

# What is MIDI?

MIDI (Musical Instrument Digital Interface) is a worldwide standard for exchanging musical data between electronic musical instruments and computers, etc. MIDI does not handle the “audio” data itself, but instead handles musical performance data and commands in digital form. The digital signals handled by MIDI are referred to as MIDI messages.

## MIDI Connectors

Any devices that have MIDI connectors can be connected via MIDI cables to exchange musical data, regardless of their manufacturer or model.

### REMOTE KBD IN:

This connector receives MIDI messages from an external MIDI device. The MIDI messages which are received at this connector can control RPS or the arpeggiator.

### MIDI IN:

This connector receives MIDI messages from an external MIDI device. RPS and the arpeggiator cannot be controlled via this connector.

### MIDI OUT:

MIDI messages from the JP-8080 are transmitted from this connector.

Musical data produced by MIDI messages received at REMOTE KBD IN are also transmitted from this connector. For example if you play RPS or the arpeggiator, this musical data will be transmitted.

Also, if MIDI Thru is turned ON (ALL), MIDI messages received from MIDI IN will be re-transmitted from this connector without change. If MIDI Thru is ON (w/o SysEx), any exclusive messages will be omitted from the MIDI messages which are re-transmitted.

## MIDI Channels

MIDI is able to transmit many streams of data over a single cable. This is made possible by the concept of “MIDI channels.” There are 16 MIDI channels: 1–16. MIDI messages will be received when the channels of the receiving and transmitting devices match.

On the JP-8080, the MIDI OUT transmit channel and the MIDI IN receive channel are the same. If you set the MIDI channel of the Upper and Lower Parts to match the channel settings of an external MIDI device, MIDI messages can be transmitted and received on that channel. The REMOTE KBD IN receive channel is set by the Remote Keyboard Channel.

## Main MIDI Messages Used by the JP-8080

MIDI includes a wide variety of messages that can be used to convey various types of data. MIDI messages can be broadly classified into those which are handled separately by channel (Channel messages) and those which are handled regardless of channel (System messages). The main types of MIDI message used by the JP-8080 are as follows.

### Channel Messages

These messages are used to convey musical performance operations, and make up the greater part of MIDI messages.

#### ■ Note-on

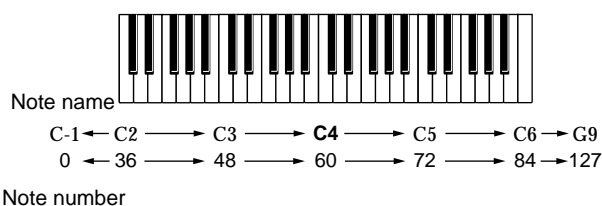
This message is transmitted when a key is played. Each Note-on message includes the following three pieces of data, which are transmitted as one message.

**Note-on:** a key was played

**Note number:** the key (number) that was played

**Velocity:** how strongly (quickly) it was played

Note numbers are expressed as a number in the range of 0–127, with middle C (C4) as 60.



#### ■ Note-off

This message is transmitted when a key is released. When this message is received, the sound for that key will be turned off. Each Note-off message includes the following three pieces of data, which are transmitted as one message.

**Note-off:** a key was released

**Note number:** the key (number) that was released

**Velocity:** how strongly (quickly) it was released

## ■ Pitch Bend Change

This message indicates the position to which the pitch bend lever was moved.

## ■ Aftertouch

This message indicates how strongly pressure was applied to the keyboard after a note was played. There are two types of aftertouch message: Channel Aftertouch which controls an entire channel, and Polyphonic Aftertouch which controls individual notes independently.

On the JP-8080 you can use the Transmit/Receive Setting (p.125) to assign aftertouch to a panel controller.

With the factory settings, the aftertouch message is selected as the control assignment for Control Up. (p.86)

## ■ Program Change

This message is used to select sounds. On the JP-8080, the program numbers 1–128 of this message will select Patches or Performances (p.60, 62).

## ■ Control Change

These messages are used to create musical expression.

On the JP-8080, Bank Select (CC# (Controller Number) 0, CC#32) are used in conjunction with Program Change messages to select Patches or Performances (p.60, 62).

Modulation (CC#1), Pan (CC#10), Expression (CC#11), and Hold (CC#64) can be controlled via pedals or the modulation lever to add expressiveness to your playing (p.87).

A variety of other control change messages can be assigned to various sliders/knobs by the Transmit/Receive Setting (p.125).

## System Messages

This category includes exclusive messages, messages used for synchronization, and messages that keep a MIDI system running correctly.

### ■ Exclusive Messages

Exclusive messages are used to convey information between devices of the same manufacturer and model (or compatible model), so that data unique to these devices (such as sound data settings) can be exchanged.

If MIDI could be used only to convey messages that were defined in the MIDI specification, it would not be possible to convey messages unique to a manufacturer or unique to a particular instrument. Thus, each manufacturer defines its own exclusive message format, and uses this format to convey proprietary data.

On the JP-8080, Transmit/Receive Setting (p.125) allow exclusive messages to be assigned to the sliders/knobs. Also, exclusive messages can be used to transmit data such as Patch settings to a sequencer for storage ("Saving Settings on an External Sequencer (Bulk Dump)" p.137).

### ● About the MIDI Implementation Chart

MIDI handles a wide variety of performance-related messages, but the types of messages that can be transmitted or received by each type of device will differ. The MIDI Implementation Chart that is included in the owner's manual of every MIDI device tells you at a glance which types of MIDI message can be transmitted and received by that particular device. Message types marked by "O" in both charts can be exchanged between the two devices.

# Troubleshooting

If there is no sound, or if the instrument does not operate the way that you expect, check the following points first. If this does not resolve the problem, contact your dealer or a nearby Roland service center.

\* Roland will take no responsibility for the recovery of any settings or data, nor for any damages incurred thereby.

## Power does not turn on

- **Is the Power cord connected correctly to the JP-8080 and to an AC outlet?**

Check the Power cord connections.

## No sound/Volume is low

- **Is the power of the connected devices turned on?**  
Make sure that the power of your amp or mixer system is turned on.
- **Is the volume turned down?**  
Check the volume of the JP-8080 and of the connected amp or mixer.
- **Is there sound in the headphones?**  
If there is sound in the headphones, it is possible that the connection cables are broken, or that the amp or mixer is malfunctioning. Check the connection cables and your other equipment once again.
- **Is the Demo Song playback selected?**  
Press [EXIT] to exit Demo Song playback mode (p.121).
- **Is the Local Switch turned OFF?**  
Turn the Local Switch ON (p.122).
- **Are the AMP section levels at a low setting?**  
Check the [LEVEL] settings of the AMP section (p.76).
- **Is the Sustain level of the AMP ENVELOPE section set too low?**  
Check the [S] setting of the AMP ENVELOPE section (p.76).
- **Is the frequency of the FILTER section set too low?**  
Check the [CUTOFF FREQ] setting of the FILTER section (p.73).
- **Is the rate of the LFO1 section set to slow?**  
Check the [RATE] setting of the LFO1 section (p.77).

- **Have volume messages been received from an external MIDI device to lower the volume?**

Check the volume.

- **Do the transmit channel and the receive channel match?**

Make sure that the transmit and receive channels of the JP-8080 and the external MIDI device match (p.118, 124).

- **Is the Individual Trigger Switch turned ON?**

Turn the Individual Trigger Switch OFF (p.116).

- **Is the External Trigger Switch turned ON?**

Turn the External Trigger Switch OFF (p.121).

## No sound even though you are inputting an external sound

- **Has the volume of the external device been turned down?**  
Check the volume of the connected external device.
- **Has the level of the EXTERNAL INPUT section [INST/LOWER]/[VOCAL/UPPER] been turned down?**  
Check the setting of the EXTERNAL INPUT section [INST/LOWER]/[VOCAL/UPPER] (p.71).
- **Is the EXTERNAL INPUT section [REAR/FRONT] set correctly?**  
If inputting from the VOCAL/UPPER jack, turn this off (REAR). If inputting from the MIC jack, turn this on (FRONT) (p.71).
- **Has the OSC 2 section [EXT] been turned off?**  
If inputting from the INST/LOWER jack, turn the Lower [EXT] on. If inputting from the VOCAL/UPPER jack, turn the Upper [EXT] on (p.71).
- **Has the OSC COMMON section [OSC BALANCE] been set to the OSC 1 position?**  
If inputting from the INST/LOWER jack, set the Lower [OSC BALANCE] to the OSC 2 position. If inputting from the VOCAL/UPPER jack, set the Upper [OSC BALANCE] to the OSC 2 position (p.71).

- **Has the OSC 2 section [CONTROL 1] (GATE THRESHOLD) been increased?**

If inputting from the INST/LOWER jack, check the setting of the Lower OSC 2 [CONTROL 1]. If inputting from the VOCAL/UPPER jack, check the setting of the Upper OSC 2 [CONTROL 1] (p.71).

- **Are PANEL SELECT and KEY MODE set correctly?**  
Think about the part into which you are inputting the external sound, and the part whose sound you wish to use, and check the settings of PANEL SELECT and KEY MODE (p.60).
- **Are note-on messages not being received?**  
If [EXT] is on and an external sound is being input, sound will be heard only while note-on messages are received, in the same way as when the OSC2 waveform is selected.

## Formant Filter does not function

- **Has the VOICE MODULATOR section [ON] been turned off?**  
Turn on the VOICE MODULATOR section [ON] (p.105).
- **Is the mic switch off?**  
Turn on the mic switch.
- **Has the EXTERNAL INPUT section [VOCAL/UPPER] level been turned down?**  
Check the setting of the EXTERNAL INPUT section [VOCAL/UPPER] (p.106).
- **Is the EXTERNAL INPUT section [REAR/FRONT] set correctly?**  
If inputting from the VOCAL/UPPER jack, turn this off (REAR). If inputting from the MIC jack, turn this on (FRONT) (p.106).
- **Has Ext->Vocal Send been turned off?**  
Turn on Ext->Vocal Send (p.109).
- **Has [VOICE MOD SEND] been turned off?**  
When inputting the sound of the Upper patch or Lower patch into the Voice Modulator, turn on the [VOICE MOD SEND] of each part (p.105).
- **Has Ext->Inst Send been turned off?**  
When inputting sound from the INST/LOWER jack directly into the Voice Modulator, turn this on (p.109).
- **Is the Algorithm set correctly?**  
For the formant filter, set this to "SOLID," "SMOOTH," or "WIDE" (p.108).

- **Are a human voice and an instrumental sound not being input simultaneously?**

In order to use the formant filter, you must input both a human voice and an instrumental sound simultaneously (p.103).

- **Has the gate threshold been raised?**  
Select the Voice Modulator panel, and check the [GATE THRESHOLD] setting (p.113).
- **Are PANEL SELECT and KEY MODE set correctly?**  
Keeping in mind the part whose sound you wish to use, check the PANEL SELECT and KEY MODE settings (p.60).

## Filter Bank does not function

- **Has the VOICE MODULATOR section [ON] been turned off?**  
Turn on the VOICE MODULATOR section [ON] (p.105).
- **Has the [VOICE MOD SEND] been turned off?**  
If you are inputting the sound of the Upper patch or Lower patch into the Voice Modulator, turn on the [VOICE MOD SEND] of each part (p.105).
- **Has Ext->Inst Send been turned off?**  
If you want the sound from the INST/LOWER jack to be input directly to the Voice Modulator, turn this on (p.109).
- **Has Ext->Vocal Send been turned off?**  
If you want the sound from the VOCAL/UPPER jack or MIC jack to be input directly to the Voice Modulator, turn this on (p.109).
- **Is the EXTERNAL INPUT section [REAR/FRONT] set correctly?**  
If inputting from the VOCAL/UPPER jack, turn this off (REAR). If inputting from the MIC jack, turn this on (FRONT) (p.106).
- **Is the algorithm set correctly?**  
When using the filter bank, set this to either "FLT BANK WIDE" or "FLT BANK NARROW" (p.108).
- **Are PANEL SELECT and KEY MODE set correctly?**  
Keep in mind the part whose sound you wish to use, and check the PANEL SELECT and KEY MODE settings (p.60).

## Vocal Morph Control does not function

- **Has the VOICE MODULATOR section [ON] been turned off?**  
Turn on the VOICE MODULATOR section [ON] (p.105).
- **Is the mic switch off?**  
Turn on the mic switch.
- **Has the EXTERNAL INPUT section [VOCAL/UPPER] level been turned down?**  
Check the setting of the EXTERNAL INPUT section [VOCAL/UPPER] (p.106).
- **Is the EXTERNAL INPUT section [REAR/FRONT] set correctly?**  
If inputting from the VOCAL/UPPER jack, turn this off (REAR). If inputting from the MIC jack, turn this on (FRONT) (p.106).
- **Has Ext->Vocal Send been turned off?**  
Turn on Ext->Vocal Send (p.109).
- **Have you specified the width of parameter change for Vocal Morph Control?**  
Specify the width of parameter change (p.84).

## The external input sound is heard mixed with the sound of the JP-8080

When using the formant filter or the filter bank, some settings may cause the external input sound to be heard mixed with the sound of the JP-8080.

- **I want to use only the sound of the JP-8080**
- **Has Ext->Inst Send been turned on?**  
Turn off Ext->Inst Send (p.109).  
If you wish to leave Ext->Inst Send turned on, set the EXTERNAL INPUT section [INST/LOWER] to the minimum position (p.106), or turn the volume of the external device to the minimum position.
- **Has Ext->Vocal Send been turned on? (only for Filter Bank)**  
Turn off Ext->Vocal Send (p.109).  
If you wish to leave Ext->Vocal Send turned on, set the EXTERNAL INPUT section [VOCAL/UPPER] to the minimum position (p.106), or turn the volume of the external device to the minimum position.

- **I want to use only the external sound synthesized by the JP-8080.**
- **Turn off Ext->Inst Send?**  
Turn off Ext->Inst Send (p.109).
- **Has Ext->Vocal Send been turned on? (only for Filter Bank)**  
Turn off Ext->Vocal Send (p.109).
- **I want to input the external sound directly to the Voice Modulator.**
- **Are note-on messages being received?**  
If note-on messages are received, the sound of the JP-8080 will always be heard. Make sure that note-on messages are not received.  
Alternatively, set the AMP section [LEVEL] to the minimum value for the corresponding part, so that the JP-8080 sound will not be heard (p.76).

## Pitch is wrong

- **Are the Range settings of the OSC2 section correct?**  
Check the [RANGE] settings of the OSC2 section (p.69).
- **Are the Fine tune/Wide settings of the OSC2 section correct?**  
Check the [FINE/WIDE] settings of the OSC2 section (p.69).
- **Is the Part Transpose setting correct?**  
Check the Part Transpose Setting (p.88).
- **Is the Master Tune setting correct?**  
Check the Master Tune setting (p.126).
- **Has a Pitch Bend message been received from an external device, leaving the pitch “hanging”?**  
Try moving the pitch bend lever of the connected MIDI keyboard.

## Cannot select sounds

- **Is the Local Switch OFF?**  
Turn the Local Switch ON (p.122).
- **Is the Program Change Transmit/Receive Switch OFF?**  
Turn the Program Change Transmit/Receive Switch ON (p.125).

## Notes drop out (are broken off)

- **Is Mono/Legato/Unison selected?**

When Mono, Legato or Unison is selected, only one note at a time will sound even if two or more keys are pressed. If you wish to play two or more notes at a time, press [MONO], [LEGATO] or [UNISON] to make the indicator go dark, selecting Poly (p.80).

- **Is the OSC1 section [WAVEFORM] set to FEEDBACK OSC?**

If the OSC1 section [WAVEFORM] is set to FEEDBACK OSC, the Mono or Legato switch will be set to on. If you wish to play two or more notes at a time, set the OSC1 section [WAVEFORM] to the waveform except FEEDBACK OSC (p.67).

- **Is the maximum simultaneous polyphony being exceeded?**

The JP-8080 can produce up to 10 simultaneous notes (voices) when the Voice Modulator is off, and up to 8 notes (voices) when the Voice Modulator is on. No more notes than this can be sounded at once.

## Sound is cracked (distorted)

- **Is the level of the AMP section set to high?**

Check the [LEVEL] setting of the AMP section (p.76).

- **Has the Patch Gain been set to +6dB or +12dB?**

Set the Patch Gain to 0 (p.121).

## Click is heard when key is pressed / released

For some sounds, a click or “blip” noise may be heard when a key is pressed or released. (This will be noticeable for some sounds but not for others.) This is due to extremely fast Attack Time or Release Time settings for the filter/amplifier, and is useful for creating the click sound of an organ attack.

If you want to avoid the click sound, raise the Attack Time and Release Time settings of the filter section and amplifier section, and lower the Envelope Depth of the filter section.

## MIDI messages are not transmitted / received correctly

- **Are the various MIDI channel settings correct?**

Check the Remote Keyboard Channel, Part MIDI channel and Performance Control channel settings (p.118, 124).

- **Are the various transmit/receive switch settings correct?**

Check the settings of the Program Change Transmit/Receive Switch (p.125) and the Exclusive Receive Switch (p.124).

- **Is the Device ID Number setting correct?**

Set the Device ID Number that was used when recording the exclusive data to the sequencer (p.123).

- **Is the Bulk Dump setting (type) correct?**

Check the Bulk Dump setting (p.137).

- **Is the sequencer being played back at a correct tempo?**

Playback the sequencer at the tempo that was used when recording the exclusive data (p.138).

# Error Messages

If an incorrect operation is performed or if the operation cannot be executed correctly, an error message will be displayed.

Refer to the explanations below and take the appropriate action.

## Battery Low!

- The internal backup battery (the battery which maintains the data in the user memory) is running down.
- **Contact your dealer or a nearby Roland service center to have the battery replaced.**

## Can't Change Data on Card!

- Since memory card data (RPS) is selected, it was not possible to execute the Factory Preset operation.
- **Select internal data (RPS), and then execute the Factory Reset operation.**

## Can't Record Data on Card!

- Since a data (RPS or Motion Control) on memory card was selected, it was not possible to enter record-ready mode.
- **Select an internal data (RPS or Motion Control), and then enter record-ready mode (p.95, 101).**

## Card Damaged!

- The card is damaged.
- **Either the memory card has reached the end of its lifespan, or has been damaged for some reason. Please purchase a new memory card.**

## Card Data Empty!

- You attempted to select a type of data (performance, patch, RPS pattern, motion control, or system setup) which had never been saved to the memory card.
- **Save data to the memory card before selecting it.**

## Card Memory Full!

- Since there was insufficient capacity on the memory card, it was not possible to store a motion control or pattern. Since motion controls and patterns share the same memory area on a memory card, it may be impossible to write an additional motion control or pattern if the card already contains motion controls or patterns which occupy a large amount of memory.
- **Delete unneeded motions or patterns from the memory card (p.133).**

## Card Not Ready!

- A memory card is not inserted into the card slot. Alternatively, the card is not inserted all the way into the slot.
- **Turn the power off, and insert one of the recommended memory cards all the way into the card slot.**

## Check Sum Error!

- Exclusive data was not received correctly. It is possible that the Check Sum value was incorrect, or there is something wrong with the MIDI cable.
- **Check the value of the Check Sum. If it is incorrect, correct the value and re-do the operation.**

If the Check Sum in the transmitted data is correct, take the following procedure.

- **Try the operation once again using a different MIDI cable as short as possible.**
- **If another MIDI device (such as a device with a MIDI Thru function) is connected between the transmitting device and the JP-8080 (receiving device), disconnect that MIDI device, and connect the transmitting device and the JP-8080 (receiving device) directly. Then try the operation once again.**

If the same error message appears in spite of this, contact a nearby qualified Roland service personnel.

### Memory Card Protected!

- Since a write protect sticker is affixed to the memory card, data could not be saved to the memory card.
- **Remove the write protect sticker from the memory card.**

### Memory Damaged!

- The data in user memory has been damaged.
- **Contact your dealer or a nearby Roland service center to repair.**

### Memory Full!

- User memory is full, and further recording or editing is not possible.
- **Delete unneeded data (p.97, 102).**

### MIDI Buffer Full!

- More MIDI data was received at once than could be handled by the JP-8080.
- **Reduce the amount of MIDI data that is being received by the JP-8080.**

### MIDI Off Line!

- There is a problem with the MIDI cable connection.
- **Check that the MIDI cable has not been disconnected or broken.**

### Not Available in V.Mod Panel!

- When the Voice Modulator panel was selected, you moved an invalid slider/knob or pressed an invalid button.
- **When the Voice Modulator panel is selected, only the sliders/knobs/buttons labeled in blue characters are valid. (With the exception of the EFFECTS section [VOICE MOD SEND].) (p.111)**

### Rx Data Error!

- MIDI messages could not be received correctly.
- **If this error message appears repeatedly, there is a problem with the content of the MIDI messages.**

### Wrong Card!

- The manufacturer/type of the memory card is not one that is specified for the JP-8080.
- **Please use either an S2M-5 (2 M byte) or an S4M-5 (4 M byte) memory card (p.128).**
- The memory card has not been formatted for the JP-8080.
- **Format the memory card (p.129).**
- It is possible that the contents of the memory card have been damaged.
- **Format the memory card (p.129).**
- The card does not contain JP-8080 data.
- **Use a card which contains JP-8080 data.**



# Performance List

## ■ Preset1 (CC# = 51H, CC#32 = 00H)

No. (PC#)	Performance Name	Lower Patch Name	Upper Patch Name
P1:11 (001)	Chariots	Chariots L	Chariots U
P1:12 (002)	Fizzoid Bass	Fizzoid Bass L	Fizzoid Bass U ★★
P1:13 (003)	Skreachy	Skreachy L	Skreachy U
P1:14 (004)	Feedback Lead	INIT PATCH	Feedback Lead U ★★
P1:15 (005)	Trancer	Trancer L ★★	Trancer U
P1:16 (006)	Whisper	Whisper L	Whisper U
P1:17 (007)	Dance Split	Dance Split L	Dance Split U
P1:18 (008)	Comb Strings	Comb Strings L	Comb Strings U
P1:21 (009)	Descender	Descender L	Descender U
P1:22 (010)	Glass Columns	Glass Columns L ★	Glass Columns U
P1:23 (011)	BPM Pulsating	BPM Pulse L	BPM Pulse U
P1:24 (012)	1979!	1979 L	1979 U
P1:25 (013)	Elliptical	Elliptical L	Elliptical U
P1:26 (014)	MKS80 Bell/Space	MKS80Bell/SpaceL	MKS80Bell/SpaceU
P1:27 (015)	Legato TB-303	Legato TB-303 L ★	Legato TB-303 U ★★
P1:28 (016)	Massive Pad	Massive Pad L	Massive Pad U
P1:31 (017)	AKS Sweep	AKS Sweep L ★	AKS Sweep U
P1:32 (018)	Sweepers	Sweepers L	Sweepers U
P1:33 (019)	Juliano	Juliano L	Juliano U
P1:34 (020)	Stargate	Stargate L	Stargate U
P1:35 (021)	Dual Mini's	Dual Mini's L ★★	Dual Mini's U ★★
P1:36 (022)	Spacescapes	Spacescapes L	Spacescapes U
P1:37 (023)	Trance Floor	Trance Floor L	Trance Floor U
P1:38 (024)	Arctic E-know	INIT PATCH	Arctic E-know U
P1:41 (025)	Smooth Split	Smooth Split L ★★	Smooth Split U ★★
P1:42 (026)	Fanfare	Fanfare L	Fanfare U
P1:43 (027)	Touchy Alarmist	TouchyAlarmist L	TouchyAlarmist U
P1:44 (028)	Last Emperor	Last Emperor L	Last Emperor U ★★
P1:45 (029)	Euroneuro	Euroneuro L	Euroneuro U
P1:46 (030)	Babylon	Babylon L	Babylon U
P1:47 (031)	Str/Whistle	Str/Whistle L	Str/Whistle U ★★
P1:48 (032)	Back To The 60's	BackToThe60's L	BackToThe60's U

No. (PC#)	Performance Name	Lower Patch Name	Upper Patch Name
P1:51 (033)	Wicked	Wicked L ★★	Wicked U ★★
P1:52 (034)	Velo NRG	Velo NRG L ★★	Velo NRG U
P1:53 (035)	Circuit Bent	Circuit Bent L	Circuit Bent U
P1:54 (036)	Arpegg<>Juno Pad	Arp<>Juno Pad L ★	Arp<>Juno Pad U
P1:55 (037)	Didjeribbon	Didjeribbon L ★★	Didjeribbon U ★★
P1:56 (038)	Faze Strings	Faze Strings L	Faze Strings U
P1:57 (039)	Dual SynthKlavs	DualSynthKlavs L	DualSynthKlavs U
P1:58 (040)	Pulsing Sweep	Pulsing Sweep L	Pulsing Sweep U
P1:61 (041)	Mini 5th	Mini 5th L ★★	Mini 5th U ★★
P1:62 (042)	Tubular	Tubular L	Tubular U
P1:63 (043)	Synthboy Split	Synthboy Split L ★★	Synthboy Split U
P1:64 (044)	Water Orchestra	WaterOrchestra L	WaterOrchestra U
P1:65 (045)	Split of 5ths	Split of 5ths L ★★	Split of 5ths U
P1:66 (046)	Road To Goa	Road To Goa L ★★	Road To Goa U ★
P1:67 (047)	Rain Drops	Rain Drops L	Rain Drops U
P1:68 (048)	Wide Quark Rings	WideQuarkRings L	WideQuarkRings U
P1:71 (049)	Tritouch Layer	Tritouch Layer L	Tritouch Layer U
P1:72 (050)	Aquapeggios	Aquapeggios L	Aquapeggios U
P1:73 (051)	OB Eight	OB Eight L	OB Eight U
P1:74 (052)	Swynk	Swynk L ★	Swynk U
P1:75 (053)	GR-300 Solo	GR-300 Solo L ★	GR-300 Solo U ★
P1:76 (054)	Ring Split	Ring Split L	Ring Split U
P1:77 (055)	Observatory	Observatory L	Observatory U
P1:78 (056)	Tron Strings	Tron Strings L	Tron Strings U
P1:81 (057)	Mirror Balls	Mirror Balls L	Mirror Balls U
P1:82 (058)	Entropy	Entropy L	Entropy U
P1:83 (059)	Template1 ♦	Tmp1:Trig Src.	Tmp1:Trig Dst.
P1:84 (060)	Template2	Tmp2:ChorusSync	Tmp2:DelaySync
P1:85 (061)	Template3	INIT PATCH	Tmp3:LFO Sync
P1:86 (062)	Template4	Tmp4:Lower	Tmp4:Upper ★★
P1:87 (063)	Template5	Tmp5:Lower	Tmp5:Upper
P1:88 (064)	Template6	Tmp6:Lower	Tmp6:Upper

♦: Indiv Trig Switch = ON (p.116)

★: MONO

★★: LEGATO

\* About P1: 83 (Template1)–P1: 88 (Template6), refer to page 16 in the owner's manual.

\* P1: 83 (Template1) is a sound which uses the Individual Trigger function. It is effective to press a key below B3 and play chords in the Upper part.

### Bank Select table

PERFORM	CC#0	CC#32
USER	50H	00H
PRESET1	51H	00H
PRESET2	51H	01H
PRESET3	51H	02H
CARD01	52H	00H
:	:	:
CARD32	52H	1FH
:	:	:
CARD64	52H	3FH

\* In the case of a S2M-5 (2M bytes) memory card these will be CARD01–32; in the case of a S4M-5 (4M bytes) card these will be CARD01–64.

## ■ Preset2 (CC# = 51H, CC#32 = 01H)

No. (PC#)	Performance Name	Lower Patch Name	Upper Patch Name	No. (PC#)	Performance Name	Lower Patch Name	Upper Patch Name
P2:11 (001)	Sand Storm	Sand Storm L	Sand Storm U	P2:51 (033)	Danger Zone	Danger Zone L	Danger Zone U
P2:12 (002)	Morph Trance	Morph Trance L	Morph Trance U	P2:52 (034)	Space Drum	Space Drum L ★	Space Drum U
P2:13 (003)	Jay Age Syncope	JayAgeSyncope L ★★	JayAgeSyncope U ★	P2:53 (035)	Unison Bass	Unison Bass L	Unison Bass U ☆
P2:14 (004)	Hard Sync	Hard Sync L	Hard Sync U	P2:54 (036)	Bio Feedback	Bio Feedback L ★	Bio Feedback U ★★
P2:15 (005)	Paradise Pad	Paradise Pad L	Paradise Pad U	P2:55 (037)	Brassy Strings	Brassy Strings L	Brassy Strings U
P2:16 (006)	Sonar	Sonar L	Sonar U	P2:56 (038)	High Tides	High Tides L	High Tides U
P2:17 (007)	Ambient Strings	AmbientStrings L	AmbientStrings U	P2:57 (039)	Club Chord	Club Chord L	Club Chord U
P2:18 (008)	Outland	Outland L	Outland U	P2:58 (040)	Battlefield	Battlefield L	Battlefield U
P2:21 (009)	Reezo Pad	Reezo Pad L	Reezo Pad U	P2:61 (041)	Morphecho	Morphecho L	Morphecho U
P2:22 (010)	Groove 4U	Groove 4U L	Groove 4U U	P2:62 (042)	Ambient Bassline	AmbientBasslineL	AmbientBasslineU
P2:23 (011)	Distorted TB	Distorted TB L ★	Distorted TB U ★★	P2:63 (043)	Fat Bass Synth	Fat Bass Synth L	Fat Bass Synth U
P2:24 (012)	Guitar Killer	Guitar Killer L	Guitar Killer U	P2:64 (044)	Slim Fuzz	Slim Fuzz L ★★	Slim Fuzz U ★★
P2:25 (013)	Click Strings	Click Strings L	Click Strings U	P2:65 (045)	Cosmic Strings	Cosmic Strings L	Cosmic Strings U ★
P2:26 (014)	Divin'	Divin' L	Divin' U	P2:66 (046)	Trance Pulses	Trance Pulses L ★	Trance Pulses U
P2:27 (015)	Letterbox	Letterbox L	Letterbox U	P2:67 (047)	Hybrid Bass	Hybrid Bass L ★★	Hybrid Bass U ★
P2:28 (016)	Pool	Pool L	Pool U	P2:68 (048)	Den	Den L	Den U ★★
P2:31 (017)	Quasar	Quasar L	Quasar U	P2:71 (049)	Wide Synbrass	Wide Synbrass L	Wide Synbrass U
P2:32 (018)	Contact	Contact L	Contact U	P2:72 (050)	Meteor	Meteor L	Meteor U
P2:33 (019)	Throb	Throb L	Throb U ★	P2:73 (051)	Staccato Synth	Staccato Synth L	Staccato Synth U
P2:34 (020)	Sync Detune	Sync Detune L	Sync Detune U ★★ ☆	P2:74 (052)	Splitter	Splitter L ★★	Splitter U
P2:35 (021)	Down 2 Earth	Down 2 Earth L	Down 2 Earth U	P2:75 (053)	Raving Dutchman	RavingDutchman L	RavingDutchman U
P2:36 (022)	Cherry Blossom	Cherry Blossom L	Cherry Blossom U ★	P2:76 (054)	Burn	Burn L	Burn U
P2:37 (023)	LullabyLand	LullabyLand L	LullabyLand U	P2:77 (055)	Methods ofMayday	MethodsofMaydayL ★	MethodsofMaydayU ★
P2:38 (024)	Morph RSS	Morph RSS L	Morph RSS U	P2:78 (056)	No Arpeggio!	No Arpeggio! L	No Arpeggio! U
P2:41 (025)	Scape	Scape L	Scape U	P2:81 (057)	VOCAL MORPH FBK	VOCALMORPH FBK L	VOCALMORPH FBK U★
P2:42 (026)	One finger Rave	Onefinger Rave L	Onefinger Rave U	P2:82 (058)	FILTER BANK	FILTER BANK L	FILTER BANK U
P2:43 (027)	Talking Bass	Talking Bass L ★★	Talking Bass U ★	P2:83 (059)	VOICE + ARPEGGIO	VOICE + ARPGIO L	VOICE + ARPGIO U
P2:44 (028)	Lite Lead	Lite Lead L	Lite Lead U ★★	P2:84 (060)	ROBOT VOICE	ROBOT VOICE L	ROBOT VOICE U
P2:45 (029)	Riff Synth	Riff Synth L	Riff Synth U	P2:85 (061)	RPS + VOICE MD	RPS + VOICE MD L	RPS + VOICE MD U
P2:46 (030)	Two Tribes	Two Tribes L	Two Tribes U	P2:86 (062)	FORMANT FILTER	FORMANT FILTER L	FORMANT FILTER U
P2:47 (031)	Trance Mission ◆	Trance Mission L	Trance Mission U	P2:87 (063)	AUDIO SYNTHESIS	AUDIO SYNTHESIS L ★	AUDIO SYNTHESIS U ★
P2:48 (032)	Hold it!	Hold it! L	Hold it! U	P2:88 (064)	With MC-505	With MC-505 L ★★	With MC-505 U ★

◆: Indiv Trig Switch = ON (p.116)

★: MONO

★★: LEGATO

☆: UNISON

\* When the JP-8080 is shipped from the factory, the User Performances contain the same settings as the correspondingly-numbered Preset2 Performances.

\* About P2: 81(VOCAL MORPH FBK), P2: 82 (FILTER BANK), P2: 86 (FORMANT FILTER), P2: 87 (AUDIO SYNTHESIS), P2: 88 (With MC-505), refer to page 16 in the owner's manual.

\* P2: 47 (Trance Mission) is a sound which uses the Individual Trigger function. It is effective to press a key below B2 and play chords in the Upper part.

## ■ Preset3 (CC# = 51H, CC#32 = 02H)

No. (PC#)	Performance Name	Lower Patch Name	Upper Patch Name	No. (PC#)	Performance Name	Lower Patch Name	Upper Patch Name
P3:11 (001)	PlyLowC,ThenChrd ◆	PlyLoCthenChrd L	PlyLoCthenChrd U	P3:51 (033)	Fommrujebo	Fommrujebo L	Fommrujebo U
P3:12 (002)	Str/Onde	Str/Onde L	Str/Onde U ★★	P3:52 (034)	Deviant	Deviant L	Deviant U ★★
P3:13 (003)	La Fiesta	La Fiesta L	La Fiesta U	P3:53 (035)	Swallowtail	Swallowtail L ★	Swallowtail U ★
P3:14 (004)	Pad<=>Feedbacky	Pad<=>FeedbackyL	Pad<=>FeedbackyU ★	P3:54 (036)	Adrenaline II	Adrenaline II L	Adrenaline II U
P3:15 (005)	Garage Chord	Garage Chord L	Garage Chord U	P3:55 (037)	Minor Seven	Minor Seven L	Minor Seven U
P3:16 (006)	Rich Strings	Rich Strings L	Rich Strings U	P3:56 (038)	Atomic Split	Atomic Split L ★★	Atomic Split U
P3:17 (007)	Nova	Nova L	Nova U	P3:57 (039)	Perc Clavi&Bass	Perc Clavi&BassL ★	Perc Clavi&BassU
P3:18 (008)	Ghost Sine	Ghost Sine L	Ghost Sine U	P3:58 (040)	X hits the spot.	X hitsTheSpot. L	X hitsTheSpot. U
P3:21 (009)	Experience	Experience L	Experience U	P3:61 (041)	Move your S	Move your S L ★★	Move your S U ★
P3:22 (010)	Tresor of Age	Tresor of Age L	Tresor of Age U	P3:62 (042)	Arpeg<>Dream Pad	Arpeg<>DreamPadL	Arpeg<>DreamPadU
P3:23 (011)	Love Rise	Love Rise L	Love Rise U	P3:63 (043)	Animated Audio	Animated Audio L	Animated Audio U
P3:24 (012)	Vive la Goa	Vive la Goa L	Vive la Goa U ★★	P3:64 (044)	Blip Pad	Blip Pad L	Blip Pad U
P3:25 (013)	Rasta Blaster	Rasta Blaster L	Rasta Blaster U	P3:65 (045)	Bells of Life	Bells of Life L	Bells of Life U
P3:26 (014)	Fiberoptics	Fiberoptics L	Fiberoptics U	P3:66 (046)	Eros Synth	Eros Synth L	Eros Synth U
P3:27 (015)	Soft Techno	Soft Techno L ★★	Soft Techno U	P3:67 (047)	Cosmic Terror	Cosmic Terror L	Cosmic Terror U
P3:28 (016)	Miditation Zone	Miditation ZoneL	Miditation ZoneU	P3:68 (048)	Mechanic Love	Mechnic Love L	Mechnic Love U
P3:31 (017)	Tunnel of Pirate	TunnelofPirate L	TunnelofPirate U	P3:71 (049)	Arpeggiatornado	ArpeggiatornadoL	ArpeggiatornadoU
P3:32 (018)	Ambi Split	Ambi Split L	Ambi Split U	P3:72 (050)	Dimension 8000	Dimension 8000 L	Dimension 8000 U
P3:33 (019)	Phenomena	Phenomena L	Phenomena U ★	P3:73 (051)	Dirty at Work	Dirty at Work L	Dirty at Work U
P3:34 (020)	Dreamboat	Dreamboat L	Dreamboat U	P3:74 (052)	Pizz Bass	Pizz Bass L	Pizz Bass U
P3:35 (021)	Dance 7th	Dance 7th L	Dance 7th U ★	P3:75 (053)	Euro Percussion2	EuroPercussion2L	EuroPercussion2U
P3:36 (022)	Euro Synchro	Euro Synchro L	Euro Synchro U	P3:76 (054)	Suspense	Suspense L	Suspense U
P3:37 (023)	Maniac	Maniac L	Maniac U	P3:77 (055)	Nautilus	Nautilus L	Nautilus U
P3:38 (024)	Birdy Sweep	Birdy Sweep L ★	Birdy Sweep U	P3:78 (056)	LFO Boy	LFO Boy L	LFO Boy U
P3:41 (025)	L:rhythm R:chord ◆	L:rhyM R:chrd L	L:rhyM R:chrd U	P3:81 (057)	Arpttrigger C2 ◆	Arpttrigger C2 L	Arpttrigger C2 U
P3:42 (026)	Talisman	Talisman L	Talisman U	P3:82 (058)	Arlequin	Arlequin L	Arlequin U
P3:43 (027)	Avengers	Avengers L	Avengers U	P3:83 (059)	Our Friend Digit	Our FriendDigitL	Our FriendDigitU
P3:44 (028)	Eastern Dawn	Eastern Dawn L	Eastern Dawn U ★★	P3:84 (060)	Compu Bass	Compu Bass L	Compu Bass U ★★
P3:45 (029)	Bounce	Bounce L	Bounce U ★★	P3:85 (061)	FM System	FM System L	FM System U
P3:46 (030)	Big Analog	Big Analog L	Big Analog U	P3:86 (062)	Meditate	Meditate L	Meditate U
P3:47 (031)	Top Organ	Top Organ L	Top Organ U	P3:87 (063)	Arp Perc	Arp Perc L	Arp Perc U ★
P3:48 (032)	Signals	Signals L	Signals U	P3:88 (064)	Octopus Garden	Octopus Garden L	Octopus Garden U

◆: Indiv Trig Switch = ON (p.116)

★: MONO

★★: LEGATO

\* P3: 11 (PlyLowC,ThenChrd), P3: 41 (L: rhythm R:chord), and P3: 81(Arptrogger C2) are sounds which use the Individual Trigger function. For P3: 11 and P3: 81, it is effective to press a key below C2 and play chords in the Upper part. For P3: 41, it is effective to play rhythm in the Lower part and chords in the Upper part.

# Patch List

## ■ Preset1 (CC# = 51H, CC#32 = 00H)

No. (PC#) Patch Name	No. (PC#) Patch Name	No. (PC#) Patch Name	No. (PC#) Patch Name
P1:A11 (001) Spit'n Slide Bs ★★	P1:A51 (033) Intervalic ★★	P1:B11 (065) Whammy Mammy ★★	P1:B51 (097) Stargate
P1:A12 (002) Velo Decay Bass ★★	P1:A52 (034) Squared Away	P1:B12 (066) Wicked Lead ★★	P1:B52 (098) Lost in Time
P1:A13 (003) Wall Bob ★★	P1:A53 (035) Velo Syncoïd	P1:B13 (067) Drefull Dr.	P1:B53 (099) Circular
P1:A14 (004) Juno Sub Bass ★★	P1:A54 (036) Resonance Chord	P1:B14 (068) Wiggle Mod	P1:B54 (100) Space Choir
P1:A15 (005) Subsonic Bass ★★	P1:A55 (037) Resorelease	P1:B15 (069) Feedback Lead ★★	P1:B55 (101) Hypass Sweep
P1:A16 (006) Big & Dark ★★	P1:A56 (038) Waspy Synth	P1:B16 (070) Crunch ★★	P1:B56 (102) BPF Tides
P1:A17 (007) Bass Flow ★★	P1:A57 (039) Euro SAW	P1:B17 (071) Chaos Lead ★★	P1:B57 (103) Matrix Sweep
P1:A18 (008) Juno Bass Vel ★★	P1:A58 (040) Dance Sweep	P1:B18 (072) Out of Control ★	P1:B58 (104) MKS80 Bells
P1:A21 (009) Dubb Bass ★★	P1:A61 (041) Trance Food	P1:B21 (073) String Machine	P1:B61 (105) Tiny bells
P1:A22 (010) Juice Bass ★★	P1:A62 (042) One Shot Reso	P1:B22 (074) Tron Vlns	P1:B62 (106) Chimey
P1:A23 (011) Dreams Are Made ★★	P1:A63 (043) The Fat Guy	P1:B23 (075) Luxury Symph	P1:B63 (107) Juno Arp
P1:A24 (012) Reso Bass Line ★★	P1:A64 (044) Spit Brass	P1:B24 (076) Debussy	P1:B64 (108) Sonar Ping
P1:A25 (013) Bass Pedals ★★	P1:A65 (045) Poly Sync	P1:B25 (077) BPF Velo Strings	P1:B65 (109) Air Harp
P1:A26 (014) Hard Core Bass ★★	P1:A66 (046) Rave 5th	P1:B26 (078) Detuned Str.	P1:B66 (110) Velo FX Percs
P1:A27 (015) MC-202 Bass ★★	P1:A67 (047) UK Shorty	P1:B27 (079) Juno B81 Pad	P1:B67 (111) Quizzled
P1:A28 (016) Rubber SH-2 ★	P1:A68 (048) Old Rhodes	P1:B28 (080) Richland	P1:B68 (112) Intermittent
P1:A31 (017) Raging Bass ★	P1:A71 (049) Wurly Piano 1	P1:B31 (081) MOD Strings	P1:B71 (113) Brain Static
P1:A32 (018) Blipper Bass ★★	P1:A72 (050) Wurly Piano 2	P1:B32 (082) Jupiter Pad	P1:B72 (114) Computone
P1:A33 (019) JP-303 ★★	P1:A73 (051) Moody Organ	P1:B33 (083) Soft Strings	P1:B73 (115) Pin Matrix
P1:A34 (020) Rave Time	P1:A74 (052) Org/Rotary>Ribon	P1:B34 (084) Shan-gri-la	P1:B74 (116) Space Cheese
P1:A35 (021) Fretless Bass ★★	P1:A75 (053) VK09 PercEchoes	P1:B35 (085) Fine Wine	P1:B75 (117) Rough Day
P1:A36 (022) Digi Strat	P1:A76 (054) Sine Lead ★★	P1:B36 (086) Glue Pad	P1:B76 (118) The Etruscan. ★
P1:A37 (023) Fire Wire	P1:A77 (055) Wichita Lead	P1:B37 (087) True Pad	P1:B77 (119) Varese
P1:A38 (024) Proflike Clavit	P1:A78 (056) Creamy ★★	P1:B38 (088) Foreboding	P1:B78 (120) Pipe Dream
P1:A41 (025) Withmod Comp	P1:A81 (057) Smoothy ★★	P1:B41 (089) Skreachea	P1:B81 (121) Meteor
P1:A42 (026) Juno Clav	P1:A82 (058) Soaring Mini ★★	P1:B42 (090) BPM Pulse 1	P1:B82 (122) Snowman
P1:A43 (027) Gritty Power	P1:A83 (059) Ribn F/B Lead ★	P1:B43 (091) BPM Pulse 2	P1:B83 (123) Space Ghost
P1:A44 (028) Separate ways	P1:A84 (060) Sup-Jup Lead ★★	P1:B44 (092) Hi-Pass Puls	P1:B84 (124) Ozone
P1:A45 (029) For RPS	P1:A85 (061) Modular Lead ★★	P1:B45 (093) Sample&Hold Me	P1:B85 (125) Cool-a little...
P1:A46 (030) Bread'n Butter	P1:A86 (062) Syncrosolo ★★	P1:B46 (094) MKS80 Space	P1:B86 (126) Electro Gulls
P1:A47 (031) Silk 5ths	P1:A87 (063) Ripper ★★	P1:B47 (095) Arctic Sweep	P1:B87 (127) Template 1
P1:A48 (032) Ancient Asia	P1:A88 (064) Phantom Lead ★★	P1:B48 (096) Replicant CS	P1:B88 (128) Template 2

★: MONO

★★: LEGATO

\* About P1: B87 (Template1), P1: B88 (Template2), refer to page 16 in the owner's manual.

### Bank Select table

PATCH	CC#0	CC#32
USER A/B	50H	00H
PRESET1 A/B	51H	00H
PRESET2 A/B	51H	01H
PRESET3 A/B	51H	02H
CARD01 A/B	52H	00H
:	:	:
CARD32 A/B	52H	1FH
:	:	:
CARD64 A/B	52H	3FH

\* In the case of a S2M-5 (2M bytes) memory card these will be CARD01-32; in the case of a S4M-5 (4M bytes) card these will be CARD01-64.

## ■ Preset2 (CC# = 51H, CC#32 = 01H)

No. (PC#) Patch Name	No. (PC#) Patch Name	No. (PC#) Patch Name	No. (PC#) Patch Name
P2:A11 (001) MG Bass ★	P2:A51 (033) WONDERLAND 1	P2:B11 (065) Virtual Voltage ★★	P2:B51 (097) Open 54
P2:A12 (002) Trance Bass 4 ★★	P2:A52 (034) WONDERLAND 2	P2:B12 (066) DAD or alive ★★	P2:B52 (098) Kling Klang 4
P2:A13 (003) Trance Bass 5 ★★	P2:A53 (035) Jupiter8Arpeggio	P2:B13 (067) Freeze Frame	P2:B53 (099) Epic
P2:A14 (004) Trance Bass 6 ★★	P2:A54 (036) Fuel	P2:B14 (068) Rave2theRhythm	P2:B54 (100) Multiples 1
P2:A15 (005) Bone Sa Mo	P2:A55 (037) Shake	P2:B15 (069) Cheesy Lead 1	P2:B55 (101) Lodelity
P2:A16 (006) Bone Yall	P2:A56 (038) Model	P2:B16 (070) Cheesy Lead 2 ★	P2:B56 (102) Lode in Stereo
P2:A17 (007) PHM 1	P2:A57 (039) Vanishing Key	P2:B17 (071) Cheesy Lead 3	P2:B57 (103) Wonderland Brs
P2:A18 (008) PHM 2	P2:A58 (040) Fade Away	P2:B18 (072) Cheesy Lead 4	P2:B58 (104) Hard Pad
P2:A21 (009) PHM 3	P2:A61 (041) Hard Key 1	P2:B21 (073) Cheesy Lead 5	P2:B61 (105) Gate in Stereo 1
P2:A22 (010) Static Bass 1 ★★	P2:A62 (042) Hard Key 2	P2:B22 (074) Coreline Nine ★	P2:B62 (106) Gate in Stereo 2
P2:A23 (011) Static Bass 2	P2:A63 (043) Hard Key 3	P2:B23 (075) Wonderland Pad 1	P2:B63 (107) Gate in Stereo 3
P2:A24 (012) M Bass	P2:A64 (044) Cheesy Key 1	P2:B24 (076) Wonderland Pad 2	P2:B64 (108) S/H in Stereo
P2:A25 (013) PHM 4	P2:A65 (045) Cheesy Key 2	P2:B25 (077) Wonderland Pad 3	P2:B65 (109) Bub
P2:A26 (014) PHM 5	P2:A66 (046) DM 1	P2:B26 (078) seqaT nortoleM	P2:B66 (110) Simple E.Drums
P2:A27 (015) Mini Bass	P2:A67 (047) DM 2	P2:B27 (079) Venusian Strings	P2:B67 (111) Boom your Woofer
P2:A28 (016) Wonderland Bass	P2:A68 (048) Hard Key 4	P2:B28 (080) Wonderland Pad 4	P2:B68 (112) Multiples 2
P2:A31 (017) Hard Bass	P2:A71 (049) Hard Key 5	P2:B31 (081) GRAMMAPHONE 1	P2:B71 (113) Midnight 1-900
P2:A32 (018) Fretless Synth ★★	P2:A72 (050) Hard Key 6	P2:B32 (082) GRAMMAPHONE 2	P2:B72 (114) 100% After
P2:A33 (019) Lead Bass	P2:A73 (051) DM 3	P2:B33 (083) GRAMMAPHONE 3	P2:B73 (115) Time and Space
P2:A34 (020) JP Fat Synbrass	P2:A74 (052) Arpy 3 ★	P2:B34 (084) Oil Canvas 1	P2:B74 (116) LFO 1
P2:A35 (021) Gate me!	P2:A75 (053) Arpy 4 ★	P2:B35 (085) Oil Canvas 2	P2:B75 (117) LFO 2
P2:A36 (022) Kling Klang 2	P2:A76 (054) J Echo	P2:B36 (086) Oil Canvas 3	P2:B76 (118) HLAH
P2:A37 (023) Rising Key	P2:A77 (055) Mini Seq. 1	P2:B37 (087) Oil Canvas 4	P2:B77 (119) Blade
P2:A38 (024) Flat Out 1	P2:A78 (056) Mini Seq. 2	P2:B38 (088) Oil Canvas 5	P2:B78 (120) Cyborg
P2:A41 (025) Flat LFO	P2:A81 (057) Pulsar 88	P2:B41 (089) Blossoms 1	P2:B81 (121) Fall
P2:A42 (026) Flat Out 2	P2:A82 (058) Kling Klang 3	P2:B42 (090) Blossoms 2	P2:B82 (122) Rise
P2:A43 (027) Flat Out 3	P2:A83 (059) Straight Jacket	P2:B43 (091) Broom	P2:B83 (123) Radioactive 1
P2:A44 (028) MiniSynth 1	P2:A84 (060) DM 4	P2:B44 (092) J Pad	P2:B84 (124) Radioactive 2
P2:A45 (029) AW/DM Resonance1	P2:A85 (061) CHEM 1 ★	P2:B45 (093) Dream Kate	P2:B85 (125) DroneOn
P2:A46 (030) AW/DM Resonance2	P2:A86 (062) CHEM 2	P2:B46 (094) Temple 1	P2:B86 (126) Duss ★★
P2:A47 (031) AW/DM Resonance3	P2:A87 (063) Dusseldorf 1	P2:B47 (095) Temple 2	P2:B87 (127) Hydro Noise
P2:A48 (032) AW/DM Resonance4	P2:A88 (064) Dusseldorf 2	P2:B48 (096) Thick	P2:B88 (128) From Space...

★: MONO

★★: LEGATO

\* When the JP-8080 is shipped from the factory, the User Patches contain the same settings as the correspondingly-numbered Preset2 Patches.

## ■ Preset3 (CC# = 51H, CC#32 = 02H)

No. (PC#) Patch Name	No. (PC#) Patch Name	No. (PC#) Patch Name	No. (PC#) Patch Name
P3:A11 (001) Culture Bass	P3:A51 (033) Viking	P3:B11 (065) Eurodance Perc 2	P3:B51 (097) 70's Mono ★
P3:A12 (002) Techno Brie	P3:A52 (034) Nova Pad	P3:B12 (066) Lo-Fi Chops	P3:B52 (098) Mega HPF Lead ★
P3:A13 (003) Wired Funk	P3:A53 (035) HPF Saws	P3:B13 (067) Tranceients	P3:B53 (099) Siren's Song
P3:A14 (004) Deep Thought	P3:A54 (036) 5th Saws Key	P3:B14 (068) Voicetransformer	P3:B54 (100) Retro Strings
P3:A15 (005) Trance Bass ★★	P3:A55 (037) Eros Synth	P3:B15 (069) AW/DM	P3:B55 (101) Ambient Pad
P3:A16 (006) Baroque Bass	P3:A56 (038) Mov'Mov Synth !	P3:B16 (070) Braindead ★★	P3:B56 (102) Mystery Room
P3:A17 (007) Pulse 303	P3:A57 (039) Formula Stack 1	P3:B17 (071) I get a Kick	P3:B57 (103) ElectronicHarmon
P3:A18 (008) 101 Sub Bass	P3:A58 (040) Formula Stack 2	P3:B18 (072) Upside down	P3:B58 (104) Jungle Pad
P3:A21 (009) Serious Low Ant1 ★★	P3:A61 (041) Raveline	P3:B21 (073) Hoppy Lead	P3:B61 (105) Filtersweep 1
P3:A22 (010) Serious Low Ant2 ★★	P3:A62 (042) Ravers Delite	P3:B22 (074) Magic Ribbon ★★	P3:B62 (106) Filtersweep 2
P3:A23 (011) Bone	P3:A63 (043) Super Saw Soup	P3:B23 (075) Nice Lead ★★	P3:B63 (107) Sizzler
P3:A24 (012) JX Dyna Bass	P3:A64 (044) Chainsawmassacre	P3:B24 (076) Solo Sine&Square ★★	P3:B64 (108) Hi-Pass Saws
P3:A25 (013) Xa Bass	P3:A65 (045) Daft Five	P3:B25 (077) Vintage Voltage ★★	P3:B65 (109) Piping Pad
P3:A26 (014) Offbeat Bass ★	P3:A66 (046) Coming up	P3:B26 (078) Trusty Lead ★	P3:B66 (110) Odyssey Astral
P3:A27 (015) Drone Bass ★★	P3:A67 (047) Power of 80's	P3:B27 (079) Dream P5	P3:B67 (111) Agitation
P3:A28 (016) Clean Wow Bass ★	P3:A68 (048) Jericho Horns	P3:B28 (080) Eastern Lead 1 ★★	P3:B68 (112) Safari LFO
P3:A31 (017) FM Solid	P3:A71 (049) Milling Lead	P3:B31 (081) Eastern Lead 2 ★★	P3:B71 (113) Tricky LFO
P3:A32 (018) FM Tube Bass	P3:A72 (050) Dark Loonie ★	P3:B32 (082) Tri&Saw Lead	P3:B72 (114) Extra Hi-Fi
P3:A33 (019) FM Rave Bass	P3:A73 (051) X-Mod May-Day !	P3:B33 (083) Crystal Noise	P3:B73 (115) Rhythmic Synth
P3:A34 (020) Velo Organ	P3:A74 (052) Dirty Mania	P3:B34 (084) Happy Euro Lead ★	P3:B74 (116) Asteroid Mode
P3:A35 (021) Club Organ	P3:A75 (053) Vinyl Story	P3:B35 (085) Alphabet Lead	P3:B75 (117) Disaster 1
P3:A36 (022) Old Organ	P3:A76 (054) Zipper Hymn	P3:B36 (086) Feedbacky ★	P3:B76 (118) Fuzzy Logic
P3:A37 (023) PercussivToyPno	P3:A77 (055) Nova Attack	P3:B37 (087) Trance Lead ★★	P3:B77 (119) QZ Sub Naut
P3:A38 (024) Noise Toys	P3:A78 (056) Super Attack	P3:B38 (088) CheeseOscillator ★★	P3:B78 (120) Searing
P3:A41 (025) Apostle Piano	P3:A81 (057) Beep 8000	P3:B41 (089) Prod Lead ★	P3:B81 (121) Disaster 2
P3:A42 (026) Clavi-Club	P3:A82 (058) Optic Perc	P3:B42 (090) Dirty Electrons	P3:B82 (122) Scrapers ★
P3:A43 (027) Perc Clavsynth	P3:A83 (059) 8008-Cow Signal	P3:B43 (091) Kitch Vinyllead	P3:B83 (123) Trip in Stereo
P3:A44 (028) Cyber Cellopluck	P3:A84 (060) X-FM Metallic	P3:B44 (092) Killerbeez ★	P3:B84 (124) CHEM
P3:A45 (029) Pulse Key	P3:A85 (061) Pluck & Pray ★	P3:B45 (093) *¥ Ethnomad !	P3:B85 (125) Xform
P3:A46 (030) Nova Catch	P3:A86 (062) Bermuda Triangle ★★	P3:B46 (094) P5 Sync ★	P3:B86 (126) Amuck
P3:A47 (031) Eurodance Perc 1	P3:A87 (063) Home of the Rave	P3:B47 (095) Ergot Rye Seed ★★	P3:B87 (127) Cat Conversation
P3:A48 (032) Tribal Party	P3:A88 (064) Paris spirit	P3:B48 (096) FB 5th ★	P3:B88 (128) Pulsing Sweep

★: MONO

★★: LEGATO

# Parameter List

## Patch Parameters

Parameter		Full Name of Parameter	Value
<b>EFFECTS Section</b>			
TONE CONTROL	BASS	Tone Control Bass	-64--+63
	TREBLE	Tone Control Treble	-64--+63
MULTI-FX LEVEL		Multi Effects Level	0-127
DELAY	TIME	Delay Time	0-127
	FEEDBACK	Delay Feedback	0-127
	LEVEL	Delay Level	0-127
	VOICE MOD SEND	Voice Modulator Send Switch	OFF, ON
<b>LFO 1 Section</b>			
	WAVEFORM	LFO 1 Waveform	TRI, SAW, SQR, S/H
	RATE	LFO 1 Rate	0-127
	FADE	LFO 1 Fade Time	0-127
<b>MODULATION (LFO 2) Section</b>			
	RATE	LFO 2 Rate	0-127
	DEPTH SELECT	Depth Select	PITCH, FILTER, AMP
	DEPTH (PITCH)	Pitch LFO 2 Depth	-64--+63
	DEPTH (FILTER)	Filter LFO 2 Depth	-64--+63
	DEPTH (AMP)	Amplifier LFO 2 Depth	-64--+63
<b>PORTAMENTO Section</b>			
	ON	Portamento Switch	OFF, ON
	TIME	Portamento Time	0-127
<b>OSC1 Section</b>			
	WAVEFORM	Oscillator 1 Waveform	SUPER SAW, TRIANGLE MOD, NOISE, FEEDBACK OSC, SQR (PWM), SAW, TRI
	CONTROL 1	Oscillator 1 Control 1	0-127
	CONTROL 2	Oscillator 1 Control 2	0-127
<b>OSC2 Section</b>			
	WAVEFORM	Oscillator 2 Waveform	SQR (PWM), SAW, TRI, NOISE
	EXT	External Input Switch	OFF, ON
	SYNC	Sync Switch	OFF, ON
	RANGE	Oscillator 2 Range	-WIDE, -24--+24, +WIDE
	FINE/WIDE	Oscillator 2 Fine Tune/Wide	-50--+50cent/-4-0oct/0--+4oct
	CONTROL 1	Oscillator 2 Control 1	0-127
	CONTROL 2	Oscillator 2 Control 2	0-127
	RING	Ring Modulator Switch	OFF, ON
<b>OSC COMMON Section</b>			
	OSC BALANCE	Oscillator Balance	-64 (OSC1)--+63 (OSC2)
	X-MOD DEPTH	Cross Modulation Depth	0-127
	LFO 1&ENV DESTINATION	LFO 1& Envelope Destination	OSC1+2, OSC2, X-MOD
	LFO 1 DEPTH	Oscillator LFO 1 Depth	-64--+63
	OSC SHIFT	Oscillator Shift	-2OCT--+2OCT
<b>PITCH ENVELOPE Section</b>			
	DEPTH	Pitch Envelope Depth	-64--+63
	A	Pitch Envelope Attack Time	0-127
	D	Pitch Envelope Decay Time	0-127
<b>FILTER Section</b>			
	TYPE	Filter Type	HPF, BPF, LPF
	-12dB/-24dB	Cutoff Slope	-12dB/oct, -24dB/oct
	CUTOFF FREQ	Cutoff Frequency	0-127
	RESONANCE	Resonance	0-127
	KEY FOLLOW	Cutoff Frequency Key Follow	-64--+63
	LFO 1 DEPTH	Filter LFO 1 Depth	-64--+63

<b>FILTER ENVELOPE Section</b>	DEPTH	Filter Envelope Depth	-64--+63
	A	Filter Envelope Attack Time	0-127
	D	Filter Envelope Decay Time	0-127
	S	Filter Envelope Sustain Level	0-127
	R	Filter Envelope Release Time	0-127
<b>AMP Section</b>	LEVEL	Amplifier Level	0-127
	PAN	Auto Pan/Manual Pan Switch	OFF, AUTO, MANUAL
	LFO 1 DEPTH	Amplifier LFO 1 Depth	-64 (L)--+63 (R)
<b>AMP ENVELOPE Section</b>	A	Amplifier Envelope Attack Time	0-127
	D	Amplifier Envelope Decay Time	0-127
	S	Amplifier Envelope Sustain Level	0-127
	R	Amplifier Envelope Release Time	0-127
<b>CONTROL Section</b>			
SOLO SW	MONO	Mono Switch	OFF, ON
	LEGATO	Legato Switch	OFF, ON
	UNISON	Unison Switch	OFF, ON
VELOCITY		Velocity Switch	OFF, ON
MORPHING	VELOCITY ASSIGN	Velocity Assign	-127--+127/-100--+100/-50--+50
	CONTROL ASSIGN	Control Assign	-127--+127/-100--+100/-50--+50
<b>[PATCH] (BANK [4])</b>	Patch Name	Patch Name	ASCII Character (max.16)
	Multi-FX Type	Multi Effects Type	SUPER CHORUS SLW/MID/FST/ CLR, FLANGER SLOW/DEEP/ FAST, DEEP PHASING SLW, JET PHASING, TWISTING, FREEZE PHASE 1/2, DISTORTION PANNING L->R/R->L/SHORT, MONO SHORT/LONG
	Delay Type	Delay Type	
	Bend Range Up	Bend Range Up	0--+24 semitone
	Bend Range Down	Bend Range Down	-24-0 semitone
	Morph Bend Assgn	Morph Bend Assign Switch	OFF, ON
	Unison Detune	Unison Detune	0-50
	Env Type in Solo	Envelope Type in Solo	STANDARD, ANALOG
	Patch Gain	Patch Gain	0dB, +6dB, +12dB
	Ext Trig Switch	External Trigger Switch	OFF, ON
	Ext Trig Dest	External Trigger Destination	FILTER, AMP, FILTER&AMP



## Performance Common Parameters

Parameter		Full Name of Parameter	Value
<b>PANEL SELECT Section</b>	LOWER, UPPER	Lower, Upper	LOWER, UPPER, LOWER & UPPER, VOICE MOD
<b>KEY MODE Section</b>	KEY MODE	Key Mode Select	SINGLE, DUAL, SPLIT
<b>ARPEGGIATOR/RPS Section</b>	ON	Arpeggio/RPS Switch	OFF, ON
	MODE	Mode	UP, DOWN, UP & DOWN, RANDOM, RPS
	RANGE	Arpeggio Range	1OCT-4OCT
	HOLD	Arpeggio/RPS Hold Switch	OFF, ON
	TEMPO	Tempo	20-250
<b>VOICE MODULATOR Section</b>	ON	Voice Modulator Switch	OFF, ON
<b>EXTERNAL INPUT Section</b>	REAR/FRONT	Vocal Input Select Switch	OFF (REAR), ON (FRONT)
<b>[PFM COMMON]</b>	Performance Name	Performance Name	ASCII Character (max.16)
<b>(BANK [1])</b>	Part Detune	Part Detune	-50-+50
	Output Assign	Output Assign	MIX OUT, PARALLEL OUT
	Voice Assign	Voice Assign	(6) 8-2 (2), (5) 7-3 (3), (4) 6-4 (4), (4) 5-5 (4), (4) 4-6 (4), (3) 3-7 (5), (2) 2-8 (6)
	(Only DUAL & SPLIT Mode) *( ) = Voice Modulator is ON		
	Split Point (Only SPLIT Mode)	Split Point	C-1-G 9
	Arpeggio Dest (Only DUAL Mode)	Arpeggio Destination	LOWER & UPPER, LOWER, UPPER
	Arp Beat Pattern	Arpeggio Beat Pattern	1/4, 1/6, 1/8, 1/12, 1/16, 1/32, PORTA-A1-11, PORTA-B1-15, SEQUENCE-A1-7, SEQUENCE-B1-5, SEQUENCE-C1-2, SEQUENCE-D1-8, ECHO1-3, MUTE1-16, STRUMMING1-8, REFRAIN1-2, PERCUSSION1-4, WALKING BASS, HARP, RANDOM
	Indv Trig Switch	Individual Trigger Switch	OFF, ON
	Indv Trig Dest	Individual Trigger Destination	FILTER, AMP, FILTER & AMP
	Indv Trig Src CH	Individual Trigger Source Channel	1-16
	IndvTrigSrc Note	Individual Trigger Source Note	C-1-G 9, ALL
<b>[VOICE MOD]</b>	Algorithm	Algorithm	SOLID, SMOOTH, WIDE, FLT BANK WIDE, FLT BANK NARROW
<b>(BANK [2])</b>	Control1 Assign	Control 1 Assign	ENSEMBLE LEVEL, V DELAY TIME, V DELAY FEEDBACK, V DELAY LEVEL, VOCAL MIX, V RESONANCE, V RELEASE, V PAN, V LEVEL, V NOISE CUTOFF, V NOISE LEVEL, GATE THRESHOLD, ROBOT PITCH, ROBOT CONTROL, ROBOT LEVEL, CHARACTER1-12
	Control2 Assign	Control 2 Assign	ENSEMBLE LEVEL, V DELAY TIME, V DELAY FEEDBACK, V DELAY LEVEL, VOCAL MIX, V RESONANCE, V RELEASE, V PAN, V LEVEL, V NOISE CUTOFF, V NOISE LEVEL, GATE THRESHOLD, ROBOT PITCH, ROBOT CONTROL, ROBOT LEVEL, CHARACTER1-12

	Ext->Inst Send	External To Instrumental Send Switch	OFF, ON
	Ext->Vocal Send	External To Vocal Send Switch	OFF, ON
	V Delay Type	Voice Modulator Delay Type	PANNING L->R/R->L/SHORT, MONO SHORT/LONG
	V Delay Sync	Voice Modulator Delay Sync	OFF, 1/16, 1/8 (3), 1/16 (.), 1/8, 1/4 (3), 1/8 (.), 1/4, 1/2 (3), 1/4 (.), 1/2
	Ensemble Type	Ensemble Type	ENSEMBLE MILD/CLEAN/FAST, SUPER CHORUS SLW/MID/FST/ CLR, FLANGER SLOW/DEEP/FAST, DEEP PHASING SLW, JET PHASING, TWISTING, FREEZE PHASE 1/2
	Ensemble Sync	Ensemble Sync	OFF, 1/16, 1/8 (3), 1/16 (.), 1/8, 1/4 (3), 1/8 (.), 1/4, 1/2 (3), 1/4 (.), 1/2, 1/1 (3), 1/2 (.), 1/1, 2/1 (3), 1/1 (.), 2/1, 3-8MEASURES
	Vocal Morph Ctrl	Vocal Morph Control	OFF, ON
	Vocal Morph Sens	Vocal Morph Sens	-64--+63
	VocalMorph Thrsh	Vocal Morph Threshold	0-127
<b>VOICE MODULATOR PANEL</b>	ENSEMBL LEVEL	Ensemble Level	0-127
	V DELAY LEVEL	Voice Modulator Delay Level	0-127
	V DELAY TIME	Voice Modulator Delay Time	0-127
	V DELAY FEEDBACK	Voice Modulator Delay Feedback	0-127
	VOCAL MIX	Vocal Mix	0-127
	V RESONANCE	Voice Modulator Resonance	0-127
	V RELEASE	Voice Modulator Envelope Release Time	0-127
	VOCAL HOLD	Vocal Hold Switch	OFF, ON
	V PAN	Voice Modulator Pan	-64--+63
	V LEVEL	Voice Modulator Level	0-127
	V NOISE LEVEL	Voice Modulator Noise Level	0-127
	V NOISE CUTOFF	Voice Modulator Noise Cutoff	0-127
	GATE THRESHOLD	Gate Threshold	0-127
	ROBOT LEVEL	Robot Oscillator Level	0-127
	ROBOT PITCH	Robot Oscillator Pitch	0-127
	ROBOT CONTROL	Robot Oscillator Control	0-127
	CHARACTER1-12	Character1-12	0-127

## Performance Part Parameters

Parameter		Full Name of Parameter	Value
[PFM PART] (BANK [3])	Part Transpose	Part Transepose	-24--+24 semitone
	Part MIDI CH	Part MIDI Channel	1-16, OFF
	Chorus Sync	Chorus Sync	OFF, 1/16, 1/8(3), 1/16(.), 1/8, 1/4(3), 1/8(.), 1/4, 1/2(3), 1/4(.), 1/2, 1/1(3), 1/2(.), 1/1, 2/1(3), 1/1(.), 2/1, 3-8MEASURES, LFO1
	Delay Sync	Delay Sync	OFF, 1/16, 1/8(3), 1/16(.), 1/8, 1/4(3), 1/8(.), 1/4, 1/2(3), 1/4(.), 1/2
	LFO Sync	LFO Sync	OFF, 1/16, 1/8(3), 1/16(.), 1/8, 1/4(3), 1/8(.), 1/4, 1/2(3), 1/4(.), 1/2, 1/1(3), 1/2(.), 1/1, 2/1(3), 1/1(.), 2/1, 3-8MEASURES

## System Parameters

Parameter		Full Name of Parameter	Value
[MIDI] (BANK [5])	Local Switch	Local Switch	OFF, ON
	MIDI Sync	MIDI Sync Switch	OFF, MIDI IN, REMOTE KBD IN
	Device ID	Device ID Number	17-32
	Rx Exclusive SW	Exclusive Receive Switch	OFF, ON
	Perform Ctrl CH	Performance Control Channel	1-16, OFF
	Remote KBD CH	Remote Keyboard Channel	1-16, ALL
	MIDI Thru	MIDI Thru Switch	OFF, ON (w/o SysEx), ON (ALL)
	Tx/Rx Edit SW	Edit Transmit/Receive Switch	OFF, ON
	Tx/Rx Edit Mode	Edit Transmit/Receive Mode	MODE1, MODE2
	Tx/Rx Setting	Transmit/Receive Setting	OFF, MODULATION: CC01-CC31, CC33-PHASER: CC95, AFTERTOUCH, EXCLUSIVE
	Tx/Rx ProgChg SW	Program Change Transmit/Receive Switch	ON, PC, BANK SEL + PC
	Control Up	Control Up	OFF, MODULATION: CC01-CC31, CC33-PHASER: CC95, AFTERTOUCH
	Control Down	Control Down	OFF, MODULATION: CC01-CC31, CC33-PHASER: CC95, AFTERTOUCH
[SETUP] (BANK [6])	LCD Contrast	LCD Contrast	1-8
	Master Tune	Master Tune	427.5-452.9 Hz
	Power Up Mode	Power Up Mode	PERFORM U: 11, LAST-SET
	Pattern Trig Qtz	Pattern Trigger Quantize	OFF, BEAT, MEASURE
	Motion Restart	Motion Restart Switch	OFF, ON

## Recording Parameters

Parameter	Full Name of Parameter		Value
<b>Pattern</b>	Loop Length	Pattern Loop Length	1–4 measures
	Input Quantize	Input Quantize	OFF, 1/16 (3), 1/16, 1/8 (3), 1/8, 1/4 (3), 1/4
	Gate Time Ratio	Gate Time Ratio	REAL, STACCATO, 33%, 50%, 66%, 100%
	Metronome	Pattern Metronome	Beep: VOLUME 4–1, OFF, Click: VOLUME 1–4
<b>Motion</b>	Loop Length	Motion Loop Length	1–8 measures, 99 (PLAY ONCE) measures
	Metronome	Motion Metronome	Beep: VOLUME 4–1, OFF, Click: VOLUME 1–4

# Transmit/Receive Setting List

Parameter		MODE1	MODE2
<b>EFFECTS Section</b>			
TONE CONTROL	BASS	TREMOLO: CC92	TREMOLO: CC92
	TREBLE	PHASER: CC95	PHASER: CC95
MULTI-FX LEVEL		CHORUS: CC93	CHORUS: CC93
DELAY	TIME	EFFECT-CTL1: CC12	EFFECT-CTL1: CC12
	FEEDBACK	EFFECT-CTL2: CC13	EFFECT-CTL2: CC13
	LEVEL	CELESTE: CC94	CELESTE: CC94
<hr/>			
<b>LFO 1 Section</b>	RATE	GENERAL1: CC16	GENERAL1: CC16
	FADE	EXCLUSIVE	CC20
<hr/>			
<b>MODULATION</b>	RATE	GENERAL2: CC17	GENERAL2: CC17
<b>(LFO 2) Section</b>	DEPTH (PITCH)	EXCLUSIVE	CC22
	DEPTH (FILTER)	EXCLUSIVE	CC23
	DEPTH (AMP)	EXCLUSIVE	CC24
<hr/>			
<b>PORTAMENTO Section</b>	TIME	PORTA-TIME: CC05	PORTA-TIME: CC05
<hr/>			
<b>OSC 1 Section</b>	CONTROL 1	FOOT-TYPE: CC04	FOOT-TYPE: CC04
	CONTROL 2	SOUND-CTL7: CC76	SOUND-CTL7: CC76
<hr/>			
<b>OSC 2 Section</b>	RANGE	EXCLUSIVE	CC21
	FINE/WIDE	SOUND-CTL8: CC77	SOUND-CTL8: CC77
	CONTROL 1	SOUND-CTL9: CC78	SOUND-CTL9: CC78
	CONTROL 2	SOUND-CTL10: CC79	SOUND-CTL10: CC79
<hr/>			
<b>OSC COMMON Section</b>	OSC BALANCE	BALANCE: CC08	BALANCE: CC08
	X-MOD DEPTH	SOUND-CTL1: CC70	SOUND-CTL1: CC70
	LFO 1 DEPTH	GENERAL3: CC18	GENERAL3: CC18
<hr/>			
<b>PITCH ENVELOPE Section</b>	DEPTH	EXCLUSIVE	CC25
	A	EXCLUSIVE	CC26
	D	EXCLUSIVE	CC27
<hr/>			
<b>FILTER Section</b>	CUTOFF FREQ	SOUND-CTL5: CC74	SOUND-CTL5: CC74
	RESONANCE	SOUND-CTL2: CC71	SOUND-CTL2: CC71
	KEY FOLLOW	EXCLUSIVE	CC30
	LFO 1 DEPTH	GENERAL4: CC19	GENERAL4: CC19
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<b>FILTER ENVELOPE Section</b>	DEPTH	GENERAL6: CC81	GENERAL6: CC81
	A	GENERAL7: CC82	GENERAL7: CC82
	D	GENERAL8: CC83	GENERAL8: CC83
	S	EXCLUSIVE	CC28
	R	EXCLUSIVE	CC29
<hr/>			
<b>AMP Section</b>	LFO 1 DEPTH	GENERAL5: CC80	GENERAL5: CC80
	LEVEL	VOLUME: CC07	VOLUME: CC07
<hr/>			
<b>AMP ENVELOPE Section</b>	A	SOUND-CTL4: CC73	SOUND-CTL4: CC73
	D	SOUND-CTL6: CC75	SOUND-CTL6: CC75
	S	EXCLUSIVE	CC31
	R	SOUND-CTL3: CC72	SOUND-CTL3: CC72

\* With the factory settings, Edit Transmit/receive Mode is set to MODE1. When you set the Edit Transmit/receive Mode to MODE2, you can set the MIDI messages of each parameter by the Transmit/Receive Setting (p.125). The factory settings of Transmit/receive Setting is according to “MODE2” in this table.

# Voice Modulator Initialize Setting List

	FORMANT FILTER			
	VINTAGE	SILKY	HUSKYVOICE	BREAKBEATS
REAR/FRONT	ON (FRONT)	ON (FRONT)	ON (FRONT)	ON (FRONT)
VOICE MOD SEND (UPPER)	ON	ON	ON	ON
VOICE MOD SEND (LOWER)	ON	ON	ON	ON
VOICE MOD ON/OFF SW	ON	ON	ON	ON
PANEL SELECT	LOWER/UPPER	LOWER/UPPER	LOWER/UPPER	LOWER/UPPER
Algorithm	SOLID	SMOOTH	SOLID	WIDE
Control1 Assign	VOCAL MIX	VOCAL MIX	V NOISE LEVEL	GATE THRESHOLD
Control2 Assign	ENSEMBLE LEVEL	ENSEMBLE LEVEL	ENSEMBLE LEVEL	V RELEASE
Ext->Inst Send	ON	ON	ON	ON
Ext->Vocal Send	ON	ON	ON	ON
V Delay Type	PANNING L->R	PANNING L->R	PANNING L->R	PANNING L->R
V Delay Sync	OFF	OFF	OFF	OFF
Ensemble Type	ENSEMBLE MILD	ENSEMBLE CLEAN	ENSEMBLE MILD	ENSEMBLE CLEAN
Ensemble Sync	OFF	OFF	OFF	OFF
Vocal Morph Ctrl	OFF	OFF	OFF	OFF
Vocal Morph Sens	+32	+32	+32	+32
VocalMorph Thrsh	10	10	10	10
ENSEMBLE LEVEL	0	0	0	0
V DELAY TIME	64	64	64	64
V DELAY FEEDBACK	64	64	64	64
V DELAY LEVEL	0	0	0	0
VOCAL MIX	32	32	0	0
V RESONANCE	0	0	0	0
V RELEASE	64	64	64	64
V PAN	0	0	0	0
V LEVEL	127	127	127	127
V NOISE CUTOFF	96	96	64	96
V NOISE LEVEL	0	0	96	0
GATE THRESHOLD	10	10	10	40
ROBOT PITCH	50	50	50	50
ROBOT CONTROL	64	64	64	64
ROBOT LEVEL	0	0	0	0
CHARACTER1	60	127	127	127
CHARACTER2	60	127	127	127
CHARACTER3	80	127	127	127
CHARACTER4	100	127	127	127
CHARACTER5	127	127	127	127
CHARACTER6	127	127	127	127
CHARACTER7	127	127	127	127
CHARACTER8	127	127	127	127
CHARACTER9	127	127	127	127
CHARACTER10	127	127	127	127
CHARACTER11	120	127	127	127
CHARACTER12	110	127	127	127

\* Only [VOICE MOD SEND] is a patch parameter. All other parameters are performance parameters.

	FORMANT FILTER		FILTER BANK		VOCAL MORPH CTRL
	ROBOT	HUSKYROBOT	STANDARD	RADIO	VOCAL MORPH CTRL
REAR/FRONT	ON (FRONT)	ON (FRONT)	OFF (REAR)	OFF (REAR)	ON (FRONT)
VOICE MOD SEND (UPPER)	ON	ON	ON	ON	OFF
VOICE MOD SEND (LOWER)	ON	ON	ON	ON	OFF
VOICE MOD ON/OFF SW	ON	ON	ON	ON	ON
PANEL SELECT	LOWER/UPPER	LOWER/UPPER	VOICE MOD	VOICE MOD	LOWER/UPPER
Algorithm	SOLID	SOLID	FLT BANK WIDE	FLT BANK NARROW	SOLID
Control1 Assign	ROBOT PITCH	ROBOT PITCH	V RESONANCE	V RESONANCE	VOCAL MIX
Control2 Assign	ROBOT CONTROL	V NOISE CUTOFF	ENSEMBLE LEVEL	CHARACTER12	ENSEMBLE LEVEL
Ext->Inst Send	ON	ON	ON	ON	OFF
Ext->Vocal Send	ON	ON	ON	ON	ON
V Delay Type	PANNING L->R	PANNING L->R	PANNING L->R	PANNING L->R	PANNING L->R
V Delay Sync	OFF	OFF	OFF	OFF	OFF
Ensemble Type	ENSEMBLE MILD	ENSEMBLE MILD	ENSEMBLE CLEAN	ENSEMBLE CLEAN	ENSEMBLE MILD
Ensemble Sync	OFF	OFF	OFF	OFF	OFF
Vocal Morph Ctrl	OFF	OFF	OFF	OFF	ON
Vocal Morph Sens	+32	+32	+32	+32	+32
VocalMorph Thrsh	10	10	10	10	10
ENSEMBLE LEVEL	0	0	0	0	0
V DELAY TIME	64	64	64	64	64
V DELAY FEEDBACK	64	64	64	64	64
V DELAY LEVEL	0	0	0	0	0
VOCAL MIX	0	0	0	0	32
V RESONANCE	0	0	0	0	0
V RELEASE	64	64	0	0	64
V PAN	0	0	0	0	0
V LEVEL	127	127	127	127	127
V NOISE CUTOFF	96	96	96	96	96
V NOISE LEVEL	0	96	0	0	0
GATE THRESHOLD	10	10	10	10	10
ROBOT PITCH	50	50	50	50	50
ROBOT CONTROL	64	64	64	64	64
ROBOT LEVEL	127	127	0	0	0
CHARACTER1	127	127	127	0	60
CHARACTER2	127	127	127	64	60
CHARACTER3	127	127	127	96	80
CHARACTER4	127	127	127	127	100
CHARACTER5	127	127	127	127	127
CHARACTER6	127	127	127	127	127
CHARACTER7	127	127	127	127	127
CHARACTER8	127	127	127	127	127
CHARACTER9	127	127	127	127	127
CHARACTER10	127	127	127	96	127
CHARACTER11	127	127	127	64	120
CHARACTER12	127	127	127	0	110

Mark	Meaning	Range
n:	MIDI channel	0H-FH (ch.1 - ch.16)
vv:	Value, Velocity etc.	00H-7FH (0 - 127) (Only for note-on velocity, this will be 01H-7FH (1 - 127).)
kk:	Note Number	00H-7FH (0 - 127): C-1 - G9
xx:	ON/OFF	00H-3FH (0 - 63): OFF 40H-7FH (64 - 127): ON

## 1. MIDI messages received at MIDI IN

### ■ Channel voice messages

- \* When MIDI Thru ([MIDI]) is other than OFF, MIDI messages arriving at MIDI IN will be re-transmitted from MIDI OUT.

#### ● Note Off

status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

- \* Notes of the part whose Part MIDI Ch ([PART]) matches the MIDI channel of the received note-off will be turned off.
- \* When the Individual Trigger Switch ([PFM COMMON]) is ON, and if MIDI channel number of received Note Off is coincident with Trigger Source Channel ([PFM COMMON]), and also the Note Number of received Note Off is coincident with Trigger Source Note ([PFM COMMON]), the Envelope of Trigger Destination ([PFM COMMON]) will be released.

#### ● Note On

status	2nd byte	3rd byte
8nH	kkH	vvH

- \* Notes of the part whose Part MIDI CH ([PART]) matches the MIDI channel of the received note-on will be sounded.
- \* When the Individual Trigger Switch ([PFM COMMON]) is ON, and if MIDI channel number of received Note On is coincident with Trigger Source Channel ([PFM COMMON]), and also the Note Number of received Note On is coincident with Trigger Source Note ([PFM COMMON]), the Envelope of Trigger Destination will be started.

### ● Control Change

- \* If Control Up/Control Down ([MIDI]) is set to a control change, this will function as controller up or down for the part whose Part MIDI CH ([PART]) matches the MIDI channel of the received control change message.
- \* If Tx/Rx Edit SW ([MIDI]) is ON and Tx/Rx Edit Mode ([MIDI]) is set to MODE2, the Tx/Rx Setting ([MIDI]) setting will be valid. This will affect the value of the parameter which is assigned to the control change that was received by the part whose Part MIDI CH ([PART]) matches the MIDI channel of the received control change.
- \* Tx/Rx settings ([MIDI]) can be made for controller numbers 1 to 31 and 33 to 95. Refer to Transmit/Receive Setting List (p.188) for the default settings.

#### ○ Bank Select (Controller number 0, 32)

status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

mm, ll = Bank number: 00 00H - 7F 7FH (bank.1 - bank.16384)

- \* This is received only when Tx/Rx ProgChg SW ([MIDI]) is BANK SEL + PC.
- \* If this is received on the Perform Ctrl CH ([MIDI]), it will specify the performance bank. If this is received on the Part MIDI CH ([PART]), it will specify the patch bank for that part. If the Perform Ctrl CH and the Part MIDI CH are the same, it will specify only the performance bank.
- \* Bank Select processing will be suspended until a Program Change message is received.

- \* If an unavailable (nonexistent) Bank Select number is received it will be ignored, and only the Program Change will be received.

- \* The Patches corresponding to each Bank Select are as follows.

Bank MSB	Select LSB	Program No.	Group	Patch No.
50H	00H	00H - 3FH	User A	11 - 88
	00H	40H - 7FH	User B	11 - 88
51H	00H	00H - 3FH	Preset 1 A	11 - 88
	00H	40H - 7FH	Preset 1 B	11 - 88
	01H	00H - 3FH	Preset 2 A	11 - 88
	01H	40H - 7FH	Preset 2 B	11 - 88
	02H	00H - 3FH	Preset 3 A	11 - 88
	02H	40H - 7FH	Preset 3 B	11 - 88
52H	00H	00H - 3FH	Card 01 A	11 - 88
	00H	40H - 7FH	Card 01 B	11 - 88
	01H	00H - 3FH	Card 02 A	11 - 88
	01H	40H - 7FH	Card 02 B	11 - 88
	:	:	:	:
	1FH	00H - 3FH	Card 32 A	11 - 88
	1FH	40H - 7FH	Card 32 B	11 - 88
	*) 20H	00H - 3FH	Card 33 A	11 - 88
	20H	40H - 7FH	Card 33 B	11 - 88
	21H	00H - 3FH	Card 34 A	11 - 88
	21H	40H - 7FH	Card 34 B	11 - 88
	:	:	:	:
	3FH	00H - 3FH	Card 64 A	11 - 88
	3FH	40H - 7FH	Card 64 B	11 - 88

- \*) Bank Select LSB 20H - 3FH are available only with the S4M-5.

- \* The Performances corresponding to each Bank Select are as follows.

Bank MSB	Select LSB	Program No.	Group	Perform No.
50H	00H	00H - 3FH	User	11 - 88
	:	:	:	:
51H	00H	00H - 3FH	Preset 1	11 - 88
	01H	00H - 3FH	Preset 2	11 - 88
	02H	00H - 3FH	Preset 3	11 - 88
52H	00H	00H - 3FH	Card 01	11 - 88
	01H	00H - 3FH	Card 02	11 - 88
	02H	00H - 3FH	Card 03	11 - 88
	:	:	:	:
	1FH	00H - 3FH	Card 32	11 - 88
	*) 20H	00H - 3FH	Card 33	11 - 88
	:	:	:	:
	3FH	00H - 3FH	Card 64	11 - 88

- \*) Bank Select LSB 20H - 3FH are available only with the S4M-5.

#### ○ Modulation (Controller number 1)

status	2nd byte	3rd byte
BnH	01H	vvH

- \* This will control the pitch, cutoff, or amplitude modulation depth for the respective PITCH/FILTER/AMP [DEPTH] parameter of the MODULATION (LFO2) in the patch of the part whose Part MIDI CH ([PART]) matches the channel on which the message was received.
- \* This is not reset to the default value when a patch program change is received.
- \* This will be reset to the default value when a performance program change is received.

#### ○ Breath type (Controller number 2)

status	2nd byte	3rd byte
BnH	02H	vvH

#### ○ Foot type (Controller number 4)

status	2nd byte	3rd byte
BnH	04H	vvH

#### ○ Portamento Time (Controller number 5)

status	2nd byte	3rd byte
BnH	05H	vvH

- \* This will modify the PORTAMENTO [TIME] value for the patch of the part whose Part MIDI CH ([PART]) matches the channel on which the message was received.

#### ○ Data Entry (Controller number 6, 38)

status	2nd byte	3rd byte
BnH	06H	mmH
BnH	26H	llH

mm, ll = the value of the parameter specified by RPN/NRPN  
mm=MSB, ll=LSB



## ○ Volume (Controller number 7)

status	2nd byte	3rd byte
BnH	07H	vvH

\* If this is received on the Perform Ctrl CH ([MIDI]), it will set the volume of the performance. If it is received on the Part MIDI CH ([PART]) it will set the volume of that part. If the Perform Ctrl CH and the Part MIDI CH are the same, only the volume of the performance will be set.

\* This is not reset to the default value when a patch program change is received.

\* This is reset to the default value when a performance program change is received.

## ○ Balance (Controller number 8)

status	2nd byte	3rd byte
BnH	08H	vvH

## ○ Panpot (Controller number 10)

status	2nd byte	3rd byte
BnH	0AH	vvH

## ○ Expression (Controller number 11)

status	2nd byte	3rd byte
BnH	0BH	vvH

\* When this is received on the Perform Ctrl CH ([MIDI]), it will adjust the volume of the performance. When this is received on the Part MIDI CH ([PART]), it will adjust the volume of that part. If the Perform Ctrl CH and the Part MIDI CH are the same, only the volume of the performance will be adjusted.

\* It can be used to independently from Volume messages. Expression messages are used for musical expression within a performance; e.g., expression pedal movements, crescendo and decrescendo.

\* This is not reset to the default value when a patch program change is received.

\* This is reset to the default value when a performance program change is received.

## ○ Effect Control1 (Controller number 12)

status	2nd byte	3rd byte
BnH	0CH	vvH

## ○ Effect Control2 (Controller number 13)

status	2nd byte	3rd byte
BnH	0DH	vvH

## ○ General Purpose Controller1–4 (Controller number 16–19)

status	2nd byte	3rd byte
BnH	10-13H	vvH

## ○ Hold1 (Controller number 64)

status	2nd byte	3rd byte
BnH	40H	xxH

\* This holds the notes which are currently in a note-on state.

## ○ Portamento (Controller number 65)

status	2nd byte	3rd byte
BnH	41H	xxH

\* This switches PORTAMENTO [ON] on/off.

## ○ Sound Controller1–10 (Controller number 70–79)

status	2nd byte	3rd byte
BnH	46-4FH	vvH

## ○ General Purpose Controllers 5–8 (Controller number 80–83)

status	2nd byte	3rd byte
BnH	50-53H	vvH

## ○ Portamento Control (Controller number 84)

status	2nd byte	3rd byte
BnH	54H	kkH

kk = Source Note Number: 00H - 7FH (C-1 - G9)

\* For the part whose Part MIDI CH ([PART]) is the same as the channel on which this message was received, the note-on received immediately after Portamento Control will be sounded with a pitch that changes smoothly from the pitch of the Source Note Number.

\* If a voice is already sounding at the same note number as the source note number, that voice will change pitch to the pitch of the newly received Note On, and continue sounding (i.e., will be played legato).

Example 1.

On MIDI	Description	Result
90 3C 40	Note on C4	C4 on
B0 54 3C	(Portamento Control from C4)	no change (C4 voice still sounding)
90 40 40	Note on E4	glide from C4 to E4
80 3C 40	Note off C4	no change
80 40 40	Note off E4	E4 off

Example 2.

On MIDI	Description	Result
B0 54 3C	(Portamento Control from C4)	no change
90 40 40	(Note on E4)	E4 is played with glide from C4 to E4
80 40 40	(Note off E4)	E4 off

\* The speed of the pitch change caused by Portamento is determined by the PORTAMENTO TIME parameter value.

## ○ Effects Depth 2–5 (Controller number 92–95)

status	2nd byte	3rd byte
BnH	5C-5FH	kkH

## ○ RPN LSB/MSB (Controller number 100,101)

status	2nd byte	3rd byte
BnH	65H	mmH
BnH	64H	llH

mm=MSB of the parameter number specified by RPN

ll=LSB of the parameter number specified by RPN

<<< RPN >>>

Control Changes include RPN (Registered Parameter Numbers), which are extended parameters whose function is defined in the MIDI specification.

When using RPNs, first the RPN (Controller numbers 100 and 101; they can be sent in any order) is transmitted to specify the parameter you wish to control. Then, Data Entry messages (Controller numbers 6 and 38) are used to set the value of the specified parameter. Once a RPN parameter has been specified, all further Data Entry messages on that channel are considered to apply to that specified parameter. In order to prevent accidents, when the desired setting has been made for the parameter, it is recommended that RPN be set to Null.

This device receives the following RPNs.

RPN	Data entry	Notes
MSB LSB	MSB LSB	
00H 00H	mmH —	Pitch Bend Sensitivity mm : 00H - 18 H (0 - 24 semitones) ll : ignored (processed as 00H) Up to 1 octave can be specified in semitone steps.

\* On the part whose Part MIDI CH ([PART]) matches the channel on which this message was received, the Bend Range Up and Bend Range Down ([PATCH]) settings will change simultaneously.

00H 01H	mmH llH	Master Fine Tuning mm, ll: 20 00H - 40 00H - 60 00H (-8192 *50 / 8192 - 0 - +8192 * 50 / 8192 cent)
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\* When this is received on the Performance Control Channel ([MIDI]), the Master Tune setting ([SETUP]) will change. When this is received on the Part MIDI Channel ([PART]), it will be added to Master Tune and the Fine Tuning of the Part will change. If the Performance Control Channel matches the Part MIDI Channel, the Master Tune setting will change.

00H 02H	mmH llH	Master Coarse Tuning mm : 28H - 40H - 58H (-24 - 0 - +24 semitones) ll : ignored (processed as 00H)
---------	---------	---

\* This will change the Part Transpose ([PART]) setting of the part whose Part MIDI CH ([PART]) matches the channel of the data that was received.

7FH 7FH	— —	RPN null
---------	-----	----------

\* RPN and NRPN will be set as "unspecified". Once this setting has been made, subsequent Data Entry messages will be ignored. (It is not necessary to transmit Data Entry for RPN Null settings.) Parameter values that were previously set will not change.

mm, ll: ignored

## ● Program Change

status      2nd byte  
CnH          ppH

pp=Program number      : 00H - 7FH (prog.1 - prog.128)

- \* This is received when Tx/Rx ProgChg SW ([MIDI]) is PC or BANK SEL + PC.
- \* If this is received on the Perform Ctrl CH ([MIDI]), the performance will change. If this is received on the Part MIDI CH ([PART]), the patch of that part will change. If the Perform Ctrl CH and the Part MIDI CH are the same, only the performance will change.
- \* In the case of a performance change, program numbers outside the range of 00H - 3FH will be ignored.
- \* When this message is received, all voices will be turned off.

## ● Channel Pressure

status      2nd byte  
DnH          vvH

- \* The Tx/Rx Setting ([MIDI]) will be valid when Tx/Rx Edit SW ([MIDI]) is ON and Tx/Rx Edit Mode ([MIDI]) is set to MODE2. In this case, this message will change the value of the parameter assigned to AFTERTOUC in the part whose Part MIDI CH ([PART]) matches the MIDI channel of the channel pressure message which was received.
- \* If Control Up/Control Down ([MIDI]) is set to AFTERTOUC, this message will operate as controller up or down for the part whose Part MIDI CH ([PART]) matches the MIDI channel on which the channel pressure message was received. With the factory settings, Control Up is set to AFTERTOUC.

## ● Pitch Bend Change

status      2nd byte      3rd byte  
EnH          llH          mmH

mm,ll=Pitch Bend value: 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

- \* This will modify the pitch of the notes of the part whose Part MIDI CH ([PART]) matches the MIDI channel on which the pitch bend change was received.
- \* The width of pitch change will be according to the patch parameter Bend Range Up ([PATCH]) and Bend Range Down ([PATCH]). A pitch bend value in the range of 00 00H - 3F 7FH will follow the Bend Range Down setting, and a value in the range of 40 01H - 7F 7FH will follow the Bend Range Up setting.

## ■ Channel Mode messages

### ● All Sound Off (Controller number 120)

status      2nd byte      3rd byte  
BnH          78H          00H

- \* When this message is received, all notes currently sounding on the corresponding channel will be turned off.

### ● Reset All Controllers (Controller number 121)

status      2nd byte      3rd byte  
BnH          79H          00H

- \* When this message is received, the following controllers will be set to their reset values.

Controller	Reset value
Pitch Bend Change	±0 (center)
Modulation	0 (minimum)
Expression	127 (maximum)
Hold 1	0 (off)
RPN	Unset. Previously set data will not change (However, the Fine Tune of the Part is excepted.).
Control Up	0 (minimum) Default setting is Aftersustain.
Control Down	0 (minimum) Default setting is Breath.

### ● All Note Off (Controller number 123)

status      2nd byte      3rd byte  
BnH          7BH          00H

- \* When All Note Off is received, all currently sounding notes of the corresponding channel will be turned off. However if Hold 1 is on, the sound will be held until these are turned off.

### ● Omni Off (Controller number 124)

status      2nd byte      3rd byte  
BnH          7CH          00H

- \* The same processing as when All Note Off is received will be done.

### ● Omni On (Controller number 125)

status      2nd byte      3rd byte  
BnH          7DH          00H

- \* The same processing as when All Note Off is received will be done.

### ● Mono (Controller number 126)

status      2nd byte      3rd byte  
BnH          7EH          mmH

mm=Mono number: 00H - 10H (0 - 16)

- \* The same processing as when All Note Off is received will be done, and the MONO Switch parameter will be set to ON.

### ● Poly (Controller number 127)

status      2nd byte      3rd byte  
BnH          7FH          00H

- \* The same processing as when All Note Off is received will be done, and the MONO Switch parameter will be set to OFF.

## ■ System Realtime messages

### ● Active Sensing

status  
FEH

- \* When an Active Sensing message is received, the unit will begin monitoring the intervals of all further messages. During monitoring, if more than 400 ms passes without a message being received, the same processing will be done as when All Sound Off, All Note Off, and Reset All Controllers messages are received. Then monitoring will be halted.

### ● Timing Clock

status  
F8H

- \* This is received when MIDI Sync ([MIDI]) is set to MIDI IN.

### ● Start

status  
FAH

- \* This is received when MIDI Sync ([MIDI]) is set to MIDI IN.

### ● Continue

status  
FBH

- \* This is received when MIDI Sync ([MIDI]) is set to MIDI IN.

### ● Stop

status  
FCH

- \* This is received when MIDI Sync ([MIDI]) is set to MIDI IN.

## ■ System Exclusive messages

- \* When MIDI Thru is ON (ALL), messages arriving at MIDI IN will be re-transmitted from MIDI OUT without change.
- \* These are not received when Rx Exclusive SW ([MIDI]) is OFF.

status	data byte	status
F0H	iiH, ddH, ....., eeH	F7H
F0H:	System Exclusive message status	
ii = ID number:	This is the ID number (manufacturer ID) that specifies the manufacturer whose exclusive message this is. Roland's manufacturer ID is 41H. ID numbers 7EH and 7FH are defined in an expansion of the MIDI standard as Universal Non-realtime messages (7EH) and Universal Realtime Messages (7FH).	
dd, ..., ee = data:	00H - 7FH (0 - 127)	
F7H:	EOX (End Of Exclusive)	

### ● Data Request 1 RQ1

This message requests the other device to transmit data. The address and size indicate the type and amount of data that is requested.  
When a Data Request message is received, if the device is in a state in which it is able to transmit data, and if the address and size are appropriate, the requested data is transmitted as a Data Set 1 (DT1) message. If the conditions are not met, nothing is transmitted.

status	data byte	status
F0H	41H, dev, 00H, 06H, 11H, aaH, bbH, ccH, ddH, ssH, ttH, uuH, vvH, sum	F7H
Byte	Remarks	
F0H	Exclusive status	
41H	ID number	(Roland)
dev	device ID	(dev: 10H - 1FH, factory setting is 10H)
00H	model ID	(JP-8080)
06H	model ID	(JP-8080)
11H	command ID	(RQ1)
aaH	address MSB	
bbH	address	
ccH	address	
ddH	address LSB	
ssH	size MSB	
ttH	size	
uuH	size	
vvH	size LSB	
sum	checksum	
F7H	EOX	(End Of Exclusive)

- \* The size of data that can be transmitted at one time is fixed for each type of data, and data requests must be made with a fixed starting address and size. Refer to the address and size given in " 4. Parameter address map " (p.200)
- \* For details on the address, size, and checksum values, refer to "Examples of exclusive messages and calculating the checksum" (p.206).

### ● Data Set 1 DT1

This message transmits the actual data, and is used when you wish to set the data of the receiving device.

status	data byte	status
F0H	41H, dev, 00H, 06H, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H
Byte	Remarks	
F0H	Exclusive status	
41H	ID number	(Roland)
dev	device ID	(dev: 10H - 1FH, factory setting is 10H)
00H	model ID	(JP-8080)
06H	model ID	(JP-8080)
12H	command ID	(DT1)
aaH	address MSB	
bbH	address	
ccH	address	
ddH	address LSB	
eeH	data: The actual data to be transmitted. Multi-byte data is transmitted in the order of the address.	
:	:	
ffH	data	
sum	checksum	
F7H	EOX	(End Of Exclusive)

- \* For details on the address, size, and checksum values, refer to "Examples of exclusive messages and calculating the checksum" (p.206).
- \* Data whose size is greater than 256 bytes should be divided into packets of 256 bytes or less and transmitted. Successive "Data Set 1 messages should have at least 20 ms of time interval between them.

### ● Identity Request

status	data byte	status
F0H	7EH, dev, 06H, 01H	F7H
F0H	Exclusive status	
7EH	ID number	(Universal Non-Realtime Messages)
dev	device ID	(dev: 10H-1FH (1-32) or 7FH (Broadcast), default value is 10H (17))
06H	Sub ID#1	(General Information)
01H	Sub ID#2	(Identity Request)
F7H	EOX	(End Of Exclusive)

- \* "dev" matches the unit's own device ID, or is 7FH (Broadcast).
- \* Even if an identity request message is received with a setting of Broadcast, the reply will be sent using the unit's own device ID.

## 2. MIDI messages received at Remote Keyboard In

### ■ Channel voice messages

#### ● Note Off

status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

- \* This is received only when Remote KBD CH ([MIDI]) is ALL or when the MIDI channel of the note-off matches.
- \* Note-off messages that are received will turn off notes of the part according to the PANEL SELECT and KEY MODE settings. At the same time, a note-off message will be transmitted from MIDI OUT on the Part MIDI CH ([PART]) of that part.
- \* If ARPEGGIATOR/RPS [ON] is on, the received note-off messages can control the arpeggiator or RPS.
- \* If the Indv Trig Switch ([PFM COMMON]) is ON and KEY MODE is SPLIT, received note-off messages that are below the Split Point ([PFM COMMON]) will release the envelope specified by Indv Trig Dest ([PFM COMMON]).

#### ● Note On

status	2nd byte	3rd byte
9nH	kkH	vvH

- \* Received only when Remote KBD CH ([MIDI]) is ALL or when the MIDI channel of the note-on message matches.
- \* Note-on messages that are received will sound notes on the part according to the PANEL SELECT and KEY MODE settings. At the same time, a note-on message will be transmitted from MIDI OUT on the Part MIDI CH ([PART]) of that part.
- \* When ARPEGGIATOR/RPS [ON] is on, received note-on messages can control the arpeggiator or RPS.
- \* When Indv Trig Switch ([PFM COMMON]) is ON and KEY MODE is SPLIT, received note-on messages that are below the Split Point ([PFM COMMON]) will start the envelope specified by Indv Trig Dest ([PFM COMMON]).

### ● Control Change

- \* Received only when Remote KBD CH ([MIDI]) is ALL or when the MIDI channel of the control change matches.
- \* If Control Up/Control Down ([MIDI]) is set to control change, this message will function as controller up or down for the part specified by PANEL SELECT (when KEY MODE is SINGLE or SPLIT) or for both the Upper and Lower parts regardless of PANEL SELECT (when KEY MODE is DUAL). At the same time, a control change message will be transmitted from MIDI OUT on the Part MIDI CH ([PART]) of that part.

\* When Tx/Rx Editing ([MIDI]) is ON and Tx/Rx Edit Mode ([MIDI]) is set to MODE2, the Tx/Rx Setting ([MIDI]) will be valid. In this case, this message will change the value of the parameter assigned to the received control change for the part specified by PANEL SELECT. Also, a control change will be transmitted from MIDI OUT on the Part MIDI CH ([PART]) of that part.

\* Tx/Rx settings ([MIDI]) can be made for controller numbers 1 to 31 and 33 to 95. Refer to Transmit/Receive Setting List (p.188) for the default settings.

#### ○ Bank Select (Controller number 0, 32)

status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

mm, ll = Bank number: 00 00H - 7F 7FH (bank.1 - bank.16384)

\* Regardless of the Tx/Rx ProgChg SW ([MIDI]) setting, this is received when Remote KBD CH ([MIDI]) is ALL or when the MIDI channel of the bank select message matches.

\* If [PERFORM/PATCH SELECT] is off (PERFORM) when this message is received, the performance bank will be specified. If [PERFORM/PATCH SELECT] is on (PATCH), the bank of the patch for the part selected by PANEL SELECT will be specified.

\* Bank Select processing will be suspended until a Program Change message is received.

\* If an unavailable (nonexistent) Bank Select number is received it will be ignored, and only the Program Change will be received.

\* The Patches corresponding to each Bank Select are as follows.

Bank MSB	Select LSB	Program No.	Group	Patch No.
50H	00H	00H - 3FH	User A	11 - 88
	00H	40H - 7FH	User B	11 - 88
51H	00H	00H - 3FH	Preset 1 A	11 - 88
	00H	40H - 7FH	Preset 1 B	11 - 88
	01H	00H - 3FH	Preset 2 A	11 - 88
	01H	40H - 7FH	Preset 2 B	11 - 88
	02H	00H - 3FH	Preset 3 A	11 - 88
	02H	40H - 7FH	Preset 3 B	11 - 88
52H	00H	00H - 3FH	Card 01 A	11 - 88
	00H	40H - 7FH	Card 01 B	11 - 88
	01H	00H - 3FH	Card 02 A	11 - 88
	01H	40H - 7FH	Card 02 B	11 - 88
	:	:	:	:
	1FH	00H - 3FH	Card 32 A	11 - 88
	1FH	40H - 7FH	Card 32 B	11 - 88
	*) 20H	00H - 3FH	Card 33 A	11 - 88
	20H	40H - 7FH	Card 33 B	11 - 88
	21H	00H - 3FH	Card 34 A	11 - 88
	21H	40H - 7FH	Card 34 B	11 - 88
	:	:	:	:
	3FH	00H - 3FH	Card 64 A	11 - 88
	3FH	40H - 7FH	Card 64 B	11 - 88

\*) Bank Select LSB 20H - 3FH can be used only with the S4M-5.

\* The Performances corresponding to each Bank Select are as follows.

Bank MSB	Select LSB	Program No.	Group	Perform No.
50H	00H	00H - 3FH	User	11 - 88
51H	00H	00H - 3FH	Preset 1	11 - 88
	01H	00H - 3FH	Preset 2	11 - 88
	02H	00H - 3FH	Preset 3	11 - 88
52H	00H	00H - 3FH	Card 01	11 - 88
	01H	00H - 3FH	Card 02	11 - 88
	02H	00H - 3FH	Card 03	11 - 88
	:	:	:	:
	1FH	00H - 3FH	Card 32	11 - 88
	*) 20H	00H - 3FH	Card 33	11 - 88
	:	:	:	:
	3FH	00H - 3FH	Card 64	11 - 88

\*) Bank Select LSB 20H - 3FH can be used only with the S4M-5.

#### ○ Modulation (Controller number 1)

status	2nd byte	3rd byte
BnH	01H	vvH

\* This will control the pitch, cutoff, or amplitude modulation depth for the respective PITCH/FILTER/AMP[DEPTH] parameter of MODULATION(LFO2).

\* This is not reset to the default value when a patch program change is received.

\* This will be reset to the default value when a performance program change is received.

#### ○ Breath type (Controller number 2)

status	2nd byte	3rd byte
BnH	02H	vvH

#### ○ Foot type (Controller number 4)

status	2nd byte	3rd byte
BnH	04H	vvH

#### ○ Portamento Time (Controller number 5)

status	2nd byte	3rd byte
BnH	05H	vvH

\* This will modify the PORTAMENTO [TIME] value.

#### ○ Data Entry (Controller number 6, 38)

status	2nd byte	3rd byte
BnH	06H	mmH
BnH	26H	llH

#### ○ Volume (Controller number 7)

status	2nd byte	3rd byte
BnH	07H	vvH

#### ○ Balance (Controller number 8)

status	2nd byte	3rd byte
BnH	08H	vvH

#### ○ Panpot (Controller number 10)

status	2nd byte	3rd byte
BnH	0AH	vvH

#### ○ Expression (Controller number 11)

status	2nd byte	3rd byte
BnH	0BH	vvH

\* This adjusts the volume of the part. Expression messages are used to create variation in dynamics (expression pedal, crescendo, decrescendo etc.) while you play.

\* This is not reset to the default value when a patch program change is received.

\* This is reset to the default value when a performance program change is received.

#### ○ Effect Control1 (Controller number 12)

status	2nd byte	3rd byte
BnH	0CH	vvH

#### ○ Effect Control2 (Controller number 13)

status	2nd byte	3rd byte
BnH	0DH	vvH

#### ○ General Purpose Controller1-4 (Controller number 16-19)

status	2nd byte	3rd byte
BnH	10-13H	vvH

#### ○ Hold1 (Controller number 64)

status	2nd byte	3rd byte
BnH	40H	xxH

\* This will hold notes which are currently in a note-on state.

#### ○ Portamento (Controller number 65)

status	2nd byte	3rd byte
BnH	41H	xxH

\* This switches PORTAMENTO [ON] on/off.

#### ○ Sound Controller1-10 (Controller number 70-79)

status	2nd byte	3rd byte
BnH	46-4FH	vvH

#### ○ General Purpose Controllers 5-8 (Controller number 80-83)

status	2nd byte	3rd byte
BnH	50-53H	vvH

## ○ Portamento Control

(Controller number 84)

status	2nd byte	3rd byte
BnH	54H	kkH

kk = Source Note Number: 00H - 7FH (C-1 - G9)

- \* A Note On message received immediately after a Portamento control will be sounded with the pitch changing smoothly from the source note number.
- \* If a voice is already sounding at the same note number as the source note number, that voice will change pitch to the pitch of the newly received Note On, and continue sounding (i.e., will be played legato).

Example 1.

On MIDI	Description	Result
90 3C 40	Note on C4	C4 on
B0 54 3C	(Portamento Control from C4)	no change (C4 voice still sounding)
90 40 40	Note on E4	glide from C4 to E4
80 3C 40	Note off C4	no change
80 40 40	Note off E4	E4 off

Example 2.

On MIDI	Description	Result
B0 54 3C	(Portamento Control from C4)	no change
90 40 40	(Note on E4)	E4 is played with glide from C4 to E4
80 40 40	(Note off E4)	E4 off

- \* The speed of the pitch change caused by Portamento is determined by the PORTAMENTO TIME parameter value.

## ○ Effects Depth 2-5

(Controller number 92-95)

status	2nd byte	3rd byte
BnH	5C-5FH	kkH

## ● Program Change

status	2nd byte
CnH	ppH

pp=Program number: 00H - 7FH (prog.1 - prog.128)

- \* Regardless of the Tx/Rx ProgChg SW ([MIDI]) setting, this message is received if the system parameter Remote KBD CH ([MIDI]) is ALL or if the MIDI channel of the program change matches.
- \* When this is received, a performance change will occur if [PERFORM/PATCH SELECT] is off (PERFORM). If [PERFORM/PATCH SELECT] is on (PATCH), the patch will change for the part selected by PANEL SELECT.
- \* In the case of a performance change, program numbers outside the range of 00H - 3FH will be ignored.
- \* When this message is received, all voices will be turned off.

## ● Channel Pressure

status	2nd byte
DnH	vvH

- \* This is received only when Remote KBD CH ([MIDI]) is ALL or if the MIDI channel of the channel pressure matches.
- \* When Tx/Rx Edit SW ([MIDI]) is ON and Tx/Rx Edit Mode ([MIDI]) is set to MODE2, the Tx/Rx Setting ([MIDI]) will be valid. In this case, the message will change the value of the parameter which is assigned to AFTERTOUCH for the part specified by PANEL SELECT. At the same time, a channel pressure message will be transmitted from MIDI OUT on the Part MIDI CH ([PART]) of that part.
- \* If Control Up/Control Down ([MIDI]) is set to AFTERTOUCH, this message will function as controller up or down for the part specified by PANEL SELECT (if KEY MODE is SINGLE or SPLIT), or for both Upper and Lower parts regardless of the PANEL SELECT setting (if KEY MODE is DUAL). With the factory settings, Control Up is set to AFTERTOUCH. At the same time, channel pressure messages will be transmitted from MIDI OUT on the Part MIDI CH ([PART]) of that part.

## ● Pitch Bend Change

status	2nd byte	3rd byte
EnH	llH	mmH

mm,ll=Pitch Bend value: 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

- \* This is received only when Remote KBD CH ([MIDI]) is ALL or when the MIDI channel of the Pitch Bend Change matches.
- \* Pitch bend change messages that are received will modify the pitch of the part specified by PANEL SELECT (if KEY MODE is SINGLE or SPLIT) or of both Upper and Lower parts regardless of the PANEL SELECT setting (if KEY MODE is DUAL). At the same time, pitch bend change messages will be transmitted from MIDI OUT on the Part MIDI CH ([PART]) for that part.
- \* The range of pitch change will be according to the patch parameter Bend Range Up ([PATCH]) and Bend Range Down ([PATCH]). Pitch bend values in the range of 00 00H - 3F 7FH will apply according to Bend Range Down, and values in the range of 40 01H - 7F 7FH will apply according to Bend Range Up.

## ■ Channel Mode messages

### ● Reset All Controllers (Controller number 121)

status	2nd byte	3rd byte
BnH	79H	00H

- \* This is received only when Remote KBD CH ([MIDI]) is ALL or when the MIDI channel of the Reset All Controllers matches.
- \* When this message is received, the values of the following controllers will be reset for the part selected by PANEL SELECT if KEY MODE is SINGLE or SPLIT, or for both Upper and Lower parts regardless of the PANEL SELECT setting if KEY MODE is DUAL.

Controller	Reset value
Pitch Bend Change	±0 (center)
Modulation	0 (minimum)
Expression	127 (maximum)
Hold 1	0 (off)
RPN	Unset. Previously set data will not change.
Control Up	0 (minimum) Default setting is Aftersustain.
Control Down	0 (minimum) Default setting is Breath.

### ● All Note Off (Controller number 123)

status	2nd byte	3rd byte
BnH	7BH	00H

- \* This is received only when Remote KBD CH ([MIDI]) is ALL or when the MIDI channel of the All Note Off matches.
- \* When this message is received, all notes of the part specified by PANEL SELECT which are currently on will be turned off. However if Hold 1 is on, the sound will continue until this is turned off.

### ● Omni Off (Controller number 124)

status	2nd byte	3rd byte
BnH	7CH	00H

- \* The same processing as when All Note Off is received will be done.

### ● Omni On (Controller number 125)

status	2nd byte	3rd byte
BnH	7DH	00H

- \* The same processing as when All Note Off is received will be done.

### ● Mono (Controller number 126)

status	2nd byte	3rd byte
BnH	7EH	mmH

mm=Mono number: 00H - 10H (0 - 16)

- \* This is received only when Remote KBD CH ([MIDI]) is ALL or when the MIDI channel of the Mono message matches.
- \* The mono number is always handled as 1.
- \* The same processing will be performed as when All Note Off is received, and [MONO] will be turned on for the patch of the part specified by PANEL SELECT.

## ● Poly

## (Controller number 127)

status	2nd byte	3rd byte
BnH	7FH	00H

- \* This is received only when Remote KBD CH ([MIDI]) is ALL or when the MIDI channel of the poly message matches.
- \* The same processing will be performed as when All Note Off is received, and [MONO] will be turned off for the patch of the part specified by PANEL.SELECT.

## ■ System Realtime messages

### ● Active Sensing

status
FEH

- \* When an Active Sensing message is received, the unit will begin monitoring the intervals of all further messages. During monitoring, if more than 400 ms passes without a message being received, the same processing will be done as when All Note Off and Reset All Controllers messages are received. Then monitoring will be halted.

### ● Timing Clock

status
F8H

- \* This is received when MIDI Sync ([MIDI]) is set to REMOTE KBD IN.

### ● Start

status
FAH

- \* This is received when MIDI Sync ([MIDI]) is set to REMOTE KBD IN.

### ● Continue

status
FBH

- \* This is received when MIDI Sync ([MIDI]) is set to REMOTE KBD IN.

### ● Stop

status
FCH

- \* This is received when MIDI Sync ([MIDI]) is set to REMOTE KBD IN.

## ■ System Exclusive messages

- \* Regardless of the Exclusive Receive Switch setting, REMOTE KBD IN will always receive exclusive messages for the parameters of the patch/performance in the temporary area. However, patch parameters and performance part parameters will be received by the part that is selected by Panel Select. No other exclusive messages will be received.

status	data byte	status
F0H	iiH, ddH, ....., eeH	F7H

F0H: System Exclusive message status  
 ii = ID number: This is the ID number (manufacturer ID) that specifies the manufacturer whose exclusive message this is. Roland's manufacturer ID is 41H. ID numbers 7EH and 7FH are defined in an expansion of the MIDI standard as Universal Non-realtime messages (7EH) and Universal Realtime Messages (7FH).  
 dd, ..., ee = data: 00H - 7FH (0 - 127)  
 F7H: EOX (End Of Exclusive)

## ● Data Set 1 DT1

This message transmits the actual data, and is used when you wish to set the data of the receiving device.

status	data byte	status
F0H	41H, dev, 00H, 06H, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H - 1FH, factory setting is 10H)
00H	model ID (JP-8080)
06H	model ID (JP-8080)
12H	command ID (DT1)
aaH	address MSB
bbH	address
ccH	address
ddH	address LSB
eeH	data: The actual data to be transmitted. Multi-byte data is transmitted in the order of the address.
:	:
ffH	data
sum	checksum
F7H	EOX (End Of Exclusive)

- \* Only data set 1 for patch parameters and performance parameters is received. For patch parameters, this message will affect the patch parameters of the part selected by PANEL.SELECT at that time, regardless of the parameter address which was received.
- \* For details on address, size, and checksum settings, refer to "Examples of exclusive messages and calculating the checksum" (p.206).
- \* Data whose size is greater than 256 bytes should be divided into packets of 256 bytes or less and transmitted. Successive "Data Set 1 messages should have at least 20 ms of time interval between them.

### 3. MIDI messages transmitted from MIDI OUT

- \* When MIDI Thru is ON (ALL), messages received at MIDI IN will be re-transmitted from MIDI OUT except for Active Sensing messages.
- \* When MIDI Thru is ON (w/o Sys.Ex), MIDI messages received at MIDI IN will be re-transmitted from MIDI OUT except for Active Sensing and System Exclusive messages.

#### ■ Channel voice messages

##### ● Note Off

status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

##### ● Note On

status	2nd byte	3rd byte
9nH	kkH	vvH

##### ● Control Change

- \* When the Tx/Rx Edit SW ([MIDI]) is ON and Tx/Rx Edit Mode ([MIDI]) is set to MODE2, the Tx/Rx Setting ([MIDI]) setting will be valid. In this case, operating the sliders/knobs will cause the control change assigned to that parameter to be transmitted on the Part MIDI CH ([PART]) of the part specified by PANEL SELECT.
- \* Tx/Rx settings ([MIDI]) can be made for controller numbers 1 to 31 and 33 to 95. Refer to Transmit/Receive Setting List (p.188) for the default settings.

##### ○ Bank Select (Controller number 0,32)

status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

mm,ll=Bank number: 00 00H - 7F 7FH (bank.1 - bank.16384)

- \* This is transmitted when Tx/Rx ProgChg SW ([MIDI]) is BANK SEL + PC.

- \* The Patches corresponding to each Bank Select are as follows.

Bank MSB	Select LSB	Program No.	Group	Patch No.
50H	00H	00H - 3FH	User A	11 - 88
	00H	40H - 7FH	User B	11 - 88
51H	00H	00H - 3FH	Preset 1 A	11 - 88
	00H	40H - 7FH	Preset 1 B	11 - 88
	01H	00H - 3FH	Preset 2 A	11 - 88
	01H	40H - 7FH	Preset 2 B	11 - 88
	02H	00H - 3FH	Preset 3 A	11 - 88
	02H	40H - 7FH	Preset 3 B	11 - 88
52H	00H	00H - 3FH	Card 01 A	11 - 88
	00H	40H - 7FH	Card 01 B	11 - 88
	01H	00H - 3FH	Card 02 A	11 - 88
	01H	40H - 7FH	Card 02 B	11 - 88
	:	:	:	:
	1FH	00H - 3FH	Card 32 A	11 - 88
	1FH	40H - 7FH	Card 32 B	11 - 88
	*) 20H	00H - 3FH	Card 33 A	11 - 88
		40H - 7FH	Card 33 B	11 - 88
		00H - 3FH	Card 34 A	11 - 88
		40H - 7FH	Card 34 B	11 - 88
	:	:	:	:
	3FH	00H - 3FH	Card 64 A	11 - 88
	3FH	40H - 7FH	Card 64 B	11 - 88

- \*) Bank Select LSB 20H - 3FH is available only with the S4M-5.

- \* The Performances corresponding to each Bank Select are as follows.

Bank MSB	Select LSB	Program No.	Group	Perform No.
50H	00H	00H - 3FH	User	11 - 88
51H	00H	00H - 3FH	Preset 1	11 - 88
	01H	00H - 3FH	Preset 2	11 - 88
	02H	00H - 3FH	Preset 3	11 - 88
52H	00H	00H - 3FH	Card 01	11 - 88
	01H	00H - 3FH	Card 02	11 - 88
	02H	00H - 3FH	Card 03	11 - 88
	:	:	:	:
	1FH	00H - 3FH	Card 32	11 - 88
	*) 20H	00H - 3FH	Card 33	11 - 88
		:	:	:
		:	:	:
		3FH	Card 64	11 - 88
	:	:	:	:

- \*) Bank Select LSB 20H - 3FH is available only with the S4M-5.

##### ○ Modulation (Controller number 1)

status	2nd byte	3rd byte
BnH	01H	vvH

##### ○ Breath type (Controller number 2)

status	2nd byte	3rd byte
BnH	02H	vvH

- \* When Control Up/Control Down ([MIDI]) is assigned to BREATH, settings of  
VOICE MODULATOR [ON] ON  
Vocal Morph Ctrl ON  
Vocal Morph Sens -64 -- 1  
VocalMorph Thrsh 0 - 126

will mean that when audio is input to VOCAL/UPPER, breath type messages will be transmitted on the Part MIDI CH of the part specified by PANEL SELECT (when KEY MODE is SINGLE or SPLIT) or of both Upper and Lower parts regardless of PANEL SELECT (when KEY MODE is DUAL). With the factory settings, BREATH is assigned to Control Down.

##### ○ Foot type (Controller number 4)

status	2nd byte	3rd byte
BnH	04H	vvH

##### ○ Portamento Time (Controller number 5)

status	2nd byte	3rd byte
BnH	05H	vvH

##### ○ Data Entry (Controller number 6, 38)

status	2nd byte	3rd byte
BnH	06H	mmH
BnH	26H	llH

mm,ll= the value of the parameter specified by RPN/NRPN  
mm=MSB, ll=LSB

##### ○ Volume (Controller number 7)

status	2nd byte	3rd byte
BnH	07H	vvH

##### ○ Balance (Controller number 8)

status	2nd byte	3rd byte
BnH	08H	vvH

##### ○ Panpot (Controller number 10)

status	2nd byte	3rd byte
BnH	0AH	vvH

##### ○ Expression (Controller number 11)

status	2nd byte	3rd byte
BnH	0BH	vvH

##### ○ Effect Control1 (Controller number 12)

status	2nd byte	3rd byte
BnH	0CH	vvH

##### ○ Effect Control2 (Controller number 3)

status	2nd byte	3rd byte
BnH	0DH	vvH

##### ○ General Purpose Controller1-4 (Controller number 16-19)

status	2nd byte	3rd byte
BnH	10-13H	vvH

##### ○ Hold1 (Controller number 64)

status	2nd byte	3rd byte
BnH	40H	xxH

##### ○ Portamento (Controller number 65)

status	2nd byte	3rd byte
BnH	41H	xxH

##### ○ Sound Controller1-10 (Controller number 70-79)

status	2nd byte	3rd byte
BnH	46-4FH	vvH

## ○ General Purpose Controllers 5–8

(Controller number 80–83)

status	2nd byte	3rd byte
BnH	50-53H	vvH

## ○ Portamento Control

(Controller number 84)

status	2nd byte	3rd byte
BnH	54H	kkH

kk = Source Note Number: 00H - 7FH (C-1 - G9)

- \* This is transmitted when ARPEGGIATOR/RPS [ON] is turned on, ARPEGGIATOR / RPS [MODE] is set to UP/DOWN/UP&DOWN/RND, Arp Beat Pattern is set to PORTA-A1 - PORTA-B15 and you play an arpeggio.

## ○ Effects Depth 2-5

(Controller number 92–95)

status	2nd byte	3rd byte
BnH	5C-5FH	kkH

## ● Program Change

status	2nd byte
CnH	ppH

pp=Program number: 00H - 7FH (prog.1 - prog.128)

- \* This is transmitted when Tx/Rx ProgChg ([MIDI]) is PC or BANK SEL + PC.
- \* This is transmitted on the Perform Ctrl CH ([MIDI]) when a performance is changed, and on the Part MIDI CH ([PART]) of that part when a patch is changed.

## ● Channel Pressure

status	2nd byte
DnH	vvH

- \* When Tx/Rx Edit SW ([MIDI]) is ON and Tx/Rx Edit Mode ([MIDI]) is set to MODE2, the Tx/Rx Setting ([MIDI]) setting will be valid. In this case when AFTERTOUCH is assigned to a controller (slider or knob), operating that controller will transmit Channel Pressure messages on the Part MIDI CH ([PART]) of that part. With the factory settings, AFTERTOUCH is not assigned to controllers.
- \* When Control Up/Control Down ([MIDI]) is assigned to AFTERTOUCH, settings of  
VOICE MODULATOR [ON] ON  
Vocal Morph Ctrl ON  
Vocal Morph Sens 1 - 63  
VocalMorph Thrsh 0 - 126  
will mean that when audio is input to VOCAL/UPPER, Channel Pressure messages will be transmitted on the Part MIDI CH of the part specified by PANEL SELECT (when KEY MODE is SINGLE or SPLIT) or of both Upper and Lower parts regardless of PANEL SELECT (when KEY MODE is DUAL). With the factory settings, AFTERTOUCH is assigned to Control Up.

## ● Pitch Bend Change

status	2nd byte	3rd byte
EnH	llH	mmH

mm,ll=Pitch Bend value: 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

- \* When performance parameters are set as follows,  
VOICE MODULATOR [ON] ON  
Vocal Morph Ctrl ON  
Vocal Morph Sens other than 0  
VocalMorph Thrsh other than 127  
and Morph Bend Assgn is also turned ON, inputting audio to VOCAL/UPPER will cause Pitch Bend Change messages to be transmitted on the Part MIDI CH of the part specified by PANEL SELECT (when KEY MODE is SINGLE or SPLIT) or of both Upper and Lower parts regardless of PANEL SELECT (when KEY MODE is DUAL).

## ■ System Realtime messages

### ● Active Sensing

status
FEH

- \* This is transmitted at intervals of approximately 200 msec.

## ■ System Exclusive messages

status	data byte	status
F0H	iiH, ddH, ....., eeH	F7H

- F0H: System Exclusive message status
- ii = ID number: This is the ID number (manufacturer ID) that specifies the manufacturer whose exclusive message this is. Roland's manufacturer ID is 41H. ID numbers 7EH and 7FH are defined in an expansion of the MIDI standard as Universal Non-realtime messages (7EH) and Universal Realtime Messages (7FH).
- dd,...., ee = data: 00H - 7FH (0 - 127)
- F7H: EOX (End Of Exclusive)

### ● Data Set 1 DT1

This message transmits the actual data, and is used when you wish to set the data of the receiving device.

status	data byte	status
F0H	41H, dev, 00H, 06H, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H - 1FH, factory setting is 10H)
00H	model ID (JP-8080)
06H	model ID (JP-8080)
12H	command ID (DT1)
aaH	address MSB
bbH	address
ccH	address
ddH	address LSB
eeH	data: The actual data to be transmitted. Multi-byte data is transmitted in the order of the address.
:	:
ffH	data
sum	checksum
F7H	EOX (End Of Exclusive)

- \* For details on setting the address, size, and checksum, refer to "Examples of exclusive messages and calculating the checksum" (p.206).
- \* Large-sized data must be divided into packets of 256 bytes or less, and transmitted at intervals of approximately 20 ms or longer.

### ● Identity Reply

status	data byte	status
F0H	7EH, dev, 06H, 02H, 41H, 06H, 01H, 00H, 01H, 00H, 02H, 00H, 00H	F7H

F0H	Exclusive status	
7EH	ID number	(Universal Non-Realtime Messages)
dev	device ID	(dev: 10H - 1FH, factory setting is 10H)
06H	Sub ID#1	(General Information)
02H	Sub ID#1	(Identity Reply)
41H	ID number	(Roland)
06H	Device Family Code	(LSB)
01H	Device Family Code	(MSB)
00H	Device Family Number Code	(LSB)
01H	Device Family Number Code	(MSB)
00H	Software Revision Level	
02H	Software Revision Level	
00H	Software Revision Level	
00H	Software Revision Level	
F7H	EOX	(End Of Exclusive)

- \* Even when an identity request message is received with a setting of Broadcast, the unit's own device ID will be used in the reply.



## 4. Parameter address map

### JP-8080 (Model ID = 00H 06H)

- \* Data of addresses marked by # is divided into two bytes for transmission. If the most significant bit of the original data is 1, transmit 01H and the remaining 7 bits as is. If the most significant bit is 0, transmit 00H and the remaining 7 bits as is.

Example)

If the original data is BCH, the binary expression of BCH is 10111100. Thus, 01H is transmitted as the first byte. As the next byte, we transmit the remaining 0111100 = 3CH without change. For reception, data will be ignored if the two bytes are not received together.

- \* Parameter names given as — are parameters which are used only by the JP-8000. They will be ignored if received by the JP-8080.

Start Address	Description	
00 00 00 00	System Area	4-1
01 00 00 00	Performance Temporary Area	4-2
02 00 00 00	User Patch (Patch U:All - U:B88)	4-4
03 00 00 00	User Performance (Performance U:11 - U:88)	4-5
09 00 00 00	Motion Control Data (Motion SET A)	4-6
0A 00 00 00	Motion Control Data (Motion SET B)	4-6

### 4-1. System Area

Offset Address	Description	
00 00 00 00	System Parameter	4-1-1
00 00 20 00	Motion Setup	4-1-2
00 00 30 00	Tx/Rx Setting	4-1-3

#### 4-1-1. System Parameter

size = 19H (25 byte)

Offset Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00 00 00 00	Performance Bank	01h - 03h	USER, PRESET, CARD
00 00 00 01	Performance No.	00h - 3Fh	11 - 88
00 00 00 02	Performance Control Channel	00h - 10h	1 - 16, OFF
00 00 00 03	Power Up Mode	00h - 01h	PERFORM U-11, LAST-SET
00 00 00 04	MIDI Sync	00h - 02h	OFF, MIDI IN, REMOTE KBD IN
00 00 00 05	Local Switch	00h - 01h	OFF, ON
00 00 00 06	Tx/Rx Edit Mode	00h - 01h	MODEL, MODE2
00 00 00 07	Tx/Rx Edit Switch	00h - 01h	OFF, ON
00 00 00 08	Tx/Rx Program Change Switch	00h - 02h	OFF, PC, BANK SEL + PC
00 00 00 09	---	---	---
00 00 00 0A	Master Tune	00h - 64h	427.5 - 452.9 [Hz]
00 00 00 0B	Pattern Trigger Quantize	00h - 02h	OFF, BEAT, MEASURE
00 00 00 0C	Motion Restart	00h - 01h	OFF, ON
00 00 00 0D	Motion Set	00h - 01h	SET A, SET B
00 00 00 0E	Gate Time Ratio	00h - 05h	REAL, STACCATO, 33%, 50%, 66%, 100%
00 00 00 0F	Input Quantize	00h - 06h	OFF, 1/16(3), 1/16, 1/8(3), ..., 1/4
00 00 00 10	Pattern Metronome	00h - 08h	Beep VOL4 - 1, OFF, Click VOL1 - 4
00 00 00 11	Motion Metronome	00h - 08h	Beep VOL4 - 1, OFF, Click VOL1 - 4
00 00 00 12	---	---	---
00 00 00 13	---	---	---
00 00 00 14	---	---	---
00 00 00 15	---	---	---
00 00 00 16	---	---	---
00 00 00 17	Performance Group No.	00h - 3Fh	Group 1..64 (*)
00 00 00 18	Remote Keyboard Channel	00h - 10h	1 - 16, ALL

(\*) The range of Performance Group numbers will be as follows depending on the Performance Bank value.

Perf. Bank	Perf Group No.
01H: USER	00H only
02H: PRESET	00H - 02H
03H: CARD (S2M-5)	00H - 1FH
(S4M-5)	00H - 3FH

#### 4-1-2. Motion Setup

size = 04H (4 byte)

Offset Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00 00 00 00	Motion Control A1 Loop length	00h - 08h	PLAY ONCE, 1 - 8 [measure]
00 00 00 01	Motion Control A2 Loop length	00h - 08h	PLAY ONCE, 1 - 8 [measure]
00 00 00 02	Motion Control B1 Loop length	00h - 08h	PLAY ONCE, 1 - 8 [measure]
00 00 00 03	Motion Control B2 Loop length	00h - 08h	PLAY ONCE, 1 - 8 [measure]

### 4-1-3. Tx/Rx Setting

size = 2AH (42 byte)

Offset	Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00 00 00 00		Tx/Rx Setting (LFO1 Rate)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 01		Tx/Rx Setting (LFO1 Fade)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 02		Tx/Rx Setting (LFO2 Rate)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 03		Tx/Rx Setting (Cross Modulation Depth)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 04		Tx/Rx Setting (Oscillator Balance)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 05		Tx/Rx Setting (OSC LFO1 Depth)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 06		Tx/Rx Setting (Pitch LFO2 Depth)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 07		Tx/Rx Setting (Pitch Env. Depth)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 08		Tx/Rx Setting (Pitch Env. Attack Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 09		Tx/Rx Setting (Pitch Env. Decay Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 0A		Tx/Rx Setting (OSC1 Controll1)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 0B		Tx/Rx Setting (OSC1 Controll2)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 0C		Tx/Rx Setting (OSC2 Range)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 0D		Tx/Rx Setting (OSC2 Fine Tune)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 0E		Tx/Rx Setting (OSC2 Controll1)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 0F		Tx/Rx Setting (OSC2 Controll2)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 10		Tx/Rx Setting (Cutoff Frequency)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 11		Tx/Rx Setting (Resonance)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 12		Tx/Rx Setting (Cutoff Key Follow)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 13		Tx/Rx Setting (Filter LFO1 Depth)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 14		Tx/Rx Setting (Filter LFO2 Depth)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 15		Tx/Rx Setting (Filter Env Depth)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 16		Tx/Rx Setting (Filter Env Attack Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 17		Tx/Rx Setting (Filter Env Decay Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 18		Tx/Rx Setting (Filter Env Sus. Level)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 19		Tx/Rx Setting (Filter Env Rel. Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 1A		Tx/Rx Setting (Amplifier Level)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 1B		Tx/Rx Setting (Amplifier LFO1 Depth)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 1C		Tx/Rx Setting (Amplifier LFO2 Depth)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 1D		Tx/Rx Setting (Amp. Env. Attack Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 1E		Tx/Rx Setting (Amp. Env. Decay Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 1F		Tx/Rx Setting (Amp. Env. Sus. Level)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 20		Tx/Rx Setting (Amp. Env. Release Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 21		Tx/Rx Setting (Tone Control Bass)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 22		Tx/Rx Setting (Tone Control Treble)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 23		Tx/Rx Setting (Multi Effects Level)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 24		Tx/Rx Setting (Delay Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 25		Tx/Rx Setting (Delay Feedback)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 26		Tx/Rx Setting (Delay Level)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 27		Tx/Rx Setting (Portamento Time)	00h - 60h	OFF, CC#1-31, AFTER, CC#33-95, SYSEX
00 00 00 28		Tx/Rx Setting (Morph Control Up)	00h - 5Fh	OFF, CC#1-31, AFTER, CC#33-95
00 00 00 29		Tx/Rx Setting (Morph Control Down)	00h - 5Fh	OFF, CC#1-31, AFTER, CC#33-95

### 4-2. Performance

Offset	Address	Description
00 00 00 00		Performance Common
00 00 08 00		Voice Modulator
00 00 10 00		Part (Upper)
00 00 11 00		Part (Lower)
00 00 40 00		Patch (Upper)
00 00 42 00		Patch (Lower)

### 4-2-1. Performance Common

size = 25h (37 byte)

Offset	Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00 00 00 00		Performance Name 1	20h - 7Dh	ASCII Code
00 00 00 01		Performance Name 2	20h - 7Dh	ASCII Code
00 00 00 02		Performance Name 3	20h - 7Dh	ASCII Code
00 00 00 03		Performance Name 4	20h - 7Dh	ASCII Code
00 00 00 04		Performance Name 5	20h - 7Dh	ASCII Code
00 00 00 05		Performance Name 6	20h - 7Dh	ASCII Code
00 00 00 06		Performance Name 7	20h - 7Dh	ASCII Code
00 00 00 07		Performance Name 8	20h - 7Dh	ASCII Code
00 00 00 08		Performance Name 9	20h - 7Dh	ASCII Code
00 00 00 09		Performance Name 10	20h - 7Dh	ASCII Code
00 00 00 0A		Performance Name 11	20h - 7Dh	ASCII Code
00 00 00 0B		Performance Name 12	20h - 7Dh	ASCII Code
00 00 00 0C		Performance Name 13	20h - 7Dh	ASCII Code
00 00 00 0D		Performance Name 14	20h - 7Dh	ASCII Code
00 00 00 0E		Performance Name 15	20h - 7Dh	ASCII Code
00 00 00 0F		Performance Name 16	20h - 7Dh	ASCII Code
00 00 00 10		Key Mode	00h - 02h	SINGLE, DUAL, SPLIT
00 00 00 11		Split Point	00h - 7Fh	C-1 ~ G9 (only in SPLIT mode)
00 00 00 12		Panel Select	00h - 02h	UPPER, LOWER, UPPER&LOWER
00 00 00 13		Part Detune	00h - 64h	-50 ~ +50
00 00 00 14		Output Assign	00h - 01h	MIX OUT, PARALLEL OUT
00 00 00 15		Arpeggio Destination	00h - 02h	LOWER&UPPER, LOWER, UPPER (*)
00 00 00 16		Voice Assign	00h - 06h	8-2, 7-3, 5-5, 3-7, 2-8, 6-4, 4-6 (**)
00 00 00 17		Arpeggio Switch	00h - 01h	OFF, ON
00 00 00 18		Arpeggio Mode	00h - 04h	UP, DOWN, UP&DOWN, RANDOM, RPS
00 00 00 19		Arpeggio Beat Pattern	00h - 59h	1/4, 1/6, ... SEQUENCE-A1, ..., RANDOM
00 00 00 1A		Arpeggio Octave Range	00h - 03h	1 ~ 4 [octave]
00 00 00 1B		Arpeggio Hold	00h - 01h	OFF, ON
00 00 00 1C			-	-
00 00 00 1D		Individual Trigger Switch	00h - 01h	OFF, ON
00 00 00 1E		Individual Trigger Destination	00h - 02h	FILTER ENV, AMPLITUDE ENV, FILTER&AMP
00 00 00 1F		Individual Trigger Source Channel	00h - 0Fh	1 ~ 16
#00 00 00 20		Individual Trigger Source Note	00h - 80h	0 ~ 127 as C-1 ~ G9, and 128 as ALL
#00 00 00 22		Tempo	14h - FAh	20 ~ 250 [beat per minute]
00 00 00 24		Vocal/Upper Input Jack Front/Rear	00h - 01h	REAR, FRONT

(\*) "Arpeggio Destination" parameter is effective only when "Key Mode" parameter is DUAL.

(\*\*) "Voice Assign" parameter is effective only when "Key Mode" parameter is DUAL or SPLIT.

## 4-2-2. Voice Modulator

size = 29h (41 byte)

Offset	Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00 00 00 00		Voice Modulator Switch	00h - 01h	OFF, ON
00 00 00 01		Voice Modulator Panel Mode	00h - 01h	OFF, ON
00 00 00 02		Algorithm	00h - 04h	SOLID, SMOOTH, ..., FILTER BANK NARROW
00 00 00 03		Voice Modulator Delay Type	00h - 04h	PANNING L->R - MONO LONG
00 00 00 04		Ensemble Type	00h - 0Eh	ENSEMBLE MILD, ..., FREEZE PHASE 2
00 00 00 05		External to Inst Send Switch	00h - 01h	OFF, ON
00 00 00 06		External to Vocal Send Switch	00h - 01h	OFF, ON
00 00 00 07		Vocal Morph Control Switch	00h - 01h	OFF, ON
00 00 00 08		Vocal Morph Threshold	00h - 7Fh	0 - 127
00 00 00 09		Vocal Morph Sensitivity	00h - 7Fh	-64 - +63
00 00 00 0A		Control 1 Assign	00h - 1Ah	ENSEMBLE LEVEL - CHARACTER 12
00 00 00 0B		Control 2 Assign	00h - 1Ah	ENSEMBLE LEVEL - CHARACTER 12
00 00 00 0C		Character 1	00h - 7Fh	0 - 127
00 00 00 0D		Character 2	00h - 7Fh	0 - 127
00 00 00 0E		Character 3	00h - 7Fh	0 - 127
00 00 00 0F		Character 4	00h - 7Fh	0 - 127
00 00 00 10		Character 5	00h - 7Fh	0 - 127
00 00 00 11		Character 6	00h - 7Fh	0 - 127
00 00 00 12		Character 7	00h - 7Fh	0 - 127
00 00 00 13		Character 8	00h - 7Fh	0 - 127
00 00 00 14		Character 9	00h - 7Fh	0 - 127
00 00 00 15		Character 10	00h - 7Fh	0 - 127
00 00 00 16		Character 11	00h - 7Fh	0 - 127
00 00 00 17		Character 12	00h - 7Fh	0 - 127
00 00 00 18		Vocal Mix	00h - 7Fh	0 - 127
00 00 00 19		Voice Modulator Release	00h - 7Fh	0 - 127
00 00 00 1A		Voice Modulator Resonance	00h - 7Fh	0 - 127
00 00 00 1B		Voice Modulator Pan	00h - 7Fh	L64 - R63
00 00 00 1C		Voice Modulator Level	00h - 7Fh	0 - 127
00 00 00 1D		Voice Modulator Noise Cutoff	00h - 7Fh	0 - 127
00 00 00 1E		Voice Modulator Noise Level	00h - 7Fh	0 - 127
00 00 00 1F		Gate Threshold	00h - 7Fh	0 - 127
00 00 00 20		Robot Pitch	00h - 7Fh	0 - 127
00 00 00 21		Robot Control	00h - 7Fh	0 - 127
00 00 00 22		Robot Level	00h - 7Fh	0 - 127
00 00 00 23		Ensemble Level	00h - 7Fh	0 - 127
00 00 00 24		Voice Modulator Delay Time	00h - 7Fh	0 - 127
00 00 00 25		Voice Modulator Delay Feedback	00h - 7Fh	0 - 127
00 00 00 26		Voice Modulator Delay Level	00h - 7Fh	0 - 127
00 00 00 27		Ensemble Sync	00h - 16h	OFF, 1/16, 1/8(3), ..., 8MEASURES
00 00 00 28		Voice Modulator Delay Sync	00h - 0Ah	OFF, 1/16, 1/8(3), ..., 1/2

## 4-2-3. Part

size = 08h (8 byte)

Offset	Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00 00 00 00		Patch Bank	00h - 03h	IN PERFORMANCE, USER, PRESET, CARD (*)
00 00 00 01		Patch No.	00h - 7Fh	All - B88 (*)
00 00 00 02		MIDI Channel	00h - 10h	1 - 16, OFF
00 00 00 03		Part Transpose	00h - 30h	-24 - + 24 [semitone]
00 00 00 04		Delay Sync	00h - 0Ah	OFF, 1/16, 1/8(3), ..., 1/2
00 00 00 05		LFO Sync	00h - 16h	OFF, 1/16, 1/8(3), ..., 8 MEAS
00 00 00 06		Chorus Sync	00h - 17h	OFF, 1/16, 1/8(3), ..., 8 MEAS, LFO1
00 00 00 07		Patch Group No.	00h - 3Fh	Group 1 - Group 64 (**)

(\*) Patch No. is valid only when Patch Bank is other than IN PERFORMANCE.

(\*\*) The range of Patch Group numbers will depend on the Patch Bank value, as follows.

Patch Bank	Patch Group No.
00H: IN PERFORMANCE	invalid
01H: USER	00H only
02H: PRESET	00H - 02H
03H: CARD (S2M-5)	00H - 1FH
(S4M-5)	00H - 3FH

## 4-3. Patch

size = 01h 78h (248 byte)

Offset	Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00 00 00 00		Patch Name 1	20h - 7Dh	ASCII Code
00 00 00 01		Patch Name 2	20h - 7Dh	ASCII Code
00 00 00 02		Patch Name 3	20h - 7Dh	ASCII Code
00 00 00 03		Patch Name 4	20h - 7Dh	ASCII Code
00 00 00 04		Patch Name 5	20h - 7Dh	ASCII Code
00 00 00 05		Patch Name 6	20h - 7Dh	ASCII Code
00 00 00 06		Patch Name 7	20h - 7Dh	ASCII Code
00 00 00 07		Patch Name 8	20h - 7Dh	ASCII Code
00 00 00 08		Patch Name 9	20h - 7Dh	ASCII Code
00 00 00 09		Patch Name 10	20h - 7Dh	ASCII Code
00 00 00 0A		Patch Name 11	20h - 7Dh	ASCII Code
00 00 00 0B		Patch Name 12	20h - 7Dh	ASCII Code
00 00 00 0C		Patch Name 13	20h - 7Dh	ASCII Code
00 00 00 0D		Patch Name 14	20h - 7Dh	ASCII Code
00 00 00 0E		Patch Name 15	20h - 7Dh	ASCII Code
00 00 00 0F		Patch Name 16	20h - 7Dh	ASCII Code
00 00 00 10		LF01 Waveform	00h - 03h	TRI, SAW, SQR, S/H
00 00 00 11		LF01 Rate	00h - 7Fh	0 - 127
00 00 00 12		LF01 Fade	00h - 7Fh	0 - 127
00 00 00 13		LF02 Rate	00h - 7Fh	0 - 127
00 00 00 14		LF02 Depth Select	00h - 02h	PITCH, FILTER, AMPLIFIER
00 00 00 15		Ring Modulator Switch	00h - 01h	OFF, ON
00 00 00 16		Cross Modulation Depth	00h - 7Fh	0 - 127
00 00 00 17		Oscillator Balance	00h - 7Fh	-64(OSC1) - +63(OSC2)
00 00 00 18		LF01 & Envelope Destination	00h - 02h	OSC1+2, OSC2, X-MOD DEPTH
00 00 00 19		OSC LF01 Depth	00h - 7Fh	-64 - +63
00 00 00 1A		Pitch LF02 Depth	00h - 7Fh	-64 - +63
00 00 00 1B		Pitch Envelope Depth	00h - 7Fh	-64 - +63
00 00 00 1C		Pitch Envelope Attack Time	00h - 7Fh	0 - 127
00 00 00 1D		Pitch Envelope Decay Time	00h - 7Fh	0 - 127
00 00 00 1E		OSC1 Waveform	00h - 06h	SUPER SAW, TWM, ..., PULSE, SAW, TRI
00 00 00 1F		OSC1 Control1	00h - 7Fh	0 - 127
00 00 00 20		OSC1 Control2	00h - 7Fh	0 - 127
00 00 00 21		OSC2 Waveform	00h - 03h	PULSE, TRI, SAW, NOISE (*)
00 00 00 22		OSC2 Sync Switch	00h - 01h	OFF, ON
00 00 00 23		OSC2 Range	00h - 32h	-WIDE, -24 - +24, +WIDE
00 00 00 24		OSC2 Fine/Wide	00h - 64h	-50 - +50 [cent]
00 00 00 25		OSC2 Control1	00h - 7Fh	0 - 127
00 00 00 26		OSC2 Control2	00h - 7Fh	0 - 127
00 00 00 27		Filter Type	00h - 02h	HFPF, BPF, LPF
00 00 00 28		Cutoff Slope	00h - 01h	-12, -24 [dB/oct]
00 00 00 29		Cutoff Frequency	00h - 7Fh	0 - 127
00 00 00 2A		Resonance	00h - 7Fh	0 - 127
00 00 00 2B		Cutoff Frequency Key Follow	00h - 7Fh	-64 - +63
00 00 00 2C		Filter LF01 Depth	00h - 7Fh	-64 - +63
00 00 00 2D		Filter LF02 Depth	00h - 7Fh	-64 - +63
00 00 00 2E		Filter Envelope Depth	00h - 7Fh	-64 - +63
00 00 00 2F		Filter Envelope Attack Time	00h - 7Fh	0 - 127
00 00 00 30		Filter Envelope Decay Time	00h - 7Fh	0 - 127
00 00 00 31		Filter Envelope Sustain Level	00h - 7Fh	0 - 127
00 00 00 32		Filter Envelope Release Time	00h - 7Fh	0 - 127
00 00 00 33		Amp Level	00h - 7Fh	0 - 127
00 00 00 34		Amp LF01 Depth	00h - 7Fh	-64 - +63 (**)
00 00 00 35		Amp LF02 Depth	00h - 7Fh	-64 - +63
00 00 00 36		Amp Envelope Attack Time	00h - 7Fh	0 - 127
00 00 00 37		Amp Envelope Decay Time	00h - 7Fh	0 - 127
00 00 00 38		Amp Envelope Sustain Level	00h - 7Fh	0 - 127
00 00 00 39		Amp Envelope Release Time	00h - 7Fh	0 - 127
00 00 00 3A		Auto Pan/Manual Pan Switch	00h - 02h	OFF, AUTO PAN, MANUAL PAN (**)
00 00 00 3B		Tone Control Bass	00h - 7Fh	-64 - +63
00 00 00 3C		Tone Control Treble	00h - 7Fh	-64 - +63
00 00 00 3D		Multi Effects Type	00h - 0Ch	SUPER CHORUS SLW, ..., DISTORTION
00 00 00 3E		Multi Effects Level	00h - 7Fh	0 - 127
00 00 00 3F		Delay Type	00h - 04h	PANNING L->R, ..., MONO LONG
00 00 00 40		Delay Time	00h - 7Fh	0 - 127
00 00 00 41		Delay Feedback	00h - 7Fh	0 - 127
00 00 00 42		Delay Level	00h - 7Fh	0 - 127
00 00 00 43		Bend Range Up	00h - 18h	0 - 24 [semitone]
00 00 00 44		Bend Range Down	00h - 18h	0 - 24 [semitone]
00 00 00 45		Portamento Switch	00h - 01h	OFF, ON
00 00 00 46		Portamento Time	00h - 7Fh	0 - 127
00 00 00 47		Mono Switch	00h - 01h	OFF, ON
00 00 00 48		Legato Switch	00h - 01h	OFF, ON
00 00 00 49		Oscillator Shift	00h - 04h	-2 - +2 [octave]
#00 00 00 4A		Control: LF01 Rate	00h - FEh	-127 - +127
#00 00 00 4C		Control: LF01 Fade	00h - FEh	-127 - +127
#00 00 00 4E		Control: LF02 Rate	00h - FEh	-127 - +127
#00 00 00 50		Control: Cross Modulation Depth	00h - FEh	-127 - +127
#00 00 00 52		Control: Oscillator Balance	00h - FEh	-127 - +127
#00 00 00 54		Control: Pitch LF01 Depth	00h - FEh	-127 - +127
#00 00 00 56		Control: Pitch LF02 Depth	00h - FEh	-127 - +127
#00 00 00 58		Control: Pitch Envelope Depth	00h - FEh	-127 - +127
#00 00 00 5A		Control: Pitch Envelope Attack Time	00h - FEh	-127 - +127
#00 00 00 5C		Control: Pitch Envelope Decay Time	00h - FEh	-127 - +127
#00 00 00 5E		Control: OSC1 Control1	00h - FEh	-127 - +127
#00 00 00 60		Control: OSC1 Control2	00h - FEh	-127 - +127
#00 00 00 62		Control: OSC2 Range	4Dh - B1h	- 50 - + 50
#00 00 00 64		Control: OSC2 Fine/Wide	1Bh - E3h	-100 - +100
#00 00 00 66		Control: OSC2 Control1	00h - FEh	-127 - +127
#00 00 00 68		Control: OSC2 Control2	00h - FEh	-127 - +127
#00 00 00 6A		Control: Cutoff Frequency	00h - FEh	-127 - +127
#00 00 00 6C		Control: Resonance	00h - FEh	-127 - +127
#00 00 00 6E		Control: Cutoff Freq. Key Follow	00h - FEh	-127 - +127
#00 00 00 70		Control: Filter LF01 Depth	00h - FEh	-127 - +127
#00 00 00 72		Control: Filter LF02 Depth	00h - FEh	-127 - +127
#00 00 00 74		Control: Filter Env. Depth	00h - FEh	-127 - +127
#00 00 00 76		Control: Filter Env. Attack Time	00h - FEh	-127 - +127
#00 00 00 78		Control: Filter Env. Decay Time	00h - FEh	-127 - +127
#00 00 00 7A		Control: Filter Env. Sustain Level	00h - FEh	-127 - +127
#00 00 00 7C		Control: Filter Env. Release Time	00h - FEh	-127 - +127
#00 00 00 7E		Control: Amp Level	00h - FEh	-127 - +127
#00 00 01 00		Control: Amp LF01 Depth	00h - FEh	-127 - +127
#00 00 01 02		Control: Amp LF02 Depth	00h - FEh	-127 - +127
#00 00 01 04		Control: Amp Env. Attack Time	00h - FEh	-127 - +127
#00 00 01 06		Control: Amp Env. Decay Time	00h - FEh	-127 - +127
#00 00 01 08		Control: Amp Env. Sustain Level	00h - FEh	-127 - +127
#00 00 01 0A		Control: Amp Env. Release Time	00h - FEh	-127 - +127
#00 00 01 0C		Control: Tone Control Bass	00h - FEh	-127 - +127
#00 00 01 0E		Control: Tone Control Treble	00h - FEh	-127 - +127
#00 00 01 10		Control: Multi Effects Level	00h - FEh	-127 - +127
#00 00 01 12		Control: Delay Time	00h - FEh	-127 - +127
#00 00 01 14		Control: Delay Feedback	00h - FEh	-127 - +127
#00 00 01 16		Control: Delay Level	00h - FEh	-127 - +127
00 00 01 18		Morph Bend Assign	00h - 01h	OFF, ON
#00 00 01 19		Control: Portamento Time	00h - FEh	-127 - +127

00 00 01 1B	Velocity Switch	00h - 01h	OFF, ON
#00 00 01 1C	Velocity: LFO1 Rate	00h - FEh	-127 - +127
#00 00 01 1E	Velocity: LFO1 Fade	00h - FEh	-127 - +127
#00 00 01 20	Velocity: LFO2 Rate	00h - FEh	-127 - +127
#00 00 01 22	Velocity: Cross Modulation Depth	00h - FEh	-127 - +127
#00 00 01 24	Velocity: Oscillator Balance	00h - FEh	-127 - +127
#00 00 01 26	Velocity: Pitch LFO1 Depth	00h - FEh	-127 - +127
#00 00 01 28	Velocity: Pitch LFO2 Depth	00h - FEh	-127 - +127
#00 00 01 2A	Velocity: Pitch Envelope Depth	00h - FEh	-127 - +127
#00 00 01 2C	Velocity: Pitch Envelope Attack Time	00h - FEh	-127 - +127
#00 00 01 2E	Velocity: Pitch Envelope Decay Time	00h - FEh	-127 - +127
#00 00 01 30	Velocity: OSC1 Control1	00h - FEh	-127 - +127
#00 00 01 32	Velocity: OSC1 Control2	00h - FEh	-127 - +127
#00 00 01 34	Velocity: OSC2 Range	4Dh - B1h	-50 - +50
#00 00 01 36	Velocity: OSC2 Fine/Wide	1Bh - E3h	-100 - +100
#00 00 01 38	Velocity: OSC2 Control1	00h - FEh	-127 - +127
#00 00 01 3A	Velocity: OSC2 Control2	00h - FEh	-127 - +127
#00 00 01 3C	Velocity: Cutoff Frequency	00h - FEh	-127 - +127
#00 00 01 3E	Velocity: Resonance	00h - FEh	-127 - +127
#00 00 01 40	Velocity: Cutoff Freq. Key Follow	00h - FEh	-127 - +127
#00 00 01 42	Velocity: Filter LFO1 Depth	00h - FEh	-127 - +127
#00 00 01 44	Velocity: Filter LFO2 Depth	00h - FEh	-127 - +127
#00 00 01 46	Velocity: Filter Env. Depth	00h - FEh	-127 - +127
#00 00 01 48	Velocity: Filter Env. Attack Time	00h - FEh	-127 - +127
#00 00 01 4A	Velocity: Filter Env. Decay Time	00h - FEh	-127 - +127
#00 00 01 4C	Velocity: Filter Env. Sus. Level	00h - FEh	-127 - +127
#00 00 01 4E	Velocity: Filter Env. Release Time	00h - FEh	-127 - +127
#00 00 01 50	Velocity: Amp Level	00h - FEh	-127 - +127
#00 00 01 52	Velocity: Amp LFO1 Depth	00h - FEh	-127 - +127
#00 00 01 54	Velocity: Amp LFO2 Depth	00h - FEh	-127 - +127
#00 00 01 56	Velocity: Amp Env. Attack Time	00h - FEh	-127 - +127
#00 00 01 58	Velocity: Amp Env. Decay Time	00h - FEh	-127 - +127
#00 00 01 5A	Velocity: Amp Env. Sustain Level	00h - FEh	-127 - +127
#00 00 01 5C	Velocity: Amp Env. Release Time	00h - FEh	-127 - +127
#00 00 01 5E	Velocity: Tone Control Bass	00h - FEh	-127 - +127
#00 00 01 60	Velocity: Tone Control Treble	00h - FEh	-127 - +127
#00 00 01 62	Velocity: Multi Effects Level	00h - FEh	-127 - +127
#00 00 01 64	Velocity: Delay Time	00h - FEh	-127 - +127
#00 00 01 66	Velocity: Delay Feedback	00h - FEh	-127 - +127
#00 00 01 68	Velocity: Delay Level	00h - FEh	-127 - +127
#00 00 01 6A	Velocity: Portamento Time	00h - FEh	-127 - +127
00 00 01 6C	Active Indicator of Bender	00h - 01h	NOT ACTIVE, ACTIVE (***)
00 00 01 6D	Active Indicator of Velocity Assign	00h - 01h	NOT ACTIVE, ACTIVE (***)
00 00 01 6E	Active Indicator of Control Assign	00h - 01h	NOT ACTIVE, ACTIVE (***)
00 00 01 6F	Envelope Type in Solo	00h - 01h	STANDARD, ANALOG
00 00 01 70	(reserved)	(reserved)	(reserved)
00 00 01 71	OSC2 External Input Switch	00h - 01h	OFF, ON (*)
00 00 01 72	Voice Modulator Send Switch	00h - 01h	OFF, ON
00 00 01 73	Unison Switch	00h - 01h	OFF, ON
00 00 01 74	Unison Detune	00h - 32h	0 - 50 [cent]
00 00 01 75	Patch Gain	00h - 02h	0dB, +6dB, +12dB
00 00 01 76	External Trigger Switch	00h - 01h	OFF, ON
00 00 01 77	External Trigger Destination	00h - 02h	FILTER, AMP, FILTER&AMP

(\*) OSC2 Waveform is invalid when OSC2 External Input Switch is ON.

(\*\*) Amp LFO1 Depth will be handled as Pan LFO Depth if Auto Pan/Manual Pan Switch is set to AUTO PAN. Amp LFO1 Depth will be handled as Pan if Auto Pan/Manual Pan is set to MANUAL PAN.

(\*\*\*) " Active Indicator of Bender ", " Active Indicator of Velocity Assign ", and " Active Indicator of Control Assign " messages can be transmitted, but can not be received.

## 4-4. User Patch Area

Offset	Address	Description
00 00 00 00	User Patch 1 (A11)	4-3
00 00 02 00	User Patch 2 (A12)	4-3
00 00 04 00	User Patch 3 (A13)	4-3
00 00 06 00	User Patch 4 (A14)	4-3
:	:	:
00 00 7C 00	User Patch 63 (A87)	4-3
00 00 7E 00	User Patch 64 (A88)	4-3
00 01 00 00	User Patch 65 (B11)	4-3
00 01 02 00	User Patch 66 (B12)	4-3
:	:	:
00 01 7C 00	User Patch 127 (B87)	4-3
00 01 7E 00	User Patch 128 (B88)	4-3

## 4-5. User Performance Area

Offset	Address	Description
00 00 00 00	User Performance 1 (11)	4-2
00 01 00 00	User Performance 2 (12)	4-2
00 02 00 00	User Performance 3 (13)	4-2
00 03 00 00	User Performance 4 (14)	4-2
:	:	:
00 3D 00 00	User Performance 62 (86)	4-2
00 3E 00 00	User Performance 63 (87)	4-2
00 3F 00 00	User Performance 64 (88)	4-2

## 4-6. Motion Control Data

Offset	Address	Description
00 00 00 00	Motion Control 1 Data	
00 40 00 00	Motion Control 2 Data	

## Address block map

00 00 00 00	+-----+   System Area   +-----+ refer to 4-1	00 00 00 00 00 00 20 00 00 00 30 00	+-----+   System   refer to 4-1-1 +-----+   Motion Setup   refer to 4-1-2 +-----+   Tx/Rx Setting   refer to 4-1-3 +-----+	
01 00 00 00	+-----+   Perf. Temporary   +-----+ refer to 4-2	00 00 00 00 00 00 08 00 00 00 10 00 00 00 11 00 00 00 40 00 00 00 42 00	+-----+   Perf. Common   refer to 4-2-1 +-----+   Voice Modulator   refer to 4-2-2 +-----+   Part (upper)   refer to 4-2-3 +-----+   Part (lower)   refer to 4-2-3 +-----+   Patch (upper)   refer to 4-3 +-----+   Patch (lower)   refer to 4-3 +-----+	
02 00 00 00	+-----+   User Patch   +-----+ refer to 4-4	00 00 00 00 00 00 02 00 00 00 04 00 : 00 01 7E 00	+-----+   Patch U:A11   refer to 4-3 +-----+   Patch U:A12   refer to 4-3 +-----+ : +-----+   Patch U:B88   refer to 4-3 +-----+	
03 00 00 00	+-----+   User Perf.   +-----+ refer to 4-5	00 00 00 00 00 01 00 00 00 02 00 00 00 03 00 00 : 00 3F 00 00	+-----+   Perf. U:11   00 00 00 00 +-----+   Perf. U:12   00 00 08 00 +-----+   Perf. U:13   00 00 10 00 +-----+ : 00 00 11 00 +-----+ : 00 00 40 00 +-----+   Perf. U:88   00 00 42 00 +-----+	+-----+   Perf. Common   refer to 4-2-1 +-----+   Voice Modulator   refer to 4-2-2 +-----+   Part (upper)   refer to 4-2-3 +-----+   Part (lower)   refer to 4-2-3 +-----+   Patch (upper)   refer to 4-3 +-----+   Patch (lower)   refer to 4-3 +-----+
09 00 00 00	+-----+   Motion Data   +-----+ refer to 4-6	00 00 00 00 00 40 00 00	+-----+   Motion Ctrl A   +-----+   Motion Ctrl B   +-----+	

## 5. Supplementary material

### ● Decimal/Hexadecimal table

(hexadecimal values are indicated by a following “H”)

MIDI uses 7-bit hexadecimal values to indicate data values and the address and size of exclusive messages. The following table shows the correspondence between decimal and hexadecimal numbers.

D	H	D	H	D	H	D	H
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	72	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	59	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

D: decimal

H: hexadecimal

- \* Decimal expressions such as used for MIDI channel, Bank Select, and Program Change will be the value 1 greater than the decimal value given in the above table.
- \* Since each MIDI byte carries 7 significant data bits, each byte can express a maximum of 128 different values. Data for which higher resolution is required must be transmitted using two or more bytes. For example a value indicated as a two-byte value of aa bbH would have a value of  $aa \times 128 + bb$ .

#### <Example 1>

What is the decimal equivalent of 5AH?

From the above table, 5AH = 90.

#### <Example 2>

What is the decimal equivalent of the 7-bit hexadecimal values 12 34H?

From the above table, 12H = 18 and 34H = 52

Thus,  $18 \times 128 + 52 = 2356$

#### ○ Examples of actual MIDI messages

##### <Example 1> 92 3E 5F

9n is the Note On status and 'n' is the MIDI channel number. Since 2H = 2, 3EH = 62, and 5FH = 95, this is a Note On message of MIDI CH = 3, note number 62 (note name D4) and velocity 95.

##### <Example 2> CE 49

CnH is the Program Change status and 'n' is the MIDI channel number. Since EH = 14, and 49H = 73, this is a Program Change message of MIDI CH = 15, Program number 74 (in the GS sound map, Flute).

##### <Example 3> EA 00 28

EnH is the Pitch Bend Change status and 'n' is the MIDI channel number. The 2nd byte (00H=0) is the LSB of the Pitch Bend value, and the 3rd byte (28H=40) is the MSB. However since the Pitch Bend is a signed number with 0 at 40 00H (=  $64 \times 128 + 0 = 8192$ ), the Pitch Bend value in this case is

$$28\ 00H - 40\ 00H = 40 \times 128 + 0 - (64 \times 128 + 0) = 5120 - 8192 = -3072$$

If we assume that the Pitch Bend Sensitivity is set to two semitones, the pitch will change only -200 cents for a Pitch Bend value of -8192 (00 00H). Thus, this message is specifying a Pitch Bend of  $-200 \times (-3072) / (-8192) = -75$  cents on MIDI CH = 11.

#### <Example 4> B3 64 00 65 00 06 0C 26 00 64 7F 65 7F

BnH is the Control Change status, and 'n' is the MIDI channel number. In Control Change messages, the 2nd byte is the controller number, and the 3rd byte is the parameter value. MIDI allows what is known as “running status,” when if messages of the the same status follow each other, it is permitted to omit the second and following status bytes. In the message above, running status is being used, meaning that the message has the following content.

B3 64 00 MIDI CH = 4, RPN parameter number LSB: 00H  
(B3) 65 00 MIDI CH = 4, RPN parameter number MSB: 00H  
(B3) 06 0C MIDI CH = 4, parameter value MSB: 0CH  
(B3) 26 00 MIDI CH = 4, parameter value LSB: 00H  
(B3) 64 7F MIDI CH = 4, RPN parameter number LSB: 7FH  
(B3) 65 7F MIDI CH = 4, RPN parameter number MSB: 7FH

Thus, this message transmits a parameter value of 0C 00H to RPN parameter number 00 00H on MIDI CH = 4, and then sets the RPN parameter number to 7F 7FH.

The function assigned to RPN parameter number 00 00H is Pitch Bend Sensitivity, and the MSB of the parameter value indicates semitone steps. Since the MSB of this parameter value is 0CH = 12, the maximum width of pitch bend is being set to  $\pm 12$  semitones (1 octave) (GS sound sources ignore the LSB of Pitch Bend Sensitivity, but it is best to transmit the LSB (parameter value 0) as well, so that the message can be correctly received by any device.

Once the parameter number has been set for RPN or NRPN, all subsequent Data Entry messages on that channel will be effective. Thus, it is recommended that after you have made the change you want, you set the parameter number to 7F 7FH (an 'unset' or 'null' setting). The final (B3) 64 7F (B3) 65 7F is for this purpose.

It is not a good idea to store many events within the data of a song (e.g., a Standard MIDI File song) using running status as shown in <Example 4>. When the song is paused, fast-forwarded or rewound, the sequencer may not be able to transmit the proper status, causing the sound source to misinterpret the data. It is best to attach the proper status byte to all events.

It is also important to transmit RPN or NRPN parameter number settings and parameter values in the correct order. In some sequencers, data events recorded in the same clock (or a nearby clock) can sometimes be transmitted in an order other than the order in which they were recorded. It is best to record such events at an appropriate interval (1 tick at TPQN=96, or 5 ticks at TPQN=480).

- \* TPQN :Ticks Per Quarter Note (i.e., the time resolution of the sequencer)

#### ○ Examples of exclusive messages and calculating the checksum

Roland exclusive messages (RQ1, DT1) are transmitted with a checksum at the end of the data (before F7) to check that the data was received correctly. The value of the checksum is determined by the address and data (or size) of the exclusive message.

#### ◇ How to calculate the checksum

(hexadecimal values are indicated by a 'H')

The checksum consists of a value whose lower 7 bits are 0 when the address, size and checksum itself are added.

The following formula shows how to calculate the checksum when the exclusive message to be transmitted has an address of aa bb cc ddH, and data or size of ee ffH.

$$\begin{aligned} &aa + bb + cc + dd + ee + ff = \text{total} \\ &\text{total} / 128 = \text{quotient} \dots \text{remainder} \\ &128 - \text{remainder} = \text{checksum} \end{aligned}$$

#### <Example 1>

##### Setting the Temporary Performance Upper Part Transpose to +5 (DT1).

The “Parameter address map” indicates that the starting address of the Temporary Performance is 01 00 00 00H, that Temporary Performance upper Part offset address is 10 00H, Part Transpose is 00 03H. Thus,the address is:

$$\begin{array}{r} 01\ 00\ 00\ 00H \\ 10\ 00H \\ +) \quad 00\ 03H \\ \hline 01\ 00\ 10\ 03H \end{array}$$

Since +5 is parameter value 1DH,

F0	41	10	00 06	12	01 00 10 03	1D	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

- (1) Exclusive status      (2) ID number (Roland)      (3) device ID (17)  
(4) model ID (JP-8080)      (5) command ID (DT1)      (6) EOX

Next we calculate the checksum.

$01H + 00H + 10H + 03H + 1DH = 1 + 0 + 16 + 3 + 29 = 49$  (sum)  
 $49$  (total)  $128 \div 0$  (quotient) ...  $49$  (remainder)  
checksum =  $128 - 49$  (quotient) =  $79 = 4FH$

This means that the message transmitted will be F0 41 10 00 06 12 01 00 10 03 1D 4F F7 .

### <Example 2>

#### Retrieving data for Patch of Performance USER: 13 Lower Part.

The "Parameter address map" indicates that the starting address of the User Performance is 03 00 00 00H, the start address of Performance USER:13 is 03 00 00 00H, and that the offset address of Performance Lower Patch is 00 00 42 00H. Thus, the address is:

```
03 00 00 00H
00 02 00 00H
+) 00 00 42 00H
-----
03 02 42 00H
```

Since the size of the Performance Patch is 00 00 01 78H,

F0	41	10	00 06	11	03 02 42 00	00 00 01 78	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

(1) Exclusive status      (2) ID number (Roland)      (3) device ID (17)  
(4) model ID (JP-8080)      (5) command ID (DT1)      (6) EOX

Next we calculate the checksum.

$03H + 02H + 42H + 00H + 00H + 00H + 01H + 78H = 3 + 2 + 66 + 0 + 0 + 0 + 1 + 120 = 192$  (sum)  
 $192$  (total)  $\div 128 = 1$  (quotient) ...  $64$  (remainder)  
checksum =  $128 - 64$  (quotient) =  $64 = 40H$

Thus, a message of F0 41 10 00 06 11 03 02 42 00 00 00 01 6D 40 F7 would be transmitted.

### <Example 3> Retrieving data for Temporary Performance (RQ1)

The "Parameter address map" gives the following start addresses for Temporary Performance data.

01 00 00 00H Temporary Performance Common  
01 00 08 00H Voice Modulator  
01 00 10 00H Part (Upper)  
01 00 11 00H Part (Lower)  
01 00 40 00H Patch(Upper)  
01 00 42 00H Patch(Lower)

Since Patch has a size of 00 00 01 78H, we add that size to the start address of the Temporary Patch Lower Part, resulting in:

```
01 00 42 00H
+) 00 00 01 78H
-----
01 00 43 78H
```

Thus, the Size for the retrieved data will be:

```
01 00 43 78H
-) 01 00 00 00H
-----
00 00 43 78H
```

F0	41	10	00 06	11	01 00 00 00	00 00 43 78	??	F7
(1)	(2)	(3)	(4)	(5)	address	size	checksum	(6)

(1) Exclusive status      (2) ID number (Roland)      (3) device ID (17)  
(4) model ID (JP-8080)      (5) command ID (RQ1)      (6) EOX

Calculating the checksum as shown in <Example 2>, we get a message of F0 41 10 00 06 11 01 00 00 00 00 43 6FH 44 F7 to be transmitted.

## ● ASCII code table

Char	Hex.	Char	Hex.	Char	Hex.	Char	Hex.
SP	20H						
A	41H	a	61H	0	30H	:	3AH
B	42H	b	62H	1	31H	;	3BH
C	43H	c	63H	2	32H	<	3CH
D	44H	d	64H	3	33H	>	3DH
E	45H	e	65H	4	34H	=	3EH
F	46H	f	66H	5	35H	?	3FH
G	47H	g	67H	6	36H	@	40H
H	48H	h	68H	7	37H	[	5BH
I	49H	i	69H	8	38H	\	5CH
J	4AH	j	6AH	9	39H	]	5DH
K	4BH	k	6BH	!	21H	^	5EH
L	4CH	l	6CH	"	22H	{	5FH
M	4DH	m	6DH	#	23H	~	60H
N	4EH	n	6EH	\$	24H	{	7BH
O	4FH	o	6FH	%	25H	}	7CH
P	50H	p	70H	&	26H	}	7DH
Q	51H	q	71H	'	27H		
R	52H	r	72H	(	28H		
S	53H	s	73H	)	29H		
T	54H	t	74H	*	2AH		
U	55H	u	75H	+	2BH		
V	56H	v	76H	,	2CH		
W	57H	w	77H	-	2DH		
X	58H	x	78H	.	2EH		
Y	59H	y	79H	/	2FH		
Z	5AH	z	7AH				

Note: SP indicates "space".



## MIDI Implementation Chart

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16 1-16	1-16 1-16	
Mode	Default Messages Altered	Mode 3 x *****	Mode 3 Mode 3, 4 (M=1)	* 1
Note Number :	True Voice	0-127 *****	0-127 * 3 0-127 * 3	
Velocity	Note ON Note OFF	O O (8n, v=1-127)	O * 3 O	
After Touch	Key's Ch's	x O	x O * 2, * 4	
Pitch Bend		O	O	
Control Change	1-31, 33-95	O * 2	O * 2, * 4	See page 191, 194 Bank Select Modulation Portamento Time Volume Panpot Expression Hold 1 Portamento Portamento Control NRPN LSB, MSB RPN LSB, MSB
	0, 32	O * 2	x * 2	
	1	O	O	
	5	O	O * 4	
	7	O	O	
	10	O	O	
	11	O	O	
	64	O	O	
	65	O	O * 4	
	84	O	O	
	98, 99	x	x	
	100, 101	x	O	
Prog Change	: True #	O * 2 *****	O * 2 0-127	Program Number 1-128
System Exclusive		O	O * 2	
System Common	: Song Pos : Song Sel : Tune	x x x	O x x	
System Real Time	: Clock : Command : Start : Continue : Stop	x x x x x	O * 2 x O * 2 O * 2 O * 2	
Aux Message	: All sound off : Reset all controllers : Local ON/OFF : All Notes OFF : Active Sense : Reset	x x x x O x	O * 5 O x O (123-127) O x	
Notes		* 1 Recognized as M=1 even if M≠1. * 2 O x is selectable. * 3 RPS patterns can record these messages received from REMOTE KBD IN connector. * 4 Motions can record these messages received from REMOTE KBD IN connector. * 5 Only received from MIDI IN.		

Mode 1 : OMNI ON, POLY

Mode 2 : OMNI ON, MONO

O : Yes

Mode 3 : OMNI OFF, POLY

Mode 4 : OMNI OFF, MONO

X : No

# Specifications

## Synthesizer Section

- **Parts**  
2 (Upper, Lower)
- **Key Mode**  
Single, Dual, Split
- **Maximum Polyphony**  
10 Voices (Voice Modulator OFF)  
8 Voices (Voice Modulator ON)
- **Waveform**  
**OSC 1**  
SUPER SAW  
TRIANGLE MOD  
NOISE  
FEEDBACK OSC  
SQUARE (PWM)  
SAW  
TRIANGLE  
  
**OSC 2**  
SQUARE (PWM)  
SAW  
TRIANGLE  
NOISE
- **Effects**  
Tone Control  
**Multi-FX (13 types)**  
SUPER CHORUS SLW, SUPER CHORUS MID, SUPER CHORUS FST, SUPER CHORUS CLR, FLANGER SLOW, FLANGER DEEP, FLANGER FAST, DEEP PHASING SLW, JET PHASING, TWISTING, FREEZE PHASE 1, FREEZE PHASE 2, DISTORTION  
**Delay (5 types)**  
PANNING L->R, PANNING R->L, PANNING SHORT, MONO SHORT, MONO LONG
- **Internal Memory**  
Performances User: 64  
Preset: 192  
Patches User: 128  
Preset: 384
- **Voice Modulator**  
Two 12-band band-pass filters  
Noise  
Robot Oscillator  
Dedicated effect unit for Voice Modulator (Ensemble, Delay)

## Arpeggiator/RPS Section

- **Arpeggio Mode**  
UP  
DOWN  
UP&DOWN  
RANDOM
- **Arpeggio Beat Patterns**  
1/4, 1/6, 1/8, 1/12, 1/16, 1/32, PORTA-A1—A11, PORTA-B1—B15, SEQUENCE-A1—A7, SEQUENCE-B1—B5, SEQUENCE-C1—C2, SEQUENCE-D1—D8, ECHO1—3, MUTE1—16, STRUMMING1—8, REFRAIN1—2, PERCUSSION1—4, WALKING BASS, HARP, RANDOM  
(total 90 types)
- **Arpeggio Range**  
1—4 octave
- **Hold**  
ON/OFF
- **RPS Pattern Data (Internal Memory)**  
Patterns: 48  
Maximum Loop Length (Measures): 4
- **Resolution**  
24 ticks per quarter note
- **Gate Time**  
REAL, STACCATO, 33%, 50%, 66%, 100%
- **Input Quantize**  
OFF, TRIPLET1/16, 1/16, TRIPLET1/8, 1/8, TRIPLET1/4, 1/4
- **Recording Method**  
Realtime (Loop Recording)
- **Tempo**  
20 to 250

## Motion Control Section

### ● Motion Data (Internal Memory)

Motions: 2 x 2 sets (SET A, B)

Maximum Loop Length (Measures): 8

Maximum Recording Length (Measures): 99

### ● Recording Method

Realtime (Loop Recording and One Shot Recording)

### ● Tempo

20 to 250

## Others

### ● External storage device (SmartMedia)

#### Storage:

#### •S2M-5 (2M byte)

Performances: 64 x 32

Patches: 128 x 32

RPS Patterns: 48

Motion Controls: 2 x 4

System Settings: 1

#### •S4M-5 (4M byte)

Performances 64 x 64

Patches 128 x 64

RPS Patterns 48

Motion Controls 2 x 4

System Settings 1

### ● Display

16 characters, 2 lines (backlit LCD)

### ● Connectors

MIDI connectors

REMOTE KBD IN

IN

OUT

Output jacks

L(MONO): 1/4 inch phone type

R: 1/4 inch phone type

External Input jacks

INST/LOWER(MONO): 1/4 inch phone type

VOCAL/UPPER: 1/4 inch phone type

MIC jack: 1/4 inch phone type

Headphone jack: Stereo 1/4 inch phone type

### ● Input Level

External Input jacks

INST/LOWER (MONO): -30dBm- +4dBm

VOCAL/UPPER: -30dBm- +4dBm

MIC jack: -60dBm- -20dBm

### ● Input Impedance

External Input jacks

INST/LOWER (MONO): 24 kΩ

VOCAL/UPPER: 24 kΩ

MIC jack: 5 kΩ

### ● Output Impedance

Output jacks

L(MONO): 2.2 kΩ

R: 2.2 kΩ

Headphone jack: 100 Ω

### ● Power Supply

AC 117 V, AC 230 V, AC 240 V

### ● Power Consumption

17 W (AC 117 V), 17 W (AC 230 V), 17 W(AC 240 V)

### ● Dimensions

482 (W) x 88 (D) x 264 (H) mm

19 (W) x 3-1/2 (D) x 10-7/16 (H) inches

### ● Weight

4.5 kg/9 lbs 15 oz (except Power cord)

### ● Accessories

Owner's Manual

Power Cord

Card Protector

### ● Options

SmartMedia: S2M-5 (2M bytes)

S4M-5 (4M bytes)

\* In the interest of product development, the specifications for this product are subject to change without prior notice.