves lower.

<FineB> Fine Pitch B — -100 to +100
This sets the amount of change in pitch for pitch-shifted sound B, in increments of 2 cents (a cent is 1/100th of a half-tone).

<Pan B> Output Pan B — L64 to 0 to 63R
This sets the stereo position at which pitch-shifted sound B is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

<PreDlyB> Predelay Time B — 0 ms to 500 ms
This sets the delay time for pitch-shifted sound B.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 39 ms:	In 1 ms steps
40 to 290 ms:	In 10 ms steps
300 to 500 ms:	In 20 ms steps

<Mode> Pitch Shift Mode — 1 to 5
This selects the pitch shift mode. Larger mode numbers result in longer response times but less undulations in the sound.

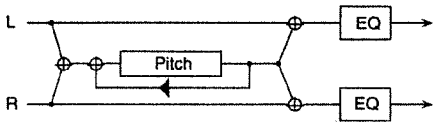
<Lvl Bal> Level Balance — A100:0B to A0:100B
This sets the volume balance for pitch-shifted sounds A and B.

<Balance> Effect Balance — D100:0E to D0:100E
This sets the balance for the levels of the original sound and the effect sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 23: FBK-PITCH-SHIFTER (Feedback-Pitch-Shifter)

This is a pitch shifter with a feedback loop.



***<Coarse> Coarse Pitch — -24 to +12**
This sets the amount of change in pitch for the pitch-shifted sound, in half-tone increments. You can make a setting up to one octave higher or two octaves lower.

<Fine> Fine Pitch — -100 to +100
This sets the amount of change in pitch for the pitch-shifted sound, in increments of 2 cents (a cent is 1/100th of a half-tone).

<Pan> Output Pan — L64 to 0 to 63R
This sets the stereo position at which the pitch-shifted sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

<PreDly> Predelay Time — 0 ms to 500 ms
This sets the delay time for the pitch-shifted sound.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 39 ms:	In 1 ms steps
40 to 290 ms:	In 10 ms steps
300 to 500 ms:	In 20 ms steps

<Mode> Pitch Shift Mode — 1 to 5
This selects the pitch shift mode. Larger mode numbers result in longer response times but less undulations in the sound.

***<Feedback> Feedback — -98% to +98%**
This sets the amount of feedback for the pitch-shifted sound. "Feedback" refers to returning a portion of the output signal to the input signal.
This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

<Low Gain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

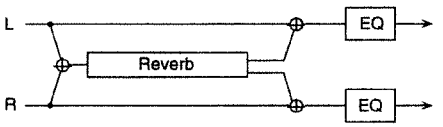
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

<Balance> Effect Balance — D100:0E to D0:100E
This sets the balance for the levels of the original sound and the effect sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 24: REVERB

This adds lingering reverberations to the original sound to simulate sounds played in a spacious setting.



<Type> Reverb Type — ROOM1/ROOM2/STAGE1/ STAGE2/HALL1/HALL2
This selects the type of reverb.

ROOM1:
Short, high-density reverb

ROOM2:
Short, low-density reverb

STAGE1:
Reverb with many later reverberations

STAGE2:
Reverb with strong initial reflection

HALL1:
Clear reverb

HALL2:
Rich reverb

<Pre Dly> Predelay Time — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the REVERB sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

***<Time> Reverb Time — 0 to 127**
This sets the time from when the reverb sound starts until it fades away.

<HF Damp> High-Frequency Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/ 3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding walls. HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, while a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

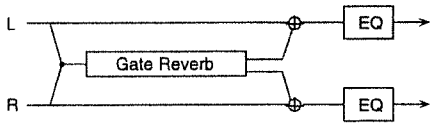
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

***<Balance> Effect Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the effect (reverb) sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 25: GATE-REVERB

This reverb mutes out the lingering reverberations while they are in progress.



<Type> Reverb Type — NORMAL/REVERSE/ SWEEP1/SWEEP2
This selects the type of reverb.

NORMAL:
This is a normal gate reverb.

REVERSE:
With this type, the reverb is rotated in reverse.

SWEEP1:
The reverb sound moves from right to left.

SWEEP2:
The reverb sound moves from left to right.

<Pre Dly> Predelay Time — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the REVERB sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<GateTime> Gate Time — 5 to 500
This sets the interval from the time the reverb sound starts until the time when it is muted.

<LowGain> Low Gain — -15 dB to +15 dB
This sets the bass sound quality. A larger positive value results in greater emphasis of the lower band.

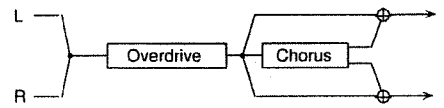
<Hi Gain> High Gain — -15 dB to +15 dB
This sets the treble sound quality. A larger positive value results in greater emphasis of the higher band.

***<Balance> Effect Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the effect (reverb) sound.

***<Level> Output Level — 0 to 127**
This sets the overall level for the effect sound.

■ 26: OVERDRIVE -> CHORUS

With this type, the Overdrive is connected in series with the Chorus.



<Drive> Drive — 0 to 127
This sets the strength of the overdrive sound distortion.

***<Pan> Overdrive Pan — L64 to 0 to 63R**
This sets the stereo position where the overdrive sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

<Pre Dly> Chorus Predelay — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the chorus sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<Rate> Chorus Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the chorus sound undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

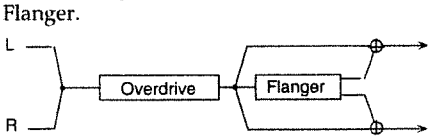
<Depth> Chorus Depth — 0 to 127
This sets the depth of the undulations of the chorus sound.

***<Balance> Chorus Balance — D100:0E to D0:100E**
This sets the balance for the levels of the overdrive sound and the overdrive + chorus sound. A setting of "D100:0E" outputs only the overdrive sound, and a setting of "D0:100E" outputs overdrive + chorus sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 27: OVERDRIVE -> FLANGER

With this type, the Overdrive is connected in series with the Flanger.



<Drive> Drive — 0 to 127
This sets the strength of the overdrive sound distortion.

***<Pan> Overdrive Pan — L64 to 0 to 63R**
This sets the stereo position where the overdrive sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

<Pre Dly> Flanger Pre delay — 0 ms to 100 ms
This sets the interval from the time when the original sound.is played until the time when the flanger sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<Rate> Flanger Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the flanger undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> Flanger Depth — 0 to 127
This sets the depth of the flanger undulations.

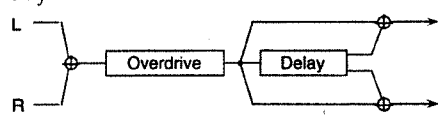
<Fbk> Feedback — -98% to +98%
This sets the amount of feedback for the flanger sound. "Feedback" refers to returning a portion of the output signal to the input signal. This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

***<Balance> Flanger Balance — D100:0E to D0:100E**
This sets the balance for the levels of the overdrive sound and the overdrive + flanger sound. A setting of "D100:0E" outputs only the overdrive sound, and a setting of "D0:100E" outputs overdrive + flanger sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 28: OVERDRIVE -> DELAY

With this type, the Overdrive is connected in series with the Delay.



<Drive> Drive — 0 to 127
This sets the strength of the overdrive sound distortion.

***<Pan> Overdrive Pan — L64 to 0 to 63R**
This sets the stereo position where the overdrive sound is output. L64 is leftmost, 0 is centered, and 63R is rightmost.

<Delay> Delay Time — 0 ms to 500 ms
This sets the interval from the time when the original sound is played until the delayed sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 39 ms:	In 1 ms steps
40 to 290 ms:	In 10 ms steps
300 to 500 ms:	In 20 ms steps

<Fbk> Delay Feedback — -98% to +98%
This sets the amount of feedback for the delayed sound. "Feedback" refers to returning a portion of the output signal to the input signal. This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

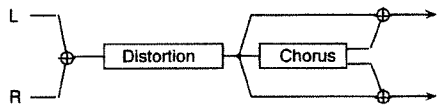
<HF Damp> Delay HF Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding walls. HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, while a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

***<Balance> Balance — D100:0E to D0:100E**
This sets the balance for the levels of the overdrive sound and the overdrive + delayed sound. A setting of "D100:0E" outputs only the overdrive sound, and a setting of "D0:100E" outputs overdrive + delayed sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 29: DISTORTION -> CHORUS

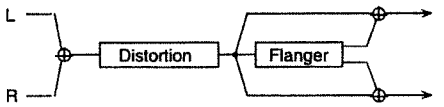
With this type, Distortion is connected in series with the Chorus.



* *The parameters that you can set are the same as for "OVERDRIVE -> CHORUS."*

■ 30: DISTORTION -> FLANGER

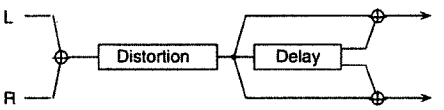
With this type, Distortion is connected in series with the Flanger.



* *The parameters that you can set are the same as for "OVERDRIVE -> FLANGER."*

■ 31: DISTORTION -> DELAY

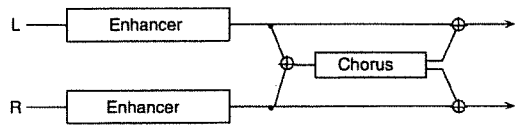
With this type, Distortion is connected in series with the Delay.



* *The parameters that you can set are the same as for "OVERDRIVE -> DELAY."*

■ 32: ENHANCER -> CHORUS

With this type, the Enhancer is connected in series with the Chorus.



***<Sens> Sensitivity — 0 to 127**
This sets the depth to which the Enhancer is applied.

<Mix> Mix Level — 0 to 127
This sets the ratio for mixing the original sound with the generated harmonics.

<Pre Dly> Chorus Pre delay — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the chorus sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<Rate> Chorus Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the chorus sound undulations.
0.05 to 4.95 Hz: In 0.05 Hz steps
5.0 to 6.9 Hz: In 0.1 Hz steps
7.0 to 10.0 Hz: In 0.5 Hz steps

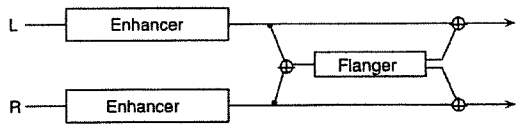
<Depth> Chorus Depth — 0 to 127
This sets the depth of the undulations of the chorus sound.

***<Balance> Chorus Balance — D100:0E to D0:100E**
This sets the balance for the levels of the enhancer sound and the enhancer + chorus sound. A setting of "D100:0E" outputs only the enhancer sound, and a setting of "D0:100E" outputs enhancer + chorus sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 33: ENHANCER -> FLANGER

With this type, the Enhancer is connected in series with the Flanger.



***<Sens> Sensitivity — 0 to 127**
This sets the depth to which the Enhancer is applied.

<Mix> Mix Level — 0 to 127
This sets the ratio for mixing the original sound with the generated harmonics.

<Pre Dly> Flanger Pre delay — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the flanger sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<Rate> Flanger Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the flanger undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Depth> Flanger Depth — 0 to 127
This sets the depth of the flanger undulations.

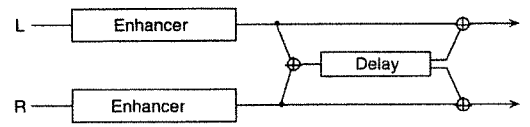
<Fbk> Flanger Feedback — -98% to +98%
This sets the amount of feedback for the flanged sound. "Feedback" refers to returning a portion of the output signal to the input signal. This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

***<Balance> Flanger Balance — D100:0E to D0:100E**
This sets the balance for the levels of the enhancer sound and the enhancer + flanger sound. A setting of "D100:0E" outputs only the enhancer sound, and a setting of "D0:100E" outputs enhancer + flanger sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 34: ENHANCER -> DELAY

With this type, the Enhancer is connected in series with the Delay.



***<Sens> Sensitivity — 0 to 127**
This sets the depth to which the Enhancer is applied.

<Mix> Mix Level — 0 to 127
This sets the ratio for mixing the original sound with the generated harmonics.

<Delay> Delay Time — 0 ms to 500 ms
This sets the interval from the time when the original sound is played until the delayed sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 39 ms:	In 1 ms steps
40 to 290 ms:	In 10 ms steps
300 to 500 ms:	In 20 ms steps

<Fbk> Delay Feedback — -98% to +98%
This sets the amount of feedback for the delayed sound. "Feedback" refers to returning a portion of the output signal to the input signal. This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

<HF Damp> Delay HF Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding walls. HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, while a

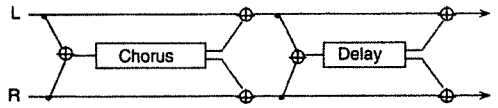
higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

***<Balance> Delay Balance — D100:0E to D0:100E**
This sets the balance for the levels of the enhancer sound and the enhancer + delayed sound. A setting of "D100:0E" outputs only the enhancer sound, and a setting of "D0:100E" outputs enhancer + delayed sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 35: CHORUS -> DELAY

This type connects Chorus and Delay in series.



<Cho Dly> Chorus Predelay — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the chorus sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<ChoRate> Chorus Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the chorus sound undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz	In 0.5 Hz steps

<Cho Dpt> Chorus Depth — 0 to 127
This sets the depth of the undulations of the chorus sound.

***<Cho Bal> Chorus Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the chorus sound. A setting of "D100:0E" outputs only the original sound, and a setting of "D0:100E" outputs chorus sound only.

<Delay> Delay Time — 0 ms to 500 ms
This sets the interval from the time when the original sound is played until the delayed sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 39 ms:	In 1 ms steps
40 to 290 ms:	In 10 ms steps
300 to 500 ms:	In 20 ms steps

<Dly Fbk> Delay Feedback — -98% to +98%
This sets the amount of feedback for the delayed sound. "Feedback" refers to returning a portion of the output signal to the input signal. This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

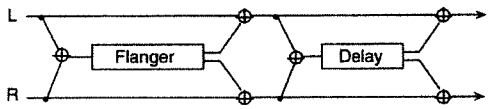
<HF Damp> Delay HF Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding walls. HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, while a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

***<Delay Balance> Delay Balance — D100:0E to D0:100E**
This sets the balance for the levels of the chorus sound and the chorus + delayed sound. A setting of "D100:0E" outputs only the chorus sound, and a setting of "D0:100E" outputs chorus + delayed sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 36: FLANGER -> DELAY

This type connects the Flanger and Delay in series.



<Flg Dly> Flanger Predelay — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the flanger sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<FlgRate> Flanger Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the flanger undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Flg Dpt> Flanger Depth — 0 to 127
This sets the depth of the flanger undulations.

<Flg Fbk> Flanger Feedback — -98% to +98%
This sets the amount of feedback for the flanger sound. "Feedback" refers to returning a portion of the output signal to the input signal. This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

***<Flg Bal> Flanger Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the flanger sound. A setting of "D100:0E" outputs only the original sound, and a setting of "D0:100E" outputs flanger sound only.

<Delay> Delay Time — 0 ms to 500 ms
This sets the interval from the time when the original sound is played until the delayed sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 39 ms:	In 1 ms steps
40 to 290 ms:	In 10 ms steps
300 to 500 ms:	In 20 ms steps

<Dly Fbk> Delay Feedback — -98% to +98%
This sets the amount of feedback for the delayed sound. "Feedback" refers to returning a portion of the output signal to the input signal. This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

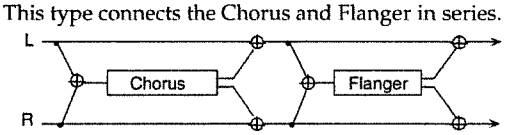
<HF Damp> Delay HF Damp — 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000 (200 Hz to 8 kHz), BYPASS
This sets the frequency at which the high-frequency components of the reverb sound are cut off.
The degree to which the high-frequency components of a reverb sound are attenuated depends on the composition of surrounding walls. HF Damp (high-frequency damp) is a parameter which simulates this by attenuating the high-frequency components.
A lower cutoff frequency results in a sedate sound, and a higher frequency produces a brighter sound. When set to "BYPASS," no high-frequency components are cut off.

***<Delay Balance> Delay Balance — D100:0E to D0:100E**
This sets the balance for the levels of the flanger sound and the flanger + delayed sound. A setting of "D100:0E" outputs only the flanger sound, and a setting of "D0:100E" outputs flanger + delayed sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 37: CHORUS -> FLANGER

This type connects the Chorus and Flanger in series.



<Cho Dly> Chorus Predelay — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the chorus sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<ChoRate> Chorus Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the chorus sound undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Cho Dpt> Chorus Depth — 0 to 127
This sets the depth of the undulations of the chorus sound.

***<Cho Bal> Chorus Balance — D100:0E to D0:100E**
This sets the balance for the levels of the original sound and the chorus sound. A setting of "D100:0E" outputs only the original sound, and a setting of "D0:100E" outputs chorus sound only.

<Flg Dly> Flanger Predelay — 0 ms to 100 ms
This sets the interval from the time when the original sound is played until the time when the flanger sound is played.

0 to 4.9 ms:	In 0.1 ms steps
5.0 to 9.5 ms:	In 0.5 ms steps
10 to 49 ms:	In 1 ms steps
50 to 100 ms:	In 2 ms steps

<FlgRate> Flanger Rate — 0.05 Hz to 10.0 Hz
This sets the cycle for the flanger undulations.

0.05 to 4.95 Hz:	In 0.05 Hz steps
5.0 to 6.9 Hz:	In 0.1 Hz steps
7.0 to 10.0 Hz:	In 0.5 Hz steps

<Flg Dpt> Flanger Depth — 0 to 127
This sets the depth of the flanger undulations.

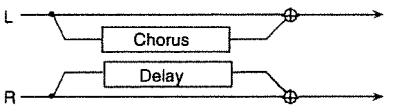
<Flg Fbk> Flanger Feedback — -98% to +98%
This sets the amount of feedback for the flanger sound. "Feedback" refers to returning a portion of the output signal to the input signal. This sets the percentage of the in-phase or inverted-phase output signal (positive or negative value) that is returned to the input.
You can set a value from -98% to +98%, in steps of 2%. No feedback is applied when this is set to zero.

***<Flanger Balance> Flanger Balance — D100:0E to D0:100E**
This sets the balance for the levels of the chorus sound and the chorus + flanger sound. A setting of "D100:0E" outputs only the chorus sound, and a setting of "D0:100E" outputs chorus + flanger sound.

<Level> Output Level — 0 to 127
This sets the overall level for the effect sound.

■ 38: CHORUS/DELAY

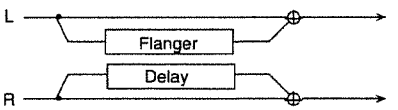
This type connects the Chorus and Delay in parallel.



* *The parameters that you can set are the same as for "CHORUS -> DELAY." However, the Delay Balance setting determines the balance level for the original sound and the delayed sound.*

■ 39: FLANGER/DELAY

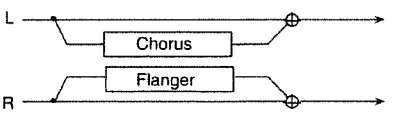
This type connects the Flanger and Delay in parallel.



* *The parameters that you can set are the same as for "FLANGER -> DELAY." However, the Delay Balance setting determines the balance level for the original sound and the delayed sound.*

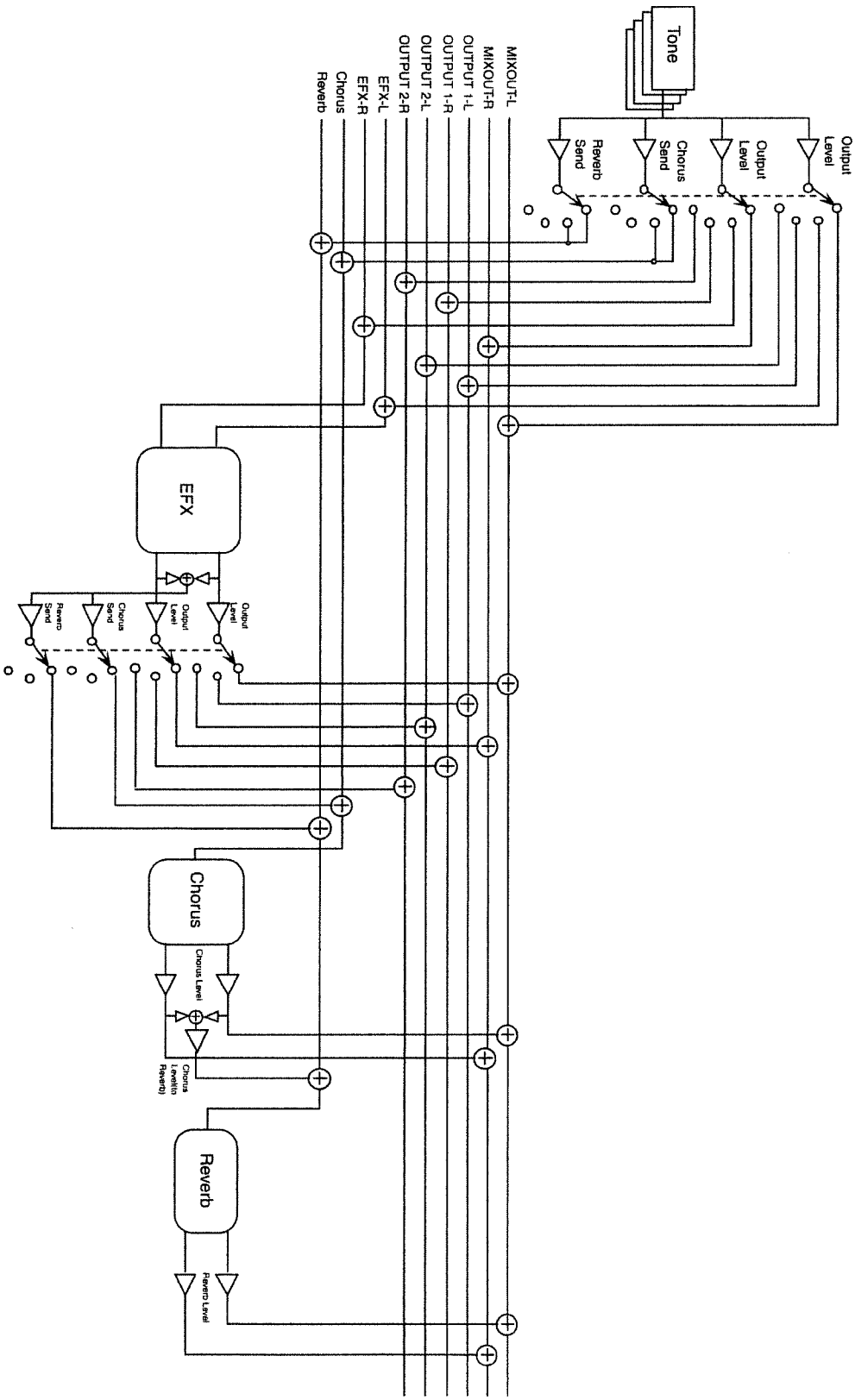
■ 40: CHORUS/FLANGER

This type connects the Chorus and Flanger in parallel.



* *The parameters that you can set are the same as for "CHORUS -> FLANGER." However, the Flanger Balance setting determines the balance level for the original sound and the flanger sound.*

JV-1080 Effect Routing



Chapter 6

Supplementary Materials

Troubleshooting

■ Error Messages

If you make a mistake in operating the JV-1080, or if something doesn't execute correctly, an error message appears on the display for a few moments. Check the error message and take action appropriately to correct the problem.

● Message Appearing at Powerup

Internal Battery Low

Cause: The JV-1080's backup battery is almost out of power.

Action: Contact your nearest Roland Service Center.

● Messages About the User Memory

User Memory Write Protect

Cause: Write Protect (☞ p. 72) is on.

Action: Turn off Write Protect.

User Memory Read Error

Cause: The data in the internal memory cannot be read correctly.

Action: Try executing it again.

● Messages About the DATA Card

DATA Card Not Ready

Cause: A DATA Card is not inserted into the DATA Card slot, or is inserted incorrectly.

Action: Make sure that a DATA Card is inserted correctly.

DATA Card Battery Low

Cause: The DATA Card's backup battery is almost out of power.

Action: Check the manual for the DATA Card and replace the battery.

DATA Card Not Properly Formatted

Cause: A DATA Card that has not been initialized or that is for a different model has been inserted into the DATA Card slot.

Action: Initialize the DATA Card (☞ p. 73), or use a DATA Card for the JV-1080.

DATA Card Read Error

Cause: The DATA Card may have come out of the DATA Card slot during data transmission.

Action: Reinsert the DATA Card and execute the operation again.

DATA Card Write Protect

Cause: The DATA Card protect function is on (☞ p. 70).

Action: Switch off the DATA Card protect function.

Cannot Read Performance

Cause: A DATA Card for a different model has been inserted in the DATA Card slot.

Action: Use a DATA Card for the JV-1080.

● Messages About the PCM Card

PCM Card Not Ready

Cause: A PCM Card is not inserted in the PCM Card slot, or is inserted incorrectly.

Action: Make sure that a PCM Card is inserted correctly.

PCM Card Not Properly Formatted

Cause: A PCM Card for a different model has been inserted in the PCM Card slot.

Action: Use a PCM Card for the JV-1080.

PCM Card Not Patch

Cause: A PCM Card which does not contain Patch data has been inserted.

Action: Insert a PCM Card that contains Patch data.

● Messages About the Expansion Board

Expansion Board Not Ready

Cause: An Expansion Board is not installed, or is installed incorrectly.

Action: Make sure that an Expansion Board is installed correctly.

Expansion Board Not Properly Formatted

Cause: An Expansion Board for a different model has been installed.

Action: Use an Expansion Board for the JV-1080.

Expansion Board Not Patch

Cause: An Expansion Board which does not contain Patch data has been installed.

Action: Install an Expansion Board that contains Patch data.

Expansion Board Not Rhythm

Cause: An Expansion Board which does not contain Rhythm data has been installed.

Action: Install an Expansion Board that contains Rhythm data.

● Messages About MIDI

Exclusive Address Error

Cause: The address of an Exclusive (SysEx) message that has been received is incorrect.

Action: Check the addresses of the data being sent and carry out the operation again.

Check Sum Error

Cause: A checksum error has occurred for an Exclusive (SysEx) message that has been received.

Action: Check the checksums for the data being sent and carry out the operation again.

MIDI Buffer Full

Cause: A large amount of data that the JV-1080 cannot process has been received.

Action: Reduce the amount of MIDI data sent from the transmitting device.

MIDI Communication Error

Cause: A MIDI cable may have come loose or been severed.

Action: Make sure that the MIDI cables and connections are secure.

BULK DUMP: Improper Data Card

Cause: A DATA card not formatted for the JV-1080 has been inserted, and the data received as a bulk dump cannot be written into it.

Action: In Utility mode, format the DATA card (☞ p.73), and try the operation again.

BULK DUMP: Receive Data Error

Cause: The range of the data received by bulk dump was incorrect.

Action: Modify the data values to an appropriate range.

BULK DUMP: Data Format Error

Cause: The check sum value or data length of a bulk dump was incorrect.

Action: Check the check sum value or the data length.

BULK DUMP: User Memory Write Protected

Cause: Since Exclusive Write Protect is on, data received by bulk dump cannot be written into user memory.

Action: Turn off Exclusive Write Protect (☞ p.72).

BULK DUMP: Data Card Not Ready

Cause: Since a DATA card is not inserted, data received by bulk dump cannot be written into the card.

Action: Correctly insert a DATA card into the DATA card slot.

BULK DUMP: Data Card Write Protected

Cause: Since the protect switch of the DATA card is on, data received by bulk dump cannot be written into the card.

Action: Turn off the protect switch of the DATA card (☞ p.70), and try the operation again.

BULK DUMP: Check Sum Error

Cause: The check sum of a bulk dump was incorrect.

Action: Correct the exclusive data.

BULK DUMP: MIDI Buffer Full

Cause: An excessively large amount of data was received as a bulk dump.

Action: Make settings to reduce the amount of exclusive data that is transmitted as a single message.

■ Troubleshooting

If you're not getting any sound out, or you think the JV-1080 is acting funny, please check the following. If these don't fix the problem, then go ahead and contact the store you bought it from, or your nearest Roland Service Station.

● No Sound

Is the volume too low?

➪ Check the settings for the VOLUME knob on the JV-1080 and the volume controls for connected mixers and amps.

Are connections correct?

➪ If you are using headphones, the cable may be broken, or there may be a problem with an amp or a mixer. Check the cables and the connected equipment.

Are the MIDI send and receive channels set correctly?

➪ Make sure that the MIDI send channel for the connected equipment matches the MIDI receive channel set for the JV-1080 (☞ p. 59 and p. 67).

Are the level settings for Tones, Patches, and Parts too low?

➪ Check the level settings for the Tones (☞ p. 55), the Patch level setting (☞ p. 42), and the Performance Part level setting (☞ p. 60).

Are Tones or Parts being muted?

➪ Make sure the Tone switches or Part switches are set to ON (☞ p. 32).

Are the Key Range settings correct?

➪ Check the Key Range settings for Tones and Parts (☞ p. 43 and p. 57).

Is the Part level set too low in volume/exclusive (SysEx) messages arriving from an external device?

➪ Check this with the Information screen (☞ p. 38).

Are the Effect settings correct?

➪ Check the Effect settings ON or OFF (☞ p. 38), in the Effect Balance level (☞ p. 83).

Are the settings for the output destination correct?

➪ Check the setting for Output Assign (Patches: ☞ p. 45, Performances: ☞ p. 57).

● The Pitch Isn't Right

Is the Master Tune setting correct?

➪ Check this setting (☞ p. 68).

Are the Pitch settings for Tones and Parts correct?

➪ Check these settings (Tones: ☞ p. 52, Parts: ☞ p. 60).

Is the JV-1080 receiving Pitch Bend messages from some external device?

➪ Check this with the Information screen (☞ p. 40).

● I Can't Change Patches

If the Receive switch for Program Change set to OFF?

➪ If you're using an external device to change Patches, make sure the MIDI channel settings match and set the Receive switch for Program Change to ON.

Are you still at the Edit screen or in the ROM Play mode?

➪ Press [EXIT] or a Mode button to return to the Play mode.

● I Can't Apply an Effect

Are the Effect parameter settings correct?

➪ Make sure the Effects are switched on (☞ p. 38), and check the level setting for each of the Effects.

Is the Output Assign setting correct?

➪ Check the Output Assign settings for Tones and Parts (Patches: ☞ p. 45, Peformances: ☞ p. 57).

● Can't receive over MIDI

Are you sure the settings for the receive channels and reception switches are appropriate?

➪ Check your settings for the MIDI receive channels (Patches: ☞ p. 67; Performances: ☞ p. 59), and the various MIDI reception switches (☞ p. 68).

Could you have inappropriate settings made for exclusive reception?

➪ Make sure the Exclusive Protect switch (☞ p. 72) is turned OFF.
Also, check to make sure the Unit Number setting matches that of the transmitting device (☞ p. 67).

● Can't use cards

Is the DATA card (M-256E, M-512E) formatted?

➪ DATA cards need to be formatted before they can be used. Format the card correctly (☞ p. 73).

Could you be trying to use a card that the JV-1080 doesn't support?

➪ This unit cannot read card data that was produced on any device other than those in the JV series (JV-1080/1000/90/80/880). Also, you cannot write data onto a card unless it has been formatted on the JV-1080.

● Song data doesn't play back properly

Are you trying to start playback from midway through the song?

➪ A "GM System ON" message is included at the top of GM score data. If you haven't played the song from the beginning, this message would not have been conveyed, so the data might not be played properly.

Are you trying to play song data designed for the GS Format?

➪ Since this unit is designed to support the General MIDI System, it may in certain cases not provide faithful playback if you try playing GS Format song data.

Parameter List

Patch Parameters

COMMON

Page	Parameter	Display	Value	Reference
PATCH NAME	Patch Name	----	(12 Character ASCII)	42
PATCH COMMON	Patch Level	Level	0 — 127	42
	Patch Pan	Pan	L64 — 0 — 63R	42
	Analog Feel Depth	Analog Feel	0 — 127	42
	Octave Shift	Octave	-3 — 0 — +3	42
	Stretch Tune Depth	Stretch	OFF/1/2/3	42
	Voice Priority	Priority	LAST/LOUDEST	42
	Velocity Range Switch	Velocity Range	OFF/ON	42
	Default Tempo	Default Tempo	20 — 250	42
VELOCITY	Velocity Range Lower	Lower	1 — 127	42
	Velocity Range Upper	Upper	1 — 127	43
	Velocity Cross Fade Depth	X-Fade	0 — 127	43
KEY RANGE	Key Range Lower	Lower	C-1 — G9	43
	Key Range Upper	Upper	C-1 — G9	43
STRUCT	Structure	Struct	1 — 10	43
	Booster Level	Booster	0/+6/+12/+18	44

EFFECTS

Page	Parameter	Display	Value	Reference
OUTPUT	Output Assign	Output Assign	MIX/EFX/OUTPUT1,2	45
	Output Level		0 — 127	45
	Chorus Send Level	Chorus	0 — 127	45
	Reverb Send Level	Reverb	0 — 127	45
PATCH EFX TYPE	EFX Type	Type	*1	45
PATCH EFX PRM	EFX Parameter	*1		45
PATCH EFX OUT	Output Assign	Output Assign	MIX/OUTPUT1,2	45
	Output Level		0 — 127	45
	Chorus Send Level	Chorus	0 — 127	46
	Reverb Send Level	Reverb	0 — 127	46
PATCH EFX CTRL	EFX Control Source1,2	----	*2	46
	EFX Control Depth1,2	----	-63 — +63	46
PATCH CHORUS	Chorus Rate	Rat	0 — 127	46
	Chorus Depth	Dpt	0 — 127	46
	Pre Delay	Dly	0 — 127	46
	Chorus Feedback	Fbk	0 — 127	46
	Chorus Level	Level	0 — 127	46
	Chorus Output Assign	Output	MIX/REVERB/MIX+REV	46
PATCH REVERB	Reverb Type	Type	ROOM1,2/STAGE1,2/ HALL1,2/DELAY/ PAN-DELAY	46
	Reverb Time	Time	0 — 127	47
	Reverb Level	Lev	0 — 127	47
	Delay Feedback	Fbk	0 — 127	47
	High Frequency Damp	HF damp	*3	47

*1 : Refer to "EFX Parameters"
*2 : OFF/SYS-CTRL1/SYS-CTRL2/MODULATION/BREATH/FOOT/VOLUME/PAN/EXPRESSION/BENDER/AFTERTOUCH
*3 : 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS

CONTROL

Page	Parameter	Display	Value	Reference
KEY MODE & BENDER	Key Assign Mode	Assign	POLY/SOLO	47
	Solo Legato	Legato	OFF/ON	47
	Bender Range Down	Bend Range	–48 — 0	47
	Bender Range Up		0 — +12	47
PORTAMENT	Portament Switch	Sw	OFF/ON	47
	Portament Time	Tm	0 — 127	47
	Portament Mode	Mode	NORMAL/LEGATO	47
	Portament Type	Type	RATE/TIME	47
	Portament Start	Start	PITCH/NOTE	48
RxSWITCH	Volume Control Switch	Volume	OFF/ON	48
	Pan Control Switch	Pan	OFF/CONT/KEY-ON	48
	Bender Control Switch	Bender	OFF/ON	48
DAMPER	Hold-1 Control Switch	Hold-1 Switch	OFF/ON	48
	Redamper Control Switch	Redamper	OFF/ON	48
PEAK&HOLD	EFX Control Hold/Peak	EfxCtrl	OFF/HOLD/PEAK	48
	Control1 Hold/Peak	Ctrl 1	OFF/HOLD/PEAK	48
	Control2 Hold/Peak	Ctrl 2	OFF/HOLD/PEAK	48
	Control3 Hold/Peak	Ctrl 3	OFF/HOLD/PEAK	49
CONTROL SOURCE	Patch Control Source 2	Control 2	*1	49
	Patch Control Source 3	Control 3	*1	49
CONTROL 1	Control Destination1 — 4	Destination	*2	49
	Control Depth1 — 4	Depth	–63 — +63	49
CONTROL 2	Control Destination1 — 4	Destination	*2	49
	Control Depth1 — 4	Depth	–63 — +63	49
CONTROL 3	Control Destination1 — 4	Destination	*2	49
	Control Depth1 — 4	Depth	–63 — +63	49

*1 : OFF/SYS-CTRL1/SYS-CTRL2/MODULATION/BREATH/FOOT/VOLUME/PAN/EXPRESSION/BENDER/AFTERTOUCH/LFO1/LFO2/VELOCITY/KEYFOLLOW/PLAY-MATE

*2 : OFF/PCH/CUT/RES/LEV/PAN/MIX/CHO/REV/PL1/PL2/FL1/FL2/AL1/AL2/pL1/pL2/L1R/L2R

WAVE

Page	Parameter	Display	Value	Reference
WAVE	Wave Group	Group	INT-A,B/CARD/ EXP-A,B,C,D	50
	Wave Number	Number	1 — 255	50
	Wave Gain	Gain	–6/0/+6/+12	50
	Tone Switch	Switch	OFF/ON	50
FXM	FXM Switch	Switch	OFF/ON	50
	FXM Color	Color	1 — 4	50
	FXM Depth	Depth	1 — 16	50
TONE DELAY	Tone Delay Mode	Mode	*1	50
	Tone Delay Time	Time	0 — 127 /0 — 880 (*2)	51

*1 : NORMAL/HOLD/PLAY-MATE/CLOCK-SYNC/TAP-SYNC/KEY-OFF-NORMAL/KEY-OFF-DECAY

*2 : 𝅘𝅥𝅯/𝅘𝅥𝅯.𝅭/𝅘𝅥𝅯𝅭/𝅘𝅥𝅯𝅭.𝅭/𝅘𝅥𝅯𝅭𝅭/𝅘𝅥𝅯𝅭𝅭.𝅭/𝅘𝅥𝅭/𝅘𝅥𝅭.𝅭/𝅘𝅥𝅭𝅭/𝅘𝅥𝅭𝅭.𝅭/𝅘𝅥/𝅘𝅥.𝅭/𝅗𝅥/𝅗𝅥.𝅭

LFO

Page	Parameter	Display	Value	Reference
LFO1	LFO Waveform	Form	TRI/SIN/SAW/SQR/TRP/ S&H/RND/CHS	51 51
	Key Triger	KeyTrig	OFF/ON	51
	LFO Rate	Rate	0 — 127 / 0 — 880 (*1)	51
	LFO External Sync	ExtSync	OFF/CLOCK/TAP	51
	Fade Mode	Mode	ON-IN/ON-OUT/OFF-IN/ OFF-OUT	52
	Delay Time	Delay	0 — 127	52
	Fade Time	Fade	0 — 127	52
	Level Offset	Offset	-100/-50/0/+50/+100	52
LFO2	*Refer to "LFO1"			
LFO DEPTH1:2	Pitch LFO Depth1,2	Pitch	-63 — +63	52
	Filter LFO Depth1,2	TVF	-63 — +63	52
	Amplitude LFO Depth1,2	TVA	-63 — +63	52
	Pan LFO Depth1,2	PAN	-63 — +63	52

*1 : 𝅘𝅥𝅯/𝅘𝅥𝅯𝅳/𝅘𝅥𝅯/𝅘𝅥𝅯/𝅘𝅥𝅮𝅳/𝅘𝅥𝅯/𝅘𝅥𝅯/𝅗𝅥𝅳/𝅘𝅥𝅮./𝅘𝅥𝅮/𝅗𝅥𝅳/𝅗𝅥/𝅗𝅥/𝅝𝅳/𝅗𝅥./𝅗𝅥/𝅝/𝅝𝅳/𝅝./𝅝

PITCH

Page	Parameter	Display	Value	Reference
PITCH	Coarse Tune	Coarse	-48 — +48	52
	Fine Tune	Fine	-50 — +50	53
	Random Pitch Depth	Random	0 — 1200 *1	53
	Pitch Keyfollow	KeyFlw	-100 — +200 *2	53
PCH ENV DPT	Pitch Envelope Depth	Envelope Depth	-12 — +12	53
	Pitch Envelope Velocity Sensitivity	Velocity Sens	-100 — +150	53
PCH TIME ENV	Velocity Time1 Sensitivity	V-T1	-100 — +100 *3	53
	Velocity Time4 Sensitivity	V-T4	-100 — +100 *3	53
	Time Keyfollow	Time Keyfollow	-100 — +100 *3	53
PCH ENVELOPE	Pitch Envelope Time1,2,3,4	T1,T2,T3,T4	0 — 127	53
	Pitch Envelope Level1,2,3,4	L1,L2,L3,L4	-63 — +63	53

*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
*3 : -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100

TVF

Page	Parameter	Display	Value	Reference
FILTER	Filter Type	Typ	OFF/LPF/BPF/HPF/PKG	54
	Cutoff Frequency	Cut	0 — 127	54
	Resonance	Res	0 — 127	54
	Cutoff Keyfollow	KeyFlw	-100 — +200 *1	54
	TVF Envelope Depth	Env Dpt	-63 — +63	54
TVF VELOCITY	TVF Envelope Velocity Sensitivity	V-Sens	-100 — +150	54
	TVF Envelope Velocity Curve	V-Curve	1 — 7	55
	Resonance Velocity Sensitivity	V-Resonance	-100 — +150	55
TVF TIME ENV	Velocity Time1 Sensitivity	V-T1	-100 — +100 *2	55
	Velocity Time4 Sensitivity	V-T4	-100 — +100 *2	55
	Time Keyfollow	Time Keyfollow	-100 — +100 *2	55
TVF ENVELOPE	TVF Envelope Time1,2,3,4	T1,T2,T3,T4	0 — 127	55
	TVF Envelope Level1,2,3,4	L1,L2,L3,L4	0 — 127	55

*1 : -100/-70/-50/-30/-10/0/+10/+20/+30/+40/+50/+70/+100/+120/+150/+200
*2 : -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100

TVA

Page	Parameter	Display	Value	Reference
TVA	Tone Level	Level	0 — 127	55
	Tone Pan	Pan	L64 — 0 — 63R	55
	TVA Envelope Velocity Sensitivity	V-Sens	–100 — +150	55
	TVA Envelope Velocity Curve	V-Curve	1 — 7	55
BIAS	Bias Level	Bias	–100 — +100 *1	55
	Bias Point	Point	C-1 — G9	55
	Bias Direction	Direction	LOWER/UPPER/ LOWER&UPPER/ALL	55
PAN MODULATE	Pan Keyfollow	KeyFlw	–100 — +100 *1	56
	Random Pan Depth	Random	0 — 63	56
	Alternate Pan Depth	Alternate	L63 — 0 — 63R	56
TVA TIME ENV	Velocity Time1 Sensitivity	V-T1	–100 — +100 *1	56
	Velocity Time4 Sensitivity	V-T4	–100 — +100 *1	56
	Time Keyfollow	Time Keyfollow	–100 — +100 *1	56
TVA ENVELOPE	TVA Envelope Time1,2,3,4	T1,T2,T3,T4	0 — 127	56
	TVA Envelope Level1,2,3	L1,L2,L3	0 — 127	56

*1 : -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100

Performance Parameters

COMMON

Page	Parameter	Display	Value	Reference
PERFORM NAME	Perfomance Name	----	(12 CHARACTER ASCII)	57
PERFORM TEMPO	Default Tempo	Default Tempo	20 — 250	57
PERFORM KEY MODE	Key Range Switch	Key Range	OFF/ON	57
KEY RANG	Key Range Lower	Key Lower	C-1 — G9	57
	Key Range Upper	Key Upper	C-1 — G9	57
RESERVE	Voice Reserve	Voice Reserve	0 — 64	57

EFFECTS

Page	Parameter	Display	Value	Reference
OUTPUT	Output Assign	Output Assign	MIX/EFX/OUTPUT1,2/ PATCH	57
	Output Level		0 — 127	57
	Chorus Send Level	Chorus	0 — 127	58
	Reverb Send Level	Reverb	0 — 127	58
PERFORM EFX TYPE	EFX Type	Type	*1	58
	EFX Source	Source	PERFORM/1 — 9,11 — 16	58
PERFORM EFX PRM	EFX Parameter	*1		58
PERFORM EFX OUT	Output Assign	Output Assign	MIX/OUTPUT1,2	58
	Output Level		0 — 127	58
	Chorus Send Level	Chorus	0 — 127	58
	Reverb Send Level	Reverb	0 — 127	58
PERFORM EFX CTRL	EFX Control Source1,2	----	*1	58
	EFX Control Depth1,2	----	–63 — +63	58
PERFORM CHORUS	Chorus Rate	Rat	0 — 127	59
	Chorus Depth	Dpt	0 — 127	59
	Pre Delay	Dly	0 — 127	59
	Chorus Feedback	Fbk	0 — 127	59
	Chorus Level	Level	0 — 127	59
	Chorus Output Assign	Output	MIX/REVERB/MIX+REV	59
PERFORM REVERB	Reverb Type	Type	ROOM1,2/STAGE1,2/ HALL1,2/DELAY/ PAN-DELAY	59
	Reverb Time	Time	0 — 127	59
	Reverb Level	Lev	0 — 127	59
	Delay Feedback	Fbk	0 — 127	59
	High Frequency Damp	HF damp	*3	59

*1 : Refer to "EFX Parameters"
*2 : OFF/SYS-CTRL1/SYS-CTRL2/MODULATION/BREATH/FOOT/VOLUME/PAN/EXPRESSION/BENDER/AFTERTOUCH
*3 : 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS

MIDI

Page	Parameter	Display	Value	Reference
CONTROL	MIDI Channel	Channel	1 — 16	59
	MIDI Receive Switch	Rx	OFF/ON	59
RX MIDI	Receive Volume	Volume	OFF/ON	60
	Receive Hold-1	Hold-1	OFF/ON	60
	Receive Program Change	Program Change	OFF/ON	60

PART

Page	Parameter	Display	Value	Reference
PATCH	Patch Group	Group	USER/CARD/PCM/ PR-A,B,C/GM/XP-A,B,C,D	60
	Patch Number	Number	001 — 255	60

PITCH

Page	Parameter	Display	Value	Reference
PITCH	Pitch Coarse Tune	Pitch Coarse	-48 — +48	60
	Pitch Fine Tune	Pitch Fine	-50 — +50	60

PAN

Page	Parameter	Display	Value	Reference
PAN	Part Pan	Part Pan	L64 — 0 — 63R	60

LEVEL

Page	Parameter	Display	Value	Reference
LEVEL	Part Level	Level	0 — 127	60

Rhythm Set Parameters

COMMON

Page	Parameter	Display	Value	Reference
RHYTHM NAME	Rhythm Set Name	----	(12 Character ASCII)	61

EFFECTS

Page	Parameter	Display	Value	Reference
OUTPUT	Output Assign	Output Assign	MIX/EFX/OUTPUT1,2	61
	Output Level		0 — 127	61
	Chorus Send Level	Chorus	0 — 127	61
	Reverb Send Level	Reverb	0 — 127	61
PERFORM EFX TYPE	EFX Type	Type	*1	61
	EFX Source	Source	PERFORM/1 — 9,11 — 16	61
PERFORM EFX PRM	EFX Parameter	*1		61
PERFORM EFX OUT	Output Assign	Output Assign	MIX/OUTPUT1,2	61
	Output Level		0 — 127	61
	Chorus Send Level	Chorus	0 — 127	62
	Reverb Send Level	Reverb	0 — 127	62
PERFORM EFX CTRL	EFX Control Source1,2	----	*2	62
	EFX Control Depth1,2	----	-63 — +63	62
PERFORM CHORUS	Chorus Rate	Rat	0 — 127	62
	Chorus Depth	Dpt	0 — 127	62
	Pre Delay	Dly	0 — 127	62
	Chorus Feedback	Fbk	0 — 127	62
	Chorus Level	Level	0 — 127	62
	Chorus Output Assign	Output	MIX/REVERB/MIX+REV	62
PERFORM REVERB	Reverb Type	Type	ROOM1,2/STAGE1,2/ HALL1,2/DELAY/ PAN-DELAY	62
	Reverb Time	Time	0 — 127	62
	Reverb Level	Lev	0 — 127	63
	Delay Feedback	Fbk	0 — 127	63
	High Frequency Damp	HF damp	*3	63

*1 : Refer to "EFX Parameters"
*2 : OFF/SYS-CTRL1/SYS-CTRL2/MODULATION/BREATH/FOOT/VOLUME/PAN/EXPRESSION/BENDER/AFTERTOUCH
*3 : 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS

CONTROL

Page	Parameter	Display	Value	Reference
CONTROL	Bender Range	Bender	0 — 12	63
	Envelope Mode	EnvMode	NO-SUS/SUSTAIN	63
	Mute Group	Mute Group	OFF/1 — 31	63
RxSWITCH	Volume Control Switch	Volume	OFF/ON	63
	Pan Control Switch	Pan	OFF/CONT/KEY-ON	63
	Hold-1 Control Switch	Hold-1	OFF/ON	63

WAVE

Page	Parameter	Display	Value	Reference
WAVE	Wave Group	Group	INT-A,B/CARD/ EXP-A,B,C,D	63
	Wave Number	Number	1 — 255	64
	Wave Gain	Gain	-6/0/+6/+12	64
	Tone Switch	Switch	OFF/ON	64

PITCH

Page	Parameter	Display	Value	Reference
PITCH	Source Key	Coarse	C-1 — G9	64
	Fine Tune	Fine	-50 — +50	64
	Random Pitch Depth	Random	0 — 1200 *1	64
	Pitch Envelope Depth	Env Dpt	-12 — +12	64
PCH VELOCITY	Pitch Envelope Velocity Sensitivity	Velocity Sens	-100 — +150	64
	Velocity Time Sensitivity	Velocity Time	-100 — +100 *2	64
PCH ENVELOPE	Pitch Envelope Time1,2,3,4	T1,T2,T3,T4	0 — 127	64
	Pitch Envelope Level1,2,3,4	L1,L2,L3,L4	-63 — +63	64

*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/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100

TVF

Page	Parameter	Display	Value	Reference
FILTER	Filter Type	Type	OFF/LPF/BPF/HPF/PKG	64
	Cutoff Frequency	Cutoff	0 — 127	64
	Resonance	Res	0 — 127	65
	TVF Envelope Depth	Env Dpt	-63 — +63	65
TVF VELOCITY	TVF Envelope Velocity Sensitivity	V-Sens	-100 — +150	65
	Velocity Time Sensitivity	V-Time	-100 — +100 *1	65
	Resonance Velocity Sensitivity	V-Resonance	-100 — +150	65
TVF ENVELOPE	TVF Envelope Time1,2,3,4	T1,T2,T3,T4	0 — 127	65
	TVF Envelope Level1,2,3,4	L1,L2,L3,L4	0 — 127	65

TVA

Page	Parameter	Display	Value	Reference
TVA	Tone Level	Level	0 — 127	65
	Tone Pan	Pan	L64 — 0 — 63R	65
	Random Pan Depth	Random	0 — 63	65
	Alternate Pan Depth	Alt	L63 — 0 — 63R	65
TVA VELOCITY	TVA Envelope Velocity Sensitivity	Velocity Sens	-100 — +150	65
	Velocity Time Sensitivity	Velocity Time	-100 — +100 *1	65
TVA ENVELOPE	TVA Envelope Time1,2,3,4	T1,T2,T3,T4	0 — 127	65
	TVA Envelope Level1,2,3	L1,L2,L3	0 — 127	65

*1 : -100/-70/-50/-40/-30/-20/-10/0/+10/+20/+30/+40/+50/+70/+100

General MIDI Mode Parameters

EFFECTS

Page	Parameter	Display	Value	Reference
OUTPUT	Output Assign	Output Assign	MIX/EFX/OUTPUT1,2/ PATCH	77
	Output Level		0 — 127	77
	Chorus Send Level	Chorus	0 — 127	77
	Reverb Send Level	Reverb	0 — 127	77
GM EFX TYPE	EFX Type	Type	*1	77
GM EFX PRM	EFX Parameter	*1		77
GM EFX OUT	Output Assign	Output Assign	MIX/OUTPUT1,2	77
	Output Level		0 — 127	77
	Chorus Send Level	Chorus	0 — 127	77
	Reverb Send Level	Reverb	0 — 127	77
GM CHORUS	Chorus Rate	Rat	0 — 127	77
	Chorus Depth	Dpt	0 — 127	77
	Pre Delay	Dly	0 — 127	77
	Chorus Feedback	Fbk	0 — 127	77
	Chorus Level	Level	0 — 127	77
	Chorus Output Assign	Output	MIX/REVERB/MIX+REV	77
GM REVERB	Reverb Type	Type	ROOM1,2/STAGE1,2/ HALL1,2/DELAY/ PAN-DELAY	78
	Reverb Time	Time	0 — 127	78
	Reverb Level	Lev	0 — 127	78
	Delay Feedback	Fbk	0 — 127	78
	High Frequency Damp	HF damp	*3	78

*1 : Refer to "EFX Parameters"
*2 : OFF/SYS-CTRL1/SYS-CTRL2/MODULATION/BREATH/FOOT/VOLUME/PAN/EXPRESSION/BENDER/AFTERTOUCH
*3 : 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS

PART

Page	Parameter	Display	Value	Reference
PATCH	Patch Number	Number	001 — 128	78

PITCH

Page	Parameter	Display	Value	Reference
PITCH	Pitch Coarse Tune	Pitch Coarse	-48 — +48	78
	Pitch Fine Tune	Pitch Fine	-50 — +50	78

PAN

Page	Parameter	Display	Value	Reference
PAN	Part Pan	Part Pan	L64 — 0 — 63R	78

LEVEL

Page	Parameter	Display	Value	Reference
LEVEL	Part Level	Level	0 — 127	78

System Parameters

SETUP

Page	Parameter	Display	Value	Reference
LCD	LCD Contrast	LCD	1 — 10	66
DEFAULT SETUP	Power Up Mode	PowerUp	DEFAULT/LAST	66
	Patch Remain Switch	Patch Remain	OFF/ON	66
RHYTHM EDIT KEY	Rhythm Edit Source	Source	PANEL/PANEL&MIDI	66

MIDI

Page	Parameter	Display	Value	Reference
PERFORM MIDI	Control Channnel	Control Channel	1 — 16/OFF	66
	Clock Source	Clock	INT/MIDI	66
	Stack	Stack	OFF/1 of 2 — 8 of 8	66
PATCH MIDI	Patch Receive Channnel	Receive Channel	OFF/ON	67
	Clock Source	Clock	INT/MIDI	67
	Stack	Stack	OFF/1 of 2 — 8 of 8	67
GM MODE MIDI	Clock Source	Clock	MIDI	67
	Stack	Stack	OFF/1 of 2 — 8 of 8	67
SYS-EXC MIDI	Unit Number	Unit#	17 — 32	67
	Receive System Exclusive	Rx.Exc	OFF/ON	67
	Transmit Edit Data	Tx.Edit	OFF/ON	67
	Receive GM Message	Rx.GM	OFF/ON	67
CONTROL SOURCE	Tap Control Source	Tap	OFF/HOLD-1/SOST/ SOFT/HOLD-2	67
	Hold Control Source	Hold	*Same as above	67
	Peak Control Source	Peak	*Same as above	67
RECEIVE MIDI	Receive Program Change	P.C	OFF/ON	68
	Receive Bank Select	Bnk	OFF/ON	68
	Receive Control Change	C.C	OFF/ON	68
	Receive Volume	Vol	OFF/ON	68
	Receive Hold-1	Hld	OFF/ON	68
	Receive Bender	Bnd	OFF/ON	68
	Receive Modulation	Mod	OFF/ON	68
	Receive Aftertouch	Aft	OFF/ON	68
CONTROL ASSIGN1	System Control Source 1	Control 1	CC00 — CC95/BENDER/ AFTERTOUCH	68
	System Control Source 2	Control 2	*Same as above	68
CONTROL ASSIGN2	Volume Control Source	Volume	VOLUME/VOL&EXP	68
	Aftertouch Source	Aftertouch	CH-AFTER/POLY-AFTER /CH&POLY	68

TUNE

Page	Parameter	Display	Value	Reference
TUNE	Master Tune	Master Tune	427.4 — 452.6	68
SCALE TUNE	Scale Tune Switch	Scale Tune	OFF/ON	68
PART SCALE	Scale Tune C — B	C — B	-64 — +63	69
PATCH SCALE	Scale Tune C — B	C — B	-64 — +63	69

PREVIEW

Page	Parameter	Display	Value	Reference
PREVIEW MODE	Preview Sound Mode	Mode	SINGLE/CHORD	69
PREVIEW KEY	Preview Key Set 1—4	Note1 — 4	C-1 — G9	69
PREVIEW VELOCITY	Preview Velocity Set1 — 4	Note1 — 4	0 — 127	69

Utility Parameters

WRITE

Page	Parameter	Display	Value	Reference
PERFORM WRITE	Performance Write Number	Number	USR:01 — 32/CRD:01 — 32	70
PATCH WRITE	Patch Write Number	Number	USR:001 — 128/ CRD:001 — 128	70
PATCH COMPARE	Patch Compare Number	Number	*Same as above	70
RHYTHM WRITE	Rhythm Write Number	Number	USR:1 — 2/CRD:1 — 2	71

COPY

Page	Parameter	Display	Value	Reference
PERFORM PART COPY	Copy Source	Source	TEMP/USR:01 — 32/ CRD:01 — 32/ PRA:01 — PRB:32	71
	Copy Part	Part	P1 — P16	71
PERFORM FX COPY	Copy Source	Source	PERFORM/PATCH	71
	Copy Number	Number	*1	71
PATCH TONE COPY	Copy Source	Source	TEMP/USR:001 — 128/ CRD:001 — 128/ PRA:001 — PRC:128/ GM:001 — 128	71
	Copy tone	Tone	T1 — T4	71
PATCH FX COPY	Copy Source	Source	PERFORM/PATCH	71
	Copy Number	Number	*1	71
RHYHTM KEY COPY	Copy Source	Source	TEMP/USR:1 — 2/CRD:1 — 2 /PRA:1 — PRC:2/GM:1 — 2	72
	Copy Key	Key	B1 — D7	72

*1: USR:01-32/CRD:01-32/PRA:01-PRB:32/USR:001-128/CRD:001-128/PRA:001-PRD:128

INITIALIZE

Page	Parameter	Display	Value	Reference
PERFORM INIT	Initialize Mode	Mode	DEFAULT/PRESET	72
PATCH INIT	Initialize Mode	Mode	DEFAULT/PRESET	72
RHYTHM KEY INIT	Initialize Mode	Mode	DEFAULT/PRESET	72
	Initialize Key	Key	B1 — D7	72
RHYTHM SET INIT	Initialize Mode	Mode	DEFAULT/PRESET	72

PROTECT

Page	Parameter	Display	Value	Reference
WRITE PROTECT	Internal Protect	Internal	OFF/ON	72
	Exclusive Protect	Exclusive	OFF/ON	72

CARD

Page	Parameter	Display	Value	Reference
FORMAT	Card Name	Name	(12 Character ASC II)	73
RENAME	Card Name	Name	(12 Character ASC II)	73
CARD COPY	Copy Source	Source	ALL/PERFORM/PATCH/ RHYTHM	73
	Copy Group	Group	*1	73
	Copy Mode	Mode	ADAPT/DIRECT	73
CARD SWAP	Swap Source	Source	ALL/PERFORM/PATCH/ RHYTHM	73
	Swap Group	Group	*2	73
	Swap Mode	Mode	ADAPT/DIRECT	73

*1: USR-HALF1->CARD/USR-HALF2->CARD/CARD->USR-HALF1/CARD->USR-HALF2
*2: USR-HALF1<>CARD/USR-HALF2<>CARD

BLOCK COPY

Page	Parameter	Display	Value	Reference
BLOCK COPY	Copy Mode	Mode	PERFORM/PATCH/RHYTHM	74
	Copy Block	Block	*1	74

*1: (PERFORM) USR:01-01 — 32-32/CRD:01-01 — 32-32/PRA — B:01-01 — 32-32; CRD:01 — 32
(PATCH) USR:001-001 — 128-128/CRD:001-001 — 128-128/PRA — C:001-001 — 128-128/GM:001-001 — 128-128/XPA — D:001-001 — *-*; CRD:001 — 128
(RHYTHM) USR:1-1 — 2-2/CRD:1-1 — 2-2,PRA — C:1-1 — 2-2/GM:1-1 — 2-2/XPA — D:1-1 — *-*; CRD:1 — 2

BULK DUMP

Page	Parameter	Display	Value	Reference
BULK DUMP	Bulk Dump Source	Source	TEMP/USER/CARD: ALL/PERFORMANCE/ PATCH/RHYTHM/SYSTEM	74

FACTORY

Page	Parameter	Display	Value	Reference
FACTORY PRESET	Factory Preset	----	----	74

EFX Parameters

1: STEREO-EQ

Page	Parameter	Display	Value	Reference
EFX PARAM	Low Frequency	Low Freq	200/400 [Hz]	84
	Low Gain	LowGain	–15 — +15 [dB]	84
	High Frequency	Hi Freq	4000/8000 [Hz]	84
	High Gain	Hi Gain	–15 — +15 [dB]	84
	Peaking1 Frequency	P1 Freq	*1	84
	Peaking1 Q	P1 Q	0.5/1.0/2.0/4.0/9.0	84
	Peaking1 Gain	P1 Gain	–15 — +15 [dB]	84
	Peaking2 Frequency	P2 Freq	*1	84
	Peaking2 Q	P2 Q	0.5/1.0/2.0/4.0/9.0	84
	Peaking2 Gain	P2 Gain	–15 — +15 [dB]	84
	Output Level	Level	0 — 127	84

*1: 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6000/8000 [Hz]

2: OVERDRIVE

Page	Parameter	Display	Value	Reference
EFX PARAM	Drive	Drive	0 — 127	84
	Output Level	Level	0 — 127	84
	Low Gain	LowGain	–15 — +15 [dB]	84
	High Gain	Hi Gain	–15 — +15 [dB]	84
	Amp Type	AmpType	SMALL/BUILT-IN/2STACK /3STACK	84
	Output Pan	Pan	L64 — 0 — 63R	84

3: DISTORTION

Page	Parameter	Display	Value	Reference
EFX PARAM	Drive	Drive	0 — 127	84
	Output Level	Level	0 — 127	84
	Low Gain	LowGain	–15 — +15 [dB]	85
	High Gain	Hi Gain	–15 — +15 [dB]	85
	Amp Type	AmpType	SMALL/BUILT-IN/2STACK /3STACK	85
	Output Pan	Pan	L64 — 0 — 63R	85

4: PHASER

Page	Parameter	Display	Value	Reference
EFX PARAM	Manual	Manual	100 — 8000 [Hz]	85
	Phaser Rate	Rate	0.05 — 10.0 [Hz]	85
	Phaser Depth	Depth	0 — 127	85
	Resonance	Res	0 — 127	85
	Mix Level	Mix	0 — 127	85
	Output Pan	Pan	L64 — 0 — 63R	85
	Output Level	Level	0 — 127	85

5: SPECTRUM

Page	Parameter	Display	Value	Reference
EFX PARAM	Band1 Level	Band 1	–15 — +15 [dB]	85
	Band2 Level	Band 2	–15 — +15 [dB]	85
	Band3 Level	Band 3	–15 — +15 [dB]	85
	Band4 Level	Band 4	–15 — +15 [dB]	85
	Band5 Level	Band 5	–15 — +15 [dB]	85
	Band6 Level	Band 6	–15 — +15 [dB]	85
	Band7 Level	Band 7	–15 — +15 [dB]	85
	Band8 Level	Band 8	–15 — +15 [dB]	85
	Band Width	Width	1 — 5	85
	Output Pan	Pan	L64 — 0 — 63R	85
	Output Level	Level	0 — 127	85

6: ENHANCER

Page	Parameter	Display	Value	Reference
EFX PARAM	Sensitivity	Sens	0 — 127	86
	Mix Level	Mix	0 — 127	86
	Low Gain	Low Gain	-15 — +15 [dB]	86
	High Gain	Hi Gain	-15 — +15 [dB]	86
	Output Level	Level	0 — 127	86

7: AUTO-WAH

Page	Parameter	Display	Value	Reference
EFX PARAM	Filter Type	Filter	LPF/BPF	86
	Sensitivity	Sens	0 — 127	86
	Manual	Manual	0 — 127	86
	Peak	Peak	0 — 127	86
	LFO Rate	Rate	0.05 — 10.0 [Hz]	86
	LFO Depth	Depth	0 — 127	86
	Output Level	Level	0 — 127	86

8: ROTALY

Page	Parameter	Display	Value	Reference
EFX PARAM	Low Frequency Slow Rate	LowSlow	0.05 — 10.0 [Hz]	86
	Low Frequency Fast Rate	Low Fast	0.05 — 10.0 [Hz]	86
	Low Frequency Acceleration	LowAccl	0 — 15	86
	Low Frequency Level	LowLvl	0 — 127	86
	High Frequency Slow Rate	Hi Slow	0.05 — 10.0 [Hz]	86
	High Frequency Fast Rate	Hi Fast	0.05 — 10.0 [Hz]	86
	High Frequency Acceleration	Hi Accl	0 — 15	86
	High Frequency Level	Hi Lvl	0 — 127	86
	Separation	Separation	0 — 127	86
	Speed	Speed	SLOW/FAST	86
	Output Level	Level	0 — 127	87

9: COMPRESSOR

Page	Parameter	Display	Value	Reference
EFX PARAM	Atack Rate	Attack	0 — 127	87
	Sustain Rate	Sustain	0 — 127	87
	Post Gain	Post Gain	x1/x2/x4/x8	87
	Low Gain	LowGain	-15 — +15 [dB]	87
	High Gain	Hi Gain	-15 — +15 [dB]	87
	Output Pan	Pan	L64 — 0 — 63R	87
	Output Level	Level	0 — 127	87

10: LIMITER

Page	Parameter	Display	Value	Reference
EFX PARAM	Threshold	Thresh	0 — 127	87
	Ratio	Ratio	1.5:1/2:1/4:1/100:1	87
	Release Time	Release	0 — 127	87
	Post Gain	Gain	x1/x2/x4/x8	87
	Low Gain	LowGain	-15 — +15 [dB]	87
	High Gain	Hi Gain	-15 — +15 [dB]	87
	Output Pan	Pan	L64 — 0 — 63R	87
	Output Level	Level	0 — 127	87

11: HEXA-CHORUS

Page	Parameter	Display	Value	Reference
EFX PARAM	Pre Delay time	Pre Dly	0.0 — 100 [ms]	87
	Chorus Rate	Rate	0.05 — 10.0 [Hz]	87
	Chorus Depth	Depth	0 — 127	87
	Pre Delay Deviation	Dly Div	0 — 20	87
	Depth Deviation	Dpt Div	-20 — 20	87
	Pan Deviation	Pan Div	0 — 20	88
	Effect Balance	Balance	D100:0E — D0:100E	88
	Output Level	Level	0 — 127	88

12: TREMOLO-CHORUS

Page	Parameter	Display	Value	Reference
EFX PARAM	Pre Delay time	Pre Dly	0.0 — 100 [ms]	88
	Chorus Rate	ChoRate	0.05 — 10.0 [Hz]	88
	Chorus Depth	Cho Dpt	0 - 127	88
	Chorus Phase	Phase	0 — 180	88
	Tremolo Rate	TrmRate	0.05 — 10.0 [Hz]	88
	Tremolo Separation	Trm Sep	0 — 127	88
	Effect Balance	Balance	D100:0E — D0:100E	88
	Output Level	Level	0 — 127	88

13: SPACE-D

Page	Parameter	Display	Value	Reference
EFX PARAM	Pre Delay time	Pre Dly	0.0 — 100 [ms]	88
	Chorus Rate	Rate	0.05 — 10.0 [Hz]	88
	Chorus Depth	Depth	0 — 127	88
	Phase	Phase	0 — 180	88
	Low Gain	LowGain	–15 — +15 [dB]	88
	High Gain	Hi Gain	–15 — +15 [dB]	88
	Effect Balance	Balance	D100:0E — D0:100E	88
	Output Level	Level	0 — 127	88

14: STEREO-CHORUS

Page	Parameter	Display	Value	Reference
EFX PARAM	Pre Delay time	Pre Dly	0.0 — 100 [ms]	88
	Chorus Rate	Rate	0.05 — 10.0 [Hz]	88
	Chorus Depth	Depth	0 — 127	89
	Phase	Phase	0 — 180	89
	Filter Type	Filter Type	OFF/LPF/HPF	89
	Cutoff Frequency	Cutoff	*1	89
	Low Gain	LowGain	–15 — +15 [dB]	89
	High Gain	Hi Gain	–15 — +15 [dB]	89
	Effect Balance	Balance	D100:0E — D0:100E	89
	Output Level	Level	0 — 127	89

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

15: STEREO-FLANGER

Page	Parameter	Display	Value	Reference
EFX PARAM	Pre Delay time	Pre Dly	0.0 — 100 [ms]	89
	LFO Rate	Rate	0.05 — 10.0 [Hz]	89
	LFO Depth	Depth	0 — 127	89
	Feedback	Fbk	–98 — +98 [%]	89
	Phase	Phase	0 — 180	89
	Filter Type	Filter	OFF/LPF/HPF	89
	Cutoff Frequency	Cutoff	*1	89
	Low Gain	LowGain	–15 — +15 [dB]	89
	High Gain	Hi Gain	–15 — +15 [dB]	89
	Effect Balance	Balance	D100:0E — D0:100E	89
	Output Level	Level	0 — 127	89

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

16: STEP-FLANGER

Page	Parameter	Display	Value	Reference
EFX PARAM	Pre Delay time	Pre Delay	0.0 — 100 [ms]	89
	LFO Rate	Rate	0.05 — 10.0 [Hz]	89
	LFO Depth	Depth	0 — 127	90
	Feedback	Fbk	-98 — +98 [%]	90
	Phase	Phase	0 — 180	90
	Step Rate	Step Rate	*1	90
	Low Gain	LowGain	-15 — +15 [dB]	90
	High Gain	Hi Gain	-15 — +15 [dB]	90
	Effect Balance	Balance	D100:0E — D0:100E	90
	Output Level	Level	0 — 127	90

*1: 0.05 — 10.0 [Hz]/𝅘𝅥𝅯/𝅘𝅥𝅯𝄾/𝅘𝅥𝅯/𝅘𝅥𝅮/𝅘𝅥𝅮𝄾/𝅘𝅥𝅮/𝅘𝅥/𝅘𝅥𝄾/𝅘𝅥./𝅗𝅥

17: STEREO-DELAY

Page	Parameter	Display	Value	Reference
EFX PARAM	Delay Time Left	Delay L	0.0 — 500 [ms]	90
	Delay Time Right	Delay R	0.0 — 500 [ms]	90
	Feedback	Fbk	-98 — +98 [%]	90
	Feedback Mode	Mode	NORMAL/CROSS	90
	Phase Left	Phase L	NORMAL/INVERT	90
	Phase Right	Phase R	NORMAL/INVERT	90
	High Frequency Damp	HF Damp	*1	90
	Low Gain	LowGain	-15 — +15 [dB]	91
	High Gain	Hi Gain	-15 — +15 [dB]	91
	Effect Balance	Balance	D100:0E — D0:100E	91
	Output Level	Level	0 — 127	91

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

18: MODULATION-DELAY

Page	Parameter	Display	Value	Reference
EFX PARAM	Delay Time Left	Delay L	0.0 — 500 [ms]	91
	Delay Time Right	Delay R	0.0 — 500 [ms]	91
	Feedback	Fbk	-98 — +98 [%]	91
	Feedback Mode	Mode	NORMAL/CROSS	91
	Modulation Rate	Rate	0.05 — 10.0 [Hz]	91
	Modulation Depth	Depth	0 — 127	91
	Phase	Phase	0 — 180	91
	High Frequency Damp	HF Damp	*1	91
	Low Gain	LowGain	-15 — +15 [dB]	91
	High Gain	Hi Gain	-15 — +15 [dB]	91
	Effect Balance	Balance	D100:0E — D0:100E	91
	Output Level	Level	0 — 127	91

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

19: TRIPLE-TAP-DELAY

Page	Parameter	Display	Value	Reference
EFX PARAM	Delay Time Center	Delay C	*1	91
	Delay Time Left	Delay L	*1	92
	Delay Time Right	Delay R	*1	92
	Feedback	Fbk	-98 — +98 [%]	92
	Center Level	Level C	0 — 127	92
	Left Level	Level L	0 — 127	92
	Right Level	Level R	0 — 127	92
	High Frequency Damp	HF Damp	*2	92
	Low Gain	LowGain	-15 — +15 [dB]	92
	High Gain	Hi Gain	-15 — +15 [dB]	92
	Effect Balance	Balance	D100:0E — D0:100E	92
	Output Level	Level	0 — 127	92

*1 : 200 — 1000 [ms]/𝅘𝅥𝅯/𝅘𝅥𝅯𝄾/𝅘𝅥𝅯./𝅘𝅥𝅮/𝅘𝅥𝅮𝄾/𝅘𝅥𝅮./𝅘𝅥/𝅘𝅥𝄾/𝅘𝅥./𝅗𝅥

*2 : 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS [Hz]

20: QUADRUPLE-TAP-DELAY

Page	Parameter	Display	Value	Reference
EFX PARAM	Delay Time 1	Delay 1	*1	92
	Delay Time 2	Delay 2	*1	92
	Delay Time 3	Delay 3	*1	92
	Delay Time 4	Delay 4	*1	92
	Level 1	Level 1	0 — 127	92
	Level 2	Level 2	0 — 127	92
	Level 3	Level 3	0 — 127	92
	Level 4	Level 4	0 — 127	92
	Feedback	Fbk	-98 — +98 [%]	92
	High Frequency Damp	HF Damp	*2	92
	Effect Balance	Balance	D100:0E — D0:100E	93
	Output Level	Level	0 — 127	93

*1: 200 — 1000 [Hz]/𝅘𝅥𝅯/𝅘𝅥𝅯₃/𝅘𝅥𝅮/𝅘𝅥𝅮₃/𝅘𝅥/𝅘𝅥₃/𝅗𝅥/𝅗𝅥₃/𝅗𝅥

*2 : 200/250/315/400/500/630/800/1000/1250/1600/2000/2500/3150/4000/5000/6300/8000/BYPASS [Hz]

21: TIME-CONTROL-DELAY

Page	Parameter	Display	Value	Reference
EFX PARAM	Delay Time	Delay	200 — 1000 [ms]	93
	Acceleration	Accel	0 — 15	93
	Feedback	Fbk	-98 — +98 [%]	93
	Output Pan	Pan	L64 — 0 — 63R	93
	High Frequency Damp	HF Damp	*1	93
	Low Gain	LowGain	-15 — +15 [dB]	93
	High Gain	Hi Gain	-15 — +15 [dB]	93
	Effect Balance	Balance	D100:0E — D0:100E	93
	Output Level	Level	0 — 127	93

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

22: 2 VOICE-PITCH-SHIFTER

Page	Parameter	Display	Value	Reference
EFX PARAM	Coarse Pitch A	CoarseA	-24 — 12	93
	Fine Pitch A	Fine A	-100 — 100	93
	Output Pan A	Pan A	L64 — 0 — 63R	93
	Pre Delay Time A	PreDlyA	0.0 — 500 [ms]	93
	Coarse Pitch B	CoarseB	-24 — 12	93
	Fine Pitch B	Fine B	-100 — 100	93
	Output Pan B	Pan B	L64 — 0 — 63R	93
	Pre Delay Time B	PreDlyB	0.0 — 500 [ms]	94
	Pitch Shift Mode	Mode	1/2/3/4/5	94
	Level Balance	Lvl Bal	A100:0B — A0:100B	94
	Effect Balance	Balance	D100:0E — D0:100E	94
	Output Level	Level	0 — 127	94

23: FBK-PITCH-SHIFTER

Page	Parameter	Display	Value	Reference
EFX PARAM	Coarse Pitch	Coarse	-24 — 12	94
	Fine Pitch	Fine	-100 — 100	94
	Output Pan	Pan	L64 — 0 — 63R	94
	Pre Delay Time	Pre Dly	0.0 — 500 [ms]	94
	Pitch Shift Mode	Mode	1/2/3/4/5	94
	Feedback	Feedback	-98 — +98 [%]	94
	Low Gain	LowGain	-15 — +15 [dB]	94
	High Gain	Hi Gain	-15 — +15 [dB]	94
	Effect Balance	Balance	D100:0E — D0:100E	94
	Output Level	Level	0 — 127	94

24: REVERB

Page	Parameter	Display	Value	Reference
EFX PARAM	Reverb Type	Type	ROOM1,2/STAGE1,2/ HALL1,2	94
	Pre Delay Time	Pre Dly	0.0 — 100 [ms]	94
	Reverb Time	Time	0 — 127	94
	High Frequency Damp	HF Damp	*1	94
	Low Gain	LowGain	-15 — +15 [dB]	94
	High Gain	Hi Gain	-15 — +15 [dB]	95
	Effect Balance	Balance	D100:0E — D0:100E	95
	Output Level	Level	0 — 127	95

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

25: GATE-REVERB

Page	Parameter	Display	Value	Reference
EFX PARAM	Reverb Type	Type	NORMAL/REVERSE/ SWEEP1,2	95
	Pre Delay Time	Pre Dly	0.0 — 100 [ms]	95
	Gate Time	Gate Time	5 — 500	95
	Low Gain	LowGain	-15 — +15[dB]	95
	High Gain	Hi Gain	-15 — +15[dB]	95
	Effect Balance	Balance	D100:0E — D0:100E	95
	Output Level	Level	0 — 127	95

26: OVERDRIVE➡CHORUS

Page	Parameter	Display	Value	Reference
EFX PARAM	Drive	Drive	0 — 127	95
	Overdrive Pan	Pan	L64 — 0 — 63R	95
	Chorus Pre Delay	Pre Dly	0.0 — 100 [ms]	95
	Chorus Rate	Rate	0.05 — 10.0 [Hz]	95
	Chorus Depth	Depth	0 — 127	95
	Chorus Balance	Balance	D100:0E — D0:100E	95
	Output Level	Level	0 — 127	95

27: OVERDRIVE➡FLANGER

Page	Parameter	Display	Value	Reference
EFX PARAM	Drive	Drive	0 — 127	95
	Overdrive Pan	Pan	L64 — 0 — 63R	95
	Flanger Pre Delay	Pre Dly	0.0 — 100 [ms]	95
	Flanger Rate	Rate	0.05 — 10.0 [Hz]	96
	Flanger Depth	Depth	0 — 127	96
	Flanger Feedback	Fbk	-98 — +98 [%]	96
	Flanger Balance	Balance	D100:0E — D0:100E	96
	Output Level	Level	0 — 127	96

28: OVERDRIVE➡DELAY

Page	Parameter	Display	Value	Reference
EFX PARAM	Drive	Drive	0 — 127	96
	Overdrive Pan	Pan	L64 — 0 — 63R	96
	Delay Time	Delay	0.0 — 500 [ms]	96
	Delay Feedback	Fbk	-98 — +98 [%]	96
	Delay HF Damp	HF Damp	*1	96
	Delay Balance	Balance	D100:0E — D0:100E	96
	Output Level	Level	0 — 127	96

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

29: DISTORTION➡CHORUS

*Refer to "OVERDRIVE➡CHORUS"

30: DISTORTION➡FLANGER

*Refer to "OVERDRIVE➡FLANGER"

31: DISTORTION➡DELAY

*Refer to "OVERDRIVE➡DELAY"

32: ENHANSER➡CHORUS

Page	Parameter	Display	Value	Reference
EFX PARAM	Sensitivity	Sens	0 — 127	97
	Mix Level	Mix	0 — 127	97
	Chorus Pre Delay	Pre Dly	0.0 — 100 [ms]	97
	Chorus Rate	Rate	0.05 — 10.0 [Hz]	97
	Chorus Depth	Depth	0 — 127	97
	Chorus Balance	Balance	D100:0E — D0:100E	97
	Output Level	Level	0 — 127	97

33: ENHANSER➡FLANGER

Page	Parameter	Display	Value	Reference
EFX PARAM	Sensitivity	Sens	0 — 127	97
	Mix Level	Mix	0 — 127	97
	Flanger Pre Delay	Pre Dly	0.0 — 100 [ms]	97
	Flanger Rate	Rate	0.05 — 10.0 [Hz]	97
	Flanger Depth	Depth	0 — 127	97
	Flanger Feedback	Fbk	-98 — +98 [%]	97
	Flanger Balance	Balance	D100:0E — D0:100E	97
	Output Level	Level	0 — 127	97

34: ENHANSER➡DELAY

Page	Parameter	Display	Value	Reference
EFX PARAM	Sensitivity	Sens	0 — 127	97
	Mix Level	Mix	0 — 127	97
	Delay Time	Delay	0.0 — 500 [ms]	97
	Delay Feedback	Fbk	-98 — +98 [%]	97
	Delay HF Damp	HF Damp	*1	97
	Delay Balance	Balance	D100:0E — D0:100E	98
	Output Level	Level	0 — 127	98

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

35: CHORUS➡DELAY

Page	Parameter	Display	Value	Reference
EFX PARAM	Chorus Pre Delay	Cho Dly	0.0 — 100 [ms]	98
	Chorus Rate	ChoRate	0.05 — 10.0 [Hz]	98
	Chorus Depth	Cho Dpt	0 — 127	98
	Chorus Balance	Cho Bal	D100:0E — D0:100E	98
	Delay Time	Delay	0.0 — 500 [ms]	98
	Delay Feedback	Dly Fbk	-98 — +98 [%]	98
	Delay HF Damp	HF Damp	*1	98
	Delay Balance	Delay Balance	D100:0E — D0:100E	98
	Output Level	Level	0 — 127	98

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

36: FLANGER➡DELAY

Page	Parameter	Display	Value	Reference
EFX PARAM	Flanger Pre Delay	Flg Dly	0.0 — 100 [ms]	98
	Flanger Rate	FlgRate	0.05 — 10.0 [Hz]	98
	Flanger Depth	Flg Dpt	0 — 127	98
	Flanger Feedback	Flg Fbk	-98 — +98 [%]	98
	Flanger Balance	Flg Bal	D100:0E — D0:100E	98
	Delay Time	Delay	0.0 — 500 [ms]	98
	Delay Feedback	Dly Fbk	-98 — +98 [%]	98
	Delay HF Damp	HF Damp	*1	99
	Delay Balance	Delay Balance	D100:0E — D0:100E	99
	Output Level	Level	0 — 127	99

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

37: CHORUS➡FLANGER

Page	Parameter	Display	Value	Reference
EFX PARAM	Chorus Pre Delay	Cho Dly	0.0 — 100 [ms]	99
	Chorus Rate	ChoRate	0.05 — 10.0 [Hz]	99
	Chorus Depth	Cho Dpt	0 — 127	99
	Chorus Balance	Cho Bal	D100:0E — D0:100E	99
	Flanger Pre Delay	Flg Dly	0.0 — 100 [ms]	99
	Flanger Rate	FlgRate	0.05 — 10.0 [Hz]	99
	Flanger Depth	Flg Dpt	0 — 127	99
	Flanger Feedback	Flg Fbk	-98 — +98 [%]	99
	Flanger Balance	Flanger Balance	D100:0E — D0:100E	99
	Output Level	Level	0 — 127	99

38: CHORUS/DELAY

*Refer to "CHORUS➡DELAY"

39: FLANGER/DELAY

*Refer to "FLANGER➡DELAY"

40: CHORUS/FLANGER

*Refer to "CHORUS➡DELAY"

Default Settings for the Sound Settings

Waveform List

Internal A

No.	Wave Name	Type	No.	Wave Name	Type	No.	Wave Name	Type	No.	Wave Name	Type	No.	Wave Name	Type
1	Ac Piano1 A	L	52	Nylon Gtr A	L	103	Syn Gtr B	L	154	MC-202 Bs B	L	205	Cello A	L
2	Ac Piano1 B	L	53	Nylon Gtr B	L	104	Syn Gtr C	L	155	MC-202 Bs C	L	206	Cello B	L
3	Ac Piano1 C	L	54	Nylon Gtr C	L	105	Harp 1A	L	156	Flute 1A	L	207	Cello C	L
4	Ac Piano2 pA	L	55	6-Str Gtr A	L	106	Harp 1B	L	157	Flute 1B	L	208	ST.Strings-R	L
5	Ac Piano2 pB	L	56	6-Str Gtr B	L	107	Harp 1C	L	158	Flute 1C	L	209	ST.Strings-L	L
6	Ac Piano2 pC	L	57	6-Str Gtr C	L	108	Banjo A	L	159	Blow Pipe	L	210	MonoStringsA	L
7	Ac Piano2 fA	O	58	Gtr Harm A	L	109	Banjo B	L	160	Bottle	L	211	MonoStringsC	L
8	Ac Piano2 fB	O	59	Gtr Harm B	L	110	Banjo C	L	161	Shakuhachi	L	212	Pizz	O
9	Ac Piano2 fC	O	60	Gtr Harm C	L	111	Sitar A	L	162	Clarinet A	L	213	JP Strings1A	L
10	Piano Thump	O	61	Comp Gtr A	L	112	Sitar B	L	163	Clarinet B	L	214	JP Strings1B	L
11	Piano Up TH	O	62	Comp Gtr B	L	113	Sitar C	L	164	Clarinet C	L	215	JP Strings1C	L
12	MKS-20 P3 A	L	63	Comp Gtr C	L	114	Dulcimer A	L	165	Oboe mf A	L	216	JP Strings2A	L
13	MKS-20 P3 B	L	64	Comp Gtr A+	L	115	Dulcimer B	L	166	Oboe mf B	L	217	JP Strings2B	L
14	MKS-20 P3 C	L	65	Mute Gtr 1	L	116	Dulcimer C	L	167	Oboe mf C	L	218	JP Strings2C	L
15	SA Rhodes 1A	L	66	Mute Gtr 2A	L	117	Shamisen A	L	168	Sop.Sax mf A	L	219	Soft Pad A	L
16	SA Rhodes 1B	L	67	Mute Gtr 2B	L	118	Shamisen B	L	169	Sop.Sax mf B	L	220	Soft Pad B	L
17	SA Rhodes 1C	L	68	Mute Gtr 2C	L	119	Shamisen C	L	170	Sop.Sax mf C	L	221	Soft Pad C	L
18	SA Rhodes 2A	L	69	Pop Strat A	L	120	Koto A	L	171	Alto Sax 1A	L	222	Fantasynth A	L
19	SA Rhodes 2B	L	70	Pop Strat B	L	121	Koto B	L	172	Alto Sax 1B	L	223	Fantasynth B	L
20	SA Rhodes 2C	L	71	Pop Strat C	L	122	Koto C	L	173	Alto Sax 1C	L	224	Fantasynth C	L
21	E.Piano 1A	L	72	Jazz Gtr A	L	123	Pick Bass A	L	174	Tenor Sax A	L	225	D-50 HeavenA	L
22	E.Piano 1B	L	73	Jazz Gtr B	L	124	Pick Bass B	L	175	Tenor Sax B	L	226	D-50 HeavenB	L
23	E.Piano 1C	L	74	Jazz Gtr C	L	125	Pick Bass C	L	176	Tenor Sax C	L	227	D-50 HeavenC	L
24	E.Piano 2A	L	75	JC Strat A	L	126	Fingerd Bs A	L	177	Bari.Sax f A	L	228	Fine Wine	L
25	E.Piano 2B	L	76	JC Strat B	L	127	Fingerd Bs B	L	178	Bari.Sax f B	L	229	D-50 Brass A	L
26	E.Piano 2C	L	77	JC Strat C	L	128	Fingerd Bs C	L	179	Bari.Sax f C	L	230	D-50 Brass B	L
27	E.Piano 3A	L	78	JC Strat A+	L	129	E.Bass	L	180	Harmonica A	L	231	D-50 Brass C	L
28	E.Piano 3B	L	79	JC Strat B+	L	130	Fretless A	L	181	Harmonica B	L	232	D-50 BrassA+	L
29	E.Piano 3C	L	80	JC Strat C+	L	131	Fretless B	L	182	Harmonica C	L	233	DualSquare A	L
30	MK-80 EP A	L	81	Clean Gtr A	L	132	Fretless C	L	183	Chanter	L	234	DualSquare C	L
31	MK-80 EP B	L	82	Clean Gtr B	L	133	UprightBs 1	L	184	Tpt Sect. A	L	235	DualSquareA+	L
32	MK-80 EP C	L	83	Clean Gtr C	L	134	UprightBs 2A	L	185	Tpt Sect. B	L	236	Pop Voice	L
33	D-50 EP A	L	84	Stratus A	L	135	UprightBs 2B	L	186	Tpt Sect. C	L	237	Syn Vox 1	L
34	D-50 EP B	L	85	Stratus B	L	136	UprightBs 2C	L	187	Trumpet 1A	L	238	Syn Vox 2	L
35	D-50 EP C	L	86	Stratus C	L	137	Slap Bass 1	L	188	Trumpet 1B	L	239	Voice Aahs A	L
36	Celesta	L	87	OD Gtr A	L	138	Slap & Pop	L	189	Trumpet 1C	L	240	Voice Aahs B	L
37	Music Box	L	88	OD Gtr B	L	139	Slap Bass 2	L	190	Trumpet 2A	L	241	Voice Aahs C	L
38	Clav 1A	L	89	OD Gtr C	L	140	Slap Bass 3	L	191	Trumpet 2B	L	242	Voice Oohs1A	L
39	Clav 1B	L	90	OD Gtr A+	L	141	Jz.Bs Thumb	L	192	Trumpet 2C	L	243	Voice Oohs1B	L
40	Clav 1C	L	91	Heavy Gtr A	L	142	Jz.Bs Slap 1	L	193	HarmonMute1A	L	244	Voice Oohs1C	L
41	Organ 1	L	92	Heavy Gtr B	L	143	Jz.Bs Slap 2	L	194	HarmonMute1B	L	245	Voice Oohs2A	L
42	Jazz Organ 1	L	93	Heavy Gtr C	L	144	Jz.Bs Slap 3	L	195	HarmonMute1C	L	246	Voice Oohs2B	L
43	Jazz Organ 2	L	94	Heavy Gtr A+	L	145	Jz.Bs Pop	L	196	Trombone 1	L	247	Voice Oohs2C	L
44	Organ 2	L	95	Heavy Gtr B+	L	146	Syn Bass A	L	197	French 1A	L	248	Voice Breath	L
45	Organ 3	L	96	Heavy Gtr C+	L	147	Syn Bass C	L	198	French 1C	L	249	Male Ooh A	L
46	Organ 4	L	97	PowerChord A	L	148	Mini Bs 1A	L	199	F.Horns A	L	250	Male Ooh B	L
47	Rock Organ	L	98	PowerChord B	L	149	Mini Bs 1B	L	200	F.Horns B	L	251	Male Ooh C	L
48	Dist. Organ	L	99	PowerChord C	L	150	Mini Bs 1C	L	201	F.Horns C	L	252	Org Vox A	L
49	Rot.Org Slw	L	100	EG Harm	L	151	Mini Bs 2	L	202	Violin A	L	253	Org Vox B	L
50	Rot.Org Fst	L	101	Gt.FretNoise	O	152	Mini Bs 2+	L	203	Violin B	L	254	Org Vox C	L
51	Pipe Organ	L	102	Syn Gtr A	L	153	MC-202 Bs A	L	204	Violin C	L	255	Vox Noise	L

L: Loop Waveform
O: One-shot Waveform

* For important information about the difference between loop and one-shot sounds, and how they are edited, see Chapter 1, "5. Concerning Tone Editing." (p. 26)

Internal B

No.	Wave Name	Type	No.	Wave Name	Type	No.	Wave Name	Type	No.	Wave Name	Type
1	Kalimba	L	52	Feedbackwave	L	103	Cowbell 1	O	154	REV 606HH Op	O
2	Marimba Wave	L	53	Spectrum	L	104	Wood Block	O	155	REV Ride	O
3	Log Drum	L	54	BreathNoise	O	105	Claves	O	156	REV Cup	O
4	Vibes	L	55	Rattles	L	106	Bongo Hi	O	157	REV Crash 1	O
5	Bottle Hit	L	56	Ice Rain	L	107	Bongo Lo	O	158	REV China	O
6	Glockenspiel	L	57	Tin Wave	L	108	Cga Open Hi	O	159	REV DrySick	O
7	Tubular	L	58	Anklungs	L	109	Cga Open Lo	O	160	REV RealCLP	O
8	Steel Drums	L	59	Wind Chimes	L	110	Cga Mute Hi	O	161	REV FingSnap	O
9	Fanta Bell A	L	60	Orch. Hit	O	111	Cga Mute Lo	O	162	REV Cowbell	O
10	Fanta Bell B	L	61	Tekno Hit	O	112	Cga Slap	O	163	REV WoodBlck	O
11	Fanta Bell C	L	62	Back Hit	O	113	Timbale	O	164	REV Clve	O
12	FantaBell A+	L	63	Philly Hit	O	114	Cabasa Up	O	165	REV Conga	O
13	Org Bell	L	64	Scratch 1	O	115	Cabasa Down	O	166	REV Tamb	O
14	Agogo	L	65	Scratch 2	L	116	Cabasa Cut	O	167	REV Maracas	O
15	DIGI Bell 1	L	66	Scratch 3	O	117	Maracas	O	168	REV Guiro	O
16	DIGI Bell 1+	L	67	Natural SN1	O	118	Long Guiro	O	169	REV Cuica	O
17	DIGI Chime	L	68	Natural SN2	O	119	Tambourine	O	170	REV Metro	O
18	Wave Scan	L	69	Piccolo SN	O	120	Open Triangl	L	171	Loop 1	L
19	Wire String	L	70	Ballad SN	O	121	Cuica	O	172	Loop 2	L
20	2.2 Bellwave	L	71	SN Roll	O	122	Vibraslap	L	173	Loop 3	L
21	2.2 Vibwave	L	72	808 SN	O	123	Timpani	L	174	Loop 4	L
22	Spark VOX	L	73	Brush Slap	O	124	Applause	L	175	Loop 5	L
23	MMM VOX	L	74	Brush Swish	O	125	REV Orch.Hit	O	176	Loop 6	L
24	Lead Wave	L	75	Brush Roll	L	126	REV TeknoHit	O	177	Loop 7	L
25	Synth Reed	L	76	Dry Stick	O	127	REV Back Hit	O	178	R8 Click	O
26	Synth Saw 1	L	77	Side Stick	O	128	REV PhillHit	O	179	Metronome 1	L
27	Synth Saw 2	L	78	Lite Kick	O	129	REV Steel DR	O	180	Metronome 2	O
28	Syn Saw 2inv	L	79	Hybrid Kick1	O	130	REV Tin Wave	O	181	MC500 Beep 1	O
29	Synth Saw 3	L	80	Hybrid Kick2	O	131	REV NatrlSN1	O	182	MC500 Beep 2	O
30	JP-8 Saw A	L	81	Old Kick	O	132	REV NatrlSN2	O	183	Low Saw	L
31	JP-8 Saw B	L	82	Verb Kick	O	133	REV PiccloSN	O	184	Low Saw inv	L
32	JP-8 Saw C	L	83	Round Kick	O	134	REV BalladSN	O	185	Low P5 Saw	L
33	P5 Saw A	L	84	808 Kick	L	135	REV Side Stk	O	186	Low Pulse 1	L
34	P5 Saw B	L	85	Verb Tom Hi	O	136	REV SN Roll	O	187	Low Pulse 2	L
35	P5 Saw C	L	86	Verb Tom Lo	O	137	REV Brush 1	O	188	Low Square	L
36	D-50 Saw A	L	87	Dry Tom Hi	L	138	REV Brush 2	O	189	Low Sine	L
37	D-50 Saw B	L	88	Dry Tom Lo	L	139	REV Brush 3	O	190	Low Triangle	L
38	D-50 Saw C	L	89	Cl HiHat 1	O	140	REV LiteKick	O	191	Low White NZ	L
39	Synth Square	L	90	Cl HiHat 2	O	141	REV HybridK1	O	192	Low Pink NZ	L
40	JP-8 SquareA	L	91	Op HiHat	L	142	REV HybridK2	O	193	DC	L
41	JP-8 SquareB	L	92	Pedal HiHat	O	143	REV Old Kick	O			
42	JP-8 SquareC	L	93	606 HiHat Cl	O	144	REV Timpani	O			
43	Synth Pulse1	L	94	606 HiHat Op	L	145	REV VerbTomH	O			
44	Synth Pulse2	L	95	808 Claps	O	146	REV VerbTomL	O			
45	Triangle	L	96	Hand Claps	O	147	REV DryTom H	O			
46	Sine	L	97	Finger Snaps	O	148	REV DryTom M	O			
47	Org Click	O	98	Ride 1	L	149	REV ClHiHat1	O			
48	White Noise	L	99	Ride 2	L	150	REV ClHiHat2	O			
49	Pink Noise	L	100	Ride Bell 1	L	151	REV Op HiHat	O			
50	Metal Wind	L	101	Crash 1	L	152	REV Pedal HH	O			
51	Wind Agogo	L	102	China Cym	L	153	REV 606HH Cl	O			

Patch Lists

USER

No.	Name	V	No.	Name	V
1	Symphonique	4	65	Bass Marimba	4
2	Alternative	2	66	Syncrosonix	3
3	Velo Tekno 1	3	67	MandolinTrem	4
4	West Coast	4	68	Poly Saws	4
5	Albion	2	69	Pulse Pad	4
6	Jz Gtr Hall	1	70	Nylon Gtr	1
7	Rocker Spin	3	71	ORBit Pad	2
8	101 Bass	2	72	Majestic Tpt	1
9	Claviduck	2	73	Terminate	3
10	Jet Pad 2	2	74	SquareLead 1	3
11	Raggatronic	4	75	House Piano	2
12	Crunch Split	4	76	Fooled Again	1
13	Running Pad	4	77	Pick Bass	1
14	Brass Sect	4	78	Wide Tubular	4
15	Flying Waltz	4	79	Velo-Rez Clv	1
16	Pure Tibet	1	80	Airplaaane	4
17	4 Hits 4 You	4	81	Delicate EP	2
18	Waterhodes	2	82	Rezoid	4
19	Blade Racer	4	83	E-Motion Pad	4
20	JC Strat	1	84	Phripphuzz	1
21	Dawn 2 Dusk	3	85	Archimede	3
22	Saw Mass	4	86	Intentions	3
23	Steel Away	3	87	Nylon Rhodes	4
24	64voicePiano	1	88	Huff N Stuff	3
25	Wave Bells	4	89	Finger Bass	1
26	JP-8Haunting	4	90	Gospel Spin	3
27	Vanishing	1	91	Harmonicum	2
28	Harmonica	2	92	Impact	4
29	Film Octaves	4	93	Rotary Gtr	2
30	Edye Boost	2	94	Tp&Sax Sect	4
31	AugerMentive	3	95	Tubular Vox	4
32	Deep Strings	2	96	Sawteeth	3
33	Chime Wash	4	97	Ocean Floor	1
34	SA Rhodes 1	4	98	E.Grand	1
35	3D Flanged	1	99	Clarinet mp	1
36	Ac.Upright	1	100	Bass In Face	2
37	Poly Brass	3	101	BritelowBass	4
38	Dissimilate	4	102	Mellow Bars	4
39	Dulcimer	2	103	LetterFrmPat	4
40	Fantasy Vox	4	104	MG Solo	4
41	Dist Gtr 1	3	105	Air Lead	2
42	Sax Section	4	106	Raya Shaku	3
43	Aurora	4	107	Greek Power	4
44	St.Strings	2	108	Biosphere	2
45	AmbienceVibe	4	109	EP+Mod Pad	4
46	Cascade	1	110	Chambers	3
47	AltoLead Sax	3	111	Nomad Perc	3
48	PWM Strings	3	112	Horn Swell	4
49	Childlike	4	113	Hillbillys	4
50	Velo Tekno 2	2	114	Night Shade	4
51	Taj Mahal	1	115	Nice Piano	3
52	D-50 Stack	4	116	VOX Flute	4
53	ChamberWoods	3	117	Music Bells	2
54	Pulse Key	3	118	JUNO Strings	3
55	Mondo Bass	3	119	Bs/Pno+Brs	4
56	Velo-Wah Gtr	1	120	Dark Vox	2
57	Sitar	2	121	Bass Pizz	4
58	Purple Spin	4	122	Seq Mallet	2
59	RandomVowels	4	123	Variable Run	4
60	Big BPF	4	124	Cyber Space	3
61	Dunes	4	125	12str Gtr 1	2
62	Heirborne	4	126	PianoStrings	4
63	PsychoRhodes	2	127	Sands ofTime	4
64	Tortured	4	128	Fantasia JV	4

PRESET A

No.	Name	V	No.	Name	V
1	64voicePiano	1	65	Dual Profs	3
2	Bright Piano	1	66	Saw Mass	4
3	Classique	2	67	Poly Split	4
4	Nice Piano	3	68	Poly Brass	3
5	Piano Thang	3	69	Stackoid	4
6	Power Grand	3	70	Poly Rock	4
7	House Piano	2	71	D-50 Stack	4
8	E.Grand	1	72	Fantasia JV	4
9	MIDIed Grand	3	73	Jimmee Dee	4
10	Piano Blend	3	74	Heavenals	4
11	West Coast	4	75	Mallet Pad	4
12	PianoStrings	4	76	Huff N Stuff	3
13	Bs/Pno+Brs	4	77	Puff 1080	2
14	Waterhodes	2	78	BellVox 1080	4
15	S.A.E.P.	3	79	Fantasy Vox	4
16	SA Rhodes 1	4	80	Square Keys	2
17	SA Rhodes 2	2	81	Childlike	4
18	Stiky Rhodes	3	82	Music Box	3
19	Dig Rhodes	2	83	Toy Box	2
20	Nylon EPiano	4	84	Wave Bells	4
21	Nylon Rhodes	4	85	Tria Bells	4
22	Rhodes Mix	3	86	Beauty Bells	4
23	PsychoRhodes	2	87	Music Bells	2
24	Tremo Rhodes	4	88	Pretty Bells	2
25	MK-80 Rhodes	1	89	Pulse Key	3
26	MK-80 Phaser	1	90	Wide Tubular	4
27	Delicate EP	2	91	AmbienceVibe	4
28	Octa Rhodes1	4	92	Warm Vibes	2
29	Octa Rhodes2	4	93	Dyna Marimba	1
30	JV Rhodes+	4	94	Bass Marimba	4
31	EP+Mod Pad	4	95	Nomad Perc	3
32	Mr.Mellow	4	96	Ethno Metals	4
33	Comp Clav	1	97	Islands Mlt	4
34	Klavinet	4	98	Steelin Keys	3
35	Winger Clav	4	99	Steel Drums	1
36	Phaze Clav 1	2	100	Voicey Pizz	3
37	Phaze Clav 2	1	101	Sitar	2
38	Phuzz Clav	2	102	Drone Split	4
39	Chorus Clav	1	103	Ethnopluck	4
40	Claviduck	2	104	Jamisen	2
41	Velo-Rez Clv	1	105	Dulcimer	2
42	Clavicembalo	4	106	East Melody	2
43	Analog Clav1	1	107	MandolinTrem	4
44	Analog Clav2	1	108	Nylon Gtr	1
45	Metal Clav	3	109	Gtr Strings	3
46	Full Stops	2	110	Steel Away	3
47	Ballad B	3	111	Heavenly Gtr	4
48	Mellow Bars	4	112	12str Gtr 1	2
49	AugerMentive	3	113	12str Gtr 2	3
50	Perky B	2	114	Jz Gtr Hall	1
51	The Big Spin	3	115	LetterFrmPat	4
52	Gospel Spin	3	116	Jazz Scat	3
53	Roller Spin	3	117	Lounge Gig	3
54	Rocker Spin	3	118	JC Strat	1
55	Tone Wh.Solo	3	119	Twin Strats	3
56	Purple Spin	4	120	JV Strat	2
57	60's LeadORG	2	121	Syn Strat	2
58	Assalt Organ	3	122	Rotary Gtr	2
59	D-50 Organ	2	123	Muted Gtr	1
60	Cathedral	4	124	SwitchOnMute	2
61	Church Pipes	4	125	Power Trip	2
62	Poly Key	3	126	Crunch Split	4
63	Poly Saws	4	127	Rezodrive	2
64	Poly Pulse	4	128	RockYurSocks	4

PRESET B

No.	Name	V	No.	Name	V
1	Dist Gtr 1	3	65	Analog Seq	2
2	Dist Gtr 2	3	66	Impact Vox	4
3	R&R Chunk	4	67	TeknoSoloVox	2
4	Phripphuzz	1	68	X-Mod Man	2
5	Grungeroni	3	69	Paz <==> Zap	1
6	Black Widow	4	70	4 Hits 4 You	4
7	Velo-Wah Gtr	1	71	Impact	4
8	Mod-Wah Gtr	2	72	Phase Hit	3
9	Pick Bass	1	73	Tekno Hit 1	2
10	Hip Bass	2	74	Tekno Hit 2	2
11	Perc.Bass	3	75	Tekno Hit 3	4
12	Homey Bass	2	76	Reverse Hit	3
13	Finger Bass	1	77	SquareLead 1	3
14	Nylon Bass	2	78	SquareLead 2	2
15	Ac.Upright	1	79	You and Luck	2
16	Wet Fretls	1	80	Belly Lead	4
17	Fretls Dry	2	81	WhistlinAtom	2
18	Slap Bass 1	2	82	Edye Boost	2
19	Slap Bass 2	1	83	MG Solo	4
20	Slap Bass 3	1	84	FXM Saw Lead	4
21	Slap Bass 4	2	85	Sawteeth	3
22	4 Pole Bass	1	86	Smoothe	2
23	Tick Bass	4	87	MG Lead	2
24	House Bass	3	88	MG Interval	4
25	Mondo Bass	3	89	Pulse Lead 1	3
26	Clk AnalogBs	2	90	Pulse Lead 2	4
27	Bass In Face	2	91	Little Devil	4
28	101 Bass	2	92	Loud SynLead	4
29	Noiz Bass	2	93	Analog Lead	2
30	Super Jup Bs	2	94	5th Lead	2
31	Occitan Bass	3	95	Flute	2
32	Hugo Bass	4	96	Piccolo	1
33	Multi Bass	2	97	VOX Flute	4
34	Moist Bass	2	98	Air Lead	2
35	BritelowBass	4	99	Pan Pipes	2
36	Untamed Bass	3	100	Airplaaane	4
37	Rubber Bass	3	101	Taj Mahal	1
38	Stereoww Bs	3	102	Raya Shaku	3
39	Wonder Bass	3	103	Oboe mf	1
40	Deep Bass	2	104	Oboe Express	2
41	Super JX Bs	2	105	Clarinet mp	1
42	W<RED>-Bass	4	106	ClariExpress	2
43	HI-Ring Bass	3	107	Mitzva Split	4
44	Euro Bass	2	108	ChamberWinds	4
45	SinusoidRave	1	109	ChamberWoods	3
46	Alternative	2	110	Film Orch	4
47	Acid Line	1	111	Sop.Sax mf	2
48	Auto TB-303	3	112	Alto Sax	3
49	Hihat Tekno	2	113	AltoLead Sax	3
50	Velo Tekno 1	3	114	Tenor Sax	3
51	Raggatronic	4	115	Baritone Sax	3
52	Blade Racer	4	116	Take A Tenor	4
53	S&H Pad	1	117	Sax Section	4
54	Syncrosonix	3	118	Bigband Sax	4
55	Fooled Again	1	119	Harmonica	2
56	Alive	3	120	Harmo Blues	2
57	Velo Tekno 2	2	121	BluesHarp	1
58	Rezoid	4	122	Hillbillys	4
59	Raverborg	4	123	French Bags	4
60	Blow Hit	4	124	Majestic Tpt	1
61	Hammer Bell	3	125	Voluntare	2
62	Seq Mallet	2	126	2Trumpets	2
63	Intentions	3	127	Tpt Sect	4
64	Pick It	3	128	Mute TP mod	4

V: Number of Voices

* Most all of the patches are set up (at their factory settings) so their timbre can be modified as a result of modulation, aftertouch, and expression (Control Change No. 11). You will want to try this feature out. Also, if you find that certain kinds of music data (GM, etc.) you play does not seem to sound the way it should, try switching OFF the aftertouch reception switch.
* When using a sequencer to play ensembles, we recommend that you use mainly the preset patches. The preset patches are set up so they support the preferred sounding ranges of GM instruments (some sounds such as bass and bells extend beyond the range of a 61-key keyboard). On the other hand, the user patches (a rearranged selection of preset patches) are all designed to be played from a 61-key keyboard, and have been tuned so they sound appropriately.

PRESET C

No.	Name	V	No.	Name	V
1	Harmon Mute	1	65	Harmonicum	2
2	Tp&Sax Sect	4	66	D-50 Heaven	2
3	Sax+Tp+Tb	3	67	Afro Horns	3
4	Brass Sect	4	68	Pop Pad	4
5	Trombone	1	69	Dreamesque	4
6	Hybrid Bones	4	70	Square Pad	4
7	Noble Horns	4	71	JP-8 Hollow	4
8	Massed Horns	3	72	JP-8Haunting	4
9	Horn Swell	4	73	Heirborne	4
10	Brass It!	4	74	Hush Pad	4
11	Brass Attack	3	75	Jet Pad 1	2
12	Archimede	3	76	Jet Pad 2	2
13	Rugby Horn	3	77	Phaze Pad	3
14	MKS-80 Brass	2	78	Phaze Str	4
15	True ANALOG	2	79	Jet Str Ens	2
16	Dark Vox	2	80	Pivotal Pad	4
17	RandomVowels	4	81	3D Flanged	1
18	Angels Sing	2	82	Fantawine	4
19	Pvox Oooze	3	83	Glassy Pad	3
20	Longing...	3	84	Moving Glass	1
21	Arasian Morn	4	85	Glasswaves	3
22	Beauty Vox	3	86	Shiny Pad	4
23	Mary-AnneVox	4	87	ShiftedGlass	2
24	Belltree Vox	4	88	Chime Pad	3
25	Vox Panner	2	89	Spin Pad	2
26	Spaced Voxx	4	90	Rotary Pad	4
27	Glass Voices	3	91	Dawn 2 Dusk	3
28	Tubular Vox	4	92	Aurora	4
29	Velo Voxx	2	93	Strobe Mode	4
30	Wavox	3	94	Albion	2
31	Doos	1	95	Running Pad	4
32	Synvox Comps	4	96	Stepped Pad	4
33	Vocal Oohz	3	97	Random Pad	4
34	LFO Vox	1	98	SoundtrkDANC	4
35	St.Strings	2	99	Flying Waltz	4
36	Warm Strings	4	100	Vanishing	1
37	Somber Str	4	101	5th Sweep	4
38	Marcato	2	102	Phazweep	4
39	Bright Str	2	103	Big BPF	4
40	String Ens	4	104	MG Sweep	4
41	TremoloStrng	2	105	CeremonyTimp	3
42	Chambers	3	106	Dyno Toms	4
43	ViolinCello	4	107	Sands ofTime	4
44	Symphonique	4	108	Inertia	4
45	Film Octaves	4	109	Vektogram	4
46	Film Layers	4	110	Crash Pad	4
47	Bass Pizz	4	111	Feedback VOX	4
48	Real Pizz	3	112	Cascade	1
49	Harp On It	3	113	Shattered	2
50	Harp	2	114	NextFrontier	2
51	JP-8 Str 1	2	115	Pure Tibet	1
52	JP-8 Str 2	3	116	Chime Wash	4
53	E-Motion Pad	4	117	Night Shade	4
54	JP-8 Str 3	4	118	Tortured	4
55	Vintage Orch	4	119	Dissimilate	4
56	JUNO Strings	3	120	Dunes	4
57	Gigantalog	4	121	Ocean Floor	1
58	PWM Strings	3	122	Cyber Space	3
59	Warmth	2	123	Biosphere	2
60	ORBit Pad	2	124	Variable Run	4
61	Deep Strings	2	125	Ice Hall	2
62	Pulsify	4	126	ComputerRoom	4
63	Pulse Pad	4	127	Inverted	4
64	Greek Power	4	128	Terminate	3

PRESET D (General MIDI Patch)

No.	Name	V	No.	Name	V
1	Piano 1	2	65	Soprano Sax	1
2	Piano 2	2	66	Alto Sax	1
3	Piano 3	2	67	Tenor Sax	1
4	Honky-tonk	2	68	Baritone Sax	2
5	E.Piano 1	2	69	Oboe	2
6	E.Piano 2	4	70	English Horn	2
7	Harpsichord	2	71	Bassoon	2
8	Clav.	2	72	Clarinet	1
9	Celesta	1	73	Piccolo	1
10	Glockenspiel	2	74	Flute	1
11	Music Box	1	75	Recorder	2
12	Vibraphone	1	76	Pan Flute	2
13	Marimba	2	77	Bottle Blow	2
14	Xylophone	2	78	Shakuhachi	1
15	Tubular-bell	2	79	Whistle	1
16	Santur	2	80	Ocarina	2
17	Organ 1	1	81	Square Wave	2
18	Organ 2	1	82	Saw Wave	2
19	Organ 3	2	83	Syn.Calliope	2
20	Church Org.1	2	84	Chiffer Lead	2
21	Reed Organ	1	85	Charang	3
22	Accordion Fr	2	86	Solo Vox	2
23	Harmonica	1	87	5th Saw Wave	3
24	Bandneon	2	88	Bass & Lead	2
25	Nylon-str.Gt	1	89	Fantasia	3
26	Steel-str.Gt	1	90	Warm Pad	2
27	Jazz Gt.	1	91	Polysynth	2
28	Clean Gt.	1	92	Space Voice	2
29	Muted Gt.	1	93	Bowed Glass	3
30	Overdrive Gt	1	94	Metal Pad	2
31	DistortionGt	1	95	Halo Pad	3
32	Gt.Harmonics	3	96	Sweep Pad	2
33	Acoustic Bs.	3	97	Ice Rain	2
34	Fingered Bs.	1	98	Soundtrack	2
35	Picked Bs.	1	99	Crystal	2
36	Fretless Bs.	1	100	Atmosphere	2
37	Slap Bass 1	1	101	Brightness	3
38	Slap Bass 2	2	102	Goblin	2
39	Synth Bass 1	1	103	Echo Drops	2
40	Synth Bass 2	1	104	Star Theme	2
41	Violin	1	105	Sitar	1
42	Viola	1	106	Banjo	1
43	Cello	1	107	Shamisen	2
44	Contrabass	1	108	Koto	1
45	Tremolo Str	1	109	Kalimba	1
46	PizzicatoStr	1	110	Bag Pipe	3
47	Harp	2	111	Fiddle	1
48	Timpani	1	112	Shanai	1
49	Strings	2	113	Tinkle Bell	4
50	Slow Strings	1	114	Agogo	1
51	Syn.Strings1	2	115	Steel Drums	1
52	Syn.Strings2	2	116	Woodblock	1
53	Choir Aahs	3	117	Taiko	4
54	Voice Oohs	1	118	Melo. Tom 1	2
55	SynVox	1	119	Synth Drum	2
56	OrchestraHit	2	120	Reverse Cym.	2
57	Trumpet	2	121	Gt.FretNoise	1
58	Trombone	1	122	Breath Noise	2
59	Tuba	2	123	Seashore	3
60	MutedTrumpet	1	124	Bird	4
61	French Horn	2	125	Telephone 1	1
62	Brass 1	2	126	Helicopter	2
63	Synth Brass1	1	127	Applause	4
64	Synth Brass2	2	128	Gun Shot	2

Rhythm Sets Lists

USER

	Key (Note)	No.1 HouseDrumSet Wave Name	No.2 JazzDrumSet1 Wave Name
	35	Scratch 1	Hybrid Kick2
C2	36	808 SN	Hybrid Kick1
	37	Dry Stick	Side Stick
	38	808 SN	Ballad SN
	39	808 Claps	Brush Slap
	40	808 SN	Brush Swish
	41	808 Kick	Verb Tom Lo
	42	606 HiHat Cl	Cl HiHat 1
	43	808 SN	Verb Tom Lo
	44	606 HiHat Cl	Pedal HiHat
	45	808 Kick	Verb Tom Hi
	46	606 HiHat Op	Op HiHat
	47	808 SN	Verb Tom Hi
C3	48	808 Kick	Verb Tom Hi
	49	Crash 1	Crash 1
	50	808 SN	Verb Tom Hi
	51	Ride 2	Ride 2
	52	REV Crash 1	China Cym
	53	Ride Bell 1	Ride Bell 1
	54	Tambourine	Tambourine
	55	Crash 1	Crash 1
	56	Cowbell 1	Cowbell 1
	57	Crash 1	Crash 1
	58	Vibraslap	Vibraslap
	59	Ride 2	Ride 2
C4	60	Bongo Hi	Bongo Hi
	61	Bongo Lo	Bongo Lo
	62	Cga Mute Hi	Cga Mute Hi
	63	Cga Open Hi	Cga Open Hi
	64	Cga Open Lo	Cga Open Lo
	65	Timbale	Timbale
	66	Timbale	Timbale
	67	Agogo	Agogo
	68	Agogo	Agogo
	69	Cabasa Cut	Cabasa Up
	70	Maracas	Maracas
	71	Soft Pad B	Soft Pad B
C5	72	Soft Pad A	Soft Pad A
	73	Long Guiro	Long Guiro
	74	Long Guiro	Long Guiro
	75	Claves	Claves
	76	Wood Block	Wood Block
	77	Wood Block	Wood Block
	78	Cuica	Cuica
	79	Cuica	Cuica
	80	Open Triangl	Open Triangl
	81	Open Triangl	Open Triangl
	82	Cabasa Cut	Cabasa Cut
	83	Tambourine	Spectrum
C6	84	Old Kick	Wind Chimes
	85	Scratch 1	Wood Block
	86	Piccolo SN	Cga Slap
	87	Scratch 3	Dry Tom Lo
	88	White Noise	Lite Kick
	89	Synth Saw 1	Hybrid Kick2
	90	Synth Pulse1	Old Kick
	91	Back Hit	808 Kick
	92	Tekno Hit	Natural SN1
	93	Orch. Hit	Natural SN2
	94	Philly Hit	SN Roll
	95	REV Back Hit	Natural SN2
C7	96	MC500 Beep 1	Metronome 2
	97	R8 Click	R8 Click
	98	MC500 Beep 2	Metronome 1

PRESET A

No.1 PopDrumSet1 Wave Name	No.2 PopDrumSet2 Wave Name
Verb Kick	Hybrid Kick1
Hybrid Kick1	Round Kick
Side Stick	Dry Stick
Natural SN2	Piccolo SN
808 Claps	Hand Claps
SN Roll	Piccolo SN
Verb Tom Lo	Verb Tom Lo
Cl HiHat 1	Cl HiHat 1
Verb Tom Lo	Verb Tom Lo
Cl HiHat 2	Cl HiHat 2
Verb Tom Hi	Verb Tom Hi
Op HiHat	Op HiHat
Verb Tom Hi	Verb Tom Hi
Verb Tom Hi	Verb Tom Hi
Crash 1	Crash 1
Verb Tom Hi	Verb Tom Hi
Ride 2	Ride 1
China Cym	China Cym
Ride Bell 1	Ride Bell 1
Tambourine	Tambourine
Crash 1	Crash 1
Cowbell 1	Cowbell 1
Crash 1	Crash 1
Cowbell 1	Cowbell 1
Ride Bell 1	Ride Bell 1
Cga Mute Hi	Cga Mute Hi
Cga Mute Lo	Cga Mute Lo
Cga Slap	Cga Slap
Cga Open Hi	Cga Open Hi
Cga Open Lo	Cga Open Lo
Timbale	Timbale
Timbale	Timbale
Agogo	Agogo
Agogo	Agogo
Cabasa Up	Cabasa Up
Maracas	Maracas
Soft Pad A	Cabasa Down
Soft Pad B	Cabasa Cut
Long Guiro	808 Kick
Long Guiro	808 SN
Claves	DIGI Bell 1
Wood Block	808 SN
Wood Block	808 Kick
Cuica	Spectrum
Cuica	808 Kick
Open Triangl	Spectrum
Open Triangl	808 Kick
Cabasa Cut	Spectrum
Spectrum	808 Kick
Wind Chimes	808 Kick
Wood Block	Feedbackwave
Cga Slap	808 Kick
Dry Tom Lo	Feedbackwave
Lite Kick	Pop Voice
Hybrid Kick2	Pop Voice
Old Kick	Wind Agogo
Pop Voice	Pop Voice
Wind Agogo	Wind Agogo
Op HiHat	Op HiHat
Anklungs	Anklungs
Op HiHat	Op HiHat
Metronome 2	Metronome 2
R8 Click	R8 Click
Metronome 1	Metronome 1

PRESET B

No.1 PowerDrumSet Wave Name	No.2 RaveDrumSet Wave Name
Verb Kick	808 Kick
Round Kick	Round Kick
Dry Stick	Side Stick
Piccolo SN	808 SN
808 Claps	808 Claps
Natural SN2	808 SN
Verb Tom Lo	808 Kick
Cl HiHat 1	606 HiHat Cl
Verb Tom Lo	Tekno Hit
Pedal HiHat	606 HiHat Cl
Verb Tom Lo	808 Kick
Op HiHat	606 HiHat Op
Verb Tom Lo	Tekno Hit
Verb Tom Hi	808 Kick
Crash 1	Crash 1
Verb Tom Hi	Tekno Hit
Ride 1	Voice Breath
China Cym	MC500 Beep 1
Ride Bell 1	MC500 Beep 2
Tambourine	R8 Click
Crash 1	Pizz
Cowbell 1	DIGI Bell 1
Crash 1	Rattles
Vibraslap	Ride Bell 1
Ride 1	REV Tamb
Bongo Hi	2.2 Vibwave
Bongo Lo	Low Pink NZ
Cga Mute Hi	Kalimba
Cga Open Hi	Metal Wind
Cga Open Lo	Lead Wave
Timbale	Tin Wave
Timbale	Agogo
Agogo	Lite Kick
Agogo	Agogo
Cabasa Up	Lite Kick
Maracas	Agogo
Soft Pad A	Gtr Harm A
Soft Pad B	Gtr Harm A
Long Guiro	Piano Thump
Long Guiro	Natural SN1
Claves	Hand Claps
Wood Block	Natural SN1
Wood Block	808 SN
Cuica	PowerChord B
Cuica	Hybrid Kick2
Open Triangl	PowerChord B
Open Triangl	Gt.FretNoise
Maracas	Banjo B
Ice Rain	Slap Bass 1
Wind Chimes	Oboe mf A
Claves	Shakuhachi
808 SN	Pizz
Verb Tom Hi	Syn Vox 1
Piccolo SN	Voice Aahs A
Scratch 3	Voice Oohs2A
Tin Wave	Pop Voice
Spectrum	Male Ooh A
REV Steel DR	Voice Breath
REV Tin Wave	Org Vox C
REV PiccloSN	Vox Noise
REV Crash 1	Vox Noise
Metronome 2	Applause
R8 Click	R8 Click
Metronome 1	Metronome 2

PRESET C

	Key (Note)	No.1 JazzDrumSet2 Wave Name	No.2 OrchDrumSet Wave Name
	35	Round Kick	Old Kick
C2	36	Old Kick	Round Kick
	37	Side Stick	Side Stick
	38	Ballad SN	Ballad SN
	39	Hand Claps	808 Claps
	40	SN Roll	SN Roll
	41	Verb Tom Lo	Timpani
	42	Cl HiHat 2	Timpani
	43	Dry Tom Lo	Timpani
	44	Pedal HiHat	Timpani
	45	Verb Tom Lo	Timpani
	46	Op HiHat	Timpani
	47	Dry Tom Lo	Timpani
C3	48	Verb Tom Hi	Timpani
	49	Crash 1	Timpani
	50	Dry Tom Hi	Timpani
	51	Ride 2	Timpani
	52	China Cym	Timpani
	53	Ride Bell 1	Timpani
	54	Tambourine	Tambourine
	55	Crash 1	Crash 1
	56	Cowbell 1	Cowbell 1
	57	Crash 1	Crash 1
	58	Vibraslap	Ride 1
	59	Ride 2	Ride 2
C4	60	Bongo Hi	Bongo Hi
	61	Bongo Lo	Bongo Lo
	62	Cga Mute Hi	Cga Mute Hi
	63	Cga Open Hi	Cga Open Hi
	64	Cga Open Lo	Cga Open Lo
	65	Timbale	Timbale
	66	Timbale	Timbale
	67	Agogo	Agogo
	68	Agogo	Agogo
	69	Cabasa Up	Cabasa Up
	70	Maracas	Maracas
	71	Soft Pad A	Soft Pad A
C5	72	Brush Swish	Soft Pad B
	73	Long Guiro	Long Guiro
	74	Long Guiro	Long Guiro
	75	Claves	Claves
	76	Wood Block	Wood Block
	77	Metronome 2	Wood Block
	78	Cuica	Cuica
	79	Cuica	Cuica
	80	Open Triangl	Open Triangl
	81	Open Triangl	Open Triangl
	82	Cabasa Cut	Cabasa Cut
	83	Spectrum	Spectrum
C6	84	Wind Chimes	Wind Chimes
	85	Wood Block	Wood Block
	86	Cga Slap	Cga Slap
	87	Dry Tom Lo	Dry Tom Lo
	88	Lite Kick	Applause
	89	Hybrid Kick2	Hybrid Kick2
	90	Old Kick	Cl HiHat 1
	91	Natural SN2	Round Kick
	92	Natural SN1	Pedal HiHat
	93	Brush Swish	Natural SN2
	94	Brush Roll	Op HiHat
	95	Brush Slap	Brush Slap
C7	96	Metronome 2	Brush Swish
	97	R8 Click	Brush Roll
	98	Metronome 1	SN Roll

PRESET D

No.1 GMDrumSet Wave Name	No.2 BrushDrumSet Wave Name
Verb Kick	Hybrid Kick2
Hybrid Kick1	Hybrid Kick1
Side Stick	Side Stick
Ballad SN	Brush Swish
808 Claps	Brush Slap
Piccolo SN	Brush Roll
Verb Tom Lo	Dry Tom Lo
Cl HiHat 1	Cl HiHat 1
Verb Tom Lo	Dry Tom Lo
Pedal HiHat	Pedal HiHat
Verb Tom Hi	Dry Tom Hi
Op HiHat	Op HiHat
Verb Tom Hi	Dry Tom Hi
Verb Tom Hi	Dry Tom Hi
Crash 1	Crash 1
Verb Tom Hi	Dry Tom Hi
Ride 2	Ride 2
China Cym	China Cym
Ride Bell 1	Ride Bell 1
Tambourine	Tambourine
Crash 1	Crash 1
Cowbell 1	Cowbell 1
Crash 1	Crash 1
Vibraslap	Vibraslap
Ride 2	Ride 2
Bongo Hi	Cga Mute Hi
Bongo Lo	Cga Mute Lo
Cga Mute Hi	Cga Slap
Cga Open Hi	Cga Open Hi
Cga Open Lo	Cga Open Lo
Timbale	Timbale
Timbale	Timbale
Agogo	Agogo
Agogo	Agogo
Cabasa Up	Cabasa Up
Maracas	Maracas
Soft Pad A	Soft Pad A
Soft Pad B	Soft Pad B
Long Guiro	Long Guiro
Long Guiro	Long Guiro
Claves	Claves
Wood Block	Wood Block
Wood Block	Wood Block
Cuica	Cuica
Cuica	Cuica
Open Triangl	Open Triangl
Open Triangl	Open Triangl
Cabasa Cut	Cabasa Cut
Spectrum	Spectrum
Wind Chimes	Wind Chimes
Wood Block	Wood Block
Cga Slap	Cga Slap
Dry Tom Lo	Dry Tom Lo
Lite Kick	Lite Kick
Hybrid Kick2	Hybrid Kick2
Old Kick	Old Kick
808 Kick	808 Kick
Natural SN1	Natural SN1
Natural SN2	Natural SN2
808 SN	SN Roll
Brush Slap	Brush Slap
Brush Swish	Metronome 2
Brush Roll	R8 Click
SN Roll	Metronome 1

Performance Lists

USER

No.	Name
1	Tekno Loop 1
2	Opening Orch
3	Feedback EP
4	Cosmic Dawn
5	Tekno Loop 2
6	S&H / Pad
7	Fr.Horn Sect
8	White Hole
9	Nebular Vox
10	Flying Jazz
11	Terminator
12	Orchestral
13	Rave Split
14	Multi Sax
15	Bass / Lead
16	AcPiano+Pad
17	Kicks Attack
18	Humming Vox
19	Step Brass
20	Drone / Pipe
21	Sweeper
22	Chime Dreams
23	Big Band
24	Labyrinth
25	SpaceCarrier
26	EasternSplit
27	Cyber Sweep
28	Tekno Asia
29	1080 Fantasy
30	Pop Ballad
31	Rhythmatic
32	Power JV

PRESET A

No.	Name
1	House Set
2	Analectro
3	Anatronic
4	Tekno Pop 1
5	Tekno Pop 2
6	Hard Core
7	Hi Energy
8	Pop Dance
9	Acid Set
10	Ambient Set
11	Electro Pop
12	Pop Set 1
13	Pop Set 2
14	Pop Set 3
15	Pop Set 4
16	L.A. Ballad
17	Hip Hop Set
18	Funk Rock
19	Funk Fusion
20	Heavy Metal
21	Heavy Kids
22	Latin Set
23	BrazilianSet
24	New Age 1
25	New Age 2
26	Orchestra
27	Concerto
28	Film Score 1
29	Film Score 2
30	Symphonic
31	Chamber Set
32	Baroque Set

PRESET B

No.	Name
1	Africa
2	World Ethnic
3	Asian Ethnic
4	Asian Band
5	60's Set
6	Blues Band
7	Country Band
8	Folk Set
9	Reggae Band
10	FunkWah Band
11	Funkin'Phaze
12	Zydeco Band
13	New Orleans
14	Dixieland
15	Big Band Set
16	Cont.Jazz 1
17	Cont.Jazz 2
18	Ac.Jazz Set
19	Gospel Set
20	All Strings
21	All Brass
22	All Piano 1
23	All Piano 2
24	All Keyboard
25	All Organ
26	All Winds
27	All Bells
28	Mlt & Perc
29	All Seq
30	All Bass
31	All Pad
32	All FX

The Demo Song Names/Composer Profiles

Following Demo Songs and whose composer's profiles contained in the JV-1080:

RISE

Music by David Goldblatt Copyright ©1994, David Goldblatt Music

David Goldblatt is a Los Angeles based composer/keybordist who has performed and recorded with a broad spectrum of artists such as Tribal Tech with Gary Willis and Scott Henderson, Stanley Clarke, Dizzy Gillespie, Wayne Shoter, Joe Sample, etc.. David's compositions were featured on two Tribal Tech CDs and Brandon Fields latest CD. He is heard on many TV shows and movies, such as Jodie Foster's "Little Man Tate," as a session artist. He has written and arranged for TV shows, jingles, and various productions in all sectors of the music industry, including musical director for various TV shows and a 1989 world tour with Diana Ross, as musical director, keyboardist, and arranger, which included a live CD and a concert video for HBO.

1080 Rave

Music by Ryeland Allison Copyright © 1994, Ryeland Allison

Ryeland arranges simultaneous manifold particle vibrations to proclaim "Resonance." Resonance is to some extent qualified to contented apportion within disassociative continuance, proceding space. When converged in a synchronous locus, he at once regenerates toward fluidic empathy.

He is honored to introduce this to you.

StormWarning

Music by Mitsuru Sakaue Copyright © 1994, Roland Corporation

Mitsuru Sakaue began composing and doing arrengements for commercials and videos while still in school. In particular, his studio work earned for him a solid reputation. Currently, he produces commercial musics and jingles for FM stations.

Roland Exclusive messages

1. Data Format for Exclusive Messages

Roland's MIDI implementation uses the following data format for all Exclusive messages (type IV):

Byte	Description
F0H	Exclusive Status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
CMD	Command ID
[BODY]	Main data
F7H	End of exclusive

•MIDI status: F0H, F7H

An Exclusive message must be flanked by a pair of status codes, starting with a Manufacturer ID immediately after F0H (MIDI version 1.0).

•Manufacturer ID: 41H

The Manufacturer ID identifies the manufacturer of a MIDI instrument that sends an Exclusive message. Value 41H represents Roland's Manufacturer ID.

•Device ID: DEV

The Device ID contains a unique value that identifies individual devices in the implementation of several MIDI instruments. It is usually set to 00H–0FH, a value smaller by one than that of a basic channel, but value 00H–1FH may be used for a device with several basic channels.

•Model ID: MDL

The Model ID contains a value that identifies one model from another. Different models, however, may share an identical Model ID if they handle similar data.

The Model ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Model IDs, each representing a unique model:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

•Command ID: CMD

The Command ID indicates the function of an Exclusive message. The Command ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Command IDs, each representing a unique function:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

•Main data: BODY

This field contains a message to be exchanged across an interface. The exact data size and content will vary with the Model ID and Command ID.

2. Address-mapped Data Transfer

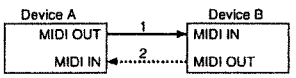
Address mapping is a technique for transferring messages conforming to the data format given in Section 1. It assigns a series of memory-resident records—waveform and tone data, switch status, and parameters, for example, to specific locations in a machine-dependent address space, thereby allowing access to data residing at the address a message specifies.

Address-mapped data transfer is therefore independent of models and data categories. This technique allows use of two different transfer procedures: one-way transfer and handshake transfer.

•One-way transfer procedure (See Section 3 for details.)

This procedure is suited to the transfer of a small amount of data. It sends out an Exclusive message completely independent of the receiving device's status.

Connection Diagram

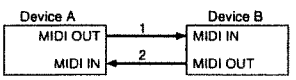


Connection at point 2 is essential for "Request data" procedures. (See Section 3.)

•Handshake-transfer procedure (This device does not use this procedure)

This procedure initiates a predetermined transfer sequence (handshaking) across the interface before data transfer takes place. Handshaking ensures that reliability and transfer speed are high enough to handle a large amount of data.

Connection Diagram



Connection at points 1 and 2 is essential.

Notes on the above procedures

*** There are separate Command IDs for different transfer procedures.**

*** Devices A and B cannot exchange data unless they use the same transfer procedure, share identical Device ID and Model ID, and are ready for communication.**

3. One-way Transfer Procedure

This procedure sends out data until it has all been sent and is used when the messages are so short that answerbacks need not be checked.

For longer messages, however, the receiving device must acquire each message in time with the transfer sequence, which inserts 20 milliseconds intervals.

Types of Messages

Message	Command ID
Request data 1	RQ1 (11H)
Data set 1	DT1 (12H)

•Request data #1: RQ1 (11H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQ1 message, the remote device checks its memory for the data address and size that satisfy the request.

If it finds them and is ready for communication, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data. Otherwise, the device won't send out anything.

Byte	Description
F0H	Exclusive Status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
11H	Command ID
aaH	Address MSB
⋮	⋮
⋮	⋮
	LSB
ssH	Size MSB
⋮	⋮
⋮	⋮
	LSB
sum	Check sum
F7H	End of exclusive

- **The size of the requested data does not indicate the number of bytes that will make up a DT1 message, but represents the address fields where the requested data resides.**
- **Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.**
- **The same number of bytes comprises address and size data, which, however, vary with the Model ID.**
- **The error-checking process uses a checksum that provides a bit pattern where the last 7 bits are zero when values for an address, size, and that checksum are summed.**

•Data set 1: DT1 (12H)

This message corresponds to the actual data transfer process.
Because every byte in the data is assigned a unique address, a DT1 message can convey the starting address of one or more bits of data as well as a series of data formatted in an address-dependent order.

The MIDI standards inhibit non real-time messages from interrupting an Exclusive one. This fact is inconvenient for devices that support a "soft-thru" function. To maintain compatibility with such devices, Roland has limited the DT1 to 256 bytes so that an excessively long message is sent out in separate 'segments'.

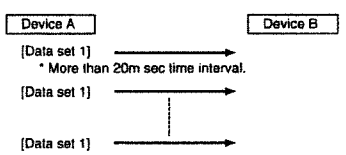
Byte	Description
F0H	Exclusive Status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
12H	Command ID
aaH	Address MSB
I	I
I	I
	LSB
ddH	Data MSB
I	I
I	I
	LSB
sum	Check sum
F7H	End of exclusive

- **A DT1 message is capable of providing only the valid data among those specified by an RQ1 message.**
- **Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.**
- **The number of bytes comprising address data varies from one Model ID to another.**
- **The error-checking process uses a checksum that provides a bit pattern where the last 7 bits are zero when values for an address, size, and that checksum are summed.**

•Example of Message Transactions

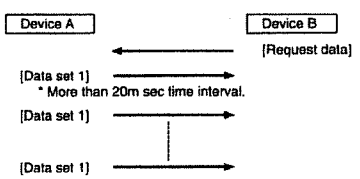
•Device A sending data to Device B

Transfer of a DT1 message is all that takes place.



•Device B requesting data from Device A

Device B sends an RQ1 message to Device A.
Checking the message, Device A sends a DT1 message back to Device B.



[MULTI TIMBRAL SYNTHESIZER MODULE]
Model JV-1080 MIDI Implementation

Date : JULY, 9, 1994
Version; 1.00

(How to read the tables)

This shows the results which you can get by setting each parameter.

Parameters to be set	Level of tone will be changed	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time		
		Setting1	Setting2	Setting1	Setting2	
SYSTEM PARAMETER						
System Control Source 1/2	--	--	CC11:EXPRESSION	--	CC11:EXPRESSION	Values of the parameters
Receive Control Change	ON	ON	ON	ON	ON	
Volume Control Source	VOL&EXP	--	--	--	--	
PATCH COMMON PARAMETER						
EFX Control Source 1/2	--	--	--	EXPRESSION	SYS-CTRL1/2	
EFX Control Depth 1/2	--	--	--	Other than 0	Other than 0	
Patch Control Source 1/2/3	--	EXPRESSION	SYS-CTRL1/2	--	--	
PATCH TONE PARAMETER						
Volume Control Switch	ON	--	--	--	--	
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	Other than OFF	--	--	
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	Other than 0	--	--	

--:Need not be set

This shows there are two different ways of setting to get the same result.

1. RECEIVE DATA

■ Channel Voice Message

● Note off

Status	Second	Third
8nH	kkH	vvH
9nH	kkH	00H

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
kk = Note number : 00H - 7FH (0 - 127)
vv = Velocity : 00H - 7FH (0 - 127)

** In the performance mode, receives this message when the MIDI Receive Switch of each part parameter is ON.*
** Rhythm part (part 10) receives this message when the envelope mode of a rhythm tone parameter is SUSTAIN.*

● Note on

Status	Second	Third
9nH	kkH	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
kk = Note number : 00H - 7FH (0 - 127)
vv = Velocity : 01H - 7FH (1 - 127)

** In the performance mode, receives this message when the MIDI Receive Switch of each part parameter is ON.*

● Polyphonic key pressure

Status	Second	Third
AnH	kkH	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
kk = Note number : 00H - 7FH (0 - 127)
vv = Pressure value : 00H - 7FH (0 - 127)

1. Patch Mode

Parameters to be set	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time	
	Setting1	Setting2	Setting1	Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	AFTERTOUCH	--	AFTERTOUCH
Receive Aftertouch	ON	ON	ON	ON
Aftertouch Source	CH&POLY or POLY-AFTER	CH&POLY or POLY-AFTER	CH&POLY or POLY-AFTER	CH&POLY or POLY-AFTER
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	AFTERTOUCH	SYS-CTRL 1/2
EFX Control Depth 1/2	--	--	Other than 0	Other than 0
Patch Control Source 1/2/3	AFTERTOUCH	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	--	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Tone parameters can be controled		Effect parameters can be controled in real-time			
	Setting1	Setting2	Setting1	Setting2	Setting3	Setting4
SYSTEM PARAMETER						
System Control Source 1/2	--	AFTERTOUCH	--	--	AFTERTOUCH	AFTERTOUCH
Receive Aftertouch	ON	ON	ON	ON	ON	ON
Aftertouch Source	CH&POLY or POLY-AFTER	CH&POLY or POLY-AFTER	CH&POLY or POLY-AFTER	CH&POLY or POLY-AFTER	CH&POLY or POLY-AFTER	CH&POLY or POLY-AFTER
PERFORMANCE COMMON PARAMETER						
EFX Source	--	--	1 - 16	PERFORM	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	AFTERTOUCH	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0	--	Other than 0
PERFORMANCE PART PARAMETER						
MIDI Receive Switch	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER						
EFX Control Source 1/2	--	--	AFTERTOUCH	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--	Other than 0	--
Patch Control Source 1/2/3	AFTERTOUCH	SYS-CTRL1/2	--	--	--	--
PATCH TONE PARAMETER						
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	Other than 0	--	--	--	--

--:Need not be set

● Control Change

○ Bank select (MSB/LSB)

Status	Second	Third
BnH	00H	mmH
BnH	20H	llH

n = MIDI channel number : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
mm = Upper bytes of bank number: 50H - 54H (80 - 84)
ll = Lower bytes of bank number: 00H - 07H (0 - 7)

1. Patch Mode

Parameters to be set	Changes Banks upon receiving program change	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time
SYSTEM PARAMETER			
System Control Source 1/2	--	CC0:BANK-SEL	CC0:BANK-SEL
Receive Bank Select	ON	ON	ON
PATCH COMMON PARAMETER			
EFX Control Source 1/2	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0
Patch Control Source 1/2/3	--	SYS-CTRL1/2	
PATCH TONE PARAMETER			
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--

--:Need not be set

** Bank select and corresponding media are as follows:*

Bank Select MSB	Bank Select LSB	Program Change	Media	(Patch Number)
80	0	0 - 127	User	(#1 - #128)
81	0	0 - 127	Preset A	(#1 - #128)
81	1	0 - 127	Preset B	(#1 - #128)
81	2	0 - 127	Preset C	(#1 - #128)
81	3	0 - 127	Preset D(General MIDI Instrument)	(#1 - #128)
82	0	0 - 127	Data Card	(#1 - #128)
83	0	0 - 127	PCM Card	(#1 - #128)
84	0	0 - 127	Expansion A	(#1 - #128)
84	1	0 - 127	Expansion A	(#129-#256)
84	2	0 - 127	Expansion B	(#1 - #128)
84	3	0 - 127	Expansion B	(#129-#256)
84	4	0 - 127	Expansion C	(#1 - #128)
84	5	0 - 127	Expansion C	(#129-#256)
84	6	0 - 127	Expansion D	(#1 - #128)
84	7	0 - 127	Expansion D	(#129-#256)

Bank Select MSB	Bank Select LSB	Program Change	Media	(Rhythm Set Number)
80	0	0 - 1	User	(#1 - #2)
81	0	0 - 1	Preset A	(#1 - #2)
81	1	0 - 1	Preset B	(#1 - #2)
81	2	0 - 1	Preset C	(#1 - #2)
81	3	0 - 1	Preset D(General MIDI Instrument)	(#1 - #2)
82	0	0 - 1	Data Card	(#1 - #2)
83	0	0 - 127	PCM Card	(#1 - #128)
84	0	0 - 127	Expansion A	(#1 - #128)
84	1	0 - 127	Expansion A	(#129-#256)
84	2	0 - 127	Expansion B	(#1 - #128)
84	3	0 - 127	Expansion B	(#129-#256)
84	4	0 - 127	Expansion C	(#1 - #128)
84	5	0 - 127	Expansion C	(#129-#256)
84	6	0 - 127	Expansion D	(#1 - #128)
84	7	0 - 127	Expansion D	(#129-#256)

2. Performance Mode

Parameters to be set	Changes Banks upon receiving the next program change	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	
			Setting1	Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	CC0:BANK SELECT	CC0:BANK SELECT	CC0:BANK SELECT
Receive Bank Select	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER				
EFX Source	--	--	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0
PERFORMANCE PART PARAMETER				
MIDI Receive Switch	ON	ON	ON	ON
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--

--:Need not be set

** Bank select and corresponding media are as shown below.*

Bank Select MSB	Bank Select LSB	Program Change	Media	(Performance Number)
80	0	0 - 31	User	(#1 - #32)
81	0	0 - 31	Preset A	(#1 - #32)
81	1	0 - 31	Preset B	(#1 - #32)
82	0	0 - 31	Data Card	(#1 - #32)

○ Modulation

Status	Second	Third
BnH	01H	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Modulation depth : 00H - 7FH (0 - 127)

1. Patch Mode

Parameters to be set	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time	
	Setting1	Setting2	Setting1	Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	CC1:MODULATION	--	CC1:MODULATION
Receive Modulation	ON	ON	ON	ON
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	MODULATION	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0	Other than 0
Patch Control Source 1/2/3	MODULATION	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	Other than 0	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time			
	Setting1	Setting2	Setting1	Setting2	Setting3	Setting4
SYSTEM PARAMETER						
System Control Source 1/2	--	CC1:MODULATION	--	--	CC1:MODULATION	CC1:MODULATION
Receive Modulation	ON	ON	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER						
EFX Source	--	--	1 - 16	PERFORM	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	MODULUATION	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0	--	Other than 0
PERFORMANCE PART PARAMETER						
MIDI Receive Switch	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER						
EFX Control Source 1/2	--	--	MODULATION	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--	Other than 0	--
Patch Control Source 1/2/3	MODULATION	SYS-CTRL1/2	--	--	--	--
PATCH TONE PARAMETER						
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	Other than 0	--	--	--	--

--:Need not be set

● Breath

○ Breath

Status	Second	Third
BnH	02H	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Breath : 00H - 7FH (0 - 127)

1. Patch Mode

Parameters to be set	Tone parameters can be controled in real-time: Setting1	Tone parameters can be controled in real-time: Setting2	Effect parameters can be controled in real-time: Setting1	Effect parameters can be controled in real-time: Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	CC2:BREATH	--	CC2:BREATH
Receive Control Change	ON	ON	ON	ON
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	BREATH	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0	Other than 0
Patch Control Source 1/2/3	BREATH	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	Other than 0	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Tone parameters can be controled in real-time: Setting1	Tone parameters can be controled in real-time: Setting2	Effect parameters can be controled in real-time: Setting1	Effect parameters can be controled in real-time: Setting2	Effect parameters can be controled in real-time: Setting3	Effect parameters can be controled in real-time: Setting4
SYSTEM PARAMETER						
System Control Source 1/2	--	CC2:BREATH	--	--	CC2:BREATH	CC2:BREATH
Receive Control Change	ON	ON	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER						
EFX Source	--	--	1 - 16	PERFORM	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	BREATH	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0	--	Other than 0
PERFORMANCE PART PARAMETER						
MIDI Receive Switch	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER						
EFX Control Source 1/2	--	--	BREATH	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--	Other than 0	--
Patch Control Source 1/2/3	BREATH	SYS-CTRL1/2	--	--	--	--
PATCH TONE PARAMETER						
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	Other than 0	--	--	--	--

--:Need not be set

○ Foot type

Status	Second	Third
BnH	04H	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Foot control : 00H - 7FH (0 - 127)

1. Patch Mode

Parameters to be set	Tone parameters can be controled in real-time: Setting1	Tone parameters can be controled in real-time: Setting2	Effect parameters can be controled in real-time: Setting1	Effect parameters can be controled in real-time: Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	CC4:FOOT-TYPE	--	CC4:FOOT-TYPE
Receive Control Change	ON	ON	ON	ON
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	FOOT	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0	Other than 0
Patch Control Source 1/2/3	FOOT	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	Other than 0	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Tone parameters can be controled in real-time: Setting1	Tone parameters can be controled in real-time: Setting2	Effect parameters can be controled in real-time: Setting1	Effect parameters can be controled in real-time: Setting2	Effect parameters can be controled in real-time: Setting3	Effect parameters can be controled in real-time: Setting4
SYSTEM PARAMETER						
System Control Source 1/2	--	CC4:FOOT-TYPE	--	--	CC4:FOOT-TYPE	CC4:FOOT-TYPE
Receive Control Change	ON	ON	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER						
EFX Source	--	--	1 - 16	PERFORM	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	FOOT	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0	--	Other than 0
PERFORMANCE PART PARAMETER						
MIDI Receive Switch	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER						
EFX Control Source 1/2	--	--	FOOT	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--	Other than 0	--
Patch Control Source 1/2/3	FOOT	SYS-CTRL1/2	--	--	--	--
PATCH TONE PARAMETER						
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	Other than 0	--	--	--	--

--:Need not be set

❍ Portamento time

Status	Second	Third
BnH	05H	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Portamento time : 00H - 7FH (0 - 127)

1. Patch Mode

Parameters to be set	Portamento time of patch common parameter will be changed	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time
SYSTEM PARAMETER			
System Control Source 1/2	--	CC5:PORT-TIME	CC5:PORT-TIME
Receive Control Change	ON	ON	ON
PATCH COMMON PARAMETER			
EFX Control Source 1/2	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--
PATCH TONE PARAMETER			
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--

--:Need not be set

2. Performance Mode

Parameters to be set	Portamento time of patch common parameter of the part on the receiving channel will be changed	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time		
			Setting1	Setting2	
SYSTEM PARAMETER					
System Control Source 1/2	--	CC5:PORT-TIME	CC5:PORT-TIME	CC5:PORT-TIME	
Receive Control Change	ON	ON	ON	ON	
PERFORMANCE COMMON PARAMETER					
EFX Source	--	--	1 - 16	PERFORM	
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2	
EFX Control Depth 1/2	--	--	--	Other than 0	
PERFORMANCE PART PARAMETER					
MIDI Receive Switch	ON	ON	ON	ON	
PATCH COMMON PARAMETER					
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--	
EFX Control Depth 1/2	--	--	Other than 0	--	
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--	
PATCH TONE PARAMETER					
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--	
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--	

--:Need not be set

❍ Volume

Status	Second	Third
BnH	07H	vvH

n = MIDI channel number: 0H - 7FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Volume : 00H - 7FH (0 - 127)

1. Patch Mode

Parameters to be set	Level of tone will be changed	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time	
		Setting1	Setting2	Setting1	Setting2
SYSTEM PARAMETER					
System Control Source 1/2	--	--	CC7:VOLUME	--	CC7:VOLUME
Receive Volume	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER					
EFX Control Source 1/2	--	--	--	VOLUME	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0	Other than 0
Patch Control Source 1/2/3	--	VOLUME	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER					
Volume Control Switch	ON	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	Other than 0	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Tone level of part on the receiving channel will be changed	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time			
		Setting1	Setting2	Setting1	Setting2	Setting3	Setting4
SYSTEM PARAMETER							
System Control Source 1/2	--	--	CC7:VOLUME	--	--	CC7:VOLUME	CC7:VOLUME
Receive Volume	ON	ON	ON	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER							
EFX Source	--	--	--	1 - 16	PERFORM	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	--	VOLUME	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	--	Other than 0	--	Other than 0
PERFORMANCE PART PARAMETER							
MIDI Receive Switch	ON	ON	ON	ON	ON	ON	ON
Receive Volume	ON	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER							
EFX Control Source 1/2	--	--	--	VOLUME	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	--	Other than 0	--	Other than 0	--
Patch Control Source 1/2/3	--	VOLUME	SYS-CTRL1/2	--	--	--	--
PATCH TONE PARAMETER							
Volume Control Switch	ON	--	--	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	Other than OFF	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	Other than 0	--	--	--	--

--:Need not be set

○ Pan

Status	Second	Third
BnH	0AH	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Pan : 00H - 7FH (0 - 127)

1. Patch Mode

Parameters to be set	Directional localization of tone can be controled in 128 steps with 0 the leftmost, 64 at the center, 127 the rightmost	Tone parameters can be controled in real-time		EFX parameters can be controled in real-time	
		Setting1	Setting2	Setting1	Setting2
SYSTEM PARAMETER					
System Control Source 1/2	--	--	CC10:PANPOT	--	CC10:PANPOT
Receive Control Change	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER					
EFX Control Source 1/2	--	--	--	PAN	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0	Other than 0
Patch Control Source 1/2/3	--	PAN	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER					
Pan Control Switch	CONT, KEY-ON	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	Other than 0	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Directional localization of tone of the part on receiving channel can be controled in 128 steps with 0 the leftmost, 64 at the center, 127 the rightmost	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time			
		Setting1	Setting2	Setting1	Setting2	Setting3	Setting4
SYSTEM PARAMETER							
System Control Source 1/2	--	--	CC10:PANPOT	--	--	CC10:PANPOT	CC10:PANPOT
Receive Control Change	ON	ON	ON	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER							
EFX Source	--	--	--	1 - 16	PERFORM	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	--	PAN	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	--	Other than 0	--	Other than 0
PERFORMANCE PART PARAMETER							
MIDI Receive Switch	ON	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER							
EFX Control Source 1/2	--	--	--	PAN	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	--	Other than 0	--	Other than 0	--
Patch Control Source 1/2/3	--	PAN	SYS-CTRL1/2	--	--	--	--
PATCH TONE PARAMETER							
Pan Control Switch	KEY-ON, CONT	--	--	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	Other than OFF	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	Other than 0	--	--	--	--

--:Need not be set

○ Expression

Status	Second	Third
BnH	0BH	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Expression : 00H - 7FH (1 - 127)

1. Patch Mode

Parameters to be set	Level of tone will be changed	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time	
		Setting1	Setting2	Setting1	Setting2
SYSTEM PARAMETER					
System Control Source 1/2	--	--	CC11:EXPRESSION	--	CC11:EXPRESSION
Receive Control Change	ON	ON	ON	ON	ON
Volume Control Source	VOL&EXP	--	--	--	--
PATCH COMMON PARAMETER					
EFX Control Source 1/2	--	--	--	EXPRESSION	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0	Other than 0
Patch Control Source 1/2/3	--	EXPRESSION	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER					
Volume Control Switch	ON	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	Other than 0	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Level of tone of the part on the receiving channel will be changed	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time			
		Setting1	Setting2	Setting1	Setting2	Setting3	Setting4
SYSTEM PARAMETER							
System Control Source 1/2	--	--	CC11:EXPRESSION	--	--	CC11:EXPRESSION	CC11:EXPRESSION
Receive Control Change	ON	ON	ON	ON	ON	ON	ON
Volume Control Source	VOL&EXP	--	--	--	--	--	--
PERFORMANCE COMMON PARAMETER							
EFX Source	--	--	--	1 - 16	PERFORM	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	--	EXPRESSION	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	--	Other than 0	--	Other than 0
PERFORMANCE PART PARAMETER							
MIDI Receive Switch	ON	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER							
EFX Control Source 1/2	--	--	--	EXPRESSION	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	--	Other than 0	--	Other than 0	--
Patch Control Source 1/2/3	--	EXPRESSION	SYS-CTRL1/2	--	--	--	--
PATCH TONE PARAMETER							
Volume Control Switch	ON	--	--	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	Other than OFF	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	Other than 0	--	--	--	--

--:Need not be set

○ Hold 1

Status	Second	Third
BnH	40H	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Control value : 00H - 7FH (0 - 127) 0 - 63 = OFF 64 - 127 = ON

1. Patch Mode

Parameters to be set	When HOLD-1 is ON, note is kept on	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	LFO Rate is changed to HOLD-1 ON interval	Tone delay time is changed to the HOLD-1 ON interval	When HOLD-1 is ON, Effect controller is held	When HOLD-1 is ON, Effect controller is held at its peak level	When HOLD-1 is ON, Tone controller is held	When HOLD-1 is ON, Tone controller is held at its peak level
SYSTEM PARAMETER									
System Control Source 1/2	--	CC64:HOLD-1	CC64:HOLD-1	--	--	--	--	--	--
Receive Hold-1	ON	ON	ON	ON	ON	ON	ON	ON	ON
TAP Control Source	--	--	--	HOLD-1	HOLD-1	--	--	--	--
Hold Control Source	--	--	--	--	--	HOLD-1	--	HOLD-1	--
Peak Control Source	--	--	--	--	--	--	HOLD-1	--	HOLD-1
PATCH COMMON PARAMETER									
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--	--	--	--	--	--
EFX Control Depth 1/2	--	--	Other than 0	--	--	--	--	--	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--	--	--	--	--	--
EFX Control Hold/Peak	--	--	--	--	--	HOLD	PEAK	--	--
Control 1/2/3 Hold/Peak	--	--	--	--	--	--	--	HOLD	PEAK
PATCH TONE PARAMETER									
Hold-1 Control Switch	ON	--	--	--	--	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--	--	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--	--	--	--	--	--
LFO1/2 External Sync	--	--	--	TAP	--	--	--	--	--
Tone Delay Mode	--	--	--	--	TAP-SYNC	--	--	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	When HOLD-1 is ON, note of the part on the receiving channel is held	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time		LFO Rate is changed to the HOLD-1 ON interval	Tone Delay time is changed to the HOLD-1 ON interval	When HOLD-1 is ON, Effect controller is held	When HOLD-1 is ON, Effect controller is held at its peak level	When HOLD-1 is ON, Tone controller is held	When HOLD-1 is ON, Tone controller is held at its peak level
			Setting1	Setting2						
SYSTEM PARAMETER										
System Control Source 1/2	--	CC64:HOLD-1	CC64:HOLD-1	CC64:HOLD-1	--	--	--	--	--	--
Receive Hold-1	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
TAP Control Source	--	--	--	--	HOLD-1	HOLD-1	--	--	--	--
Hold Control Source	--	--	--	--	--	--	HOLD-1	--	HOLD-1	--
Peak Control Source	--	--	--	--	--	--	--	HOLD-1	--	HOLD-1
PERFORMANCE COMMON PARAMETER										
EFX Source	--	--	1 - 16	PERFORM	--	--	--	--	--	--
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2	--	--	--	--	--	--
EFX Control Depth 1/2	--	--	--	Other than 0	--	--	--	--	--	--
PERFORMANCE PART PARAMETER										
MIDI Receive Switch	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER										
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--	--	--	--	--	--	--
EFX Control Depth 1/2	--	--	Other than 0	--	--	--	--	--	--	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--	--	--	--	--	--	--
EFX Control Hold/Peak	--	--	--	--	--	--	HOLD	PEAK	--	--
Control 1/2/3 Hold/Peak	--	--	--	--	--	--	--	--	HOLD	PEAK
PATCH TONE PARAMETER										
Hold-1 Control Switch	ON	--	--	--	--	--	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--	--	--	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--	--	--	--	--	--	--
LFO1/2 External Sync	--	--	--	--	TAP	--	--	--	--	--
Tone Delay Mode	--	--	--	--	--	TAP-SYNC	--	--	--	--

--:Need not be set

○ Portamento

Status	Second	Third
BnH	41H	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Control value : 00H - 7FH (0 - 127) 0 - 63 = OFF 64 - 127 = ON

1. Patch Mode

Parameters to be set	Portamento switch of Patch Common parameter is changed its setting	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time
SYSTEM PARAMETER			
System Control Source 1/2	--	CC65:PORTAMENTO	CC65:PORTAMENTO
Receive Control Change	ON	ON	ON
PATCH COMMON PARAMETER			
EFX Control Source 1/2	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--
PATCH TONE PARAMETER			
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--

--:Need not be set

2. Performance Mode

Parameters to be set	Portamento switch of Patch Common parameter of the part on the receiving channel is changed its setting	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	
			Setting1	Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	CC65:PORTAMENTO	CC65:PORTAMENTO	CC65:PORTAMENTO
Receive Control Change	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER				
EFX Source	--	--	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0
PERFORMANCE PART PARAMETER				
MIDI Receive Switch	ON	ON	ON	ON
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--

--:Need not be set

○ Sostenuto

Status	Second	Third
BnH	42H	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Control value : 00H - 7FH (0 - 127) 0 - 63 = OFF 64 - 127 = ON

1. Patch Mode

Parameters to be set	When SOSTENUTO is ON, MIDI-on note is held on	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	LFO Rate is changed to the SOSTENUTO ON interval	Tone delay time is changed to the SOSTENUTO ON interval	When SOSTENUTO is ON, Effect controller is held	When SOSTENUTO is ON, Effect controller is held at its peak level	When SOSTENUTO is ON, Tone controller is held	When SOSTENUTO is ON, Tone controller is held at its peak level
SYSTEM PARAMETER									
System Control Source 1/2	--	CC66:SOSTENUTO	CC66:SOSTENUTO	--	--	--	--	--	--
Receive Control Change	ON	ON	ON	ON	ON	ON	ON	ON	ON
TAP Control Source	--	--	--	SOSTENUTO	SOSTENUTO	--	--	--	--
Hold Control Source	--	--	--	--	--	SOSTENUTO	--	SOSTENUTO	--
Peak Control Source	--	--	--	--	--	--	SOSTENUTO	--	SOSTENUTO
PATCH COMMON PARAMETER									
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--	--	--	--	--	--
EFX Control Depth 1/2	--	--	Other than 0	--	--	--	--	--	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--	--	--	--	--	--
EFX Control Hold/Peak	--	--	--	--	--	HOLD	PEAK	--	--
Control 1/2/3 Hold/Peak	--	--	--	--	--	--	--	HOLD	PEAK
PATCH TONE PARAMETER									
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--	--	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--	--	--	--	--	--
LFO1/2 External Sync	--	--	--	TAP	--	--	--	--	--
Tone Delay Mode	--	--	--	--	TAP-SYNC	--	--	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	When SOSTENUTO is ON, MIDI-on note of the part on the receiving channel is held	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time: Setting1	Effect parameters can be controled in real-time: Setting2	LFO Rate is changed to the SOSTENUTO ON interval	Tone Delay time is changed to the SOSTENUTO ON interval	When SOSTENUTO is ON, Effect controller is held	When SOSTENUTO is ON, Effect controller is held at its peak level	When SOSTENUTO is ON, Tone controller is held	When SOSTENUTO is ON, Tone controller is held at its peak level
SYSTEM PARAMETER										
System Control Source 1/2	--	CC66:SOSTENUTO	CC66:SOSTENUTO	CC66:SOSTENUTO	--	--	--	--	--	--
Receive Control Change	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
TAP Control Source	--	--	--	--	SOSTENUTO	SOSTENUTO	--	--	--	--
Hold Control Source	--	--	--	--	--	--	SOSTENUTO	--	SOSTENUTO	--
Peak Control Source	--	--	--	--	--	--	--	SOSTENUTO	--	SOSTENUTO
PERFORMANCE COMMON PARAMETER										
EFX Source	--	--	1 - 16	PERFORM	--	--	--	--	--	--
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2	--	--	--	--	--	--
EFX Control Depth 1/2	--	--	--	Othe than 0	--	--	--	--	--	--
PERFORMANCE PART PARAMETER										
MIDI Receive Switch	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER										
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--	--	--	--	--	--	--
EFX Control Depth 1/2	--	--	Other than 0	--	--	--	--	--	--	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--	--	--	--	--	--	--
EFX Control Hold/Peak	--	--	--	--	--	--	HOLD	PEAK	--	--
Control 1/2/3 Hold/Peak	--	--	--	--	--	--	--	--	HOLD	PEAK
PATCH TONE PARAMETER										
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--	--	--	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--	--	--	--	--	--	--
LFO1/2 External Sync	--	--	--	--	TAP	--	--	--	--	--
Tone Delay Mode	--	--	--	--	--	TAP-SYNC	--	--	--	--

--:Need not be set

○ Soft Pedal

Status	Second	Third
BnH	43H	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Control Value : 00H - 7FH (0 - 127) 0 - 63 = OFF 64 - 127 = ON

1. Patch Mode

Parameters to be set	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	LFO Rate is changed to the SOFT PEDAL ON interval	Tone Delay Time is changed to the SOFT PEDAL ON interval	When SOFT PEDAL is ON, Effect controller is held	When SOFT PEDAL is ON, Effect controller is held at its peak level	When SOFT PEDAL is ON, Tone controller is held	When SOFT PEDAL is ON, Tone controller is held at its peak level
SYSTEM PARAMETER								
System Control Source 1/2	CC67:SOFT	CC67:SOFT	--	--	--	--	--	--
Receive Control Change	ON	ON	ON	ON	ON	ON	ON	ON
TAP Control Source	--	--	SOFT	SOFT	--	--	--	--
Hold Control Source	--	--	--	--	SOFT	--	SOFT	--
Peak Control Source	--	--	--	--	--	SOFT	--	SOFT
PATCH COMMON PARAMETER								
EFX Control Source 1/2	--	SYS-CTRL1/2	--	--	--	--	--	--
EFX Control Depth 1/2	--	Other than 0	--	--	--	--	--	--
Patch Control Source 1/2/3	SYS-CTRL1/2	--	--	--	--	--	--	--
EFX Control Hold/Peak	--	--	--	--	HOLD	PEAK	--	--
Control 1/2/3 Hold/Peak	--	--	--	--	--	--	HOLD	PEAK
PATCH TONE PARAMETER								
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	--	--	--	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	--	--	--	--	--	--	--
LFO1/2 External Sync	--	--	TAP	--	--	--	--	--
Tone Delay Mode	--	--	--	TAP-SYNC	--	--	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time: Setting1	Effect parameters can be controled in real-time: Setting2	LFO Rate is changed to the SOFT PEDAL ON interval	Tone Delay time is changed to the SOFT PEDAL ON interval	When SOFT PEDAL is ON, Effect controller is held	When SOFT PEDAL is ON, Effect controller is held at its peak level	When SOFT PEDAL is ON, Tone controller is held	When SOFT PEDAL is ON, Tone controller is held at its peak level
SYSTEM PARAMETER									
System Control Source 1/2	CC67:SOFT	CC67:SOFT	CC67:SOFT	--	--	--	--	--	--
Receive Control Change	ON	ON	ON	ON	ON	ON	ON	ON	ON
TAP Control Source	--	--	--	SOFT	SOFT	--	--	--	--
Hold Control Source	--	--	--	--	--	SOFT	--	SOFT	--
Peak Control Source	--	--	--	--	--	--	SOFT		SOFT
PERFORMANCE COMMON PARAMETER									
EFX Source	--	1 - 16	PERFORM	--	--	--	--	--	--
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--	--	--	--	--	--
EFX Control Depth 1/2	--	--	Other than 0	--	--	--	--	--	--
PERFORMANCE PART PARAMETER									
MIDI Receive Switch	ON	ON	ON	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER									
EFX Control Source 1/2	--	SYS-CTRL1/2	--	--	--	--	--	--	--
EFX Control Depth 1/2	--	Other than 0	--	--	--	--	--	--	--
Patch Control Source 1/2/3	SYS-CTRL1/2	--	--	--	--	--	--	--	--
EFX Control Hold/Peak	--	--	--	--	--	HOLD	PEAK	--	--
Control 1/2/3 Hold/Peak	--	--	--	--	--			HOLD	PEAK
PATCH TONE PARAMETER									
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	--	--	--	--	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	--	--	--	--	--	--	--	--
LFO1/2 External Sync	--	--	--	TAP	--	--	--	--	--
Tone Delay Mode	--	--	--	--	TAP-SYNC	--	--	--	--

--:Need not be set

○ Hold 2

Status	Second	Third
BnH	45H	vvH

n = MIDI channel number : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Control Value : 00H - 7FH (0 - 127) 0 - 63 = OFF 64 - 127 = ON

1. Patch Mode

Parameters to be set	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	LFO Rate is changed to the HOLD-2 ON interval	Tone delay time is changed to the HOLD-2 ON interval	When HOLD-2 is ON, Effect controller is held	When HOLD-2 is ON, Effect controller is held at its peak level	When HOLD-2 is ON, Tone controller is held	When HOLD-2 is ON, Tone controller is held at its peak level
SYSTEM PARAMETER								
System Control Source 1/2	CC69:HOLD-2	CC69:HOLD-2	--	--	--	--	--	--
Receive Control Change	ON	ON	ON	ON	ON	ON	ON	ON
TAP Control Source	--	--	HOLD-2	HOLD-2	--	--	--	--
Hold Control Source	--	--	--	--	HOLD-2	--	HOLD-2	--
Peak Control Source	--	--	--	--		HOLD-2	--	HOLD-2
PATCH COMMON PARAMETER								
EFX Control Source 1/2	--	SYS-CTRL1/2	--	--	--	--	--	--
EFX Control Depth 1/2	--	Other than 0	--	--	--	--	--	--
Patch Control Source 1/2/3	SYS-CTRL1/2	--	--	--	--	--	--	--
EFX Control Hold/Peak	--	--	--	--	HOLD	PEAK	--	--
Control 1/2/3 Hold/Peak	--	--	--	--	--	--	HOLD	PEAK
PATCH TONE PARAMETER								
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	--	--	--	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	--	--	--	--	--	--	--
LFO1/2 External Sync	--	--	TAP	--	--	--	--	--
Tone Delay Mode	--	--	--	TAP-SYNC	--	--	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time: Setting1	Effect parameters can be controled in real-time: Setting2	LFO Rate is changed to the HOLD-2 ON interval	Tone Delay time is changed to the HOLD-2 ON interval	When HOLD-2 is ON, Effect controller is held	When HOLD-2 is ON, Effect controller is held at its peak level	When HOLD-2 is ON, Tone controller is held	When HOLD-2 is ON, Tone controller is held at its peak level
SYSTEM PARAMETER									
System Control Source 1/2	CC69:HOLD-2	CC69:HOLD-2	CC69:HOLD-2	--	--	--	--	--	--
Receive Control Change	ON	ON	ON	ON	ON	ON	ON	ON	ON
TAP Control Source	--	--	--	HOLD-2	HOLD-2	--	--	--	--
Hold Control Source	--	--	--	--	--	HOLD-2	--	HOLD-2	--
Peak Control Source	--	--	--	--	--	--	HOLD-2	--	HOLD-2
PERFORMANCE COMMON PARAMETER									
EFX Source	--	1 - 16	PERFORM	--	--	--	--	--	--
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--	--	--	--	--	--
EFX Control Depth 1/2	--	--	Other than 0	--	--	--	--	--	--
PERFORMANCE PART PARAMETER									
MIDI Receive Switch	ON	ON	ON	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER									
EFX Control Source 1/2	--	SYS-CTRL1/2	--	--	--	--	--	--	--
EFX Control Depth 1/2	--	Other than 0	--	--	--	--	--	--	--
Patch Control Source 1/2/3	SYS-CTRL1/2	--	--	--	--	--	--	--	--
EFX Control Hold/Peak	--	--	--	--	--	HOLD	PEAK	--	--
Control 1/2/3 Hold/Peak	--	--	--	--	--	--	--	HOLD	PEAK
PATCH TONE PARAMETER									
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	--	--	--	--	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	--	--	--	--	--	--	--	--
LFO1/2 External Sync	--	--	--	TAP	--	--	--	--	--
Tone Delay Mode	--	--	--	--	TAP-SYNC	--	--	--	--

--:Need not be set

○ Portamento Control

Status	Second	Third
BnH	54H	kkH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15= ch.16
kk = Note Number : 00H - 7FH (0 - 127)

1. Patch Mode

Parameters to be set	The on-note glides to the pitch of the note turned on next	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time
SYSTEM PARAMETER			
System Control Source 1/2 Receive Control Change	-- ON	CC84: ON	CC84: ON
PATCH COMMON PARAMETER			
EFX Control Source 1/2	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--
PATCH TONE PARAMETER			
Ctrl 1/2/3 Dest.1/2/3/4	--	Other then OFF	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--

--:Need not be set

2. Performance Mode

Parameters to be set	This applies to the part on the receiving ch. The on-note glides to the pitch of the note turned on next	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	
			Setting1	Setting2
SYSTEM PARAMETER				
System Control Source 1/2 Receive Control Change	-- ON	CC84: ON	CC84: ON	CC84: ON
PERFORMANCE COMMON PARAMETER				
EFX Source	--	--	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0
PERFORMANCE PART PARAMETER				
MIDI Receive Switch	ON	ON	ON	ON
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--

--:Need not be set

○ General Purpose Effect 1 (Reverb)

Status	Second	Third
BnH	5BH	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Control value : 00H - 7FH (0 - 127)

1. Patch Mode

** This message, when received in patch mode, will not affect the reverb send level.*

Parameters to be set	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time
SYSTEM PARAMETER		
System Control Source 1/2 Receive Control Change	CC91:REVERB ON	CC91:REVERB ON
PATCH COMMON PARAMETER		
EFX Control Source 1/2	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	Other than 0
Patch Control Source 1/2/3	SYS-CTRL1/2	--
PATCH TONE PARAMETER		
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	--

--:Need not be set

2. Performance Mode

Parameters to be set	Reverb send level of the part on the receiving ch. will be changed	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	
			Setting1	Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	CC91:REVERB	CC91:REVERB	CC91:REVERB
Receive Control Change	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER				
EFX Source	--	--	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0
PERFORMANCE PART PARAMETER				
MIDI Receive Switch	ON	ON	ON	ON
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--

--:Need not be set

○ General Purpose Effect 3 (Chorus)

Status	Second	Third
BnH	5DH	vvH

n = MIDI channelnumber: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Control value : 00H - 7FH (0 - 127)

1. Patch Mode

** This message, when received in Patch mode, will not affect the chorus send level.*

Parameters to be set	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time
SYSTEM PARAMETER		
System Control Source 1/2	CC93:CHORUS	CC93:CHORUS
Receive Control Change	ON	ON
PATCH COMMON PARAMETER		
EFX Control Source 1/2	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	Other than 0
Patch Control Source 1/2/3	SYS-CTRL1/2	--
PATCH TONE PARAMETER		
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	--

--:Need not be set

2. Performance Mode

Parameters to be set	Chorus send level of the part on the receiving ch. will be changed	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	
			Setting1	Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	CC93:CHORUS	CC93:CHORUS	CC93:CHORUS
Receive Control Change	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER				
EFX Source	--	--	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0
PERFORMANCE PART PARAMETER				
MIDI Receive Switch	ON	ON	ON	ON
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--

--:Need not be set

○ RPN LSB

Status	Second	Third
BnH	64H	llH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
ll = Lower byte of the parameter number specified by RPN.

○ RPN MSB

Status	Second	Third
BnH	65H	mmH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
mm = Upper byte of the parameter number specified by RPN.

The following is commonly applied to both RPN MSB and LSB.

1. Patch Mode

Parameters to be set	The parameter No. specified by RPN will be changed
SYSTEM PARAMETER	
Receive Control Change	ON

2. Performance Mode

Parameters to be set	Parameter No., specified by RPN, of the part on the receiving channel will be changed
SYSTEM PARAMETER	
Receive Control Change	ON
PERFORMANCE PART PARAMETER	
MIDI Receive Switch	ON

○ Data Entry LSB

Status	Second	Third
BnH	26H	llH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
ll = Value for the parameter specified by RPN

1. Patch Mode

Parameters to be set	LSB of the data for the parameter specified by RPN LSB/MSB will be changed	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time
SYSTEM PARAMETER			
System Control Source 1/2	--	CC38:	CC38:
Receive Control Change	ON	ON	ON
PATCH COMMON PARAMETER			
EFX Control Source 1/2	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--
PATCH TONE PARAMETER			
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--

--:Need not be set

2. Performance Mode

Parameters to be set	LSB of the data for parameter, sepecified by PRN LSB/MSB, of the part on the receving channel will be changed	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time		
			Setting1	Setting2	
SYSTEM PARAMETER					
System Control Source 1/2	--	CC38:	CC38:	CC38:	
Receive Control Change	ON	ON	ON	ON	
PERFORMANCE COMMON PARAMETER					
EFX Source	--	--	1 - 16	PERFORM	
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2	
EFX Control Depth 1/2	--	--	--	Other than 0	
PERFORMANCE PART PARAMETER					
MIDI Receive Switch	ON	ON	ON	ON	
PATCH COMMON PARAMETER					
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--	
EFX Control Depth 1/2	--	--	Other than 0	--	
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--	
PATCH TONE PARAMETER					
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--	
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--	

--:Need not be set

○ Data Entry MSB

Status	Second	Third
BnH	06H	mm H

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
mm = Value for the parameter specified by RPN

1. Patch Mode

Parameters to be set	MSB of the data for the parameter specified by RPN LSB/MSB will be changed	Tone parameters can be controled in real-time	Effect parameters can be controled in real time
SYSTEM PARAMETER			
System Control Source 1/2	--	CC6:DATA-ENTRY	CC6:DATA-ENTRY
Receive Control Change	ON	ON	ON
PATCH COMMON PARAMETER			
EFX Control Source 1/2	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--
PATCH TONE PARAMETER			
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--

--:Need not be set

2. Performance Mode

Parameters to be set	MSB of the data for parameter, specified by PRN LSB/MSB, of the part on the receving channel will be changed	Tone parameters can be controled in real-time	Effect parameters can be controled in real-time	
			Setting1	Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	CC6:DATA-ENTRY	CC6:DATA-ENTRY	CC6:DATA-ENTRY
Receive Control Change	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER				
EFX Source	--	--	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0
PERFORMANCE PART PARAMETER				
MIDI Receive Switch	ON	ON	ON	ON
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--
Patch Control Source 1/2/3	--	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	--	--

--:Need not be set

** Description of RPN **
RPNs (Registered Parameter Numbers) are functions defined by MIDI standard.
Each PRN may be used to change parameters of equipment to vary characteristics of tone, performance, etc.
The JV-1080 can recognize the four RPNs: Pitch Bend Sensitivity (RPN#0), Fine Tuning (RPN#1),
Coarse Tuning (RPN#2) and RPN Reset (RPN#16383).
To effect RPN, first designate the parameter to be controlled using RPN MSB and RPN LSB, and then specify the value of designated parameter in
the data entry.

BnH 65H mmH (RPN MSB) BnH 64H llH (RPN LSB) BnH 06H xxH (Data Entry MSB) BnH 26H yyH (Data Entry LSB)

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

RPN MSB	RPN LSB	Data Entry MSB	Data Entry LSB	Funtion
mm	ll	xx	yy	
00H	00H	mmH	---	Pitch bend sensitivity mm : 00H - 0CH (0 - 12 in unit of semitones) ll : Ignored Up to 1 octave in unit of semitones. * Common to BENDER-RANGE UP and BENDER-RANGE DOWN * Rhythm part (part 10) ignores this function.
00H	01H	mmH	llH	Fine Tuning mm, ll : 20H, 00H - 40H, 00H - 60H, 00H (-8192 * 50 / 8192 - 0 - +8192 * 50 / 8192 cent) * In patch mode, sets master tune. * In performance mode, sets fine tune of a part. * When received on the control channel, sets the master tune.
00H	02H	mmH	---	Coarse Tuning mm : 10H - 40H - 70H (-48 - 0 - +48 in unit of semitones) ll : Ignored * Ignored in patch mode * In performance mode, sets coarse tune of a part.
7FH	7FH	---	---	RPN Reset Cancels the settings made by PRN(s). Internal settings remain unchanged. mm, ll : Ignored

** RPN is received either MSB first or LSB first.*
** Data entry data must be sent MSB first to correctly received.*
(LSB is cleared to 0 when MSB is received.)

● Program Change

Status	Second
CnH	ppH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
pp = Program number : 00H - 7FH (0 - 127)

1. Patch Mode

	Changes patches (patch number is the program number plus 1)
Parameters to be set	
SYSTEM PARAMETER	
Receive Program Change	ON

--:Need not be set

2. Performance Mode

** Changes performance when received on the control channel.*

	Patch of the part on the receiving channel will be changed. (The patch number is the program number plus 1)
Parameters to be set	
SYSTEM PARAMETER	
Receive Program Change	ON
PERFORMANCE PART PARAMETER	
MIDI Receive Switch	ON
Receive Program Change	ON

--:Need not be set

● Channel Pressure

Status	Second
DnH	vvH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Pressure value : 00H - 7FH (0 - 127)

1. Patch Mode

	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time	
Parameters to be set	Setting1	Setting2	Setting1	Setting2
SYSTEM PARAMETER				
System Control Source 1/2	--	AFTERTOUCH	--	AFTERTOUCH
Receive Aftertouch	ON	ON	ON	ON
Aftertouch Source	CH-AFTER or CH&POLY	CH-AFTER or CH&POLY	CH-AFTER or CH&POLY	CH-AFTER or CH&POLY
PATCH COMMON PARAMETER				
EFX Control Source 1/2	--	--	AFTERTOUCH	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	Other than 0	Other than 0
Patch Control Source 1/2/3	AFTERTOUCH	SYS-CTRL1/2	--	--
PATCH TONE PARAMETER				
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	Other than 0	--	--

--:Need not be set

2. Perforamance Mode

	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time			
Parameters to be set	Setting1	Setting2	Setting1	Setting2	Setting3	Setting4
SYSTEM PARAMETER						
System Control Source 1/2	--	AFTERTOUCH	--	--	AFTERTOUCH	AFTERTOUCH
Receive Aftertouch	ON	ON	ON	ON	ON	ON
Aftertouch Source	CH-AFTER or CH&POLY	CH-AFTER or CH&POLY	CH-AFTER or CH&POLY	CH-AFTER or CH&POLY	CH-AFTER or CH&POLY	CH-AFTER or CH&POLY
PERFORMANCE COMMON PARAMETER						
EFX Source	--	--	1 - 16	PERFORM	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	AFTERTOUCH	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0	--	Other than 0
PERFORMANCE PART PARAMETER						
MIDI Receive Switch	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER						
EFX Control Source 1/2	--	--	AFTERTOUCH	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	Other than 0	--	Other than 0	--
Patch Control Source 1/2/3	AFTERTOUCH	SYS-CTRL1/2	--	--	--	--
PATCH TONE PARAMETER						
Ctrl 1/2/3 Dest.1/2/3/4	Other than OFF	Other than OFF	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	Other than 0	othr than 0	--	--	--	--

--:Need not be set

● Pitch Bend Change

Status	Second	Third
EnH	llH	mmH

n = MIDI channel number : 0H - FH (0 - 15) 0 = ch.1 15= ch.16
mm, ll = Pitch bend change: 00H, 00H - 40H, 00H - 7FH, 7FH
(-8192 - 0 - +8192)

1. Patch Mode

Parameters to be set	Changes pitch of note	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time	
		Setting1	Setting2	Setting1	Setting2
SYSTEM PARAMETER					
System Control Source 1/2	--	--	BENDER	--	BENDER
Receive Bender	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER					
EFX Control Source 1/2	--	--	--	BENDER	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	Other than 0	Other than 0
Patch Control Source 1/2/3	--	BENDER	SYS-CTRL1/2	--	
PATCH TONE PARAMETER					
Bender Control Switch	ON	--	--	--	--
Bend Range Upper/Lower	Other than 0	--	--	--	--
Pan Control Switch	--	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	Other than OFF	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	Other than 0	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Changes note pitch of the part on the receiving channel	Tone parameters can be controled in real-time		Effect parameters can be controled in real-time			
		Setting1	Setting2	Setting1	Setting2	Setting3	Setting4
SYSTEM PARAMETER							
System Control Source 1/2	--	--	BENDER	--	--	BENDER	BENDER
Receive Bender	ON	ON	ON	ON	ON	ON	ON
PERFORMANCE COMMON PARAMETER							
EFX Source	--	--	--	1 - 16	PERFORM	1 - 16	PERFORM
EFX Control Source 1/2	--	--	--	--	BENDER	--	SYS-CTRL1/2
EFX Control Depth 1/2	--	--	--	--	Other than 0	--	Other than
PERFORMANCE PART PARAMETER							
MIDI Receive Switch	ON	ON	ON	ON	ON	ON	ON
PATCH COMMON PARAMETER							
EFX Control Source 1/2	--	--	--	BENDER	--	SYS-CTRL1/2	--
EFX Control Depth 1/2	--	--	--	Other than 0	--	Other than 0	--
Patch Control Source 1/2/3	--	BENDER	SYS-CTRL1/2	--	--	--	--
PATCH TONE PARAMETER							
Bender Control Switch	ON	--	--	--	--	--	--
Bend Range Upper/Lower	Other than 0	--	--	--	--	--	--
Ctrl 1/2/3 Dest.1/2/3/4	--	Other than OFF	Other than OFF	--	--	--	--
Ctrl 1/2/3 Depth1/2/3/4	--	Other than 0	Other than 0	--	--	--	--

--:Need not be set

■ Channel Mode Message

● All Sounds Off

Status	Second	Third
BnH	78H	00H

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

** Turns off all MIDI-on notes on the MIDI channel.*
However, the state of channel messages does not change.

● Reset All Controllers

Status	Second	Third
BnH	79H	00H

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

** Upon receiving this message, the JV-1080 changes settings of the controller as follows:*

Controller	Settings
Modulation	0 (min)
Breath	0 (min)
Foot	0 (min)
Volume	127 (max)
Pan	64 (center)
Expression	0 (min) (volume is set at max.)
Hold 1	0 (off)
Sostenuto	0 (off)
Soft Pedal	0 (off)
Hold 2	0 (off)
Channel Pressure	0 (min)
Polyhonic Pressure	0 (min)
Pitch Bend Change	±0 (center)
RPN	Undefined: does not affect the internal data
General purpose system controller 1	0 (min)
General purpose system controller 2	0 (min)

● All Notes Off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

** Turns off all MIDI-on notes on the MIDI channel.*
However, sound continues when Hold 1 and/or SOSTENUTO is ON.

● OMNI OFF

Status	Second	Third
BnH	7CH	00H

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

** Serves as All Notes Off.*

● OMNI ON

Status	Second	Third
BnH	7DH	00H

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

** Serves as All Notes Off and not OMNI ON.*

● MONO

Status	Second	Third
BnH	7EH	mmH

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
mm = Number of MONOs : 00H - 0FH (0 - 15)

** The key assign mode of the patch common parameter is changed to SOLO.*
** Serves as All Notes Off and Part to Mode 4 (m=1).*

● POLY

Status	Second	Third
BnH	7FH	00H

n = MIDI channel number: 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

** The key assign mode of the patch common parameter is changed to POLY.*
** Serves as All Notes Off and Part to Mode 3.*

■ System Real Time Messages

● Active Sensing

Status
FEH

** When JV-1080 receives Active Sensing, it measures time intervals between incoming messages. If the subsequent message will not come within 400 ms after the previous one, JV-1080 turns off all MIDI-on notes, operates as if it receives Reset All Controller message, and stops measuring message intervals.*

● Timing Clock

Status
F8H

1. Patch Mode

Parameters to be set	Changes LFO Rate	Changes tone delay time	Changes delay time of effect	Changes the step rate of effect (Flanger)
SYSTEM PARAMETER Clock Source	MIDI	MIDI	MIDI	MIDI
PATCH COMMON PARAMETER EFX Type	--	--	19.TRIPLE-TAP-DELAY or 20.QUADRUPLE-TAP-DELAY	16.STEP-FLANGER
PATCH TONE PARAMETER LFO1/2 External Sync	CLOCK	--	--	--
Tone Delay Mode	--	CLOCK-SYNC	--	--

--:Need not be set

2. Performance Mode

Parameters to be set	Changes LFO Rate	Changes Tone delay time	Changes delay time of effect		Changes step rate of effect (Flanger)	
			Setting1	Setting2	Setting1	Setting2
SYSTEM PARAMETER Clock Source	MIDI	MIDI	MIDI	MIDI	MIDI	MIDI
PERFORMANCE COMMON PARAMETER EFX Type	--	--	--	19.TRIPLE-TAP-DELAY or 20.QUADRUPLE-TAP-DELAY	--	16.STEP-FLANGER
EFX Source	--	--	1 - 16	PERFORM	1 - 16	PERFORM
PATCH COMMON PARAMETER EFX Type	--	--	19.TRIPLE-TAP-DELAY or 20.QUADRUPLE-TAP-DELAY	--	16.STEP-FLANGER	--
PATCH TONE PARAMETER LFO1/2 External Sync	CLOCK	--	--	--	--	--
Tone Delay Mode	--	CLOCK-SYNC	--	--	--	--

--:Need not be set

■ System Exclusive Message

```
Status      Data Byte
----------  -------------
F0H         iiH ddH .......eeH
F7H

F0H                 : System Exclusive
ii = Manufacturer ID: 41H ( 65 )
dd...ee  = Data     : 00H - 7FH ( 0 - 127 )
F7H                 : EOX (End Of Exclusive)
```

** The JV-1080 recognized this message when the receive switch in system parameter is set to ON.*
For detail, please refer to section 3: Roland exclusive message.

2. TRANSMIT DATA

■ System Exclusive Message

```
Status      Data Byte
----------  -------------
F0H         iiH ddH .......eeH
F7H

F0H                 : System Exclusive
ii = Manufacturer ID: 41H ( 65 )
dd...ee  = Data     : 00H - 7FH ( 0 - 127 )
F7H                 : EOX (End Of Exclusive)
```

For detail, please refer to section 3: Roland exclusive message.

3. EXclusive communications

The JV-1080 can send and receive patch parameter, etc using the system exclusive message.
The model ID code of the JV-1080 is 6AH. The device ID code is to be determined by unit number setteing of MIDI function.
The JV-1080 ignores GS exclusive messages other than scale tune parameter. The model ID of the GS is 42H.

■ One way communication

● Request data 1 RQ1 (11H)

```
Byte      Description
--------------------------------------------------------------
F0H       Exclusive status
41H       Manufacture ID (Roland)
Dev       Device ID (Dev=UNIT#-1)
6AH       Model ID (JV-1080)
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       Check sum
F7H       EOX (End of exclusive)
```

**Receive only: the JV-1080 does not send thie message.*

● Data set 1 DT1 (12H)

1.JV-1080 (MODEL ID = 6AH)

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
Dev	Device ID (Dev=UNIT#-1)
6AH	Model ID (JV-1080)
12H	Command ID (DT1)
aaH	Address MSB
bbH	Address
ccH	Address
ddH	Address LSB
eeH	Data
:	:
ffH	Data
sum	Check sum
F7H	EOX (End of exclusive)

2.GS (MODEL ID = 42H)

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
Dev	Device ID (Dev=UNIT#-1)
6AH	Model ID (GS)
12H	Command ID (DT1)
aaH	Address MSB
bbH	Address
ccH	Address LSB
eeH	Data
:	:
ffH	Data
sum	Check sum
F7H	EOX (End of exclusive)

**When the device ID is 7FH, JV-1080 can receive the GS exclusive message even if the unit number is anything.*

4.Parameter address map (MODEL ID = 6AH)

Address and size are configured in 7 bits, and expressed in hexadecimal.

Address	MSB	LSB		
Binary	0aaa aaaa	0bbb bbbb	0ccc cccc	0ddd dddd
7-bit hex	AA	BB	CC	DD

Size	MSB	LSB		
Binary	0sss ssss	0ttt tttt	0uuu uuuu	0vvv vvvv
7-bit hex	SS	TT	UU	VV

■ Parameter base address

All deta sent in exclusive message are given particular addresses to identify parameters. These address are the sum of the base address and offset address. Some parameters are defined using multiple offsets. The address included in the message of a data set or a data request must be within the value shown in the table below.

Note: A pair of two address preceded by the symbol # represents a divided-by-two data.e.g.the data ABH (hex) is devided into 0AH and 0BH and sent in that order.

/ Example of exclusive data /

To set the reverb type of the temporary performance common to "DELAY", send the following data to the JV-1080.

```
F0H 41H 10H 6AH 12H 01H 00H 00H 28H 06H 51H F7H
--- --- --- --- --- --- --------------- --- --- -----
1    2   3   4   5          6           7   8    9
```

Comments:
1. Exclusive status.
2. Manufacturer ID: Roland=41H
3. Device ID: the unit number of the system common parameter minus 1. In this example, the unit number is 17: 17 - 1 = 16 which is expressed as 10H in hexadecimal notation.
4. Model ID of the JV-1080 is 6AH.
5. Command ID: data set 1=12H.
6. Addresses: by refering to Table 1, the start address of the temporary performance=01H 00H 00H 00H; from Table 1-2, offset address of performance common=00H 00H; from Table 1-2-1, offset address of reverb type=00H 28H. These address are added together:

```
      01H 00H 00H 00H
            00H 00H
+)          00H 28H
-----------------
   01H 00H 00H 28H = target address
```

7. The number of "DELAY" is 6: 06H in hexadecimal.
8. Check sum
   The error checking process uses a checksum and provides a pattern where the last significant 7 bits are zero when values for an address, data (or size) and the checksum are summed. If the address is "aa bb ccH" and the data (or the size) is "dd ee ffH"

```
aa+bb+cc+dd+ee+ff=sum
sum+128=quotient•••remainder
128-remainder=checksum
```

In case of this example,

```
F0H 41H 10H 6AH 12H 01H 00H 00H 28H 06H ??H F7H
                  --------------- --- ---
                      address      data checksum
```

Using the above formura, checksum is below.

```
01H+00H+00H+28H+06H=1+0+0+40+6+=47(sum)
47(sum)+128=0(quotient)•••47(remainder)
checksum=128-47(remainder)=81=51H
```

IF you calcurate using only hexadecimal,

```
aa+bb+cc+dd+ee+ff=sum(xxH)
sum(xxH)+80H=quotient•••remainder
80H-remainder=checksum
```

Checksum is below,

```
01H+00H+00H+28H+06H=2FH(sum)
2FH+80H=00H(quotient)•••2FH(remainder)
checksum=80H-2FH(remainder)=51H
```

9.F7H is the mark of the end of exclusive.

1 JV-1080

< MODEL ID = 6AH >

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	
20 00 00 00	Data card performance CARD:01	*1-2
20 01 00 00	Data card performance CARD:02	
:		
20 1F 00 00	Data card performance CARD:32	
20 40 00 00	Data card rhythm set CARD:1	*1-4
20 41 00 00	Data card rhythm set CARD:2	
21 00 00 00	Data card patch CARD:001	*1-3
21 01 00 00	Data card patch CARD:002	
:		
21 7F 00 00	Data card patch CARD: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		Description	
00 00	0000 00aa	Panel mode	0 - 2 (PERFORMANCE,PATCH,GM)
00 01	0aaa aaaa	Performance number	0 - 127 (USER:01 - USER:32,CARD:01 - CARD:32, PR-A:01 - PR-A:32,PR-B:01 - PR-B:32)
00 02	0000 00aa	Patch mode patch group	0 - 2 (USER,PCM,EXP)
00 03	0aaa aaaa	Patch mode patch group ID	0 - 127
# 00 04	0000 aaaa	Patch mode patch number	0 - 254
	0000 bbbb		(001 - 255)
00 06	0aaa aaaa	Master tune	0 - 126 (427.4 - 452.6)
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 (OFF,HOLD-1,SOSTENUTO,SOFT,HOLD-2)

00 0E	0000 0aaa	Hold control source	0 - 4 (OFF,HOLD-1,SOSTENUTO,SOFT,HOLD-2)
00 0F	0000 0aaa	Peak control source	0 - 4 (OFF,HOLD-1,SOSTENUTO,SOFT,HOLD-2)
00 10	0000 000a	Volume control source	0 - 1 (VOLUME,VOL&EXP)
00 11	0000 00aa	Aftertouch source	0 - 2 (CH-AFTER,POLY-AFTER,CH&POLY)
00 12	0aaa aaaa	System control source 1	0 - 97 (CC00 - CC95,BENDER,AFTERTOUCH)
00 13	0aaa aaaa	System control source 2	0 - 97 (CC00 - CC95,BENDER,AFTERTOUCH)
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 bender	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 (PANEL,PANEL&MIDI)
00 1F	0000 000a	Preview sound mode	0 - 1 (SINGLE,CHORD)
00 20	0aaa aaaa	Preview key set	0 - 127 (C-1 - G9)
00 21	0aaa aaaa	Preview velocity set 1	0 - 127 (OFF,1 - 127)
00 22	0aaa aaaa	Preview key set 2	0 - 127 (C-1 - G9)
00 23	0aaa aaaa	Preview velocity set 2	0 - 127 (OFF,1 - 127)
00 24	0aaa aaaa	Preview key set 3	0 - 127 (C-1 - G9)
00 25	0aaa aaaa	Preview velocity set 3	0 - 127 (OFF,1 - 127)
00 26	0aaa aaaa	Preview key set 4	0 - 127 (C-1 - G9)
00 27	0aaa aaaa	Preview velocity set 4	0 - 127 (OFF,1 - 127)
Total size	00 00 00 28		

*1-1-2 Scale tune

Offset address		Description	
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		

/ Example using RQ1 /
To get the all data of the system common, send the following message to the JV-1080.
F0H 41H 10H 6AH 11H 00H 00H 00H 00H 00H 00H 00H 28H 58H F7H

/ Example using DT1 /
To set the Control Channel of the system common to 1, send the following message to the JV-1080.
F0H 41H 10H 6AH 12H 00H 00H 00H 1CH 00H 64H F7H

*1-2 Performance

Offset address	Description	
00 00	Performance common	*1-2-1
10 00	Performance part 1	
11 00	Performance part 2	*1-2-2
:		
1F 00	Performance part 16	

*1-2-1 Performance common

Offset address		Description	
00 00	0aaa aaaa	Performance name 1	32 - 127
00 01	0aaa aaaa	Performance name 2	32 - 127
00 02	0aaa aaaa	Performance name 3	32 - 127
00 03	0aaa aaaa	Performance name 4	32 - 127
00 04	0aaa aaaa	Performance name 5	32 - 127
00 05	0aaa aaaa	Performance name 6	32 - 127
00 06	0aaa aaaa	Performance name 7	32 - 127
00 07	0aaa aaaa	Performance name 8	32 - 127
00 08	0aaa aaaa	Performance name 9	32 - 127
00 09	0aaa aaaa	Performance name 10	32 - 127
00 0A	0aaa aaaa	Performance name 11	32 - 127
00 0B	0aaa aaaa	Performance name 12	32 - 127
00 0C	00aa aaaa	EFX:Source	0 - 15 (PERFORM,1 - 9,11 - 16)
00 0D	00aa aaaa	EFX:Type	0 - 39
00 0E	0aaa aaaa	EFX:Parameter 1	32 - 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 (MIX,OUTPUT1,OUTPUT2)
00 1B	0aaa aaaa	EFX:Output 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 (OFF,SYS-CTRL1,SYS-CTRL2,MODULATION,BREATH,FOOT,VOLUME,PAN,EXPRESSION,BENDER,AFTERTOUCH)
00 1F	0aaa aaaa	EFX:Control depth 1	0 - 126 (-63 - +63)
00 20	0000 aaaa	EFX:Control source 2	0 - 10 (OFF,SYS-CTRL1,SYS-CTRL2,MODULATION,BREATH,FOOT,VOLUME,PAN,EXPRESSION,BENDER,AFTERTOUCH)
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 assign	0 - 2 (MIX,REVERB,MIX+REV)
00 28	0000 0aaa	Reverb:type	0 - 7 (ROOM1,ROOM2,STAGE1,STAGE2,HALL1,HALL2,DELAY,PAN-DLY)
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 (200,250,315,400,500,630,800,1000,1250,1600,2000,2500,3150,4000,5000,6300,8000,BYPASS)
00 2C	0aaa aaaa	Reverb:Feedback	0 - 127
# 00 2D	0000 aaaa 0000 bbbb	Default tempo	20 - 250
00 2F	0000 000a	Key range switch	0 - 1 (OFF,ON)
00 30	0aaa aaaa	Part 1 voice reserve	0 - 64
00 31	0aaa aaaa	Part 2 voice reserve	0 - 64
00 32	0aaa aaaa	Part 3 voice reserve	0 - 64
00 33	0aaa aaaa	Part 4 voice reserve	0 - 64
00 34	0aaa aaaa	Part 5 voice reserve	0 - 64
00 35	0aaa aaaa	Part 6 voice reserve	0 - 64
00 36	0aaa aaaa	Part 7 voice reserve	0 - 64
00 37	0aaa aaaa	Part 8 voice reserve	0 - 64
00 38	0aaa aaaa	Part 9 voice reserve	0 - 64
00 39	0aaa aaaa	Part 10 voice reserve	0 - 64
00 3A	0aaa aaaa	Part 11 voice reserve	0 - 64
00 3B	0aaa aaaa	Part 12 voice reserve	0 - 64
00 3C	0aaa aaaa	Part 13 voice reserve	0 - 64
00 3D	0aaa aaaa	Part 14 voice reserve	0 - 64
00 3E	0aaa aaaa	Part 15 voice reserve	0 - 64
00 3F	0aaa aaaa	Part 16 voice reserve	0 - 64
Total size	00 00 00 40		

Note: The performance name data returned in response to this request are expressed in ASCII characters of hexadecimal.

Note: The sum of voice receives must be less than or equal 64.

/ Example usin RQ1 /
To get the performance name data of performance USER:01, send the following message to the JV-1080.
F0H 41H 10H 6AH 11H 10H 00H 00H 00H 00H 00H 0CH 64H F7H

/ Example using DT1 /
To set the reverb type of performance USER:08 to "HALL2", send the following message to the JV-1080.
F0H 41H 10H 6AH 12H 10H 07H 00H 28H 05H 3CH F7H

*1-2-2 Performance part

Offset address		Description	
00 00	0000 000a	MIDI receive switch	0 - 1 (OFF,ON)
00 01	0000 aaaa	MIDI channel	0 - 15 (1 - 16)
00 02	0000 00aa	Patch group	0 - 2 (USER,PCM,EXP)
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	Pitch coarse tune	0 - 96 (-48 - +48)
00 09	0aaa aaaa	Pitch fine tune	0 - 100 (-50 - +50)
00 0A	0000 0aaa	Output assign	0 - 4 (MIX,EFX,OUTPUT1,OUTPUT2,PATCH)
00 0B	0aaa aaaa	Output 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	0 - 1 (OFF,ON)
00 0F	0000 000a	Receive volume	0 - 1 (OFF,ON)
00 10	0000 000a	Receive hold-1	0 - 1 (OFF,ON)
00 11	0aaa aaaa	Key range lower	0 - 127 (C-1 - G9)
00 12	0aaa aaaa	Key range upper	0 - 127 (C-1 - G9)
Total size	00 00 00 13		

/ Example using RQ1 /
To get the all data of the performance USER:03 parameters of part 3, send the following message to the JV-1080.
F0H 41H 10H 6AH 11H 10H 02H 12H 00H 00H 00H 00H 13H 49H F7H

/ Example using DT1 /
To mute (MIDI receive switch = off) the part 1 of the temporary performance, send the following message to the JV-1080.
F0H 41H 10H 6AH 12H 01H 00H 10H 00H 00H 6FH F7H

*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		Description	
00 00	0aaa aaaa	Patch name 1	32 - 127
00 01	0aaa aaaa	Patch name 2	32 - 127
00 02	0aaa aaaa	Patch name 3	32 - 127
00 03	0aaa aaaa	Patch name 4	32 - 127
00 04	0aaa aaaa	Patch name 5	32 - 127
00 05	0aaa aaaa	Patch name 6	32 - 127
00 06	0aaa aaaa	Patch name 7	32 - 127
00 07	0aaa aaaa	Patch name 8	32 - 127
00 08	0aaa aaaa	Patch name 9	32 - 127
00 09	0aaa aaaa	Patch name 10	32 - 127
00 0A	0aaa aaaa	Patch name 11	32 - 127
00 0B	0aaa aaaa	Patch name 12	32 - 127
00 0C	00aa aaaa	EFX:Type	0 - 39
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 (MIX,OUTPUT1,OUTPUT2)
00 1A	0aaa aaaa	EFX:Output 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 (OFF,SYS-CTRL1,SYS-CTRL2,MODULATION,BREATH,FOOT,VOLUME,PAN,EXPRESSION,BENDER,AFTERTOUCH)
00 1E	0aaa aaaa	EFX:Control depth 1	0 - 126 (-63 - +63)
00 1F	0000 aaaa	EFX:Control source 2	0 - 10 (OFF,SYS-CTRL1,SYS-CTRL2,MODULATION,BREATH,FOOT,VOLUME,PAN,EXPRESSION,BENDER,AFTERTOUCH)
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 assign	0 - 2 (MIX,REVERB,MIX+REV)
00 27	0000 0aaa	Reverb:type	0 - 7 (ROOM1,ROOM2,STAGE1,STAGE2,HALL1,HALL2,DELAY,PAN-DLY)
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 (200,250,315,400,500,630,800,1000,1250,1600,2000,2500,3150,4000,5000,6300,8000,BYPASS)
00 2B	0aaa aaaa	Reverb:Feedback	0 - 127
# 00 2C	0000 aaaa 0000 bbbb	Default 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 depth	0 - 127
00 31	0000 aaaa	Bender range up	0 - 12
00 32	00aa aaaa	Bender 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 (NORMAL,LEGATO)
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 (OFF,SYS-CTRL1,SYS-CTRL2,MODULATION,BREATH,FOOT,VOLUME,PAN,EXPRESSION,BENDER,AFTERTOUCH,LFO1,LFO2,VELOCITY,KEYFOLLOW,PLAYMATE)
00 3B	0000 aaaa	Patch control source 3	0 - 15 (OFF,SYS-CTRL1,SYS-CTRL2,MODULATION,BREATH,FOOT,VOLUME,PAN,EXPRESSION,BENDER,AFTERTOUCH,LFO1,LFO2,VELOCITY,KEYFOLLOW,PLAYMATE)
00 3C	0000 00aa	EFX control hold/peak	0 - 2 (OFF,HOLD,PEAK)
00 3D	0000 00aa	Control 1 hold/peak	0 - 2 (OFF,HOLD,PEAK)
00 3E	0000 00aa	Control 2 hold/peak	0 - 2 (OFF,HOLD,PEAK)
00 3F	0000 00aa	Control 3 hold/peak	0 - 2 (OFF,HOLD,PEAK)
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 (LAST,LOUDEST)
00 44	0000 aaaa	Structure type 1&2	0 - 9 (1 - 10)
00 45	0000 00aa	Booster level 1&2	0 - 3 (0,+6,+12,+18)
00 46	0000 aaaa	Structure type 3&4	0 - 9 (1 - 10)
00 47	0000 00aa	Booster level 3&4	0 - 3 (0,+6,+12,+18)
Total size	00 00 00 48		

/ Example using RQ1 /
To get the value of the portamento time of the patch temporary, send the following message to the JV-1080.
F0H 41H 10H 6AH 11H 03H 00H 00H 39H 00H 00H 00H 01H 43H F7H

/ Example using DT1 /
To set the structure 1&2 of the patch USER:48 to "TYPE 3", send the following message to the JV-1080.
F0H 41H 10H 6AH 12H 11H 2FH 00H 44H 02H 7AH F7H

*1-3-2 Patch tone

Offset address		Description	
00 00	0000 000a	Tone switch	0 - 1 (OFF,ON)
00 01	0000 00aa	Wave group	0 - 2 (INT,PCM,EXP)
00 02	0aaa aaaa	Wave group ID	0 - 127
# 00 03	0000 aaaa 0000 bbbb	Wave number	0 - 254 (1 - 255)
00 05	0000 00aa	Wave gain	0 - 3 (-6,0,+6,+12)
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 - 6 (NORMAL,HOLD,KEY-INTERVAL,CLOCK-SYNC,TAP-SYNC,KEY-OFF-NORMAL,KEY-OFF-DECAY)
00 0A	0aaa aaaa	Tone delay time	0 - 127
00 0B	0aaa aaaa	Velocity cross fade depth	0 - 127
00 0C	0aaa aaaa	Velocity range lower	1 - 127
00 0D	0aaa aaaa	Velocity range upper	1 - 127
00 0E	0aaa aaaa	Key range lower	0 - 127 (C-1 - G9)
00 0F	0aaa aaaa	Key range upper	0 - 127 (C-1 - G9)
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	Bender control switch	0 - 1 (OFF,ON)
00 14	0000 00aa	Pan control switch	0 - 2 (OFF,CONTINUOUS,KEY-ON)
00 15	000a aaaa	Controller 1 destination 1	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 16	0aaa aaaa	Controller 1 depth 1	0 - 126 (-63 - +63)
00 17	000a aaaa	Controller 1 destination 2	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 18	0aaa aaaa	Controller 1 depth 2	0 - 126 (-63 - +63)
00 19	000a aaaa	Controller 1 destination 3	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 1A	0aaa aaaa	Controller 1 depth 3	0 - 126 (-63 - +63)
00 1B	000a aaaa	Controller 1 destination 4	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 1C	0aaa aaaa	Controller 1 depth 4	0 - 126 (-63 - +63)
00 1D	000a aaaa	Controller 2 destination 1	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 1E	0aaa aaaa	Controller 2 depth 1	0 - 126 (-63 - +63)
00 1F	000a aaaa	Controller 2 destination 2	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 20	0aaa aaaa	Controller 2 depth 2	0 - 126 (-63 - +63)
00 21	000a aaaa	Controller 2 destination 3	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 22	0aaa aaaa	Controller 2 depth 3	0 - 126 (-63 - +63)
00 23	000a aaaa	Controller 2 destination 4	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 24	0aaa aaaa	Controller 2 depth 4	0 - 126 (-63 - +63)
00 25	000a aaaa	Controller 3 destination 1	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 26	0aaa aaaa	Controller 3 depth 1	0 - 126 (-63 - +63)
00 27	000a aaaa	Controller 3 destination 2	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 28	0aaa aaaa	Controller 3 depth 2	0 - 126 (-63 - +63)
00 29	000a aaaa	Controller 3 destination 3	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 2A	0aaa aaaa	Controller 3 depth 3	0 - 126 (-63 - +63)
00 2B	000a aaaa	Controller 3 destination 4	0 - 18 (OFF,PCH,CUT,RES,LEV,PAN,MIX,CHO,REV, PL1,PL2,FL1,FL2,AL1,AL2,pL1,pL2,L1R,L2R)
00 2C	0aaa aaaa	Controller 3 depth 4	0 - 126 (-63 - +63)
00 2D	0000 0aaa	LFO 1 waveform	0 - 7 (TRI,SIN,SAW,SQR,TRP,S&H,RND,CHS)
00 2E	0000 000a	LFO 1 key trigger	0 - 1 (OFF,ON)
00 2F	0aaa aaaa	LFO 1 rate	0 - 127
00 30	0000 0aaa	LFO 1 level offset	0 - 4 (-100,-50,0,+50,+100)
00 31	0aaa aaaa	LFO 1 delay time	0 - 127
00 32	0000 00aa	LFO 1 fade mode	0 - 3 (ON-IN,ON-OUT,OFF-IN,OFF-OUT)
00 33	0aaa aaaa	LFO 1 fade time	0 - 127
00 34	0000 00aa	LFO 1 external sync	0 - 2 (OFF,CLOCK,TAP)
00 35	0000 0aaa	LFO 2 waveform	0 - 7 (TRI,SIN,SAW,SQR,TRP,S&H,RND,CHS)
00 36	0000 000a	LFO 2 key trigger	0 - 1 (OFF,ON)
00 37	0aaa aaaa	LFO 2 rate	0 - 127
00 38	0000 0aaa	LFO 2 level offset	0 - 4 (-100,-50,0,+50,+100)
00 39	0aaa aaaa	LFO 2 delay time	0 - 127
00 3A	0000 00aa	LFO 2 fade mode	0 - 3 (ON-IN,ON-OUT,OFF-IN,OFF-OUT)
00 3B	0aaa aaaa	LFO 2 fade time	0 - 127
00 3C	0000 00aa	LFO 2 external sync	0 - 2 (OFF,CLOCK,TAP)
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 (0,1,2,3,4,5,6,7,8,9,10,20,30,40,50, 60,70,80,90,100,200,300,400,500, 600,700,800,900,1000,1100,1200)
00 40	0000 aaaa	Pitch keyfollow	0 - 15 (-100,-70,-50,-30,-10,0,+10,+20,+30, +40,+50,+70,+100,+120,+150,+200)
00 41	000a aaaa	P-ENV depth	0 - 24 (-12 - +12)
00 42	0aaa aaaa	P-ENV velocity sensitivity	0 - 125 (-50 - +200)
00 43	0000 aaaa	P-ENV velocity time 1 sensitivity	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 44	0000 aaaa	P-ENV velocity time 4 sensitivity	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 45	0000 aaaa	P-ENV time keyfollow	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 46	0aaa aaaa	P-ENV time 1	0 - 127
00 47	0aaa aaaa	P-ENV time 2	0 - 127
00 48	0aaa aaaa	P-ENV time 3	0 - 127
00 48	0aaa aaaa	P-ENV time 4	0 - 127
00 4A	0aaa aaaa	P-ENV level 1	0 - 126 (-63 - +63)
00 4B	0aaa aaaa	P-ENV level 2	0 - 126 (-63 - +63)
00 4C	0aaa aaaa	P-ENV level 3	0 - 126 (-63 - +63)
00 4D	0aaa aaaa	P-ENV level 4	0 - 126 (-63 - +63)
00 4E	0aaa aaaa	Pitch LFO 1 depth	0 - 126 (-63 - +63)
00 4F	0aaa aaaa	Pitch LFO 2 depth	0 - 126 (-63 - +63)
00 50	0000 0aaa	Filter type	0 - 4 (OFF,LPF,BPF,HPF,PKG)
00 51	0aaa aaaa	Cutoff frequency	0 - 127
00 52	0000 aaaa	Cutoff keyfollow	0 - 15 (-100,-70,-50,-30,-10,0,+10,+20,+30, +40,+50,+70,+100,+120,+150,+200)
00 53	0aaa aaaa	Resonance	0 - 127
00 54	0aaa aaaa	Resonance velocity sensitivity	0 - 125 (-50 - +200)
00 55	0aaa aaaa	F-ENV depth	0 - 126 (-63 - +63)
00 56	0000 0aaa	F-ENV velocity curve	0 - 6 (1 - 7)
00 57	0aaa aaaa	F-ENV velocity sensitivity	0 - 125 (-50 - +200)
00 58	0000 aaaa	F-ENV velocity time 1 sensitivity	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 59	0000 aaaa	F-ENV velocity time 4 sensitivity	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 5A	0000 aaaa	F-ENV time keyfollow	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 5B	0aaa aaaa	F-ENV time 1	0 - 127
00 5C	0aaa aaaa	F-ENV time 2	0 - 127
00 5D	0aaa aaaa	F-ENV time 3	0 - 127
00 5E	0aaa aaaa	F-ENV time 4	0 - 127
00 5F	0aaa aaaa	F-ENV level 1	0 - 127
00 60	0aaa aaaa	F-ENV level 2	0 - 127
00 61	0aaa aaaa	F-ENV level 3	0 - 127
00 62	0aaa aaaa	F-ENV level 4	0 - 127
00 63	0aaa aaaa	Filter LFO 1 depth	0 - 126 (-63 - +63)
00 64	0aaa aaaa	Filter LFO 2 depth	0 - 126 (-63 - +63)
00 65	0aaa aaaa	Tone level	0 - 127
00 66	0000 00aa	Bias direction	0 - 3 (LOWER,UPPER,L&U,ALL)
00 67	0aaa aaaa	Bias point	0 - 127 (C-1 - G9)
00 68	0000 aaaa	Bias level	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 69	0000 0aaa	A-ENV velocity curve	0 - 6 (1 - 7)
00 6A	0aaa aaaa	A-ENV velocity sensitivity	0 - 125 (-50 - +200)
00 6B	0000 aaaa	A-ENV velocity time 1 sensitivity	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 6C	0000 aaaa	A-ENV velocity time 4 sensitivity	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 6D	0000 aaaa	A-ENV time keyfollow	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 6E	0aaa aaaa	A-ENV time 1	0 - 127
00 6F	0aaa aaaa	A-ENV time 2	0 - 127
00 70	0aaa aaaa	A-ENV time 3	0 - 127
00 71	0aaa aaaa	A-ENV time 4	0 - 127
00 72	0aaa aaaa	A-ENV level 1	0 - 127
00 73	0aaa aaaa	A-ENV level 2	0 - 127
00 74	0aaa aaaa	A-ENV level 3	0 - 127
00 75	0aaa aaaa	Amplitude LFO 1 depth	0 - 126 (-63 - +63)
00 76	0aaa aaaa	Amplitude LFO 2 depth	0 - 126 (-63 - +63)
00 77	0aaa aaaa	Tone pan	0 - 127 (L64 - 63R)
00 78	0000 aaaa	Pan keyfollow	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
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 LFO 1 depth	0 - 126 (L63 - 63R)
00 7C	0aaa aaaa	Pan LFO 2 depth	0 - 126 (L63 - 63R)
00 7D	0000 00aa	Output assign	0 - 3 (MIX,EFX,OUTPUT1,OUTPUT2)
00 7E	0aaa aaaa	Output 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	

Note: If the value of the wave number surpasses the number of waves contained in the corresponding wave group, this message will be ignored.

Note: If the value of the velocity range lower is greater than that of the velocity range upper, this message will be ignored.

/ Example of RQ1 /
To get the tone 2 data of the patch USER:02, send the following message to the JV-1080.
F0H 41H 10H 6AH 11H 11H 01H 12H 00H 00H 00H 01H 01H 5AH F7H

/ Exapmle of DT1 /
To set the cutoff frequency of the temporary patch tone 3 to 100, send the following message to the JV-1080.
F0H 41H 10H 6AH 12H 03H 00H 14H 51H 64H 34H F7H

*1-4 Rhythm setup

Offset address	Description		
00 00	Rhythm common		*1-4-1
23 00	Rhythm note for key# 35 (B1)		*1-4-2
24 00	Rhythm note for key# 36 (C2)		
: :	:		
62 00	Rhythm note for key# 98 (E7)		

*1-4-1 Rhythm common

Offset address	Description		
00 00	0aaa aaaa	Rhythm name 1	32 - 127
00 01	0aaa aaaa	Rhythm name 2	32 - 127
00 02	0aaa aaaa	Rhythm name 3	32 - 127
00 03	0aaa aaaa	Rhythm name 4	32 - 127
00 04	0aaa aaaa	Rhythm name 5	32 - 127
00 05	0aaa aaaa	Rhythm name 6	32 - 127
00 06	0aaa aaaa	Rhythm name 7	32 - 127
00 07	0aaa aaaa	Rhythm name 8	32 - 127
00 08	0aaa aaaa	Rhythm name 9	32 - 127
00 09	0aaa aaaa	Rhythm name 10	32 - 127
00 0A	0aaa aaaa	Rhythm name 11	32 - 127
00 0B	0aaa aaaa	Rhythm name 12	32 - 127
Total size	00 00 00 0C		

*1-4-2 Rhythm note

Offset address	Description		
00 00	0000 000a	Tone switch	0 - 1 (OFF,ON)
00 01	0000 00aa	Wave group	0 - 2 (INT,PCM,EXP)
00 02	0aaa aaaa	Wave group ID	0 - 127
# 00 03	0000 aaaa 0000 bbbb	Wave number	0 - 254 (1 - 255)
00 05	0000 00aa	Wave gain	0 - 3 (-6,0,+6,+12)
00 06	0000 aaaa	Bender range	0 - 12
00 07	000a aaaa	Mute group	0 - 31 (OFF,1 - 31)
00 08	0000 000a	Envelope mode	0 - 1 (NO-SUSTAIN,SUSTAIN)
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 (OFF,CONTINUOUS,KEY-ON)
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 (0,1,2,3,4,5,6,7,8,9,10,20,30,40,50, 60,70,80,90,100,200,300,400,500, 600,700,800,900,1000,1100,1200)
00 0F	000a aaaa	P-ENV depth	0 - 24 (-12 - +12)
00 10	0aaa aaaa	P-ENV velocity sensitivity	0 - 125 (-50 - +200)
00 11	0000 aaaa	P-ENV velocity time sensitivity	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 12	0aaa aaaa	P-ENV time 1	0 - 127
00 13	0aaa aaaa	P-ENV time 2	0 - 127
00 14	0aaa aaaa	P-ENV time 3	0 - 127
00 15	0aaa aaaa	P-ENV time 4	0 - 127
00 16	0aaa aaaa	P-ENV level 1	0 - 126 (-63 - +63)
00 17	0aaa aaaa	P-ENV level 2	0 - 126 (-63 - +63)
00 18	0aaa aaaa	P-ENV level 3	0 - 126 (-63 - +63)
00 19	0aaa aaaa	P-ENV level 4	0 - 126 (-63 - +63)
00 1A	0000 0aaa	Filter type	0 - 4 (OFF,LPF,BPF,HPF,PKG)
00 1B	0aaa aaaa	Cutoff frequency	0 - 127
00 1C	0aaa aaaa	Resonance	0 - 127
00 1D	0aaa aaaa	Resonance velocity sensitivity	0 - 125 (-50 - +200)
00 1E	0aaa aaaa	F-ENV depth	0 - 126 (-63 - +63)
00 1F	0aaa aaaa	F-ENV velocity sensitivity	0 - 125 (-50 - +200)
00 20	0000 aaaa	F-ENV velocity time sensitivity	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 21	0aaa aaaa	F-ENV time 1	0 - 127
00 22	0aaa aaaa	F-ENV time 2	0 - 127
00 23	0aaa aaaa	F-ENV time 3	0 - 127
00 24	0aaa aaaa	F-ENV time 4	0 - 127
00 25	0aaa aaaa	F-ENV level 1	0 - 127
00 26	0aaa aaaa	F-ENV level 2	0 - 127
00 27	0aaa aaaa	F-ENV level 3	0 - 127
00 28	0aaa aaaa	F-ENV level 4	0 - 127
00 29	0aaa aaaa	Tone level	0 - 127
00 2A	0aaa aaaa	A-ENV velocity sensitivity	0 - 125 (-50 - +200)
00 2B	0000 aaaa	A-ENV velocity time sensitivity	0 - 14 (-100,-70,-50,-40,-30,-20,-10,0, +10,+20,+30,+40,+50,+70,+100)
00 2C	0aaa aaaa	A-ENV time 1	0 - 127
00 2D	0aaa aaaa	A-ENV time 2	0 - 127
00 2E	0aaa aaaa	A-ENV time 3	0 - 127
00 2F	0aaa aaaa	A-ENV time 4	0 - 127
00 30	0aaa aaaa	A-ENV level 1	0 - 127
00 31	0aaa aaaa	A-ENV level 2	0 - 127
00 32	0aaa aaaa	A-ENV 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 (MIX,EFX,OUTPUT1,OUTPUT2)
00 37	0aaa aaaa	Output 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		

Note: If the value of the wave number surpasses the number of waves contained in the corresponding wave group, this message will be ignored.

/ Example using RQ1 /
To get the C2 note data of the temporary rhythm setup, send the following message to the JV-1080.
F0H 41H 10H 6AH 11H 02H 09H 24H 00H 00H 00H 00H 3AH 17H F7H

/ Example using DT1 /
To turn off (Tone switch = off) the key note D2 of the rhythm setup (part 10) of the temporary selected performance, send the following message to the JV-1080.
F0H 41H 10H 6AH 12H 02H 09H 26H 00H 00H 4FH F7H

Address Map

Address	Block	Sub block	Reference
00 00 00 00	System common		1-1-1
	Scale tune	Part 1	1-1-2
		Part 16	
		Patch	
01 00 00 00	Temporary performance	Common	1-2-1
		Part 1	1-2-2
		Part 16	
02 00 00 00	Performance mode temporary patch	Part 1	1-3-1
		Common	1-3-1
		Part 9	
		Tone 1	1-3-2
		Tone 4	
02 09 00 00	Temporary rhythm setup	Common	1-4-1
		Note# 35	1-4-2
		Note# 98	
02 0A 00 00	Performance mode temporary patch	Part 11	1-3-1
		Common	1-3-1
		Part 16	
		Tone 1	1-3-2
		Tone 4	
03 00 00 00	Patch mode temporary patch	Common	1-3-1
		Tone 1	1-3-2
		Tone 4	

```
10 00 00 00 +------------------+-----+----------+-----+----------+--+-------+
            | User             |     | USER:01  |     | Common   |  | 1-2-1 |
            | performance      |     +----------+.    +----------+..+-------+
            +------------------+..   |    :     | .   +----------+..+-------+
            :                   :  . +----------+  .  | Part 1   |  | 1-2-2 |
            :                   :  .| USER:32  |  .  +----------+..+-------+
            :                   :  .+----------+  .  |    :     |
            :                   :                 .  +----------+
            :                   :                 . | Part 16  |
            :                   :                 .+----------+
10 40 00 00 +------------------+-----+----------+-----+----------+--+-------+
            | User             |     | USER:1   |     | Common   |  | 1-4-1 |
            | rhythm setup     |     +----------+.    +----------+..+-------+
            +------------------+...  +----------+ .   +----------+..+-------+
            :                   :  . | USER:2   |  .  | Note# 35 |  | 1-4-2 |
            :                   :    +----------+  .  +----------+..+-------+
            :                   :                  .  |    :     |
            :                   :                  .  +----------+
            :                   :                  . | Note# 98 |
            :                   :                  .+----------+
11 00 00 00 +------------------+-----+----------+-----+----------+--+-------+
            | User             |     | USER:001 |     | Common   |  | 1-3-1 |
            | patch            |     +----------+.    +----------+..+-------+
            +------------------+..   |    :     | .   +----------+..+-------+
            :                   :  . +----------+  .  | Tone 1   |  | 1-3-2 |
            :                   :  .| USER:128 |  .  +----------+..+-------+
            :                   :  .+----------+  .  |    :     |
            :                   :                 .  +----------+
            :                   :                 . | Tone 4   |
            :                   :                 .+----------+
20 00 00 00 +------------------+-----+----------+-----+----------+--+-------+
            | Data card        |     | CARD:0   |     | Common   |  | 1-2-1 |
            | performance      |     +----------+.    +----------+..+-------+
            +------------------+..   |    :     | .   +----------+..+-------+
            :                   :  . +----------+  .  | Part 1   |  | 1-2-2 |
            :                   :  .| CARD:32  |  .  +----------+..+-------+
            :                   :  .+----------+  .  |    :     |
            :                   :                 .  +----------+
            :                   :                 . | Part 16  |
            :                   :                 .+----------+
20 40 00 00 +------------------+-----+----------+-----+----------+--+-------+
            | Data card        |     | CARD:1   |     | Common   |  | 1-4-1 |
            | rhythm setup     |     +----------+.    +----------+..+-------+
            +------------------+...  +----------+ .   +----------+..+-------+
            :                   :  . | CARD:2   |  .  | Note# 35 |  | 1-4-2 |
            :                   :    +----------+  .  +----------+..+-------+
            :                   :                  .  |    :     |
            :                   :                  .  +----------+
            :                   :                  . | Note# 98 |
            :                   :                  .+----------+
21 00 00 00 +------------------+-----+----------+-----+----------+--+-------+
            | Data card        |     | CARD:001 |     | Common   |  | 1-3-1 |
            | patch            |     +----------+.    +----------+..+-------+
            +------------------+..   |    :     | .   +----------+..+-------+
            :                   :  . +----------+  .  | Tone 1   |  | 1-3-2 |
            :                   :  .| CARD:128 |  .  +----------+..+-------+
            :                   :  .+----------+  .  |    :     |
            :                   :                 .  +----------+
            :                   :                 . | Tone 4   |
            :                   :                 .+----------+
```

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	Description		
40	0aaa aaaa	Scale Tune C	00 - 127 (-64 - +63)
41	:	:	C#
42	:	:	D
43	:	:	D#
44	:	:	E
45	:	:	F
46	:	:	F#
47	:	:	G
48	:	:	G#
49	:	:	A
4A	:	:	A#
4B	:	:	B
Total Size	00 00 00 0C		

/ Example using DT1 /
To set the scale tune (C-B) of the performance part 1 Arabia, send the data as follows:
F0H 41H 10H 42H 12H 40H 11H 40H 3AH 6DH 3EH 34H 0DH 38H 6BH 3CH 6FH 40H 36H 0FH 76H F7H

●Table A-1::Decimal to Hexadecimal

The MIDI messages are expressed in hexadecimal configured in 7 bits. This table is usefull when you read or write MIDI messages.

(D)=decimal
(H)=hexadecimal

(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

*The decimal value of MIDI channel, bank select, program change, etc is the decimal number in the table plus 1.
*In the hexadecimal notation in configured 7 bits, the maximum data of 1 byte is 128. If the data is more than 128, used plural bytes.
*The signed value is 00H = -64, 40H ±0, 7FH = +63. In decimal notation,
the value is decimal number in the table minus 64. The signed value of dual bytes is 00 00H = -8192, 40 00H = ±0, 7F 7FH = +8191. For example, converted aaH bbH (hex) to decimal to the following: aa bbH - 40 00 H = aa x 128 + bb - 64 x 128.

●TABLE A-2: ASCII code

Patch Name and Performance Name of MIDI data are described the ASCII code in the table below.

(C)=Character
(H)=hexadecimal

(C)	(H)	(C)	(H)	(C)	(H)
SP	20H				
A	41H	a	61H	1	31H
B	42H	b	62H	2	32H
C	43H	c	63H	3	33H
D	44H	d	64H	4	34H
E	45H	e	65H	5	35H
F	46H	f	66H	6	36H
G	47H	g	67H	7	37H
H	48H	h	68H	8	38H
I	49H	i	69H	9	39H
J	4AH	j	6AH	0	30H
K	4BH	k	6BH	+	2BH
L	4CH	l	6CH	-	2DH
M	4DH	m	6DH	*	2AH
N	4EH	n	6EH	/	2FH
O	4FH	o	6FH	#	23H
P	50H	p	70H	!	21H
Q	51H	q	71H	,	2CH
R	52H	r	72H	.	2EH
S	53H	s	73H		
T	54H	t	74H		
U	55H	u	75H		
V	56H	v	76H		
W	57H	w	77H		
X	58H	x	78H		
Y	59H	y	79H		
Z	5AH	z	7AH		

Note: "SP" is space.

MULTI TIMBRAL SYNTHESIZER MODULE
Model JV-1080

MIDI Implementation Chart

Date : July. 18, 1994
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	X	1 - 16, OFF	
Channel	Changed	X	1 - 16, OFF	Memorized
Mode	Default	X	Mode 3	
	Messages	X	Mode 3, 4 (M=1)	
	Altered	**********		
Note		X	0 – 127	
Number :	True Voice	**********	0 – 127	
Velocity	Note ON	X	O	
	Note OFF	X	O	
After	Key's	X	O * 1	
Touch	Ch's	X	O * 1	
Pitch Bend		X	O * 1	Resolution : 9 bits
Control Change	0 – 95	X	O * 2	
	0, 32	X	O * 1	Bank select
	1	X	O * 1	Modulation
	2	X	O * 1	Breath
	4	X	O * 1	Foot type
	5	X	O * 1	Portamento time
	6, 38	X	O * 1	Data entry
	7	X	O * 1	Volume
	8	X	O * 1	Balance
	10	X	O * 1	Panpot
	11	X	O * 1	Expression
	64	X	O * 1	Hold 1
	65	X	O * 1	Portamento
	66	X	O * 1	Sostenuto
	67	X	O * 1	Soft pedal
	69	X	O * 1	Hold 2
	84	X	O * 1	Portamento control
	91	X	O * 1	General purpose effects 1 (Reverb)
	93	X	O * 1	General purpose effects 3 (Chorus)
	100, 101	X	O * 1	RPN LSB, MSB
Prog Change	: True #	X	O * 1	
		**********	0 – 127	Program Number 1 — 128
System Exclusive		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	
	: Reset All Controllers	X	O	
	: Local ON/OFF	X	X	
	: All Notes OFF	X	O (123 – 127)	
	: Active Sense	X	O	
	: Reset	X	X	
Notes		* 1 Can be set to O or X manually and memorized. * 2 Can be changed manually and memorized.		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO O : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO X : No

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How-to Index

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Information

When you need repair service, call your local Roland Service Station or the authorized Roland distributor in your country as shown below.

U. S. A.

Roland Corporation US
7200 Dominion Circle
Los Angeles, CA. 90040-3696, U. S. A.
TEL: (213) 685 5141

CANADA

Roland Canada Music Ltd.
(Head Office)
5480 Parkwood Way
Richmond B. C., V6V 2M4
CANADA
TEL: (604) 270 6626

Roland Canada Music Ltd.
(Montreal Office)
9425 Transcanadienne
Service Rd. N., St Laurent,
Quebec H4S 1V3, CANADA
TEL: (514) 335 2009

Roland Canada Music Ltd.
(Toronto Office)
346 Watline Avenue,
Mississauga, Ontario L4Z 1X2, CANADA
TEL: (416) 890 6488

AUSTRALIA

Roland Corporation Australia Pty. Ltd.
38 Campbell Avenue
Dee Why West. NSW 2099
AUSTRALIA
TEL: (02) 982 8266

NEW ZEALAND

Roland Corporation (NZ) Ltd.
97 Mt. Eden Road, Mt. Eden,
Auckland 3, NEW ZEALAND
TEL: (09) 3098 715

UNITED KINGDOM

Roland (U.K.) Ltd.
Rye Close Ancells Business
Park Fleet, Hampshire GU13 8UY, UNITED KINGDOM
TEL: (0252) 816181

Roland (U.K.) Ltd., Swansea Office
Atlantic Close, Swansea
Enterprise Park, Swansea,
West Glamorgan SA79FJ,
UNITED KINGDOM
TEL: (0792) 700 139

IRELAND

The Dublin Service Centre Audio Maintenance Limited
11 Brunswick Place Dublin 2
Republic of Ireland
TEL: (01) 677322

ITALY

Roland Italy S. p. A.
Viale delle Industrie 8 20020
ARESE MILANO ITALY
TEL: (02) 93581311

SPAIN

Roland Electronics de España, S. A.
Calle Bolivia 239 08020
Barcelona, SPAIN
TEL: (93) 308 1000

GERMANY

Roland Elektronische Musikinstrumente Handelsgesellschaft mbH.
Oststrasse 96, 22844
Norderstedt, GERMANY
TEL: (040) 52 60090

FRANCE

Guillard Musiques Roland
ZAC de Rosarge Les Echets
01700
MIRIBEL FRANCE
TEL: (72) 26 5060

Guillard Musiques Roland (Paris Office)
1923 rue Léon Geoffroy
94400 VITRY-SUR-SEINE
FRANCE
TEL: (1) 4680 86 62

BELGIUM/HOLLAND/ LUXEMBOURG

Roland Benelux N. V.
Houtstraat 1 B-2260 Oevel-Westerlo BELGIUM
TEL: (014) 575811

DENMARK

Roland Scandinavia A/S
Langebrogade 6 Box 1937
DK-1023 Copenhagen K.
DENMARK
TEL: 31 95 31 11

SWEDEN

Roland Scandinavia A/S
Danvik Center 28 A, 2 tr.
S-131 30 Nacka SWEDEN
TEL: (08) 702 0020

NORWAY

Roland Scandinavia Avd. Kontor Norge
Lilleakerveien 2 Postboks 95
Lilleaker N-0216 Oslo 2
NORWAY
TEL: (02) 73 0074

FINLAND

Fazer Musik Inc.
Länsituulentie POB 169,
SF-02101 Espoo FINLAND
TEL: (00) 43 5011

SWITZERLAND

Roland (Switzerland) AG
Musitronic AG
Gerberstrasse 5, CH-4410
Liestal, SWITZERLAND
TEL: (061) 921 1615

AUSTRIA

E. Dematte &Co.
Neu-Rum Siemens-Strasse 4
A-6040 Innsbruck P.O.Box 83
AUSTRIA
TEL: (0512) 26 44 260

GREECE

V. Dimitriadis & Co. Ltd.
20, Alexandras Avn., GR
10682 Athens, GREECE
TEL: (01) 8232415

PORTUGAL

Casa Caius Instrumentos Musicais Lda.
Rua de Santa Catarina 131
4000 Porto, PORTUGAL
TEL: (02) 38 4456

HUNGARY

Intermusica Ltd.
Warehouse Area 'DEPO'
Torokbalint, Budapest
HUNGARY
TEL: (1) 1868905

ISRAEL

D.J.A. International Ltd.
Twin Towers, 33 Jabntinsy St.
Room 211, Ramat Gan 52511
ISRAEL
TEL: (03) 751 8585

CYPRUS

Radex Sound Equipment Ltd.
17 Diagorou St., P.O.Box 2046, Nicosia CYPRUS
TEL: (2) 453 426
(2) 466 423

U.A.E

Zak Electronics & Musical Instruments Co.
P.O. Box 8050
DUBAI, U.A.E
TEL: 360715

KUWAIT

Easa Husain Al-Yousifi
P.O. Box 126 Safat 13002
KUWAIT
TEL: 5719499

LEBANON

A. Chahine & Fils
P.O. Box 16-5857
Beirut, LEBANON
TEL: (01) 335799

TURKEY

Barkat Sanayi ve Ticaret
Siraselviler Cad. 86/6 Taksim
Istanbul, TURKEY
TEL: (0212) 2499324

EGYPT

Al Fanny Trading Office
9, Ebn Hagar Al Askalany
Street, Ard El Golf,
Heliopolis, Cairo, 11341
EGYPT
TEL: (02) 917 803
(04) 171 828

QATAR

Badie Studio & Stores
P.O.Box 62,
DOHA Qatar
TEL: 423554

BAHRAIN

Moon Stores
Bad Al Bahrain Road,
P.O.Box 20077
State of Bahrain
TEL: 211 005

BRAZIL

Roland Brasil Ltda.
R. Coronel Octaviano da Silveira 203 05522-010
Sao Paulo BRAZIL
TEL: (11) 843 9377

MEXICO

Casa Veerkamp, s.a. de c.v.
Mesones No. 21 Col. Centro
MEXICO D.F. 06080
TEL: (905) 709 3716

La Casa Wagner de Guadalajara s.a. de c.v.
Av. Corona No. 202 S.J.
C.P.44100 Guadalajara,
Jalisco MEXICO
TEL: (36) 13 1414

VENEZUELA

Musicland Digital C.A.
Av. Francisco De Miranda,
Centro Parque de Cristal,
Nivel C2 Local 20 Caracas
VENEZUELA
TEL: (2) 285 9218

PANAMA

Productos Superiores, S.A.
Apartado 655 - Panama 1
REP. DE PANAMA
TEL: 26 3322

ARGENTINA

Instrumentos Musicales S.A.
Florida 638
(1005) Buenos Aires
ARGENTINA
TEL: (1) 394 4029

HONG KONG

Tom Lee Music Co., Ltd.
Service Division
22-32 Pun Shan Street, Tsuen Wan, New Territories,
HONG KONG
TEL: 415 0911

KOREA

Cosmos Corporation
Service Station
261 2nd Floor Nak-Won
Arcade Jong-Ro ku, Seoul,
KOREA
TEL: (02) 742 8844

SINGAPORE

Swee Lee Company
BLOCK 231,
Bain Street #03-23
Bras Basah Complex,
Singapore 0718
TEL: 3367886

PHILIPPINES

G.A. Yupangco & Co. Inc.
339 Gil J. Puyat Avenue
Makati, Metro Manila 1200,
PHILIPPINES
TEL: (02) 817 0013

THAILAND

Theera Music Co., Ltd.
330 Verng Nakorn Kasem,
Soi 2, Bangkok 10100,
THAILAND
TEL: (02) 2248821

MALAYSIA

Bentley Music SDN BHD
No.142, Jalan Bukit Bintang
55100 Kuala Lumpur,
MALAYSIA
TEL: (03) 2443333

INDONESIA

PT CITRARAMA BELANTIKA
Kompleks Perkantoran Duta Merlin Blok E No.6—7
Jl. Gajah Mada No.3—5,
Jakarta 10130,
INDONESIA
TEL: (021) 3850073

TAIWAN

Siruba Enterprise (Taiwan) Co., LTD.
Room. 5, 9fl. No. 112 Chung Shan N.Road Sec.2 Taipei,
TAIWAN, R.O.C.
TEL: (02) 571 5860

SOUTH AFRICA

That Other Music Shop (PTY) Ltd.
11 Melle Street (Cnr Melle and Juta Street)
Braamfontein 2001
Republic of South Africa
TEL: (011) 403 4105

Paul Bothner (PTY) Ltd.
17 Werdmuller Centre
Claremont 7700
Republic of South Africa
TEL: (021) 64 4030

As of July. 15. 1994

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 räjahtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For Germany

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

SYNTHESIZER MODULE JV-1080

(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der BMPT-AmtsblVfg 243/1991 funk-entstört ist. Der vorschriftsmäßige Betrieb mancher Geräte (z. B. Meßsender) kann allerdings gewissen Einschränkungen unterliegen. Beachten Sie deshalb die Hinweise in der Bedienungsanleitung.

Dem Zentralamt für Zulassungen im Fernmeldewesen wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf die Einhaltung der Bestimmungen eingeräumt.

Roland Corporation

4-16 Dojimahama 1-Chome Kita-ku Osaka 530 Japan

(Name und Anschrift des Herstellers/Importeurs)

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.

CLASS B **AVIS**

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Réglement des signaux parasites par le ministère canadien des Communications.

SPECIFICATIONS

JV-1080 : Multi-timbral Synthesizer module
(Conforms to General MIDI System)

•Parts
Part 1to 16

•Maximum Polyphony
64 Voices

•Effects
EFX: 40 types (refer to the "Remarks" in the right side column)
Chorus: 1 type
Reverb: 1 type

•Memory

Internal	
System:	1
Patch	
User:	128
Preset A:	128
Preset B:	128
Preset C:	128
Preset D (General MIDI Sound Set):	128
Performance	
User:	32
Preset A:	32
Preset B:	32
Rhythm Set	
User:	2
Preset A:	2
Preset B:	2
Preset C:	2
Preset D (General MIDI Percussion Map):	2

•Display
40 characters, 2 lines (backlit LCD)

•Connectors
MIX OUT Jack (L, R)
OUTPUT 1 Jack (L, R)
OUTPUT 2 Jack (L, R)
Headphone Jack (Stereo)
MIDI Connectors (IN, OUT, THRU)
Wave Expansion Board Slot (4 in total)
Card Slot (PCM, DATA)

•Power Supply
AC 120V, AC 220 V or AC 240 V

•Power Consumption
16 W (AC120V), 17W (AC220V, AC240V)

•Dimensions
482(W) x 281(D) x 88(H) mm
18-15/16" (W) x 11-1/16" (D) x 3-1/2" (H) inches
(EIA -2U rack mount type)

•Weight
5.0 kg / 11 lbs 1 oz

•Accessories
Owner's Manual
AC Cord

•Options
DATA Card (PN-JV80 series, M-256E / 512E)
PCM Card (SO-PCM 1 series)
Expansion Board (SR-JV-80 series)

<Remarks>

•EFX types:
1: Stereo Equalizer
2: Overdrive
3: Distortion
4: Phaser
5: Spectrum
6: Enhancer
7: Auto-Wah
8: Rotary
9: Compressor
10: Limiter
11: HEXA Chorus
12: Tremolo Chorus
13: Space D
14: Stereo Chorus
15: Stereo Flanger
16: Step Flanger
17: Stereo Delay
18: Modulation Delay
19: Triple Tap Delay
20: Quadruple Tap Delay
21: Time Control Delay
22: 2 Voice Pitch Shifter
23: Feedback Pitch Shifter
24: Reverb
25: Gate Reverb
26: Overdrive -> Chorus
27: Overdrive -> Flanger
28: Overdrive -> Delay
29: Distortion -> Chorus
30: Distortion -> Flanger
31: Distortion -> Delay
32: Enhancer -> Chorus
33: Enhancer -> Flanger
34: Enhancer -> Delay
35: Chorus -> Delay
36: Flanger -> Delay
37: Chorus -> Flanger
38: Chorus / Delay
39: Flanger / Chorus
40: Chorus / Flanger

-> : serial connection / : parallel connection

* *In the interest of product development, the specifications for this product are subject to change without prior notice.*

Roland®

71451145

UPC 71451145

10981

Roland

Roland® JV-1080 64-Voice Synthesizer Module Patch Listing

USER Bank

001	Symphonique
002	Alternative
003	VeloTekno 1
004	West Coast
005	Albion
006	Jz Gtr Hall
007	Rocker Spin
008	101 Bass
009	Claviduck
010	Jet Pad 2
011	Raggatronic
012	Crunch Split
013	Running Pad
014	Brass Sect
015	Flying Waltz
016	Pure Tibet
017	4 Hits 4 You
018	Waterhodes
019	Blade Racer
020	JC Strat
021	Dawn 2 Dusk
022	Saw Mass
023	Steel Away
024	64 VoicePiano
025	Wave Bells
026	JP-8Haunting
027	Vanishing
028	Harmonica
029	Film Octaves
030	Edye Boost
031	AugerMentive
032	Deep Strings
033	Chime Wash
034	SA Rhodes1
035	3D Flanged
036	Ac.Upright
037	Poly Brass
038	Dissimilate
039	Dulcimer
040	Fantasy Vox
041	Dist Gtr 1
042	Sax Section
043	Aurora
044	St.Strings
045	AmbienceVibe
046	Cascade
047	AltoLead Sax
048	PWM Strings
049	Childlike
050	Velo Tekno 2
051	Taj Mahal
052	D-50 Stack
053	ChamberWoods
054	Pulse Key
055	Mondo Bass
056	Velo-Wah Gtr
057	Sitar
058	Purple Spin
059	Random Vowels
060	Big BPF
061	Dunes
062	Heirborne
063	PsychoRhodes
064	Tortured
065	Bass Marimba
066	Syncrosonix
067	Mandolin Trem
068	Poly Saws
069	Pulse Pad
070	Nylon Gtr
071	ORBit Pad
072	Majestic Tpt
073	Terminate
074	SquareLead 1
075	House Piano
076	Fooled Again
077	Pick Bass
078	Wide Tubular
079	Velo-Rez Clv
080	Airplaaane
081	Delicate EP
082	Rezoid
083	E-Motion Pad
084	Phripphuzz
085	Archimede
086	Intentions
087	Nylon Rhodes
088	Huff N Stuff
089	Finger Bass
090	Gospel Spin
091	Harmonicum
092	Impact
093	Rotary Gtr
094	Tp&Sax Sect
095	Tubular Vox
096	Sawteeth
097	Ocean Floor
098	E.Grand
099	Clarinet mp
100	Bass in Face
101	Britelow Bass
102	Mellow Bars
103	LetterFrmPat
104	MG Solo
105	Air Lead
106	Raya Shaku
107	Greek Power
108	Biosphere
109	EP+Mod Pad
110	Chambers
111	Nomad Perc
112	Horn Swell
113	Hillbillys
114	Night Shade
115	Nice Piano
116	VOX Flute
117	Music Bells
118	JUNO Strings
119	Bs/Pno+Brs
120	Dark Vox
121	Bass Pizz
122	Seq Mallet
123	Variable Run
124	Cyber Space
125	12str Gtr 1
126	PianoStrings
127	Sands of Time
128	Fantasia JV

PR-A (Preset A Bank)

001	64voicePiano
002	Bright Piano
003	Classique
004	Nice Piano
005	Piano Thang
006	Power Grand
007	House Piano
008	E.Grand
009	MIDIed Grand
010	Piano Blend
011	West Coast
012	PianoStrings
013	Bs/Pno+Brs
014	Waterhodes
015	S.A.E.P.
016	SA Rhodes 1
017	SA Rhodes 2
018	Stiky Rhodes
019	Dig Rhodes
020	Nylon EPiano
021	Nylon Rhodes
022	Rhodes Mix
023	PsychoRhodes
024	Tremo Rhodes
025	MK-80 Rhodes
026	MK-80 Phaser
027	Delicate EP
028	Octa Rhodes1
029	Octa Rhodes2
030	JV Rhodes+
031	EP+Mod Pad
032	Mr.Mellow
033	Comp Clav
034	Klavinet
035	Winger Clav
036	Phaze Clav 1
037	Phaze Clav 2
038	Phuzz Clav
039	Chorus Clav
040	Claviduck
041	Velo-Rez Clv
042	Clavicembalo
043	Analog Clav1
044	Analog Clav2
045	Metal Clav
046	Full Stops
047	Ballad B
048	Mellow Bars
049	AugerMentive
050	Perky B
051	The Big Spin
052	Gospel Spin
053	Roller Spin
054	Rocker Spin
055	Tone Wh.Solo
056	Purple Spin
057	60's LeadORG
058	Assalt Organ
059	D-50 Organ

Roland® JV-1080 64-Voice Synthesizer Module Patch Listing

060	Cathedral
061	Church Pipes
062	Poly Key
063	Poly Saws
064	Poly Pulse
065	Dual Profs
066	Saw Mass
067	Poly Split
068	Poly Brass
069	Stackoid
070	Poly Rock
071	D-50 Stack
072	Fantasia JV
073	Jimmee Dee
074	Heavenals
075	Mallet Pad
076	Huff N Stuff
077	Puff 1080
078	BellVox 1080
079	Fantasy Vox
080	Square Keys
081	Childlike
082	Music Box
083	Toy Box
084	Wave Bells
085	Tria Bells
086	Beauty Bells
087	Music Bells
088	Pretty Bells
089	Pulse Key
090	Wide Tubular
091	AmbienceVibe
092	Warm Vibes
093	Dyna Marimba
094	Bass Marimba
095	Nomad Perc
096	Ethno Metals
097	Islands Mlt
098	Steelin Keys
099	Steel Drums
100	Voicey Pizz
101	Sitar
102	Drone Split
103	Ethnopluck
104	Jamisen
105	Dulcimer
106	East Melody
107	MandolinTrem
108	Nylon Gtr
109	Gtr Strings
110	Steel Away
111	Heavenly Gtr
112	12str Gtr 1
113	12str Gtr 2
114	Jz Gtr Hall
115	LetterFrmPat
116	Jazz Scat
117	Lounge Gig
118	JC Strat
119	Twin Strats
120	JV Strat
121	Syn Strat
122	Rotary Gtr
123	Muted Gtr
124	SwitchOnMute
125	Power Trip
126	Crunch Split
127	Rezodrive
128	RockYurSocks

PR-B (Preset B Bank)

001	Dist Gtr 1
002	Dist Gtr 2
003	R&R Chunk
004	Phripphuzz
005	Grungeroni
006	Black Widow
007	Velo-Wah Gtr
008	Mod-Wah Gtr
009	Pick Bass
010	Hip Bass
011	Perc.Bass
012	Homey Bass
013	Finger Bass
014	Nylon Bass
015	Ac.Upright
016	Wet Fretls
017	Fretls Dry
018	Slap Bass 1
019	Slap Bass 2
020	Slap Bass 3
021	Slap Bass 4
022	4 Pole Bass
023	Tick Bass
024	House Bass
025	Mondo Bass
026	Clk AnalogBs
027	Bass In Face
028	101 Bass
029	Noiz Bass
030	Super Jup Bs
031	Occitan Bass
032	Hugo Bass
033	Multi Bass
034	Moist Bass
035	BritelowBass
036	Untamed Bass
037	Rubber Bass
038	Stereoww Bs
039	Wonder Bass
040	Deep Bass
041	Super JX Bs
042	W<RED>-Bass
043	HI-Ring Bass
044	Euro Bass
045	SinusoidRave
046	Alternative
047	Acid Line
048	Auto TB-303
049	Hihat Tekno
050	Velo Tekno 1
051	Raggatronic
052	Blade Racer
053	S&H Pad
054	Syncrosonix
055	Fooled Again
056	Alive
057	Velo Tekno 2
058	Rezoid
059	Raverborg
060	Blow Hit
061	Hammer Bell
062	Seq Mallet
063	Intentions
064	Pick It
065	Analog Seq
066	Impact Vox
067	TeknoSoloVox
068	X-Mod Man
069	Paz <==> Zap
070	4 Hits 4 You
071	Impact
072	Phase Hit
073	Tekno Hit 1
074	Tekno Hit 2
075	Tekno Hit 3
076	Reverse Hit
077	SquareLead 1
078	SquareLead 2
079	You and Luck
080	Belly Lead
081	WhistlinAtom
082	Edye Boost
083	MG Solo
084	FXM Saw Lead
085	Sawteeth
086	Smoothe
087	MG Lead
088	MG Interval
089	Pulse Lead 1
090	Pulse Lead 2
091	Little Devil
092	Loud SynLead
093	Analog Lead
094	5th Lead
095	Flute
096	Piccolo
097	VOX Flute
098	Air Lead
099	Pan Pipes
100	Airplaaane
101	Taj Mahal
102	Raya Shaku
103	Oboe mf
104	Oboe Express
105	Clarinet mp
106	ClariExpress
107	Mitzva Split
108	ChamberWinds
109	ChamberWoods
110	Film Orch
111	Sop.Sax mf
112	Alto Sax
113	AltoLead Sax
114	Tenor Sax
115	Baritone Sax
116	Take A Tenor
117	Sax Section
118	Bigband Sax
119	Harmonica

Roland® JV-1080 64-Voice Synthesizer Module Patch Listing

120 Harmo Blues
121 BluesHarp
122 Hillbillys
123 French Bags
124 Majestic Tpt
125 Voluntare
126 2Trumpets
127 Tpt Sect
128 Mute TP mod

PR-C (Preset C Bank)

001 Harmon Mute
002 Tp&Sax Sect
003 Sax+Tp+Tb
004 Brass Sect
005 Trombone
006 Hybrid Bones
007 Noble Horns
008 Massed Horns
009 Horn Swell
010 Brass It!
011 Brass Attack
012 Archimede
013 Rugby Horn
014 MKS-80 Brass
015 True ANALOG
016 Dark Vox
017 RandomVowels
018 Angels Sing
019 Pvox Oooze
020 Longing...
021 Arasian Morn
022 Beauty Vox
023 Mary-AnneVox
024 Belltree Vox
025 Vox Panner
026 Spaced Voxx
027 Glass Voices
028 Tubular Vox
029 Velo Voxx
030 Wavox
031 Doos
032 Synvox Comps
033 Vocal Oohz
034 LFO Vox
035 St.Strings
036 Warm Strings
037 Somber Str
038 Marcato
039 Bright Str
040 String Ens
041 TremoloStrng
042 Chambers
043 ViolinCello
044 Symphonique
045 Film Octaves
046 Film Layers
047 Bass Pizz
048 Real Pizz
049 Harp On It
050 Harp
051 JP-8 Str 1
052 JP-8 Str 2
053 E-Motion Pad
054 JP-8 Str 3
055 Vintage Orch
056 JUNO Strings
057 Gigantalog
058 PWM Strings
059 Warmth
060 ORBit Pad
061 Deep Strings
062 Pulsify
063 Pulse Pad
064 Greek Power
065 Harmonicum
066 D-50 Heaven
067 Afro Horns
068 Pop Pad
069 Dreamesque
070 Square Pad
071 JP-8 Hollow
072 JP-8Haunting
073 Heirborne
074 Hush Pad
075 Jet Pad 1
076 Jet Pad 2
077 Phaze Pad
078 Phaze Str
079 Jet Str Ens
080 Pivotal Pad
081 3D Flanged
082 Fantawine
083 Glassy Pad
084 Moving Glass
085 Glasswaves
086 Shiny Pad
087 ShiftedGlass
088 Chime Pad
089 Spin Pad
090 Rotary Pad
091 Dawn 2 Dusk
092 Aurora
093 Strobe Mode
094 Albion
095 Running Pad
096 Stepped Pad
097 Random Pad
098 SoundtrkDANC
099 Flying Waltz
100 Vanishing
101 5th Sweep
102 Phazweep
103 Big BPF
104 MG Sweep
105 CeremonyTimp
106 Dyno Toms
107 Sands ofTime
108 Inertia
109 Vektogram
110 Crash Pad
111 Feedback VOX
112 Cascade
113 Shattered
114 NextFrontier
115 Pure Tibet
116 Chime Wash
117 Night Shade
118 Tortured
119 Dissimilate
120 Dunes
121 Ocean Floor
122 Cyber Space
123 Biosphere
124 Variable Run
125 Ice Hall
126 ComputerRoom
127 Inverted
128 Terminate

PR-D (GM Bank)

001 Piano 1
002 Piano 2
003 Piano 3
004 Honky-tonk
005 E.Piano 1
006 E.Piano 2
007 Harpsichord
008 Clav.
009 Celesta
010 Glockenspiel
011 Music Box
012 Vibraphone
013 Marimba
014 Xylophone
015 Tubular-bell
016 Santur
017 Organ 1
018 Organ 2
019 Organ 3
020 Church Org.1
021 Reed Organ
022 Accordion Fr
023 Harmonica
024 Bandoneon
025 Nylon-str.Gt
026 Steel-str.Gt
027 Jazz Gt.
028 Clean Gt.
029 Muted Gt.
030 Overdrive Gt
031 DistortionGt
032 Gt.Harmonics
033 Acoustic Bs.
034 Fingered Bs.
035 Picked Bs.
036 Fretless Bs.
037 Slap Bass 1
038 Slap Bass 2
039 Synth Bass 1
040 Synth Bass 2
041 Violin
042 Viola
043 Cello
044 Contrabass
045 Tremolo Str
046 PizzicatoStr
047 Harp
048 Timpani
049 Strings

Faxback # 10452

Roland® JV-1080 64-Voice Synthesizer Module Patch Listing

050	Slow Strings	066	Alto Sax	082	Saw Wave	098	Soundtrack	114	Agogo
051	Syn.Strings1	067	Tenor Sax	083	Syn.Calliope	099	Crystal	115	Steel Drums
052	Syn.Strings2	068	Baritone Sax	084	Chiffer Lead	100	Atmosphere	116	Woodblock
053	Choir Aahs	069	Oboe	085	Charang	101	Brightness	117	Taiko
054	Voice Oohs	070	English Horn	086	Solo Vox	102	Goblin	118	Melo. Tom 1
055	SynVox	071	Bassoon	087	5th Saw Wave	103	Echo Drops	119	Synth Drum
056	OrchestraHit	072	Clarinet	088	Bass & Lead	104	Star Theme	120	Reverse Cym.
057	Trumpet	073	Piccolo	089	Fantasia	105	Sitar	121	Gt.FretNoise
058	Trombone	074	Flute	090	Warm Pad	106	Banjo	122	Breath Noise
059	Tuba	075	Recorder	091	Polysynth	107	Shamisen	123	Seashore
060	MutedTrumpet	076	Pan Flute	092	Space Voice	108	Koto	124	Bird
061	French Horn	077	Bottle Blow	093	Bowed Glass	109	Kalimba	125	Telephone 1
062	Brass 1	078	Shakuhachi	094	Metal Pad	110	Bag Pipe	126	Helicopter
063	Synth Brass1	079	Whistle	095	Halo Pad	111	Fiddle	127	Applause
064	Synth Brass2	080	Ocarina	096	Sweep Pad	112	Shanai	128	Gun Shot
065	Soprano Sax	081	Square Wave	097	Ice Rain	113	Tinkle Bell		

Roland® JV-1080 64-Voice Synthesizer Module Performance Listing

User Bank	
01	EasternSplit
02	Opening Orch
03	Feedback EP
04	Humming Vox
05	Tekno Loop 1
06	Fr.Horn Sect
07	SpaceCarrier
08	Orchestral
09	Nebular Vox
10	Terminator
11	Flying Jazz
12	Sweeper
13	Rave Split
14	Multi Sax
15	Cosmic Dawn
16	Bass / Lead
17	S&H / Pad
18	AcPiano+Pad
19	Kicks Attack
20	Step Brass
21	Drone / Pipe
22	Chime Dreams
23	Tekno Loop 2
24	Big Band
25	Labyrinth
26	White Hole
27	Cyber Sweep
28	Tekno Asia
29	1080 Fantasy
30	Pop Ballad
31	Rhythmatic
32	Power JV

PR-A (Preset A Bank)	
01	House Set
02	Analectro
03	Anatronic
04	Tekno Pop 1
05	Tekno Pop 2
06	Hard Core
07	Hi Energy
08	Pop Dance
09	Acid Set
10	Ambient Set
11	Electro Pop
12	Pop Set 1
13	Pop Set 2
14	Pop Set 3
15	Pop Set 4
16	L.A. Ballad
17	Hip Hop Set
18	Funk Rock
19	Funk Fusion
20	Heavy Metal
21	Heavy Kids
22	Latin Set
23	BrazilianSet
24	New Age 1
25	New Age 2
26	Orchestra
27	Concerto
28	Film Score 1
29	Film Score 2
30	Symphonic
31	Chamber Set
32	Baroque Set

PR-B (Preset B Bank)	
01	Africa
02	World Ethnic
03	Asian Ethnic
04	Asian Band
05	60’s Set
06	Blues Band
07	Country Band
08	Folk Set
09	Reggae Band
10	FunkWah Band
11	Funkin’Phaze
12	Zydeco Band
13	New Orleans
14	Dixieland
15	Big Band Set
16	Cont.Jazz 1
17	Cont.Jazz 2
18	Ac.Jazz Set
19	Gospel Set
20	All Strings
21	All Brass
22	All Piano 1
23	All Piano 2
24	All Keyboard
25	All Organ
26	All Winds
27	All Bells
28	Mlt & Perc
29	All Seq
30	All Bass
31	All Pad
32	All FX

MIDI Sequencing with the Roland JV-1080

The Roland JV-1080 is a 64-voice polyphonic, 16-Part multitimbral synthesizer sound module. It includes 512 instrument sounds and 8 drum kits. It also has three sets of stereo outputs and 40 digital effects including chorus, rotary speaker, distortion, reverb, and delay. This supplement is a basic guide for using the Roland JV-1080 in combination with other MIDI instruments such as MIDI keyboards and sequencers. We'll start with an overview of the instrument which includes important terminology for each of the three operating modes. Then, we'll review some basic operations. In the section called "Setting-up a MIDI Keyboard as a Controller" you'll learn how to play a Patch, change Patch Banks, and play a Rhythm Kit. The remaining sections will take you through setting-up a Performance for sequencing, using MIDI messages to select sounds, using the effects, configuring real-time controllers, and saving a Performance to a user location. To get the most out of this supplement, remember to take your time as you study each section. We will now begin with an overview of the JV-1080.

I. Overview

Before we begin, you should develop a good understanding of the terminology used in the JV-1080. This will make it easier to understand how it is organized.

Tone
A Tone is the primary source of sound on the JV-1080. It is essentially the "raw" waveform of a given instrument. For example: a clarinet Tone would be the actual digital sample or recording of a clarinet. Any four Tones can be used simultaneously in a Patch.

Patch
A Patch is an individual, "playable" sound that is comprised of up to four Tones. In a Patch, Tones can be enhanced with added characteristics using such things as TVA, TVF, LFOs, and effects processing. The Patch is typically what you play from a keyboard or controller.

Performance
A Performance is a multitimbral combination of up to 15 Patches and 1 Rhythm Set. In a Performance, each Patch can have its own level (volume), panning (stereo placement), tuning, MIDI channel, and other parameters. There are 32 User Performances (that you can customize) and 64 Preset Performances.

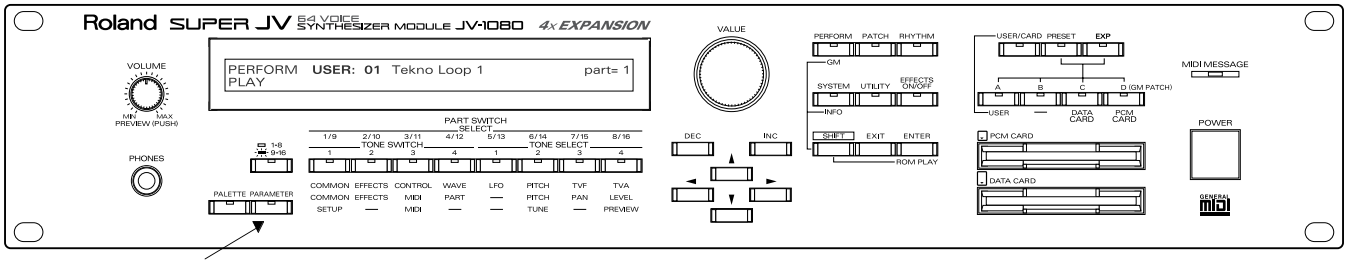
Part
A Part is one of 16 locations in a Performance which contains a Patch or Rhythm Kit. It also contains additional information such as MIDI channel and key range. Each Part can be assigned its own instrument (Patch) and MIDI channel. For sequencing purposes, each Part should be set to its own independent MIDI channel (as in Performance PR A: 12 Pop Set 1).

Layer and Split
A layer allows you to play two or more Parts (Patches) simultaneously (such as Piano and Strings). This is accomplished by setting two or more Parts (in a Performance) to the same MIDI channel. A split keyboard can be achieved in a similar manner by assigning multiple Parts to the same MIDI channel and then assigning different key ranges to each of the Parts. A common usage of the split keyboard is to assign a bass sound to the left side of the keyboard and a piano sound to the right.

Rhythm Mode
The Rhythm Mode is where you'll find the 10 built-in drum kits that can be used in a Performance. Editing of the drum kits is accomplished in this mode.

II. Basic Operation

In addition to having a clear understanding of the terminology used in the JV-1080, it is important to know your way around the front panel. Below, you'll find a diagram of the JV-1080's front panel.



Under the display screen, there is a row of eight SELECT buttons that allow you to edit the Patches, Rhythm Kits, Performances, and System settings of the JV-1080. These buttons have different functions, depending on what mode you're in. When the JV-1080 is in Performance mode (PERFORM button is lit), and the PARAMETER button is not lit, the eight buttons are used as PART SWITCH buttons — allowing you to turn Performance Parts 1 – 16 on or off. Since there are only eight buttons for the 16 Parts, there's a button to the left of the SELECT buttons which allows you to switch between Parts 1 – 8 and 9 – 16. When that button is lit, you can select Parts 9 – 16 with the 8 Part Switch buttons. When it is not lit (which is the default), you can select Parts 1 – 8. When the PARAMETER button is lit, these eight buttons are used to select parameters for editing. The parameters written in blue text below the buttons (middle row) are applicable to the Performance mode.

In the PATCH & RHYTHM modes, the orange text below the buttons is applicable when the PARAMETER button is lit. When the PARAMETER button is not lit, the TONE SWITCH and TONE SELECT buttons are active (see the orange text above the buttons). The TONE SWITCH buttons allow you to turn Tones on and off. The TONE SELECT buttons allow you to select which Tones will be edited.

The gray text below the buttons indicates which parameters are available when the SYSTEM button is lit. The PARAMETER button is automatically activated when you press the SYSTEM button.

The following chart (which is also printed on the front panel of the JV-1080) is a guide for using each of these operating modes. The parameters in **bold** text are for Performance mode, the parameters in *italicized* text are for Patch/Rhythm mode, and the normal text is for System mode parameters.

PART SWITCH SELECT								
1/9	**2/10**	**3/11**	**4/12**	**5/13**	**6/14**	**7/15**	**8/16**	*Patch/Rhythm*
TONE SWITCH				*TONE SELECT*				
1	*2*	*3*	*4*	*1*	*2*	*3*	*4*	*Patch/Rhythm*
Common	*Effects*	*Control*	*Wave*	*LFO*	*Pitch*	*TVF*	*TVA*	
Common	**Effects**	**MIDI**	**Part**	**—**	**Pitch**	**Pan**	**Level**	**Performance**
Setup	—	MIDI	—	—	Tune	—	Preview	System

Once you have selected the desired group of parameters, you can use the CURSOR buttons to select a specific parameter.

Next to the PARAMETER button is the PALETTE button. This button allows you to display and edit the values for multiple Parts (or Tones) at the same time. Be aware that some parameters will not be available to edit when PALETTE is lit.

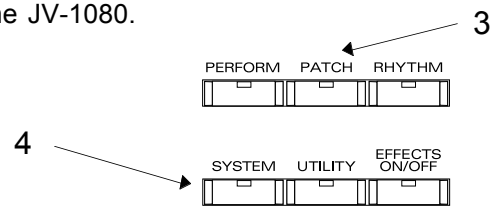
Connecting Audio
Before you begin sequencing with the JV-1080, it is important to have the audio cables connected properly. Use the following procedure to setup the JV-1080 with a mixer:

1) Turn off the power on the JV-1080.
2) Connect two 1/4" audio cables from the Mix Out L & R jacks on the back panel of the JV-1080 to channels 1 and 2 respectively on your mixer.
3) Pan channel 1 on your mixer all the way left and channel 2 all the way right to get the full stereo image. When you are using a mono signal connect the L (Mono) Mix Out to your mixer and pan the input channel on your mixer to the center (12 o'clock) position. In addition to the Mix Outs, the JV-1080 has two additional stereo outputs that can be used for individual signal routing.

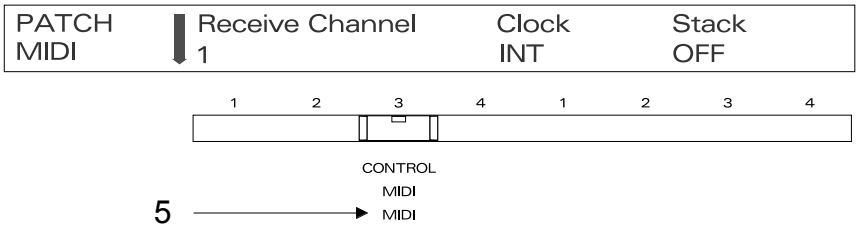
III. Setting-up a MIDI Keyboard as a Controller

Since the JV-1080 is a rack-mount sound module, you will need some type of controller to play the sounds. For our purposes we will assume you are using a keyboard, which is the most common type of controller. To setup a MIDI keyboard as a controller for the JV-1080, use the following procedure:

1) First, connect a MIDI cable from MIDI OUT of your keyboard to MIDI IN of the JV-1080.
2) Then, set the MIDI transmit channel of your keyboard to MIDI channel 1.
3) Press PATCH, so it is lit. The JV-1080 is now in Patch Mode.
4) Press SYSTEM on the JV-1080.



5) You should now be in the "PATCH MIDI" display. If not, press the MIDI (3/11) button, which is located beneath the LCD display.



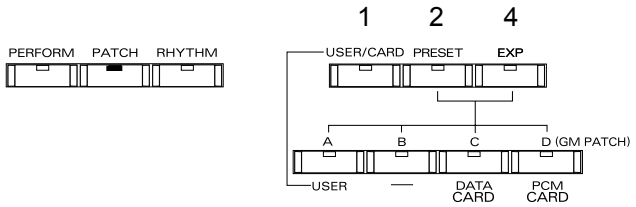
6) Use the CURSOR buttons to underline "Receive Channel" (the currently assigned parameter will begin to flash). Now use the VALUE knob or the DEC (decrement) / INC (increment) buttons to set the MIDI channel to 1.
7) Press SYSTEM to return to the previous display.

Playing a Patch
The Roland JV-1080 includes 640 Patches that are contained in one User, and four Preset Banks. Included in these sounds are 128 General MIDI sounds (Bank D). Use the following procedure to listen to the Patches:

1) Press PATCH, so it is lit.
2) Play your keyboard to hear the sound.
3) Use the VALUE knob or the INC/DEC buttons to select Patches.

Changing Patch Banks
You'll want to experiment with all of the Patches located in the User and Preset Banks to get the most out of the JV-1080 sounds. Use the following procedure to change Banks:

1) Press the USER button (so it is lit) to choose the User Bank.
2) Press the PRESET button (so it is lit) to choose Preset Banks.
3) Use the A, B, C, and D buttons to select the four Preset banks A, B, C, or D (GM).
4) Press EXP button (so it is lit) to choose Expansion Board Banks.
5) Use the A, B, C, and D buttons to access the four Expansion Board Banks respectively.



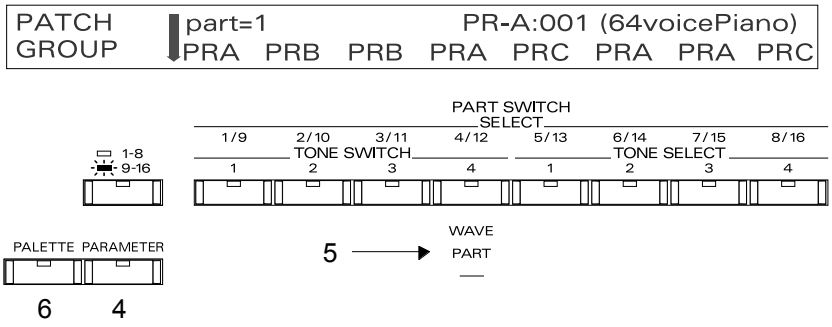
Playing a Rhythm Kit
Along with the 640 Patches, you'll want to take full advantage of the various drum kits that are located in the Rhythm Mode. Use the following procedure to listen to the drum kits:

1) Press RHYTHM, so it is lit.
2) Set the transmit channel on your keyboard to MIDI channel 10.
3) Play the keyboard to hear the sounds.
4) Use the VALUE knob to select drum kits. You can also change banks as previously described (each bank contains two drum kits).

IV. Setting-up a Performance for Sequencing

Performance mode allows you to have multiple instruments playing at the same time. Each Performance contains up to 15 different Patches plus a Rhythm Kit. Certain Performances contain Parts that are assigned independent MIDI channels and are designed primarily for MIDI sequencing. Use the following procedure to setup a Performance for sequencing:

1) Press PERFORM, so it is lit.
2) Press PRESET (located in the upper right section of the front panel).
3) Use the VALUE knob to select "Preset A: 12 Pop Set 1." This Performance is ideal for sequencing.
4) Press PARAMETER, so it is lit. Now, we can choose a parameter to edit.
5) Press the PART (4/12) button to access the Part parameters.
6) Press PALETTE, so it is lit. Now, instead of looking at the parameters for a single Part, we can see the parameters for eight Parts at the same time.

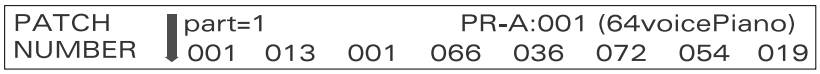


Note: While in the Performance Mode, the parameters in blue text under the LCD are available.

7) Use the CURSOR buttons to select the desired Part (1-16).
8) Set the MIDI channel on your keyboard to match the number of the Part you want to hear. For example, MIDI channel 1 plays the instrument (Patch) assigned to Part 1. MIDI channel 2 plays Part 2, etc.

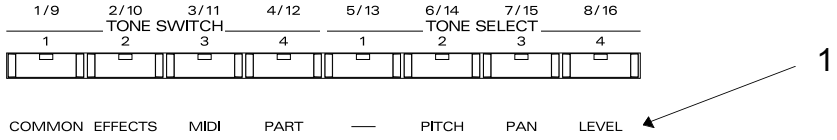
Changing the Sound for the each Part
In Performance mode, any Patch can be assigned to any Part. The only exception is Part 10 which can only contain a Rhythm Kit. This is useful for creating 16 Part sequences or arrangements. Use the following procedure to change the sound (Patch) for each Part in a Performance:

1) Begin by completing steps 1 – 8 in the previous section, “Setting-up a Performance for Sequencing.”
2) Use the VALUE knob to select the desired Patch Banks (User/Preset/Exp A, B, C, D).
3) Use the CURSOR buttons to select the “PATCH NUMBER” display. Use the VALUE knob to change Patches.



Level
Level is used to change the volume of each Part. This is helpful for creating a “mix” or balance between instrument sounds (Patches). Use the following procedure to change the level:

1) From the previous display, press the LEVEL (8/16) button and use the CURSOR buttons to select the desired Part.
2) Use the VALUE knob to set the level (volume) for each Part.



Pan
Pan is used to set the balance of each Part between the left and right outputs. Use the following procedure to set the pan:

1) From the previous display, press the PAN (7/15) button and use the CURSOR buttons to select the desired Part.
2) Use the VALUE knob to set the pan position for each Part.

NOTE: Some Patches contain Tones that are already panned left or right. Adjusting the pan position for Parts containing such Patches will move them from their current position, not from the center. For example, if a Patch contains a Tone that was set to a pan position of L63 and you set the pan position for the Part containing that Patch to R63, that Tone would be heard in the center pan position. On these Patches, it is a good idea to set the pan position for each Tone to “0” (center) while in Patch edit mode. You can then save the edited version of this Patch to a User location. From Performance Mode, you can assign the edited (User) version of that Patch in place of the original. This will ensure that you have full control over the pan position of that Patch in Performance mode.

Pitch
Pitch is used to set the individual pitch of each Part. This is helpful for transposing Parts (coarse tune) and/or altering their tuning (fine tune). Use the following procedure to set the desired pitch:

1) From the previous display, press the PITCH (6/14) button and use the CURSOR buttons to select a Part. Use the VALUE knob to set the desired coarse tune.
2) Use the DOWN CURSOR button to select the “Fine Tune” display. Use the CURSOR buttons to select a Part and use the VALUE knob to adjust the pitch as desired.

NOTE: Coarse tune changes the pitch by half-steps and fine tune changes the pitch by cents.

MIDI Connections
When using the JV-1080 for sequencing it is important to have all MIDI connections properly setup so that the sequencer and sound module can communicate. Use the following procedure to connect your MIDI cables:

1) Connect a MIDI cable from MIDI OUT of your keyboard controller to MIDI IN of the sequencer/MIDI interface.
2) Connect a MIDI cable from MIDI OUT of your sequencer/MIDI interface to MIDI IN of the JV-1080.
3) Be sure the “MIDI Thru” function (also known as “Soft Thru” or “MIDI Echo”) is set to “on” or enabled in your sequencer/software.

Recording Part 1 to your Sequencer
Now that you've made all the necessary MIDI connections, we are ready to start recording. Use the following procedure to record a track using Part 1 on the JV-1080:

1) Select Performance "PR-A:12 Pop Set 1" (as described previously). This is a good Performance to use because each Part (1 – 16) is set to its own MIDI channel (1 – 16).
2) Make sure the PARAMETER, PART (4/12), and PALETTE buttons are lit.
3) Now use the LEFT/RIGHT CURSOR buttons to select Part 1. This Performance is set up with "PR-A:011 64 VoicePiano" on Part 1.
4) Use the UP/DOWN CURSOR buttons to select the "PATCH NUMBER" display and use the VALUE knob to select the desired sound.
5) To select a sound for Part 2, press the RIGHT CURSOR button so that the currently assigned Patch for Part 2 is displayed. Use the VALUE knob to select the desired sound. "PR-B:013 FingerBass" is the default Patch assigned to Part 2 for this Performance.
6) Enable track 1 on your sequencer to record MIDI channel 1. Make sure your keyboard is transmitting on MIDI channel 1.
7) Start recording on your sequencer.
8) Play your keyboard controller. You should hear the sound assigned to Part 1 on the JV-1080 as you play.
9) Stop your sequencer when you are finished.
10) Playback your song from the beginning to hear the results.

Recording Part 2 to your Sequencer
Now that we've recorded MIDI channel 1 data to track 1 of your sequencer using JV-1080 Performance Part 1, let's use Part 2 to record MIDI channel 2 to track 2 of your sequencer. We've already determined that Part 2 in this Performance is using the Patch selected in step 5 above. From the previous display, use the following procedure to record Part 2:

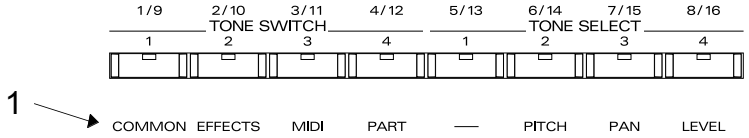
1) Select track 2 on your sequencer and enable it for recording.
2) Set the MIDI channel on your keyboard and/or sequencer to MIDI channel 2.
3) Start recording on your sequencer and play your keyboard.
4) Playback your song from the beginning to hear the results.

Recording Part 10 (the Drum Part) to your Sequencer
Any Rhythm Kit in the JV-1080 can be used in a Performance. Part 10 is designated as the drum Part. As such, Part 10 is set to MIDI channel 10. Use the following procedure to record a drum track:

1) Make sure the PERFORM, PARAMETER, PART (4/12), and PALETTE buttons are lit.
2) Press the [1]-[8]/[9]-[16] button, so it is lit. This will display Performance Parts 9 to 16.
3) Use the LEFT/RIGHT CURSOR buttons to select Part 10.
4) Use the UP/DOWN CURSOR buttons to select the "PATCH GROUP" screen. Use the VALUE knob or the DEC/INC buttons to select a Bank (USR, PRA, PRB, PRC, GM).
5) Press the DOWN CURSOR button to select the "PATCH NUMBER" page and use the VALUE knob to select a drum kit (1 or 2).
6) Set the MIDI channel on your keyboard and/or sequencer to MIDI channel 10.
7) Start recording on your sequencer and play your keyboard.
8) Playback your song from the beginning to hear the results.

Naming and Saving a Performance
Now that we have a Performance setup the way we want, let's name it and save it to a User location. Use the following procedure to give your Performance a name:

1) Press PARAMETER, so it is lit, then press the COMMON (1/9) button. Make sure that the PALETTE button is not lit.



2) Use the UP CURSOR button to select the "PERFORM NAME" screen.
3) Use the CURSOR buttons to select the character you wish to change and the VALUE knob to select the desired letter.
4) Press UTILITY.

5) Use the CURSOR buttons to select “WRITE” (it should start to flash).
6) Press ENTER. The destination of your custom Performance (USR: 12 Orchestral) will be displayed.

NOTE: The default destination will always be the User equivalent location of the Preset you started from. Since we started with Preset A:12, the default destination is U:12. If you want to select a different destination, simply turn the VALUE dial to select another User Performance.

PERFORM	Number	[Press ENTER]
WRITE	USR: 12 (Orchestral)	

7) When you have selected the desired destination Performance, press ENTER.

NOTE: If the Write Protect function is turned on, “User Memory Write Protected” may be displayed. This is a safeguard to prevent you from writing over something you wish to keep. To continue the WRITE procedure, press UTILITY. To CANCEL the procedure, press EXIT.

V. Using MIDI to Select Patches on the JV-1080

You can select sounds or drum kits from an external MIDI device (sequencer, controller keyboard, etc.) using Control and Program Change messages. On the JV-1080, Patches, Performances, and Rhythm Kits are selected via MIDI using Bank Select (Control Changes 0 and 32) and Program Change messages. Use the following chart to determine the combination of values needed to select a sound:

Bank Select MSB Value	Bank Select LSB Value	MIDI Bank Select #	Program Change	Patch Group	JV Patch Number
80	0	10,240	0-127	User	#1 - #128
81	0	10,368	0-127	Preset A	1 - 128
81	1	10,369	0-127	Preset B	1 - 128
81	2	10,370	0-127	Preset C	1 - 128
81	3	10,371	0-127	Preset D (GM)	1 - 128
82	0	10,623	0-127	Data Card	1 - 128
83	0	10,624	0-127	PCM Card	1 - 128
84	0	10,752	0-127	Expansion A	1 - 128
84	1	10,753	0-127	Expansion A	129 - 256
84	2	10,754	0-127	Expansion B	1 - 128
84	3	10,755	0-127	Expansion B	129 - 256
84	4	10,756	0-127	Expansion C	1 - 128
84	5	10,757	0-127	Expansion C	129 - 256
84	6	10,758	0-127	Expansion D	1 - 128
84	7	10,759	0-127	Expansion D	129 - 256

Some sequencers do not allow you to define values for Control Change 0 and 32 in an event list. If this is the case, the sequencer will typically require a single Bank Number. The formula for calculating this number is as follows: (Controller 0 value) x 128 + (Controller 32 value). We have provided the Bank Select numbers that apply to the JV-1080 in the third column of the chart above. Use the following examples as a guideline when changing Patches through MIDI:

To access Patch USER: 001 “Symphonique” we need the following messages:

- Controller 0 with a value of 80, Controller 32 with a value of 0, and Program Change 0.

  or

- Bank number 10,240 and Program Change 0.

To access Patch PR-C: 112 “Cascade” we need the following messages:

- Controller 0 with a value of 81, Controller 32 with a value of 2, and Program Change 111.

  or

- Bank number 10,370 and Program Change 111.

VI. Effects and Output Routing

The JV-1080 has 3 independent effects processors. In Patch mode, the amount of each of the three effects can be adjusted for each Tone (4 maximum) in the Patch. In Performance mode, the amount of each of the three effects can be adjusted for each Part in the Performance. The three processors are grouped as follows:

EFX: This is also known as the "insert effects" processor. It allows you to choose between 40 different effects including rotary, distortion, compressor, and stereo EQ. In addition to single effects, this processor includes multiple effects configured in "series" or "parallel." Parallel effects allow you to get a different effect depending on the pan position of your Patch.

REVERB: This processor contains primarily reverb and delay effects.

CHORUS: This processor contains a chorus effect.

The effects parameters for each of these three processors can be different for each Performance. Each of the 16 Parts in a Performance can be routed through all three processors if desired. There are five options for the output routing of each Part:

MIX: This routes the Part (Patch) to the MIX L&R OUTS *without* the INSERT Effects processor.

EFX: This routes the Part (Patch) to the INSERT Effects processor which is then routed to either the MIX Outs, OUTPUT 1, or OUTPUT 2. The output of the EFX processor can also be routed to the REVERB and CHORUS processors.

OUTPUT 1: This routes the Part (Patch) to the OUTPUT 1 L&R OUTS.

OUTPUT 2: This routes the Part (Patch) to the OUTPUT 2 L&R OUTS.

PATCH: This routes the Part (Patch) using the effects and output settings determined for each Tone as the Patch was setup in Patch mode.

NOTE: The amount of REVERB and CHORUS on a given Part is controlled by the REVERB and CHORUS send levels.

Effects Routing

1) Press PERFORM, so it is lit.
2) Press PARAMETER, so it is lit.
3) Press the EFFECTS (2/10) button.
4) Use the UP CURSOR button to access the "PART OUTPUT" screen.
5) Use the RIGHT CURSOR button to select "Output Assign." Use the VALUE knob to select the desired routing.

6) To change the effects routing for other Parts, press PALETTE, so it is lit. This will allow you to view the Insert effect routing for eight Parts at a time. Use the LEFT/RIGHT CURSOR buttons to select the desired Part. Use the [1]-[8]/[9]-[16] button to view Parts 1 – 8 or 9 – 16 respectively.
7) Press the DOWN CURSOR button to access the "OUTPUT LEVEL" screen. Use the DOWN CURSOR button to access the individual REVERB and CHORUS SEND levels for each Part. Use the LEFT/RIGHT CURSOR buttons to select the desired Part and use the VALUE knob to change the level to suit each instrument.

Selecting Effects

Once you've routed a Part to an effects processor, you can choose the type of effects you would like to use.

1) Press PALETTE, so it is not lit.
2) Make sure that the PARAMETER and EFFECTS (2/10) buttons are lit. Use the UP/DOWN CURSOR buttons to select the "PERFORM EFX TYPE" screen.
3) Use the VALUE knob to select the desired Insert effect. Make sure that "PERFORM" is selected under "Source." Keep in mind, you'll only hear this effect on the Parts that have their output assigned to EFX in the previous steps.

4) Press the DOWN CURSOR button until you get to the “PERFORM EFX OUT” screen. Here, you can select the output routing for the Insert effect (and subsequently the Parts whose outputs you’ve routed to EFX) and the overall output level. Use the RIGHT CURSOR button and VALUE knob to adjust the amount of Chorus and Reverb applied after the Insert effect.

5) Use the DOWN CURSOR button to access the “PERFORM CHORUS” screen. Here you can adjust the Chorus parameters to make it suitable for your Performance.
6) Use the DOWN CURSOR button to access the “PERFORM REVERB” screen. Here you can select a Reverb type and adjust the various parameters as desired.

NOTE: Since a Performance allows you to use 16 different Patches at once, you may want to alter the amount of effects (Chorus and Reverb) on a given Part to suit the sound (Patch). Use the procedure on Page 8 to change the effect level individually for each of the Performance Parts. The Insert effect level will be controlled globally by the Level parameter in the” PERFORM EFX PRM” screen for all Parts whose outputs are set to EFX in the “ PART OUTPUT” screen.

Copying the Effects from a Patch to a Performance
The JV-1080 allows you to copy the Effects settings from a Patch to a Performance. This enables you to assign a Patch in a Part (Performance mode) the same effects settings as it has in Patch Mode. This includes the Reverb, Chorus, and Insert effects (EFX) with all their parameters. Use the following procedure to copy the effects from a Patch to a Performance:

1) Press UTILITY.
2) Press the RIGHT CURSOR button to select “COPY” (it will start to flash).
3) Press ENTER.
4) Press the DOWN CURSOR button to access the “PERFORM EFX COPY” screen.
5) Use the LEFT CURSOR button and VALUE knob to set the Source to “PATCH.”
6) Use the RIGHT CURSOR button to select the Patch displayed under “NUMBER”, and use the VALUE knob to select the Patch from which you wish to copy the effects.
7) Press ENTER to copy the effects from the Patch you’ve selected to the current Performance.
8) Press EXIT to return to Performance Play mode.

Once the effects settings are copied to the Performance we need to set the output of the Part to match the output settings of the Patch in Patch Mode.

1) Make sure that the PARAMETER, PALETTE, and EFFECTS (2/10) buttons are lit. Use the UP/DOWN CURSOR buttons to access the “OUTPUT ASSIGN” screen.
2) Use the LEFT/RIGHT CURSOR buttons to select the Part (1-16) that contains the Patch that was used as the effects source in step #6 above.
3) Use the VALUE knob to select PAT.
4) Use the DOWN CURSOR button to select “OUTPUT LEVEL” and use the VALUE knob to select 127.
5) Use the DOWN CURSOR button to select “CHORUS SEND” and use the VALUE knob to select 127.
6) Use the DOWN CURSOR button to select “REVERB SEND” and use the VALUE knob to select 127.
7) Press PALETTE (so it is not lit) and use the CURSOR buttons to access the “PERFORM EFX TYPE” screen.
8) Use the LEFT/RIGHT CURSOR buttons to select “SOURCE” and use the VALUE knob to select “PERFORM.”

VII. System Controllers

As was mentioned in the Effects section, certain effects parameters can be modified in real-time by controllers – adding an additional element of expressiveness to a Performance. These controllers include aftertouch (key pressure), modulation, foot pedal, or a special type called “System Controllers.” “System Controllers” allow you to globally assign a MIDI controller message to one of two System Controller locations. This provides a great deal of flexibility when using external keyboards, pedals, or any other type of MIDI controller. Use the following procedure to assign System Controllers to control the rotary speed on an organ Patch:

1) Press SYSTEM, so it is lit.
2) Press the MIDI (3/11) button, so it is lit.
3) Use the UP/DOWN CURSOR buttons to access the “CONTROL ASSIGN1” screen. Here you can assign a MIDI continuous controller (CC) to either Control 1 or Control 2.

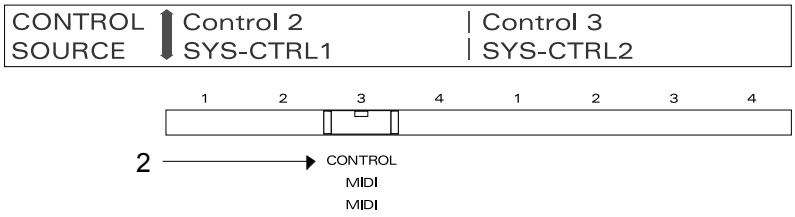
4) Use the LEFT/RIGHT CURSOR buttons to select “Control 1” (the currently assigned parameter will start to flash). Use the VALUE knob to select “CC16:GENERAL-1.” This is a general purpose controller.
5) From Patch Mode, use the VALUE knob to select Patch “PR-A: 051 The Big Spin.”
6) Press the PARAMETER and EFFECTS (3/11) buttons, so they are lit. Make sure that the PALETTE button is not lit.
7) Use the UP/DOWN CURSOR buttons to access the “PATCH EFX CTRL” screen.
8) The two rotary (Leslie speaker) effect parameters that can be controlled in real-time are speed and level. Use the LEFT CURSOR button to underline “MODULATION” (the parameter currently assigned to control the rotary speed) and use the VALUE knob to select “SYS-CTRL1.”
9) Assign a slider (or foot pedal) on your keyboard to transmit controller 16 to the JV-1080, it will control the rotation speed of the Rotary effect.

TIP: *You can assign both speed and level to SYS-CTRL1 so that when you send CC:16 to the JV-1080, the rotary speed and level will change simultaneously.*

NOTE: You can also assign the system controllers to EFX parameters in Performance Mode although you will need to make sure that the MIDI receive channel for the Part you wish to effect is the same as the Control Channel.

Setting-up System Controllers for a Patch
A Patch on the JV-1080 can respond to up to three real-time Control Sources. Control Source 1 is Modulation. Control Sources 2 and 3 are user-assignable. Once you’ve assigned a MIDI Continuous Controller (CC) to a JV-1080 System Controller in System mode (as previously described), you can then assign it to either Control Source 2 or 3 in a Patch. Since we have already assigned a slider (or foot pedal) to transmit CC16, let’s use CC16 to control the cutoff frequency and resonance of a Patch:

1) From Patch Mode, select Patch “PR-B: 054 Syncrosonix.”
2) Press the PARAMETER and CONTROL (3/11) buttons, so they are lit.
3) Use the UP/DOWN CURSOR buttons to access the “CONTROL SOURCE” screen.



4) Use the LEFT/RIGHT CURSOR buttons to select “Control 2” (the parameter that is currently assigned will start to flash). Use the VALUE knob to select “SYS-CTRL 1.”
5) Use the DOWN CURSOR button to access the “CONTROL 2” screen, and “OFF:0 | OFF:0 | OFF:0 | OFF:0” will be displayed. This represents the parameters that will be controlled by SYS-CTRL 1 (CC16). Press the LEFT CURSOR button until the first parameter (OFF) is underlined and use the VALUE knob to select CUT (cutoff).
6) Press the RIGHT CURSOR button so that “0” is underlined and use the VALUE knob to select “+63” (the amount of change for cutoff).
7) Press the RIGHT CURSOR button and use the VALUE knob to select RES (resonance).
8) Press the RIGHT CURSOR button and use the VALUE knob to select “+12” (the amount of change for resonance).
9) Play your keyboard and adjust the slider assigned to CC16 to change the cutoff and resonance.

By now you should have a better understanding of the JV-1080 and how it is used with a MIDI sequencer. We have given you an overview of the JV-1080 architecture and basic operation. In addition, we have shown you how to integrate the JV-1080 with a MIDI sequencer and controller keyboard. Finally, we explained how to route effects and assign system controllers. With a little practice, you will be able to master these topics and use your JV-1080 to its fullest potential.

Roland®

JV-1080

SUPER JV SYNTHESIZER

TurboStart

It's a Fact...

The JV-1080 Super JV Synthesizer module is a powerful instrument based on a 32-bit RISC processor. It is 64-note polyphonic, and offers 16-part multitimbral capability. In addition to its 8 MBytes of onboard ROM waveforms, the user can install up to four 8 MByte Expansion Boards (from the SR-JV80 Series) for a total of 40 MBytes of accessible waveforms. There are 512 preset patches and 128 user patches. The effects include reverb and chorus, plus 40 insert effects, such as rotary speaker, distortion, flanging, phasing, and multi-tap delays.

Initialize

1. Press UTILITY.
2. Use the CURSOR buttons to select FACTORY PRESET, then press ENTER.

Play the ROM Demos

1. Hold SHIFT and press ENTER.
2. Use the VALUE dial to select desired song.
3. Press ENTER to begin play and EXIT to stop.

Selecting Tones

The EM-2000 has 1,161 tones and 43 drum kits. Use the following procedure to select a Tone:

1. If necessary, press GM/GS MODE so it is not lit.
2. Press SELECT under TONE/USER PROGRAM so Tone is lit.
3. Press GROUP under TONE/ USER PROGRAM to select a Tone group (A through E.)
4. Use TONE/ USER PROGRAM 1-8 to select a Tone bank.
5. Use TONE/ USER PROGRAM 1-8 to select a Tone.
6. Press VARIATION ^ / v to select alternate Tones.

Selecting Patches

There are 512 preset patches in the JV-1080 as well as 128 user patches. Any installed expansion boards also have patches that can be accessed directly from the JV-1080's front panel.

1. Press PATCH.
2. Use the USER/CARD, PRESET and EXP buttons to select the desired group of patches.
3. Use the A/B/C/D buttons to determine which bank of patches you wish to use.
4. Use the VALUE dial to choose patches. Notice that turning the dial moves through patches one-by-one, and turning the dial while pressing it in moves through patches in increments of 10.

Editing Patches

1. Press PATCH.
2. Notice that there are four Tone Switch buttons under the display. Any tone(s) that are lit are active in the patch you have chosen. To enable or disable a tone, press its Tone Switch button.
3. Make sure that the Tone Select button is lit to correspond to an active Tone; otherwise, you will not be able to hear any edits that you make.
4. Press PARAMETER—you are now in Edit Mode.
5. Press WAVE (written in orange); this will show you the waveform being used for the selected tone. Notice the arrow in the display; this indicates that you can access more wave parameters by using CURSOR UP or DOWN.
6. All other patch parameters are accessed by pressing a corresponding button (i.e. COMMON, EFFECTS, CONTROL, etc).
7. You can press the PALETTE button at any time to view the selected parameter setting for all four tones simultaneously.

Storing an Edited Patch

To store a modified patch to a user memory location:

1. Press UTILITY.
2. Select WRITE by using the CURSOR buttons.
3. Press ENTER, then turn the VALUE dial to select the desired user patch location.
4. Press ENTER, then press UTILITY.

Sequencing

The JV-1080 is a 16-part multitimbral instrument. There are 64 preset performances and 32 user performances. To select a performance:

1. Press PERFORMANCE.
2. Press USER/CARD or PRESET to choose a performance bank.
3. Turn the VALUE dial to select a performance.

To change a patch for a part, or adjust levels, panning and other part parameters:

1. Press PARAMETER.
2. Press PART (written in blue)—you can now see the patch currently selected for this part.
3. To access the patches for other parts, press PARAMETER again, turning it off. Now you can use the 8 PART SELECT buttons (written in blue) to choose which part you want to edit. The 1-8/9-16 button will choose between Parts 1 through 8 or 9 through 16, respectively.
4. You can select other part parameters by pressing PARAMETER again and then pressing any PERFORMANCE EDIT button written in blue (i.e. COMMON, EFFECTS, MIDI, etc).
5. You can also press the PALETTE button to view the parameter setting for Parts 1-8 or 9-16.

Using the JV-1080 for General MIDI

The Super JV contains all of the sounds required by General MIDI. They are found in Preset Bank D. If you want to play GM sequences through the JV-1080, you can quickly set up all 16 parts for General MIDI by doing the following:

1. Press and hold SHIFT.
2. Press GM.
3. To exit GM mode, press the PERFORMANCE or PATCH buttons.