Roland®

GENERAL MIDI2

JUNO-G

128 VOICE EXPANDABLE SYNTHESIZER
with AUDIO/MIDI Song Recorder

Owner's Manual

Thank you, and congratulations on your choice of the Roland JUNO-G.

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

Conventions Used in This Manual

Operating buttons are enclosed by square brackets [ ]; e.g., [REC].
Reference pages are indicated by (p. **).

The following symbols are used.

NOTE This indicates an important note; be sure to read it.

MEMO This indicates a memo regarding the setting or function; read it as desired.

TIP This indicates a useful hint for operation; read it as necessary.

cf. This indicates information for your reference; read it as necessary.

TERM This indicates an explanation of a term; read it as necessary.

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

For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.

USING THE UNIT SAFELY

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

About ⚠WARNING and ⚠CAUTION Notices

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

About the Symbols

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

ALWAYS OBSERVE THE FOLLOWING

⚠WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.

- Do not open or perform any internal modifications on the unit or its AC adaptor. (The only exception would be where this manual provides specific instructions which should be followed in order to put in place user-installable options; see p. 174, p. 176.)

- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

- Never use or store the unit in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

- This unit should be used only with a stand (KS-12) that is recommended by Roland.

⚠WARNING

- When using the unit with a stand (KS-12) recommended by Roland, the rack or stand must be carefully placed so it is level and sure to remain stable. If not using a rack or stand, you still need to make sure that any location you choose for placing the unit provides a level surface that will properly support the unit, and keep it from wobbling.

- Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.

- Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device.

- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!

- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.

⚠ WARNING

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. When you install the Wave Expansion Board (SRX series) or memory (DIMM), please be careful particularly.

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
  - The AC adaptor, the power-supply cord, or the plug has been damaged; or
  - If smoke or unusual odor occurs
  - Objects have fallen into, or liquid has been spilled onto the unit; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.

- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

- Protect the unit from strong impact.
(Do not drop it!)

- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.

- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

- Always turn the unit off and unplug the AC adaptor before attempting installation of the circuit board (SRX series; p. 174, DIMM; p. 176).

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

⚠ CAUTION

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.

- This (JUNO-G) for use only with Roland stand (KS-12). Use with other stands is capable of resulting in instability causing possible injury.

- Always grasp only the plug on the AC adaptor cord when plugging into, or unplugging from, an outlet or this unit.

- At regular intervals, you should unplug the AC adaptor and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.

- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.

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

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

- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.

- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (p. 15).

- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.

- Install only the specified circuit board(s) (SRX series, DIMM). Remove only the specified screws (p. 174, p. 176).

- Should you remove the ground terminal screw or screws that fasten the bottom cover or the PC card protector, keep them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.

IMPORTANT NOTES

In addition to the items listed under "USING THE UNIT SAFELY" on page 2–3, please read and observe the following:

Power Supply

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.
- Do not allow objects to remain on top of the keyboard. This can be the cause of malfunction, such as keys ceasing to produce sound.
- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface. You can place a piece of felt or cloth under the rubber feet to prevent this from happening. If you do so, please make sure that the unit will not slip or move accidentally.

Maintenance

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

Repairs and Data

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

Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory on a memory card.
- Unfortunately, it may be impossible to restore the contents of data that was stored on a memory card or unit's memory once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.
- Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.
- Use a cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.
  - Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.
- The sensitivity of the D Beam controller will change depending on the amount of light in the vicinity of the unit. If it does not function as you expect, adjust the sensitivity as appropriate for the brightness of your location.

Before Using Cards

Using Memory Cards (p. 178)

- Carefully insert the memory card all the way in—until it is firmly in place.
- Never touch the terminals of the memory card. Also, avoid getting the terminals dirty.
- This unit's PC card slot accepts CompactFlash memory cards. Microdrive storage media are not compatible.
- CompactFlash and SmartMedia (3.3 V) are constructed using precision components; handle the cards carefully, paying particular note to the following.
  - To prevent damage to the cards from static electricity, be sure to discharge any static electricity from your own body before handling the cards.
  - Do not touch or allow metal to come into contact with the contact portion of the cards.
  - Do not bend, drop, or subject cards to strong shock or vibration.
  - Do not keep cards in direct sunlight, in closed vehicles, or other such locations (storage temperature: -25 to 85° C).
  - Do not allow cards to become wet.
  - Do not disassemble or modify the cards.

Handling CD-ROMs

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

Copyright

- Unauthorized recording, distribution, sale, lending, public performance, broadcasting, or the like, in whole or in part, of a work (musical composition, video, broadcast, public performance, or the like) whose copyright is held by a third party is prohibited by law.
- Do not use this unit for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this unit.

Contents

Main Features

The JUNO-G is a high-quality synthesizer with professional sounds and playability. It features the latest sound generator, a variety of effects, and a song recorder with audio tracks, all combined into an easy-to-use instrument. The features listed below make the JUNO-G a great choice for any style of music, in applications ranging from stage performance to composition and arranging.

The latest sound engine with 128-voice polyphony

The JUNO-G provides 128 voices of polyphony—the standard for the new era. You can layer complex sounds and enjoy multitrack recording using the song recorder.

Support for wave expansion boards

To supplement the numerous patches that use the carefully selected high quality waves built into the JUNO-G, you can install one wave expansion board to add more waveform data. Depending on your needs and your favorite musical styles, you can choose one board from the wide variety of professionally acclaimed Roland SRX series boards now available.

Song recorder with audio tracks

The built-in song recorder provides four dedicated audio tracks (stereo) in addition to the MIDI tracks (16 parts). This lets you create songs that contain audio acquired from a performing vocalist or guitarist in combination with the music produced by the internal sound generator.

The MIDI track section provides a high-resolution 16-part (MIDI) sequencer that's designed with features like loop recording so that you can record non-stop without interrupting your musical imagination.

The audio track section contains 4 MB of memory as standard (corresponding to approximately 23.5 seconds of stereo recording). You can add DIMM memory (up to 512 MB) to expand the recording capacity to a maximum of 51 minutes (stereo). In addition to audio phrases you record on the JUNO-G, you can also import audio files (in WAV or AIFF format) from your PC and use them as audio track phrases.

Live Setting function

The Live Setting function allows you to memorize settings and recall them as your live set progresses, guaranteeing that your performance will go smoothly.

Sample Patch function

This function lets you recall audio phrases from the audio tracks and play them on the keyboard just like patches or rhythm sets.

Powerful effects including mastering functionality

The JUNO-G provides three multi-effects processors (78 types), plus independent chorus and reverb processors. There's a mastering effect, indispensable for adding the final touch to your production, bringing your sound CD-master level impact and audio quality.

Versatile sound control functionality

In addition to a D Beam controller, the JUNO-G provides a wide range of controllers, such as the sound modify knobs and a hold pedal jack that can detect half-damper operations. The JUNO-G gives you complete control over your on-stage sound.

Plenty of external interfacing

The rear panel USB connector supports both file transfer and USB-MIDI, and can be switched as desired. There's also a PC card slot that can accommodate SmartMedia or CompactFlash via a commercially available adaptor. You can use a card to store as much as 1 GB of data (when using CompactFlash).

JUNO-G Editor/Librarian is included

Dedicated editor/librarian software is included, letting you edit and manage JUNO-G sounds from the large screen of your computer.

V-LINK functionality

V-LINK allows you to synchronize music and video, opening up completely new performance possibilities.

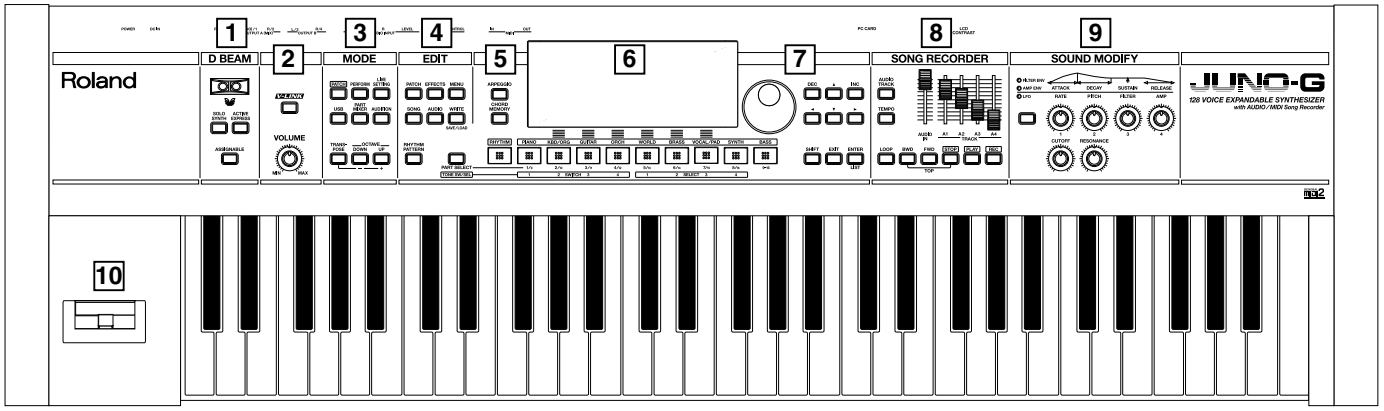
If you use the JUNO-G in conjunction with a V-LINK compatible video device (such as the Edirol motion dive .tokyo Performance Package, DV-7PR, PR-50, or V-4), you'll be able to control the images using the same operations as when playing music on the JUNO-G.

General MIDI/GM2 compatibility

The JUNO-G is compatible with General MIDI/GM2, and is able to play back music data that complies with the General MIDI/GM2 standard (General MIDI scores).

Panel Descriptions

Front Panel



1 D BEAM

Switches D Beam function on/off. You can apply a variety of effects to sounds simply by moving your hand (p. 69).

[SOLO SYNTH]

Play the JUNO-G as a monophonic synthesizer (p. 70).

[ACTIVE EXPRESS]

Play the JUNO-G as a active expression (p. 71).

[ASSIGNABLE]

You can assign a variety of parameters and functions to D Beam to modify the sound in realtime (p. 71).

* *Hold down [SHIFT] and press one of the corresponding buttons to access the D BEAM setting screen.*

2

VOLUME Knob

Adjusts the overall volume that is output from the rear panel OUTPUT A (MIX) jacks and PHONES jack (p. 15).

[V-LINK]

Switches the V-LINK function on/off (p. 172).

Press this button to access the V-LINK setting screen.

3 MODE

[PATCH]

Enter Patch mode (p. 25).

[PERFORM]

View the Performance mode's Play screen (p. 58).

[LIVE SETTING]

View the LIVE SETTING screen (p. 83).

[USB]

Accesses the USB function select screen (p. 167).

[PART MIXER]

View the Performance mode's Mixer screen (p. 58).

[AUDITION]

Hold down this button to audition the currently selected sound (p. 28).

[TRANSPOSE]

By holding down [TRANSPOSE] and pressing [+] [-], you can raise or lower the keyboard range in steps of a semitone (p. 29).

OCTAVE [UP] [DOWN]

Transposes the pitch of the keyboard in 1 octave units (p. 28).

4 EDIT

[PATCH]

Make patch-related settings (p. 30).

[EFFECTS]

Make effect-related settings (p. 125).

[MENU]

Opens the MENU. The contents of the menu will depend on the current mode.

[SONG]

Press this button to edit the entire song or to edit MIDI tracks. Also, this button is pressed to toggle between the Song Edit screen and the Song List screen (p. 84, p. 87, p. 94).

[AUDIO]

This button accesses the Sample Edit screen. Also, this button is pressed to toggle between the Sample Edit screen and the Sample List screen (p. 117).

[WRITE]

Save edited settings into internal memory or a memory card (p. 32, p. 51, p. 63, p. 76, p. 78, p. 124).

5

[ARPEGGIO]

Switches the ARPEGGIO on/off. The arpeggio setting screen will appear when you turn this on (p. 73).

[CHORD MEMORY]

Switches the CHORD MEMORY on/off. The chord memory setting screen will appear when you turn this on (p. 77).

6

Display

This displays information regarding the operation you are performing.

[RHYTHM PATTERN]
This button accesses the Rhythm Pattern playback screen (p. 79).

[PART SELECT/TONE SW/SEL]
When you press this button so it's lit, the category group buttons will operate as part select, tone switch, or tone select buttons.

[RHYTHM]–[BASS]
These are the category group buttons (only in Patch mode).

Function Buttons ([F1 (KBD/ORG)]–[F6 (VOCAL/PAD)])
The row of six buttons below the display are used to carry out various functions during editing and other tasks. The functions of these buttons will depend on the screen that you've selected (p. 23).

7

VALUE Dial
This is used to modify values. If you hold down [SHIFT] as you turn the VALUE dial, the value will change in greater increments (p. 24).

[DEC], [INC]
This is used to modify values. If you keep on holding down one button while pressing the other, the value change accelerates. If you press one of these buttons while holding down [SHIFT], the value will change in bigger increments (p. 24).

[▲], [▼], [◀], [▶]
Moves the cursor location up/down/left/right (p. 24).

[SHIFT]
This button is used in conjunction with other buttons to execute various functions.

[EXIT]
Return to the previous screen, or close the currently open window. In some screens, this causes the currently executing function to be aborted.

[ENTER]
Use this button to execute an operation.

8 SONG RECORDER

[AUDIO TRACK]
This button accesses the Audio Track screen (p. 104, p. 108).

[TEMPO]
Sets the tempo (BPM) (p. 73, p. 79, p. 85, p. 88).

[LOOP]
Turns Loop Play on/off. The loop setting screen will appear when you turn this on (p. 86, p. 95).

AUDIO IN Slider
This adjusts the AUDIO INPUT level. If you hold down [SHIFT] while operating this slider, the Input Setting screen will appear (p. 104).

TRACK A1–A4 Sliders
These sliders adjust the volume of each audio track (stereo).

[BWD], [FWD]
Moves the song position to the first beat of the previous or next measure (p. 85).

* *While playback is stopped, you can hold down [STOP] and press [BWD] to return the song position to the beginning of the song. If you press this during playback, you will return to the beginning of the song and stop.*

[STOP]
Controls song recorder stop.

[PLAY]
Controls song recorder play.

* *While stopped, you can hold down [SHIFT] and Press [PLAY] to perform MIDI Update (p. 86).*

[REC]
The display changes to the Recording Standby window (p. 88, p. 92, p. 105). If you press this button while recording a MIDI track, the Rehearsal function will be activated (p. 92).

9 SOUND MODIFY
Turn these knobs to adjust the sound in real time or to edit parameter values.
Pressing the button located at the left of knobs 1–4 will change the illumination status of the indicators located above the button, and will change the function of knobs 1–4 (p. 30).

* *In the performance mode, this button doesn't function.*

The CUTOFF knob and RESONANCE knob are dedicated to controlling Cutoff Frequency and Resonance (p. 30).

10

Pitch Bend/Modulation Lever
This allows you to control pitch bend or apply vibrato (p. 16).

Rear Panel

1

LCD CONTRAST Knob

This knob adjusts the contrast of the top panel display.

USB Connector

This connector lets you use a USB cable to connect your computer to the JUNO-G (p. 167, p. 170).

2

PC CARD Slot

A memory card can be inserted here (p. 178).

* *Never insert or remove a memory card while this unit's power is on. Doing so may corrupt the unit's data or the data on the memory card.*

* *Carefully insert the memory card all the way in—until it is firmly in place.*

3

MIDI Connectors (OUT, IN)

These connectors can be connected to other MIDI devices to receive and transmit MIDI messages.

CONTROL PEDAL Jack

You can connect optional expression pedals (EV-5, etc.) to these jacks. By assigning a desired function to a pedal, you can use it to select or modify sound or perform various other control. You can also connect optional pedal switches (DP series etc.) to sustain sound (p. 16).

* *Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.*

HOLD PEDAL Jack

An optional pedal switch (DP series etc.) can be connected to this jack for use as a hold pedal (p. 16).

This can also be set so it supports the use of half-pedaling techniques. So, after connecting an optional expression pedal (DP-8/10), you can employ pedal work to achieve even finer control in performances in which piano tones are used.

4

AUDIO INPUT LEVEL Knob

This knob adjusts the volume of the input to the AUDIO INPUT. Use this knob to make adjustments if the sound is still distorted even after you lower the top panel AUDIO IN slider, or conversely if the volume is insufficient even after setting the slider to the maximum position (p. 104).

AUDIO INPUT Jacks (L (MONO)/MIC, R)

Accept input of audio signals in stereo (L/R) from external devices. If you want to use mono input, connect to the L jack. When recording from a mic, connect it to the L jack

* *When connection cables with resistors are used, the volume level of equipment connected to the AUDIO INPUT jacks may be low. If this happens, use connection cables that do not contain resistors, such as those from the Roland PCS series.*

OUTPUT A (MIX) Jacks (L (MONO)/1, R/2)

These jacks output the audio signal to the connected mixer/amplifier system in stereo. For mono output, use the L jack (p. 14).

* *You can also use these to output each part independently.*

OUTPUT B Jacks (L/3, R/4)

These jacks output the audio signal to the connected mixer/amplifier system in stereo.

* *You can also use these to output each part independently.*

PHONES Jack

This is the jack for connecting headphones (sold separately) (p. 14).

5

Cord Hook

Anchor the cord of the AC adaptor (p. 14).

DC IN Jack

Connect the AC adaptor here (p. 14).
Be sure to use only the supplied AC adaptor.

POWER ON Switch

Press to turn the power on/off (p. 15).

Ground Terminal

Depending on the circumstances of a particular setup, you may experience a discomforting sensation, or perceive that the surface feels gritty to the touch when you touch this device, microphones connected to it, or the metal portions of other objects, such as guitars. This is due to an infinitesimal electrical charge, which is absolutely harmless. However, if you are concerned about this, connect the ground terminal (see figure) with an external ground. When the unit is grounded, a slight hum may occur, depending on the particulars of your installation. If you are unsure of the connection method, contact the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

Unsuitable places for connection

- Water pipes (may result in shock or electrocution)
- Gas pipes (may result in fire or explosion)
- Telephone-line ground or lightning rod (may be dangerous in the event of lightning)

Getting Ready

Connections

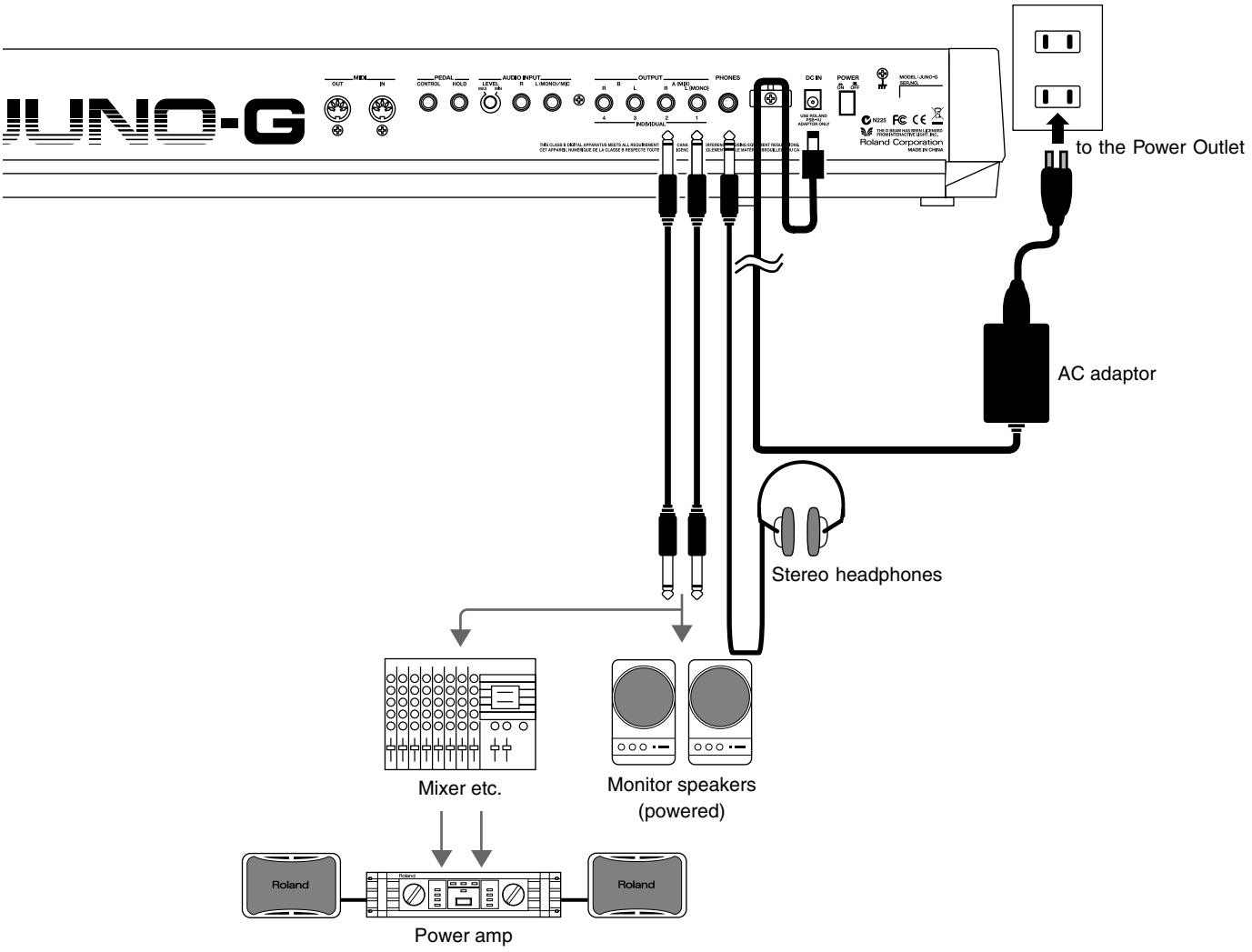
Since JUNO-G contains no amplifier or speakers, you'll need to connect it to audio equipment such as a keyboard amplifier, monitor speaker system or home stereo, or use headphones to hear its sound.

In order to fully experience the JUNO-G's sound, we recommend using a stereo amp/speaker system. If you're using a mono system, however, make your connections to the JUNO-G's OUTPUT A (MIX) jack L (MONO).

* *Audio cables are not included with the JUNO-G. You'll need to provide them.*

NOTE

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



NOTE

To prevent the inadvertent disruption of power to your unit (should the plug be pulled out accidentally), and to avoid applying undue stress to the AC adaptor jack, anchor the power cord using the cord hook, as shown in the illustration.

Turning On/Off the Power

* *Once the connections have been completed (p. 14), turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.*

1. Before turning on the JUNO-G's power, consider these two questions:

- Are all devices connected properly?
- Have the volume controls of the JUNO-G and all connected audio devices been turned to their lowest settings?

2. Turn on the POWER ON switch located on the rear panel of the JUNO-G.

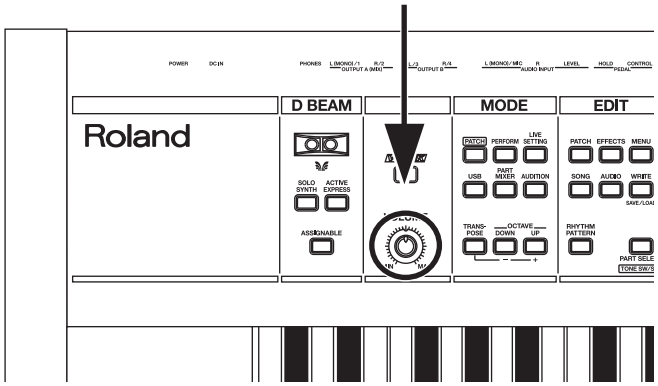
* *This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.*

* *To ensure proper operation of the pitch bend lever, make sure not to touch the lever when turning the JUNO-G's power on.*

Do not touch!

3. Turn on the power for any connected audio devices.

4. While playing the keyboard, gradually raise the volume of the JUNO-G and connected devices.



Turning Off the Power

1. Before turning off the power, consider these two questions:

- Have the volume controls of the JUNO-G and all connected audio devices been turned to their lowest settings?
- Have you saved your JUNO-G sounds or other data you've created?

2. Turn off the power for all connected audio devices.

3. Turn off the POWER ON switch of the JUNO-G.

Adjusting the Display Contrast (LCD Contrast)

The characters in the display may be difficult to view immediately after turning on the JUNO-G's power or after extended use. If this occurs, turn the rear panel LCD CONTRAST knob to make the display legible.

Listening to the Demo Songs

The internal demo songs will feature the JUNO-G's exceptional sounds and effects.

1. Press EDIT [MENU] to open the Top Menu Window.

2. Press [▲] [▼] to select "7. Demo Play."

3. Press [ENTER].
The DEMO MENU screen appears.

4. Turn the VALUE dial or use [INC] [DEC] to select a song.

5. Press [ENTER] to start playback.
Playback will stop automatically when the song ends.
If you press [F6 (PLAY ALL)], the songs will playback successively, beginning from the first.

* *Press [EXIT] or [STOP] to stop the demo song.*

6. Press [EXIT] to return to the previous screen.

MEMO

For the names and copyright information of these demo songs, refer to the JUNO-G's display.

* *All rights reserved. Unauthorized use of this material for purposes other than private, personal enjoyment is a violation of applicable laws.*

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

NOTE

When you perform demo playback, any patch or performance you may have been editing will be lost.

Various Performance Features

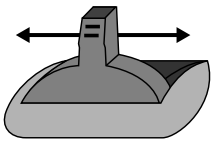
Velocity

The velocity—the force with which you play the keyboard—can affect the volume or timbre of a sound.

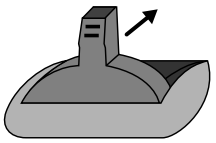
Pitch Bend/Modulation Lever

While playing the keyboard, move the lever to the left to lower the pitch of the currently selected patch, or to the right to raise its pitch (**pitch bend**). You can also apply vibrato by gently pushing the lever away from you (**modulation**).

If you push the lever away from you and at the same time move it to the right or left, you can apply both effects at once.



Pitch Bend



Modulation

Octave Shift

You can shift the pitch of the keyboard in one-octave units over a range of +/-3 octaves.

- In the MODE section, use OCTAVE [DOWN] [UP] to adjust the octave shift.
- To return to the original pitch, press both buttons simultaneously.

Transpose

You can transpose the pitch of the keyboard in semitone steps, over a range of G–F# (-5– +6 semitones).

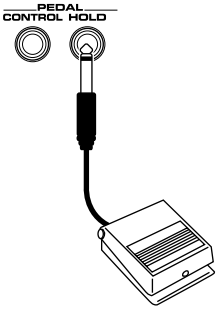
- Hold down MODE [TRANSPOSE] and use [-] [+] to change the transposition.
- To return to the original pitch, hold down [TRANSPOSE] and press both buttons simultaneously.

MEMO

The Octave Shift and Transpose settings are remembered even if you change patches or performances.

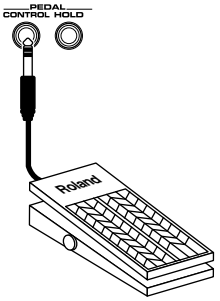
Hold Pedal

If an optional pedal switch (DP series) is connected to the rear panel PEDAL HOLD jack, you can press the pedal to cause notes to sustain or "hold" even after their keys have been released.



Control Pedal

If an optional expression pedal or pedal switch (EV-5, DP series) is connected to the rear panel PEDAL CONTROL jack, you can use the pedal to control the volume or various function.



cf.

For details on pedal settings, refer to **Control Pedal Settings** (p. 72).

NOTE

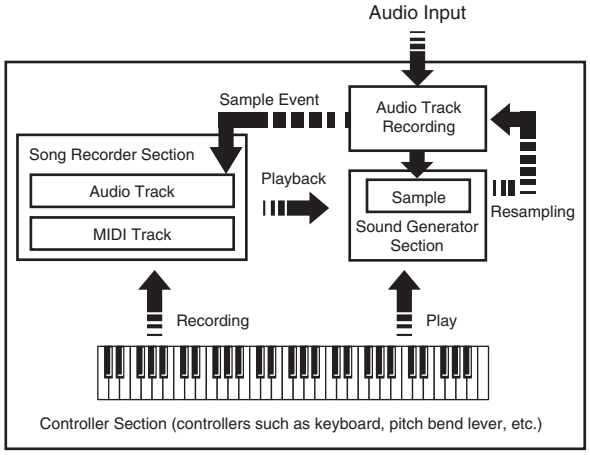
Use only the specified expression pedal or pedal switch (EV-5, DP series; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

Overview of the JUNO-G

How the JUNO-G Is Organized

Basic Structure

Broadly speaking, the JUNO-G consists of a controller section, a sound generator section, and a song recorder section.



Controller Section

This section consists of the keyboard, pitch bend/modulation lever, panel knobs and buttons, and D Beam controller. It also includes any pedals that may be connected to the rear panel. The performance information generated when you do things such as press/release a key, or depress the hold pedal is converted into MIDI messages and sent to the sound generator section, song recorder section, and/or an external MIDI device.

Sound Generator Section

The sound generator section produces the sound. It receives MIDI messages from the controller section and song recorder section and/or from an external MIDI device, generates musical sound according to the MIDI messages that were received, and outputs the sound from the output jacks or headphones jack.

Song Recorder Section

This consists of MIDI tracks, which record keyboard and controller operations as MIDI messages, and audio tracks, which record the performance data (sample events) used to trigger audio phrases (samples). The recorded data is sent to the sound generator section, reproducing the performance. MIDI messages recorded on MIDI tracks can also be transmitted from the MIDI OUT connector to control external MIDI devices.

Audio Track Recording

Audio track recording lets you capture sound from a CD player or microphone connected to the audio input jacks into the sound generator section as a sample. Performance data for that sample is recorded on the song recorder's audio track as a sample event.

The captured sample can be used in an audio track, or used in the same way as a sound generator waveform. You can also record the performance of the internal sound generator as a sample.

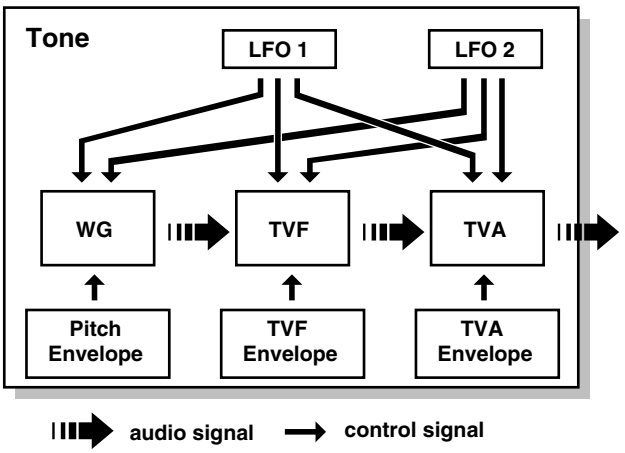
The JUNO-G can load WAV or AIFF format wave files as samples via a USB connection.

Classification of JUNO-G Sound Types

When using the JUNO-G, you will notice that a variety of different categories come into play when working with sounds. What follows is a simple explanation of each sound category.

Tones

On the JUNO-G, the tones are the smallest unit of sound. However, it is not possible to play a tone by itself. The patch is the unit of sound which can be played, and the tones are the basic building blocks which make up the patch.



Tones consist of the following five components.

WG (Wave Generator)

Specifies the PCM waveform (wave) that is the basis of the sound, and determines how the pitch of the sound will change.

The JUNO-G has 1267 different waveforms. All patches built into the JUNO-G consist of combinations of tones which are created based on these waveforms.

* *There are four wave generators for each rhythm tone (percussion instrument sounds).*

TVF (Time Variant Filter)

Specifies how the frequency components of the sound will change.

TVA (Time Variant Amplifier)

Specifies the volume changes and the sound's position in a stereo soundfield.

Envelope

You use Envelope to initiate changes to occur to a sound over time. There are separate envelopes for Pitch, TVF (filter), and TVA (volume). For example if you wish to modify the way in which the sound attacks or decays over time, you would adjust the TVA envelope.

LFO (Low Frequency Oscillator)

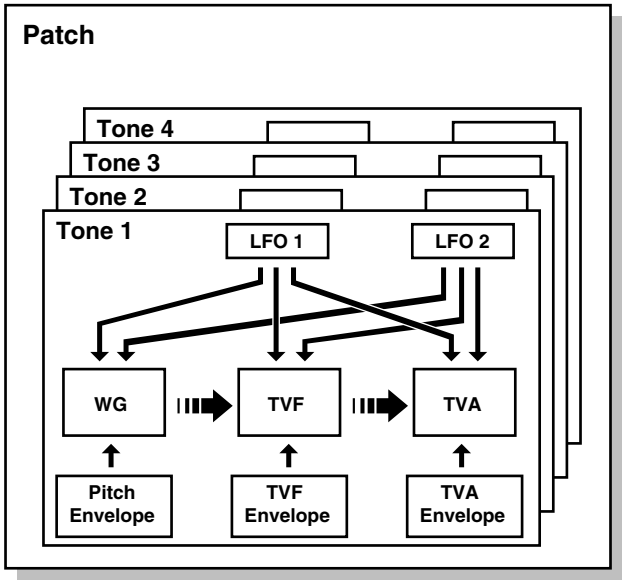
Use the LFO to create cyclic changes (modulation) in a sound. The JUNO-G has two LFOs. You can use the LFO to apply an effect to either the WG (pitch), the TVF (filter), or the TVA (volume). When an LFO is applied to the WG pitch, a vibrato effect is produced. When an LFO is applied to the TVF cutoff frequency, a wah effect is produced. When an LFO is applied to the TVA volume, a tremolo

effect is produced.

* *LFO is not included in the rhythm tones (percussion instrument sounds).*

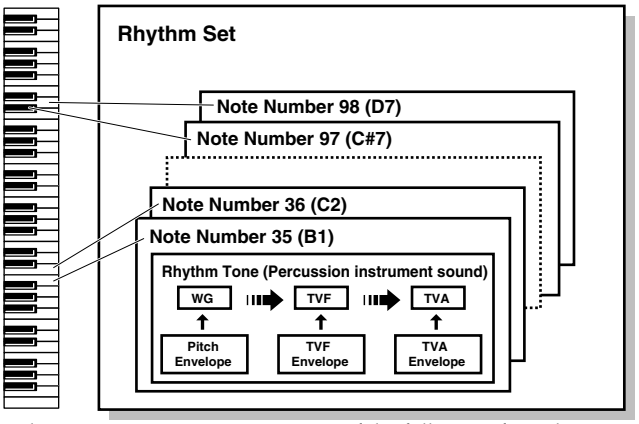
Patches

Patches are the basic sound configurations that you play during a performance. Each patch can be configured by combining up to four tones. How the four tones are combined is determined by the Structure Type parameter (p. 35).



Rhythm Sets

Rhythm sets are groups of a number of different percussion instrument sounds. Since percussion instruments generally do not play melodies, there is no need for a percussion instrument sound to be able to play a scale on the keyboard. It is, however, more important that as many percussion instruments as possible be available to you at the same time. Therefore, each key (note number) of a rhythm set will produce a different percussion instrument.



Each percussion instrument consists of the following four elements. (For details, refer to the explanations for "Tones.")

- WG (Wave Generator): 1–4
- TVF (Time Variant Filter)
- TVA (Time Variant Amplifier)
- Envelope

Performances

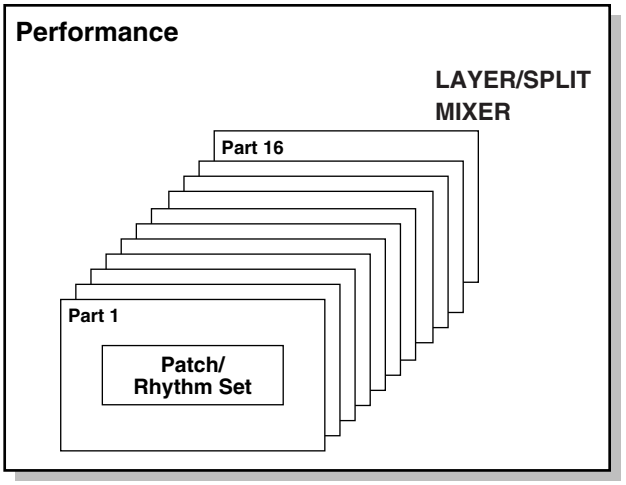
A performance has a patch or rhythm set assigned to each of the 16 parts, and can simultaneously handle 16 sounds.

The JUNO-G's performances are controlled via two screens; a Play screen and a Part Mixer screen (p. 58).

Use the PLAY screen if you want to play two or more patches together (Layer) or play different patches in separate areas of the keyboard (Split).

Use the MIXER screen if you want to "mix" by individually adjusting the pan and level settings for each of the sixteen parts.

Because the JUNO-G sound generator can control multiple sounds (instruments), it is called a Multi-timbral sound generator.



Part

On the JUNO-G, a "part" is something to which you assign a patch or rhythm set. In Patch mode you can assign a patch or rhythm set to the keyboard. In Performance mode, each performance has sixteen parts, and you can assign a patch or rhythm set to each part.

About Simultaneous Polyphony

The JUNO-G can play a maximum of 128 sounds simultaneously. The following paragraphs discuss what this means, and what will happen when more than 128 simultaneous voices are requested from the JUNO-G.

Calculating the Number of Voices Being Used

The JUNO-G is able to play up to 128 notes simultaneously. The polyphony, or the number of voices (sounds) does not refer only to the number of patches actually being played, but changes according to the number of tones used in the patches, and the number of waves used in the tones. The following method is used to calculate the number of sounds used for one patch being played.

(Number of patches being played) x (Number of tones used by patches being played) x (Number of waves used in the tones)

For example, a patch that combines four tones, each of which use two waves, will use eight notes of polyphony at once. Also, when playing in Performance mode, the number of sounds for each part is counted to obtain the total number of sounds for all parts.

How a Patch Sounds

When the JUNO-G is requested to play more than 128 voices simultaneously, currently sounding notes will be turned off to make room for newly requested notes. The note with the lowest priority will be turned off first. The order of priority is determined by the Patch Priority setting (p. 34).

Patch Priority can be set either to "LAST" or "LOUDEST." When "LAST" is selected, a newly requested note that exceeds the 128 voice limit will cause the first-played of the currently sounding notes to be turned off. When "LOUDEST" is selected, the quietest of the currently sounding notes will be turned off. Usually, "LAST" is selected.

Note Priority in Performance Mode

Since Performance mode is usually used to play an ensemble consisting of several patches, it is important to decide which parts take priority. Priority is specified by the Voice Reserve settings (p. 66). When a note within a patch needs to be turned off to make room for a new note, the Patch Priority setting of the patch will apply (p. 34).

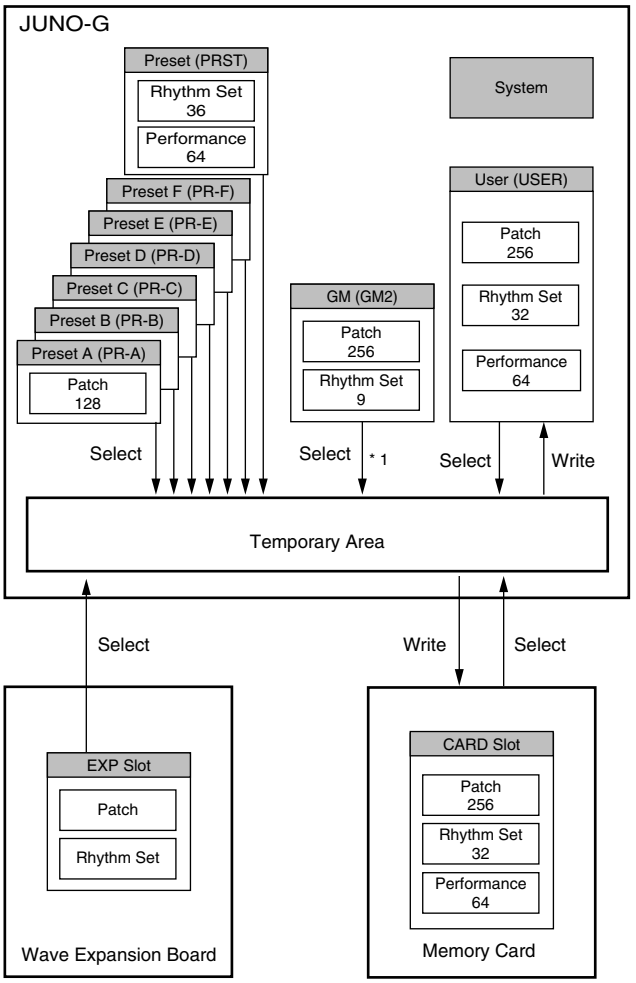
Voice Reserve

The JUNO-G has a Voice Reserve function that lets you reserve a minimum number of notes that will always be available for each part. For example if Voice Reserve is set to "10" for part 16, part 16 will always have 10 notes of sound-producing capacity available to it even if a total of more than 128 notes (total for all parts) are being requested. When you make Voice Reserve settings, you need to take into account the number of notes you want to play on each part as well as the number of tones used by the selected patch (p. 66).

It is not possible to make Voice Reserve settings that would cause the total of all parts to be greater than 64 voices.

About Memory

Patch and performance settings are stored in what is referred to as memory. There are three kind of memory: temporary, rewritable, and non-rewritable.



* 1 The selected Patches/Rhythm Sets cannot be changed.

Temporary Memory

Temporary Area

This is the area that holds the data for the patch or performance that you've selected using the panel buttons.

When you play the keyboard or play back a sequence, sound is produced based on data in the temporary area. When you edit a patch or performance, you do not directly change the data in memory; rather, you call up the data into the temporary area, and edit it there.

Settings in the temporary area are temporary, and will be lost when the power is turned off or when you select another patch/performance. To keep the settings you have changed, you must write them into rewritable memory.

Rewritable Memory

System Memory

System memory stores system parameter settings that determine how the JUNO-G functions.

User Memory

User memory is the internal memory area that holds patches, performances, samples, and performance data.

Memory Card

You can use a memory card to store patches, performances, samples, and performance data just as you can in User memory.

Non-Rewritable Memory

Preset Memory

Data in Preset memory cannot be rewritten. However, you can call up settings from preset memory into the temporary area, modify them and then store the modified data in rewritable memory (except GM2).

Wave Expansion Board (SRX Series)

The JUNO-G can be equipped with a Wave Expansion Board (SRX series; sold separately). Wave Expansion Boards contain Wave data, as well as patches and rhythm sets that use this Wave data, which can be called directly into the temporary area and played.

About the Onboard Effects

Effect Types

The JUNO-G has built-in effect units, and you can independently edit each unit's settings.

Multi-Effects

The multi-effects are multi-purpose effects that completely change the sound type by changing the sound itself. Contained are 78 different effects types; select and use the type that suits your aims. In addition to effects types composed of simple effects such as Distortion, Flanger, and other such effects, you can also set up a wide variety of other effects, even connecting effects in series or in parallel. Furthermore, while chorus and reverb can be found among the multi-effects types, the following chorus and reverb are handled with a different system. In Performance mode, three types of multi-effect can be used simultaneously; these are referred to as MFX1, MFX2, and MFX3. In Patch mode you can use MFX1 and MFX2.

Chorus

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

Reverb

Reverb adds the reverberation characteristics of halls or auditoriums. Five different types are offered, so you can select and use the type that suits your purpose.

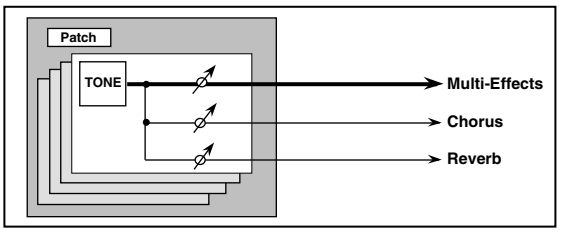
Mastering Effect

This is a stereo compressor (limiter) that is applied to the final output of the JUNO-G. It has independent high, mid, and low ranges. Independently for the high-frequency, mid-frequency, and low-frequency regions, this compresses any sounds that exceed the specified level, making the volume more consistent.

How Effects Units Work in Different Modes

In Patch Mode

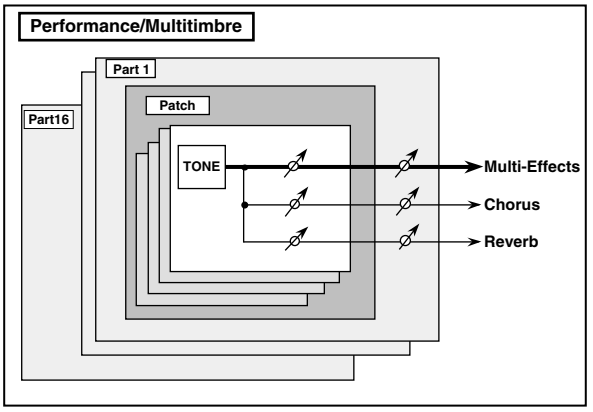
Multi-effects can be used individually by each patch and rhythm set. Chorus and reverb are each shared by patches and rhythm sets; the same effect applies to each tone. Adjusting the signal level to be sent to each effects unit (Send Level) provides control over the effect intensity that's applied to each tone.



* *To each part you can assign either a Patch or a Rhythm Set.*

In the Performance Mode

The multi-effects, chorus and reverb can be set individually for each performance. The intensity of each effect will be set for each part. When you apply effects in Performance mode, the effect settings of the patch or rhythm set assigned to each part will be ignored, and the effect settings of the performance will be used. Thus, the effects for the same patch or rhythm set may differ when played in Patch mode and in Performance mode. However, depending on the settings, you can have effect settings for a patch or rhythm set assigned to a part applied to the entire performance. In addition, when using the multi-effects settings of a performance, you can use three different multi-effects simultaneously, depending on the effect type.

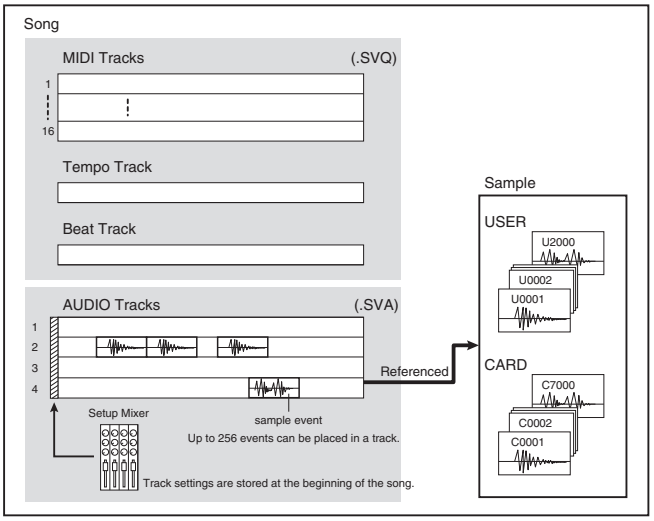


About the Song Recorder

The song recorder records performance data from the keyboard and controllers and performance data for the samples created by audio track recording, and manages this data as a "song." When you play back the song recorder, this performance data is sent to the sound generator, causing it to generate sound and reproduce the recorded performance.

What Is a Song?

For the JUNO-G, musical performance data for one song or composition is referred to as a **song**. This consists of the performance data recorded on the MIDI tracks (MIDI channels 1–16), the tempo track, the beat track, and audio tracks 1–4.



What Is a Track?

Each section of a song which stores musical performance data is called a **track**.

MIDI Tracks 1–16

MIDI tracks record your keyboard playing and controller operations as MIDI messages. When you play back a song, the MIDI tracks send these recorded MIDI messages to the sound generator, causing it to produce sound. MIDI tracks actually plays instruments instead of the musician, and since it can record a musical performance, it is a tape recorder as well.

But in reality MIDI tracks doesn't record sound, but actually the steps that cause the sound generator to produce sound, so it offers several advantages. Sound quality is always excellent, the equivalent of first-generation tape, no matter how many times the data plays back; tempo changes have no effect on pitch; detailed editing is possible, etc.

The MIDI tracks can record performance data for sixteen MIDI channels. In Performance mode, the sound generator's sixteen parts correspond to the sixteen MIDI channels. In Patch mode, the keyboard performance is recorded on MIDI channel 1 and the rhythm pattern performance is recorded on MIDI channel 10 (with the default settings).

Audio Tracks 1–4

Audio tracks handle the samples you've captured by audio track recording, as well as imported samples.

Even if you change the tempo during the song, audio tracks will be time-stretched so that they will continue playing in synchronization with the song. You can also play back from the middle of a sample.

Audio tracks do not record the sample itself; they only contain information that tells the sound generator to "play USER (or CARD) sample number 'x' at this point." (This information is called a "sample event.") This means that even if you delete a sample event from the audio track, the sample data itself will remain.

Up to 256 sample events can be placed on each audio track.

* *Each audio track can play back only one sample at a time. If there are overlapping sample events on an audio track, the sample event located later will be given priority.*

Tempo Track

The Tempo track records tempo changes of a song over time. It can be used for tempo changes during a song. If a song has the same tempo from beginning to end, the Tempo track can be ignored.

When a song is first recorded on the JUNO-G, a tempo setting at the time of recording will be stored at the beginning of the Tempo track. Therefore when song playback starts from the beginning, the song will always play back at this initial tempo.

Thus playback tempo is determined by the Tempo track setting. If you modify the tempo during playback, the overall tempo of the song will be controlled by the setting you make.

Beat Track

The Beat track records the time signature of each measure of a song. Set the Beat track when recording a new song, or when you want to change time signature during a song.

Positions for Storing a Song

Temporary Area

The song recorder has an area called **Temporary Area** that can temporarily store one song. So we call this **temporary song**.

The song in Temporary Area is volatile and will be lost when the power is turned off. To keep a song, you must save it to user memory or memory card.

Memory Card/User Memory

If you want to keep the song in Temporary Area that you recorded or edited, you must save it as a song file onto a memory card or into user memory. Either method lets you save up to 256 songs.

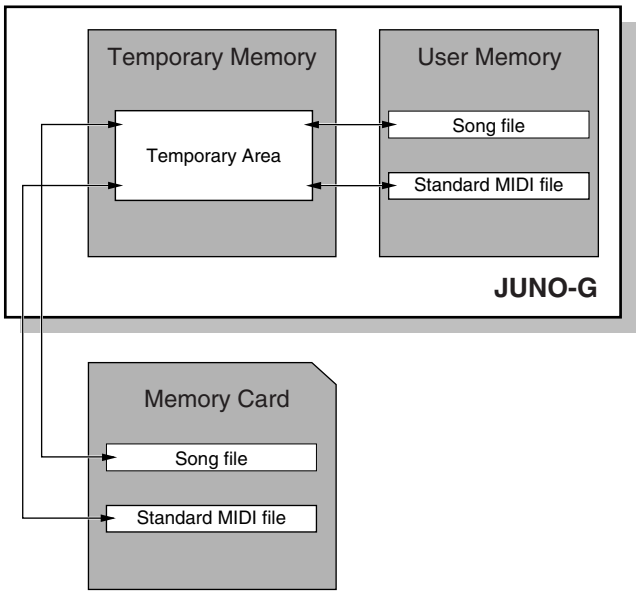
A card and user memory can contain two file types. The three-letter symbol shown in parentheses ( ) is a file name extension that distinguishes the different file types.

Song File (.SVQ, .SVA)

Each song you create on the JUNO-G is saved as two files; a file with a name consisting of the song name and an extension of "**.SVQ**" (the SVQ file), and a file with an extension of "**.SVA**" (the SVA file). The SVQ file contains mainly the data of the MIDI tracks. The SVA file contains mainly the audio track data (sample events).

Standard MIDI File (.MID)

Standard MIDI File is a standard file format that allows sequencer data to be exchanged between most musical applications. JUNO-G files can be saved as Standard MIDI Files. This also allows you to play back commercially available music data (GM scores) that is compatible with the GM/GM2 system.

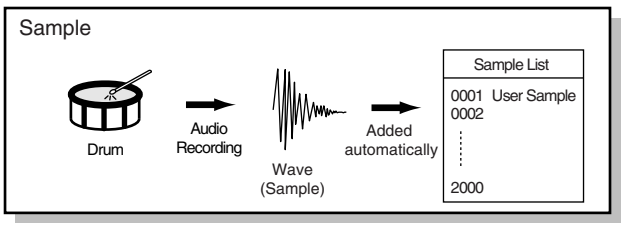


About Audio Track Recording

Audio track recording lets you record external input sources such as an audio device or microphone as digital audio data. A sound you record can be played as a patch (sample patch), or used as the waveform for a patch or drum set. You can also import WAV/AIFF format files and use them in the same way.

Samples

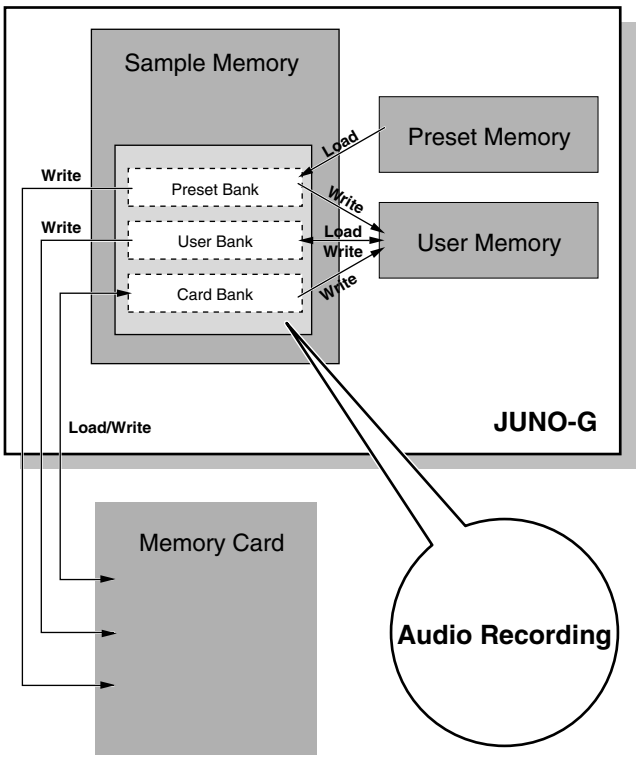
A "**sample**" is a waveform (a piece of sound) obtained by recording an audio track on the JUNO-G. In addition to the actual waveform data itself, a sample also contains parameters such as start point, loop start, and loop end. The JUNO-G can hold 9,000 samples (User: 2000, Card: 7000).



Where Samples are Stored

Samples that you record or import are stored in sample memory. This sample memory is temporary, and its data will be lost when you turn off the power. If you want to keep these samples, you must save them to user memory or a memory card.

* *You cannot save data to the preset memory.*



Basic Operation of the JUNO-G

Switching the Sound Generator Mode

The JUNO-G has two sound generating modes: Patch mode, Performance mode. You can select the sound generating mode (state) that is most appropriate for how you are playing the JUNO-G. Use the following procedure to switch between these modes.

Patch Mode

This is the mode you'll use to play a single sound (patch/rhythm set) from the keyboard.
The keyboard and sound generator are connected by a single MIDI channel.

To select Patch mode

1. **Press MODE [PATCH].**

Performance Mode

This mode allows you to combine multiple sounds (patches or rhythm sets).

PERFORM PLAY screen

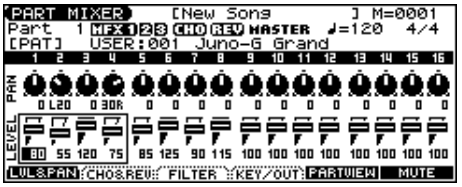
Use this screen when you want to play two or more sounds (patches/rhythm sets) together.
You can play patches together (Layer) or divide the keyboard into two regions and play different patches in each region (Split).

1. **Press MODE [PERFORM].**

MIXER screen

Use this screen when you want to mix the sounds by adjusting the level and pan for each of the 16 parts.

1. **Press MODE [PART MIXER].**

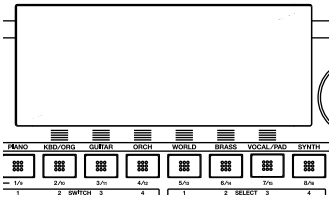


MEMO

The PERFORM PLAY screen and PART MIXER screen provide different views of the same performance. For example, you'll want to use the PERFORM PLAY screen when you're setting up a keyboard split, or use the PART MIXER screen when you're adjusting the effect settings or volume balance of the patches for each part.

About the Function Buttons

The six [KBD/ORG]–[VOCAL/PAD] buttons located below the display execute various functions (function buttons), and their operation will differ depending on the screen. Functions will be listed in the bottom of the screen.



Window

The somewhat smaller screens that appear temporarily on top of the normal screens are called windows. Various types of windows appears according to the situation. Some display lists, others allow you to make settings, and still others ask you to confirm an operation.

Press [EXIT] to close the window. Some windows will close automatically when an operation is performed.

Moving the Cursor

A single screen or window displays multiple parameters or items for selection. To edit the setting of a parameter, move the cursor to the value of that parameter. To select an item, move the cursor to that item. When selected with the cursor, a parameter value or other selection is highlighted.

Move the cursor with the [▲], [▼], [◀] and [▶] (cursor buttons).

[▲]: moves the cursor up.

[▼]: moves the cursor down.

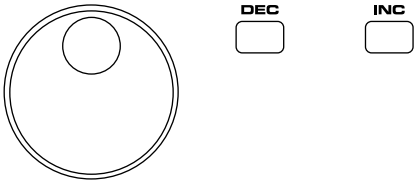
[◀]: moves the cursor to the left.

[▶]: moves the cursor to the right.

- If you hold down one cursor button while you also press the cursor button for the opposite direction, the cursor will move more rapidly in the direction of the first-pressed cursor button.
- When you press [ENTER], the value of the parameter selected by the cursor may appear in a list. This is convenient when you want to see what your choices are.

Changing a Value

To change the value, use the VALUE dial or the [INC] [DEC] buttons.



TIP

In each screen of the JUNO-G, you can use the cursor buttons to move the area displayed as highlighted, and modify its value.

VALUE Dial

Turning the VALUE dial clockwise increases the value, counterclockwise decreases the value.

- Holding down [SHIFT] as you move the VALUE dial increases value increments so you can make large value changes faster.

[INC] and [DEC]

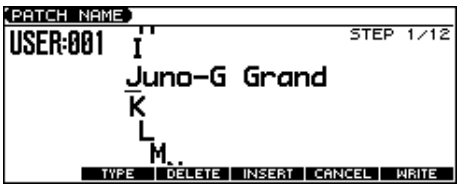
Pressing [INC] increases the value, and [DEC] decreases it.

- Keep the button pressed for continuous adjustment.
- For faster value increases, keep [INC] pressed down and press [DEC]. For decreasing value faster, keep [DEC] pressed down and press [INC].
- If you press [INC] or [DEC] while holding down [SHIFT], the value increments will get bigger.

When the cursor is located at a parameter value, press [ENTER] to display a window where you can set the value. Use [▲] [▼] to select a value, and then press [ENTER] to finalize the setting.

Assigning a Name

On the JUNO-G, you can assign names to each patch, rhythm set, performance, Song and Sample. The procedure is the same for any type of data.



1. Press [◀] [▶] to move the cursor to the location where you wish to input a character.

2. Turn the VALUE dial, or press [INC] [DEC] to specify the character.

- [F2 (TYPE)]: Selects the type of character. Each time you press this, you will alternately select the first character of a character set: uppercase (A), lowercase (a), numerals and symbols (0).
- [F3 (DELETE)]: Deletes the character at the cursor location.
- [F4 (INSERT)]: Inserts a space at the cursor location.
- [◀] or [▶]: Move the cursor.
- [▲], [▼]: Switch between uppercase and lowercase letters.

* *If you decide to discard your input, press [F5 (CANCEL)].*

Available Characters/Symbols

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

TIP

From a naming screen you can press [MENU] and select "1. Undo" to return the name to what it was before you changed it. From [MENU] you can select "2. To Upper" or press [▲] to change the character at the cursor to uppercase. From [MENU] you can select "3. To Lower" or press [▼] to change the character at the cursor to lowercase. From [MENU] you can select "4. Delete All" to clear all the characters you were inputting.

NOTE

Song file names may not contain lowercase characters or certain symbols (" * + , . / : ; < = > ? [\ ] |).

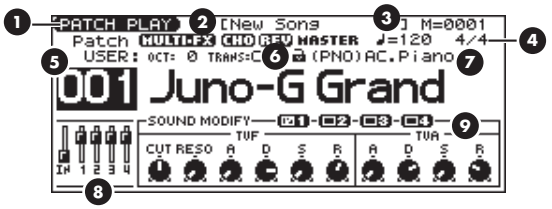
Playing in Patch Mode

Patch mode lets you play a single sound (patch/rhythm set) from the keyboard.

About the PATCH PLAY Screen

Press MODE [PATCH]. You will enter Patch mode, and the PATCH PLAY screen appears.

Functions in the PATCH PLAY Screen



1. Indicates the current sound generating mode.

2. Indicates multi-effects (MFX), chorus (CHO), reverb (REV), and mastering (MASTER) on and off.

3. Indicates the name of the currently selected song, the measure location.

4. Indicates the time signature, and the tempo.

5. Indicates/selects the group, number, and name of the selected patch.

6. Indicates the octave and transposition values.

7. Indicates the patch category group.

8. Positions of the five SONG RECORDER sliders

9. SOUND MODIFY settings

Patch/Rhythm Set Group

The JUNO-G has several patch groups, including the User group and Preset groups A–F and GM, with each group storing 128 patches (256 in GM, USER). What's more, you can further expand your options by installing an optional Wave Expansion Board (SRX series; sold separately), enabling you to select from a huge assortment of available patches. There are also sample patches (USAM, CSAM) that can use samples as patches.

USER

This is the group inside the JUNO-G which can be rewritten. Patches you yourself create can be stored in this group. The JUNO-G includes 256 preset patches and 32 rhythm sets.

PR-A–F (Preset A–F), PRST (Preset)

This is the group inside the JUNO-G which cannot be rewritten. However you may modify the settings of the currently selected patch, and then store the modified patch in User memory. Groups A–F already contain 128 prepared patches each, for a total of 768 patches.

GM (General MIDI 2)

This is an internal group of patches compatible with General MIDI 2, a system of MIDI function specifications designed to transcend differences between makers and types of devices; these patches cannot be overwritten. Furthermore, settings of currently selected patches from this group cannot be changed. The JUNO-G includes 256 preset patches.

CARD (Memory Card)

This group lets you use patches stored on a memory card inserted in the rear panel card slot. Since the data in this group can be rewritten, you can use this group to store patches that you create.

USAM (User Sample)

You can use a sample from user memory as a patch (the Sample Patch function), and play the sample in a pitched fashion just as a conventional patch.

* *If there are no samples in memory, this will indicate "Empty."*

* *Since a stereo sample uses two adjacent sample numbers, you should choose the L-channel sample number (the lower number). It will play as a stereo patch. (If you choose the sample number for the R channel, "---" will be indicated for it, and it will not be playable.*

CSAM (Card Sample)

You can use a sample from card memory as a patch (the Sample Patch function), and play the sample in a pitched fashion just as a conventional patch.

* *If there are no samples in memory, this will indicate "Empty."*

* *Since a stereo sample uses two adjacent sample numbers, you should choose the L-channel sample number (the lower number). It will play as a stereo patch. (If you choose the sample number for the R channel, "---" will be indicated for it, and it will not be playable.*

EXP (Wave Expansion Board installed in EXP Slot)

These are groups used when using patches from Wave Expansion Board installed in the EXP slot, and cannot be rewritten. However you may modify the settings of the currently selected patch, and then store the modified patch in User memory and Memory card. The number of onboard patches depends on the specific Wave Expansion Board installed.

* *EXP patches can be selected only if a Wave Expansion Board (SRX series; sold separately) is installed in the slot.*

Selecting Patches in the Main Screen

1. **Press MODE [PATCH] to access the PATCH PLAY screen.**

2. **To switch patches or rhythm sets, move the cursor to the location shown below and use the VALUE dial or [INC] [DEC] to make your selection.**

3. **To select a patch (rhythm set) group, move the cursor to the location shown below and use the VALUE dial or [INC] [DEC] to make your selection.**

4. **Press [▲] [▼] to move the cursor to the patch number.**

5. **Use the VALUE dial or [INC] [DEC] to select a patch (or a rhythm set).**

Selecting Patches by Category

The JUNO-G allows you to specify a type (category) of patch so that you can quickly find the desired patch. There are a total of 38 categories.

1. **Press MODE [PATCH] to access the PATCH PLAY screen.**

2. **Move the cursor to the location shown below, and use the VALUE dial or [INC] [DEC] to select a category.**

3. **Press [◀] to move the cursor one space to the left, and use the VALUE dial or [INC] [DEC] to lock the padlock symbol.**

* *If you don't lock (🔓) the category (the padlock symbol 🔒) here, you won't be able to select patches by category.*

4. **Use [▲] [▼] [◀] [▶] to move the cursor to the patch group/number, and use the VALUE dial or [INC] [DEC] to select a patch.**

* *If you didn't lock the category in step* **3***, you will step through the patch numbers in order.*

The following categories can be selected.

Category		Contents
- - -	No Assign	No assign
PNO	AC.Piano	Acoustic Piano
EP	EL.Piano	Electric Piano
KEY	Keyboards	Other Keyboards (Clav, Harpsichord etc.)
BEL	Bell	Bell, Bell Pad
MLT	Mallet	Mallet
ORG	Organ	Electric and Church Organ
ACD	Accordion	Accordion
HRM	Harmonica	Harmonica, Blues Harp
AGT	AC.Guitar	Acoustic Guitar
EGT	EL.Guitar	Electric Guitar
DGT	Dist.Guitar	Distortion Guitar
BS	Bass	Acoustic & Electric Bass
SBS	Synth Bass	Synth Bass
STR	Strings	Strings
ORC	Orchestra	Orchestra Ensemble
HIT	Hit&Stab	Orchestra Hit, Hit
WND	Wind	Winds (Oboe, Clarinet etc.)
FLT	Flute	Flute, Piccolo
BRS	AC.Brass	Acoustic Brass
SBR	Synth Brass	Synth Brass
SAX	Sax	Sax
PLK	Plucked	Plucked (Harp etc.)
ETH	Ethnic	Other Ethnic
FRT	Fretted	Fretted Inst (Mandolin etc.)
BPD	Bright Pad	Bright Pad Synth
SPD	Soft Pad	Soft Pad Synth
VOX	Vox	Vox, Choir
HLD	Hard Lead	Hard Synth Lead
SLD	Soft Lead	Soft Synth Lead
TEK	Techno Synth	Techno Synth
PLS	Pulsating	Pulsating Synth
FX	Synth FX	Synth FX (Noise etc.)
SYN	Other Synth	Poly Synth
PRC	Percussion	Percussion
SFX	Sound FX	Sound FX
BTS	Beat&Groove	Beat and Groove
DRM	Drums	Drum Set
CMB	Combination	Other patches which use Split and Layer

Using the Category Group Buttons to Select Patches

You can use the category group buttons to quickly find the patch you want. The 38 categories and rhythm sets are organized into ten category groups that are assigned to these buttons.

1. **Press MODE [PATCH] to access the PATCH PLAY screen.**

2. **With [TONE SW/SEL] unlit, press one of the [RHYTHM]–[BASS] (category group buttons) to select the category group for the desired patch.**

3. **Use [◀] [▶] to select the category.**

4. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a patch/rhythm set.**

5. **Press [ENTER] to confirm your selection.**

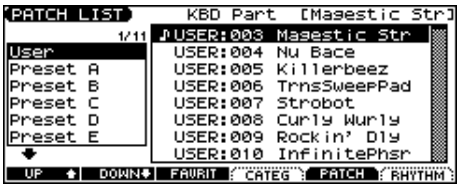
Category Group	Category	
PIANO	PNO	AC.Piano
	EP	EL.Piano
ORG/KBD	KEY	Keyboards
	BEL	Bell
	MLT	Mallet
	ORG	Organ
	ACD	Accordion
	HRM	Harmonica
GUITAR	AGT	AC.Guitar
	EGT	EL.Guitar
	DGT	Dist.Guitar
BASS	BS	Bass
	SBS	Synth Bass
ORCH	STR	Strings
	ORC	Orchestra
	HIT	Hit&Stab
BRASS	WND	Wind
	FLT	Flute
	BRS	AC.Brass
	SBR	Synth Brass
	SAX	Sax
SYNTH	HLD	Hard Lead
	SLD	Soft Lead
	TEK	Techno Synth
	PLS	Pulsating
	FX	Synth FX
	SYN	Other Synth
VOCAL/PAD	BPD	Bright Pad
	SPD	Soft Pad
	VOX	Vox
WORLD	PLK	Plucked
	ETH	Ethnic
	FRT	Fretted
	PRC	Percussion
	SFX	Sound FX
	BTS	Beat&Groove
	DRM	Drums
	CMB	Combination
RHYTHM	RHYTHM SET	

Selecting Patches from the List

You can display a list of patches and select a patch from that list.

1. **Press MODE [PATCH] to access the PATCH PLAY screen.**

2. **Press [ENTER].**
The PATCH LIST screen appears.



3. **To select a patch, press [F5 (PATCH)].**
To select a rhythm set, press [F6 (RHYTHM)].
If you press [F6 (RHYTHM)], the RHYTHM LIST screen appears.

4. **Press [F1 (UP)] [F2 (DOWN)] to select a group.**

5. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a patch/rhythm set.**

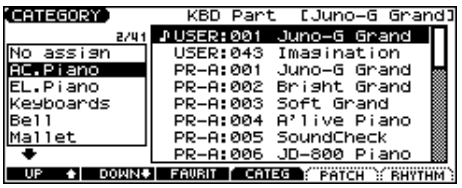
6. **Press [ENTER] to confirm your selection.**

Selecting Patches by Category

1. **Press MODE [PATCH] to access the PATCH PLAY screen.**

2. **Press [ENTER].**
The PATCH LIST screen appears.

3. **Press [F4 (CATEG)].**
The CATEGORY screen appears.



4. **Press [F1 (UP)] [F2 (DOWN)] to select a category.**

5. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a patch.**

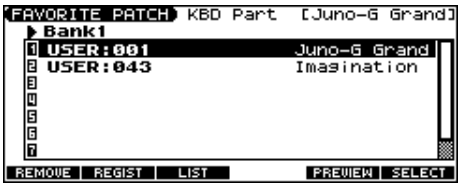
6. **Press [ENTER] to confirm your selection.**

Selecting Favorite Patches/Rhythm Sets (Favorite Patch)

In the patch mode, you can bring together your favorite and most frequently used patches (or rhythm sets) in one place by registering them in the favorite patch. By using this function, you can rapidly select favorite patches from Preset/User/Card area or a Wave Expansion Board. You can register a total of 64 sounds (8 sounds x 8 banks) as favorite patches.

Registering a Favorite Patch/Rhythm Set

1. **In the PATCH PLAY screen, select the patch (or rhythm set) that you wish to register.**
2. **Press [ENTER] to access the PATCH LIST screen.**
3. **Press [F3 (FAVORIT)].**
   The FAVORITE PATCH screen appears.



4. **Press [◀] [▶] to select the Bank.**
5. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a favorite number.**
6. **Press [F2 (REGIST)] to execute the registration.**
7. **Press [F3 (LIST)] to return to the PATCH LIST screen.**

TIP

You can hold down MODE [AUDITION] or [F5 (PREVIEW)] to audition the patch or rhythm set.

Canceling a patch registration

By pressing [F1 (REMOVE)] you can cancel the patch (or rhythm set) registration that is selected in the FAVORITE PATCH screen.

Choosing the Favorite Patch/Rhythm Set

1. **Press MODE [PATCH] to access the PATCH PLAY screen.**
2. **Press [ENTER] to access the PATCH LIST screen.**
3. **Press [F1 (FAVORIT)].**
   The FAVORITE PATCH screen appears.
4. **To change the Bank, use the VALUE dial or [◀] [▶].**
5. **Press [INC] [DEC] or [▲] [▼] to select the patch.**
6. **Press [F6 (SELECT)] or [ENTER] to confirm your selection.**

Auditioning a Patch or Rhythm Set (Phrase Preview)

This function lets you audition a patch using a suitable phrase that's provided for each type (category) of patch.

1. **In the PATCH PLAY screen, PATCH LIST screen, RHYTHM LIST screen, FAVORITE PATCH screen, or CATEGORY screen, hold down MODE [AUDITION].**
   The patch (rhythm set) selected in the screen will play.
2. **The audition playback will stop when you take your finger off the [AUDITION] button.**

cf.

You can use the Preview Mode parameter to change the way in which Phrase Preview plays the sound. (p. 158)

Transposing the Keyboard in Octave Units (Octave Shift)

The Octave Shift function transposes the pitch of the keyboard in 1 octave units (-3– +3 octaves).

For playing a bass part more easily using your right hand, transpose the keyboard down by 1 or 2 octaves.

* *Octave Shift applies only to the keyboard part.*

1. **In the PATCH PLAY screen, press OCTAVE [-] or [+] to set the amount of transposition (-3– +3).**
   The button will light if this is set.

- Each time you press OCTAVE [+], the amount of transposition will change in the order of +1, +2, and +3. Each time you press OCTAVE [-], the amount of transposition will change in the order of -1, -2, and -3.
- [UP] will light if the setting is +1, +2, or +3; [DOWN] will light if the setting is -1, -2, or -3.
- Press both buttons simultaneously to return the setting to 0.

MEMO

There is a single Octave Shift setting (Setup parameter) for the entire JUNO-G. The changed setting will be remembered even if you switch patches or performances.

Transposing the Keyboard in Semitone Steps (Transpose)

Transpose changes keyboard pitch in units of semitones.
This function is useful when you play transposed instruments such as trumpet or clarinet following a printed score.

1. **In the PATCH PLAY screen, hold down [TRANSPOSE] and press [-] or [+] to specify the amount of transposition (G–F#: -5–+6 semitones).**

- [TRANSPOSE] will light if the setting is anything other than C.
- Hold down [TRANSPOSE] and press both buttons simultaneously to return the setting to C.

MEMO

There is a single Transpose setting (Setup parameter) for the entire JUNO-G. The changed setting will be remembered even if you switch patches or performances.

Selecting the Tones That Will Sound (Tone On/Off)

Since a patch is a combination of up to four tones, you can switch unwanted (tones out of the four) off and get just the sound of a specific tone.

1. **In the PATCH PLAY screen, press [TONE SW/SEL] so the button is lit.**

2. **Use SWITCH [1]–[4] to turn each tone on/off.**
   Making the button light turns the tone on.

TIP

If you want just one or two tones to sound in a patch, turn the others off and store that setting on a patch. This cuts nonessential use of the JUNO-G's simultaneous voices.

3. **Press [TONE SW/SEL] once again so its illumination is turned off.**

Playing Percussion Instruments

In Patch mode, you can play percussion instruments from the keyboard by selecting a rhythm set. As the rhythm tone assigned to each key varies by the rhythm set selected, you can play a wide range of percussion instruments.

Adjusting the Volume Balance between the Keyboard Performance and the Rhythm Pattern

1. **In the PATCH PLAY screen, hold down [SHIFT] and press [F4 (LEVEL)].**
   The PART LEVEL window appears.

2. **Press [F4 (KBD)] (keyboard) or [F5 (PTN)] (rhythm pattern) to select a part.**

3. **Use the VALUE dial or [INC] [DEC] to adjust the volume.**

4. **Press [F6 (CLOSE)] to close the window.**

Creating a Patch

With the JUNO-G, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating patches, and the functions of the patch parameters.

Four Tips for Editing Patches

Select a patch that is similar to the sound you wish to create (p. 26)

It's hard to create a new sound that's exactly what you want if you just select a patch and modify its parameters at random. It makes sense to start with a patch whose sound is related to what you have in mind.

Decide which tones will sound (p. 29)

Since a patch is a combination of up to any four tones, you should listen to how the individual tones sound before you edit. Then decide which tones you are going to use. It is important to turn off unused tones to avoid wasting voices, unnecessarily reducing the number of simultaneous notes you can play.

Check the Structure setting (p. 35)

The important Structure parameter determines how the four tones combine. Before you select new tones, make sure you understand how the currently selected tones are affecting each other.

Turn Effects off (p. 125)

Since you will hear the original sound of the patch itself when the effects are turned off, the results of your modifications will be easier to hear. Actually, sometimes just changing effects settings can give you the sound you want.

How to Make Patch Settings

Using the Knobs to Edit the Sound

You can use the six SOUND MODIFY knobs to edit the sound in real time.

1. Press MODE [PATCH] to access the PATCH PLAY screen.

2. Select the patch whose settings you want to edit (p. 26).

NOTE

You cannot edit the patches in the GM2 group.

Selecting the tone to edit

3. In the PATCH PLAY screen, press [TONE SW/SEL] so the button is lit.

4. Press SELECT[1]–[4] to select the tone(s) you want to edit.

In the SOUND MODIFY 1–4 area at the bottom of the screen, a check mark (✔) will be added to the tone number(s) you select.

* *You can press multiple buttons simultaneously to select multiple tones.*

* *By turning TONE SWITCH on/off you can edit the sound while hearing only the desired tone.*

Changing the brightness of the sound and adding special qualities (CUTOFF/RESONANCE)

The sound generator section of the JUNO-G contains a filter that can cut or boost specific frequency regions of the sound. The CUTOFF knob specifies the frequency (cutoff frequency) at which the filter will begin to modify the sound, and the RESONANCE knob boosts the region near the cutoff frequency to add a distinctive character to the sound.

5. Turn the CUTOFF or RESONANCE knobs.

Turning a knob toward the right increases the value.

FREQ: Frequency at which the filter begins to have an effect on the waveform's frequency components

RESO: Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound

* *Excessively high settings can produce oscillation, causing the sound to distort.*

Editing the way that the volume will change

The volume continues to change from the time a key is pressed to when it is released.

6. Press the SOUND MODIFY select button to make AMP ENV light.

7. Turn the ATTACK, DECAY, SUSTAIN, and RELEASE knobs.

Turning a knob toward the right increases the value.

A: Attack Time: The time from when the keyboard is pressed until the maximum tonal change is reached.

D: Delay Time: The time from when the maximum tonal change is reached until the Sustain Level is reached.

S: Sustain level: Volume that is sustained while you hold down the key

R: Release Time: The time from when the keyboard is released until the sound disappears.

* *If you press the SOUND MODIFY select button so all of the indicators are off, turning these knobs will not produce any change.*

Editing the way that tone (brightness) will change

The tone undergoes changes between the moment you press a key until you release it.

8. Press the SOUND MODIFY select button to make FILTER ENV light.

9. Turn the ATTACK, DECAY, SUSTAIN, and RELEASE knobs.

Turning a knob toward the right increases the value.

* *If you press the SOUND MODIFY select button so all of the indicators are off, turning these knobs will not produce any change.*

Applying vibrato, wah, or tremolo (LFO)

The LFO, short for "low frequency oscillator," makes changes to the sound in periodic fashion. Vibrato is the effect produced by using the LFO to vary the pitch. Wah is the effect produced by using the LFO to vary the cutoff frequency. Tremolo is the effect produced by using the LFO to vary the volume.

10. Press the SOUND MODIFY select button to make LFO light.

11. Turn the ATTACK, DECAY, SUSTAIN, and RELEASE knobs.

RATE: LFO RATE: Speed of LFO 1

PIT: LFO Pitch Depth: Depth by which LFO 1 changes the WG pitch

FLT: LFO TVF Depth: Depth by which LFO 1 changes the TVF cutoff frequency

AMP: LFO TVA Depth: Depth by which LFO 1 changes the volume

cf.

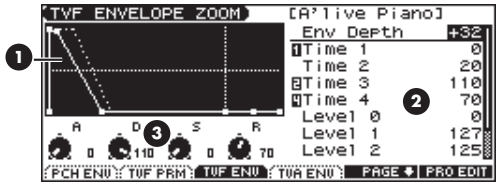
For details on these parameters, refer to **Modulating Sounds/ Output** (p. 46).

* *If you press the SOUND MODIFY select button so all of the indicators are off, turning these knobs will not produce any change.*

Editing in a Graphic Display (Zoom Edit)

The important parameters most commonly used to edit the sound are available in eight screens for graphic editing.

Parameter	page	Parameter	page
PITCH ENVELOPE	p. 40	PATCH EDIT	p. 35
TVF PARAMETER	p. 40	LFO 1/2	p. 46
TVF ENVELOPE	p. 41	STEP LFO	p. 47
TVA ENVELOPE	p. 43		



1. Graphic display

2. Move the cursor and use the VALUE dial or [INC] [DEC]

3. Corresponds to SOUND MODIFY knobs 1--4.

1. Press MODE [PATCH] to access the PATCH PLAY screen.

2. Select the patch whose settings you want to edit (p. 26).

NOTE

You cannot edit the patches in the GM2 group.

3. Press EDIT [PATCH] so it's lit.

4. Use [F1]–[F4] to select the parameter screen.

* *Pressing [F5 (PAGE)] will switch the [F1]–[F4] screens.*

5. Use [▲] [▼] [◀] [▶] to select a parameter.

* *Some parameters can be edited independently for each tone. To select the tone to edit, press [TONE SW/SEL] so it's lit, and press one of the SELECT [1]–[4] buttons.*

6. Use the VALUE dial or [INC] [DEC] to change the value.

Parameters with an indication of 1–4 can also be edited using the corresponding SOUND MODIFY knob 1–4.

7. Repeat steps 4–6 to set each parameter.

8. Press [WRITE] to save the changes you've made (p. 32). If you do not wish to save changes, press [EXIT] to return to the PATCH PLAY screen.

If you return to the PATCH PLAY screen without saving, an "*" will be displayed at the left of the rhythm set group.

NOTE

If you turn off the power or select a different sound while the display indicates "*," your edited rhythm set will be lost.

Viewing and editing all parameters (PRO EDIT)

cf.

For details on the parameters, refer to p. 34 and follows.

1. Press MODE [PATCH] to access the PATCH PLAY screen.

2. Select the patch whose settings you want to edit (p. 26).

NOTE

You cannot edit the patches in the GM2 group.

3. Press EDIT [PATCH] so it's lit.

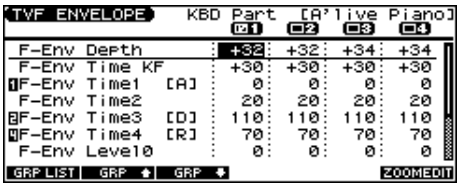
4. Press [F6 (PRO EDIT)].

5. Use [F2 (GRP ↑)] [F3 (GRP ↓)] to switch the parameter group.

* *Pressing [F1 (GRP LIST)] will display the Patch Pro Edit Menu window. Use the VALUE dial or [INC] [DEC] [▲] [▼] to select a parameter group, and press [ENTER].*

6. Use [▲] [▼] to select a parameter.

* *A check mark (✔) will be added to the tone number in the upper right of the screen.*



7. Use the VALUE dial or [INC] [DEC] to change the value.

Parameters with an indication of 1–4 can also be edited using the corresponding SOUND MODIFY knob 1–4.

8. Repeat steps 5–7 to set each parameter.

9. Press [WRITE] to save the changes you've made (p. 32). If you do not wish to save changes, press [EXIT] to return to the PATCH PLAY screen.

If you return to the PATCH PLAY screen without saving, an "*" will be displayed at the left of the rhythm set group.

NOTE

If you turn off the power or select a different sound while the display indicates "*," your edited rhythm set will be lost.

Using the SOUND MODIFY Knobs to Change the Value

If a number is displayed for the parameter name (1, 2, 3, 4), you can use the SOUND MODIFY knobs 1–4 to set the value.

* *Press the SOUND MODIFY select button so all of the indicators are off. If any indicator is lit, the knob functions will change.*

For example, in the TVF ENVELOPE ZOOM screen, the knobs correspond to parameters as follows.

Knob 1	A (Time 1)
Knob 2	D (Time 3)
Knob 3	S (Level 3)
Knob 4	R (Time 4)

Initializing Patch Settings

"Initialize" means to return the settings of the currently selected sound to a standard set of values.

* *The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the JUNO-G's settings to their factory values, perform a Factory Reset (p. 164).*

1. With EDIT [PATCH] lit, hold down [SHIFT] and press [F5 (INIT)].
A message will ask you for confirmation.

2. Press [F6 (EXEC)].
The initialization will be carried out.

* *To cancel, press [F5 (CANCEL)].*

Copying Patch (Tone) Settings

This operation copies the settings of any desired patch to the currently selected patch.

1. With EDIT [PATCH] lit, hold down [SHIFT] and press [F6 (TONE COPY)].
The Patch Tone Copy window appears.

2. Press [▲] [▼] [◀] [▶] to move the cursor, and use the VALUE dial or [INC] [DEC] to select the "Source (copy-source)" group and number, and the tone.

* *By pressing [F4 (COMPR)] to add a check mark (✔), you can check the copy-source patch (Compare function).*

3. Press [▲] [▼] [◀] [▶] to move the cursor, and select the "Destination (copy-destination)" tone.

4. Press [F6 (EXEC)].
A message will ask you for confirmation.

5. Press [F6 (EXEC)] to execute the copy operation.

* *To cancel, press [F5 (CANCEL)].*

The Compare Function

For the Patch Tone Copy and Patch Save operations, you can use the Compare function.
If you want to play the copy-source or write-destination patch, press [F4 (COMPR)] to add a check mark (✔). Now you can play the copy-source or write-destination patch from the keyboard.

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

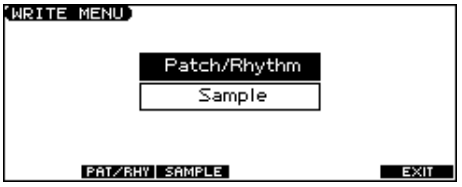
Saving Patches You've Created (Write)

Changes you make to sound settings are temporary, and will be lost if you turn off the power or select another sound. If you want to keep the modified sound, you must save it in the internal USER group (user memory) or CARD group (memory card).
When you edit the patch settings, an "*" will appear in the PATCH PLAY screen.

NOTE
When you perform the save procedure, the data that previously occupied the save destination will be lost.

1. Edit the patch.

2. Press EDIT [WRITE].
The WRITE MENU screen appears.



3. Press [F2 (PAT/RHY)].

* *Alternatively, you can use [▲] [▼] to select "Patch/Rhythm," and then press [ENTER].*

The PATCH NAME screen appears.

4. Assign a name to the patch.

cf.
For details on assigning names, refer to p. 24.

5. When you have finished inputting the name, press [F6 (WRITE)].
A screen will appear, allowing you to select the write-destination patch.

6. Use the VALUE dial, [INC] [DEC], or [▲] [▼] and [F1 (USER)] [F2 (CARD)] to select the write destination and patch number.

* *By pressing [F4 (COMPR)] to add a check mark (✔), you can check the write-destination patch (Compare function).*

7. Press [F6 (WRITE)].

A message will ask you for confirmation.

8. Press [F6 (EXEC)] to execute the save operation.

* *To cancel, press [F5 (CANCEL)].*

NOTE

Never switch off the JUNO-G while data is being saved.

One-shot Waveform and Loop Waveform

The internal waveforms of the JUNO-G fall into the following two groups.

One-shot:

These waveforms contain sounds that have short decays. A one-shot waveform records the initial rise and fall of the sound.

The JUNO-G also contains many other one-shot waveforms that are elements of other sounds. These include attack components such as piano-hammer sounds and guitar fret noises.

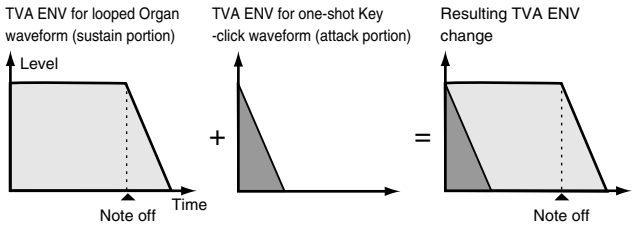
* *It is not possible to use the envelope to modify a one-shot waveform to create a decay that is longer than the original waveform, or to turn it into a sustaining sound.*

Loop:

These waveforms include sounds with long decays as well as sustained sounds. Loop waveforms repeatedly play back (loop) the portion of the waveform after the sound has reached a relatively steady state.

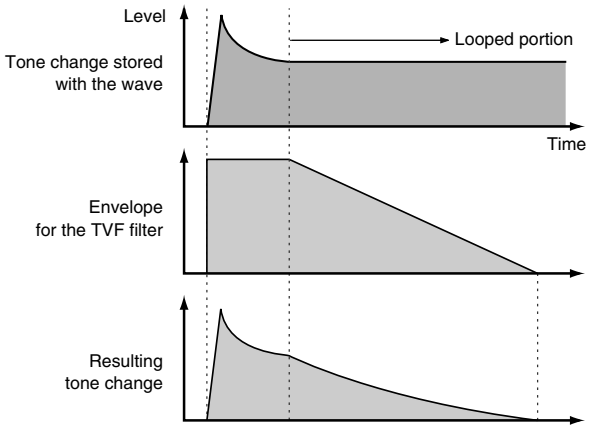
The JUNO-G's looped waveforms also include components of other sounds, such as piano-string resonant vibrations and the hollow sounds of brass instruments.

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



Tips for Using an Acoustic Instrument's Waveform

With many acoustic instruments such as piano and sax, extreme timbral changes occur during the first few moments of each note. This initial attack is what defines much of the instrument's character. For such waveforms, it is best to use the complex tonal changes of the attack portion of the waveform just as they are, and to use the envelope only to modify the decay portion.



Functions of Patch Parameters

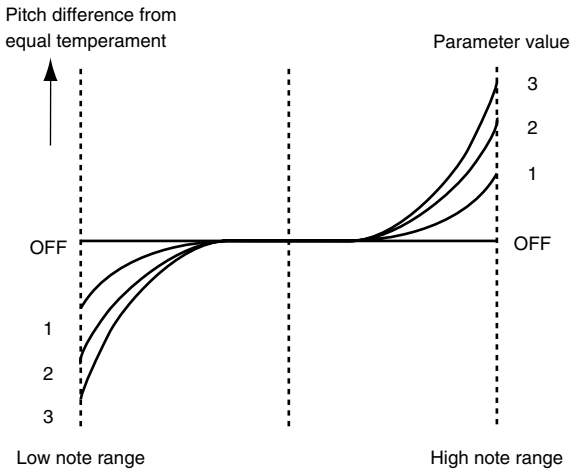
Settings Common to the Entire Patch

GENERAL

Parameter marked with a "★" can be controlled using specified MIDI messages
(Matrix Control, p. 44)

Parameter	Value	Description
Patch Category	Refer to p. 26.	Type (category) of the patch
Patch Level	0–127	Volume of the patch
Patch Pan	L64–0–63R	Left/right position of the patch
Patch Priority	LAST, LOUDEST	How notes will be managed when the maximum polyphony is exceeded (128 voices) **LAST:** The last-played voices will be given priority (Notes will be turned off in order, beginning with the first-played note.) **LOUDEST:** The loudest voices will be given priority (Notes will be turned off, beginning with the lowest-volume voice.)
Octave Shift	-3– +3	Pitch of the patch's sound (in units of an octave)
Patch Coarse Tune ★	-48– +48	Pitch of the patch's sound (in semitones, +/- 4 octaves)
Patch Fine Tune	-50– +50	Pitch of the patch's sound (in 1-cent steps; one cent is 1/100th of a semitone)
Stretch Tune Depth	OFF, 1–3	Stretched tuning (a system by which acoustic pianos are normally tuned, causing the lower range to be lower and the higher range to be higher than the mathematical tuning ratios would otherwise dictate) **OFF:** Equal temperament **1–3:** Higher settings will produce the greater difference in the pitch of the low and high ranges.
Analog Feel	0–127	Depth of 1/f modulation (a pleasant and naturally-occurring ratio of modulation that occurs in a babbling brook or rustling wind) * *You can simulate the natural instability characteristic of an analog synthesizer by adding this "1/f modulation."*

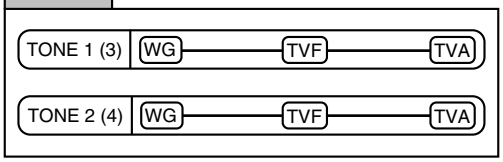
Stretched Tuning



Changing How a Tone Is Sounded (Structure)

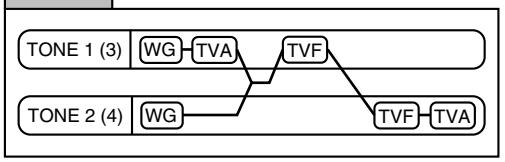
Parameter	Value	Explanation
Struct 1 & 2, 3 & 4 (Structure Type)	TYPE 01–TYPE 10	Determines how tone 1 and 2, or tone 3 and 4 are connected. The following 10 different Types of combination are available.

TYPE 1



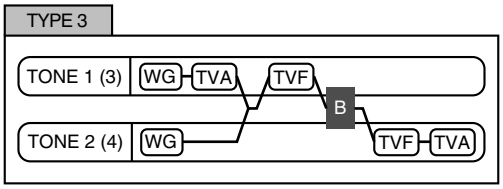
With this type, tones 1 and 2 (or 3 and 4) are independent. Use this type when you want to preserve PCM sounds or create and combine sounds for each tone.

TYPE 2



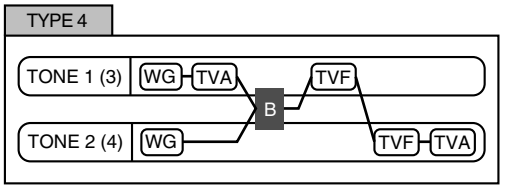
This type stacks the two filters together to intensify the characteristics of the filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones.

TYPE 3



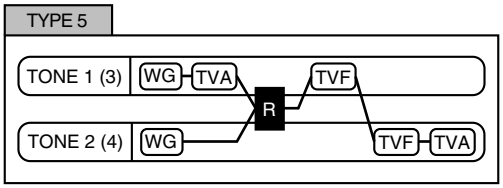
This type mixes the sound of tone 1 (3) and tone 2 (4), applies a filter, and then applies a booster to distort the waveform.

TYPE 4



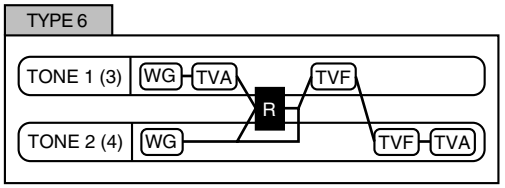
This type applies a booster to distort the waveform, and then combines the two filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones and adjusts booster level.

TYPE 5



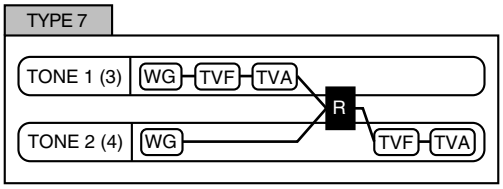
This type uses a ring modulator to create new overtones, and combines the two filters. The tone 1 (3) TVA will control the volume balance of the two tones, adjusting the depth of ring modulator.

TYPE 6



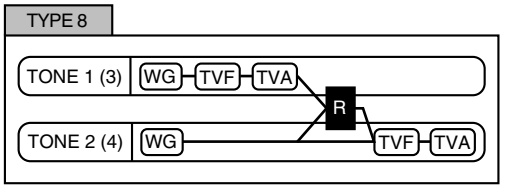
This type uses a ring modulator to create new overtones, and in addition mixes in the sound of tone 2 (4) and stacks the two filters. Since the ring-modulated sound can be mixed with tone 2 (4), tone 1 (3) TVA can adjust the amount of the ring-modulated sound.

TYPE 7



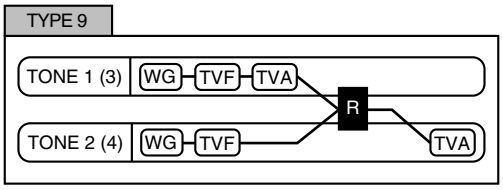
This type applies a filter to tone 1 (3) and ring-modulates it with tone 2 (4) to create new overtones.

TYPE 8



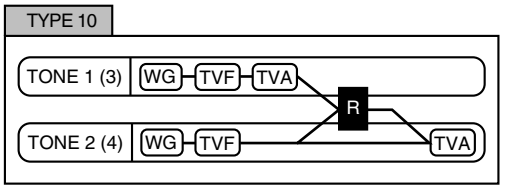
This type sends the filtered tone 1 (3) and tone 2 (4) through a ring modulator, and then mixes in the sound of tone 2 (4) and applies a filter to the result.

TYPE 9



This type passes the filtered sound of each tone through a ring modulator to create new overtones. The tone 1 (3) TVA will control the volume balance of the two tones, adjusting the depth of ring modulator.

TYPE 10



This type passes the filtered sound of each tone through a ring modulator to create new overtones, and also mixes in the sound of tone 2 (4). Since the ring-modulated sound can be mixed with tone 2 (4), tone 1 (3) TVA can adjust the amount of the ring-modulated sound.

* *When TYPE 2–10 is selected and one tone of a pair is turned off, the other tone will be sounded as TYPE 1 regardless of the displayed setting.*

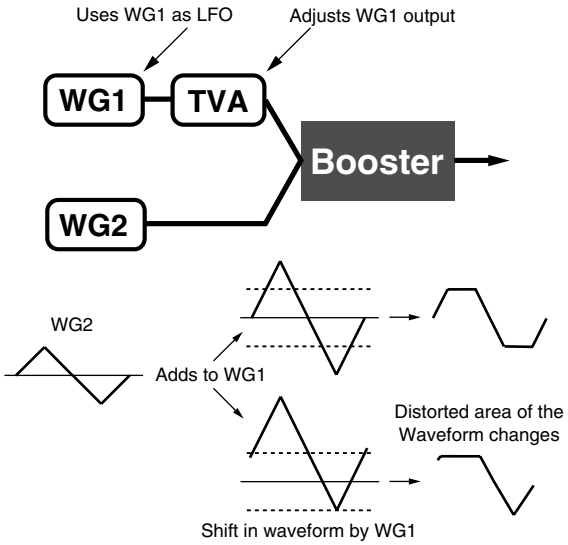
* *If you limit the keyboard area in which a tone will sound (Keyboard Range, p. 37) or limit the range of velocities for which it will sound (Velocity Range, p. 38), the result in areas or ranges where the tone does not sound is just as if the tone had been turned off. This means that if TYPE 2–10 is selected and you create a keyboard area or velocity range in which one tone of a pair does not sound, notes played in that area or range will be sounded by the other tone as TYPE 1 regardless of the displayed setting.*

Parameter	Value	Explanation
Booster 1&2, 3&4 (Booster Gain)	0, +6, +12, +18	When a Structure Type of TYPE 3 or TYPE 4 is selected, you can adjust the depth of the booster. The booster increases the input signal in order to distort the sound. This creates the distortion effect frequently used with electric guitars. Higher settings will produce more distortion.

Booster

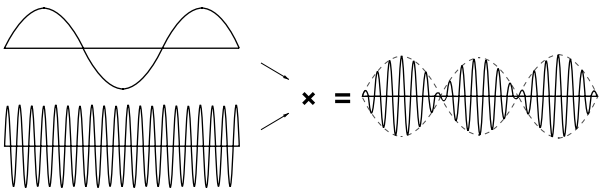
The Booster is used to distort the incoming signal.

In addition to using this to create distortion, you can use the waveform (WG1) of one of the tones as an LFO which shifts the other waveform (WG2) upward or downward to create modulation similar to PWM (pulse width modulation). This parameter works best when you use it in conjunction with the Wave Gain parameter (p. 38).



Ring Modulator

A ring modulator multiplies the waveforms of two tones with each other, generating many new overtones (in harmonic partials) which were not present in either waveform. (Unless one of the waveforms is a sine wave, evenly-spaced frequency components will not usually be generated.)
As the pitch difference between the two waveforms changes the harmonic structure, the result will be an unpitched metallic sound. This function is suitable for creating metallic sounds such as bells.



MODIFY

These values are added to the parameter values of each tone.

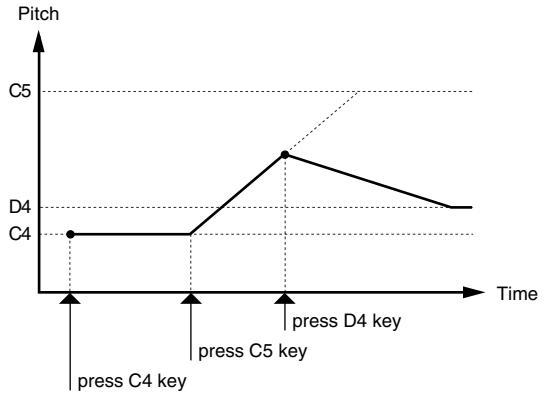
Parameter	Value	Description
Cutoff Offset	-63– +63	Cutoff Frequency (p. 40)
Resonance Offset	-63– +63	Resonance (p. 40)
Attack Time Offset	-63– +63	F-Env Time 1, A-Env Time 1 (p. 41, p. 43)
Release Time Offset	-63– +63	F-Env Time 4, A-Env Time 4 (p. 41, p. 43)
Velocity Sens Offset	-63– +63	Cutoff V-Sens, Level V-Sens (p. 41, p. 42)

PORTAMENTO

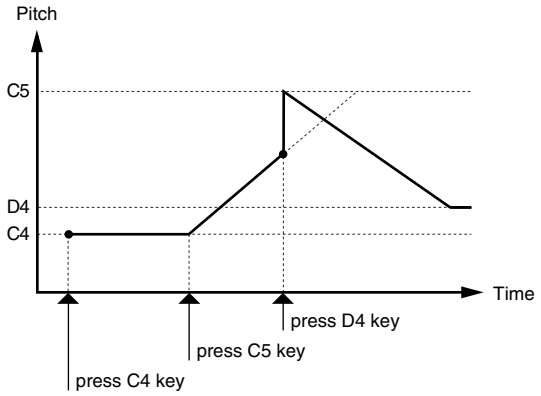
Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key.

Parameter	Value	Explanation
Portamento Switch	OFF, ON	Specifies whether the portamento effect will be applied (ON) or not (OFF).
Portamento Mode	NORMAL, LEGATO	**NORMAL:** Portamento will always be applied. **LEGATO:** Portamento will be applied only when you play legato.
Portamento Type	RATE, TIME	**RATE:** The time it takes will depend on the distance between the two pitches. **TIME:** The time it takes will be constant, regardless of how far apart in pitch the notes are.
Portamento Start	PITCH, NOTE	**PITCH:** Starts a new portamento when another key is pressed while the pitch is changing. **NOTE:** Portamento will begin anew from the pitch where the current change would end.
Portamento Time	0–127	Specifies the time over which the pitch will change.

Portamento Start: PITCH



Portamento Start: NOTE

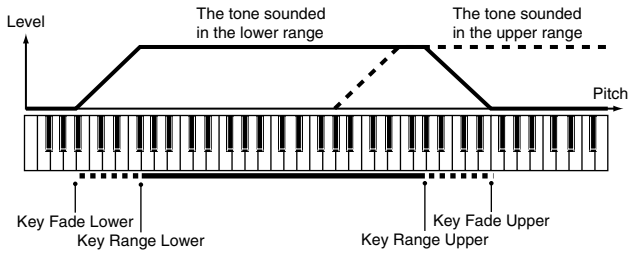


CONTROL

Parameter	Value	Explanation
Mono/Poly	MONO, POLY	**MONO:** Only the last-played note will sound. This setting is effective when playing a solo instrument patch such as sax or flute. **POLY:** Two or more notes can be played simultaneously.
Legato Switch	OFF, ON	**ON:** Pressing a key while continuing to press a previous key causes the note to change pitch to the pitch of the most recently pressed key, sounding all the while. This is effective when you wish to simulate the hammering-on and pulling-off techniques used by a guitarist. * *Legato Switch is valid when the Mono/Poly parameter is set to "MONO."*
Legato Retrigger	OFF, ON	**OFF:** When one key is held down and another key is then pressed, only the pitch changes, without the attack of the latter key being played. Set this to "OFF" when performing wind and string phrases or when using modulation with the mono synth keyboard sound. **ON:** Normally you will leave this parameter "ON." * *Legato Retrigger is valid when the Mono/Poly is set to "MONO" and the Legato Switch is set to "ON."*
Pitch Bend Range Up	0– +48	Degree of pitch change in semitones when the Pitch Bend lever is all the way right
Pitch Bend Range Down	-48–0	Degree of pitch change in semitones when the Pitch Bend lever is all the way left

KEY RANGE

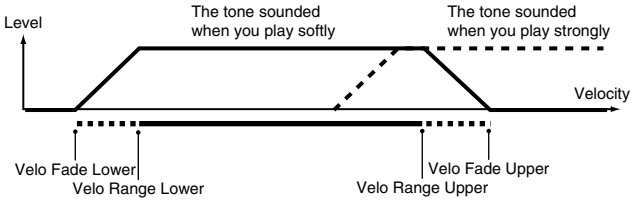
You can use the note number to control the way each Tone is played.



Parameter	Value	Explanation
Key Fade Lower	0–127	Determines what will happen to the tone's level when a note that's lower than Key Range Lower is played. If you don't want the tone to sound at all, set this parameter to "0."
Key Range Lower	C - –(Upper)	Specifies the lowest note that the tone will sound for each tone.
Key Range Upper	(Lower)–G9	Specifies the highest note that the tone will sound for each tone.
Key Fade Upper	0–127	Determines what will happen to the tone's level when a note that's higher than Key Range Upper is played. If you don't want the tone to sound at all, set this parameter to "0."

VELOCITY RANGE

You can use the force with which keys are played to control the way each Tone is played.



Parameter	Value	Explanation
Tone Mix Velo Control	OFF, ON, RANDOM, CYCLE	Determines whether a different tone is played (ON) or not (OFF) depending on the force with which the key is played (velocity). **RANDOM:** The patch's constituent tones will sound randomly, regardless of any Velocity messages. **CYCLE:** The patch's constituent tones will sound consecutively, regardless of any Velocity messages.
Control Switch	OFF, ON	Use the Matrix Control (p. 44) to enable (ON), or disable (OFF) sounding of different tones.
Velo Fade Lower	0–127	Determines what will happen to the tone's level when the tone is played at a velocity lower than Velo Range Lower. If you don't want the tone to sound at all, set this parameter to "0."
Velo Range Lower	1–(Upper)	Specifies the lowest velocity at which the tone will sound.
Velo Range Upper	(Lower)–127	Specifies the highest velocity at which the tone will sound.
Velo Fade Upper	0–127	Determines what will happen to the tone's level when the tone is played at a velocity greater than Velo Range Upper. If you don't want the tone to sound at all, set this parameter to "0."

MEMO

When using the Matrix Control to have different tones played, set the lowest value (Lower) and highest value (Upper) of the value of the MIDI message used.

NOTE

Instead of using Velocity, you can also have tones substituted using the Matrix Control. However, the keyboard velocity and the Matrix Control cannot be used simultaneously to make different tones to sound. When using the Matrix Control to switch tones, set the Tone Mix Velo Control parameter to "OFF."

Modifying Waveforms/Pitch/Pitch Envelope

WAVE PARAMETER

Parameter	Value	Explanation
Wave Group	INT, EXP, SAMP	Group for the waveform that is to be the basis of the tone **INT:** Waveforms stored in internal **EXP:** Waveform stored in a Wave Expansion Board (SRX series) installed in EXP slots **SAMP:** Sample waveforms
Wave Bank	PRST, USER, CARD	When the Wave Group is SAMP: PRST, USER, CARD When the Wave Group is MSAM: USER, CARD
Wave No. L (Mono) Wave No. R	----, 1–1267	Basic waveform for a tone (The upper limit will depend on the wave group.) When in monaural mode, only the left side (L) is specified. When in stereo, the right side (R) is also specified. If you want to select a left/right pair of Waves, select the left (L) Wave number, and then hold down [SHIFT] and press [F4 (STEREO)] to add a check mark (✔); the right (R) (Wave) will be recalled.
Wave Gain	-6, 0, +6, +12	Gain (amplification) of the waveform The value changes in 6 dB (decibel) steps—an increase of 6 dB doubles the waveform's gain. * *If you intend to use the Booster to distort the waveform's sound, set this parameter to its maximum value (p. 36).*
Wave Tempo Sync	OFF, ON	When you wish to synchronize a Phrase Loop to the clock (tempo), set this to "ON." * *This is valid only when a separately sold wave expansion board is installed, and a waveform that indicates a tempo (BPM) is selected as the sample for a tone.* If a waveform from a wave expansion board is selected for the tone, turning the Wave Tempo Sync parameter "ON" will cause pitch-related settings and FXM-related settings to be ignored. • If a sample is selected for a tone, you must first set the BPM (tempo) parameter of the sample. • If a sample is selected for a tone, Wave Tempo Sync will require twice the normal number of voices. • When this parameter is set to "ON," set the Tone Delay Time parameter (p. 45) to "0."

Phrase Loop

Phrase loop refers to the repeated playback of a phrase that's been pulled out of a song (e.g., by using a sampler). One technique involving the use of Phrase Loops is the excerpting of a Phrase from a pre-existing song in a certain genre, for example dance music, and then creating a new song with that Phrase used as the basic motif. This is referred to as "Break Beats."

Realtime Time Stretch

If the wave group is "SAMP" or "MSAM," and the Wave Tempo Sync parameter is turned "ON," you can vary the playback speed of the waveform without affecting the pitch.

Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 44)

Parameter	Value	Explanation
FXM Switch	OFF, ON	This sets whether FXM will be used (ON) or not (OFF).
FXM Color	1–4	How FXM will perform frequency modulation Higher settings result in a grainier sound, while lower settings result in a more metallic sound.
FXM Depth ★	0–16	Depth of the modulation produced by FXM

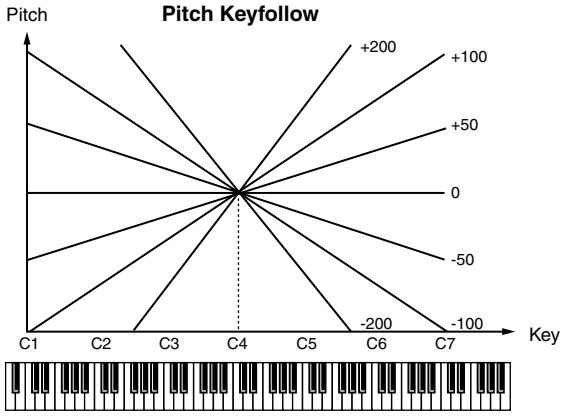
FXM

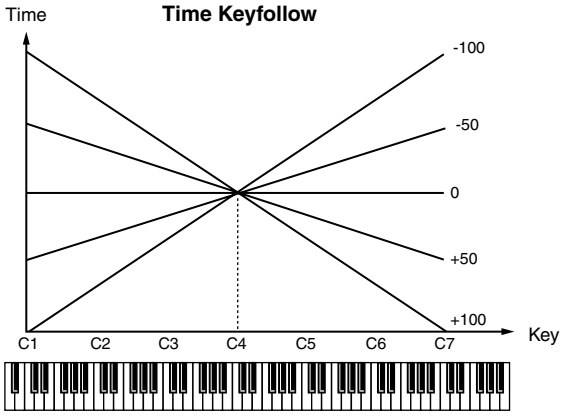
FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This is useful for creating dramatic sounds or sound effects.

WAVE PITCH

Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 44)

Parameter	Value	Explanation
Tone Coarse Tune ★	-48– +48	Pitch of the tone's sound (in semitones, +/-4 octaves)
Tone Fine Tune ★	-50– +50	Pitch of the tone's sound (in 1-cent steps; one cent is 1/100th of a semitone)
Rand Pitch Depth	0–1200	Width of random pitch deviation that will occur each time a key is pressed (in 1-cent steps) If you do not want the pitch to change randomly, set this to "0."
Pitch Keyfollow	-200– +200	Amount of pitch change that will occur when you play a key one octave higher If you want the pitch to rise one octave as on a conventional keyboard, set this to "+100." If you want the pitch to rise two octaves, set this to "+200."
P-Env V-Sens	-63– +63	Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value.
P-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the Pitch envelope. If you want T1 to be speeded up for strongly played notes, set this parameter to a positive (+) value.
P-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the Pitch envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value.
P-Env Time KF (Time Keyfollow)	-100– +100	Use this setting if you want the pitch envelope times (T2–T4) to be affected by the keyboard location. Based on the pitch envelope times for the C4 key, positive (+) settings will cause notes higher than C4 to have increasingly shorter times.



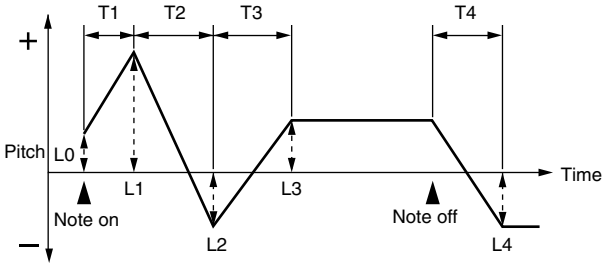


WAVE PITCH ENV

Parameter marked with a "★" can be controlled using specified MIDI messages
(Matrix Control, p. 44)

Parameter	Value	Explanation
P-Env Depth	-12– +12	Depth of the Pitch envelope Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.
P-Env Time 1–4 ★	0–127	Pitch envelope times (T1–T4) Higher settings will result in a longer time until the next pitch is reached.
P-Env Level 0–4	-63– +63	Pitch envelope levels (L0–L4) Specify how the pitch will change at each point, relative to the pitch set with Coarse Tune or Fine Tune.

Pitch Envelope



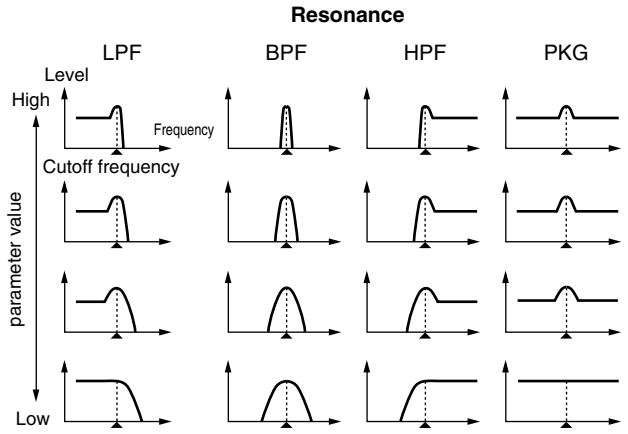
Modifying the Brightness of a Sound with a Filter (TVF/TVF Envelope)

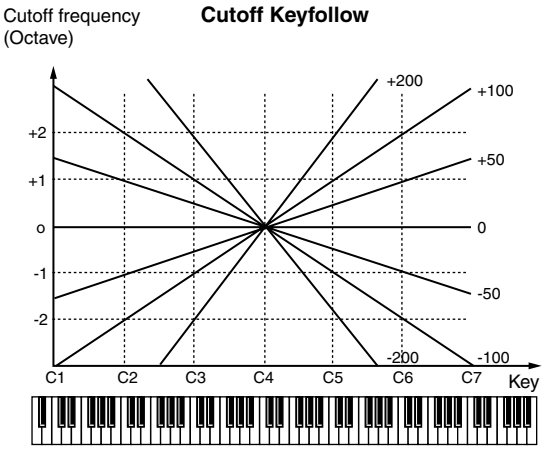
A filter cuts or boosts a specific frequency region to change a sound's brightness, thickness, or other qualities.

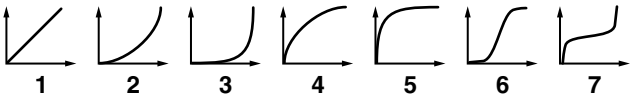
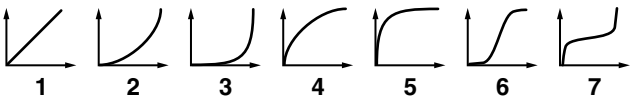
TVF PARAMETER

Parameter marked with a "★" can be controlled using specified MIDI messages
(Matrix Control, p. 44)

Parameter	Value	Explanation
Filter Type	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3	Type of filter **OFF:** No filter is used. **LPF:** Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency in order to round off, or unbrighten the sound. **BPF:** Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. This can be useful when creating distinctive sounds. **HPF:** High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. This is suitable for creating percussive sounds emphasizing their higher tones. **PKG:** Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency. You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically. **LPF2:** Low Pass Filter 2. Although frequency components above the Cutoff frequency are cut, the sensitivity of this filter is half that of the LPF. This filter is good for use with simulated instrument sounds such as the acoustic piano. **LPF3:** Low Pass Filter 3. Although frequency components above the Cutoff frequency are cut, the sensitivity of this filter changes according to the Cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings. * *If you set "LPF2" or "LPF3," the setting for the Resonance parameter will be ignored.*
Cutoff Frequency ★	0–127	Frequency at which the filter begins to have an effect on the waveform's frequency components
Resonance ★	0–127	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound * *Excessively high settings can produce oscillation, causing the sound to distort.*
Cutoff Keyfollow	-200– +200	Use this parameter if you want the cutoff frequency to change according to the key that is pressed. Relative to the cutoff frequency at the C4 key (center C), positive (+) settings will cause the cutoff frequency to rise for notes higher than C4, and negative (-) settings will cause the cutoff frequency to fall for notes higher than C4. Larger settings will produce greater change.



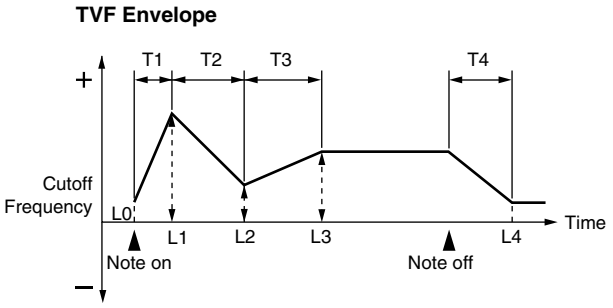


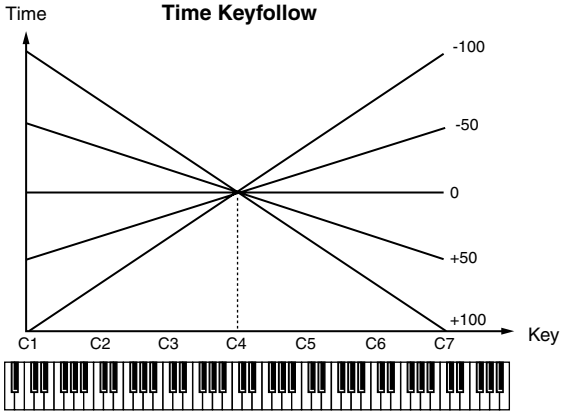
Parameter	Value	Explanation
Cutoff V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the cutoff frequency Set this to "FIX" if you don't want the Cutoff frequency to be affected by the keyboard velocity.  1 2 3 4 5 6 7
Cutoff V-Sens	-63– +63	Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings.
Resonance V-Sens	-63– +63	This allows keyboard velocity to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings.
F-Env V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the TVF envelope Set this to "FIX" if you don't want the TVF Envelope to be affected by the keyboard velocity.  1 2 3 4 5 6 7
F-Env V-Sens	-63– +63	Specifies how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.
F-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the TVF envelope. If you want T1 to be speeded up for strongly played notes, set this parameter to a positive (+) value.
F-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the TVF envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value.

TVF ENVELOPE

Parameter marked with a "★" can be controlled using specified MIDI messages
(Matrix Control, p. 44)

Parameter	Value	Explanation
F-Env Depth	-63– +63	Depth of the TVF envelope Higher settings will cause the TVF envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.
F-Env Time KF (Time Keyfollow)	-100– +100	Use this setting if you want the TVF envelope times (T2–T4) to be affected by the keyboard location. Based on the TVF envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times.
F-Env Time 1–4 ★	0–127	TVF envelope times (T1–T4) Higher settings will lengthen the time until the next cutoff frequency level is reached.
F-Env Level 0–4	0–127	TVF envelope levels (L0–L4) Specify how the cutoff frequency will change at each point, relative to the Cutoff Frequency value.

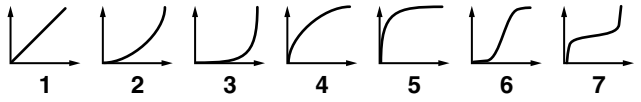


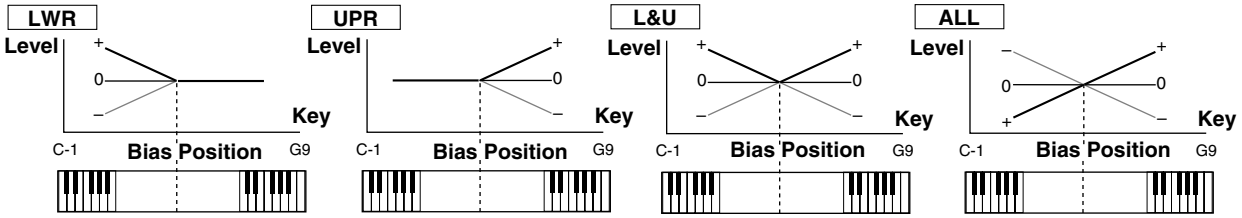


Adjusting the Volume (TVA/TVA Envelope)

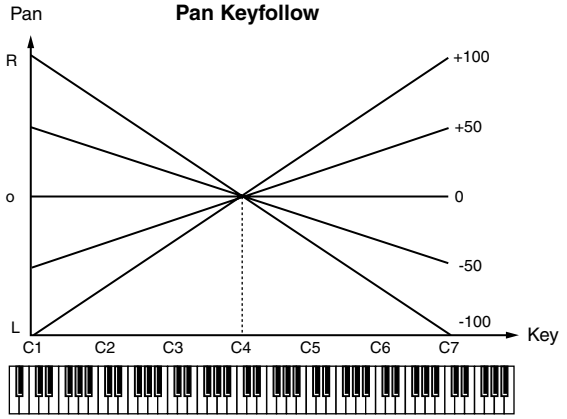
TVA PARAMETER

Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 44)

Parameter	Value	Explanation
Tone Level ★	0–127	Volume of the tone. This setting is useful primarily for adjusting the volume balance between tones.
Level V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the volume Set this to "FIX" if you don't want the volume of the tone to be affected by the keyboard velocity. 
Level V-Sens	-63– +63	Set this when you want the volume of the tone to change depending on keyboard playing dynamics. Set this to a positive (+) value to have the changes in tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value.
Bias	Bias causes the volume to be affected by the keyboard position. This is useful for changing volume through keyboard position (pitch) when playing acoustic instruments.	
Bias Level	-100– +100	Angle of the volume change that will occur in the selected Bias Direction Larger settings will produce greater change. Negative (-) values will invert the change direction.
Bias Position	C - –G9	Key relative to which the volume will be modified
Bias Direction	LWR, UPR, L&U, ALL	Direction in which change will occur starting from the Bias Position **LWR:** The volume will be modified for the keyboard area below the Bias Point. **UPR:** The volume will be modified for the keyboard area above the Bias Point. **L&U:** The volume will be modified symmetrically toward the left and right of the Bias Point. **ALL:** The volume changes linearly with the bias point at the center.



Parameter	Value	Explanation
Tone Pan ★	L64–0–63R	Left/right position of the tone
Pan Keyfollow	-100– +100	Use this parameter if you want key position to affect panning. Positive (+) settings will cause notes higher than C4 key (center C) to be panned increasingly further toward the right, and negative (-) settings will cause notes higher than C4 key (center C) to be panned toward the left. Larger settings will produce greater change.

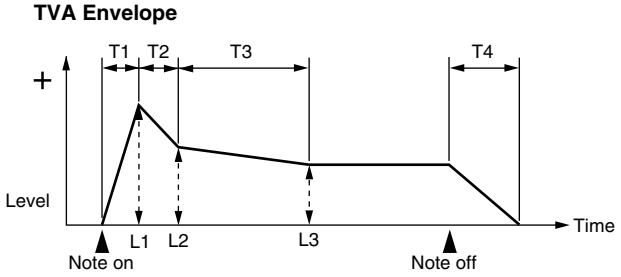


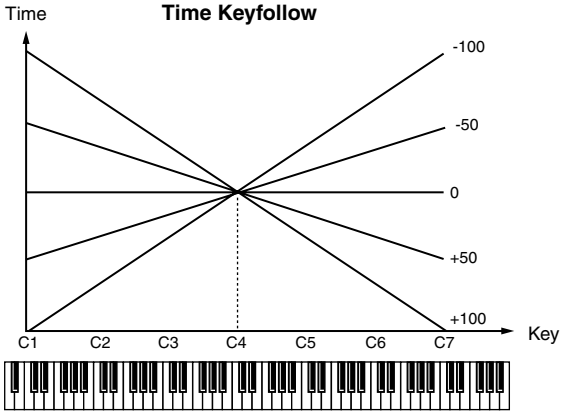
Parameter	Value	Explanation
Random Pan Depth	0–63	Use this parameter when you want the stereo location to change randomly each time you press a key. Higher settings will produce a greater amount of change.
Alter Pan Depth	L63–0–63R	This setting causes panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example if two tones are set to "L" and "R" respectively, the panning of the two tones will alternate each time they are played. * *When any value from Type "2"–"10" is selected for the Structure parameter in the Pan KF, Rnd Pan Depth, Alter Pan Depth parameter settings, the output of tones 1 and 2 are joined in tone 2, and the output of tones 3 and 4 are joined in tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 35).*

TVA ENVELOPE

Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 44)

Parameter	Value	Explanation
A-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the TVA envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
A-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the TVA envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
A-Env Time KF (Time Keyfollow)	-100– +100	Use this setting if you want the TVA envelope times (T2–T4) to be affected by the keyboard location. Based on the TVA envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change.
A-Env Time 1–4 ★	0–127	TVA envelope times (T1–T4) Higher settings will lengthen the time until the next volume level is reached.
A-Env Level 1–3	0–127	TVA envelope levels (L1–L3) Specify how the volume will change at each point, relative to the Tone Level value.





Matrix Control Settings/Miscellaneous Settings

MATRIX CTRL1–4

The function which allows you use MIDI messages to make changes in realtime to the tone parameters is called the **Matrix Control**. Up to four Matrix Controls can be used in a single patch.

To use the Matrix Control, specify which MIDI message (CTRL Source parameter) will be used to control which parameter (CTRL Destination parameter), and how greatly (CTRL Sens parameter), and the tone to which the effect is applied (CTRL Switch parameter).

Parameter	Value	Explanation
CTRL 1–4 Source	OFF, CC01–31, 33–95, PITCH BEND, AFTERTOUCH, SYS CTRL1–4, VELOCITY, KEY FOLLOW, TEMPO, LFO1, LFO2, PITCH ENV, TVF ENV, TVA ENV	MIDI message used to change the tone parameter with the Matrix Control **OFF:** Matrix control will not be used. **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **PITCH BEND:** Pitch Bend **AFTERTOUCH:** Aftertouch **SYS CTRL1–4:** MIDI messages used as common matrix controls **VELOCITY:** Pressure you press a key with **KEY FOLLOW:** Keyboard position with C4 as 0 **TEMPO:** The specified tempo (song recorder tempo) or the tempo of an external MIDI sequencer. **LFO1:** LFO 1 **LFO2:** LFO 2 **PITCH ENV:** Pitch envelope **TVF ENV:** TVF envelope **TVA ENV:** TVA envelope

MEMO

Velocity and Key follow correspond to Note messages.

TIP

Although there are no MIDI messages for LFO 1 through TVA Envelope, they can be used as Matrix Control. In this case, you can change the tone settings in realtime by playing patches.

- If you want to use common controllers for the entire JUNO-G, select "SYS CTRL1"–"SYS CTRL4." MIDI messages used as System Control 1–4 are set with the System Ctrl 1–4 Source parameters (p. 160).

NOTE

There are parameters that determine whether or not Pitch Bend, Controller Number 11 (Expression) and Controller Number 64 (Hold 1) are received (p. 45). When these settings are "ON," and the MIDI messages are received, then when any change is made in the settings of the desired parameter, the Pitch Bend, Expression, and Hold 1 settings also change simultaneously. If you want to change the targeted parameters only, then set these to "OFF."

- There are parameters that let you specify whether specific MIDI messages will be received for each channel in a performance (p. 67). When a patch with Matrix Control settings is assigned to a part, confirm that any MIDI messages used for the Matrix Control will be received. If the JUNO-G is set up such that reception of MIDI messages is disabled, then the Matrix Control will not function.

Parameter	Value	Explanation
CTRL 1–4 Destination 1–4	OFF, PITCH, CUTOFF, RESONANCE, LEVEL, PAN, OUTPUT LEVEL, CHORUS SEND, REVERB SEND, LFO1/2 PITCH DEPTH, LFO1/2 TVF DEPTH, LFO1/2 TVA DEPTH, LFO1/2 PAN DEPTH, LFO1/2 RATE, PCH ENV A-TIME, PCH ENV D-TIME, PCH ENV R-TIME, TVF ENV A-TIME, TVF ENV D-TIME, TVF ENV R-TIME, TVA ENV A-TIME, TVA ENV D-TIME, TVA ENV R-TIME, TMT, FXM DEPTH, MFX CTRL1–4, TIME	Tone parameter that is to be controlled when using the Matrix Control Up to four parameters can be specified for each Matrix Control, and controlled simultaneously. * *In this manual, Parameters that can be controlled using the Matrix Control are marked with a "★."*

Parameter	Value	Explanation
CTRL 1–4 Sens 1–4	-63– +63	Amount of the Matrix Control's effect that is applied If you wish to modify the selected parameter in a positive (+) direction—i.e., a higher value, toward the right, or faster etc.—from its current setting, select a positive (+) value. If you wish to modify the selected parameter in a negative (-) direction—i.e., a lower value, toward the left, or slower etc.—from its current setting, select a negative (-) value. For either positive or negative settings, greater absolute values will allow greater amounts of change. Set this to "0" if you don't want to apply the effect.
CTRL 1–4 Switch 1–4	OFF, ON, REVS	Tone to which the effect is applied when using the Matrix Control **OFF:** The effect will not be applied. **ON:** The effect will be applied. **REVS:** The effect will be applied in reverse.

MISC

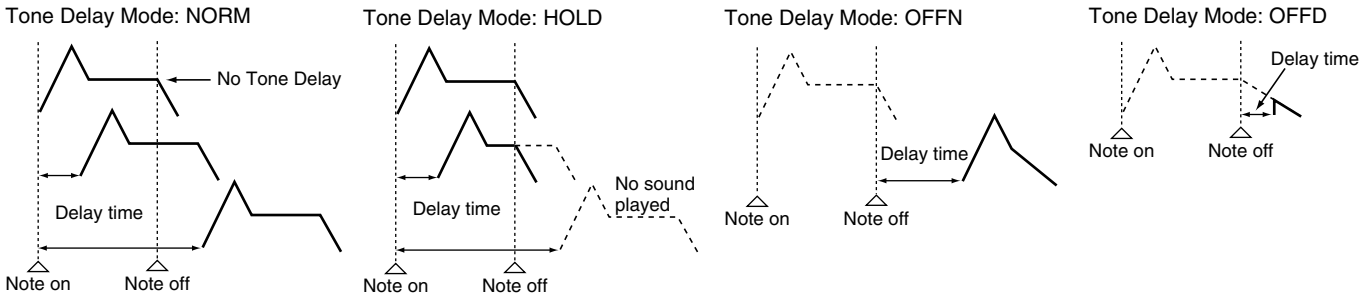
Tone Delay

This produces a time delay between the moment a key is pressed (or released), and the moment the tone actually begins to sound. You can also make settings that shift the timing at which each tone is sounded. This differs from the Delay in the internal effects, in that by changing the sound qualities of the delayed tones and changing the pitch for each tone, you can also perform arpeggio-like passages just by pressing one key.
You can also synchronize the tone delay time to the tempo of the song recorder.

* *If you are not going to use Tone Delay, set the Delay Mode parameter to "NORM" and Delay Time parameter to "0."*

- If the Structure parameters set in the range of "2"–"10," the output of tones 1 and 2 will be combined into tone 2, and the output of tones 3 and 4 will be combined into tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 35).

Parameter	Value	Explanation
Tone Delay Mode	NORM, HOLD, OFFN, OFFD	Type of tone delay **NORM:** The tone begins to play after the time specified in the Delay Time parameter has elapsed. **HOLD:** Although the tone begins to play after the time specified in the Delay Time parameter has elapsed, if the key is released before the time specified in the Delay Time parameter has elapsed, the tone is not played. **OFFN:** Rather than being played while the key is pressed, the tone begins to play once the period of time specified in the Delay Time parameter has elapsed after release of the key. This is effective in situations such as when simulating noises from guitars and other instruments. **OFFD:** Rather than being played while the key is pressed, the tone begins to play once the period of time specified in the Delay Time parameter has elapsed after release of the key. Here, however, changes in the TVA Envelope begin while the key is pressed, which in many cases means that only the sound from the release portion of the envelope is heard. * *If you have selected a waveform that is a decay-type sound (i.e., a sound that fades away naturally even if the key is not released), selecting "OFFN" or "OFFD" may result in no sound being heard.*
Tone Delay Time	0-127, Note	Time from when the key is pressed (or if the Delay Mode parameter is set to "OFFN" or "OFFD," the time from when the key is released) until when the tone will sound Tone Delay Time specifies the beat length for the synchronized tempo when the tempo that specifies the elapsed time until the tone is sounded (Patch Tempo) is synchronized with the tempo set in a song recorder.



Parameter	Value	Explanation
Tone Env Mode	NSUS, SUST	When a loop waveform (p. 33) is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to "NSUS." * *If a one-shot type wave (p. 33) is selected, it will not sustain even if this parameter is set to "SUST."*
Rx Bender	OFF, ON	For each tone, specify whether MIDI Pitch Bend messages will be received (ON), or not (OFF).
Rx Expression	OFF, ON	For each tone, specify whether MIDI Expression messages will be received (ON), or not (OFF).
Rx Hold-1	OFF, ON	For each tone, specify whether MIDI Hold-1 messages will be received (ON), or not (OFF). * *If "NSUS" is selected for Env Mode parameter, this setting will have no effect.*
Rx Pan Mode	CONT, K-ON	For each tone, specify how pan messages will be received. **CONT:** Whenever Pan messages are received, the stereo position of the tone will be changed. **K-ON:** The pan of the tone will be changed only when the next note is played. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed. * *The channels cannot be set so as not to receive Pan messages.*
Redamper Sw	OFF, ON	You can specify, on an individual tone basis, whether or not the sound will be held when a Hold 1 message is received after a key is released, but before the sound has decayed to silence. If you want to sustain the sound, set this "ON." When using this function, also set the Rx Hold-1 parameter "ON." This function is effective for piano sounds.

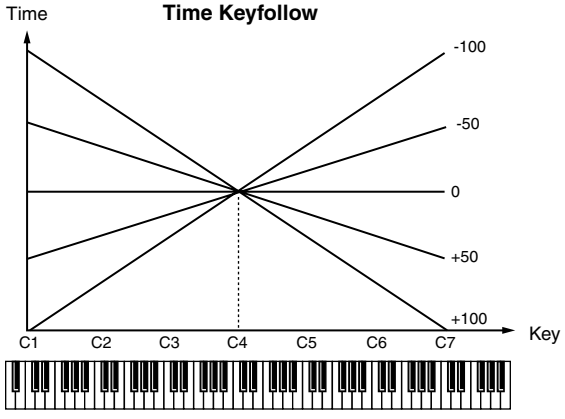
Modulating Sounds/Output

An LFO (Low Frequency Oscillator) causes change over a cycle in a sound. Each tone has two LFOs (LFO1/LFO2), and these can be used to cyclically change the pitch, cutoff frequency and volume to create modulation-type effects such as vibrato, wah and tremolo. Both LFOs have the same parameters so only one explanation is needed.

LFO 1–2

Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 44)

Parameter	Value	Explanation
Wave Form	SIN, TRI, SAWU, SAWD, SQR, RND, BD-U, BD-D, TRP, S&H, CHS, VSIN, STEP	Waveform of the LFO **SIN:** Sine wave **TRI:** Triangle wave **SAWU:** Sawtooth wave **SAWD:** Sawtooth wave (negative polarity) **SQR:** Square wave **RND:** Random wave **BD-U:** Once the attack of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change. **BD-D:** Once the decay of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change. **TRP:** Trapezoidal wave **S&H:** Sample & Hold wave (one time per cycle, LFO value is changed) **CHS:** Chaos wave **VSIN:** Modified sine wave. The amplitude of a sine wave is randomly varied once each cycle. **STEP:** A waveform generated by the data specified by LFO Step 1–16. This produces stepped change with a fixed pattern similar to a step modulator. * *If you set this to "BD-U" or "BD-D," you must turn the Key Trigger parameter to "ON." If this is "OFF," it will have no effect.*
Rate ★	0–127, Note	Modulation speed of the LFO LFO Rate sets the beat length for the synchronized tempo is synchronized with the tempo set in a sequencer. * *This setting will be ignored if the Waveform parameter is set to "CHAOS."*
Rate Detune	0–127	Makes subtle changes in the LFO cycle rate (Rate parameter) each time a key is pressed. Higher settings will cause greater change. This parameter is invalid when Rate is set to "note."
Offset	-100– +100	Raises or lowers the LFO waveform relative to the central value (pitch or cutoff frequency). Positive (+) settings will move the waveform so that modulation will occur from the central value upward. Negative (-) settings will move the waveform so that modulation will occur from the central value downward.
Delay Time	0–127	Time elapsed before the LFO effect is applied (the effect continues) after the key is pressed (or released) When using violin, wind, or certain other instrument sounds in a performance, rather than having vibrato added immediately after the sounds are played, it can be effective to add the vibrato after the note is drawn out somewhat.
Delay Time KF (Time Keyfollow)	-100– +100	Adjusts the value for the Delay Time parameter depending on the key position, relative to the C4 key (center C). To decrease the time with each higher key that is pressed in the upper registers, select a positive value; to increase the elapsed time, select a negative value. Larger settings will produce greater change. If you do not want the elapsed time to change according to the key pressed, set this to "0."



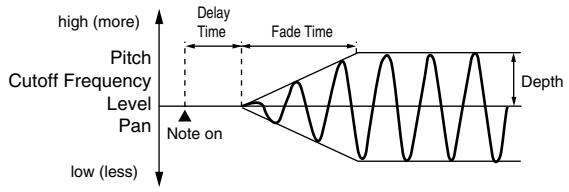
Parameter marked with a "★" can be controlled using specified MIDI messages (Matrix Control, p. 44)

Parameter	Value	Explanation
Fade Mode	ON <, ON >, OFF <, OFF >	How the LFO will be applied
Fade Time	0–127	Time over which the LFO amplitude will reach the maximum (minimum)
Key Trigger	OFF, ON	Specifies whether the LFO cycle will be synchronized to begin when the key is pressed (ON) or not (OFF).
Pitch Depth ★	-63– +63	How deeply the LFO will affect pitch
TVF Depth ★	-63– +63	How deeply the LFO will affect the cutoff frequency
TVA Depth ★	-63– +63	How deeply the LFO will affect the volume

Parameter	Value	Explanation
Pan Depth ★	-63– +63	How deeply the LFO will affect the pan
	Positive (+) and negative (-) settings for the Depth parameter result in differing kinds of change in pitch and volume. For example, if you set the Depth parameter to a positive (+) value for one tone, and set another tone to the same numerical value, but make it negative (-), the modulation phase for the two tones will be the reverse of each other. This allows you to shift back and forth between two different tones, or combine it with the Pan setting to cyclically change the location of the sound image. * *When the Structure parameter is set to any value from "2" through "10," the output of tones 1 and 2 will be combined into tone 2, and the output of tones 3 and 4 will be combined into tone 4. This applies to the Pan Depth parameter settings. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 35).*	

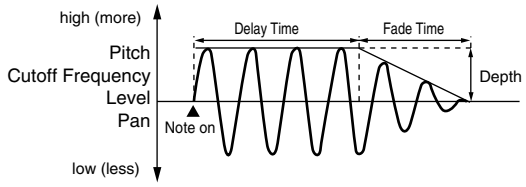
How to Apply the LFO

● Apply the LFO gradually after the key is pressed



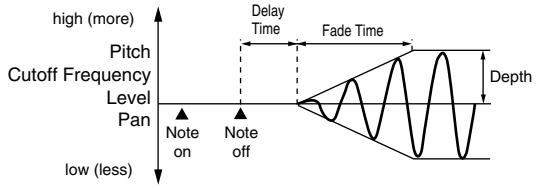
Fade Mode: ON <
Delay Time: Time from when the keyboard is played until the LFO begins to be applied
Fade Time: Time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed

● Apply the LFO immediately when the key is pressed, and then gradually begin to decrease the effect



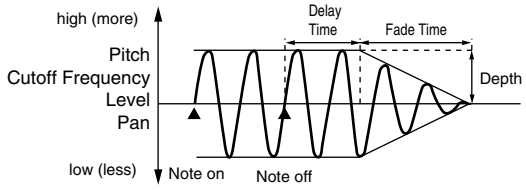
Fade Mode: ON >
Delay Time: Time that the LFO will continue after the keyboard is played
Fade Time: Time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed

● Apply the LFO gradually after the key is released



Fade Mode: OFF <
Delay Time: Time from when the keyboard is released until the LFO begins to be applied
Fade Time: Time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed

● Apply the LFO from when the key is pressed until it is released, and gradually begin to decrease the effect when the key is released



Fade Mode: OFF >
Delay Time: Time that the LFO will continue after the keyboard is released
Fade Time: Time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed

STEP

Parameter	Value	Explanation
Step Type	TYP1, TYP2	When generating an LFO waveform from the data specified in LFO Step 1–16, specify whether the level will change abruptly at each step or will be connected linearly. **TYP1:** stair-step change **TYP2:** linear change
Step 1–16	-36– +36	Specifies the data for the Step LFO. If the LFO Pitch Depth is +63, each +1 unit of the step data corresponds to a pitch of +50 cents.

OUTPUT

Parameter	Value	Explanation
Patch Out Assign	MFX, A, B, 1–4, TONE	Specifies how the direct sound of each patch will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jacks or OUTPUT B jacks in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. **TONE:** Outputs according to the settings for each tone. * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
Tone Out Assign	MFX, A, B, 1–4	Specifies how the direct sound of each tone will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jacks or OUTPUT B jacks in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. * *If the Patch Out Assign is set to anything other than "TONE," these settings will be ignored.* * *When the Structure Type parameter has a setting of Type "2"–"10," the outputs of tones 1 and 2 will be combined with tone 2, and the outputs of tones 3 and 4 will be combined with tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 35).* * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).* * *If you've set Tone Out Assign to "MFX," set the MFX Output Assign parameter (p. 127) to specify the output destination of the sound that has passed through the multi-effects.* * *Sounds are output to chorus and reverb in mono at all times.* * *The output destination of the signal after passing through the chorus is set with the Chorus Output Select and Chorus Output Assign parameters (p. 127).* * *The output destination of the signal after passing through the reverb is set with the Reverb Output Assign parameter (p. 127).*
Tone Out Level	0–127	Level of the signal that is sent to the output destination specified by Tone Output Assign
Send Level (Output = MFX)		
Tone Chorus Send	0–127	Level of the signal sent to chorus for each tone if the tone is sent through MFX
Tone Reverb Send	0–127	Level of the signal sent to reverb for each tone if the tone is sent through MFX
Send Level (Output = non MFX)		
Tone Chorus Send	0–127	Level of the signal sent to chorus for each tone if the tone is not sent through MFX
Tone Reverb Send	0–127	Level of the signal sent to reverb for each tone if the tone is not sent through MFX

Setting Effects for a Patch (Effects/MFX/MFX Control/Chorus/Reverb)

For details regarding effect settings, refer to the pages shown below.

- **Making Effect Settings** (p. 125)
- **Making Multi-Effects Settings (MFX1–3)** (p. 129)
- **Making Chorus Settings** (p. 154)
- **Making Reverb Settings** (p. 155)

Creating a Rhythm Set

With the JUNO-G, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating rhythm sets, and the functions of the rhythm set parameters.

How to Make Rhythm Set Settings

Using the Knobs to Edit the Sound

You can use the six SOUND MODIFY knobs to edit the sound in real time.

MEMO

In the case of a sound that has only a brief duration, it may be difficult to hear the effect of turning a knob.

1. **Press MODE [PATCH] to access the PATCH PLAY screen.**
2. **Select the rhythm set whose settings you want to edit (p. 26).**

NOTE

You cannot edit the patches in the GM2 group.

3. **Press keys to specify the key (A0–C8) that is to be controlled by the SOUND MODIFY knobs.**

Selecting the tone to edit

4. **In the PATCH PLAY screen, press [TONE SW/SEL] so the button is lit.**
5. **Press SELECT[1]–[4] to select the tone(s) you want to edit.**
   In the SOUND MODIFY 1–4 area at the bottom of the screen, a check mark (✔) will be added to the tone number(s) you select.

* *You can press multiple buttons simultaneously to select multiple tones.*

* *By turning TONE SWITCH on/off you can edit the sound while hearing only the desired tone.*

Changing the brightness of the sound and adding special qualities (CUTOFF/RESONANCE)

The sound generator section of the JUNO-G contains a filter that can cut or boost specific frequency regions of the sound. The CUTOFF knob specifies the frequency (cutoff frequency) at which the filter will begin to modify the sound, and the RESONANCE knob boosts the region near the cutoff frequency to add a distinctive character to the sound.

6. **Turn the CUTOFF or RESONANCE knobs.**
   Turning a knob toward the right increases the value.
   FREQ: Frequency at which the filter begins to have an effect on the waveform's frequency components
   RESO: Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound

* *Excessively high settings can produce oscillation, causing the sound to distort.*

Editing the way that the volume will change

The volume continues to change from the time a key is pressed to when it is released.

7. **Press the SOUND MODIFY select button to make AMP ENV light.**
8. **Turn the ATTACK, DECAY, SUSTAIN, and RELEASE knobs.**
   Turning a knob toward the right increases the value.
   A: Attack Time: The time from when the keyboard is pressed until the maximum tonal change is reached.
   D: Delay Time: The time from when the maximum tonal change is reached until the Sustain Level is reached.
   S: Sustain level: Volume that is sustained while you hold down the key
   R: Release Time: The time from when the keyboard is released until the sound disappears.

* *If you press the SOUND MODIFY select button so all of the indicators are off, turning these knobs will not produce any change.*

Editing the way that tone (brightness) will change

The tone undergoes changes between the moment you press a key until you release it.

9. **Press the SOUND MODIFY select button to make FILTER ENV light.**
10. **Turn the ATTACK, DECAY, SUSTAIN, and RELEASE knobs.**
    Turning a knob toward the right increases the value.

* *If you press the SOUND MODIFY select button so all of the indicators are off, turning these knobs will not produce any change.*

Editing in a Graphic Display (Zoom Edit)

The important parameters most commonly used to edit the sound are available in five screens for graphic editing.

Parameter	page
PITCH ENVELOPE ZOOM	p. 54
TVF PARAMETER ZOOM	p. 55
TVF ENVELOPE ZOOM	p. 55
TVA ENVELOPE ZOOM	p. 56

1. **Press MODE [PATCH] to access the PATCH PLAY screen.**
2. **Select the rhythm set whose settings you want to edit (p. 26).**

NOTE

You cannot edit the patches in the GM2 group.

3. **Press EDIT [PATCH] so it's lit.**
4. **Press keys to specify the key (A0–C8) that is to be edited.**
5. **Use [F1]–[F4] to select the parameter screen.**
6. **Use [▲] [▼] [◀] [▶] to select a parameter.**

* *Some parameters can be edited independently for each tone. To select the tone to edit, press [TONE SW/SEL] so it's lit, and press one of the SELECT [1]–[4] buttons.*

7. Use the VALUE dial or [INC] [DEC] to change the value.
Parameters with an indication of 1–4 can also be edited using the corresponding SOUND MODIFY knob 1–4.

8. Repeat steps 4–6 to set each parameter.

9. Press [WRITE] to save the changes you've made (p. 51). If you do not wish to save changes, press [EXIT] to return to the PATCH PLAY screen.
If you return to the PATCH PLAY screen without saving, an "*" will be displayed at the left of the rhythm set group.

NOTE
If you turn off the power or select a different sound while the display indicates "*," your edited rhythm set will be lost.

Viewing and editing all parameters (PRO EDIT)

cf.
For details on the parameters, refer to p. 52 and follows.

1. Press MODE [PATCH] to access the PATCH PLAY screen.

2. Select the rhythm set whose settings you want to edit (p. 26).

NOTE
You cannot edit the patches in the GM2 group.

3. Press EDIT [PATCH] so it's lit.

4. Press [F6 (PRO EDIT)].

5. Press keys to specify the key (A0–C8) that is to be edited.

6. Use [F2 (GRP ↑)][F3 (GRP ↓)] to switch the parameter group.

* *Pressing [F1 (GRP LIST)] will display the Patch Pro Edit Menu window. Use the VALUE dial or [INC] [DEC] [▲] [▼] to select a parameter group, and press [ENTER].*

7. Use [▲] [▼] to select a parameter.

* *A check mark (✔) will be added to the tone number in the upper right of the screen.*

8. Use the VALUE dial or [INC] [DEC] to change the value.
Parameters with an indication of 1–4 can also be edited using the corresponding SOUND MODIFY knob 1–4.

9. Repeat steps 5–7 to set each parameter.

10. Press [WRITE] to save the changes you've made (p. 51). If you do not wish to save changes, press [EXIT] to return to the PATCH PLAY screen.
If you return to the PATCH PLAY screen without saving, an "*" will be displayed at the left of the rhythm set group.

NOTE
If you turn off the power or select a different sound while the display indicates "*," your edited rhythm set will be lost.

Using the SOUND MODIFY Knobs to Change the Value

If a number is displayed for the parameter name (1, 2, 3, 4), you can use the SOUND MODIFY knobs 1–4 to set the value.

* *Press the SOUND MODIFY select button so all of the indicators are off. If any indicator is lit, the knob functions will change.*

For example, in the TVF ENVELOPE ZOOM screen, the knobs correspond to parameters as follows.

Knob 1	A (Time 1)
Knob 2	D (Time 3)
Knob 3	S (Level 3)
Knob 4	R (Time 4)

Initializing Rhythm Set Settings

"Initialize" means to return the settings of the currently selected sound to a standard set of values.

* *The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the JUNO-G's settings to their factory values, perform a Factory Reset (p. 164).*

1. With EDIT [PATCH] lit, hold down [SHIFT] and press [F5 (INIT)].
A message will ask you for confirmation.

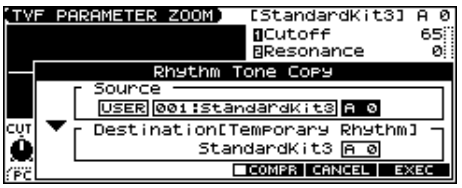
2. Press [F6 (EXEC)].
The initialization will be carried out.

* *To cancel, press [F5 (CANCEL)].*

Copying Rhythm Tone Settings

This operation copies the settings of any desired rhythm set to the currently selected rhythm set.

1. With EDIT [PATCH] lit, hold down [SHIFT] and press [F6 (TONE COPY)].
The Rhythm Tone Copy window appears.



2. Press [▲] [▼] [◀] [▶] to move the cursor, and use the VALUE dial or [INC] [DEC] to select the "Source (copy-source)" group and number, and the tone.

* *By pressing [F4 (COMPR)] to add a check mark (✔), you can check the copy-source patch (Compare function).*

3. Press [▲] [▼] [◀] [▶] to move the cursor, and select the "Destination (copy-destination)" tone.

4. Press [F6 (EXEC)].
A message will ask you for confirmation.

5. Press [F6 (EXEC)] to execute the copy operation.

* *To cancel, press [F5 (CANCEL)].*

The Compare Function

For the Rhythm Tone Copy and Rhythm Set Save operations, you can use the Compare function.
If you want to play the copy-source or write-destination rhythm set, press [F4 (COMPR)] to add a check mark (✔). Now you can play the copy-source or write-destination rhythm set from the keyboard.

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

Saving Rhythm Sets You've Created (Write)

Changes you make to sound settings are temporary, and will be lost if you turn off the power or select another sound. If you want to keep the modified sound, you must save it in the internal USER group (user memory) or CARD group (memory card).
When you edit the patch settings, an "*" will appear in the PATCH PLAY screen.

NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost.

1. Edit the rhythm set.

2. Press EDIT [WRITE].
The WRITE MENU screen appears.

3. Press [F2 (PAT/RHY)].

* *Alternatively, you can use [▲] [▼] to select "Patch/Rhythm," and then press [ENTER].*

The RHYTHM SET NAME screen appears.

4. Assign a name to the rhythm set.

cf.

For details on assigning names, refer to p. 24.

5. When you have finished inputting the name, press [F6 (WRITE)].
A screen will appear, allowing you to select the write-destination patch.

6. Use the VALUE dial, [INC] [DEC], or [▲] [▼] and [F1 (USER)] [F2 (CARD)] to select the write destination and patch number.

* *By pressing [F4 (COMPR)] to add a check mark (✔), you can check the write-destination patch (Compare function).*

7. Press [F6 (WRITE)].
A message will ask you for confirmation.

8. Press [F6 (EXEC)] to execute the save operation.

* *To cancel, press [F5 (CANCEL)].*

NOTE

Never switch off the JUNO-G while data is being saved.

One-shot Waveform and Loop Waveform

The internal waveforms of the JUNO-G fall into the following two groups.

One-shot:

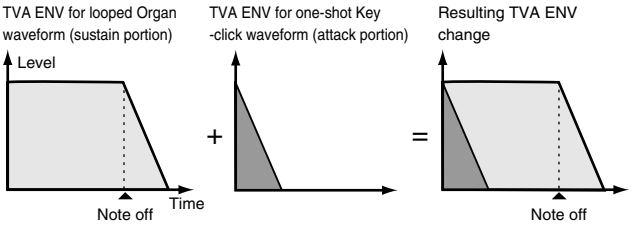
These waveforms contain sounds that have short decays. A one-shot waveform records the initial rise and fall of the sound.
The JUNO-G also contains many other one-shot waveforms that are elements of other sounds. These include attack components such as piano-hammer sounds and guitar fret noises.

* *It is not possible to use the envelope to modify a one-shot waveform to create a decay that is longer than the original waveform, or to turn it into a sustaining sound.*

Loop:

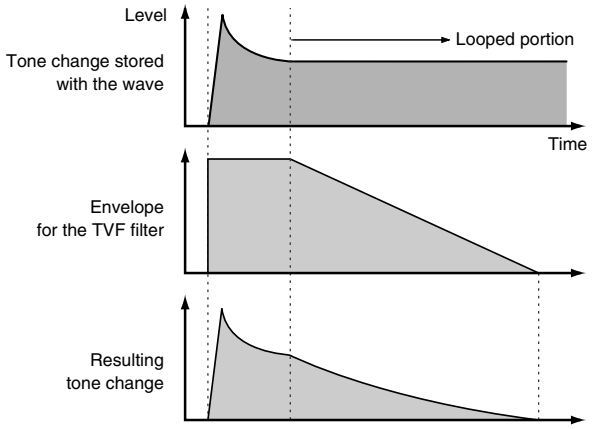
These waveforms include sounds with long decays as well as sustained sounds. Loop waveforms repeatedly play back (loop) the portion of the waveform after the sound has reached a relatively steady state.
The JUNO-G's looped waveforms also include components of other sounds, such as piano-string resonant vibrations and the hollow sounds of brass instruments.

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



Tips for Using an Acoustic Instrument's Waveform

With many acoustic instruments such as piano and sax, extreme timbral changes occur during the first few moments of each note. This initial attack is what defines much of the instrument's character. For such waveforms, it is best to use the complex tonal changes of the attack portion of the waveform just as they are, and to use the envelope only to modify the decay portion.



Functions of Rhythm Set Parameters

Settings Common to the Entire Rhythm Set

GENERAL

Parameter	Value	Description
Rhythm Level	0–127	Volume of the rhythm set
Rhythm Tone Name		You can assign a name of up to 12 characters to the rhythm tone. Press [◀] [▶] to move the cursor, and use the VALUE dial or [INC] [DEC] to select characters.

CONTROL

Parameter	Value	Explanation
Assign Type	MULTI, SINGLE	Sets the way sounds are played when the same key is pressed a number of times. **MULTI:** Layer the sound of the same keys. Even with continuous sounds where the sound plays for an extended time, such as with crash cymbals, the sounds are layered, without previously played sounds being eliminated. **SINGLE:** Only one sound can be played at a time when the same key is pressed. With continuous sounds where the sound plays for an extended time, the previous sound is stopped when the following sound is played.
Mute Group	OFF, 1–31	On an actual acoustic drum set, an open hi-hat and a closed hi-hat sound can never occur simultaneously. To reproduce the reality of this situation, you can set up a Mute Group. The Mute Group function allows you to designate two or more rhythm tones that are not allowed to sound simultaneously. Up to 31 Mute Groups can be used. rhythm tones that are not belong to any such group should be set to "OFF."
Tone Env Mode	NO-SUS, SUSTAIN	When a loop waveform (p. 51) is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to "NO-SUS." * *If a one-shot type wave (p. 51) is selected, it will not sustain even if this parameter is set to "SUSTAIN."*
Tone Pitch Bend Range	0–48	Amount of pitch change in semitones (4 octaves) that will occur when the Pitch Bend Lever is moved The amount of change when the lever is tilted is set to the same value for both left and right sides.
One Shot Mode	OFF, ON	**ON:** The sound will play back until the end of the waveform (or the end of the envelope, whichever comes first). If you have set Wave Group (p. 53) to SAMP, the loop setting will be forced to ONE SHOT.
Aftertouch Time Ctrl Sens	-63– +63	If Wave Group is set to SAMP and Wave Tempo Sync is ON, aftertouch will control the amount of time stretching/shrinking caused by Time Stretch. If Time Stretch is not being applied, nothing will happen. If set to "+" the stretch/shrink time will become shorter, and if set to "-" the time will become longer.

RECEIVE

Parameter	Value	Explanation
Tone Receive Expression	OFF, ON	For each rhythm tone, specify whether MIDI Expression messages will be received (ON), or not (OFF).
Tone Receive Hold-1	OFF, ON	For each rhythm tone, specify whether MIDI Hold-1 messages will be received (ON), or not (OFF). * *If "NO-SUS" is selected for Env Mode parameter, this setting will have no effect.*

Parameter	Value	Explanation
Tone Receive Pan Mode	CONTINUOUS, KEY-ON	For each rhythm tone, specify how pan messages will be received. **CONTINUOUS:** Whenever Pan messages are received, the stereo position of the tone will be changed. **KEY-ON:** The pan of the tone will be changed only when the next note is played. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed. * *The channels cannot be set so as not to receive Pan messages.*

Modifying Waveforms/Pitch/Pitch Envelope

WAVE PARAMETER

Parameter	Value	Explanation
Wave Group	INT, EXP, SAMP	Group containing the waveforms comprising the rhythm tone **INT:** Waveforms stored in internal **EXP:** Waveform stored in a Wave Expansion Board (SRX series) installed in EXP slots **SAMP:** Sample waveforms
Wave Bank	PRST, USER, CARD	When the Wave Group is SAMP: PRST, USER, CARD When the Wave Group is MSAM: USER, CARD
Wave No. L (Mono) Wave No. R	----, 1–1267	Waves comprising the rhythm tone (The upper limit will depend on the wave group.) When in monaural mode, only the left side (L) is specified. When in stereo, the right side (R) is also specified. If you want to select a left/right pair of Waves, select the left (L) Wave number, and then hold down [SHIFT] and press [F4 (STEREO)] to add a check mark (✔); the right (R) (Wave) will be recalled.
Wave Gain	-6, 0, +6, +12	Gain (amplification) of the waveform The value changes in 6 dB (decibel) steps—an increase of 6 dB doubles the waveform's gain.
Wave Tempo Sync	OFF, ON	When you wish to synchronize a Phrase Loop to the clock (tempo), set this to "ON." * *This is valid only when a separately sold wave expansion board is installed, and a waveform that indicates a tempo (BPM) is selected as the sample for a tone.* If a waveform from a wave expansion board is selected for the tone, turning the Wave Tempo Sync parameter "ON" will cause pitch-related settings and FXM-related settings to be ignored. • If a sample is selected for a tone, you must first set the BPM (tempo) parameter of the sample. • If a sample is selected for a tone, Wave Tempo Sync will require twice the normal number of voices.

Phrase Loop

Phrase loop refers to the repeated playback of a phrase that's been pulled out of a song (e.g., by using a sampler). One technique involving the use of Phrase Loops is the excerpting of a Phrase from a pre-existing song in a certain genre, for example dance music, and then creating a new song with that Phrase used as the basic motif. This is referred to as "Break Beats."

Realtime Time Stretch

If the wave group is "SAMP" or "MSAM," and the Wave Tempo Sync parameter is turned "ON," you can vary the playback speed of the waveform without affecting the pitch.

Parameter	Value	Explanation
FXM Switch	OFF, ON	This sets whether FXM will be used (ON) or not (OFF).
FXM Color	1–4	How FXM will perform frequency modulation Higher settings result in a grainier sound, while lower settings result in a more metallic sound.
FXM Depth	0–16	Depth of the modulation produced by FXM

FXM

FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This is useful for creating dramatic sounds or sound effects.

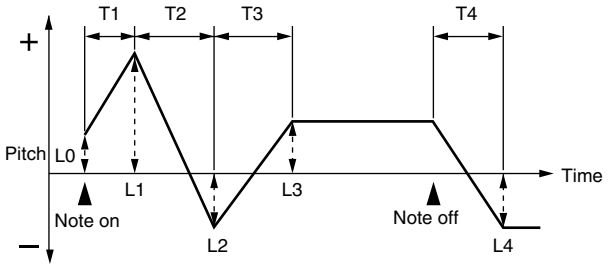
WAVE PITCH

Parameter	Value	Explanation
Tone Coarse Tune	0 (C -)–127 (G9)	Pitch at which a rhythm tone sounds Set the coarse tuning for Waves comprising the rhythm tones with the Wave Coarse Tune parameter (p. 54).
Tone Fine Tune	-50– +50	Pitch of the rhythm tone's sound (in 1-cent steps; one cent is 1/100th of a semitone) Set the fine tuning for Waves comprising the rhythm tones with the Wave Fine Tune parameter (p. 54).
Tone Random Pitch Depth	0–1200	Width of random pitch deviation that will occur each time a key is pressed (in 1-cent steps) If you do not want the pitch to change randomly, set this to "0."

WAVE PITCH ENV

Parameter	Value	Explanation
P-Env Depth	-12– +12	Depth of the Pitch Envelope Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.
P-Env V-Sens	-63– +63	Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value.
P-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the Pitch envelope. If you want T1 to be speeded up for strongly played notes, set this parameter to a positive (+) value.
P-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the Pitch envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value.
P-Env Time 1–4	0–127	Pitch envelope times (T1–T4) Higher settings will result in a longer time until the next pitch is reached.
P-Env Level 0–4	-63– +63	Pitch envelope levels (L0–L4) Specify how the pitch will change at each point, relative to the pitch set with Coarse Tune or Fine Tune.

Pitch Envelope



WAVE MIX Parameters

WAVE MIX LV/PN

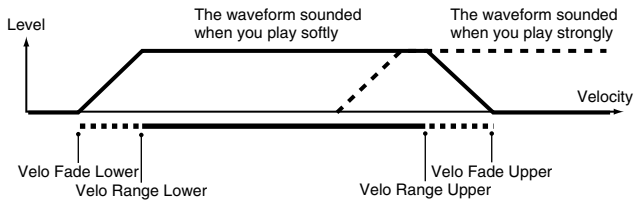
Parameter	Value	Description
Wave Level	0–127	Volume of the waveform
Wave Pan	L64–0–63R	Left/right position of the waveform
Wave Rnd Pan Sw	OFF, ON	Use this setting to cause the waveform's panning to change randomly each time a key is pressed (ON) or not (OFF). * *The range of the panning change is set by the Random Pan Depth parameter (p. 56).*
Wave Alter Pan Sw	OFF, ON, REVS	This setting causes panning of the waveform to be alternated between left and right each time a key is pressed. Set this to "ON" to pan the wave according to the Alternate Pan Depth parameter (p. 56) settings, or to "REVS" when you want the panning reversed.

WAVE MIX TUNE

Parameter	Value	Explanation
Wave Coarse Tune	-48– +48	Pitch of the waveform's sound (in semitones, +/-4 octaves)
Wave Fine Tune	-50– +50	Pitch of the waveform's sound (in 1-cent steps; one cent is 1/100th of a semitone)

VELOCITY RANGE

You can use the force with which keys are played to control the way each waveform is played.



Parameter	Value	Explanation
Velocity Control	OFF, ON, RAN	Determines whether a different waveform is played (ON) or not (OFF) depending on the force with which the key is played (velocity). **RAN:** The rhythm tone's constituent waveforms will sound randomly, regardless of any Velocity messages.
Velo Fade Lower	0–127	Determines what will happen to the waveform's level when the rhythm tone is played at a velocity lower than Velo Range Lower. If you don't want the waveform to sound at all, set this parameter to "0."
Velo Range Lower	1–UPPER	Specifies the lowest velocity at which the waveform will sound.
Velo Range Upper	LOWER–127	Specifies the highest velocity at which the waveform will sound.

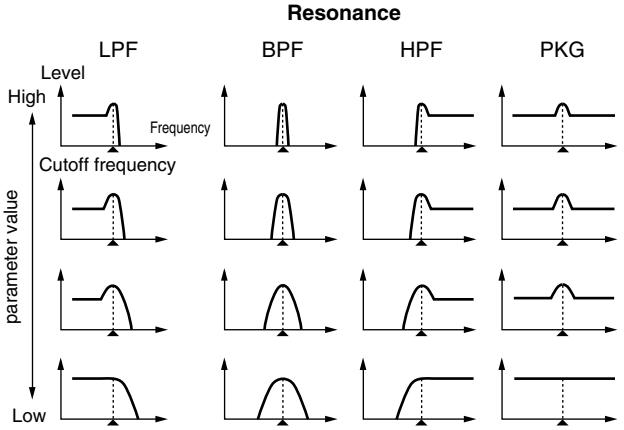
Parameter	Value	Explanation
Velo Fade Upper	0–127	Determines what will happen to the waveform's level when the rhythm tone is played at a velocity greater than Velo Range Upper. If you don't want the waveform to sound at all, set this parameter to "0."

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

A filter cuts or boosts a specific frequency region to change a sound's brightness, thickness, or other qualities.

TVF PARAMETER

Parameter	Value	Explanation
Filter Type	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3	Type of filter **OFF:** No filter is used. **LPF:** Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency in order to round off, or un-brighten the sound. **BPF:** Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. This can be useful when creating distinctive sounds. **HPF:** High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. This is suitable for creating percussive sounds emphasizing their higher tones. **PKG:** Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency. You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically. **LPF2:** Low Pass Filter 2. Although frequency components above the Cutoff frequency are cut, the sensitivity of this filter is half that of the LPF. This filter is good for use with simulated instrument sounds such as the acoustic piano. **LPF3:** Low Pass Filter 3. Although frequency components above the Cutoff frequency are cut, the sensitivity of this filter changes according to the Cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings. * *If you set "LPF2" or "LPF3," the setting for the Resonance parameter will be ignored.*
Cutoff Frequency	0–127	Frequency at which the filter begins to have an effect on the waveform's frequency components
Resonance	0–127	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. * *Excessively high settings can produce oscillation, causing the sound to distort.*



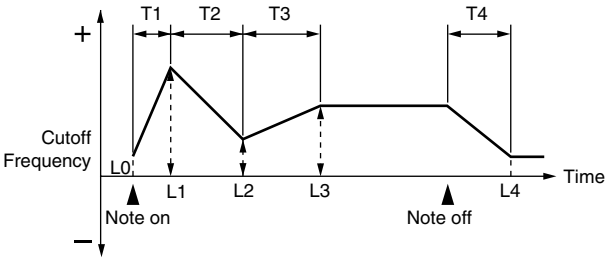
Parameter	Value	Explanation
Cutoff V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the cutoff frequency Set this to "FIX" if you don't want the Cutoff frequency to be affected by the keyboard velocity. 
Cutoff V-Sens	-63– +63	Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings.
Resonance V-Sens	-63– +63	This allows keyboard velocity to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings.

TVF ENVELOPE

Parameter	Value	Explanation
F-Env Depth	-63– +63	Depth of the TVF envelope Higher settings will cause the TVF envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.

Parameter	Value	Explanation
F-Env V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the TVF envelope Set this to "FIX" if you don't want the TVF Envelope to be affected by the keyboard velocity. 
F-Env V-Sens	-63– +63	Specifies how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.
F-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the TVF envelope. If you want T1 to be speeded up for strongly played notes, set this parameter to a positive (+) value.
F-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the TVF envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value.
F-Env Time 1–4	0–127	TVF envelope times (T1–T4) Higher settings will lengthen the time until the next cutoff frequency level is reached.
F-Env Level 0–4	0–127	TVF envelope levels (L0–L4) Specify how the cutoff frequency will change at each point, relative to the Cutoff Frequency value.

TVF Envelope



Adjusting the Volume (TVA/TVA Envelope)

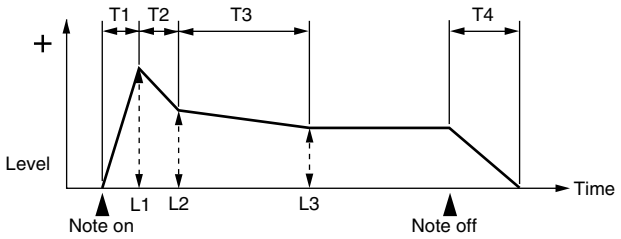
TVA PARAMETER

Parameter	Value	Explanation
Tone Level	0–127	Volume of the tone This setting is useful primarily for adjusting the volume balance between tones.
Level V-Curve	FIX, 1–7	Curve that determines how keyboard playing dynamics (velocity) will affect the volume Set this to "FIX" if you don't want the volume of the tone to be affected by the keyboard velocity. 
Level V-Sens	-63– +63	Set this when you want the volume of the tone to change depending on keyboard playing dynamics. Set this to a positive (+) value to have the changes in tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value.
Tone Pan	L64–0–63R	Left/right position of the tone
Random Pan Depth	0–63	Use this parameter when you want the stereo location to change randomly each time you press a key. Higher settings will produce a greater amount of change.
Alternate Pan Depth	L63–0–63R	This setting causes panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example if two rhythm tones are set to "L" and "R" respectively, the panning of the two rhythm tones will alternate each time they are played.

TVA ENVELOPE

Parameter	Value	Explanation
A-Env T1 V-Sens	-63– +63	This allows keyboard dynamics to affect the T1 of the TVA envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
A-Env T4 V-Sens	-63– +63	Use this parameter when you want key release speed to affect the T4 value of the TVA envelope. If you want T4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
A-Env Time 1–4	0–127	TVA envelope times (T1–T4) Higher settings will lengthen the time until the next volume level is reached.
A-Env Level 1–3	0–127	TVA envelope levels (L1–L3) Specify how the volume will change at each point, relative to the Tone Level value.

TVA Envelope



Output Settings (OUTPUT)

Parameter	Value	Explanation
Rhythm Out Assign	MFX, A, B, 1–4, TONE	Specifies for each rhythm set how the direct sound will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jacks or OUTPUT B jacks in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. **TONE:** Outputs according to the settings for each rhythm tone. * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
Tone Out Assign	MFX, A, B, 1–4	Specifies how the direct sound of each rhythm tone will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jacks or OUTPUT B jacks in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. * *If the Rhythm Out Assign is set to anything other than "TONE," these settings will be ignored.* * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).* * *If you've set Tone Out Assign to "MFX," set the MFX Output Assign parameter (p. 127) to specify the output destination of the sound that has passed through the multi-effects.* * *Sounds are output to chorus and reverb in mono at all times.* * *The output destination of the signal after passing through the chorus is set with the Chorus Output Select and Chorus Output Assign parameters (p. 127).* * *The output destination of the signal after passing through the reverb is set with the Reverb Output Assign parameter (p. 127).*
Tone Out Level	0–127	Level of the signal that is sent to the output destination specified by Tone Output Assign
Send Level (Output = MFX)		
Tone Chorus Send	0–127	Level of the signal sent to chorus for each rhythm tone if the tone is sent through MFX
Tone Reverb Send	0–127	Level of the signal sent to reverb for each rhythm tone if the tone is sent through MFX
Send Level (Output = non MFX)		
Tone Chorus Send	0–127	Level of the signal sent to chorus for each rhythm tone if the tone is not sent through MFX
Tone Reverb Send	0–127	Level of the signal sent to reverb for each rhythm tone if the tone is not sent through MFX

Setting Effects for a Patch (Effects/MFX/MFX Control/Chorus/Reverb)

For details regarding effect settings, refer to the pages shown below.

- **Making Effect Settings** (p. 125)
- **Making Multi-Effects Settings (MFX1–3)** (p. 129)
- **Making Chorus Settings** (p. 154)
- **Making Reverb Settings** (p. 155)

Playing in Performance Mode

A performance contains settings that apply to each individual part, such as the patch (rhythm set) assigned to each part, and its volume and pan.

Broadly speaking, Performance mode consists of two screens: PLAY screen and MIXER screen.

Use the PLAY screen when you want to combine multiple sounds (patches or rhythm sets) to create complex sounds. This lets you play patches together ("layer") or play different patches in separate areas of the keyboard ("split").

Use the MIXER screen when you want to mix the sounds by adjusting the level and pan for each of 16 parts.

When you play the keyboard, you will hear the current part and the parts whose keyboard switch is set to "ON."

In addition to the settings of each part, the following settings can also be stored for each performance.

- Controller settings such as the D Beam
- Arpeggio and chord memory settings
- Rhythm group number

NOTE

Changes you make to sound settings are temporary, and will be lost if you turn off the power or select another sound. If you want to keep the modified sound, you must save it in the internal USER group (user memory) or CARD group (memory card).

MEMO

When you edit the settings of a Performance, an "*" will appear in the PERFORM PLAY screen.

Displaying PERFORM PLAY Screen

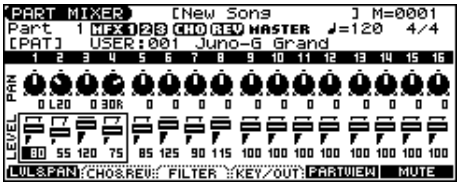
1. Press MODE [PERFORM].

You will enter Performance mode, and the PERFORM PLAY screen appears.

Displaying PART MIXER Screen

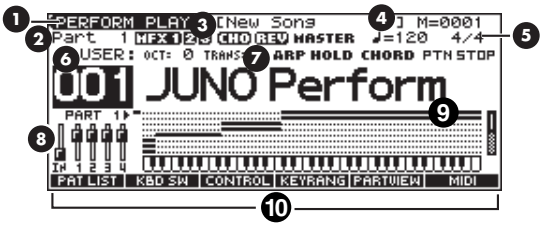
1. Press MODE [PART MIXER].

You will enter Performance mode, and the PART MIXER screen appears.



Functions in the PERFORMANCE PLAY/MIXER Screen

PLAY screen



1. Indicates the current sound generating mode.

2. Indicates the current part (use [◀] [▶] to change).

3. Indicates multi-effects (MFX1, 2, 3), chorus (CHO), reverb (REV), and mastering (MASTER) on and off.

4. Indicates the name of the currently selected song, the measure location.

5. Indicates the time signature, and the tempo.

6. Group, number, and name of the selected performance

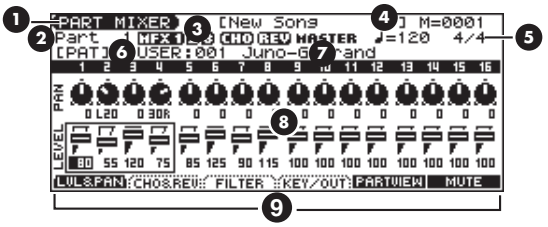
7. Octave and transposition values, arpeggio, arpeggio hold, chord memory on/off, rhythm play/stop

8. Positions of the five SONG RECORDER sliders

9. Range in which you can play the keyboard, or range in which you can play the rhythm set

10. Jump to the editing screen for the displayed function

MIXER screen



1. Indicates the current sound generating mode.

2. Indicates the current part.

3. Indicates multi-effects (MFX1, 2, 3), chorus (CHO), reverb (REV), and mastering (MASTER) on and off.

4. Indicates the name of the currently selected song, the measure location.

5. Indicates the time signature, and the tempo.

6. The patch or rhythm pattern

7. Group, number, and name of the patch or rhythm pattern

8. Each part's volume (LEVEL), stereo position (PAN), reverb (REVERB), chorus (CHORUS), resonance (RESO), cutoff frequency (FREQ), Pitch Coarse (KEY), keyboard switch (KBD), rhythm pattern playback part (RHY), arpeggio playback part (ARP), and output destination (OUT) setting

* *Use the function buttons to switch screens.*

9. Jump to the editing screen for the displayed function

Selecting a Performance

The JUNO-G has three performance groups, including the User group, Preset groups and Memory Card groups.

USER

This is the group inside the JUNO-G which can be rewritten. Performances you yourself create can be stored in this group. The JUNO-G contains 64 preset performances.

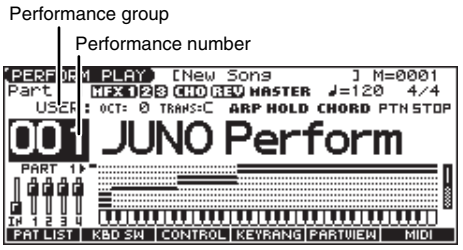
PRST (Preset)

This is the group inside the JUNO-G which cannot be rewritten. However you may modify the settings of the currently selected performance, and then store the modified performance in User memory. The JUNO-G contains 64 preset performances.

CARD (Memory Card)

This group lets you use patches stored on a memory card inserted in the rear panel PC card slot. Since the data in this group can be rewritten, you can use this group to store patches that you create.

1. **Press [PERFORM].**
2. **Press [▲] [▼] to move the cursor to the performance group.**



3. **Use the VALUE dial, or [INC] [DEC] to select a performance group.**
4. **Press [▲] [▼] to move the cursor to the performance number.**
5. **Use the VALUE dial or [INC] [DEC] to select the performance number.**

Selecting Performances from the List

You can display a list of performances and select a performance from that list.

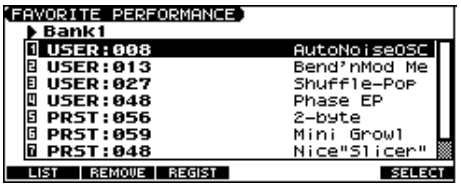
1. **Press MODE [PERFORM] to access the PERFORM PLAY screen.**
2. **Move the cursor to the performance group or performance number.**
3. **Press [ENTER].**
   The PERFORMANCE LIST screen appears.

4. **To switch the performance group, press [◀] [▶].**
5. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select the performance.**
6. **Press [F6 (SELECT)] or [ENTER] to finalize your choice.**

Selecting Favorite Performances

You can bring together your favorite and most frequently used performances in one place by registering them in the Favorite Performance. By using this function you can quickly select your favorite performances.

1. **Press MODE [PERFORM] to access the PERFORM PLAY screen.**
2. **Move the cursor to the performance group or performance number.**
3. **Press [ENTER] and then press [F1 (FAVORIT)].**
   The FAVORITE PERFORMANCE screen appears.



4. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a performance number.**
   To switch banks, press [◀] [▶].
5. **Press [F6 (SELECT)] or [ENTER] to finalize your choice.**

Registering a Favorite Performance

You can register a total of 64 Performances (8 sounds x 8 banks) as favorite Performance.

1. **Select the Performance that you wish to register.**
2. **Access the FAVORITE PERFORMANCE screen.**
3. **Press [◀] [▶] to select the bank in which you wish to register the Performance.**
4. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select the number to which you wish to register.**
5. **Press [F3 (REGIST)] to execute the registration.**

* *To cancel, press [EXIT].*

MEMO

By pressing [F2 (REMOVE)] you can cancel the Performance registration that is selected in the FAVORITE PERFORM screen.

Using the PLAY Screen

Selecting a Part

The currently selected part is called the "**current part**."

1. From the PERFORM PLAY screen, use [▲] [▼] to select the part.

MEMO

You can also select the part by pressing [PART SELECT] to make it light and pressing PART SELECT [1]–[8].

* *To select parts 9–16, press [9-16] to make it light, and then press PART SELECT [9]–[16].*

Selecting the Sound for a Part

It's easy to switch the patch assigned to a part.

1. Select the part whose sound you want to switch.

2. Press [F1 (PAT LIST)].

The PATCH LIST screen appears.

- If you press [F3 (FAVORIT)], the FAVORITE PATCH screen (p. 28) appears.
- If you press [F4 (CATEG)], you can select patches by category (p. 27).
- If you press [F5 (PATCH)], the PATCH LIST screen (p. 27) appears.
- If you press [F6 (RHYTHM)], the RHYTHM LIST screen appears.

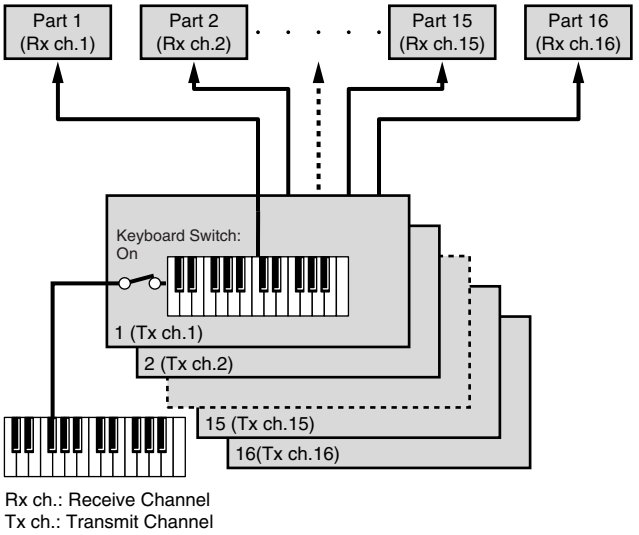
3. Use [F1 (UP)] [F2 (DOWN)] to select a category or bank.

4. Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a patch.

5. Press [ENTER] to select the patch.

Combining and Playing Sounds Together (Layer)

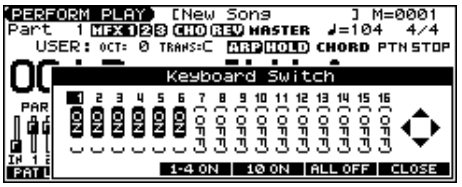
In Performance mode you can play the sounds of all parts whose Keyboard Switch is on, and all connected parts. Combining the parts will produce, thicker, fatter sounds.



1. Press MODE [PERFORM] to access the PERFORM PLAY screen.

2. Press [F2 (KBD SW)].

The Keyboard Switch window appears.



3. Press [◀] [▶] to select the part you want to sound.

4. Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select "ON."

When you play the keyboard, you will hear the current part and the parts whose keyboard switch is set to "ON."

MEMO

Press [PART SELECT] so it's lit, then press PART SELECT [1]–[8] to turn on/off the selected part.

* *To turn parts 9–16 on/off, press [9-16] so it's lit, then press PART SELECT [9]–[16].*

5. Repeat steps 3–4 to turn the Keyboard Switch on for all parts that are connected to the parts you want to play.

6. Press [F6 (CLOSE)] to return to the PERFORM PLAY screen.

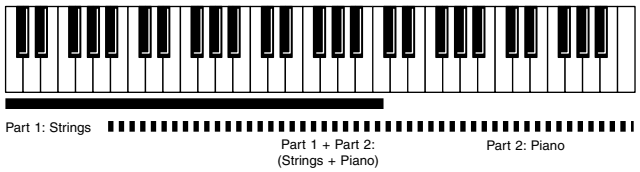
About the keyboard switch

Use the keyboard switch when you want to play multiple sounds layered together (Layer) or assign different sounds to different regions of the keyboard (Split). Conversely, you can turn off all keyboard switches when you are creating data, etc.

Playing Different Sounds in Different Areas of the Keyboard (Split)

In Performance mode you can divide the keyboard and play a different patch in each area (this is called "split"). As the note range that plays each part can be specified individually, you can split the keyboard into a maximum of 16 sections.

For instance, you can play strings in the lower range, piano in the upper range, and both sounds in the middle range.



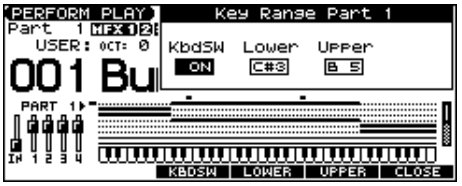
MEMO

A split performance is one application of a layer. Changing the key range of each part in the layer results in a split.

1. Press MODE [PERFORM] to access the PERFORM PLAY screen.

2. Press [F4 (KEYRANG)].

The Key Range window appears.



3. Press [▲] [▼] to select the part you want to play.

4. Press [F3 (KBDSW)]–[F5 (UPPER)] or [◀] [▶] to select the parameter.

5. Use the VALUE dial or [INC] [DEC] to change the setting.

Parameter	Value	Explanation
KbdSW	OFF, ON	Specifies whether or not the part will sound.
Lower	C - –Upper	Lower limit of the range
Upper	Lower–G9	Upper limit of the range

The bar shown above the keyboard indicates the range of keys that will sound.

6. When you are finished, press [F6 (CLOSE)] to return to the PERFORM PLAY screen, and begin playing.

MEMO

By specifying sections for different parts so that they overlap each other, you can combine two or more parts only in a specific section.

Using the MIXER Screen

Selecting a Part

The currently selected part is called the "**current part**."

1. In the PART MIXER screen, press [▲] to move the cursor to the Part number.

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

MEMO

You can also select the part by pressing [PART SELECT] to make it light and pressing PART SELECT [1]–[8].

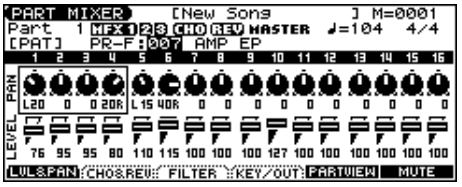
* *To select parts 9–16, press [9-16] to make it light, and then press PART SELECT [9]–[16].*

Selecting the Sound for a Part

You can switch the patch that is assigned to a part.

1. Select the part whose sound you want to switch.

2. Press [▲] [▼] [◀] [▶] to move the cursor to the patch number or patch group.



3. Use the VALUE dial or [INC] [DEC] to select a patch.

Selecting the Rhythm Set

1. Select a part.

2. Press [▲] [▼] [◀] [▶] to move the cursor to the following location.

3. Use the VALUE dial or [INC] [DEC] to select "RHY."

The rhythm set will be selected.

Editing the Part Settings

In the PART MIXER screen you can set the following parameters for each part.

1. **Press MODE [PART MIXER] to access the PART MIXER screen.**
2. **Press [F1 (LVL&PAN)]–[F4 (KEY/OUT)] to select the function.**
3. **Use [▲] [▼] [◀] [▶] to select the parameter and part that you want to edit.**
4. **Use the VALUE dial or [INC] [DEC] to change the setting.**

Parameter (Function Button)		Explanation
[F1 (LVL&PAN)]		The part's volume (Level, p. 64) and panning (left/right position) (Pan, p. 64)
[F2 (CHO&REV)]		The amount of signal sent from each part to chorus (Chorus, p. 65) and to reverb (Reverb, p. 65)
[F3 (FILTER)]		The part's CUTOFF and RESONANCE values
[F4 (KEY/OUT)]	KEY	The part's pitch (semitone units, +/-4 octaves) (Coarse, p. 65)
	KBD	Keyboard Switch (p. 60)
	RHY	Rhythm Part
	ARP	Arpeggio Part (p. 74)
	OUT	Output Assign (Asgn, p. 65)

Silencing the Playback of a Specific Part (Mute)

When playing along with a song, you can turn off (i.e., mute) parts you don't want to hear. This allows you to turn off the melody part for karaoke applications or for practicing the muted part.

1. **Press MODE [PART MIXER] to access the PART MIXER screen.**
2. **Press [F6 (MUTE)].**
   The Part Mute window appears.
3. **Press [◀] [▶] to select the part you want to mute.**
4. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select "ON."**
   Parts whose mute setting is "ON" will not be heard.

   MEMO

   Press [PART SELECT] so it's lit, then press PART SELECT [1]–[8] to turn on/off the selected part.

   * *To turn parts 9–16 on/off, press [9-16] so it's lit, then press PART SELECT [9]–[16].*
5. **Press [F6 (CLOSE)] to return to the previous screen.**

   MEMO

   This setting can be saved as a performance setting.

   * *Part Mute does not turn off the MIDI receive switch; rather, it sets the volume to the minimum setting to silence the sound. Therefore, MIDI messages are still received.*

Creating a Performance

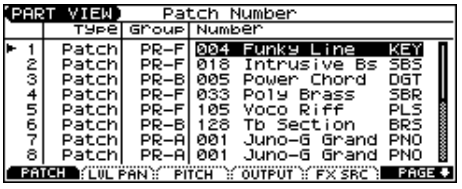
With the JUNO-G, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating Performances, and the functions of the Performance parameters.

Adjusting the Parameters of Each Part

In Performance mode you can view the part settings as a list. This is called the "**PART VIEW**" screen. In this screen you can view a list that shows settings for eight parts at once, such as the patch assigned to each part, and its volume and pan settings. You can also edit these settings here, and make detailed settings that cannot be made in the PERFORM PLAY screen, or PART MIXER screen.

1. Access the PERFORM PLAY screen or the PART MIXER screen.

2. Press [F5 (PARTVIEW)].
The PART VIEW screen will appear.



3. Press [▲] [▼] to select the part.

4. Press [F1]–[F6], and/or [◀] [▶] to select the parameter.
The name of the parameter at the cursor location is displayed in the top line of the PART VIEW screen.

5. Use the VALUE dial or [INC] [DEC] to change the value.

6. When you've finished making settings, press [EXIT] to return to the previous screen.
If you return to the previous screen without saving, an "*" will be displayed at the left of the performance group.

NOTE
If you turn off the power or select a different sound while the display indicates "*," your edited rhythm set will be lost.

Initializing Performance Settings

"Initialize" means to return the settings of the currently selected sound to a standard set of values.

* *The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the JUNO-G's settings to their factory values, perform a Factory Reset (p. 164).*

1. Press MODE [PERFORM] to access the PERFORM PLAY screen.

2. Select the Performance that you want to initialize (p. 59).

3. Hold down [SHIFT] and press [F6 (INIT)].
The Performance Initialize window appears.

4. Press [▲] [▼] to select the initialization type.

Default: Resets the currently selected performance in the Temporary memory to the standard values. Use this setting when you wish to create a sound from scratch.

Sound Control: Initializes the values of the following part parameters.
Cutoff Offset, Resonance Offset, Attack Time Offset, Release Time Offset, Decay Time Offset, Vibrato Rate, Vibrato Depth, Vibrato Delay

5. Press [F6 (SELECT)].
A message will ask you for confirmation.

6. Press [F6 (EXEC)].
The initialization will be carried out.

* *To cancel, press [F5 (CANCEL)].*

Changing the Settings of the Patch Assigned to a Part

When using patches (or rhythm sets) in Performance mode, some settings such as effects settings will be affected by Performance settings. If you wish to edit a patch (rhythm set) while hearing how it will sound in the Performance, use this procedure:

1. Make sure that MODE [PERFORM] is lit.

2. Press EDIT [PATCH].
The patch (rhythm set) assigned to the current part is displayed in the PATCH EDIT screen.

3. The rest of the procedure is the same as when making changes in Patch mode (p. 30, p. 49).

NOTE
When you've edited a patch, press EDIT [WRITE] to save the patch.

Saving a Performance You've Created (Write)

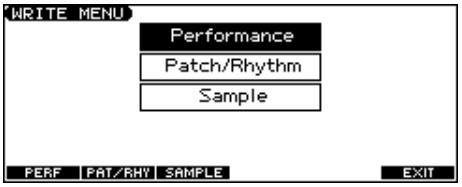
Changes you make to sound settings are temporary, and will be lost if you turn off the power or select another sound. If you want to keep the modified sound, you must save it in the internal USER group (user memory) or CARD group (memory card).
When you edit the settings of a Performance, an "*" will appear in the PERFORM PLAY screen.

NOTE
When you perform the save procedure, the data that previously occupied the save destination will be lost.

1. Edit the performance.

2. Press [WRITE].

The WRITE MENU screen appears.



3. Press [F1 (PERF)].

* *Alternatively, you can use [▲] [▼] to select "Performance," and then press [ENTER].*

The PERFORMANCE NAME screen appears.

4. Assign a name to the performance.

cf.

For details on assigning names, refer to **Assigning a Name** (p. 24).

5. When you have finished inputting the name, press [F6 (WRITE)].

A screen will appear, allowing you to select the write-destination performance.

6. Use the VALUE dial, [INC] [DEC], or [▲] [▼] and [F1 (USER)] [F2 (CARD)] to select the write destination and rhythm set number.

7. Press [F6 (WRITE)].

A message will ask you for confirmation.

8. Press [F6 (EXEC)] to execute the save operation.

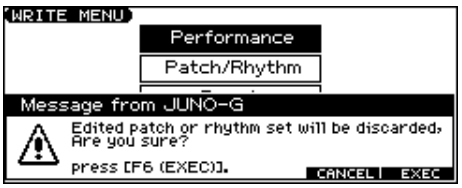
* *To cancel, press [F5 (CANCEL)].*

NOTE

Never switch off the JUNO-G while data is being saved.

When Changing the Settings for the Patch or Rhythm Set Assigned to a Part in a Performance

If you've edited a patch or rhythm set assigned to a part in a performance and then try to save the performance without first saving the edited patch or rhythm set, the following message appears.



In such cases, first save the patches and rhythm sets, and then save the performance.

Functions of Parameters of Each Part (Performance Parameters)

[F5 (PART VIEW)]

[F1 (PATCH)]

Parameter	Value	Explanation
Type	Patch, Rhythm	Sets the assignment of a patch (Patch) or rhythm set (Rhythm) to each of the parts.
Group	USER, PR-A–F, GM, CARD, USAM, CSAM, EXP	Selects the group to which the desired patch belongs. (* If Type is Patch) **USER:** User **PR-A–F:** Preset A–F **GM:** General MIDI (GM2) **CARD:** Card **USAM:** User Sample **CSAM:** Card Sample **EXP:** Wave Expansion Board
	USER, PRST, GM, CARD, EXP	Selects the group to which the desired rhythm set belongs. (* If Type is Rhythm) **USER:** User **PRST:** Preset **GM:** General MIDI (GM2) **CARD:** Card **EXP:** Wave Expansion Board
Number	001–****	Selects the desired patch or rhythm set by its number.

* *When the cursor is at a Type, Group, or Number, you can press [ENTER] to open the PATCH LIST screen and choose a patch from the list (p. 27).*

[F2 (LVL PAN)]

Parameter	Value	Explanation
Level	0–127	Volume of each part This setting's main purpose is to adjust the volume balance between parts.
Pan	L64–0–63R	Left/right position of each part
Kbd	OFF, ON (✔)	Specifies, for each part, whether or not the keyboard controller section will be connected to the internal sound generator.
Solo	OFF, ON (✔)	Check "✔" this setting if you want to hear the part by itself; this is called "soloing" the part.
Mute	OFF, ON (✔)	Mutes (✔) or un-mutes (OFF) each part. Use this setting when, for example, you want to use the instrument for karaoke by muting the part playing the melody, or when you want to play something using a separate sound module. * *The Mute Switch parameter does not turn the part off, but sets the volume to minimum so that no sound is heard. Therefore, MIDI messages are still received.*

[F3 (PITCH)]

Parameter	Value	Explanation
Octave	-3– +3	Pitch of the part's sound (in 1-octave units) * *Note that when a rhythm set is assigned to a part, you cannot modify this parameter.*
Coarse	-48– +48	Pitch of the part's sound (in semitones, +/-4 octaves)
Fine	-50– +50	Pitch of the part's sound (in 1-cent steps; one cent is 1/100th of a semitone)
Bend	0–24, PAT	Amount of pitch change in semitones (2 octaves) that will occur when the Pitch Bend Lever is moved. The amount of change when the lever is tilted is set to the same value for both left and right sides. If you want to use the Pitch Bend Range setting of the patch assigned to the part (p. 37), set this to "PAT."

Coarse Tune and Octave Shift

The Coarse Tune and Fine Tune parameters, along with the Octave Shift parameter, can all be seen as doing the same thing to the sound, i.e., changing the pitch of the sound. For example, if C4 (Middle C) is played with the Coarse Tune parameter set to "+12," the note produced is C5 (one octave above C4). For example, if C4 (Middle C) is played with the Octave Shift parameter set to "+1," the note produced is C5 (one octave above C4).

However, internally these function very differently. When the Coarse Tune parameter is set to "+12," the pitch itself is raised one octave. On the other hand, when the Octave Shift parameter is set to "+1," it is the same as pressing the keys one octave up. In other words, use the Coarse Tune parameter when changing the pitch, and the Octave Shift parameter when you want to shift the entire keyboard, for example, when the number of keys is insufficient.

[F4 (OUTPUT)]

Parameter	Value	Explanation
Asgn	MFX 1–3, A, B, 1–4, PAT 1–3	Specifies for each part how the direct sound will be output. **MFX 1–3:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. Specify which multi-effects (1–3) will be used. **A, B:** Output to the OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1-4 jacks in mono without passing through multi-effects. **PAT 1–3:** The part's output destination is determined by the settings of the patch or rhythm set assigned to the part. Specify which multi-effects (1–3) will be used. * *If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).* * *If you've set Tone Out Assign to "MFX," set the MFX Output Assign parameter to specify the output destination of the sound that has passed through the multi-effects.* • Chorus and reverb are output in mono at all times. • The output destination of the signal after passing through the chorus is set with the Chorus Output Select and Chorus Output Assign parameters (p. 127). • The output destination of the signal after passing through the reverb is set with the Reverb Output Assign parameter (p. 127).
Output	0–127	Level of the signal that is sent to the output destination specified by Part Output Assign
Chorus	0–127	Level of the signal sent to chorus for each part
Reverb	0–127	Level of the signal sent to reverb for each part

[F5 (FX SRC)]

Parameter	Value	Explanation
MFX1–3	OFF, ON (✔)	The settings of a specific patch can be used as the settings for MFX1–MFX3, chorus, and reverb. This setting specifies the part to which this patch has been assigned. If no part is selected, the settings of the Performance will be used.
Chorus		
Reverb		

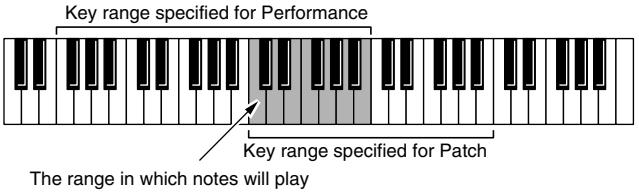
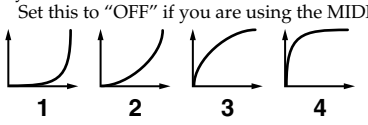
[PAGE ↓] - [F1 (OFFSET)]

Parameter	Value	Explanation
Cutoff	-64– +63	Adjusts the cutoff frequency for the patch or rhythm set assigned to a part.
Reso	-64– +63	Adjusts the Resonance for the patch or rhythm set assigned to a part.
Attack	-64– +63	Adjusts the TVA/TVF Envelope Attack Time for the patch or rhythm set assigned to a part.
Releas	-64– +63	Adjusts the TVA/TVF Envelope Release Time for the patch or rhythm set assigned to a part.
Decay	-64– +63	Adjusts the TVA/TVF Envelope Decay Time for the patch or rhythm set assigned to a part.

[PAGE ↓] - [F2 (VIBRATO)]

Parameter	Value	Explanation
Vib Rate	-64– +63	For each part, adjust the vibrato speed.
Depth	-64– +63	For each part, this adjusts the depth of the vibrato effect.
Delay	-64– +63	For each part, this adjusts the time delay until the vibrato.
Phase	OFF, ON	Set to "ON" when you want to suppress discrepancies in timing of parts played on the same MIDI channel. * *When this parameter is set to "ON," parts on the same MIDI channel are put in a condition in which their timing is matched, enabling them to be played at the same time. Accordingly, a certain amount of time may elapse between reception of the Note messages and playing of the sounds. Turn this setting to "ON" only as needed.*

[PAGE ↓] - [F3 (KEYBORD)]

Parameter	Value	Explanation
Kbd	OFF, ON (✔)	Specifies, for each part, whether or not the keyboard controller section will be connected to the internal sound generator.
K.L	C - –(Upper)	Lowest note that the tone will sound for each part.
K.U	(Lower)–G9	Highest note that the tone will sound for each part When the Key Range (p. 37) is set for each individual tone in a patch, sounds are produced in the range where the Key Range of each tone and the Key Range for the part overlap. 
Velo	-63– +63	Changes the volume and cutoff frequency for each part according to the velocity with which the keys are pressed. If you want strongly played notes to raise the volume/cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the volume/cutoff frequency, use negative (-) settings. Set Velocity Sensitivity to "0" when you want sounds played at a fixed volume and cutoff frequency, regardless of the force with which the keys are played.
Curve	OFF, 1–4	Selects for each MIDI channel one of the four following Velocity Curve types that best matches the touch of the connected MIDI keyboard. Set this to "OFF" if you are using the MIDI keyboard's own velocity curve. 
Voice	0–63, FUL	This setting specifies the number of voices that will be reserved for each part when more than 128 voices are played simultaneously. * *It is not possible for the settings of all parts to total an amount greater than 64. The remaining number of available voices will be displayed at (rest=). Pay attention to this readout as you make Voice Reserve settings.*
Ch	1–16	MIDI receive channel for each part

Calculating the Number of Voices Being Used

The JUNO-G is able to play up to 128 notes simultaneously. The polyphony, or the number of voices (sounds) does not refer only to the number of sounds actually being played, but changes according to the number of tones used in the patches, and the number of Waves used in the tones. The following method is used to calculate the number of sounds used for one patch being played.

(Number of Sounds Being Played) x (Number of Tones Used by Patches Being Played) x (Number of Waves Used in the Tones)

Realtime Stretch requires twice the normal polyphony.

[PAGE ↓] - [F4 (KEY MOD)]

Parameter	Value	Explanation
Mono/Poly	MONO, POLY, PAT	Set this parameter to "MONO" when the patch assigned to the part is to be played monophonically, or to "POLY" when the patch is to be played polyphonically. If you want to use the Mono/Poly setting of the patch assigned to the part (p. 37), set this to "PAT." * *This setting is ignored for parts to which a rhythm set is assigned.*
Legato	OFF, ON, PAT	You can add legato when performing monophonically. The term "legato" refers to a playing style in which notes are smoothly connected to create a flowing feel. This creates a smooth transition between notes, which is effective when you wish to simulate the hammering-on and pulling-off techniques used by a guitarist. Turn this parameter "ON" when you want to use the Legato feature and "OFF" when you don't. If you want to use the Legato Switch setting of the patch assigned to the part (p. 37), set this to "PAT." * *This setting is ignored for parts to which a rhythm set is assigned.*
Portament	OFF, ON, PAT	Specify whether portamento will be applied. Turn this parameter "ON" when you want to apply Portamento and "OFF" when you don't. If you want to use the Portamento Switch setting of the patch assigned to the part (p. 37), set this to "PAT."
Time	0–127, PAT	When portamento is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time. If you want to use the Portamento Time setting of the patch assigned to the part (p. 37), set this to "PAT."

[PAGE ↓] - [F5 (S.TUNE)]

Parameter	Value	Explanation
Part Scale Tune for C–B	-64– +63	Make scale tune settings for each part. Scale Tune is switched on/off by means of the Scale Tune Switch parameter (p. 159).

Equal Temperament

This tuning divides the octave into 12 equal parts, and is the most widely used method of temperament used in Western music. The JUNO-G employs equal temperament when the Scale Tune Switch is set to "OFF."

Just Temperament (Tonic of C)

Compared with equal temperament, the principle triads sound pure in this tuning. However, this effect is achieved only in one key, and the triads will become ambiguous if you transpose.

Arabian Scale

In this scale, E and B are a quarter note lower and C#, F# and G# are a quarter-note higher compared to equal temperament. The intervals between G and B, C and E, F and G#, Bb and C#, and Eb and F# have a natural third-the interval between a major third and a minor third. On the JUNO-G, you can use Arabian temperament in the three keys of G, C and F.

<Example>

Note name	Equal temperament	Just Temperament (tonic C)	Arabian Scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
Eb	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
Bb	0	+14	-10
B	0	-12	-49

MIDI Settings

1. Access the PERFORM PLAY screen, and select the Performance whose settings you wish to modify (p. 59).

2. Press [F6 (MIDI)].

The MIDI FILTER screen appears.

Parameter	Value	Explanation
Rx	OFF, ON (✔)	For each part, specify whether MIDI messages will be received (ON), or not (OFF). If this is "OFF," the part will not respond. Normally, you should leave this "ON," but you can turn it "OFF" when you do not want a specific part to be playing during song playback.
PC (Program Change)	OFF, ON (✔)	For each MIDI channel, specify whether MIDI messages will be received (ON), or not (OFF).
BS (Bank Select)		
PB (Pitch Bend)		
PA (Polyphonic Key Pressure)		
CA (Channel Pressure)		
Md (Modulation)		
Vo (Volume)		
Pn (Pan)		
Ex (Expression)		
Hd (Hold-1)		

Settings for the D Beam and the Controller

The JUNO-G lets you assign the parameters that will be affected when you operate the D Beam.

1. **Access the PERFORM PLAY screen, and select the Performance whose settings you wish to modify (p. 59).**
2. **Press [F3 (CONTROL)].**
   The CTRL SETTING screen appears.
3. **Press [F2]–[F5] and/or [▲] [▼] to select the parameter.**
4. **Use the VALUE dial or [INC] [DEC] to change the value.**
5. **Repeat steps 3–5 to set each parameter you want to edit.**
6. **Press [WRITE] to save the changes you've made.**
   If you do not wish to save changes, press [EXIT] to return to the PERFORM PLAY screen.

* *Settings for the Active Expression and Solo Synth are saved for system settings. Press [F6 (WRITE)] to execute the write operation.*
If you return to the PERFORM PLAY screen without saving, an "*" will be displayed at the left of the Performance group.

NOTE

If you turn off the power or select a different sound while the display indicates "*," your edited Performance will be lost.

[F2 (TEMPO)]

Recommended Tempo

If you want the song recorder tempo to change when you switch Performances, specify the tempo that will follow this change. This setting is valid when the Seq Tempo Override parameter is "ON." In order to enable this setting, turn on the Tempo Override parameter.

VALUE: 20–250

* *This value is specified independently for each performance. This means that when you switch performances, the tempo setting of the JUNO-G will change.*

* *The song recorder tempo will be overwritten to the new tempo when you switch performances.*

[F3 (DB ASGN)]

For details, refer to **ASSIGNABLE** (p. 71).

[F4 (DB EXP)]

For details, refer to **ACTIVE EXPRESSION** (p. 71).

[F5 (DB SYN)]

For details, refer to **SOLO SYNTH** (p. 70).

Control Switch Settings [F1 (CTRL SW)]

You can change controller switch on/off settings for each patch in the performance.

1. **In the CONTROL SETTING(PERF) screen, press [F1 (CTRL SW)].**
   The CONTROL SW(PERF) screen appears.
2. **Use [▲] [▼] [◀] [▶] to select the parameter.**
3. **Use the VALUE dial or [INC] [DEC] to change the setting.**
4. **Repeat steps 2–3 to set each parameter you want to edit.**
5. **Press [F6 (EXIT)] to return to the previous screen.**

[F1 (CTRLSW)]

Parameter	Value	Explanation
P.B	OFF, ON (✔)	For each part, specify whether MIDI Pitch Bend messages will be transmitted.
Mod		For each part, specify whether MIDI Modulation messages will be transmitted.
Hold		For each part, you can specify whether control messages from a pedal connected to the HOLD PEDAL jacks will be transmitted.
Ctrl		For each part, you can specify whether control messages from a pedal connected to the CONTROL PEDAL jacks will be transmitted.
D Beam		Specifies whether each part will be controlled by the D Beam.
Knob C/R		On/off setting for allowing the SOUND MODIFY section's CUTOFF/RESONANCE knob to control each part.

[F2 (EXT)]

Parameter	Value	Explanation
Bank Sel (MSB)	0–127, OFF	If you want a Bank Select number MSB (controller number 0) to also be transmitted when you switch Performances, specify the value that you want to transmit (0–127) for each part. If you do not want this message to be transmitted, set this to "OFF." * *The data of the part for which the Keyboard Switch is turned off will not be transmitted.*
Bank Sel (LSB)	0–127	If you want a Bank Select number LSB (controller number 32) to also be transmitted when you switch Performances, specify the value that you want to transmit (0–127) for each part. * *The data of the part for which the Keyboard Switch is turned off will not be transmitted.*
Prog	1–128, OFF	If you want a Program Change number to also be transmitted when you switch Performances, specify the value that you want to transmit (0–128) for each part. If you do not want this message to be transmitted, set this to "OFF." * *The data of the part for which the Keyboard Switch is turned off will not be transmitted.*
Level	0–127, OFF	If you want Volume messages to also be transmitted when you select a Performance, specify the desired value (0–127) for the part. If you do not want this message to be transmitted, set this to "OFF." * *The data of the part for which the Keyboard Switch is turned off will not be transmitted.*
Pan	L64–0–63R, OFF	If you want Pan messages to also be transmitted when you select a Performance, specify the desired value (L64–0–63R) for the part. If you do not want this message to be transmitted, set this to "OFF." * *These messages will not be transmitted by parts whose Keyboard Switch is turned off.*

Modifying the Sound in Real Time

You can use the D Beam controller or a control pedal to modify the sound while you perform.

Here we will explain the procedures and settings for using these functions in Patch mode. The operations are the same in Performance mode.

D Beam Controller

The **D Beam controller** can be used simply by waving your hand over it. It can be used to apply various effects, depending on the function that is assigned to it. You can also create effects in which the sound changes instantaneously, in a way that would not be possible by operating a knob or the bender lever. On the JUNO-G, the D Beam controller can be used not only to modify the sounds, but also to control the pitch of a monophonic (solo) synthesizer sound.

1. Press either the D BEAM [SOLO SYNTH], [ACTIVE EXPRESS], or [ASSIGNABLE] button to turn on the D Beam controller.

[SOLO SYNTH]: Lets you use the D Beam as a monophonic synthesizer.

[ACTIVE EXPRESS]: The D Beam will add the ideal type of expression for each sound.

[ASSIGNABLE]: Operates the function assigned to the D Beam controller.

2. While you play the keyboard to produce sound, place your hand above the D Beam controller and move it slowly up and down.

An effect will be applied to the sound, depending on the function that is assigned to the D Beam controller.

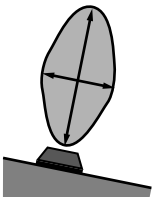
3. To turn off the D Beam controller, once again press the button you pressed in step 1 so the indicator goes out.

MEMO

If Performance mode is selected, the D Beam controller on/off setting is saved for each performance as part of the performance settings.

The usable range of the D Beam controller

The following diagram shows the usable range of the D Beam controller. Waving your hand outside this range will produce no effect.



NOTE

The usable range of the D Beam controller will become extremely small when used under strong direct sunlight. Please be aware of this when using the D Beam controller outside.

NOTE

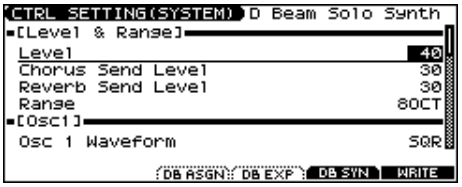
The sensitivity of the D Beam controller will change depending on the amount of light in the vicinity of the unit. If it does not function as you expect, adjust the D Beam Sens parameter as appropriate for the brightness of your location. Increase this value will raise the sensitivity (p. 162).

SOLO SYNTH

On the JUNO-G you can play a monophonic synthesizer whose pitch is controlled by the D Beam.

1. Hold down [SHIFT] and press D BEAM [SOLO SYNTH].

A screen like the following appears.



2. Press [▲] [▼] to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make the setting.

4. If you want to save the settings, press [F6 (WRITE)].

TIP

Press [F3 (DB ASGN)] to access the D Beam assignment screen, or [F4 (DB EXP)] to access the D Beam active expression screen.

5. Press [EXIT] to return to the previous screen.

MEMO

Setting for the Solo Synth are saved for system settings.

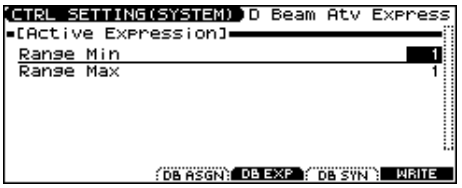
Parameter	Value	Explanation
Level & Range		
Level	0–127	Sets the volume.
Chorus Send Level	0–127	Level of the signal sent to chorus
Reverb Send Level	0–127	Level of the signal sent to reverb
Range	2OCT, 4OCT, 8OCT	Range in which the pitch of the solo synth will vary
Osc1		
Osc 1 Waveform	SAW, SQR	Waveform **SAW:** Sawtooth wave **SQR:** Square wave
Osc 1 Pulse Width	0–127	Pulse width of the waveform By cyclically modifying the pulse width you can create subtle changes in the tone. * *The Pulse Width is activated when "SQR" is selected with OSC1/2 waveform.*
Osc 1 Coarse Tune	-48– +48	Pitch of the tone's sound (in semitones, +/-4 octaves)
Osc 1 Fine Tune	-50– +50	Pitch of the tone's sound (in 1-cent steps)
Osc2 & Sync		
Osc 2 Waveform	(same as Osc 1)	
Osc 2 Pulse Width		
Osc 2 Coarse Tune		
Osc 2 Fine Tune		
Osc 2 Level	0–127	Adjust the level.
Osc Sync Switch	OFF, ON	Turning this switch on produces a complex sound with many harmonics. This is effective when the OSC1 pitch is higher than the OSC2 pitch.
Filter		
Filter Type	OFF,LPF, BPF, HPF, PKG	Type of filter **OFF:** No filter is used. **LPF:** Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff) in order to round off, or un-brighten the sound. **BPF:** Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. **HPF:** High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. **PKG:** Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency.
Cutoff	0–127	Frequency at which the filter begins to have an effect on the waveform's frequency components
Resonance	0–127	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. * *Excessively high settings can produce oscillation, causing the sound to distort.*
LFO		
LFO Rate	0–127	Modulation speed of the LFO
LFO Osc 1 Pitch Depth	-63– +63	Depth to which the LFO will modulate the Osc 1 pitch
LFO Osc 2 Pitch Depth	-63– +63	Depth to which the LFO will modulate the Osc 2 pitch
LFO Osc 1 Pulse Width Depth	-63– +63	Depth to which the LFO will modulate the pulse width of the Osc 1 waveform * *The Pulse Width is activated when "SQR" is selected with Osc 1 waveform.*
LFO Osc 2 Pulse Width Depth	-63– +63	Depth to which the LFO will modulate the pulse width of the Osc 2 waveform * *The Pulse Width is activated when "SQR" is selected with Osc 2 waveform.*

ACTIVE EXPRESSION

You can use the D Beam to apply the ideal type of expression for each sound.

* *The way in which expression is applied will differ for each sound. For some sounds, the effect may be difficult to notice.*

1. Hold down [SHIFT] and press D BEAM [ACTIVE EXPRESS].
A screen like the following appears.



2. Press [▲] [▼] to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make the setting.

TIP

Press [F3 (DB ASGN)] to access the D Beam assignment screen, or [F5 (DB SYN)] to access the D Beam solo synth screen.

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

MEMO

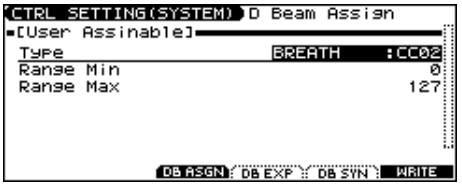
Setting for the Active Expression are saved for system settings.

Parameter	Value	Explanation
Range Min	0–127	Lower limit of the range of the D Beam controller
Range Max	0–127	Upper limit of the range of the D Beam controller By setting Range Max below Range Min you can invert the range of change.

ASSIGNABLE

You can assign various functions to the D Beam controller and apply a wide range of effects to the sound in real time.

1. Hold down [SHIFT] and press D BEAM [ASSIGNABLE].
A screen like the following appears.



2. Press [▲] [▼] to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make the setting.

TIP

Press [F4 (DB EXP)] to access the D Beam active expression screen, or [F5 (DB SYN)] to access the D Beam solo synth screen.

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

MEMO

The settings for the ASSIGNABLE are saved independently for each performance as part of the performance settings. This lets you create performances that make effective use of controller settings.

MEMO

If Patch mode is selected, this is saved as part of the system settings. If you want to save the settings, press [F6 (WRITE)].

Parameter	Value	Explanation
Type	CC01–31, 33–95, BEND UP, BEND DOWN, START/STOP, TAP TEMPO, ARP GRID, ARP DURATION, ARP MOTIF, ARP OCTAVE UP, ARP OCTAVE DOWN, ARP STEP, AFTERTOUCH	Function controlled by the D Beam controller **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **BEND UP:** Controls the pitch as specified by the "Pitch Bend Range Up" setting (p. 37). **BEND DOWN:** Controls the pitch as specified by the "Pitch Bend Range Down" setting (p. 37). **START/STOP:** Starts/Stops the song recorder. **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you move your hand over the D Beam controller). **ARP GRID:** Arpeggio Grid **ARP DURATION:** Duration of each arpeggiated note **ARP MOTIF:** Arpeggio Motif **ARP OCTAVE UP:** The range in which the arpeggio is sounded will rise in steps of an octave (maximum 3 octaves). **ARP OCTAVE DOWN:** The range in which the arpeggio is sounded will lower in steps of an octave (maximum 3 octaves). **ARP STEP:** Controls the playback position of the arpeggio pattern. **AFTERTOUCH:** Aftertouch
Range Min	0–127	Lower limit of the range of the D Beam controller
Range Max	0–127	Upper limit of the range of the D Beam controller By setting Range Max below Range Min you can invert the range of change.

Control Pedal

You can modify the sound by pressing a pedal that is connected to the rear panel HOLD PEDAL jack or CONTROL PEDAL jack.

Pedal such as expression pedals (EV-5; available separately), pedal switches (DP series; available separately), or foot switches (BOSS FS-5U; available separately) can be connected to the JUNO-G.

1. **Access the Patch Play screen (p. 25).**
2. **While playing the keyboard to produce sound, operate a pedal.**
   The sound will change according to the function that is assigned to the control pedal.

Control Pedal Settings

1. **Press EDIT [MENU].**
2. **Press [▲] [▼] to select "2. System," and then press [ENTER].**
   The System Menu window appears.

3. **Press [F2 (KBD/CTRL)], and then press [F2 (PDL BND)].**
   A screen like the following appears.

4. **Press [▲] [▼] to select the parameter.**
5. **Use the VALUE dial or [INC] [DEC] to make the setting.**

Parameter	Value	Explanation
Control Pedal Assign	CC01–31, 33–95, BEND UP, BEND DOWN, AFTERTOUCH, OCT UP, OCT DOWN, START/STOP, PUNCH IN/OUT, TAP TEMPO, PROG UP, PROG DOWN, FAVORITE UP, FAVORITE DOWN, ARP SW, RHY START/STOP, CHORD SW, LIVE SET UP, LIVE SET DOWN, LOOP	Function of the pedal connected to the CONTROL PEDAL jack **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **BEND UP:** Controls the pitch as specified by the "Pitch Bend Range Up" setting (p. 37). **BEND DOWN:** Controls the pitch as specified by the "Pitch Bend Range Down" setting (p. 37). **AFTERTOUCH:** Aftertouch **OCT UP:** Pedal press raises the key range in octave steps (up to 3 octaves higher). **OCT DOWN:** Pedal press lowers the key range in octave steps (up to 3 octaves lower). **START/STOP:** The song recorder will start/stop. **PUNCH IN/OUT:** Manual punch-in/out recording will start/stop. **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you press the pedal). **PROG UP:** The next sound number will be selected. **PROG DOWN:** The previous sound number will be selected. **FAVORITE UP:** The favorite patch/performance of the next number or bank will be selected. **FAVORITE DOWN:** The favorite patch/performance of the previous number or bank will be selected. **ARP SW:** Arpeggio/Rhythm function on/off **RHY START/STOP:** Rhythm pattern playback on/off **CHORD SW:** Switches the Chord Memory function on/off. **LIVE SET UP:** Switches to the next step within a Live Setting list. **LIVE SET DOWN:** Switches to the previous step within a Live Setting list. **LOOP:** Loop Playback on/off
Control Pedal Polarity Hold Pedal Polarity	STANDARD, REVERSE	Polarity of the pedal On some pedals, the electrical signal output by the pedal when it is pressed or released is the opposite of other pedals. If your pedal has an effect opposite of what you expect, set this parameter to "REVERSE." If you are using a Roland pedal (that has no polarity switch), set this parameter to "STANDARD."
Continuous Hold Pedal	OFF, ON	Determines whether the HOLD PEDAL jack will provide support for half-pedaling (ON), or not (OFF). When this is set to "ON," you can then connect an optional damper pedal (DP-10, etc.), and employ pedal work to achieve even finer control in performances in which piano tones are used.

6. **If you want to save the settings, press [F6 (WRITE)].**
7. **Press [EXIT] to return to the previous screen.**

Playing Arpeggios

About Arpeggio

The JUNO-G's Arpeggio function lets you produce arpeggios automatically; simply hold down some keys, and a corresponding arpeggio will be played automatically.

Not only can you use the factory-set **Arpeggio Styles**, which determine the way the arpeggio is played, but you can also freely rewrite Styles and enjoy performing your own original arpeggios.

An Arpeggio Style is not part of any Patch or Performance, but rather independent data; you can store up to 128 Arpeggio Styles. Therefore you can use a single Arpeggio Style in different Patches and Performances. Arpeggio settings can be saved independently for each performance. However, they cannot be saved as part of a patch.

What's more, you can perform in ensemble using these arpeggios and rhythm patterns (p. 79).

Playing Arpeggios

Turning Arpeggio On and Off

1. Press [ARPEGGIO] to turn it on.
The button will light.

* *You can make arpeggio settings in this screen.*

* *Press [EXIT] to return to the previous screen.*

2. Play a chord on the keyboard.
The JUNO-G will play an arpeggio, according to the notes forming the chord you have just voiced.

3. To finish playing arpeggios, press [ARPEGGIO] again to turn it off.

MEMO

In arpeggio settings, the **Style (Arpeggio Style)** (p. 74) is particularly important. The playback pattern of the arpeggio is determined mainly by this selection.

Using in Combination with the Chord Memory Function

When performing with the Arpeggio, you can also use it along with the Chord Memory function (p. 77). After first storing complex Chord Forms in memory, you can then call them up when Arpeggio function is on, and you can easily play complex arpeggio sounds just by pressing a single key.

Determining the Tempo for Arpeggio Performances

This sets the arpeggio tempo.

1. Press SONG RECORDER [TEMPO].
The current tempo value appears in the display.

2. Use the VALUE dial or [INC] [DEC] to set the tempo value (5–300), or set the value by tapping [F4 (TAP)] a number of times with the same rhythm (Tap Tempo).

* *If you press [F5 (CLICK)] to add a check mark (✔), the click will sound.*

3. When you have made the setting, press [F6 (CLOSE)].

Holding an Arpeggio

By using the following procedure, you can produce arpeggios even without continuing to press the keyboard.

1. Press [ARPEGGIO] to turn on the arpeggio.
The ARPEGGIO STYLE screen appears.

2. Press [F1 (HOLD)] to add a check mark (✔).

3. Play a chord on the keyboard.

4. If you play a different chord or notes while the arpeggio is being held, the arpeggio will change accordingly.

5. To cancel Arpeggio Hold, press [F1 (HOLD)] once again.

When Using a Hold Pedal

If you play an arpeggio while pressing the hold pedal, the arpeggio will continue to be played even if you release the chord.

1. Connect an optional pedal switch (DP series etc.) to the HOLD PEDAL jack.

2. Press [ARPEGGIO] to turn on the arpeggio.

3. Play a chord while pressing the hold pedal.

4. If you play a different chord or notes while the arpeggio is being held, the arpeggio will change accordingly.

Playing Arpeggios Along with the Song Recorder

When using arpeggios while the song recorder is playing, or when you want to record arpeggios into the song recorder in real time, you can synchronize the arpeggio with the start/stop timing of the song recorder.

For details, refer to **Arp/Rhythm Sync Switch** (p. 162).

Arpeggio Settings

1. Press [ARPEGGIO] so it's lit. Alternatively, hold down [SHIFT] and press [ARPEGGIO].

The ARPEGGIO STYLE screen appears.

* *When you hold down [SHIFT] and press [ARPEGGIO], the ARPEGGIO STYLE screen will appear regardless of whether the arpeggio function is on or off.*

2. Press [▲] [▼] to select the parameter.

3. Use the VALUE dial or [INC] [DEC] to make the setting.

Parameter	Value	Explanation
(Arpeggio Style)	U001–128 (User), P001–128 (Preset)	This selects the arpeggio's basic performance Style. The arpeggio styles are kept in preset memory and user memory.
Grid	1/4, 1/8, 1/8L, 1/8H, 1/12, 1/16, 1/16L, 1/16H, 1/24	This sets the particular note division and resolution in a "single grid" used in creating the arpeggio in an Arpeggio Style, and how much of a "shuffle" syncopation is to be to applied (none/weak/strong) to it (grid type). **1/4:** Quarter note (one grid section = one beat) **1/8:** Eighth note (two grid sections = one beat) **1/8L:** Eighth note shuffle Light (two grid sections = one beat, with a light shuffle) **1/8H:** Eighth note shuffle Heavy (two grid sections = one beat, with a heavy shuffle) **1/12:** Eighth note triplet (three grid sections = one beat) **1/16:** Sixteenth note (four grid sections = one beat) **1/16L:** Sixteenth note shuffle Light (four grid sections = one beat, with a light shuffle) **1/16H:** Sixteenth note shuffle Heavy (four grid sections = one beat, with a heavy shuffle) **1/24:** Sixteenth note triplet (six grid sections = one beat) * *Grid settings are shared with the rhythm pattern.*
Duration	30–120%, Full	This determines whether the sounds are played staccato (short and clipped), or tenuto (fully drawn out). **30–120:** For example, when set to "30," the length of the note in a grid (or when a series of grids is connected with ties, the final grid) is 30% of the full length of the note set in the grid type. **Full:** Even if the linked grid is not connected with a tie, the same note continues to sound until the point at which the next new sound is specified. * *Duration settings are shared with the rhythm pattern.*
Motif	(See p. 75.)	Refer to **Selecting Ascending/Descending Variations (Motif)** (p. 75).
Velocity	REAL, 1–127	Specifies the loudness of the notes that you play. **REAL:** If you want the velocity value of each note to depend on how strongly you play the keyboard, set this parameter to REAL. **1–127:** If you want each note to have a fixed velocity regardless of how strongly you play the keyboard, set this parameter to the desired value.
OctRange	-3– +3	This adds an effect that shifts arpeggios one cycle at a time in octave units (octave range). You can set the shift range upwards or downwards (up to three octaves up or down).
Accent	0–100	When you play arpeggios, the velocity of each arpeggiated note is determined by the velocity of the notes programmed within the arpeggio style. You can adjust the amount ("spread") of this dynamic variation. With a setting of "100," the arpeggiated notes will have the velocities that are programmed by the arpeggio style. With a setting of "0," all arpeggiated notes will be sounded at a fixed velocity.
Part (Displayed in Performance mode)	Part1–16	Here's how to specify the part that will use the arpeggio in Performance mode. You can specify only one part for playing arpeggios. If a rhythm set is assigned to a part in Performance mode, you can play a rhythm pattern along with the arpeggios. * *The part you select here functions for both the arpeggio and the chord memory functions.*

4. When you have made the setting, press [EXIT].

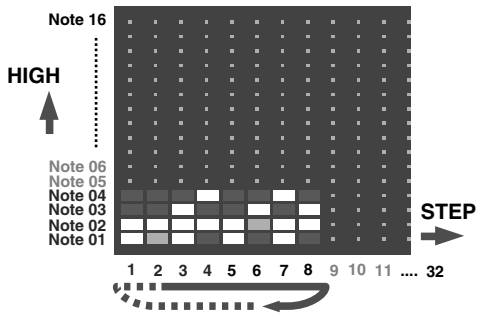
About Arpeggio Styles

An Arpeggio Style is a series of data for basic arpeggio patterns and chord styles recorded in the form of a grid consisting of a maximum of 32 steps x 16 pitches. Each grid contains one of the following kinds of data.

- **ON:** Note On (with Velocity data)
- **TIE:** Tie (hold of the previous note)
- **REST:** Rest (no sound played)

The keys that are pressed along with the sequence in which they are pressed is referenced to the "lowest-pitched key during input." Thus, you can use a single Arpeggio Style in different Patches and Performances at the same time.

A Arpeggio Style is not part of any patch or Performance, but rather independent data.



Selecting Ascending/Descending Variations (Motif)

This selects the method used to play sounds (motif) when you have a greater number of notes than programmed for the Arpeggio Style.

* *When the number of keys played is less than the number of notes in the Style, the highest-pitched of the pressed keys is played by default.*

Value:

Up (L): Only the lowest of the keys pressed is sounded each time, and the notes play in order from the lowest of the pressed keys.

Up (L&H): Notes from both the lowest and highest pressed keys are sounded each time, and the notes play in order from the lowest of the pressed keys.

Up (_): The notes play in order from the lowest of the pressed keys. No one note is played every time.

Down (L): Only the lowest of the keys pressed is sounded each time, and the notes play in order from the highest of the pressed keys.

Down (L&H): Notes from both the lowest and highest pressed keys are sounded each time, and the notes play in order from the highest of the pressed keys.

Down (_): The notes play in order from the highest of the pressed keys. No note is played every time.

U/D (L): Notes will be sounded from the lowest to the highest key you press and then back down to the lowest key, with only the lowest key sounded each time.

U/D (L&H): Notes from both the lowest and highest pressed keys are sounded each time, and the notes play in order from the lowest of the pressed keys and then back again in the reverse order.

U/D (_): The notes play in order from the lowest of the pressed keys, and then back again in the reverse order. No note is played every time.

Rand (L): Notes will be sounded randomly for the keys you press, with only the lowest key sounded each time.

Rand (_): Only the lowest of the keys pressed is sounded each time, the notes you press will be sounded randomly. No note will sound each time.

Phrase: Pressing just one key will play a phrase based on the pitch of that key. If you press more than one key, the key you press last will be used.

<Example>

Action of a Style starting from the lowest note, "1-2-3-2" when the keys "**C**-D-E-F-**G**" are played

- When "UP (L)" is selected as the motif:
  C-D-E-D -> **C**-E-F-E -> **C**-F-G-F (-> repeated)
- When "UP (_)" is selected as the motif:
  C-D-E-D -> D-E-F-E -> E-F-G-F (-> repeated)
- When "UP&DOWN (L&H)" is selected as the motif:
  C-D-**G**-D -> **C**-E-**G**-E -> **C**-F-**G**-F -> **C**-E-**G**-E (-> repeated)

Creating an Arpeggio Style (Arpeggio Style Edit)

In addition to using the built-in arpeggio styles, you are free to create your own. After creating an original arpeggio style, you can store it in the internal user memory.
Broadly speaking, there are two ways to create an arpeggio style.

Step-recording

In this method, you use the keyboard to step-record your arpeggio. Each time you input a note, you will advance to the next step. This method is convenient when you want to create an arpeggio from scratch using a Style that contains no data.

MEMO

If you want to create "from scratch," you'll need to initialize the Style. In the ARPEGGIO STYLE EDIT screen, hold down [SHIFT] and press [F4 (INIT)]. A message will ask whether you want to initialize; press [F6 (EXEC)] to execute initialization.

1. **Press [ARPEGGIO] so it's lit. Alternatively, hold down [SHIFT] and press [ARPEGGIO].**

* *When you hold down [SHIFT] and press [ARPEGGIO], the ARPEGGIO STYLE screen will appear regardless of whether the arpeggio function is on or off.*

2. **Press [F5 (EDIT)].**
   The ARPEGGIO STYLE EDIT screen appears.
3. **Press [F1 (SETUP)].**
   The Arpeggio Setup window appears.
4. **Press [▲] to move the cursor to "End Step."**
5. **Use the VALUE dial or [INC] [DEC] to specify the number of steps for the arpeggio style.**
6. **Press [▼] to move the cursor to "Input Velocity."**
7. **Use the VALUE dial or [INC] [DEC] to specify the velocity setting for the data you will input.**
8. **Press [F6 (CLOSE)] to close the Arpeggio Setup window.**
9. **Press [F6 (STP REC)] to add a check mark (✔).**
   Now you're ready to step-record.
   - To move to the desired input location, press [▲] [▼] [◀] [▶].
   - To input notes, play the keyboard.
   - To input a tie, press [F2 (TIE)].
   - To input a rest, press [F3 (REST)].
   - To erase the note, hold down [SHIFT] and press [F6 (CLR NOTE)].
   - To erase all notes at the current step, hold down [SHIFT] and press [F5 (CLR STEP)].
   - By pressing [F4 (PREVU)] to add a check mark (✔) you can listen to the style that you're entering.

MEMO

A maximum of sixteen note numbers (pitches) can be used in a single style.

10. When you have finished, press [F5 (EXIT)].

Using the VALUE Dial or [INC] [DEC] to Input Values

In this method, you'll use the cursor to specify the step or pitch that you want to input, and use the dial or [INC] [DEC] to input values. This method is convenient when you want to edit or modify previously input data.

1. Press [ARPEGGIO] so it's lit. Alternatively, hold down [SHIFT] and press [ARPEGGIO].

* *When you hold down [SHIFT] and press [ARPEGGIO], the ARPEGGIO STYLE screen will appear regardless of whether the arpeggio function is on or off.*

2. Press [F5 (EDIT)].
The ARPEGGIO STYLE EDIT screen appears.

3. Press [F1 (SETUP)].
The Arpeggio Setup window appears.

4. Press [▲] to move the cursor to "End Step."

5. Use the VALUE dial or [INC] [DEC] to specify the number of steps for the arpeggio style.

6. Press [F6 (CLOSE)] to close the Arpeggio Setup window.

7. Press [▲] [▼] [◀] [▶] to specify the step or pitch you want to input.

* *When using this method of input, you can use the keyboard to specify the pitch of the note. (Unlike when step-recording, pressing the keyboard will not actually input the note.)*

8. Input the velocity value, using either the VALUE dial or [INC] [DEC]. You can input a tie by turning VALUE all the way to the right (or using [INC] to raise the value all the way).

- You can also input a tie by pressing [F2 (TIE)].
- To input a rest, press [F3 (REST)].
- By pressing [F4 (PREVU)] to add a check mark (✔) you can listen to the style that you're entering.

MEMO

A maximum of sixteen note numbers (pitches) can be used in a single style.

9. When you have finished, press [F5 (EXIT)].

Saving the Styles You Have Created (Write)

The Styles you create are temporary; they are deleted as soon as you turn off the power or select some other Style. You can store 128 arpeggio styles in the User memory.

Arpeggio style settings are saved as independent data, not as part of the data for each patch. The settings in Patch mode, it is not possible to save arpeggio parameters (e.g., Arpeggio Style, Grid, Motif, Duration).
It can be saved to individual in Performance mode. If you want to save your settings, press [WRITE] and save the performance.

1. Create an arpeggio style.

2. Press [F6 (WRITE)].
The ARPEGGIO STYLE NAME screen appears.

3. Assign a name to the Style.

cf.

For details on assigning names, refer to p. 24.

4. When you have finished inputting the name, press [F6 (WRITE)].
A screen will appear, allowing you to select the write-destination Style.

5. Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select the write destination.

6. Press [F6 (WRITE)].
A message will ask you for confirmation.

7. To save the Style, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

NOTE

Never switch off the JUNO-G while data is being saved.

Using the Chord Memory Function

About the Chord Memory Function

Chord Memory is a function that allows you to play chords based on pre-programmed **Chord Forms**, just by pressing a single key on the keyboard. The JUNO-G can store 64 preset chord forms and 64 user chord forms. If you wish, you can overwrite any of the 64 user (factory set) chord forms.

The chord memory function operates on the arpeggio part in Performance mode. If a rhythm set is selected for that part, you can also use this to play rhythms.

NOTE

When you use the Chord Memory function with a tone for which the Mono/Poly Parameters (p. 37) is Mono, only one sound in the chord is played. When using the Chord Memory function to turn Poly the Mono/Poly Parameters.

Using in Combination with the Arpeggio Function

When performing with the Chord Form function, you can also use it along with the Arpeggio function (p. 73). After first storing complex Chord Forms in memory, you can then call them up when Arpeggio is on, and you can easily create complex arpeggio sounds just by pressing a single key.

Performing with the Chord Memory Function

Turning Chord Memory Function On and Off

1. **Press [CHORD MEMORY] to turn it on.**
   The button will light. The CHORD MEMORY screen appears.

* *In this screen you can select a chord form and make settings for the Rolled Chord function.*

* *Press [EXIT] to return to the previous screen.*

2. **Play the keyboard.**
   A chord will sound according to the currently selected chord form.
   When you press the C4 key (Middle C), the chord is played using the exact chord structure recorded in the Chord Form. This is referenced to the C4 key; parallel chords are played by pressing other keys.

3. **To finish playing chords, press [CHORD MEMORY] again to turn it off.**

Selecting Chord Forms

Changing the chord form will change the notes in the chord.

1. **Press [CHORD MEMORY] so it's lit. Alternatively, hold down [SHIFT] and press [CHORD MEMORY].**
   The CHORD MEMORY screen appears.

* *When you hold down [SHIFT] and press [CHORD MEMORY], the CHORD MEMORY screen will appear regardless of whether the arpeggio function is on or off.*

2. **Use the VALUE dial or [INC] [DEC] to select a Chord Form number.**
   U01–64: User
   P01–64: Preset
   The notes of the chord will be displayed.

3. **When you have finished selecting a Chord Form, press [EXIT].**

Sounding a chord in the order of its notes (Rolled Chord)

This causes the notes within a chord to be sounded consecutively, rather than simultaneously. Since the playback speed will change according to the force with which you play the keyboard, you can vary your playing dynamics to create a realistic simulation of playing a guitar.

1. **Press [CHORD MEMORY] so it's lit. Alternatively, hold down [SHIFT] and press [CHORD MEMORY].**
   The CHORD MEMORY screen appears.

* *When you hold down [SHIFT] and press [CHORD MEMORY], the CHORD MEMORY screen will appear regardless of whether the arpeggio function is on or off.*

2. **Press [F1 (ROLL)] to add a check mark (✔).**
   With this setting, the notes of the chord will be sounded consecutively when you play the keyboard.

Changing the order in which notes are sounded

You can change the order in which the notes of a chord are sounded.

1. **In the CHORD MEMORY screen, use [▲] [▼] to move the cursor to "Rolled Chord Type."**

2. **Use the VALUE dial or [INC] [DEC] to change a value.**

UP:	Notes will be sounded in order from bottom to top.
DOWN:	Notes will be sounded in order from top to bottom.
ALTERNATE:	The order in which the notes are sounded will change each time you play the keyboard.

Creating Your Own Chord Forms

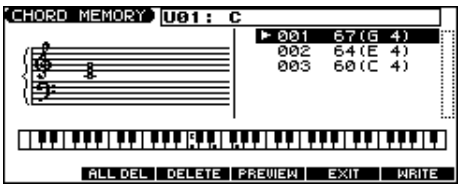
Not only can you use the prepared internal Chord Forms, which determine the constituent notes of chords played using the Chord Memory function, but you can also freely create and rewrite them as well.

1. **Press [CHORD MEMORY] so it's lit. Alternatively, hold down [SHIFT] and press [CHORD MEMORY].**
   The CHORD MEMORY screen appears.

* *When you hold down [SHIFT] and press [CHORD MEMORY], the CHORD MEMORY screen will appear regardless of whether the arpeggio function is on or off.*

2. **Use the VALUE dial or [INC] [DEC] to select a chord form.**

3. **Press [F5 (EDIT)].**
   A screen like the following appears.



4. **Use the keyboard to input the chord that you want to play.**
   When you press a key, the note will be added in the screen.
   - If you input a note by mistake, press [F3 (DELETE)]. You can also erase a note you input by pressing the same key.
   - If you want to erase all notes, press [F2 (ALL DEL)].
   - You can press [F4 (PREVIEW)] to hear the chord that you are inputting.

5. **When you have finished, press [F5 (EXIT)].**

Saving the Chord Forms You Have Created (Write)

The Chord Forms you create are temporary; they are deleted as soon as you turn off the power or select some other Chord Form. If you want to keep a Chord Form you have made, save it to the JUNO-G's user memory.

A chord form is not part of any patch or performance, but rather independent data. Therefore you can use a single chord form in different Patches and Performances.
In Performance mode you can save these settings individually for each performance. These settings cannot be saved in a patch. If you want to save your settings, press [WRITE] and save the performance.

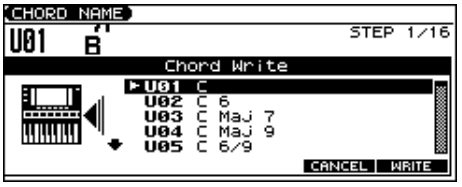
1. **Create a chord form.**

2. **Press [F6 (WRITE)].**
   The CHORD NAME screen appears.

3. **Assign a name to the Chord Form.**

cf.
For details on assigning names, refer to p. 24.

4. **When you have finished inputting the name, press [F6 (WRITE)].**
   A screen will appear, allowing you to select the write-destination Chord Form.



5. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select the write destination.**

6. **Press [F6 (WRITE)].**
   A message will ask you for confirmation.

7. **To save the Chord Form, press [F6 (EXEC].**

* *To cancel, press [F5 (CANCEL)].*

NOTE
Never switch off the JUNO-G while data is being saved.

Playing Rhythms

About Rhythm Patterns

The JUNO-G contains 256 preset rhythm patterns. You can play a variety of rhythm patterns simply by pressing the function buttons ([F1]–[F6]). In addition to using these built-in rhythm patterns, you can also create your own.

The 256 rhythm patterns are maintained as independent data; they are not part of a performance's data. This means that any one rhythm pattern can be shared by various rhythm sets or performances. In Performance mode, a number by which a rhythm pattern is recalled can be stored as one of the performance parameters. This number cannot be stored in Patch mode.

Using Rhythm Groups

A "group" consists of settings for each of the six buttons, specifying the pattern that each function button will play. The rhythm set used by that group is also stored as part of the settings.

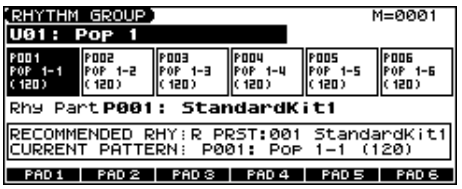
* *You are free to change how rhythm pattern numbers and rhythm sounds are assigned.*

Rhythm group data is not part of a rhythm set or performance; the 32 rhythm groups are stored as independent data. This means that any one rhythm group can be shared by various patches or performances. In addition to using the built-in rhythm groups, you can also create your own.
Rhythm Group settings can be saved independently for each performance. However, they cannot be saved as part of a patch.

Playing Rhythm

Using the Rhythm Function

1. Press [RHYTHM PATTERN].
The RHYTHM GROUP screen appears.



2. Play a function button ([F1 (PAD 1)]–[F6 (PAD 6)]).
According to the button you pressed, the assigned rhythm pattern will begin playing. The currently playing button will blink.

MEMO

The pattern or rhythm tone that is sounded by each button can be specified in Rhythm Group Edit (p. 82).

3. If you press a blinking button, the pattern will stop playing.

4. Press [EXIT] to close the RHYTHM GROUP screen.
You can also press [EXIT] to close the RHYTHM GROUP screen while a rhythm pattern is playing. In this case, you can press [RHYTHM PATTERN] once again to open the RHYTHM GROUP screen and press the blinking function button to stop the pattern playback.

* *You can also stop the pattern playback by pressing SONG RECORDER [STOP].*

Determining the Tempo for Rhythm Pattern Performances

This sets the Rhythm Pattern tempo.

1. Press SONG RECORDER [TEMPO].
The current tempo value appears in the display.

2. Use the VALUE dial or [INC] [DEC] to set the tempo value (5–300), or set the value by tapping [F4 (TAP)] a number of times with the same rhythm (Tap Tempo).

* *If you press [F5 (CLICK)] to add a check mark (✔), the click will sound.*

3. When you have made the setting, press [F6 (CLOSE)].

Select the Rhythm Group

1. Press [RHYTHM PATTERN].
The RHYTHM GROUP screen appears.

2. Use the VALUE dial or [INC] [DEC] to select a Rhythm group number.
This selects the Rhythm group's basic performance Style.
U01–32: User
P01–32: Preset

* *When you select the Rhythm group, the most suitable rhythm set is assigned to the Rhythm part. (In the screen, this is indicated by "RECOMMENDED RHY PATTERN."*

3. When you have finished selecting a Rhythm group, press [EXIT].

Recording the Rhythm Pattern Playback to Song Recorder

In the RHYTHM GROUP screen, record the rhythm pattern to Song Recorder.
In recording standby mode, when you press [PLAY] (or [F6 (START)]) the current rhythm pattern will start playback at the same time, and you can record the rhythm pattern.

TIP

If you want to record the rhythm pattern at the same time that it starts playback, set the Count In to Off in the recording standby window.

Rhythm Pattern Settings

1. Press [RHYTHM PATTERN].

2. Hold down [SHIFT] and press [F2 (RHY PTN)].
The RHYTHM PATTERN screen appears.

3. Press [▲] [▼] to select the parameter.

4. Use the VALUE dial or [INC] [DEC] to make the setting.

* *You can audition the rhythm pattern by pressing [F4 (PREVU)] to add a check mark (✔).*

Parameter	Value	Explanation
(Rhythm Pattern)	U001–256 (User), P001–256 (Preset)	This selects the rhythm's basic performance Style.
Grid	1/4, 1/8, 1/8L, 1/8H, 1/12, 1/16, 1/16L, 1/16H, 1/24	This sets the particular note division and resolution in a "single grid" used in creating the pattern in an Rhythm Pattern, and how much of a "shuffle" syncopation is to be to applied (none/weak/strong) to it (grid type). **1/4:** Quarter note (one grid section = one beat) **1/8:** Eighth note (two grid sections = one beat) **1/8L:** Eighth note shuffle Light (two grid sections = one beat, with a light shuffle) **1/8H:** Eighth note shuffle Heavy (two grid sections = one beat, with a heavy shuffle) **1/12:** Eighth note triplet (three grid sections = one beat) **1/16:** Sixteenth note (four grid sections = one beat) **1/16L:** Sixteenth note shuffle Light (four grid sections = one beat, with a light shuffle) **1/16H:** Sixteenth note shuffle Heavy (four grid sections = one beat, with a heavy shuffle) **1/24:** Sixteenth note triplet (six grid sections = one beat) * *Grid settings are shared with the arpeggio.*
Duration	30–120%, Full	This determines whether the sounds are played staccato (short and clipped), or tenuto (fully drawn out). **30–120:** For example, when set to "30," the length of the note in a grid (or when a series of grids is connected with ties, the final grid) is 30% of the full length of the note set in the grid type. **Full:** Even if the linked grid is not connected with a tie, the same note continues to sound until the point at which the next new sound is specified. * *Duration settings are shared with the arpeggio.* * *This has no effect if the Tone Env Mode parameter (p. 52) is set to "NO-SUS."*
Velocity	1–127	Specifies the loudness of the rhythm pattern.
Accent	0–100	When you play rhythm patterns, the velocity of each note is determined by the velocity of the notes programmed within the rhythm pattern. You can adjust the amount ("spread") of this dynamic variation. With a setting of "100," the notes will have the velocities that are programmed by the rhythm pattern. With a setting of "0," all notes will be sounded at a fixed velocity.

Creating a Rhythm Pattern (Rhythm Pattern Edit)

In addition to using the built-in Rhythm Patterns, you are free to create your own. After creating an original Rhythm Pattern, you can store it in the internal user memory.
Broadly speaking, there are two ways to create a Rhythm Pattern.

Step-recording

In this method, you use the keyboard to step-record your Rhythm Pattern. Each time you input a note, you will advance to the next step. This method is convenient when you want to create a Rhythm Pattern from scratch using a Pattern that contains no data.

MEMO

If you want to create "from scratch," you'll need to initialize the Pattern. In the RHYTHM PATTERN EDIT screen, hold down [SHIFT] and press [F4 (INIT)]. A message will ask whether you want to initialize; press [F6 (EXEC)] to execute initialization.

1. **Press [RHYTHM PATTERN].**
2. **Hold down [SHIFT] and press [F2 (RHY PTN)].**
3. **Press [F5 (PTN EDIT)].**
   The RHYTHM PATTERN EDIT screen appears.
4. **Press [F1 (SETUP)].**
   The Rhythm Setup window appears.
5. **Press [▲] to move the cursor to "End Step."**
6. **Use the VALUE dial or [INC] [DEC] to specify the number of steps for the Rhythm Pattern.**
7. **Press [▼] to move the cursor to "Input Velocity."**
8. **Use the VALUE dial or [INC] [DEC] to specify the velocity setting for the data you will input.**
   The data will be input with the specified velocity.
9. **Press [F6 (CLOSE)] to close the Rhythm Setup window.**
10. **Press [F6 (STP REC)] to add a check mark (✔).**
    Now you're ready to step-record.
    - To move to the desired input location, press [▲] [▼] [◀] [▶].
    - To input notes, play the keyboard.
    - To input a tie, press [F2 (TIE)].
    - To input a rest, press [F3 (REST)].
    - To erase the note, hold down [SHIFT] and press [F6 (CLR NOTE)].
    - To erase all notes at the current step, hold down [SHIFT] and press [F5 (CLR STEP)].
    - By pressing [F4 (PREVU)] to add a check mark (✔) you can listen to the pattern you've input.

    MEMO

    A maximum of sixteen note numbers (pitches) can be used in a single pattern.
11. **When you have finished, press [F5 (EXIT)].**

Using the VALUE Dial or [INC] [DEC] to Input Values

In this method, you'll use the cursor to specify the step or pitch that you want to input, and use the dial or [INC] [DEC] to input values. This method is convenient when you want to edit or modify previously input data.

1. **Press [RHYTHM PATTERN].**
2. **Hold down [SHIFT] and press [F2 (RHY PTN)].**
3. **Press [F5 (PTN EDIT)].**
   The RHYTHM PATTERN EDIT screen appears.
4. **Press [F1 (SETUP)].**
   The Rhythm Setup window appears.
5. **Press [▲] to move the cursor to "End Step."**
6. **Use the VALUE dial or [INC] [DEC] to specify the number of steps for the Rhythm Pattern.**
7. **Press [F6 (CLOSE)] to close the Rhythm Setup window.**
8. **Press [▲] [▼] [◀] [▶] to specify the step or pitch you want to input.**
   * *When using this method of input, you can use the keyboard to specify the pitch of the note. (Unlike when step-recording, pressing the keyboard will not actually input the note.)*
9. **Input the velocity value, using either the VALUE dial or [INC] [DEC]. You can input a tie by turning VALUE all the way to the right (or using [INC] to raise the value all the way).**
   - You can also input a tie by pressing [F2 (TIE)].
   - To input a rest, press [F3 (REST)].
   - By pressing [F4 (PREVU)] to add a check mark (✔) you can listen to the pattern you've input.

   MEMO

   A maximum of sixteen note numbers (pitches) can be used in a single pattern.
10. **When you have finished, press [F5 (EXIT)].**

Saving the Rhythm Pattern You Have Created (Write)

The Rhythm Patterns you create are temporary; they are deleted as soon as you turn off the power or select some other Pattern. You can store 32 Rhythm Groups in the User memory.

Rhythm pattern settings are saved as independent data, not as part of the data for each patch. The settings in Patch mode, it is not possible to save rhythm pattern parameters (e.g., Rhythm Pattern, Grid, Duration).
It can be saved to individual in Performance mode. If you want to save your settings, press [WRITE] and save the performance.

1. Create a rhythm pattern.

2. Press [F6 (WRITE)].
The RHYTHM PATTERN NAME screen appears.

3. Assign a name to the Rhythm Pattern.

cf.

For details on assigning names, refer to p. 24.

4. When you have finished inputting the name, press [F6 (WRITE)].
A screen will appear, allowing you to select the write-destination pattern.

5. Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select the write destination.

6. Press [F6 (WRITE)].
A message will ask you for confirmation.

7. To save the Rhythm Pattern, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

NOTE

Never switch off the JUNO-G while data is being saved.

Creating a Rhythm Group (Rhythm Group Edit)

Not only can you use the prepared internal Rhythm Groups that determine how rhythm are played, but you can also create them as well. This way, you can enjoy performing your own original rhythm group.

1. Press [RHYTHM PATTERN].
The RHYTHM GROUP screen appears.

2. Use the VALUE dial or [INC] [DEC] to select a rhythm group you want to edit.

3. Hold down [SHIFT] and press [F5 (GRP EDIT)].
The RHY GRP EDIT screen appears.

4. Press [▲] [▼] to select the parameter.

5. Use the VALUE dial or [INC] [DEC] to set the value.

Parameter	Value	Explanation
Current Pad Number	1–6	Select the function button for which you want to make settings. You can also choose the button that you want to set by pressing that button.
Ptn	U001–256, P001–256	Specifies the pattern number that will sound when you press the function button.
Rhy	USER: 001–032 PRST: 001–036 GM: 001–009 CARD: 001–032 EXP: 001–	Specifies which rhythm set will be used.

6. When you have finished, press [F5 (EXIT)].

Saving the Rhythm Group You Have Created (Write)

The Rhythm Groups you create are temporary; they are deleted as soon as you turn off the power or select some other Group. You can store 32 Rhythm Groups in the User memory.

Rhythm group settings are saved as independent data, not as part of the data for each patch. The settings in Patch mode, it is not possible to save rhythm group settings.
It can be saved to individual in Performance mode. If you want to save your settings, press [WRITE] and save the performance.

1. Create a rhythm group.

2. Press [F6 (WRITE)].
The RHYTHM GROUP NAME screen appears.

3. Assign a name to the Rhythm Group.

cf.

For details on assigning names, refer to p. 24.

4. When you have finished inputting the name, press [F6 (WRITE)].
A screen will appear, allowing you to select the write-destination group.

5. Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select the write destination.

6. Press [F6 (WRITE)].
A message will ask you for confirmation.

7. To save the Rhythm Group, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

NOTE

Never switch off the JUNO-G while data is being saved.

Creating a List of Frequently Used Patches, Performances, or Songs (Live Setting)

You can create a list of frequently used sounds, and recall them instantly. Since you can register Patches, Rhythm Sets, Performances, or Songs any type of sound you need can be recalled instantly regardless of the mode.

Each list (bank) can store a total of twelve patches, rhythm sets, performances, and songs. You can create twenty of these banks.

For example, you might use bank 1 to list up to twelve sounds that you use in the first song of your live set.

Recalling Sounds

1. Press MODE [LIVE SETTING].

The LIVE SETTING screen appears.

2. Use [▲] [▼] to switch banks (1–20).

3. Press [F1 (1)]–[F6 (6)] to select the number that you want to recall.

To select 7–12, hold down [SHIFT] and press [F1 (7)]–[F6 (12)].

* *The sound name or the song file name will be the function display for the numbers you register.*

TIP

You can also use [INC] [DEC] to successively recall the next number in the bank.

TIP

You can also use [◀] [▶] to select numbers within the bank. In this case, the sound will not change until you press [ENTER].

Registering a Sound

1. Access the screen of the patch, rhythm set, or performance that you want to register.

2. Hold down [SHIFT] and press MODE [LIVE SETTING].

The LIVE SET EDIT screen appears.

* *You can also access this screen by pressing EDIT [MENU] and choosing "5. Live Setting Edit" in the Top Menu window.*

3. Use [F1 (BANK UP)] [F2 (BANK DOWN)] ([▲] [▼]) to select the bank in which you want to register the sound.

4. Use [◀] [▶] to select the number in which to register the sound.

You can register the sound in any of the twelve numbers. Register the sounds in an order that's appropriate for your song or live performance.

5. Press [F6 (REGIST)] to register the sound.

For example, if you register the sound in Bank 1, number 02, the display will indicate "Regist to 1-02."

* *Press [EXIT] if you decide to cancel.*

Registering a Song

1. Hold down [SHIFT] and press MODE [LIVE SETTING].

The LIVE SET EDIT screen appears.

* *You can also access this screen by pressing EDIT [MENU] and choosing "5. Live Setting Edit" in the Top Menu window.*

2. Use [F1 (BANK UP)] [F2 (BANK DOWN)] ([▲] [▼]) to select the bank in which you want to register the song.

3. Use [◀] [▶] to select the number in which to register the song.

You can register the song in any of the twelve numbers. Register the songs in an order that's appropriate for your song or live performance.

4. Press [F3 (SET SONG)].

5. Press [F1 (USER)] (user memory) or [F2 (CARD)] (memory card) to select the registration destination.

6. Use the VALUE dial or [INC] [DEC] to move the cursor to the song you want to register, and press [F6 (SELECT)].

* *Press [EXIT] if you decide to cancel.*

Removing a Registration

1. In the LIVE SET EDIT screen, use [◀] [▶] to move the cursor to the number that you want to remove.

2. Press [F4 (REMOVE NUMBER)].

For example, if you remove the registration for Bank 1, number 02, the display will indicate "Remove 1-02," and that number becomes empty.

Removing all Registrations from a Bank

1. In the LIVE SET EDIT screen, use [F1 (BANK UP)] [F2 (BANK DOWN)] ([▲] [▼]) to move the cursor to the bank for which you want to clear the registrations.

2. Press [F5 (REMOVE BANK)].

If you clear the entire contents of Bank 1, the display will indicate "Remove Bank 1," and that bank is made empty.

Playing Back a Song

This chapter explains how you can use the JUNO-G's song recorder to play back a song.

MEMO

When you play back a song, we recommend that you use the sound generator in **Performance mode**. In Performance mode, up to sixteen different sounds can be played separately by the sixteen parts, making this mode ideal for playing songs that are multi-instrument ensembles of drums, bass, piano, etc.

With the factory settings, demo song data will automatically be loaded into Temporary Area when the JUNO-G is powered up. Here's how to change this setting so that this automatic load does not occur (i.e., the song memory will remain empty).

1. **Press [MENU].**
2. **Press [▲] [▼] to select "2. System," and then press [ENTER].**
3. **Press [F1 (GENERAL)], and then press [F2 (AUTO LD)] to select "Startup."**
4. **Press [▲] [▼] to select "Load Demo Song at Startup."**
5. **Use the VALUE dial or [INC] [DEC] to set it to "OFF."**
6. **Press [F6 (WRITE)] to save the setting.**

Loading and Playing a Song (Load Play)

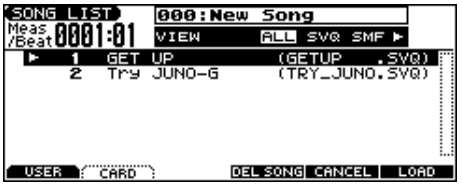
The JUNO-G can load a song from user memory or a memory card into the temporary area, and play it.

NOTE

The Temporary Song will be lost if you turn power off or load another song into Temporary Area. If Temporary Area contains a song you wish to keep, you must save that song to user memory or memory card (p. 113).

1. **Press EDIT [SONG] to access the SONG LIST screen.**

* *Pressing [SONG] toggles you between the SONG LIST screen and MIDI TRACK screen.*



* *By pressing [◀] [▶] in the above screen, you can specify the type of songs that will be displayed. If various types of songs are saved together, it will be easier to find the desired song if you restrict the displayed file types in this way.*

ALL: all songs will be displayed

SVQ: Only the SVQ song files are displayed

SMF: only Standard MIDI Files will be displayed

2. **Use the VALUE dial or [INC] [DEC] to select the song.**
   - **[F1 (USER)]:** Songs in user memory
   - **[F2 (CARD)]:** Songs on a memory card
3. **Press [F6 (LOAD)].**

   A Message will ask you for confirmation.
4. **Press [F6 (EXEC)].**

   When the song has finished loading, the performance data of the loaded song will be displayed in the MIDI TRACK screen.

* *You can also load a song by holding down [SHIFT] and pressing [WRITE] (p. 115).*

5. **Press SONG RECORDER [PLAY] to start playback.**

   When the song finishes playing, it will stop automatically. If you want to stop playback midway through the song, press [STOP].

MEMO

If you play back the song while the MIDI TRACK screen is displayed, the screen will scroll in keeping with the song playback location.

NOTE

There will be no sound if samples have not been loaded for the patches used in the song. You must load the necessary samples beforehand (p. 115).

Playing MIDI Tracks Immediately (Quick Play)

The JUNO-G can immediately play the MIDI tracks of SMF data without loading the song into the temporary area (**Quick Play**). This lets you verify the contents of a song before loading it into the temporary area.

NOTE

Quick Play does not play back the audio tracks. If you want to play the audio tracks, you must load the song into the temporary area.

1. **Press EDIT [SONG] to access the SONG LIST screen.**

* *This button is pressed to toggle between the SONG LIST screen and the MIDI TRACK screen.*

* *By pressing [◀] [▶] in the above screen, you can specify the type of songs that will be displayed. If various types of songs are saved together, it will be easier to find the desired song if you restrict the displayed file types in this way.*

ALL: all songs will be displayed

SVQ: Only the SVQ song files are displayed

SMF: only Standard MIDI Files will be displayed

2. **Use the VALUE dial or [INC] [DEC] to select the song.**
   - **[F1 (USER)]:** Songs in user memory
   - **[F2 (CARD)]:** Songs on a memory card
3. **Press SONG RECORDER [PLAY] to start playback.**

   When the song finishes playing, it will stop automatically. If you want to stop playback midway through the song, press [STOP].

* *If you want to return to the song in the temporary area, press EDIT [SONG] to access the MIDI TRACK screen, and then press [F5 (TMP SONG)].*

NOTE

There will be no sound if samples have not been loaded for the patches used in the song. You must load the necessary samples beforehand (p. 115).

Various Playback Methods

Fast-Forward and Rewind During Playback

Fast-forward, rewind, and jump can be performed during playback, as well as while stopped. Use the following procedures for each operation.

Fast-forward: Press [FWD].

Continuous fast-forward: Press and hold [FWD].

Rapid fast-forward: Hold down [FWD] and press [BWD].

Rewind: Press [BWD].

Continuous rewind: Press and hold [BWD].

Rapid rewind: Hold down [BWD] and press [FWD].

Jump to the preceding marker location:
Hold down [SHIFT] and press [BWD].

Jump to the following marker location:
Hold down [SHIFT] and press [FWD].

Jump to the beginning of the song:
Hold down [STOP] and press [BWD].

* *Song playback will be interrupted if you jump to the beginning or end of the song while the song is playing.*

* *A certain amount of time may be required for fast-forward, rewind, or jump during Quick Play.*

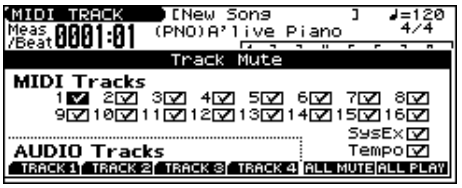
* *You can't jump to a marker location when using Quick Play.*

Playing Back with a Specific Instrument Muted (MIDI Track Mute)

If you want to silence the playback of a specific instrument, you can mute the part that contains the sequencer data for that instrument.

1. Press EDIT [SONG] to access the MIDI TRACK screen.

2. Press [F4 (MUTE)].



3. Use [▲] [▼] [◀] [▶] to move the cursor to the part (MIDI track) whose performance you want to mute.

4. Use the VALUE dial or [DEC] to clear the check mark (✔).

- You can press [F5 (ALL MUTE)] to mute all of the MIDI track parts.
- You can press [F6 (ALL PLAY)] to clear muting for all of the MIDI track parts.

MEMO

You can press [PART SELECT] so it's lit, and then press PART SELECT [1]–[8] to mute the part for the selected MIDI track.

* *To mute a MIDI track part 9–16, press [9-16] so it's lit, then press PART SELECT [9]–[16].*

NOTE

If a MIDI track is muted when you save the song in Standard MIDI File format, the data of that track will not be saved in the file. If you save the song as a song file (SVQ file, SVA file), the muted status of each track will be preserved in the file.

TIP

If you clear the check mark (✔) for system exclusive messages (SysEx), system exclusive messages will be ignored.

TIP

If you clear the tempo track (Tempo) check mark (✔), the tempo track will be muted. You can mute the tempo track if you want a song containing recorded tempo changes to play back at a fixed tempo.

5. When you have finished making settings, press [EXIT].

Playing Back with an Audio Track Muted (Audio Track Mute)

If you want to play back a song with a specific audio track muted, you can mute the audio track that plays that audio data.

1. Press SONG RECORDER [AUDIO TRACK] to access the AUDIO TRACK screen.

2. Press [F4 (MUTE)].

3. Press [F1 (TRACK 1)]–[F4 (TRACK 4)].
The corresponding audio track will be muted, and the function display color will be inverted. The function display for unmuted tracks will remain black.

4. When you have finished making settings, press [EXIT].

Playing a Song Back at a Fixed Tempo (Muting the Tempo Track)

If the tempo changes while a song is being played back, this is because those tempo changes have been recorded in the Tempo track. If you want to override these tempo changes and play back at a fixed tempo, you can mute the Tempo track.

cf.

For details on operations, refer to "Playing Back with a Specific Instrument Muted (MIDI Track Mute)."

Changing the Playback Tempo of a Song

The tempo at which a song will play back is recorded on its tempo track, but the tempo of the entire song can be adjusted during playback. The tempo at which the song actually plays is called the **playback tempo**.

* *The playback tempo is a temporary setting. It will be lost if you switch to another song or turn off the power. If you want the song to always play back at this tempo, you must re-save the song (p. 113).*

MEMO

When you change the tempo, audio tracks will be time-stretched (the sample length and tempo will change) so that they remain in synchronization with the MIDI tracks.

1. **Press SONG RECORDER [TEMPO].**
   The Tempo window appears.

2. **Use the VALUE dial or [INC] [DEC] to set the playback tempo.**
   - If you press [F5 (CLICK)] to add a check mark (✔), a click will sound at the specified tempo.
   - By pressing [F4 (TAP)] you can set the tempo to the timing at which you press the button (Tap Tempo). Press the button three or more times at quarter-note intervals of the desired tempo.

3. **When you have finished making settings, press [F6 (CLOSE)].**

NOTE

The audio quality may be degraded if the audio tracks have been time-stretched because of a change in tempo. If so, we recommend that you limit the tempo change to an appropriate range.

Playing Back a Song Repeatedly (Loop Play)

Use the Loop function when you want to repeatedly play back an entire song or just a specified portion of a song.

1. **Press SONG RECORDER [LOOP] to make it light.**
   The Loop Play window appears. Now playback will loop according to the region and the number of times specified in the Loop Play window.

* *To defeat the Loop function, press [LOOP] once again.*

cf.

For details on making settings in the Loop window, refer to **Specifying the Area of a Song that will Repeat (Loop Points)** (p. 95).

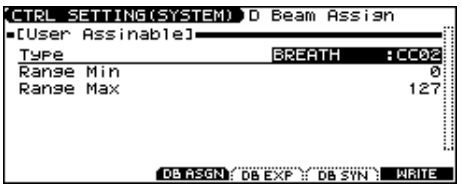
2. **When you have finished making settings, press [F6 (CLOSE)].**

Using the D Beam Controller to Start/Stop Song Playback

You can start/stop song playback by passing your hand over the D Beam controller.

1. **Select the song that you want to play back.**

2. **Hold down [SHIFT] and press D BEAM [ASSIGNABLE].**
   A screen like the following appears.



3. **Use [▲] [▼] to move the cursor to "Type."**

4. **Use the VALUE dial or [INC] [DEC] to set this to "START/STOP."**

5. **Press [EXIT] to return to the previous screen.**

6. **Press D BEAM [ASSIGNABLE] to turn on the D Beam controller.**

7. **When you pass your hand across the D Beam controller, song playback will start. When you pass your hand across it once again, playback will stop.**

* *You can also start/stop song playback by using a pedal connected to the PEDAL CONTROL jack (p. 72).*

NOTE

D Beam controller settings are stored in the song. If you want to save your settings, save the song.

Playing Back Correctly from the Middle of the Song (MIDI Update)

When you play back from the middle of a song, for example after fast-forward or rewind, the correct patch may not be selected, or the pitch may be incorrect. This is because the MIDI messages in the area that you skipped have not been transmitted to the sound generator. In such cases, you can use the **MIDI Update** function. When you perform MIDI Update, the MIDI messages (other than Note messages) from the beginning of the song until the location to which you moved will be transmitted to the sound generator, ensuring that the sound generator will be in the correct state for the resumption of playback.

1. **Make sure that song playback is stopped.**

* *It is not possible to perform MIDI Update while the song is playing.*

2. **Hold down [SHIFT] and press SONG RECORDER [PLAY].**
   The display will indicate "MIDI Update..." while processing takes place, and when finished, will indicate "MIDI Update Completed!"

Recording a Song (MIDI Track)

This chapter explains the procedure for using the JUNO-G's song recorder to record a song.

TIP

Before you begin this procedure, put the sound generator in **Performance mode**. Normally, when recording or playing back a song, you will put the sound generator in Performance mode. The reason for this is that in this mode, only the sound of the specified MIDI channel will be heard when you record while playing the keyboard of the JUNO-G, and that when the song is played back, the parts can independently play up to 16 different sounds. Thus, Performance mode is suitable for recording and playing back a song that uses an ensemble of multiple instruments, such as drums, bass, and piano. In Performance mode, we recommend that you leave the keyboard switches (p. 60) turned off (unchecked). If any keyboard switches are on (checked), parts other than the current part will also sound when you play the keyboard; you probably don't want this to occur while you're creating a song.

Two Recording Methods

You can use one of two methods of recording: **realtime recording** or **step recording**. Select the method that is appropriate for your situation.

Realtime Recording (p. 88)

Realtime recording is the recording method in which your keyboard playing and controller operations are recorded just as you perform them.

Step Recording (p. 92)

Step recording is the recording method in which you can input notes and rests one by one. This method is suitable for inputting drums or bass with precise timing.

Before You Record a New MIDI Track

Overview of the Recording Process

The work flow for recording a new song (MIDI tracks) is as follows.

1. **Select the sound to be used for recording**
2. **Clear the Temporary Song**
3. **Specify the time signature of the song (p. 88)**
4. **Set the tempo (p. 88)**
5. **Use realtime recording (p. 88) or step recording (p. 92) to record**
6. **Use track edit (p. 97) or micro edit (p. 99) to edit the song**
7. **Save the song to user memory or memory card (p. 113)**

With the factory settings, demo song data will automatically be loaded into Temporary Area when the JUNO-G is powered up. Here's how to change this setting so that this automatic load does not occur (i.e., the song memory will remain empty).

1. **Press MODE [PERFORM] to access the PERFORM PLAY screen.**
2. **Press [MENU].**
3. **Press [▲] [▼] to select "2. System," and then press [ENTER].**
4. **Press [F1 (GENERAL)], and then press [F2 (AUTO LD)] to select "Startup."**
5. **Press [▲] [▼] to select "Load Demo Song at Startup."**
6. **Use the VALUE dial or [INC] [DEC] to set it to "OFF."**

Select the Sound to be Used for Recording

Before you record a song (MIDI tracks), select the sound that you want to use for recording. Select the recording method that is appropriate for your situation.

Performance

Select a Performance when you want to record an ensemble performance using multiple instruments. When recording a song, we recommend that you normally select a Performance.

Patch/Rhythm set

Select a patch or rhythm set if you want to use a single patch or rhythm set to record your playing.

Erasing the Song from Temporary Song (Song Clear)

When you record a song (MIDI tracks), the sequencer data is temporarily recorded in Temporary Area. If you want to record a new song, you must erase any existing sequencer data from Temporary Song.

NOTE

If Temporary Song contains an important song that you want to keep, you should first save that song to user memory/memory card (p. 113).

1. **Press EDIT [SONG] to access the MIDI TRACK screen.**
2. **Hold down [SHIFT] and press [F6 (UTILITY)].**
   The Song Utility Menu appears.
3. **Press [F2 (SONG CLEAR)].**
   A message will ask you for confirmation.
4. **Press [F6 (EXEC)] to execute the operation.**

* *To cancel, press [F5 (CANCEL)].*

When the operation has been completed, the display will briefly indicate "Completed!"

Specifying the Time Signature

Before you record a new song, you must specify the time signature. However, a time signature of 4/4 is automatically specified when you perform the Song Initialize operation or when the power is turned on, so you will need to make this setting only if you want to record a new song in a different time signature.

1. **Press EDIT [SONG] to access the MIDI TRACK screen.**
2. **Press [F3 (MICRO)].**
   The MICROSCOPE screen appears.
3. **Press [F5 (CH/PART)].**
   The Ch/Part Select window appears.
4. **Press [F5 (BEAT)] (beat track).**
5. **Press [F6 (CLOSE)].**
   The MICROSCOPE screen for the BEAT track appears.
6. **Press [◀] [▶] to move the cursor to "Beat Change Numerator" or "Beat Change Denominator."**
7. **Use the VALUE dial or [INC] [DEC] to specify the time signature.**

   cf.

   If you want to change time signatures midway through the song, refer to **Changing the Time Signature Midway Through the Song** (p. 103).
8. **Press [EXIT] to return to the previous screen.**

Setting the Tempo

Set the tempo at which the song is to be recorded.

1. **Press [TEMPO].**
   The Tempo window appears.
2. **Use the VALUE dial or [INC] [DEC] to set the playback tempo.**
   - If you press [F5 (CLICK)] to add a check mark (✔), a click will sound at the specified tempo. This will switch on/off each time you press the button.
   - By pressing [F4 (TAP)] you can set the tempo to the timing at which you press the button (Tap Tempo). Press the button three or more times at quarter-note intervals of the desired tempo.
3. **When you have finished making settings, press [F6 (CLOSE)].**

   cf.

   If you want to change tempo midway through the song, refer to **Changing the Tempo Midway Through the Song** (p. 102).

Recording Your Performance as You Play It (Realtime Recording)

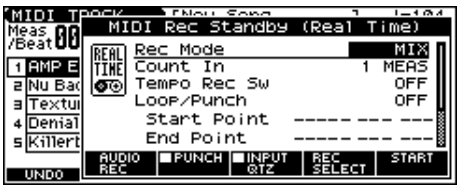
Realtime Recording is the recording method in which your keyboard playing and controller operations are recorded just as you perform them. Use this recording method when you want to capture the nuances of your own performance.

Basic Operation for Realtime Recording

1. **Make sure that the preparations for recording have been completed as described in "Before You Record a New MIDI Track" (p. 87).**

   MEMO

   If you want to record into an existing song, load the desired song into Temporary Song (p. 115). Then press SONG RECORDER [BWD] or [FWD] to specify the measure at which you want to begin recording. The measure at which recording will begin is indicated by the "M=" in the upper right of each PLAY screen.
2. **Press SONG RECORDER [REC].**
   The [REC] indicator will blink, and the MIDI Rec Standby (Real Time) window appears.



3. **As basic settings, specify the following two parameters.**
   Use [▲] [▼] [◀] [▶] to move the cursor to each parameter, and use the VALUE dial or [INC] [DEC] to make the setting.

Parameter	Explanation
Rec Mode	Select how recording is to take place. **MIX:** Mix-recording will be carried out. Normally, you will record using this method. If a performance has already been recorded on the recording-destination track, your newly recorded performance will be added to the existing performance without erasing it. By using this in conjunction with Loop-recording, you can record repeatedly over a specified area without erasing the previously recorded performance. For example, this is a convenient way to record a drum performance one instrument at a time; bass drum -> snare drum -> hi-hat, etc. **REPLACE:** Replace-recording will be carried out. If a performance has already been recorded on the recording-destination track, it will be erased as you record your new performance. Use this when you want to re-record. * *Since system exclusive messages are not erased, you'll need to erase this data beforehand (p. 100).*

Parameter	Explanation
Count In	Select how recording is to begin. **OFF:** Recording will begin immediately when you press [PLAY]. **1 MEAS:** When you press [PLAY], a count (playback) will begin one measure before the recording-start location, and recording will begin when you reach the recording-start location. **2 MEAS:** When you press [PLAY], a count (playback) will begin two measures before the recording-start location, and recording will begin when you reach the recording-start location. **WAIT NOTE:** Recording will begin when you press [PLAY], or play a note or press the pedal.

In the MIDI Rec Standby (Real Time) window you can perform the following operations.

- Specifying the punch-in/out points
- Specifying the loop points
- Quantize (p. 90)
- Selecting the sequencer data that will be recorded (p. 91)

For details on these operations, refer to the appropriate page.

4. When you are finished making settings in the MIDI Rec Standby (Real Time) window, press [PLAY] or [F6 (START)].

The MIDI Rec Standby (Real Time) window will close, the [REC] indicator will change from blinking to lit, and recording will begin.

When recording begins, the Realtime Rec Control window will appear.

In the Realtime Rec Control window you can perform the following operations.

- Specifying the punch-in/out points
- Realtime Erase (p. 91)
- Rehearsal Function (p. 92)

For details on these operations, refer to the appropriate page.

* *To close the Realtime Rec Control window, press [F6 (CLOSE)] or [PLAY]. To open it once again, press [PLAY].*

5. When you are finished recording, press [STOP].

The [REC] indicator will go dark.

TIP

If you're not satisfied with the recording you just made, you can press [F1 (UNDO)] in the MIDI TRACK screen to revert to the state prior to recording (Undo). After executing Undo, you can use Redo to revert to the previous state. After executing Undo, you can execute Redo by performing the above procedure once again.

Recording the Rhythm Pattern Playback to MIDI Track

In the RHYTHM GROUP screen, record the rhythm pattern to MIDI track.

In recording standby mode, when you press [PLAY] (or [F6 (START)]) the current rhythm pattern will start playback at the same time, and you can record the rhythm pattern.

TIP

If you want to record the rhythm pattern at the same time that it starts playback, set the Count In to Off in the recording standby window.

Recording Tempo Changes in a Song (Tempo Recording)

If you want the tempo to change during the song, you can record those tempo changes in the Tempo track. If tempo changes have already been recorded in the tempo track, they will be rewritten.

Set the following recording parameters in addition to the basic settings described in step **3** of **Basic Operation for Realtime Recording** (p. 88).

Parameter	Value	Explanation
Tempo Rec Sw	OFF, ON	Specify whether tempo changes will be recorded (ON), or not (OFF).

Loop Recording and Punch-In Recording

You can record repeatedly over a specified area (Loop recording), or re-record just that area (Punch-in recording).

Set the following recording parameters in addition to the basic settings described in step **3** of **Basic Operation for Realtime Recording** (p. 88).

Parameter	Explanation
Loop/Punch	Specify how loop recording or punch-in recording is to take place. **OFF:** Loop recording or punch-in recording will not occur. **LOOP (POINT):** Recording takes place repeatedly, according to the loop point settings. **LOOP (1–16 MEAS):** The 1–16 measure area starting at the record-start measure will be recorded repeatedly. **LOOP SONG ALL:** The entire song from beginning to end will be recorded repeatedly. **AUTO PUNCH:** Auto punch-in recording will be performed. **MANUAL PUNCH:** Manual punch-in recording will be performed.
Start Point	Measure and beat at which loop recording or auto punch-in recording is to begin * *It is not possible to specify the Tick.*
End Point	Measure and beat at which loop recording or auto punch-in recording is to Stop. * *It is not possible to specify the Tick.* * *The minimum loop length is four quarter notes.*

* *After loop recording, the loop points (p. 95) will automatically be set to the recorded region.*

* *You can also make loop settings by pressing SONG RECORDER [LOOP].*

Using Auto Punch-In Recording

You must pre-specify the area (punch points) in which recording is to take place. This is convenient when you want to re-record over a mistake. The song will play back when you begin recording. When you reach the punch-in point, playback will switch to record mode.

1. **In the MIDI Rec Standby (Real Time) window, set the Loop/Punch parameter to "AUTO PUNCH."**
2. **Set the Start Point/End Point parameters to the desired punch points.**
3. **Move to a measure earlier than the specified Start Point, and press [PLAY] or [F6 (START)].**
   The song will begin playing. Recording will begin at the location specified by the Start Point parameter. Playback will resume at the location specified by the End Point parameter.
4. **Press [STOP] to stop playback.**

Using Manual Punch-In Recording

Recording takes place (erasing the existing data) in the area that you specify by pressing a pedal or button. This is convenient when you want to re-record more than one location in which you made a mistake. The song will play back when you begin recording. When you press a pedal or button, playback will switch to record mode, and will switch back to play mode when you press the pedal or button once again. By pressing the pedal or button, you can toggle between record and play modes.

TIP

If you want to use a pedal connected to the PEDAL CONTROL jack to specify the area for recording, you must first set the Control Pedal Assign parameter to "PUNCH IN/OUT" (p. 72).

1. **In the MIDI Rec Standby (Real Time) window, set the Loop/Punch parameter to "MANUAL PUNCH."**
2. **Press [PLAY] or [F6 (START)].**
   Song playback will begin, and the Realtime Rec Control window will appear.
3. **At the point where you want to begin recording, press [F3 (PUNCH IN)] or step on the pedal.**
   Playback will switch to record mode.
4. **At the point where you want to stop recording, once again press [F3 (PUNCH OUT)] or step on the pedal.**
   You will return to playback mode.
5. **Press [STOP] to stop playback.**

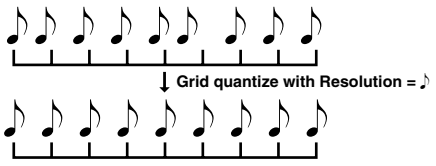
Correct the Timing of Your Playing as You Record (Recording Quantize)

The Quantize function automatically corrects inaccuracies in the timing of your keyboard performance, aligning the notes to accurate timing intervals. During realtime recording, you can quantize while you record.

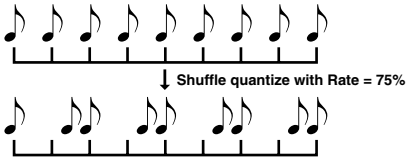
Set the following recording parameters in addition to the basic settings described in step **3** of **Basic Operation for Realtime Recording** (p. 88).

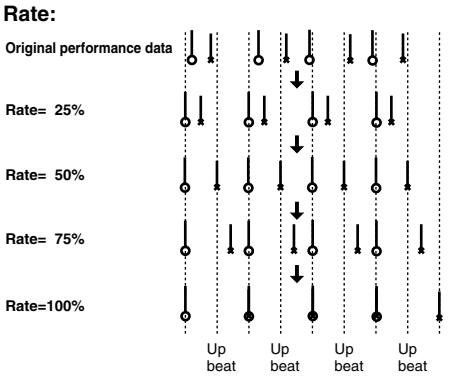
Parameter	Value	Explanation
Input Quantize	OFF, GRID, SHUFFLE	**OFF:** Quantize will not be applied while recording. **GRID:** Grid Quantize will be applied while recording. Use this when you want the timing to be accurate, such as when recording drums or bass. **SHUFFLE:** Shuffle Quantize will be applied while recording. Use this when you want to give the rhythm a "shuffle" or "swing" character.
When "Input Quantize" is "**GRID**"		
Grid Resolution	𝅘𝅥𝅯, 𝅘𝅥𝅯3, 𝅘𝅥𝅮, 𝅘𝅥𝅮3, ♪, ♩3, ♩	Quantization time interval Select the shortest note value that will occur in the range to which Grid Quantize will be applied.
Grid Quantize Strength	0–100%	Degree to which notes will be adjusted toward the timing intervals specified by Grid Resolution With a setting of "100%," the notes will be corrected precisely to the timing of the Grid Resolution parameter. With a setting of "0%," the timing will not be adjusted at all.
When "Input Quantize" is "**SHUFFLE**"		
Shuffle Resolution	𝅘𝅥𝅯, 𝅘𝅥𝅮	Quantization time interval
Shuffle Quantize	0–100%	Degree to which the backbeat will be separated from the downbeat specified by Shuffle Resolution With a setting of "50%," the backbeat will be exactly between adjacent downbeats. With a setting of "0%," the backbeat will be moved to the same timing as the preceding downbeat. With a setting of "100%," the backbeat will be moved to the same timing as the following downbeat.

When Quantize Type is "GRID"



When Quantize Type is "SHUFFLE"





Selecting the Sequencer Data that will Be Recorded (Recording Select)

When you use realtime recording, all of your sequencer data will normally be recorded. If you want to avoid recording a specific type of data, you can turn its Recording Select setting "OFF."

1. Press [REC].

2. Press [F5 (REC SELECT)].
The Recording Select window appears.

3. Press [▲] [▼] [◀] [▶] to select the sequencer data (MIDI messages) that will be recorded.

MIDI Message	Explanation
Note	Represent notes.
Control Change	Apply various effects such as modulation or expression.
Program Change	Select sounds.
System Ex	Used to make settings unique to the JUNO-G, such as sound parameters.
Channel After	Apply aftertouch to an entire MIDI channel.
Poly After	Apply aftertouch to individual keys.
Pitch Bend	Change the pitch.

4. Use the VALUE dial or [INC] [DEC] to add a check mark (✔).
The message will be recorded if you assign a check mark (✔), and will not be recorded if you remove the check mark.

- [F4 (ALL ON)]: All of the sequencer data will be recorded.
- [F5 (ALL OFF)]: No sequencer data will be recorded.

5. Press [F6 (CLOSE)] to close the Recording Select window.

Erasing Unwanted Data While You Record (Realtime Erase)

Realtime Erase is a function that erases unwanted data during realtime recording. This is particularly convenient during loop recording, since it lets you erase data without stopping recording.

* *Realtime Erase can be executed only if the Recording Mode is set to "MIX."*

1. Begin realtime recording (p. 88).
The Realtime Rec Control window appears.

2. Press [F4 (ERASE)].
The Realtime Erase window appears.

3. Erase unwanted data.

- To erase all data, press [F5 (ALL NOTE)]. Data will be erased for as long as you hold down the button.
- To erase notes of a specific key, hold down that key. Data for that note will be erased for as long as you hold down that key.
- To erase notes of a specific key range, hold down the top and bottom keys of that range. Data for that range will be erased for as long as you hold down those keys.

4. Press [F6 (CLOSE)] to close the Realtime Erase window.
You will return to the normal recording state.

Recording Arpeggios Aligned to the Measures of the Song Recorder

When recording arpeggios in real time, you can synchronize the arpeggio with the song recorder start/stop timing.
For details, refer to **Arp/Rhythm Sync Switch** (p. 162).

Auditioning Sounds or Phrases While Recording (Rehearsal Function)

The Rehearsal function lets you temporarily suspend recording during realtime recording. This is convenient when you want to audition the sound that you will use next, or to practice the phrase that you will record next.

1. **Begin realtime recording (p. 88).**
   The Realtime Rec Control window appears.

2. **Press [F5 (REHEARSAL)] or [REC].**
   The [REC] indicator will blink, indicating that you are in rehearsal mode. In this state, nothing will be recorded when you play the keyboard.

3. **To return to record mode, press [F5 (REHEARSAL)] or [REC] once again.**

Inputting Data One Step at a Time (Step Recording)

Step Recording is the method of inputting notes and rests individually, as if you were writing them onto a musical staff.

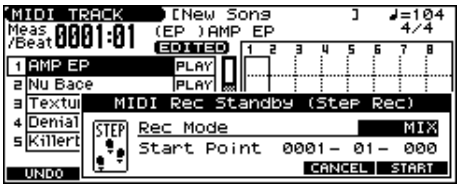
Inputting Notes and Rests

1. **Make sure that the preparations for recording have been performed as described in "Before You Record a New MIDI Track" (p. 87).**

   TIP

   If you want to record into an existing song, load the desired song into Temporary Song (p. 115). Then press SONG RECORDER [BWD] or [FWD] to specify the measure at which you want to begin recording. The measure at which recording will begin is indicated by the "M=" in the upper right of each PLAY screen.

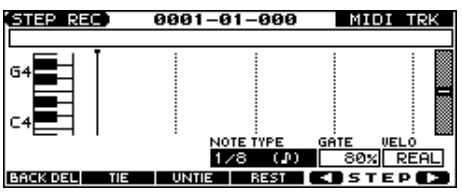
2. **Press [REC] twice, or hold down [SHIFT] and press [REC].**
   The [REC] indicator blinks, and the MIDI Rec Standby (Step Rec) window appears.



3. **Make settings for step recording. Use [▲] [▼] [◀] [▶] to move the cursor to the desired parameter, and use the VALUE dial or [INC] [DEC] to set it.**

Parameter	Explanation
Rec Mode	Select how recording is to take place. **MIX:** Mix-recording will be carried out. If a performance has already been recorded on the recording-destination track, your newly recorded performance will be added to the existing performance without erasing it. Normally, you will record using this method. **REPLACE:** Replace-recording will be carried out. If a performance has already been recorded on the recording-destination track, it will be erased as you record your new performance. Use this when you want to re-record.
Start Point	Specify the location (measure-beat-tick) at which recording will begin.

4. **Press [F6 (NOTE)] or [PLAY].**
   The [REC] indicator lights, and the STEP REC screen appears.



5. Specify the note that you want to input. Use [◀] [▶] to select the desired parameter.

Parameter	Value	Explanation
Note Type	Note (p. 93)	Specify the length of the notes that you want to input, in terms of a note value. The length of the note value indicates the length from one note-on to the next note-on.
Gate Time	1–100%	Specify the proportion of the gate time relative to the Note Type. The gate time is the length between note-on and note-off. Specify a lower value if you want the notes to be played staccato, or a higher value if you want the notes to be played tenuto, or as a slur. Normally, you will set this to about "80%."
Input Velo	REAL, 1–127	Specify the strength with which the note will be played. If you want this to be the strength with which you actually pressed the key, select "REAL." Otherwise, use settings of p (piano)=60, mf (mezzo forte)=90, or f (forte)=120 as general guidelines.

6. Use the VALUE dial or [INC] [DEC] to make the setting.

7. Press [F5] or [F6] to move to the desired input location, and press a note on the keyboard.

When you press a key, the input position will advance by the value of the Note Type you specified. The velocities are displayed as a bar graph.

You can use the function buttons to perform the following operations.

Button	Explanation
F1 (BAK DEL)	Cancel the previously input note.
F2 (TIE)	Extend the length of the previously input note by the current setting.
F3 (UNTIE)	Cancel the previously input TIE.
F4 (REST)	Inputs a rest. First set the Note Type parameter to a length that is the same as the rest you want to input, and then press [F4 (REST)].
[SHIFT] + [F6 (VIEW)]	Switches the type of display in the STEP REC screen (Piano Roll ↔ Event List)

8. Repeat the above steps to continue inputting.

TIP

The previous value of each parameter is remembered. This means that if you want to use the same settings as the previously input note, there is no need to change the settings. Once you have set the Gate Time parameter and Input Velocity parameter, it is not normally necessary to change them, so all you have to do is set the Step Time parameter and specify the pitch (note) of each note.

MEMO

The note will not be finalized as long as you hold down the key. This means that you will be able to modify the various parameters of the note (Note Type, Gate Time, Input Velo).

9. When you are finished step recording, press [STOP].

The [REC] indicator will go dark.

Inputting a Chord

Press the chord. The cursor will move to the next step when you release all keys.

Moving the input location

Pressing [F6 (▶)] will move the input location forward by the current Note Type value.

Pressing [F5 (◀)] will move the input location backward by the current Note Type value.

Moving the display region

Pressing **[▲] [▼]** will move the displayed region of notes upward or downward.

The Relation between Note Value Length and Gate Time

The relation between the length of the note value and the gate time is shown below. Since the JUNO-G's song recorder uses a TPQN (Ticks Per Quarter Note; i.e., resolution) of 480, a quarter note gate time is 480 ticks.

Note	Gate time
𝅘𝅥𝅯	30
𝅘𝅥𝅯3	40
𝅘𝅥𝅯.	45
𝅘𝅥𝅰	60
𝅘𝅥𝅰3	80
𝅘𝅥𝅰.	90
𝅘𝅥𝅱	120
𝅘𝅥𝅱3	160
𝅘𝅥𝅱.	180
𝅗𝅥	240
𝅗𝅥3	320
𝅗𝅥.	360
♩	480
♩3	640
♩.	720
𝅗𝅥	960
𝅝	1920
𝅜	3840

MEMO

The gate time that is recorded in step recording will be the original gate time value multiplied by the value of the Gate Time parameter. For example, if the Gate Time parameter is set to "80%," inputting a quarter note will mean that the gate time is 480 x 0.8=384.

Editing a Song (MIDI Track)

This chapter explains the procedure for editing a song (MIDI track).

Loading the Song You Want to Edit

When you're going to edit a song, you have to first load it into the Temporary Area.

The Temporary Song will be lost if you turn power off or load another song into Temporary Area. If Temporary Area contains a song you wish to keep, you must save that song to user memory or memory card.

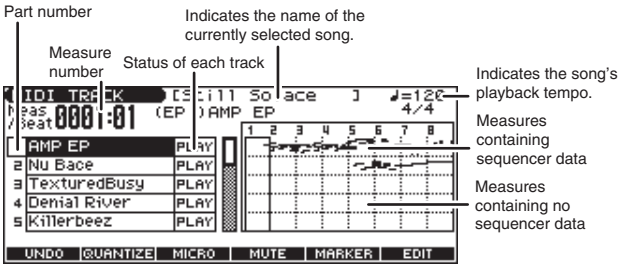
cf.

For details on how to load the song you want to edit, refer to **Loading and Playing a Song (Load Play)** (p. 84).

MIDI TRACK Screen

The JUNO-G is able to record data of multiple MIDI channels.

This screen graphically shows the note data of each channel. The height of the bar indicates the note pitch, and the length of the bar indicates the duration.



Playing Back with a Specific Instrument Muted (MIDI Track Mute)

cf.

For details on how to load the song you want to edit, refer to **Playing Back with a Specific Instrument Muted (MIDI Track Mute)** (p. 85).

Assigning Markers in a Song

You can add markers to desired measures within a song. This is a convenient way to visually keep track of sections within a song, and can also assist you in editing a song since you can easily and quickly jump to the marker location you specify.

Assigning a marker

Up to sixteen marker locations can be assigned in each song.

1. **Press EDIT [SONG] to access the MIDI TRACK screen.**
2. **Press [F5 (MARKER)].**
   The Edit Marker List window appears.
3. **Press [F3 (SET)] to add a marker to the beginning of the current measure.**
   You can assign a marker location in this way even while listening to the song play back.
   * *While the song is stopped, you can use SONG RECORDER [BWD] [FWD] to move a measure at a time.*
4. **Press [F6 (CLOSE)] to close the window.**

Moving to marker locations

Use the following procedure to change the song location to a marker location.

1. **In the MIDI TRACK screen, press [F5 (MARKER)].**
   The Edit Marker List window appears.
2. **Use the VALUE dial or [INC] [DEC] [▲] [▼] to select the marker to which you want to move.**
   You will move to the location of the specified marker.

   TIP

   You can hold down [SHIFT] and press [BWD] or [FWD] to jump to the preceding or following marker location.
3. **Press [F6 (CLOSE)] to close the window.**

Deleting a marker

Here's how to delete a marker.

1. **In the MIDI TRACK screen, press [F5 (MARKER)].**
   The Edit Marker List window appears.
2. **Use the VALUE dial or [INC] [DEC] [▲] [▼] to select the marker to which you want to delete.**
3. **Press [F4 (CLEAR)].**
   The specified marker will be deleted.
4. **Press [F6 (CLOSE)] to close the window.**

Naming a marker

Here's how to name a marker.

1. **In the MIDI TRACK screen, press [F5 (MARKER)].**
   The Edit Marker List window appears.
2. **Use the VALUE dial or [INC] [DEC] [▲] [▼] to select the marker that you want to rename.**
3. **Press [F5 (NAME)] or [▶].**
   The cursor will move to the right.
4. **Use the VALUE dial or [INC] [DEC] to select a name.**
   * *Choose from the list of names supplied.*
5. **Press [F5 (NAME)], [EXIT] or [◀] to finish assigning the name.**
6. **Press [F6 (CLOSE)] to close the window.**

Specifying the Area of a Song that will Repeat (Loop Points)

When using Loop Play or Loop Recording, you can use the loop points you specify here to specify the repeated area, as an alternative to repeating the specified number of measures.

1. Press EDIT [SONG] to access the MIDI TRACK screen.

2. Hold down [SHIFT] and press SONG RECORDER [LOOP].
The Loop Play window will open, with the Loop function still off.

* *If you press [LOOP] without holding down [SHIFT], the Loop function will turn on and the Loop Play window will open.*

3. Move the cursor to the desired parameter, and use the VALUE dial or [INC] [DEC] to make the setting.

Parameter	Explanation
Repeat Times	Number of repeats **Value:** INF, 1–99 If you want repetition to continue until you press [STOP], set this to "INF."
Start Point (**S**)	Location at which repetition is to begin If you press [F3 (START)], the current location of the song will be set as the starting location.
End Point (**E**)	Location at which repetition will end If you press [F4 (END)], the current location of the song will be set as the ending location. * *The location you specify here will not be included in the repeated area.*

4. If you press [LOOP] to make it light, or press [F5 (LOOP)] to add a check mark (✔); looping will be turned on.

5. Press [F6 (CLOSE)] to close the window.

Aligning a Song's Timing (Quantize)

In the chapter **"Recording a Song (MIDI Track)"** (p. 87), we explained **Recording Quantize**, which lets you quantize during realtime recording. Alternatively, it is also possible to quantize a song that has already been recorded.
The JUNO-G has a **Preview function** that allows playing back the results of a Quantize operation while you are still setting parameters (before actual execution). This helps to make optimal Quantize settings.

Preview Function

The Preview function allows you to hear how quantizing will work while you are still setting Quantize parameters (before you execute operation). If you modify parameter values during preview playback, the next preview playback will include those latest value changes. Try various parameter settings to find the one that works best.

* *You can't preview the playback of a MIDI track that's muted.*

* *You can't change the Quantize Type while using the Preview function.*

Pressing [PLAY] when the Quantize window is displayed selects Preview mode. The two measures from the current location of the song will play back repeatedly. The preview start location can also be specified by pressing [FWD] or [BWD]. To exit Preview mode, press [STOP].

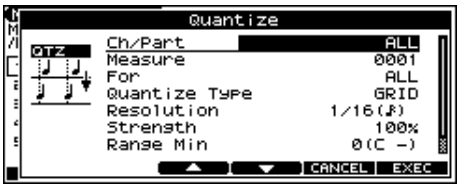
NOTE

The Quantize operation will correct only the timing at which notes were pressed (note-on) and released (note-off), and will not correct any other sequencer data. This means that if you record MIDI messages such as bend range or modulation along with notes, quantization can cause the notes to go out of sync with the MIDI messages, skewing timing. To avoid such problems it is better to record non-keyboard data afterward, using mix recording, etc.

1. Access the SONG LIST screen, and then load the song you want to edit (p. 84).

2. Press EDIT [SONG] to access the MIDI TRACK screen.

3. Press [F2 (QUANTIZE)].
The Quantize window appears.



4. Use [F3 (▲)] [F4 (▼)] or [▲] [▼] to select a parameter, and use the VALUE dial or [INC] [DEC] to set the value.

Parameter	Value	Explanation
Ch/Part	ALL, Ch 1–16	MIDI channel(s) of the notes to be quantized **ALL:** Quantizes all notes. **Ch 1–16** Quantizes only the notes of a specific MIDI channel.

Parameter	Value	Explanation
Measure	0001–	Range of measures to be quantized If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Quantize Type	GRID, SHUFFLE, TEMPLATE	(See below.)
When "Quantize Type" is "**GRID**" Since the notes will be adjusted to the timing of the specified note value, you can use this when you want drums or bass (for example) to play in an accurate rhythm.		
Resolution	𝅘𝅥𝅯, 𝅘𝅥𝅯3, 𝅘𝅥𝅯, 𝅘𝅥𝅮3, 𝅘𝅥𝅮, 𝅘𝅥𝅮3, 𝅘𝅥	Quantization time interval Choose a Resolution that matches the smallest note in the area you're quantizing.
Strength	0–100%	Percentage of how note timing will be corrected toward the timing interval specified by Resolution
	With a setting of "100%," the note will move all the way to the nearest timing interval of the Resolution setting. A setting of "0%" will not change note timing at all.	
When "Quantize Type" is "**SHUFFLE**" Use this when you want to produce a "shuffle" or "swing" rhythmic feel.		
Resolution	𝅘𝅥𝅯, 𝅘𝅥𝅮	Quantization time interval
Rate	0–100%	How far apart you want a down-beat specified by Resolution to be from the up-beat that immediately follows
	By shifting the timing of an up-beat, you can create a "swing" feel. A setting of "50%" will place the timing of the up-beat note at the exact mid point between the down-beat and the next down-beat. A setting of "0%" will move the up-beat note to the same timing as the previous down-beat. A setting of "100%" will move it to the same timing as the following down-beat.	
When "Quantize Type" is "**TEMPLATE**" The JUNO-G provides 71 quantize templates. These templates contain various quantize settings for applying rhythmic `feels' of many different musical categories. Select the template you want for quantization. * If your sequencer data notes are too far off from accurate time, Template Quantize may not work that efficiently so you won't achieve the desired results. If this is the case, apply Grid Quantize to your sequencer data first to lose timing mistakes.		
Template	001–071	Template you wish to use
Timing	0–100%	How much a note will move toward the timing interval of the template At a setting of 100%, the note will be perfectly timed with the template. At a setting of 0%, the note will not move at all.
Range Min Range Max	0 (C -2)–127 (G9)	Range of note numbers to be quantized You can also specify the key range by pressing keys on the keyboard.

5. Press [F6 (EXEC)].

A message will ask you for confirmation.

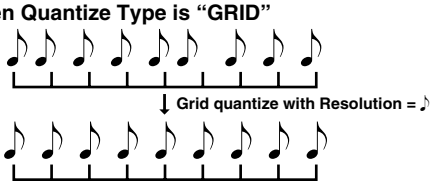
6. Press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

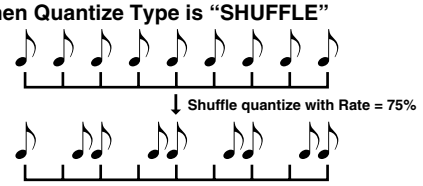
MEMO

If you are not satisfied with the results of executing the function, you can press [F1 (UNDO)] in the MIDI TRACK screen to revert to the state prior to recording (Undo). After executing Undo, you can use Redo to revert to the previous state. After executing Undo, you can execute Redo by performing the above procedure once again.

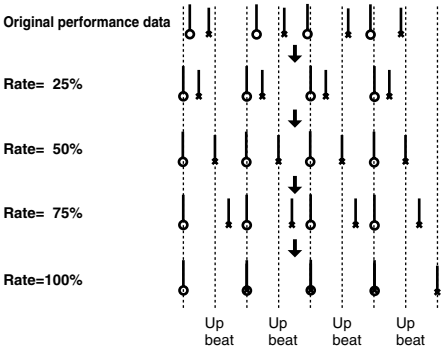
When Quantize Type is "GRID"



When Quantize Type is "SHUFFLE"



Rate:



When Quantize Type is "TEMPLATE"

Here is a list of quantize templates.

No.	Explanation
001	Dance (small dynamics)
002	Dance (large dynamics)
003	Dance (light swing)
004	Dance (heavy swing)
005	Dance (dragging beats, small dynamics)
006	Dance (dragging beats, large dynamics)
007	Dance (dragging beats, light swing)
008	Dance (dragging beats, heavy swing)
009	Dance (pushing beats, small dynamics)
010	Dance (pushing beats, large dynamics)
011	Dance (pushing beats, light swing)
012	Dance (pushing beats, heavy swing)
013	Fusion (small dynamics)
014	Fusion (large dynamics)
015	Fusion (light swing)
016	Fusion (heavy swing)
017	Fusion (dragging beats, small dynamics)
018	Fusion (dragging beats, large dynamics)
019	Fusion (dragging beats, light swing)
020	Fusion (dragging beats, heavy swing)
021	Fusion (pushing beats, small dynamics)
022	Fusion (pushing beats, large dynamics)
023	Fusion (pushing beats, light swing)
024	Fusion (pushing beats, heavy swing)
025	Reggae (small dynamics)
026	Reggae (large dynamics)
027	Reggae (light swing)
028	Reggae (heavy swing)
029	Reggae (dragging beats, small dynamics)
030	Reggae (dragging beats, large dynamics)
031	Reggae (dragging beats, light swing)
032	Reggae (dragging beats, heavy swing)
033	Reggae (pushing beats, small dynamics)

No.	Explanation
034	Reggae (pushing beats, large dynamics)
035	Reggae (pushing beats, light swing)
036	Reggae (pushing beats, heavy swing)
037	Pops (small dynamics)
038	Pops (large dynamics)
039	Pops (light swing)
040	Pops (heavy swing)
041	Pops (dragging beats, small dynamics)
042	Pops (dragging beats, large dynamics)
043	Pops (dragging beats, light swing)
044	Pops (dragging beats, heavy swing)
045	Pops (pushing beats, small dynamics)
046	Pops (pushing beats, large dynamics)
047	Pops (pushing beats, light swing)
048	Pops (pushing beats, heavy swing)
049	Rhumba (small dynamics)
050	Rhumba (large dynamics)
051	Rhumba (light swing)
052	Rhumba (heavy swing)
053	Rhumba (dragging beats, small dynamics)
054	Rhumba (dragging beats, large dynamics)
055	Rhumba (dragging beats, light swing)
056	Rhumba (dragging beats, heavy swing)
057	Rhumba (pushing beats, small dynamics)
058	Rhumba (pushing beats, large dynamics)
059	Rhumba (pushing beats, light swing)
060	Rhumba (pushing beats, heavy swing)
061	Samba (for Pandeiro, etc.)
062	Samba (for Surdo, Timbale)
063	Axe (for Caixa)
064	Axe (for Surdo)
065	Salsa (for Cascala)
066	Salsa (for Conga)
067	Triplets
068	Quintuplets
069	Sextuplets
070	Septuplets over two beats
071	Lagging triplets

* *The templates are designed for a 4/4 time signature. Applying them to a performance of a different time signature may not produce the desired result.*

* *The style names shown here are only for your convenience; they are not intended to imply that the templates are usable only for the named style. You can certainly try them with other styles of music.*

Editing Sequencer Data Over the Specified Range (Track Edit)

Track Edit lets you edit areas of sequencer data that you specify.

Basic Operation for Track Editing

1. Access the SONG LIST screen, and then load the song you want to edit (p. 94).

2. Press EDIT [SONG] to access the MIDI TRACK screen.

3. Press [F6 (EDIT)].

The Track Edit window appears.

4. Press [F3 (▲)] [F4 (▼)] or [▲] [▼] to select the desired function, and then press [F6 (SELECT)].

Copy	Erase (p. 98)	Delete (p. 98)
Insert (p. 99)	Transpose (p. 99)	

cf.

For details on the setting windows of each track editing function, refer to the following explanations of each function.

5. Set the parameters for each function. Press [▲] [▼] [◀] [▶] to move the cursor to the desired parameter, and use the VALUE dial or [INC] [DEC] to set the value. First check the region that is to be affected by the editing operation, and then make corrections if you want to change it.

6. Press [F6 (EXEC)].

A message will ask you for confirmation.

7. Press [F6 (EXEC)].

When the operation is completed, the display will briefly indicate "Completed!"

* *To cancel, press [F5 (CANCEL)].*

MEMO

If you are not satisfied with the results of executing the function, you can press [F1 (UNDO)] in the MIDI TRACK screen to revert to the state prior to recording (Undo). After executing Undo, you can use Redo to revert to the previous state. After executing Undo, you can execute Redo by performing the above procedure once again.

Copying Phrases (Copy)

This function copies a specified area of sequencer data. It is convenient for repeating the same phrase several times.

cf. For details on the settings, refer to **Basic Operation for Track Editing** (p. 97).

Parameter	Value	Explanation
Src Ch/Part	ALL, Ch 1–16	MIDI channel of the performance data to be copied
	ALL: Copies all the sequencer data. **Ch 1–16:** Copies only the sequencer data of a specific MIDI channel. * *You can't specify this if Status is set to "System Exclusive."*	
Src Measure	0001–	Range of copy-source measures If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Dst Ch/Part	ALL, Ch 1–16	MIDI channel of the copy-destination performance data
	ALL: Copy performance data to all MIDI channels. **Ch 1–16:** Copy performance data to the specified MIDI channel. * *You can't specify this if Status is set to "System Exclusive."*	
Dst Measure	0001–END	Copy-destination measure * *If you want the copy destination to be right after the last measure of a song, set this parameter to "END."*
Copy Mode	MIX, REPLACE	Specifies whether you want to preserve the existing data in the copy destination when copying.
	MIX: Combines the data from the copy source with the existing data in the copy destination. **REPLACE:** Musical data in the copy destination will be erased (i.e., overwritten) when the copy takes place. Only the sequencer data of the MIDI channels specified by the Channel parameter will be overwritten, and data of other MIDI channels will remain.	
Copy Times	1–999	Number of times that the data will be copied to the copy destination
Status	ALL, Note, Poly Aftertouch, Control Change, Program Change, Channel Aftertouch, Pitch Bend, System Exclusive	Type of data to be copied
When "Status" is "Note" or "Poly Aftertouch"		
Range Min	0 (C -)–127 (G9)	Range of note numbers to be copied You can also specify the key range by pressing keys on the keyboard.
Range Max		
When "Status" is "Control Change"		
Range Min	0–127	Range of controller numbers to be copied
Range Max		
When "Status" is "Program Change"		
Range Min	1–128	Range of program numbers to be copied
Range Max		

* *If you selected "ALL" for "Src Ch/Part" and "Dst Ch/Part," the tempo track, beat track, and audio tracks will also be copied at the same time.*

Erasing Unwanted Performance Data (Erase)

This function erases all the sequencer data inside the specified area. As the erased data is replaced by rests, the original measures will remain.

cf. For details on the settings, refer to **Basic Operation for Track Editing** (p. 97).

Parameter	Value	Explanation
Ch/Part	ALL, Ch 1–16	MIDI channel of the data to be erased
	ALL: Erases all sequencer data. **Ch 1–16:** Erases sequencer data of one specific MIDI channel only. * *You can't specify this if Status is set to "System Exclusive."*	
Measure	0001–	Range of measures to be erased If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Status	ALL, Note, Poly Aftertouch, Control Change, Program Change, Channel Aftertouch, Pitch Bend, System Exclusive	Type of data to be erased
When "Status" is "Note" or "Poly Aftertouch"		
Range Min	0 (C -)–127 (G9)	Range of note numbers to be erased You can also specify the key range by pressing keys on the keyboard.
Range Max		
When "Status" is "Control Change"		
Range Min	0–127	Range of controller numbers to be erased
Range Max		
When "Status" is "Program Change"		
Range Min	1–128	Range of program numbers to be erased
Range Max		

* *If you selected "ALL" for "Ch/Part," the tempo track and beat track will also be erased at the same time.*

Deleting Unwanted Measures (Delete)

This function deletes a specified area of sequencer data, and moves the subsequent data to fill the gap. As a result, the measure length will be shortened by the number of deleted measures.

cf. For details on the settings, refer to **Basic Operation for Track Editing** (p. 97).

Parameter	Value	Explanation
Measure	0001–	Range of measures to be deleted If you set "For" to "ALL," all measures will be specified.
For	1–ALL	

* *The tempo track, beat track, and audio tracks will also be deleted at the same time.*

Inserting a Blank Measure (Insert)

This function inserts blank measures into a specified song position. As you can set the time signature of the blank measures, this is convenient when inserting a phrase having a different time signature in the middle of a song.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 97).

Parameter	Value	Explanation
Measure	0001–END	Measure location at which the blank measures are to be inserted
For	1–	Number of blank measures to be inserted
Beat	Numerator: 1–32 Denominator: 2, 4, 8, 16	In general, the time signature of the measure immediately before insertion will be used for the blank measures. To change the time signature of the blank measures to be inserted, use this parameter. * *Beat can be specified only when you have set "Track" to "TRK ALL."*

* *Blank measures will also be inserted into the tempo track, beat track, and audio tracks at the same time.*

Transpose the Key (Transpose)

This transposes the pitch of notes within a specified area, over a +/- 127 semitone range. Use this function to modulate from one key to another in a song, or to transpose the entire song.

cf.

For details on the settings, refer to **Basic Operation for Track Editing** (p. 97).

Parameter	Value	Explanation
Ch/Part	ALL, Ch 1–16	MIDI channel(s) of the notes to be transposed
	ALL: Transposes all notes. **Ch 1–16:** Transposes only the notes of a specific MIDI channel.	
Measure	0001–	Range of measures to be transposed If you set "For" to "ALL," all measures will be specified.
For	1–ALL	
Range Min	0 (C -)–127 (G9)	Range of note numbers to be transposed You can also specify the key range by pressing keys on the keyboard.
Range Max		
Bias	-127– +127	Transpose amount in semitone steps Set a "+" (positive) value to raise the pitch, or a "-" (negative) value to lower the pitch.

If You Want to Lower the Bass Sound One Octave...

If your bass is played one octave higher than the staff notation, use the Transpose function to lower it one octave.

To lower the bass sound one octave, set the Range parameter to "Lowest-Highest" for the bass part, and set the Bias parameter to "-12."

When You Want to Change Percussion Sounds...

You can also use the Transpose function to change percussion sounds.

Suppose you want to change conga to tom. If the conga sound is assigned to the D4 key, and the tom sound is assigned to the C3 key, set the Range parameter to "D4–D4" and the Bias parameter to "-14."

Editing Individual Items of Sequencer Data (Micro Edit)

Micro Edit lets you edit individual items of sequencer data recorded in a song, such as MIDI messages and tempo data.

* *When you're going to edit a song, you have to first load it into the Temporary Area (p. 94).*

Editing Sequencer Data (Basic Procedure in the Microscope)

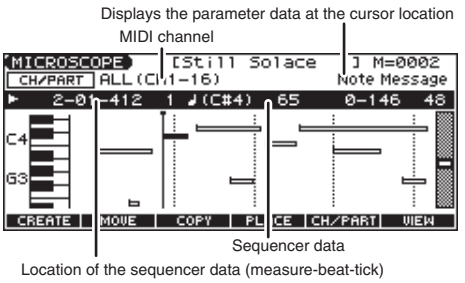
Access the Microscope screen when you want to view the sequencer data recorded in a song. Each line indicates the location (measure-beat-tick) at which the sequencer data is recorded, and the data recorded at that location.

1. **Load the song that contains the sequencer data you want to view/edit (p. 115).**

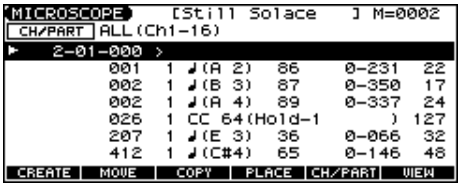
2. **Press [F3 (MICRO)].**

   The MICROSCOPE screen appears.

   Press [▲] [▼] to view sequencer data.

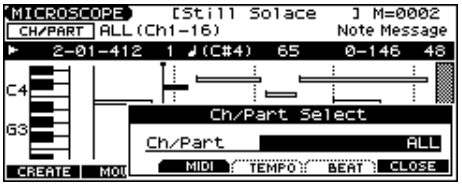


* *Each time you press [F6 (VIEW)] you will switch between the two screens. (Piano Roll ↔ Event List)*



3. Press [F5 (CH/PART)].

The Ch/Part Select window appears.



4. Select the track whose performance data you want to view or edit.

- **[F3 (MIDI)]: MIDI track**

  Use the VALUE dial or [INC] [DEC] to make your selection.

  ALL: Tracks of all MIDI channels

  Ch1–Ch16: The track of the specified MIDI channel
- **[F4 (TEMPO)]:** Tempo track
- **[F5 (BEAT)]:** Beat track

cf.

For an explanation of each type of sequencer data, refer to "Sequencer Data Handled by a MIDI Track," below.

5. Press [F6 (CLOSE)] to close the window.

6. Use [▲] [▼] or the VALUE dial to select the performance data that you want to edit.

7. Press [◀] [▶] to select the parameter that you want to edit.

8. Use the VALUE dial or [INC] [DEC] to set the value.

TIP

When editing the Note Number of note or polyphonic aftertouch data, or the On Velocity or Off Velocity of a note, you can also specify the value by playing a key on the keyboard.

- When you press [ENTER], the sequencer data currently shown at the "▶" will be transmitted from the MIDI OUT connector. In the case of a note message, the note will sound when you press [ENTER].

cf.

If you want to edit a system exclusive message, refer to "Editing a System Exclusive Message," below.

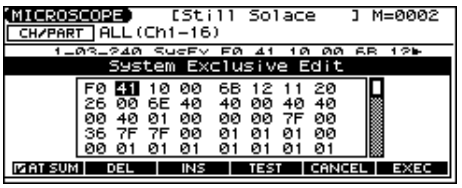
9. To close the MICROSCOPE screen, press [EXIT].

Editing a System Exclusive Message

1. Use [▲] [▼] or the VALUE dial to select the system exclusive message that you want to edit.

2. Press [▶].

The System Exclusive Edit screen appears.



3. Press [▲] [▼] [◀] [▶] to move the cursor to the data you want to edit.

4. Use the VALUE dial or [INC] [DEC] to edit the value.

- If you want to add data between "F0" and "F7," move the cursor to that location and press [F3 (INS)]. A value of "00" will be inserted. Change this to the desired value.
- To delete data, move the cursor to the relevant location and press [F2 (DEL)].

5. When you are finished editing, press [F6 (EXEC)] to finalize the values of the system exclusive message.

* *To cancel, press [F5 (CANCEL)].*

TIP

If you decide to discard the changes you made to the system exclusive message and return to the MICROSCOPE screen, press [EXIT].

- In the case of a Roland type IV system exclusive message, the checksum can be calculated automatically when you finalize the values. If you do not want to calculate the checksum automatically, press [F1 (AT SUM)] to remove the check mark (✔).
- When you press [F4 (TEST)], the system exclusive message you are editing will be transmitted from the MIDI OUT connector.

Sequencer Data Handled by a MIDI Track

MIDI tracks can record the following seven types of sequencer data. The recorded location (measure-beat-tick) is displayed at the far left of each data item, and the MIDI channel number is displayed beside it.

Note (♩)

These MIDI messages represent notes. From the left, the parameters are Note Number, which indicates the name of the note; On Velocity, which specifies the force with which the key is pressed; Duration, which specifies the duration of the note; and Off Velocity, which determines the speed with which the key is released.

Program Change

This MIDI message switches sounds. The program number (PC#) selects the sound.

Control Change
This MIDI message applies various effects such as modulation or expression. The controller number (CC#) selects the function, and Value specifies the depth of the effect.

Pitch Bend
This MIDI message changes the pitch. The value specifies the amount of pitch change.

Poly Aftertouch
This MIDI messages applies aftertouch to an individual note. From the left, the parameters are Note Number which specifies the key, and Value which specifies the depth of the aftertouch.

Channel Aftertouch
This MIDI message applies aftertouch to an entire MIDI channel. Value specifies the depth of the aftertouch.

System Exclusive
These are MIDI messages used to make settings unique to the JUNO-G, such as sound settings. Input the data between "F0" and "F7."

Data Handled by the Tempo Track

The Tempo track records tempo data for the song.

Tempo Change
This data specifies the tempo. The song will play back according to the "Value" of the tempo change.

The value displayed in "♩= **" is the tempo at which the song will actually play (the playback tempo), and can be changed only in the PLAY screen of each mode.

* *If the tempo change value differs from the playback tempo, this means that the playback tempo has been changed temporarily. In other words, since the tempo change value has not been rewritten, this setting will be lost if you select another song or turn off the power. If you want to play back at this tempo the next time as well, you must re-save the song to disk. This will rewrite the tempo change value so that it matches the playback tempo.*

Data Handled by the Beat Track

The Beat track records time signature data.

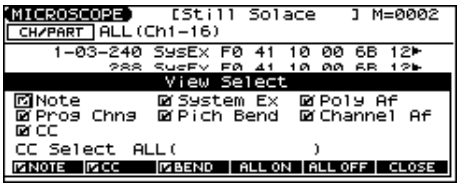
Beat Change
This specifies the time signature (Beat).

Viewing Sequencer Data (View Select)

Since a MIDI track contains a large amount of sequencer data, the display may be cluttered and difficult to read. For this reason, the JUNO-G lets you specify the type(s) of sequencer data that will be displayed in the screen. This is convenient when you want to check or edit only a specific type of sequencer data.

1. Access the MICROSCOPE screen.

2. Hold down [SHIFT] and press [F5 (VIEW SEL)].
The View Select window appears.



3. Use [▲] [▼] [◀] [▶] to select the sequencer data that will be displayed.

Note	System Exclusive	Poly Aftertouch
Program Change	Pitch Bend	Channel Aftertouch
Control Change		
CC Select Specifies the controller number that will be displayed.		

4. Press [INC] or [DEC] to switch.
The message will be displayed if the check mark (✔) is assigned, and will not be displayed if the check mark is removed.

- [F1 (NOTE)]: Note
- [F2 (CC)]: Control Change
- [F3 (BEND)]: Pitch Bend
- [F4 (ALL ON)]: All of the sequencer data will be displayed
- [F5 (ALL OFF)]: None of the sequencer data will be displayed

5. Press [F6 (CLOSE)] to close the View Select window.

Inserting Sequencer Data (Create)

You can insert new sequencer data into a desired location of a MIDI track.

cf.

For details on the sequencer data that can be inserted, refer to **Sequencer Data Handled by a MIDI Track** (p. 100).

1. Access the MICROSCOPE screen for the track into which you want to insert data.

2. Press [F1 (CREATE)].
The Create Event window appears.

3. Press [▲] [▼] to select the data that will be inserted.

4. Press [F6 (EXEC)] to insert the performance data.
The inserted data will have the default parameter values, so edit them as necessary.

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [F1 (UNDO)] in the MIDI TRACK screen to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

Erasing Sequencer Data (Erase)

If desired, you can erase just an individual event of sequencer data. You can also use the same operation to erase individual items of data from the tempo track or beat track.

* *It is not possible to erase the tempo change located at the beginning of the tempo track, the beat change located at the beginning of the beat track.*

1. **Access the MICROSCOPE screen for the track from which you want to erase data.**
2. **Press [▲] [▼] to select the data that you want to erase.**
3. **Hold down [SHIFT] and press [F6 (ERASE)] to erase the sequencer data.**

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [F1 (UNDO)] in the MIDI TRACK screen to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

Moving Sequencer Data (Move)

You can move an individual item of sequencer data to a different location. Data recorded in the tempo track or beat track can also be moved in the same way.

* *It is not possible to move the tempo change located at the beginning of the tempo track, the beat change and key signature located at the beginning of the beat track.*

1. **Access the MICROSCOPE screen for the track whose data you want to move.**
2. **Press [▲] [▼] to select the data that you want to move.**
3. **Press [F2 (MOVE)].**
   The Move Event window appears.
4. **Press [◀] [▶] to move the cursor to the "Meas (measure)," "Bt (beat)," and "Tick" fields.**
5. **Use the VALUE dial or [INC] [DEC] to specify the location to which the data will be moved.**
6. **Press [F6 (EXEC)] to move the data.**

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [F1 (UNDO)] in the MIDI TRACK screen to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

Copying Sequencer Data (Copy)

Sequencer data can be copied to the desired location. This is convenient when you want to use the same sequencer data at multiple locations. Data recorded in the tempo track or beat track can also be copied in this way.

1. **Access the MICROSCOPE screen for the track whose data you want to copy.**
2. **Press [▲] [▼] to select the data that you want to copy.**
3. **Press [F3 (COPY)].**
4. **Press [F4 (PLACE)].**
   The Place Event window appears.
5. **Press [◀] [▶] to move the cursor to the "Meas (measure)," "Bt (beat)," and "Tick" fields.**
6. **Use the VALUE dial or [INC] [DEC] to specify the location to which the data will be copied.**
7. **Press [F6 (EXEC)] to paste the data.**

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [F1 (UNDO)] in the MIDI TRACK screen to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

Changing the Tempo Midway Through the Song

If you want to change the tempo midway through the song, insert a new Tempo Change into the tempo track. The song will play back at that tempo following the location at which the tempo change was inserted.

* *If you want to create gradual tempo changes such as ritardando or accelerando, it is more convenient to use Tempo Recording (p. 89).*

* *If you want to make the entire song faster or slower, change the playback tempo in one of the PLAY screens.*

1. **From the MICROSCOPE screen, press [F5 (CH/PART)].**
   The Ch/Part Select window appears.
2. **Press [F4 (TEMPO)] and then press [F6 (CLOSE)].**
3. **Press [F1 (CREATE)].**
   The Create Event window appears.
4. **Press [F6 (EXEC)].**
   The Create Position window appears.
5. **Press [◀] [▶] to move the cursor to the "Meas (measure)," "Bt (beat)," and "Tick" fields.**
6. **Use the VALUE dial or [INC] [DEC] to specify the location at which the data will be inserted.**

7. Press [F6 (EXEC)] to insert the tempo change data.

8. A default value is specified for the tempo change that is inserted, so press [▶] and use the VALUE dial or [INC] [DEC] to change the value as desired.

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [F1 (UNDO)] in the MIDI TRACK screen to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

Changing the Time Signature Midway Through the Song

If you want to change the time signature midway through the song, insert a new Beat Change. The song will play back using that time signature for measures following the inserted beat change.

1. From the MICROSCOPE screen, press [F5 (CH/PART)].
The Ch/Part Select window appears.

2. Press [F5 (BEAT)] and then press [F6 (CLOSE)].

3. Press [F1 (CREATE)].
The Create Event window appears.

4. Press [F6 (EXEC)].
The Create Position window appears.

5. Use the VALUE dial or [INC] [DEC] to specify the location at which the data will be inserted.

6. Press [F6 (EXEC)] to insert the beat change data.

7. A default value is specified for the beat change that is inserted, so press [▶] and use the VALUE dial or [INC] [DEC] to change the value as desired.

TIP

If you are not satisfied with the results of executing this operation, press [EXIT] to close the MICROSCOPE screen, and press [F1 (UNDO)] in the MIDI TRACK screen to return to the state prior to execution (Undo). After executing Undo, you can use Redo to revert to the previous state by performing the above procedure once again.

NOTE

It is not possible to change the time signature in the middle of a measure. You must change the time signature at the beginning of a measure.

TIP

If you want to change the time signature from a measure that is later than the end of the song, or if it is ok to change the length of the song, you will find it more convenient to use the track edit Insert function (p. 99).

Assigning a Name to a Song (Song Name)

You can assign a song name to a song, or edit the song name. This song name is independent of the file name assigned when saving a song to user memory or memory card. Although you are not required to assign a song name, you can assign one using up to 15 characters, and you may find it a convenient way to store a title or memo that will help you organize your songs.

* *Some commercially available Standard MIDI Files contain copyright data. It is not possible to assign or modify the song name for such songs.*

1. Access the MIDI TRACK screen, and then load the song whose song name you want to assign (p. 84).

2. Hold down [SHIFT] and press [F6 (UTILITY)].
The Song Utility Menu window appears.

3. Press [F1 (SONG NAME)].
The SONG NAME screen appears.

4. Assign a song name to the song. (up to 15 characters).

cf.

For details on assigning names, refer to p. 24.

5. After you have assigned a name, press [F6 (WRITE)].

* *To cancel, press [F5 (CANCEL)].*

Recording a Song (Audio Track)

Before You Record Audio via the AUDIO INPUT Jacks

The JUNO-G lets you sample audio sources, such as an audio device, mic, or CD.

Before you record audio from a CD player, mic, or other external audio source connected to the AUDIO INPUT jacks, please follow the procedure described below.

Making AUDIO INPUT Settings (Audio Input Setting)

1. Connect your CD player, mic, or other audio source to the AUDIO INPUT jacks located on the rear panel of the JUNO-G.

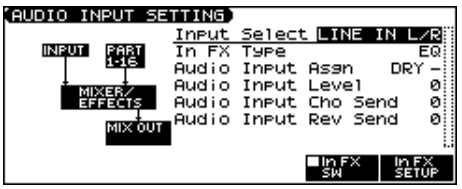
Cautions when using a microphone

Howling could be produced depending on the location of microphones relative to speakers. This can be remedied by:

1. Changing the orientation of the microphone(s).
2. Relocating microphone(s) at a greater distance from speakers.
3. Lowering volume levels.

2. While holding down [SHIFT], move the SONG RECORDER's AUDIO IN slider.

The AUDIO INPUT SETTING screen appears.



* *You can also access this screen by pressing EDIT [MENU] and selecting "6. Input Setting" in the Top Menu window.*

3. Press [▲] [▼] to select the parameter that you want to set.

4. Turn the VALUE dial or press [INC] [DEC] to set the value.

- **Input Select**

  Specifies the input source of the sound to be sampled.

  Value

  LINE IN L/R: INPUT jacks L/R (stereo)

  LINE IN L: INPUT jack L (mono)

  MICROPHONE: INPUT jack L (mono, mic level)

- **Input FX (Effect) Type**

  Selects the type of effect that will be applied to the external input source.

  Value: EQ, ENHANCER, COMPRESSOR, LIMITER, NOISE SUP, C CANCELLER

  When you press [F6 (In FX Setup)], the parameter setting screen for the currently selected input effect will be displayed "Input Effect Setup Settings."

- **Audio Input Asgn**

  Output destination of the external input sound that is mixed in

  Value

  DRY: Output to OUTPUT (A) jacks without passing through effects

  MFX: Output through multi-effects

  When you select "MFX," selects which of the three multi-effects (1–3) will be used.

- **Audio Input Level**

  Volume level of the external input sound.

  Value: 0–127

* *You can also use the SONG RECORDER's AUDIO IN slider to adjust this.*

- **Audio Input Cho Send**

  Adjusts the depth of chorus that will be applied to the external input source. Set this to "0" if you do not want to apply chorus.

  Value: 0–127

- **Audio Input Reverb Send**

  Depth of reverb applied to the external input sound. Set this to 0 if you don't want to apply reverb.

  Value: 0–127

5. Press [F5 (In FX SW)] (Input Effect Switch) to add a check mark; the external audio input will be routed through the dedicated input effect.

If you press [F5 (In FX SW)] to clear the check mark, the external audio input will not be routed through the dedicated input effect.

6. Play back the external input source.

7. Turn the rear panel AUDIO INPUT LEVEL knob to adjust the input level from the external audio source.

8. Press [EXIT] to return to the previous screen.

Input Effect Setup Settings

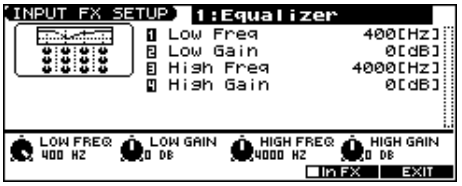
1. While holding down [SHIFT], move the SONG RECORDER's AUDIO IN slider.

The AUDIO INPUT SETTING screen appears.

* *You can also access this screen by pressing EDIT [MENU] and selecting "6. Input Setting" in the Top Menu window.*

2. Press [F6 (In FX SETUP)].

The INPUT FX SETUP screen appears.



3. Press [▲] [▼] to move the cursor.

4. Turn the VALUE dial, or press [INC] /[DEC] to set the value.

In this settings screen, you can edit parameters for the type of input effect you selected.

* *You can also use the SOUND MODIFY knobs 1–4 to edit the value of the corresponding parameters.*

- 01: EQUALIZER

  Adjusts the tone of the low-frequency and high-frequency ranges.

Parameter	Range	Explanation
Low Freq	200, 400 Hz	Center frequency of the low-frequency range
Low Gain	-15–+15 dB	Amount of low-frequency boost/cut
High Freq	2000, 4000, 8000 Hz	Center frequency of the high-frequency range
High Gain	-15–+15 dB	Amount of high-frequency boost/cut

- 02: ENHANCER

  Modifies the harmonic content of the high-frequency range to add sparkle to the sound.

Parameter	Range	Explanation
Sens	0–127	Depth of the enhancer effect
Mix	0–127	Volume of the harmonics that are generated

- 03: COMPRESSOR

  Restrains high levels and boosts low levels to make the overall volume more consistent.

Parameter	Range	Explanation
Attack	0–127	Time from when the input exceeds the Threshold until the volume begins to be compressed
Threshold	0–127	Volume level at which compression will begin
Post Gain	0–+18 dB	Level of the output sound

- 04: LIMITER

  Compresses the sound when it exceeds a specified volume, to keep distortion from occurring.

Parameter	Range	Explanation
Release	0–127	Time from when the input falls below the Threshold until compression ceases
Threshold	0–127	Volume level at which compression will begin
Post Gain	0–+18 dB	Level of the output sound

- 05: NOISE SUPPRESSOR

  Suppresses noise during periods of silence.

Parameter	Range	Explanation
Threshold	0–127	Volume at which noise suppression will begin
Release	0–127	Time from when noise suppression begins until the volume reaches zero.

- 06: CENTER CANCELER

  Removes the sounds that are localized at the center of the stereo input. This is a convenient way to eliminate a vocal.

Parameter	Range	Explanation
Ch Balance	-50– +50	Volume balance of the L (left) and R (right) channels for removing the sound
Range Low	16–15000 Hz	Lower frequency limit of the band to be removed
Range High	16–15000 Hz	Upper frequency limit of the band to be removed

MEMO

When you enter the INPUT FX SETUP screen, the indicators located at the left of SOUND MODIFY knobs 1--4 will go dark; in this state, knobs 1--4 are used to edit the parameters of the input effect. If you press the button once again to make the indicator light, the knobs will return to their normal function. When you exit the Input Effect Setup screen, the indicator will automatically return to its previous lit state.

5. Press [EXIT] to return to the previous screen.

Recording an Audio Track (SOLO/RE-SAMPLING)

Here's how to record the input from an AUDIO INPUT jack or from the internal sound generator.

1. Press SONG RECORDER [AUDIO TRACK].

The AUDIO TRACK screen appears.

2. Press [REC].

The [REC] indicator will blink, and the Audio Rec Standby window will appear.

3. Use the Audio Rec Mode (Audio Recording Mode) field to select the recording method you want to use.

Use [▲] [▼] to move the cursor to Audio Rec Mode, and turn the VALUE dial or use [INC][DEC] to select the desired recording mode.

- **SOLO**

  The internal sound generator will play as usual, and only the sound from the external audio input will be recorded.

* *You won't be able to apply effects to the external audio input.*

- **RE-SAMPLING**

  The sound from the internal sound generator (including the audio tracks) will be recorded. The external audio input will not be heard.

* *The volume of a resampled phrase may be less than the original volume of the phrase. As necessary, use Normalize (p. 121) to raise the volume.*

* *Audio tracks whose Audio Track Output Assign (p. 111) parameter is set to MON (Monitor) will not be recorded.*

- **AUDIO MERGE**

  Multiple audio tracks will be combined into one audio track. For details, refer to **Combining Multiple Audio Tracks into One Track (AUDIO MERGE)** (p. 106).

4. Use the Audio Rec Count In (Audio Recording Count In) field to specify how you want recording to start.

Use [▲] [▼] to move the cursor to Audio Rec Count In, and turn the VALUE dial or use [INC][DEC] to choose the desired setting.

- **OFF**

  Recording will start the moment you press [PLAY].

- **1 MEAS**

  When you press [PLAY], there will be a count-in (playback) beginning one measure before the recording start point. Recording will start when you reach the recording start point.

- **2 MEAS**

  When you press [PLAY], there will be a count-in (playback) beginning two measures before the recording start point. Recording will start when you reach the recording start point.

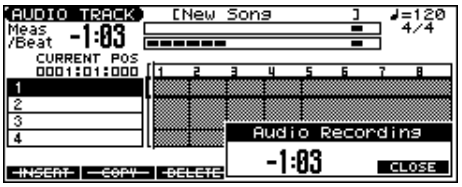
5. Use the Audio Rec Channel (audio recording channel) field to select whether you will record in stereo or in monaural.

Use [▲] [▼] to move the cursor to Audio Rec Channel, and turn the VALUE dial or use [INC][DEC] to choose the desired setting.

- **MONO**
  Record in monaural.
- **STEREO**
  Record in stereo.

6. When you've chosen the desired setting in the Audio Rec Standby window, press [PLAY] or [F6 (START)].

The Audio Rec Standby window will close, the [REC] indicator will change from blinking to steadily lit, and recording will start. When recording starts, the Audio Recording window will appear.

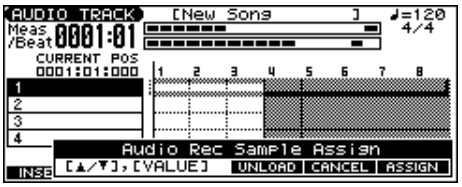


To close the Audio Recording window, press [F6 (Close)] or [PLAY]. To open it once again, press [PLAY].

7. When you've finished recording, press [STOP].

The [REC] indicator will go dark.

8. The Audio Rec Sample Assign window will open.



Use [BWD]+[STOP] (TOP), [BWD] [FWD], the VALUE dial, or [▲] [▼] [◀] [▶] to specify the location at which you want to assign the sample event.

9. Press [F6 (ASSIGN)].

A sample event that plays the recorded sample will be assigned to the audio track, and you will return to the previous screen.

- If you press [F4 (UNLOAD)], the samples you just recorded will be deleted (unloaded). A message will ask you for confirmation; press [F6 (EXEC)] to confirm.
- If you want to neither assign nor unload the sample, press [F5 (CANCEL)].

* *Even if you cancel, the recorded sample data itself will remain in the sample list.*

MEMO

If the sample event you assign would exceed the length of the song, a screen will ask you to confirm whether you want to extend the length of the song. Press [F6 (EXEC)] to automatically extend the length of the song so that the sample event can play back completely.

MEMO

If the sample memory is full, the "Sample Memory Full" error will be displayed. In this case, you can either delete unneeded sample data (p. 118) or install more memory (p. 176).

Recording the Rhythm Pattern Playback to Audio Track

In the RHYTHM GROUP screen, record the rhythm pattern to Audio Track.

In recording standby mode, when you press [PLAY] (or [F6 (START)]) the current rhythm pattern will start playback at the same time, and you can record the rhythm pattern.

TIP

If you want to record the rhythm pattern at the same time that it starts playback, set the Count In to Off in the recording standby window.

Combining Multiple Audio Tracks into One Track (AUDIO MERGE)

A maximum of four tracks are available for you to use. By combining (merging) several audio tracks, you can free up audio tracks for other uses.

When you record using Audio Merge, all MIDI tracks will be muted automatically, and the audio tracks will be recorded according to the current track mute setting.

1. Press SONG RECORDER [AUDIO TRACK].

The AUDIO TRACK screen appears.

2. Mute any tracks that you don't want to merge (p. 85).

3. Press [REC].

The [REC] indicator will blink, and the Audio Rec Standby window will appear.

4. In the Audio Rec Mode (Audio Recording Mode) field, choose "AUDIO MERGE."

Use [▲] [▼] to move the cursor, and turn the VALUE dial or use [INC][DEC] to make the setting.

5. In the Audio Rec Count In (Audio Recording Count In) field, specify how you want recording to start.

Refer to step **4** of "Recording an audio track (SOLO/RE-SAMPLING)."

6. In the Audio Rec Channel (Audio Recording Channel) field, select whether you will record in stereo or in monaural.

Refer to step **5** of "Recording an audio track (SOLO/RE-SAMPLING)."

7. When you've finished making settings in the Audio Rec Standby window, press [PLAY] or [F6 (START)].

The Audio Rec Standby window will close, the [REC] indicator will change from blinking to steadily lit, and recording will start. When recording starts, the Audio Recording window will appear.

To close the Audio Recording window, press [F6 (CLOSE)] or [PLAY]. To open it once again, press [PLAY].

8. When you've finished recording, press [STOP].
The [REC] indicator will go dark.

9. The Audio Rec Sample Assign window will open.
The location at which the recorded sample event is to be assigned will blink.
Use [BWD]+[STOP] (TOP), [BWD] [FWD], the VALUE dial, or [▲] [▼] [◀] [▶] to specify the location at which you want to assign the sample event.

10. Press [F6 (ASSIGN)].
A sample event that plays the recorded sample will be assigned to the audio track, and you will return to the previous screen.

- If you press [F4 (UNLOAD)], the samples you just recorded will be deleted (unloaded). A message will ask you for confirmation; press [F6 (EXEC)] to confirm.
- If you want to neither assign nor unload the sample, press [F5 (CANCEL)].

* *Even if you cancel, the recorded sample data itself will remain in the sample list.*

MEMO

If the sample event you assign would exceed the length of the song, a screen will ask you to confirm whether you want to extend the length of the song. Press [F6 (EXEC)] to automatically extend the length of the song so that the sample event can play back completely.

MEMO

If the sample memory is full, the "Sample Memory Full" error will be displayed. In this case, you can either delete unneeded sample data (p. 118) or install more memory (p. 176).

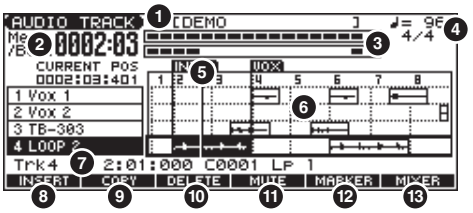
Editing a Song (Audio Track)

You will use the following two screens to edit audio tracks.

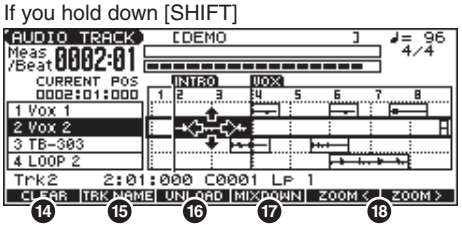
- **AUDIO TRACK screen**
  Here you can edit each audio track.
- **AUDIO MIXER screen** (p. 111)
  In this screen you can adjust the mixing of the audio tracks, such as their level and pan.

Items in the AUDIO TRACK Screen

1. Press SONG RECORDER [AUDIO TRACK].
The AUDIO TRACK screen appears.



If you hold down [SHIFT]



1. Indicates the name of the currently selected song.

2. Indicates the current location of the audio track.

3. Audio level meter.

4. Indicates the time signature and tempo of the song.

5. Indicates the current location.

6. Indicates the name, contents, and markers of audio tracks.
If the audio file referenced by the selected sample event is not loaded, the sample number will be displayed for the sample event.

7. Shows details of the currently selected event.
If this indicates "unload," the audio file referenced by the selected sample event has not been loaded.

8. Inserts a sample event at the specified location.

9. Copies the sample event (p. 109).

10. Deletes the selected sample event (p. 109).

11. Mutes audio tracks (p. 109).

12. Displays the marker list (p. 109).

13. Displays the AUDIO MIXER screen (p. 111).

14. Erases audio tracks (p. 109).

15. Names an audio track (p. 110).

16. Unloads the sample (p. 110).

17. Combines the contents of the tracks into a single audio track (p. 110).

18. Zooms in/out in the display (p. 110).

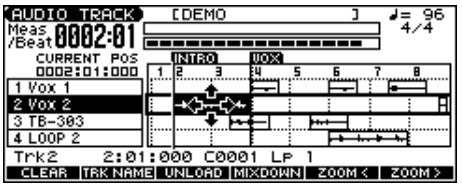
Editing Audio Tracks (AUDIO TRACK Screen)

Moving a Sample Event (Move)

Here's how to move the currently selected sample event to another track or location.

1. Use [▲] [▼] [◀] [▶] to select the sample event you want to move.
The selected event is displayed in orange.

2. Press [SHIFT].
The cursor will change shape as follows.



3. While continuing to hold down [SHIFT], press [▲] [▼].
Move the sample event to the desired track.

4. While continuing to hold down [SHIFT], use the following buttons to move the sample event to the desired location.

- [INC][DEC]
  Move the sample event in steps of one tick.
- [◀] [▶]
  Move the sample event in steps of one measure.
- VALUE dial
  Move the sample event in steps of 16th note (120 ticks).

Selecting and Auditioning a Sample Event (Preview)

1. Use to select a track.

2. Press [ENTER].
The sample in the track you selected in step **1** that is closest to the current location will be selected.
While the play is stopped, you can audition (preview) the sample by continuing to hold down [ENTER].

Inserting a Sample Event at a Specified Location (Insert)

1. Use [▲] [▼] to select the audio track into which you want to insert a sample event.

2. Specify the location at which you want to insert a sample event.
The buttons have the following functions.

- [STOP] + [BWD] (TOP)
  Moves the current location to the beginning of the song.

- [INC] [DEC]
  Move the current location in steps of one tick.
- [BWD] [FWD]
  Move the current location in steps of one measure.
- VALUE dial
  Moves the current location in steps of 120 ticks.

3. Press [F1 (INSERT)].
The SAMPLE SEL screen will appear.

4. Select the sample event that you want to insert, and press [F6 (SELECT)].
The sample event will be inserted at the location you specified.

MEMO

If inserting the sample event would exceed the current length of the song, a screen will ask you whether you really want to extend the length of the song. When you press [F6 (EXEC)], the song will automatically be lengthened as necessary to accommodate the newly inserted sample event.

Copying a Sample Event (Copy)

Here's how to copy the currently selected sample event.

1. Use [▲] [▼] [◀] [▶] to select the sample event that you want to copy.

2. Press [F2 (COPY)].
The currently selected sample event will be copied to a location immediately following itself.

MEMO

If copying the sample event would make the track exceed the current length of the song, a screen will ask you whether you really want to extend the length of the song. When you press [F6 (EXEC)], the song will automatically be lengthened as necessary to accommodate the newly copied sample event.

Deleting the Selected Sample Event from an Audio Track (Delete)

1. Use [▲] [▼] [◀] [▶] to select the sample event that you want to delete from an audio track.

2. Press [F3 (DELETE)].
The selected sample event will be deleted from the track.

* *This merely deletes the sample event; the sample data itself will remain in the sample list.*

Muting Audio Tracks (Mute)

cf.

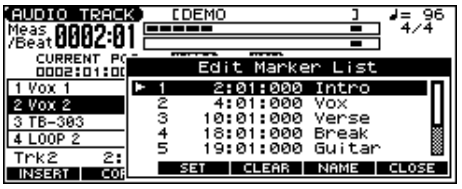
Refer to **Playing Back with an Audio Track Muted (Audio Track Mute)** (p. 85).

Viewing a List of Markers (Marker List)

You can assign markers to desired measures within a song. This gives you a visual indication of the structure of your song, and is a real convenience when editing a song since you can move rapidly to a desired marker.

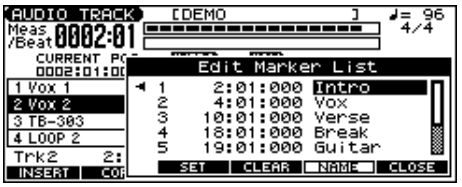
Here's how you can view a list of the markers in the song, and edit the markers.

1. Press [F5 (MARKER)].
The Edit Marker List window will appear.



The buttons have the following functions.

- VALUE dial, [INC] [DEC], **[▲] [▼]**
  Select a marker within the list. The current location will jump accordingly.
- [F3 (SET)]
  Adds a marker at the beginning of the current measure.
- [F4 (CLEAR)]
  Deletes the selected marker.
- [F5 (NAME)], [▶]
  Assigns a name to the currently selected marker. Use the VALUE dial or [INC] [DEC] to select a name, and press [F5 (NAME)] or [◀] to finalize your choice.



2. Press [F6 (CLOSE)] to close the window.

Erasing Audio Tracks (Clear)

1. Hold down [SHIFT] and press [F1 (CLEAR)].
The Audio Track Clear Menu window appears.

2. Turn the VALUE dial, or press [INC] [DEC] or [▲] [▼] to select the menu.

- 1 Clear All
  All audio tracks will be erased. (The track names and setup data will also revert to their default settings.)

- 2 Clear Track
  The selected audio track will be erased. (The track name and setup data will also revert to its default settings.)

3. Press [F6 (SELECT)].
A message will ask you for confirmation.

4. Press [F6 (EXEC)].

* *If you decide to cancel, press [F5 (CANCEL)].*

* *This operation will not change the length of the song.*

Naming an Audio Track (Track Name)

Here's how to assign a name to an audio track (you can use up to twelve characters).

1. Use to select the audio track that you want to name.

2. Hold down [SHIFT] and press [F2 (TRK NAME)].
The AUDIO TRACK NAME screen will appear.

3. Assign the desired name.

* *For details on how to assign a name, refer to p. 24.*

4. Press [F6 (WRITE)] to confirm the name.

Unloading a Sample (Unload Sample)

This operation deletes the currently selected sample event and also unloads it from the sample list.

1. Hold down [SHIFT] and press [F3 (UNLOAD)].
A message will ask you for confirmation.

2. Press [F6 (EXEC)] to execute.

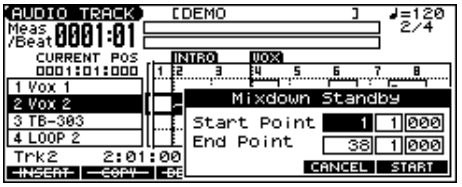
* *If you decide to cancel, press [F5 (CANCEL)].*

Combining the Contents of the Tracks into One Audio Track (Mixdown)

This operation lets you specify a region, then have the performance of all audio tracks and MIDI tracks in that region be combined into a single track.
After creating a sample in this way, you can save it on your computer as the audio data for a single song.

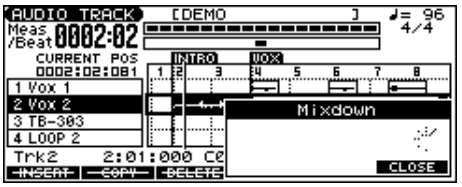
1. Hold down [SHIFT] and press [F4 (MIXDOWN)].
The [REC] indicator will blink, and the Mixdown Standby window will appear.

2. In the Mixdown Standby window, specify the region that you want to mix down.
Use [▲] [▼] to move the cursor to each parameter, and turn the VALUE dial or use [INC][DEC] to set the value.



- Start Point
  Specify the measure at which the mixdown is to start.
- End Point
  Specify the measure at which the mixdown is to end.

3. Press [PLAY] or [F6 (START)].
The Mixdown Standby window will close, and [REC] indicator will change from blinking to lit, and the mixdown will begin.
When the mixdown begins, the Mixdown window will appear.



To close the Mixdown window, press [F6 (CLOSE)] or [PLAY]. To open it again, press [PLAY].

4. The mixdown will end automatically.
The [REC] indicator will go out.

* *You can also press [STOP] to stop before you reach the end.*

5. The Mixdown Sample Assign window will open.
Use [STOP] + [BWD] (TOP), [BWD][FWD] or [▲] [▼] [◀] [▶] to specify the location at which the sample event will be assigned.

6. Press [F6 (ASSIGN)].
A sample event that plays the mixed-down sample will be assigned to the audio track, and you will return to the previous screen.

- If you press [F4 (UNLOAD)], the samples you just mixed down will be deleted (unloaded). A message will ask you for confirmation; press [F6 (EXEC)] to confirm.
- If you want to neither assign nor unload the sample, press [F5 (CANCEL)].

* *Even if you cancel, the mixed-down sample data itself will remain in the sample list.*

MEMO

If the sample memory is full, the "Sample Memory Full" error will be displayed. In this case, you can either delete unneeded sample data or install more memory (p. 176).

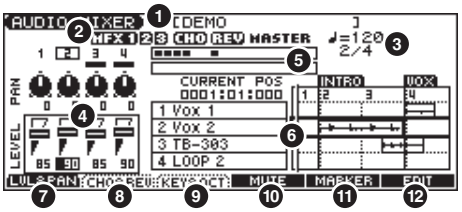
Zooming In and Zooming Out in the Display

1. Hold down [SHIFT] and press [F5 (Zoom <)] (reduce) / [F6 (Zoom >)] (magnify).
You can zoom in/out to display between two and thirty-two measures in the screen.

Items in the AUDIO MIXER Screen

1. **With the AUDIO TRACK screen displayed, press [F6 (MIXER)].**
   The AUDIO MIXER screen will appear.

* *Press [F6 (EDIT)] to switch the AUDIO TRACK screen.*



1. Indicates the name of the currently selected song.

2. Indicates the on/off status of the multieffects (MFX 1–3), chorus (CHO), reverb (REV), and mastering effect (MASTER).

3. Indicates the time signature and tempo of the song.

4. Shows the parameters that can be controlled for each audio track.

5. Audio level meter.

6. Displays a simplified view of the AUDIO TRACK screen.

7. Area **4** will show the volume and pan.

8. Area **4** will show the chorus and reverb.

9. Area **4** will show the audio track key shift and the output assignment.

10. Mutes audio tracks.

11. Displays the marker list.

12. Displays the AUDIO TRACK screen (p. 108).

Controlling the Audio Tracks (AUDIO MIXER screen)

It's convenient to use the AUDIO MIXER screen when you want to adjust mixing parameters, such as the level and pan of the four audio tracks.

Controlling the Audio Track Settings

Adjusting the Volume and Pan

1. **Press [F1 (LVL&PAN)].**

2. **Use [◀] [▶] to move the cursor to the audio track you want to edit.**

3. **Use [▲] [▼] to move the cursor to the parameter you want to edit.**
   - **LEVEL:** Track Level
     Adjusts the volume of each audio track. This is used mainly to set the volume balance between audio tracks.
     Value: 0–127
   - **PAN:** Track Pan
     Adjusts the pan of each audio track. "L64" is far left, "0" is center, and "63R" is far right.
     Value: L64–0–63R

4. **Turn the VALUE dial or use [INC] [DEC] to adjust the value.**

Adjusting the Chorus and Reverb

1. **Press [F2 (CHO&REV)].**

2. **Use [◀] [▶] to move the cursor to the audio track you want to edit.**

3. **Use [▲] [▼] to move the cursor to the parameter you want to edit.**
   - **CHO:** Track Chorus Send Level
     Adjusts the amount of signal sent from each audio track to the chorus.
     Value: 0–127
   - **REV:** Track Reverb Send Level
     Adjusts the amount of signal sent from each audio track to the reverb.
     Value: 0–127

4. **Turn the VALUE dial or use [INC] [DEC] to adjust the value.**

Setting the Audio Track Key Shift and Output Assignment

1. **Press [F3 (KEY&OCT)].**

2. **Use [◀] [▶] to move the cursor to the audio track you want to edit.**

3. **Use [▲] [▼] to move the cursor to the parameter you want to edit.**
   - **KEY:** Audio Track Key Shift
     Adjusts the pitch of each track in semitone steps (+/-2 octaves).
     Value: -24–+24
   - **OUT :**Output Assign
     Specifies how the direct sound from each audio track will be output.
     Value:
     MFX 1–3: The sound will be routed through the multieffect and output in stereo. You can also apply chorus or reverb to the sound that has passed through the multi-effect.
     A, B: The sound will be output in stereo from the OUTPUT A (MIX) jacks or OUTPUT B jacks without passing through a multi-effect.
     MON: The sound will be output in stereo from the OUTPUT A (MIX) jacks without passing through a multi-effect. Use this setting if you want only to hear the sound without resampling or recording it.

4. **Turn the VALUE dial or use [INC] [DEC] to adjust the value.**

Muting Audio Tracks (Mute)

cf.
Refer to **Playing Back with an Audio Track Muted (Audio Track Mute)** (p. 85).

Viewing a List of Markers (Marker List)

cf.
Refer to p. 109.

Using the Sliders to Control the Mixer

You can move the SONG RECORDER TRACK A1–A4 sliders to adjust the volume (track level) of each audio track.

Saving/Loading a Song (Save/Load)

Songs you record are initially held in Temporary Area. A song in Temporary Area will be lost when you turn off the power or when you load a different song. If you want to keep the song, you must save it to user memory or a memory card.

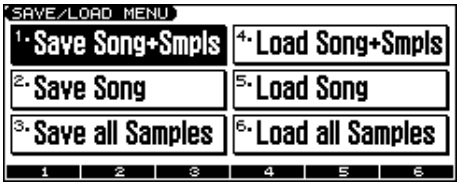
Conversely in order to edit a song (p. 94, p. 108), you must first load it into Temporary Area.

Saving a Song (Save)

Basic Procedure

1. Hold down [SHIFT] and press EDIT [WRITE].

The SAVE/LOAD MENU screen appears.



* *When the MIDI TRACK screen, AUDIO TRACK screen, or AUDIO MIXER screen is displayed, you can access the SAVE/LOAD MENU screen simply by pressing EDIT [WRITE].*

2. Press [F1 (1)]–[F3 (3)] to select the format in which you want to save the song.

- **1. Save Song+Smpls:**
  The temporary song will be saved as a song file (SVQ file, SVA file). All samples in sample memory will also be saved. The saved song includes the data of the temporary area.
- **2. Save Song:**
  The temporary song will be saved as a song file (SVQ file, SVA file). The saved song includes the data of the temporary area.
- **3. Save all Samples:**
  All samples in sample memory will be saved.

Function	Button	Song	ALL Samples
Save Song+Smpls	[F1]	✔	✔
Save Song	[F2]	✔	–
Save all Samples	[F3]	–	✔

✔: Saving is possible

Data Saved Together with a Song

The performances, patches, and system setup you are using at that time are saved together with the song recorder data.

The performances and patches saved along with the song are special data used to reproduce the song; they are separate from the user performances and user patches.

* *If you want to use these performances or patches in a different song, or without reference to a song, you'll need to save them in the user area.*

* *Mastering Effect settings are not included in the data saved with a song. In order to completely reproduce the way in which the song played back at the time it was saved, you will also need to check the mastering settings.*

Parameters included in System Setup

- Sound generator mode (Patch/Performance) and Patch/Performance numbers
- MFX 1–3/Chorus/Reverb switch
- Transpose and Octave Shift values
- The selection of the function controlled by D Beam
- All settings in the Arpeggio screen and the Arpeggio on/off setting
- All settings in the Rhythm Group screen and the Rhythm Pattern on/off setting
- All settings in the Chord Memory screen and the Chord Memory on/off setting

Saving a Song with Samples (Save Song+Smpls)

Here's how to save the Temporary Song along with all samples in sample memory and the current sound generator settings.

1. From the SAVE/LOAD MENU screen, press [F1 (1)].

The SONG FILE NAME screen appears.

2. Assign a file name to the song (up to 8 characters). A file name extension of ".SVQ" will automatically be added to the song.

cf.
For details on assigning names, refer to p. 24.

NOTE
Song file names may not contain lowercase characters or certain symbols (space, " * + , . / : ; < = > ? [\ ] |).

3. After you have assigned a name, press [F6 (WRITE)].

The SAVE SONG screen appears.

4. Press [F1 (USER)] (User memory) or [F2 (CARD)] (Memory card) to select the location where you want to save the song.

5. Press [F6 (SAVE)].

A message will ask you for confirmation.

6. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

MEMO
A song file having the same name, but with an extension of ".SVA" will also be saved at the same time.

When samples are saved, they will automatically be overwritten onto the same numbers of the same bank in the sample list. The samples will be saved with a file name of "smpl****.wav (aif)" in the "ROLAND/SMPL" folder of user memory or memory card. The number of the file name will correspond to the number in the sample list.

File Name and Song Name

Song Files and Standard MIDI Files have a song name in addition to a file name. The file name is used to distinguish between files, and must be assigned when you save a file. It will help you manage songs if you use the file name to distinguish between types of song, and use the song name to assign a title. Use the SONG NAME screen (p. 103) to assign a song name.

If you assign a file name that is identical to a file name already existing in the user area or memory card, and attempt to save, a message of "File "****" Already Exists! Overwrite Sure?" will appear, asking you for confirmation. If it is OK to overwrite the existing file, press [F6 (EXEC)]. If you decide to cancel the Save operation, press [F5 (CANCEL)].
If you attempt to save data on a memory that was not formatted by the JUNO-G, a message of "Unformatted!" (memory card has not been formatted) will appear. Please format the memory card on the JUNO-G (p. 164).

Saving a Song (Save Song)

Here's how to save the Temporary Song with the current sound generator settings.

1. **From the SAVE/LOAD MENU screen, press [F2 (2)].**
   The SONG FILE NAME screen appears.

2. **Assign a file name to the song (up to 8 characters). A file name extension of ".SVQ" will automatically be added to the song.**

   cf.

   For details on assigning names, refer to p. 24.

   NOTE

   Song file names may not contain lowercase characters or certain symbols (space, " * + , . / : ; < = > ? [\ ] |).

3. **After you have assigned a name, press [F6 (WRITE)].**
   The SAVE SONG screen appears.

4. **Press [F1 (USER)] (User memory) or [F2 (CARD)] (Memory card) to select the location where you want to save the song.**

5. **Press [F6 (SAVE)].**
   A message will ask you for confirmation.

6. **Press [F6 (EXEC)] to execute.**

* *To cancel, press [F5 (CANCEL)].*

MEMO

A song file having the same name, but with an extension of ".SVA" will also be saved at the same time.

Even if you save your song using "Save," it cannot be played back by a sequencer other than the JUNO-G's song recorder.
If you want to play back the song's MIDI track on a sequencer other than the JUNO-G, save the song as an SMF file. Also at this time, you must record the appropriate bank selects and program numbers so that the correct sounds will be played.
The performance settings will be saved in the state they were in when you executed Save. This means that if the performance changed during the song, and you saved the song in that state when you finished recording, the state in which recording began will not be saved. In other words when you play back the song from the beginning, it will begin with the performance sounds that were being used at the point where you saved. If you change the performance during the song, you must use the Microscope screen etc. to insert the appropriate bank select and program number at the beginning of the song to specify the performance with which you began recording it.

Saving Samples (Save all Samples)

Here's how to save all samples from sample memory into user memory or a memory card.

1. **From the SAVE/LOAD MENU screen, press [F3 (3)].**
   A message will ask you for confirmation.

2. **Press [F6 (EXEC)] to execute.**

* *To cancel, press [F5 (CANCEL)].*

When samples are saved, they will automatically be overwritten onto the same number of the same bank in the sample list.

Saving a Song as an SMF File (Save as SMF)

Here's how to convert the MIDI track data of the temporary song into an SMF file and save it.

1. **1. In the MIDI TRACK screen, hold down [SHIFT] and press [F6 (UTILITY)].**

2. **Press [F5 (SAVE AS SMF)].**
   The SAVE AS SMF screen appears.

3. **Assign a file name to the song.**

   cf.

   For details on assigning names, refer to p. 24.

   NOTE

   Song file names may not contain lowercase characters or certain symbols (space, " * + , . / : ; < = > ? [\ ] |).

4. **After you have assigned a name, press [F6 (WRITE)].**

5. **Press either [F1 (USER)] (user memory) or [F2 (CARD)] (memory card) to select the save-destination.**

6. Press either [F3 (FMT 0)] or [F4 (FMT 1)] to select the format for saving.

- **FMT 0 (Format 0):**
  Convert the song to a Format 0 Standard MIDI File (all performance data is saved in one phrase track) and save it to disk. An extension of ".MID" will be added automatically.
- **FMT 1 (Format 1):**
  Convert the song to a Format 1 Standard MIDI File (performance data is saved in more than one phrase track) and save it to disk. An extension of ".MID" will be added automatically.

7. Press [F6 (SAVE)].
A message will ask for confirmation.

8. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

The filename extension will be ".MID" whether you select "Save SMF (Format 0)" or "Save SMF (Format 1)." The two cannot be distinguished in this way.

NOTE

When you save data in SMF format, the sound setup data will not be saved. In order to ensure that the correct sounds are played, you must record the appropriate bank select and program numbers.

NOTE

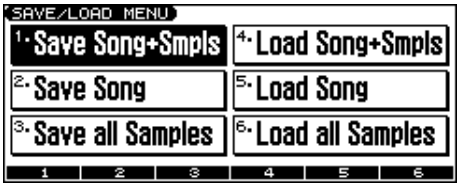
The audio track data is not saved when you save the song in SMF format.

If you assign a file name that is identical to a file name already existing in the user area or memory card, and attempt to save, a message of "File "****" Already Exists! Overwrite Sure?" will appear, asking you for confirmation. If it is OK to overwrite the existing file, press [F6 (EXEC)]. If you decide to cancel the Save operation, press [F5 (CANCEL)].
If you attempt to save data on a memory that was not formatted by the JUNO-G, a message of "Unformatted!" (memory card has not been formatted) will appear. Please format the memory card on the JUNO-G (p. 164).

Loading a Song (Load)

Basic Procedure

1. Hold down [SHIFT] and press [WRITE].
The SAVE/LOAD MENU screen appears.



2. Press [F4 (4)]–[F6 (6)] to select the format in which you want to load the song.

- **4. Load Song+Smpls:**
  Loads a song into Temporary Area. All samples will be loaded into sample memory.
- **5. Load Song:**
  Loads a song into Temporary Area.
- **6. Load all Samples:**
  Loads all samples into sample memory.

Function	Button	Song	ALL Samples
Load Song+Smpls	[F4]	✔	✔
Load Song	[F5]	✔	–
Load all Samples	[F6]	–	✔

✔: Loading is possible

* *A song saved on the JUNO-G (.SVQ) also includes the data for the sound generator's temporary area.*

Loading a Song with Samples (Load Song+Smpls)

Here's how you can load a song into Temporary Area and all samples into sample memory.

1. From the SAVE/LOAD MENU screen, press [F4 (4)].
The SONG LIST screen appears.

* *Alternatively, press EDIT [SONG] to access the SONG LIST screen. This button is pressed to toggle between the SONG LIST screen and the MIDI TRACK screen.*

* *By pressing [◀] [▶] in the above screen, you can specify the type of songs that will be displayed. If various types of songs are saved together, it will be easier to find the desired song if you restrict the displayed file types in this way.*

ALL: all songs will be displayed
SVQ: Only the SVQ song files are displayed
SMF: only Standard MIDI Files will be displayed

2. Press either [F1 (USER)] (User memory) or [F2 (CARD)] (Memory card) to select the load-destination, and use [▲] [▼] to select a song.

3. Press [F6 (LOAD)].
A message will ask you for confirmation.

4. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

Loading a song (Load Song)

Here's how you can load a song into Temporary Area.

1. From the SAVE/LOAD MENU screen, press [F5 (5)].
The SONG LIST screen appears.

* *Alternatively, press EDIT [SONG] to access the SONG LIST screen. This button is pressed to toggle between the SONG LIST screen and the MIDI TRACK screen.*

* *By pressing [◀] [▶] in the above screen, you can specify the type of songs that will be displayed. If various types of songs are saved together, it will be easier to find the desired song if you restrict the displayed file types in this way.*

ALL: all songs will be displayed
SVQ: Only the SVQ song files are displayed
SMF: only Standard MIDI Files will be displayed

2. Press either [F1 (USER)] (User memory) or [F2 (CARD)] (Memory card) to select the load-destination, and use [▲] [▼] to select a song.

3. Press [F6 (LOAD)].
A message will ask you for confirmation.

4. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

Loading Samples (Load all Samples)

Here's how you can load all samples from user memory or memory card into sample memory.

1. From the SAVE/LOAD MENU screen, press [F6 (6)].
A message will ask you for confirmation.

2. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

Deleting a Song (Delete Song)

Here's how to delete a previously saved song from user memory or the memory card.

1. From the SAVE/LOAD MENU screen, press [F5 (5)].
The SONG LIST screen appears.

* *You can also access the SONG LIST screen by pressing EDIT [SONG]. This button is pressed to toggle between the SONG LIST screen and the MIDI TRACK screen.*

* *By pressing [◀] [▶] in the above screen, you can specify the type of songs that will be displayed. If various types of songs are saved together, it will be easier to find the desired song if you restrict the displayed file types in this way.*

ALL: all songs will be displayed
SVQ: Only the SVQ song files are displayed
SMF: only Standard MIDI Files will be displayed

2. Press either [F1 (USER)] (User memory) or [F2 (CARD)] (Memory card) to select the delete-destination, and use [▲] [▼] to select a song.

3. Press [F4 (DEL SONG)].
A message will ask you for confirmation.

4. Press [F6 (EXEC)] to execute.

* *To cancel, press [F5 (CANCEL)].*

Editing a Audio Phrase (Sample)

Audio phrases you record or import are saved and managed as editable samples.

Editing is performed in sample memory—a memory area dedicated to samples (p. 22).

Sample List

Select a sample from the list.

Selecting a Sample

1. **Press EDIT [AUDIO].**
   The SAMPLE EDIT screen appears.
2. **Press [F4 (LIST)] to access the SAMPLE LIST screen.**

* *Pressing [AUDIO] toggles you between the SAMPLE EDIT screen and the SAMPLE LIST screen.*

3. **Press [◀] [▶] to select the group that contains the desired sample.**

- **PRST:** preset samples
- **USER:** user samples
- **CARD:** samples stored on a memory card

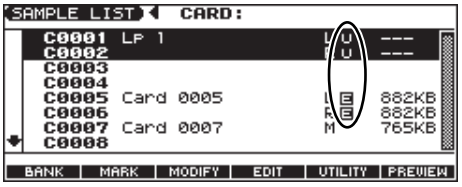
* *You cannot edit preset samples.*

4. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a sample.**

* *You can press [F6 (PREVIEW)] to audition the selected sample.*

5. **Press [F4 (EDIT)] or [ENTER].**
   The SAMPLE EDIT screen appears.

The sample list shows the current state of the samples.



N (New): Audio-recorded samples. It will be lost when you turn off the power. The same is true for samples imported as WAV/AIFF.

U (Unload): The sample has been saved, but not loaded into sample memory.

E (Edit): The loaded or audio-recorded sample has been edited. Your edits will be lost when you turn off the power. If you want to keep them, you must Write the sample. Save this data as necessary.

If Load User Samples at Startup (p. 158) is turned off, samples will not be loaded into memory when you turn on the power. In this case, you will need to load samples into memory yourself. If you have unload a sample from sample memory, you will also need to load it again before you can re-select that sample.

Loading a Sample

Here's how you can load a sample from the user area, a memory card, or a preset into sample memory.

1. **Press EDIT [AUDIO].**
   The SAMPLE EDIT screen appears.
2. **Press [F4 (LIST)] to access the SAMPLE LIST screen.**

* *Pressing [AUDIO] toggles you between the SAMPLE EDIT screen and the SAMPLE LIST screen.*

3. **Press [◀] [▶] to select the group that contains the desired sample.**
4. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a sample.**
   If you want to load two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.
   To remove the check mark from a selected sample, select and press [F2 (MARK)] again.
   If you hold down [SHIFT] and press [F4 (SET ALL)], a check mark will be added to all samples of the selected group.
   If you hold down [SHIFT] and press [F3 (CLR ALL)], check marks will be removed from all selected samples.
5. **Press [F5 (UTILITY)], and then press [F5 (LOAD)].**
   A message will ask you for confirmation.
6. **Press [F6 (EXEC)] to load the sample.**
   To cancel, press [F5 (CANCEL)].

* *You can also perform this operation from the SAMPLE LIST or SAMPLE EDIT screen by pressing [MENU] and selecting "Load Sample."*

Loading all Samples

Here's all samples in the user memory and memory card can be loaded.

NOTE

When you execute Load All Samples, all unsaved samples will be erased.

* *If the total size of the data in the user memory and card memory exceeds the size of memory, the samples of the user memory will be loaded first. At this time, as many card memory samples as possible will be loaded, starting from the lowest-numbered sample.*

1. **From the SAMPLE LIST screen, press [F5 (UTILITY)].**
2. **Press [F2 (LOAD ALL)].**
   A message will ask you for confirmation.
3. **Press [F6 (EXEC)] to execute.**
   To cancel, press [F5 (CANEL)].

* *You can also perform this operation from the SAMPLE LIST screen by pressing [MENU] and selecting "3. Load All Samples."*

Unloading a Sample

Here's how you can unload a sample from sample memory. The saved sample file itself will not be deleted.

1. **With the SAMPLE LIST screen shown, press [◀] [▶] to select the group that contains the sample you want to erase.**

2. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a sample.**
   If you want to unload two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.
   To remove the check mark from a selected sample, select and press [F2 (MARK)] again.
   If you hold down [SHIFT] and press [F4 (SET ALL)], a check mark will be added to all samples of the selected group.
   If you hold down [SHIFT] and press [F3 (CLR ALL)], check marks will be removed from all selected samples.

3. **Press [F5 (UTILITY)], and then press [F4 (UNLOAD)].**
   A message will ask you for confirmation.

4. **Press [F6 (EXEC)] to unload the sample.**
   To cancel, press [F5 (CANCEL)].

* *You can also perform this operation from the SAMPLE LIST or SAMPLE EDIT screen by pressing [MENU] and selecting "Unload Sample."*

Deleting a Sample

Here's how to completely delete a sample file.

* *You cannot delete the preset samples.*

1. **With the SAMPLE LIST screen shown, press [◀] [▶] to select the group that contains the sample you want to delete.**

2. **Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select a sample.**
   If you want to delete two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.
   To remove the check mark from a selected sample, select and press [F2 (MARK)] again.
   If you hold down [SHIFT] and press [F4 (SET ALL)], a check mark will be added to all samples of the selected group.
   If you hold down [SHIFT] and press [F3 (CLR ALL)], check marks will be removed from all selected samples.

3. **Press [F5 (UTILITY)], and then press [F3 (DELETE)].**
   A message will ask you for confirmation.

4. **Press [F6 (EXEC)] to delete the sample.**
   To cancel, press [F5 (CANCEL)].

* *You can also perform this operation from the SAMPLE LIST or SAMPLE EDIT screen by pressing [MENU] and selecting "Delete Sample File."*

Importing an Audio File (Import Audio)

Here's how an audio file (WAV/AIFF) can be loaded into memory as a sample.

1. **Place the audio files you want to import into the JUNO-G as samples in user memory or in the "TMP/AUDIO_IMPORT" folder of the memory card.**

   cf.

   For details on how you can use your computer to copy files to user memory or to a memory card, refer to p. 167.

2. **From the SAMPLE LIST screen, press [F5 (UTILITY)] and then press [F1 (IMPORT AUDIO)].**
   The IMPORT AUDIO screen appears.

* *You can obtain the same result by pressing [MENU] and selecting "5. Import Audio."*

3. **Press [F1 (USER)] or [F2 (CARD)] to select the import-source area.**
   [F1 (USER)]: Import from the user memory
   [F2 (CARD)]: Import from the memory card

4. **Press [▲] [▼] to select the file that you want to import.**
   If you want to select two or more files, press [F3 (MARK)] to add a check mark (✔) to the files that you want to select.
   To remove the check mark from a selected file, select and press [F3 (MARK)] again.
   If you press [F5 (SET ALL)], a check mark will be added to all files of the selected folder. If you press [F4 (CLR ALL)], check marks will be removed from all selected files.

5. **Press [F6 (IMPORT)].**
   A message will ask you for confirmation.

6. **Press [F6 (EXEC)].**
   The file will be imported, and the SAMPLE LIST screen will appear.

* *To cancel, press [F5 (CANCEL)].*

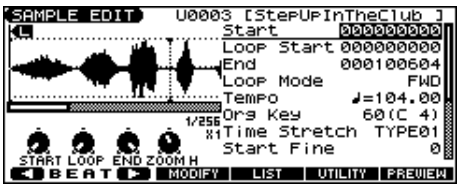
NOTE

The imported file will be added to the sample list as a sample. This sample is temporary, and will be lost when you turn off the power. If you want to keep it, press [WRITE] to save the data.

Sample Edit

1. Press EDIT [AUDIO].

The SAMPLE EDIT screen appears.



* *If you're in the SAMPLE LIST screen, press [F4 (EDIT)]. You can also alternate between the SAMPLE LIST screen and the SAMPLE EDIT screen by pressing [AUDIO].*

NOTE

Samples that you edit will be lost when you turn off the power. If you want to keep them, you must Save them (p. 124).

Magnifying/Shrinking the Waveform Display (Zoom In/Out)

Here's how to change the magnification of the sample display.

- **Horizontal axis (time axis):** 1/1–1/65536

  Press [▶] to increase the display magnification.

  Press [◀] to decrease the display magnification.

- **Vertical axis (waveform amplitude axis):** x1–x128

  Hold down [SHIFT] and press [▲] to increase the display magnification.

  Hold down [SHIFT] and press [▼] to decrease the display magnification.

Setting the Start/End Points of the Sample

You can specify the portion of the sample that will actually sound. You can also specify the region that is to be looped.

1. With the SAMPLE LIST screen shown, select the sample that you want to edit (p. 117).

2. Press [F4 (EDIT)] or [ENTER] to access the SAMPLE EDIT screen.

3. Use [▲] [▼] to select the point that you want to set.

Point	Explanation
Start	Point at which playback will start Set this so that any unwanted portion at the beginning of the sample will be skipped, and the sound will begin at the desired moment.
Loop Start	Point at which loop playback (second and subsequent times) will start Set this if you want to loop the sound from a point other than the start point. * *This is useful when you're using a sample as a sample patch or as the waveform for a patch or rhythm set.*
End	Point at which playback will end Set this so that any unwanted portion at the end of the sample will not be heard.

* *By pressing [F6 (PREVIEW)] you can audition the region between Start and End.*

4. Use the VALUE dial or [INC] [DEC] to move the point.

You can move the point in units of one beat by pressing [F1 (◀)] or [F2 (▶)].

MEMO

If you hold down [F6 (PREVIEW)] and move Start/Loop Start/End, the sample will play repeatedly across that point. This is a convenient way to check your setting.
(Zooming-in or zooming-out on the waveform will change the region that loops.)

cf.

After specifying Start and End, you can execute Truncate (p. 120) to delete unwanted portions at the beginning and end of the sample.

* *Sample modify operations (Chop, Normalize, etc.) apply to the entire sample. Even if you specify Start or End, they will be ignored. If you want to apply the operation only to the region between the Start and End, use Truncate to delete unwanted portions of the sample, and then perform the sample modifying operation.*

Using the knobs to edit the points

You can use the SOUND MODIFY 1–4 knobs to edit each point. Using the knobs is convenient when you need to make large changes to the value. From the left, the knobs have the following functions.

1 : Start Point **2** : Loop Start **3** : End Point

4 : Zoom-in/zoom-out the horizontal axis of the display

Making Settings for Sample (Sample Parameters)

Here you can make various settings for the sample.

1. With the SAMPLE LIST screen shown, select the sample that you want to edit.

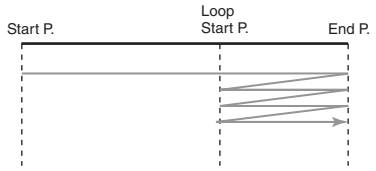
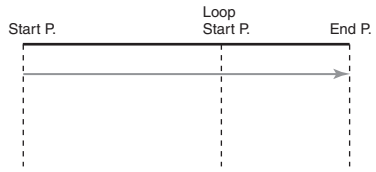
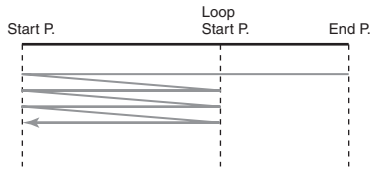
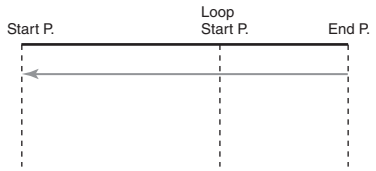
2. Press [F4 (EDIT)] or [ENTER] to access the SAMPLE EDIT screen.

3. Press [▲] [▼] to select a parameter.

4. Use the VALUE dial or [INC] [DEC] to edit the value.

5. Press [EXIT] when you are finished.

Parameter	Explanation
Start	Refer to **Setting the Start/End Points of the Sample** (p. 119).
Loop Start	
End	

Parameter	Explanation
Loop Mode	Specifies how the sample will be played. * *When you use a sample in an audio track, it will play as ONE-SHOT regardless of this setting.* **FWD:** After the Sample played back from Start to End, it will then be repeatedly played back in the forward direction, from the Loop Start to End.  **ONE-SHOT:** The sample will be played back only once, from the Start to End.  **REV:** When the sample has been played back from End to Start, it will be repeatedly played back in the reverse direction, from Loop Start to Start.  **REV-ONE:** The sample will be played back only once from End to Start in the reverse direction. 
Tempo	Original tempo of the sample You can hold down [SHIFT] and use the VALUE dial or [INC] [DEC] to adjust the value to the right of the decimal point. **5.00–300.00** * *In order to synchronize the tempo, Wave Temp Sync (p. 38, p. 53) must be turned ON.*
Org Key *	Note number that will play the sample at the pitch at which it was sampled **0 (C -2)–127 (G9)**
Time Stretch	Specifies how the tempo will be synchronized. Decreasing this value will optimize the sound for more rapid phrases, and increasing this value will optimize the sound for slower phrases. **TYPE01–TYPE10**
Start Fine	Fine adjustment of the Start point **0–255**
Loop Start Fine *	Fine adjustment of the Loop Start point **0–255**
Loop End Fine	Fine adjustment of the End point **0–255**
Loop Tune *	Pitch of the loop region Make fine adjustments in one-cent (1/100 semitone) increments. **-50– +50**
Zoom Horz	Display magnification (horizontal axis) **1/1–1/16384**
Zoom Vert	Display magnification (vertical axis) **x1–x128**

Automatically calculating a sample's tempo

1. **Move the cursor to "Tempo" and press [F1(CALC)].**
   The BPM Calculator window appears.
   * *You will always be able to select [F1 (CALC)] if the cursor is located somewhere other than Start, Loop Start, or End.*
2. **Use [▲] [▼] [◀] [▶] to move the cursor, and use the VALUE dial or [INC] [DEC] to specify the number of measures in the sample and its time signature.**
3. **Press [F3 (EXEC)].**
   The sample's tempo will be calculated automatically.
   * *To cancel, press [F2 (CLOSE)].*

About the beat

Samples contain beat data. Up to 100 beat locations are specified for one sample. If the sample contains more than 100 beats, fifty beat locations will be specified from the beginning and end of the sample, respectively.

When you want to reset the beat indication (Reset Grid function)

You can reassign the sample grid according to the specified Start point and Tempo.

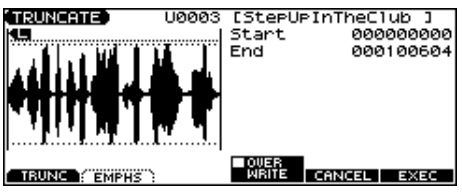
1. **In the SAMPLE EDIT screen, specify the Start point and Tempo of the sample.**
2. **Press [F5 (UTILITY)], and then press [F1 (RESET GRID)].**
   A message will ask you for confirmation.
3. **Press [F6 (EXEC)] to execute.**
   To cancel, press [F5 (CANCEL)].

Removing Unwanted Portions of a Sample (TRUNCATE)

This operation cuts the portions of the sample that are earlier than the Start Point and later than the Loop End Point.

* *You cannot execute this with more than one sample selected.*

1. **In the SAMPLE EDIT screen, specify the Start/End points of the sample (p. 119).**
2. **Press [F3 (MODIFY)] to open the Sample Modify Menu window.**
3. **Press [F1 (TRUNC&EMPHS)], and then press [F1 (TRUNC)].**



4. **If you want to replace the current sample with the truncated sample, press [F4 (OVER WRITE)] to display the "✔" mark.**

5. Press [F6 (EXEC)].
A message will ask you for confirmation.

6. To execute, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

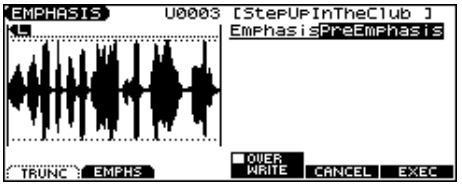
Boosting or Limiting the High-frequency Range of the Sample (EMPHASIS)

In some cases, the audio quality will be improved if you boost the high-frequency range of an imported sample. Also, the high-frequency range of the sample may be emphasized when you use a sampler made by another manufacturer. In this case, you can minimize the change in tonal character by attenuating the high-frequency range.

* *You cannot execute this with more than one sample selected.*

1. In the SAMPLE EDIT screen, press [F3 (MODIFY)] to open the Sample Modify Menu window.

2. Press [F1 (TRUNC&EMPHS)], and then press [F2 (EMPHS)].



3. Use the VALUE dial or [INC] [DEC] to select the emphasis type.
PreEmphasis: Emphasizes the high-frequency range.
DeEmphasis: Attenuates the high-frequency range.

4. If you want to replace the current sample with the emphasized sample, press [F4 (OVER WRITE)] to display the "✔" mark.

5. Press [F6 (EXEC)].
A message will ask you for confirmation.

6. To execute, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

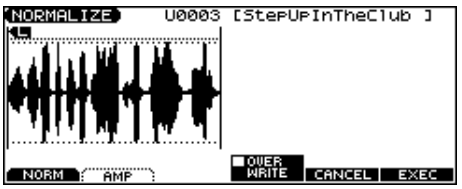
Maximizing the Volume of a Sample (NORMALIZE)

This operation raises the level of the entire sample as much as possible without exceeding the maximum level. It is a good idea to boost the volume by executing the Normalize operation.

* *You cannot execute this with more than one sample selected.*

1. In the SAMPLE EDIT screen, press [F3 (MODIFY)] to open the Sample Modify Menu window.

2. Press [F2 (NORM & AMP)], and then press [F1 (NORM)].



3. If you want to replace the current sample with the normalized sample, press [F4 (OVER WRITE)] to display the "✔" mark.

4. Press [F6 (EXEC)].
A message will ask you for confirmation.

5. To execute, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

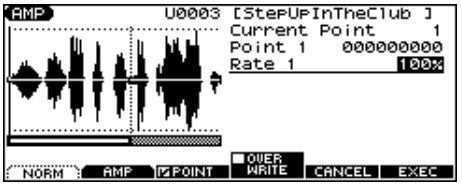
AMP

This operation adjusts the volume of the entire sample. You can also apply an envelope (time-variant change) to the volume of the sample.

* *You cannot execute this with more than one sample selected.*

1. In the SAMPLE EDIT screen, press [F3 (MODIFY)] to open the Sample Modify Menu window.

2. Press [F2 (NORM & AMP)], and then press [F2 (AMP)].



3. If you want to adjust the volume of the entire sample, use the VALUE dial or [INC] [DEC] to set the rate of volume boost.

Parameter	Explanation
Rate	Rate of volume boost: **0–400%** Specifies how much boost will be applied relative to the current volume

4. If you want to apply an envelope, specify points.
Press [F3 (POINT)] to display the "✔" mark. Then press [▲] [▼] to select a parameter, and then use the VALUE dial or [INC] [DEC] to set the value.

Parameter	Explanation
Current Point	Currently selected point Beginning near the start point, the points will be numbered 1, 2, 3, or 4.
Point 1–4	Location of the current point
Rate 1–4	Amplification ratio of the current point: **0–400%** Specifies how the volume of each point is to be boosted relative to the current value.

5. If you want to replace the current sample with the edited sample, press [F4 (OVER WRITE)] to display the "✔" mark.

6. Press [F6 (EXEC)].
A message will ask you for confirmation.

7. To execute, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

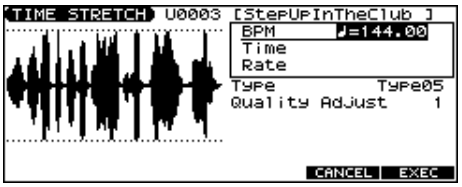
Stretching or Shrinking a Sample (TIME STRETCH)

This operation stretches or shrinks the sample to modify the length or tempo. You can stretch or shrink the sample by a factor of one half to double the original length.

* *You cannot execute this with more than one sample selected.*

1. **In the SAMPLE EDIT screen, press [F3 (MODIFY)] to open the Sample Modify Menu window.**

2. **Press [F3 (TIME STRETCH)].**



3. **Press [▲] [▼] to select the parameter.**

4. **Use the VALUE dial or [INC] [DEC] to specify the tempo/length.**
When setting the BPM (tempo) value, you can hold down [SHIFT] and turn the VALUE dial, or use [INC] [DEC] to adjust the value to the right of the decimal point.

Parameter	Explanation
BPM	Change the BPM of the sample to the BPM you specify.
Time	Specify the length of the sample as a time value.
Rate	Specify the length relative to the current length of the sample. (**50.0–200.0%**)
Type	Lower settings of this value will make the sound more suitable for faster phrases, and higher settings will make the sound more suitable for slower phrases. (**TYPE01–TYPE10**)
Quality Adjust	Make fine adjustments to the tonal quality of the Time Stretch. (**1–10**)

5. **Press [F6 (EXEC)].**
A message will ask you for confirmation.

6. **To execute, press [F6 (EXEC)].**
The length of the sample will be changed as specified.

* *To cancel, press [F5 (CANCEL)].*

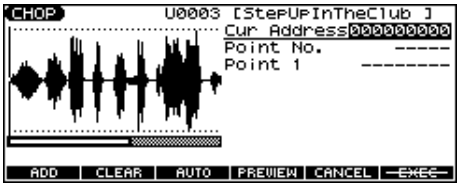
Dividing a Sample into Notes (CHOP)

The **chop** function divides a sample waveform into separate notes.

* *You cannot execute this with more than one sample selected.*

1. **In the SAMPLE EDIT screen, press [F3 (MODIFY)] to open the Sample Modify Menu window.**

2. **Press [F4 (CHOP)].**



3. **Specify the point(s) at which the sample is to be divided.**
Refer to "Procedure for Dividing a Sample" or "Automatically Dividing a Sample (Auto Chop)" (p. 123).

4. **Audition the sample as described in the section "Auditioning the Divided Samples" (p. 123).**
If you want to re-make settings, move or delete the point (p. 123).

5. **Press [F6 (EXEC)].**
A message will ask you for confirmation.

6. **To execute the division, press [F6 (EXEC)].**
The divided samples will be added to the sample list.

* *To cancel, press [F5 (CANCEL)].*
When you execute the Chop operation, a message will ask whether you want to execute Create Rhythm.

TERM

Create Rhythm
This creates a rhythm set using the samples that were divided by the Chop operation, and assigns it to a part. The samples are assigned successively starting at the C2 key.

7. **To execute Create Rhythm, press [F6 (EXEC)].**
The Create Rhythm window opens.

* *To cancel, press [F5 (CANCEL)].*

8. **8. Use [▲] [▼] to select the part to which you want to assign the rhythm set, and press [F6 (SELECT)].**
A message will ask you for confirmation.

* *You can't select a part in Patch mode.*

9. **To execute, press [F6 (EXEC)].**
The samples will be assigned to the selected part as a rhythm set.

* *To cancel, press [F5 (CANCEL)].*

NOTE

If you select a different rhythm set, the rhythm set to which the samples are assigned will disappear. If you want to keep this rhythm set, press [WRITE] to save it. (p. 124)

Procedure for Dividing a Sample

You can freely specify the dividing point(s).

1. **Press [▲] [▼] to move the cursor to "Current Address."**

2. **Use the VALUE dial or [INC] [DEC] to move the point.**

3. **At the location where you want to divide the sample, press [F2 (ADD)].**
The current location will be the dividing point.

4. **Repeat steps 2 and 3 to specify other dividing points.**

You can specify up to 15 dividing points; i.e., the sample will be divided into a maximum of 16 pieces.

Automatically Dividing a Sample (Auto Chop)

Here's how you can automatically specify the points at which the sample is to be divided, and then divide the sample.

1. From step 3 of p. 122, press [F4 (AUTO)].
The Auto Chop window will appear.

2. Use the VALUE dial or [INC] [DEC] to select the method by which the sample is to be divided.

3. Press [▼] and then use the VALUE dial or [INC] [DEC] to set the value.

Parameter	Explanation
Chop Type	How the sample will be divided **Level:** Divide according to volume. **Beat:** Divide at beats based on the Tempo (p. 120) of the sample. **Divide x:** Divide into 'x' number of equal lengths.
If Chop Type is Level	
Level	Level at which the sample is to be divided Lower settings of this value will cause the sample to be divided more finely. **1–10**
If Chop Type is Beat	
Beat	Beat interval at which the sample is to be divided **1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2, 1/1, 2/1**
If Chop Type is Divide x	
Times	Number of samples into which the sample is to be divided **2–16**

4. Press [F6 (EXEC)].
The sample will be automatically divided according to your settings, and the points will be specified. A maximum of 15 division points will be set (16 regions).

* *To cancel, press [F5 (CANCEL)].*

Moving/Deleting a Dividing Point

1. Press [▲] [▼] to move the cursor to "Point No."

2. Use the VALUE dial or [INC] [DEC] to select the point that you want to move or delete.
In order from the start point, the points are numbered 1, 2,...15.

3. To move the dividing point, press [▼] and then turn the VALUE dial.

4. To delete the dividing point, press [F3 (CLEAR)].

Auditioning the Divided Samples

1. Press [▲] [▼] to move the cursor to "Point No."

2. Use the VALUE dial or [INC] [DEC] to select the point that you want to audition.
In order from the start point, the points are numbered 1, 2,...15.

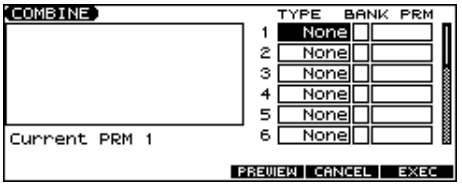
3. Press [F4 (PREVIEW)].

Joining Two or More Samples (COMBINE)

This operation combines multiple samples into a single sample. You can combine as many as sixteen samples. You can also place silent spaces between the samples.

1. In the SAMPLE EDIT screen, press [F3 (MODIFY)] to open the Sample Modify Menu window.

2. Press [F5 (COMBINE)].



3. Press [▲] [▼] [◀] [▶] to select a parameter.

4. Use the VALUE dial or [INC] [DEC] to set the value.

Parameter	Explanation
TYPE	Sample or silence to be combined **None:** none **Sample:** sample **Time:** silent region (specified as time) **Beat:** silent region (specified as a note value)
BANK	Bank that contains the sample **U:** user **C:** card * *This will be displayed only if TYPE is set to Sample.*
PRM	Sample number, or the duration/note value of the silent region The note value is based on the BPM of the sample immediately before the silent region. * *If there is no sample immediately before the silent region, the current BPM will be used.* If TYPE is set to Sample **1–2000** If TYPE is set to Time **1–10000 ms** If TYPE is set to Beat **1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2, 1/1, 2/1**

* *You can press [F4 (PREVIEW)] to audition the selected sample.*

5. Press [F6 (EXEC)].
A message will ask you for confirmation.

6. To execute, press [F6 (EXEC)].

* *To cancel, press [F5 (CANCEL)].*

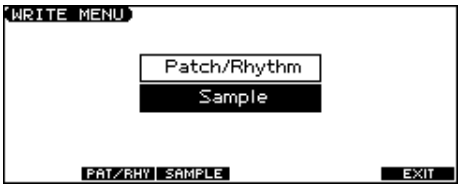
Saving a Sample (Write)

A edited sample, as well as any changes you've made in the settings for a sample will be lost as soon as you turn off the power. If you want to keep such data, you must save it as follows.

1. Access the SAMPLE LIST screen. (p. 117)
Samples displayed as "N" or "E" have not yet been saved (p. 117).

2. Select the sample that you want to save.
If you want to select two or more samples, press [F2 (MARK)] to add a check mark (✔) to the samples that you want to select.
To remove the check mark from a selected sample, select and press [F2 (MARK)] again.
If you hold down [SHIFT] and press [F4 (SET ALL)], a check mark will be added to all samples of the selected group.
If you hold down [SHIFT] and press [F3 (CLR ALL)], check marks will be removed from all selected samples.

3. Press [WRITE].
The WRITE MENU screen will appear. Make sure that "Sample" is highlighted.



4. Press [F3 (SAMPLE)] or [ENTER].

If you have selected more than one sample, a message will ask you to confirm the writing operation. Samples will be written into the identical number corresponding to each bank of the sample list. Sample names will be assigned automatically. If you want to write the samples, press [F6 (EXEC)]. If you decide to cancel, press [F5 (CANCEL)].

5. Assign a name to the sample.

cf.

For details on assigning names, refer to p. 24.

6. When you have finished inputting the name, press [F6 (WRITE)].
A screen will appear allowing you to select the write-destination sample.

7. Use the VALUE dial, [INC] [DEC], or [▲] [▼] to select the write destination sample number.
The write destination can be either the JUNO-G's internal user memory (User), or a memory card (Card).

8. Press [F6 (WRITE)].
A message will ask you for confirmation.

9. Press [F6 (EXEC)] to execute the save operation.

* *To cancel the operation, press [F5 (CANCEL)].*

NOTE

Never switch off the JUNO-G while data is being saved.

- You can't save by overwriting another sample.
- Stereo samples must be saved to two consecutive sample numbers.

Adding Effects

This section explains the procedures and settings for applying effects in each mode.

cf.

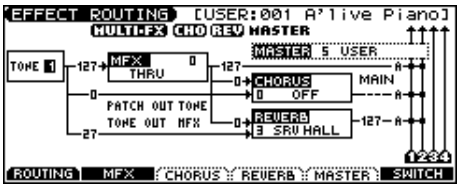
For details of the JUNO-G's onboard effects, refer to **About the Onboard Effects** (p. 20).

Turning Effects On and Off

The JUNO-G's onboard effects can be turned on/off as a whole. Turn these settings OFF when you wish to listen to the unprocessed sound as you create a sound, or when you wish to use external effects processors instead of the built-in effects.

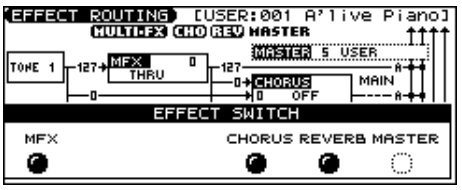
* *Effect ON/OFF settings are global JUNO-G settings. These settings cannot be made for each Patch or Performance individually.*

1. Press EDIT [EFFECTS] to access the EFFECT ROUTING screen.



2. Press [F6 (SWITCH)].

The EFFECT SWITCH window appears.

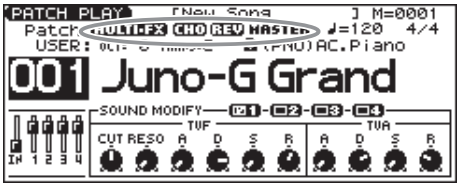


3. Press [F1 (MFX1)]–[F6 (MASTER)] to turn each effect switch on/off.

The switch will turn on/off each time you press the button.

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

When you return to the PLAY screen, the settings will be displayed in the following area.



Making Effect Settings

1. In the appropriate mode, select the sound to which you want to apply effects.

2. Press EDIT [EFFECTS] to access the EFFECT ROUTING screen.

3. Press [F1 (ROUTING)]–[F5 (MASTER)] to select the effect that you want to edit.

4. Use the VALUE dial or [INC] [DEC] to set the effect type you want.

5. Use [▲] [▼] [◀] [▶] to move the cursor to the parameter you wish to change.

6. Use the VALUE dial or [INC] [DEC] to get the value you want.

7. Press [EXIT] to return to the previous screen.

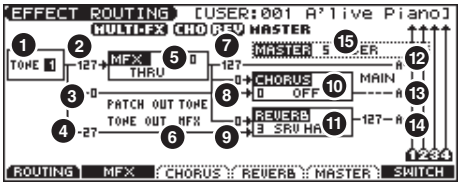
* *You cannot edit the effect settings for patches of the GM group.*

Applying Effects in Patch Mode

In Patch mode you can use one multi-effect (MFX), one chorus, and one reverb.

Specifying How the Sound Will Be Output (Routing)

Here you can make overall settings for effects, and the output destination and level of each signal.



cf.
For details on these settings, refer to **Making Effect Settings** (p. 125).

	Parameter	Value	Explanation
❶	Tone Select (Rhythm Key Select)	1–4 (A0–C8)	Tone (or rhythm tone) for which you want to make settings This parameter is Rhythm Key Select when a rhythm set is being selected. You can select the rhythm tone (A0–C8) for which you want to make settings.
❷	Tone Output Level	0–127	Level of the signal sent to the output destination specified by Output Assign
❸	Tone Chorus Send Level	0–127	Level of the signal sent to chorus for each tone
❹	Tone Reverb Send Level	0–127	Level of the signal sent to reverb for each tone
❺	MFX Type	0–78	Selects from among the 78 available multi-effects. For details on multi-effects parameters, refer to **Multi-Effects Parameters** (p. 131).
❻	Patch Output Assign (Rhythm Output Assign)	MFX, A, B, 1–4, TONE	Specifies how the direct sound of each patch will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. **TONE:** Outputs according to the settings for each tone. This parameter is Rhythm Output Assign when a rhythm set is being selected. You can specifies for each rhythm set how the direct sound will be output. * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
	Tone Output Assign	MFX, A, B, 1–4	Specifies how the direct sound of each tone will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** Output to the OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects. **1–4:** Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects. * *If the Patch Output Assign is set to anything other than "TONE," these settings will be ignored.* • When the Structure Type parameter has a setting of Type "2"–"10," the outputs of tones 1 and 2 will be combined with tone 2, and the outputs of tones 3 and 4 will be combined with tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 35). * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
❼	MFX Output Level	0–127	Volume of the sound passed through the multi-effects
❽	MFX Chorus Send Level	0–127	Amount of chorus for the sound passed through multi-effects
❾	MFX Reverb Send Level	0–127	Amount of reverb for the sound passed through multi-effects
❿	Chorus Type	0–3	Selects either chorus or delay. **0 (OFF):** Neither chorus or delay is used. **1 (CHORUS):** Chorus is used. **2 (DELAY):** Delay is used. **3 (GM2 CHO):** General MIDI 2 chorus
⓫	Reverb Type	0–5	Type of reverb **0 (OFF):** Reverb is not used. **1 (REVERB):** Normal reverb **2 (SRV ROOM):** Simulates typical room acoustic reflections. **3 (SRV HALL):** Simulates typical concert hall acoustic reflections. **4 (SRV PLATE):** Simulates a plate reverb, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. **5 (GM2 REV):** General MIDI 2 reverb

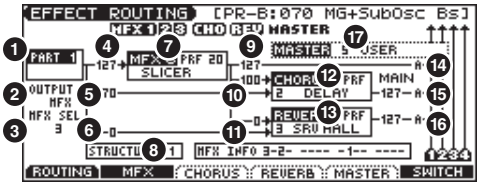
	Parameter	Value	Explanation
⑫	MFX Output Assign	A, B	Output destination of the sound passed through the multi-effects **A:** OUTPUT A (MIX) jacks in stereo **B:** OUTPUT B jacks in stereo * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
⑬	Chorus Output Select	MAIN, REV, M+R	Specifies how the sound routed through chorus will be output. **MAIN:** Output to the OUTPUT jacks in stereo. **REV:** Output to reverb in mono. **M+R:** Output to the OUTPUT jacks in stereo, and to reverb in mono.
	Chorus Level	0–127	Volume of the sound passed through chorus
	Chorus Output Assign	A, B	Selects the pair of OUTPUT jacks to which the chorus sound is routed when Chorus Output Select is set to "MAIN" or "M+R." **A:** Output to the OUTPUT A (MIX) jacks in stereo. **B:** Output to the OUTPUT B jacks in stereo. * *When Chorus Output Select is set to "REV," this setting will have no effect.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
⑭	Reverb Level	0–127	Volume of the sound passed through reverb
	Reverb Output Assign	A, B	Specifies how the sound routed through reverb will be output. **A:** Output to the OUTPUT A (MIX) jacks in stereo. **B:** Output to the OUTPUT B jacks in stereo. * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
⑮	Mastering Effect Type	0–5	Mastering effect settings (p. 156)

Applying Effects in Performance Mode

In Performance mode you can use three multi-effects (MFX1, MFX2, MFX3), one chorus, and one reverb. For each of the three multi-effects, the chorus, and the reverb, you can specify whether it will operate according to the effect settings of the performance, or according to the effect settings of the patch or rhythm set assigned to the part you specify. The three multi-effects can be used independently, or you can connect two or three of them in series.

Specifying How the Sound Will Be Output (Routing)

Here you can make overall settings for effects, and the output destination and level of each signal.



cf.

For details on these settings, refer to **Making Effect Settings** (p. 125).

* *For the following parameters ⑦, ⑨ – ⑪, and ⑭ settings can be made individually for three systems multi-effects (MFX1–MFX3).*

Parameter		Value	Explanation
①	Part Select	1–16	Part for which you want to make settings
②	Part Output Assign	MFX, A, B, 1–4, PAT	Specifies for each part how the direct sound will be output. **MFX:** Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects. **A, B:** OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects **1–4:** INDIVIDUAL 1–4 jacks in mono without passing through multi-effects **PAT:** Determined by the settings of the patch or rhythm set assigned to the part. * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
③	Part Output MFX Select	1–3 (MFX1–MFX3)	Specifies which multi-effects will be used.
④	Part Output Level	0–127	Level of the signal sent to the output destination specified by Part Output Assign (②)
⑤	Part Chorus Send Level	0–127	Level of the signal sent to chorus for each part
⑥	Part Reverb Send Level	0–127	Level of the signal sent to reverb for each part.

Parameter		Value	Explanation
❼	MFX Source	PRF, P1–P16	Multi-effects parameter settings used by the performance **PRF:** Performance settings **P1–P16:** Settings of the patch/rhythm set assigned to one of the parts (Select the part number.)
	MFX Type	0–78	Selects from among the 78 available multi-effects. For details on multi-effects parameters, refer to **Multi-Effects Parameters** (p. 131).
❽	MFX Structure	1–16	Specifies how MFX1–3 will be connected.
❾	MFX Output Level	0–127	Volume of the sound passed through the multi-effects
❿	MFX Chorus Send Level	0–127	Amount of chorus for the sound passed through multi-effects
⓫	MFX Reverb Send Level	0–127	Amount of reverb for the sound passed through multi-effects
⓬	Chorus Source	PRF, P1–P16	Chorus parameter settings used by the performance **PRF:** Performance settings **P1–P16:** Settings of the patch/rhythm set assigned to one of the parts (Select the part number.)
	Chorus Type	0–3	Selects either chorus or delay. **0 (OFF):** Neither chorus or delay is used. **1 (CHORUS):** Chorus is used. **2 (DELAY):** Delay is used. **3 (GM2 CHO):** General MIDI 2 chorus
⓭	Reverb Source	PRF, P1–P16	Reverb parameter settings used by the performance **PRF:** Performance settings **P1–P16:** Settings of the patch/rhythm set assigned to one of the parts (Select the part number.)
	Reverb Type	0–5	Type of reverb **0 (OFF):** Reverb is not used. **1 (REVERB):** Normal reverb **2 (SRV ROOM):** Simulates typical room acoustic reflections. **3 (SRV HALL):** Simulates typical concert hall acoustic reflections. **4 (SRV PLATE):** Simulates a plate reverb, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. **5 (GM2 REV):** General MIDI 2 reverb
⓮	MFX Output Assign	A, B	Output destination of the sound passed through the multi-effects **A:** OUTPUT A (MIX) jacks in stereo **B:** OUTPUT B jacks in stereo * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).* * *For some settings of MFX Structure, the sound that passes through the multi-effect will be sent to a different multi-effect, and the MFX Output Assign setting will be ignored.*
⓯	Chorus Output Select	MAIN, REV, M+R	Specifies how the sound routed through chorus will be output. **MAIN:** Output to the OUTPUT jacks in stereo. **REV:** Output to reverb in mono. **M+R:** Output to the OUTPUT jacks in stereo, and to reverb in mono.
	Chorus Level	0–127	Volume of the sound passed through chorus
	Chorus Output Assign	A, B	Selects the pair of OUTPUT jacks to which the chorus sound is routed when Chorus Output Select is set to "MAIN" or "M+R." **A:** OUTPUT A (MIX) jacks in stereo **B:** OUTPUT B jacks in stereo * *When Chorus Output Select is set to "REV," this setting will have no effect.* * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
⓰	Reverb Level	0–127	Volume of the sound passed through reverb
	Reverb Output Assign	A, B	Specifies how the sound routed through reverb will be output. **A:** Output to the OUTPUT A (MIX) jacks in stereo. **B:** Output to the OUTPUT B jacks in stereo. * *If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 158).*
⓱	Mastering Effect Type	0–5	Mastering effect settings (p. 156)

When Patch or Rhythm Set Settings Are Selected

When the patch or rhythm set's effects settings are selected, those settings are shown in each of the performance's effects setting screens, and the settings can be then be changed as well. Changes to patch or rhythm set effects parameter settings are lost when another patch or rhythm set is selected. To keep the modified settings, save the patch/rhythm set settings (p. 32, p. 51).

Making Multi-Effects Settings (MFX1–3)

cf.

For details on these settings, refer to **Making Effect Settings** (p. 125).

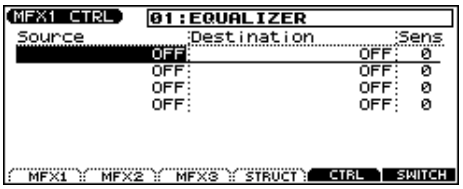
Parameter	Value	Explanation
(Multi-Effects Type)	00–78	Selects from among the 78 available multi-effects.

* *In this setting screen, you can edit the parameters of the multi-effects that is selected by the Multi-effects Type setting. For details on the parameters that can be edited, refer to* ***Multi-Effects Parameters*** *(p. 131).*

MEMO

Parameters marked by ▯ can be selected as a multi-effect control destination parameter (see below).

Making Multi-Effects Settings (MFX Control)



cf.

For details on these settings, refer to **Making Effect Settings** (p. 125).

* *Press [F5 (CTRL)] to switch the multi-effects that will be modified.*

Parameter	Value	Explanation
Source 1–4	OFF, CC01–31, 33–95, PITCH BEND, AFTERTOUCH, SYS CTRL1–4	MIDI message used to change the multi-effects parameter with the multi-effects control **OFF:** Multi-effects control will not be used. **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **PITCH BEND:** Pitch Bend **AFTERTOUCH:** Aftertouch **SYS CTRL1–4:** MIDI messages used as common multi-effects controls If you want to use common controllers for the entire JUNO-G, select "SYS CTRL1"–"SYS CTRL4." MIDI messages used as System Control 1–4 are set with the Sys Ctrl 1–4 Source parameters (p. 160).
Destination 1–4	Refer to p. 131.	Multi-effects parameters to be controlled with the multi-effects control The multi-effects parameters available for control will depend on the multi-effects type. For details, refer to **Multi-Effects Parameters** (p. 131).
Sens 1–4	-63– +63	Amount of the multi-effects control's effect that is applied To make an increase in the currently selected value (to get higher values, move to the right, increase rates, and so on), select a positive value; to make a decrease in the currently selected value (to get lower values, move to the left, decrease rates, and so on), select a negative value. For either positive or negative settings, greater absolute values will allow greater amounts of change. Set this to "0" if you don't want to apply the effect.
MFX Control Channel	1–16, OFF	This determines the channel that will be used for reception when using the Multi-effects Control to modify multi-effects parameters in real time, when the MFX1–3 Source parameter (p. 128) is set to "PRF." Set this to "OFF" when the Multi-effects Control is not being used. * *This parameter is not found in Patch mode.*

* *In patch/rhythm set mode, there are parameters that determine, for each tone/rhythm tone, whether or not Pitch Bend, Controller Number 11 (Expression) and Controller Number 64 (Hold 1) are received (p. 45). When these settings are "ON," and the MIDI messages are received, then when any change is made in the settings of the desired parameter, the Pitch Bend, Expression, and Hold1 settings also change simultaneously. If you want to change the targeted parameters only, then set these to "OFF."*

- There are parameters that determine whether or not specific MIDI messages are received for each MIDI channel (p. 67). When using the multi-effects control, confirm that any MIDI messages used for the multi-effects control will be received. If the JUNO-G is set up such that reception of MIDI messages is disabled, then the multi-effects control will not function.

Multi-Effects Control

If you wanted to change the volume of multi-effects sounds, the delay time of Delay, and the like, using an external MIDI device, you would need to send System Exclusive messages—MIDI messages designed exclusively for the JUNO-G. However, System Exclusive messages tend to be complicated, and the amount of data that needs to be transmitted can get quite large.

For that reason, a number of the more typical of the JUNO-G's multi-effects parameters have been designed so they accept the use of Control Change (or other) MIDI messages for the purpose of making changes in their values. For example, you can use the Pitch Bend lever to change the amount of distortion, or use the keyboard's touch to change the delay time of Delay. The parameters that can be changed are predetermined for each type of multi-effect; among the parameters described in **Multi-Effects Parameters** (p. 131), these are indicated by a "#."

In the multi-effect setting screen, a "c" symbol will be shown at the left of the parameter.

The function that allows you use MIDI messages to make these changes in realtime to the multi-effects parameters is called the **Multi-effects Control**. Up to four multi-effects controls can be used in a single patch/rhythm set/performance.

When the multi-effects control is used, you can select the amount of control (Sens parameter) applied, the parameter selected (Destination parameter), and the MIDI message used (Source parameter).

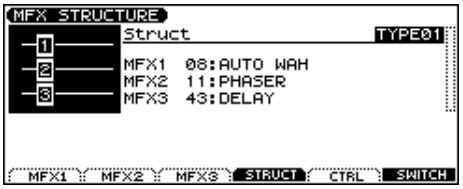
TIP

By using the Matrix Control instead of the Multi-effects Control, you can also change the some popular parameters of multi-effects in realtime (p. 44).

Specifying the Multi-Effects Structure (MFX Structure)

Here's how to specify how MFX 1–3 will be connected.

* *This parameter is not found in Patch mode.*



cf.

For details on these settings, refer to **Making Effect Settings** (p. 125).

Parameter	Value	Explanation
Struct	TYPE01–TYPE16	Specifies how MFX1–3 will be connected.
(MFX1–3 Type)	00 (THRU)–78	Selects the multi-effect type of MFX1–3.

Multi-Effects Parameters

The multi-effects feature 78 different kinds of effects. Some of the effects consist of two or more different effects connected in series.

Parameters marked with a sharp "#" can be controlled using a specified controller (Two setting items will change simultaneously for "#1" and "#2").

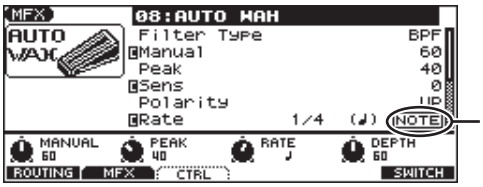
FILTER (10 types)		
01	EQUALIZER	P.132
02	SPECTRUM	P.132
03	ISOLATOR	P.132
04	LOW BOOST	P.132
05	SUPER FILTER	P.132
06	STEP FILTER	P.133
07	ENHANCER	P.133
08	AUTO WAH	P.133
09	HUMANIZER	P.134
10	SPEAKER SIMULATOR	P.134
MODULATION (12 types)		
11	PHASER	P.134
12	STEP PHASER	P.134
13	MULTI STAGE PHASER	P.135
14	INFINITE PHASER	P.135
15	RING MODULATOR	P.135
16	STEP RING MODULATOR	P.135
17	TREMOLO	P.136
18	AUTO PAN	P.136
19	STEP PAN	P.136
20	SLICER	P.136
21	ROTARY	P.137
22	VK ROTARY	P.137
CHORUS (12 types)		
23	CHORUS	P.137
24	FLANGER	P.138
25	STEP FLANGER	P.138
26	HEXA-CHORUS	P.138
27	TREMOLO CHORUS	P.139
28	SPACE-D	P.139
29	3D CHORUS	P.139
30	3D FLANGER	P.139
31	3D STEP FLANGER	P.140
32	2BAND CHORUS	P.140
33	2BAND FLANGER	P.140
34	2BAND STEP FLANGER	P.141
DYNAMICS (8 types)		
35	OVERDRIVE	P.141
36	DISTORTION	P.141
37	VS OVERDRIVE	P.141
38	VS DISTORTION	P.141
39	GUITAR AMP SIMULATOR	P.142
40	COMPRESSOR	P.142
41	LIMITER	P.142
42	GATE	P.142
DELAY (13 types)		
43	DELAY	P.143
44	LONG DELAY	P.143
45	SERIAL DELAY	P.143
46	MODULATION DELAY	P.144
47	3TAP PAN DELAY	P.144
48	4TAP PAN DELAY	P.144
49	MULTI TAP DELAY	P.145
50	REVERSE DELAY	P.145
51	SHUFFLE DELAY	P.145
52	3D DELAY	P.146
53	TIME CTRL DELAY	P.146
54	LONG TIME CTRL DELAY	P.146
55	TAPE ECHO	P.146
LO-FI (5 types)		
56	LOFI NOISE	P.147
57	LOFI COMPRESS	P.147
58	LOFI RADIO	P.147
59	TELEPHONE	P.148
60	PHONOGRAPH	P.148
PITCH (3 types)		
61	PITCH SHIFTER	P.148
62	2VOICE PITCH SHIFTER	P.148
63	STEP PITCH SHIFTER	P.149
REVERB (2 types)		
64	REVERB	P.149
65	GATED REVERB	P.149
COMBINATION (12 types)		
66	OVERDRIVE → CHORUS	P.150
67	OVERDRIVE → FLANGER	P.150
68	OVERDRIVE → DELAY	P.150
69	DISTORTION → CHORUS	P.150
70	DISTORTION → FLANGER	P.150
71	DISTORTION → DELAY	P.150
72	ENHANCER → CHORUS	P.151
73	ENHANCER → FLANGER	P.151
74	ENHANCER → DELAY	P.151
75	CHORUS → DELAY	P.151
76	FLANGER → DELAY	P.152
77	CHORUS → FLANGER	P.152
PIANO (1 type)		
78	SYMPATHETIC RESONANCE	P.152

About Note

Some effect parameters (such as Rate or Delay Time) can be set in terms of a note value.

Such parameters have a num/note switch that lets you specify whether you will set the value as a note value or as a numerical value.

If you want to set Rate (Delay Time) as a numerical value, set the num/note switch to "Hz" ("msec"). If you want to set it as a note value, set the num/note switch to "NOTE."

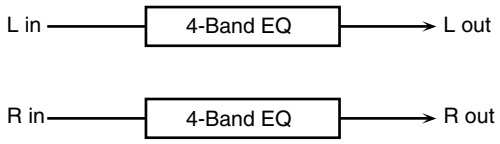


NOTE

If a parameter whose num/note switch is set to "NOTE" is specified as a destination for multi-effect control, you will not be able to use multi-effect control to control that parameter.

01: EQUALIZER

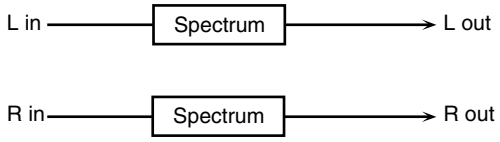
This is a four-band stereo equalizer (low, mid x 2, high).



Parameter	Value	Explanation
Low Freq	200, 400 Hz	Frequency of the low range
Low Gain #	-15– +15 dB	Gain of the low range
Mid1 Freq	200–8000 Hz	Frequency of the middle range 1
Mid1 Gain	-15– +15 dB	Gain of the middle range 1
Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 1 Set a higher value for Q to narrow the range to be affected.
Mid2 Freq	200–8000 Hz	Frequency of the middle range 2
Mid2 Gain	-15– +15 dB	Gain of the middle range 2
Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 2 Set a higher value for Q to narrow the range to be affected.
High Freq	2000, 4000, 8000 Hz	Frequency of the high range
High Gain #	-15– +15 dB	Gain of the high range
Level #	0–127	Output Level

02: SPECTRUM

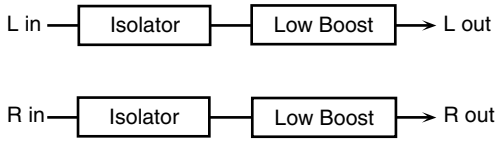
This is a stereo spectrum. Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies.



Parameter	Value	Explanation
Band1 (250Hz) Band2 (500Hz) Band3 (1000Hz) Band4 (1250Hz) Band5 (2000Hz) Band6 (3150Hz) Band7 (4000Hz) Band8 (8000Hz)	-15– +15 dB	Gain of each frequency band
Q	0.5, 1.0, 2.0, 4.0, 8.0	Simultaneously adjusts the width of the adjusted ranges for all the frequency bands.
Level #	0–127	Output Level

03: ISOLATOR

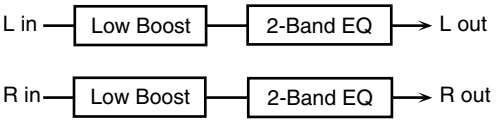
This is an equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges.



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

04: LOW BOOST

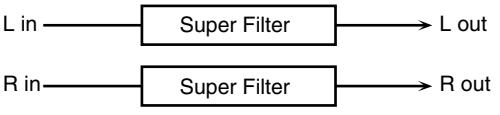
Boosts the volume of the lower range, creating powerful lows.



Parameter	Value	Explanation
Boost Frequency #	50–125 Hz	Center frequency at which the lower range will be boosted
Boost Gain #	0– +12 dB	Amount by which the lower range will be boosted
Boost Width	WIDE, MID, NARROW	Width of the lower range that will be boosted
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

05: SUPER FILTER

This is a filter with an extremely sharp slope. The cutoff frequency can be varied cyclically.

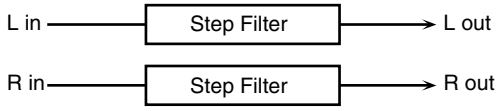


Parameter	Value	Explanation
Filter Type	LPF, BPF, HPF, NOTCH	Filter type Frequency range that will pass through each filter **LPF**: frequencies below the cutoff **BPF:** frequencies in the region of the cutoff **HPF:** frequencies above the cutoff **NOTCH:** frequencies other than the region of the cutoff

Parameter	Value	Explanation
Filter Slope	-12, -24, -36 dB	Amount of attenuation per octave **-36 dB:** extremely steep **-24 dB:** steep **-12 dB:** gentle
Filter Cutoff #	0–127	Cutoff frequency of the filter Increasing this value will raise the cutoff frequency.
Filter Resonance #	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0– +12 dB	Amount of boost for the filter output
Modulation Sw	OFF,ON	On/off switch for cyclic change
Modulation Wave	TRI, SQR, SIN, SAW1, SAW2	How the cutoff frequency will be modulated **TRI:** triangle wave **SQR:** square wave **SIN:** sine wave **SAW1:** sawtooth wave (upward) **SAW2:** sawtooth wave (downward)
		
Rate #	0.05–10.00 Hz, note	Rate of modulation
Depth	0–127	Depth of modulation
Attack #	0–127	Speed at which the cutoff frequency will change This is effective if Modulation Wave is SQR, SAW1, or SAW2.
Level	0–127	Output level

06: STEP FILTER

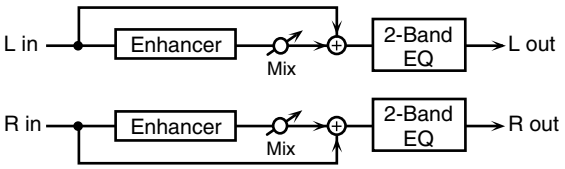
This is a filter whose cutoff frequency can be modulated in steps. You can specify the pattern by which the cutoff frequency will change.



Parameter	Value	Explanation
Step 01–16	0–127	Cutoff frequency at each step
Rate #	0.05–10.00 Hz, note	Rate of modulation
Attack #	0–127	Speed at which the cutoff frequency changes between steps
Filter Type	LPF, BPF, HPF, NOTCH	Filter type Frequency range that will pass through each filter **LPF:** frequencies below the cutoff **BPF:** frequencies in the region of the cutoff **HPF:** frequencies above the cutoff **NOTCH:** frequencies other than the region of the cutoff
Filter Slope	-12, -24, -36 dB	Amount of attenuation per octave **-12 dB:** gentle **-24 dB:** steep **-36 dB:** extremely steep
Filter Resonance #	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0– +12 dB	Amount of boost for the filter output
Level	0–127	Output level

07: ENHANCER

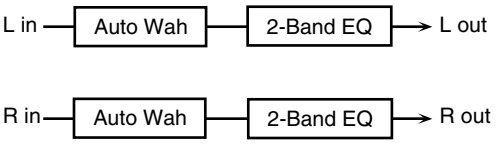
Controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.



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

08: AUTO WAH

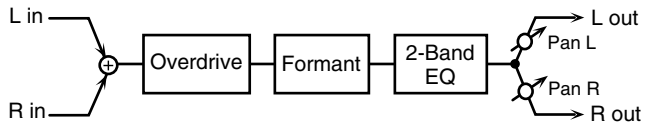
Cyclically controls a filter to create cyclic change in timbre.



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

09: HUMANIZER

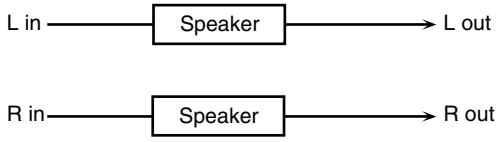
Adds a vowel character to the sound, making it similar to a human voice.



Parameter	Value	Explanation
Drive Sw	OFF, ON	Turns Drive on/off.
Drive #	0–127	Degree of distortion Also changes the volume.
Vowel1	a, e, i, o, u	Selects the vowel.
Vowel2	a, e, i, o, u	
Rate #	0.05–10.00 Hz, note	Frequency at which the two vowels switch
Depth #	0–127	Effect depth
Input Sync Sw	OFF, ON	Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF).
Input Sync Threshold	0–127	Volume level at which reset is applied
Manual #	0–100	Point at which Vowel 1/2 switch **49 or less:** Vowel 1 will have a longer duration. **50:** Vowel 1 and 2 will be of equal duration. **51 or more:** Vowel 2 will have a longer duration.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Pan #	L64–63R	Stereo location of the output
Level	0–127	Output level

10: SPEAKER SIMULATOR

Simulates the speaker type and mic settings used to record the speaker sound.



Parameter	Value	Explanation
Speaker Type	(See the table right.)	Type of speaker
Mic Setting	1, 2, 3	Adjusts the location of the mic that is recording the sound of the speaker. This can be adjusted in three steps, with the mic becoming more distant in the order of 1, 2, and 3.
Mic Level #	0–127	Volume of the microphone
Direct Level #	0–127	Volume of the direct sound
Level #	0–127	Output Level

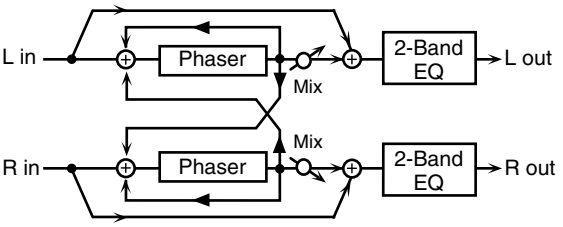
Specifications of each Speaker Type

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

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

11: PHASER

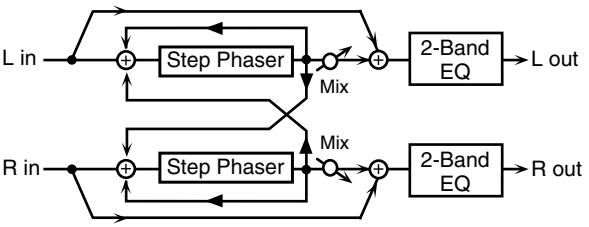
A phase-shifted sound is added to the original sound and modulated.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. **INVERSE:** The left and right phase will be opposite. When using a mono source, this spreads the sound. **SYNCHRO:** The left and right phase will be the same. Select this when inputting a stereo source.
Resonance #	0–127	Amount of feedback
Cross Feedback	-98– +98 %	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Mix #	0–127	Level of the phase-shifted sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

12: STEP PHASER

The phaser effect will be varied gradually.

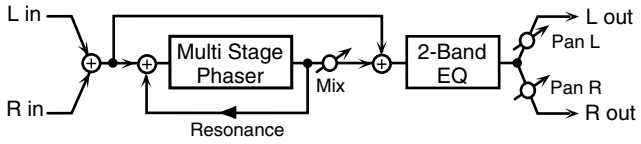


Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation

Parameter	Value	Explanation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. **INVERSE:** The left and right phase will be opposite. When using a mono source, this spreads the sound. **SYNCHRO:** The left and right phase will be the same. Select this when inputting a stereo source.
Resonance #	0–127	Amount of feedback
Cross Feedback	-98– +98 %	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00 Hz, note	Rate of the step-wise change in the phaser effect
Mix #	0–127	Level of the phase-shifted sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

13: MULTI STAGE PHASER

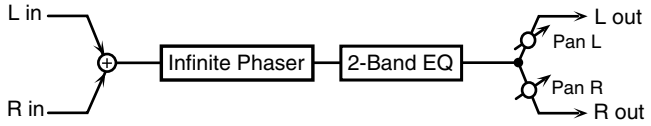
Extremely high settings of the phase difference produce a deep phaser effect.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE, 20-STAGE, 24-STAGE	Number of phaser stages
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Resonance #	0–127	Amount of feedback
Mix #	0–127	Level of the phase-shifted sound
Pan #	L64–63R	Stereo location of the output sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

14: INFINITE PHASER

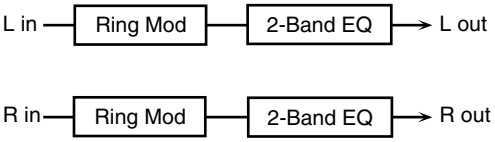
A phaser that continues raising/lowering the frequency at which the sound is modulated.



Parameter	Value	Explanation
Mode	1, 2, 3, 4	Higher values will produce a deeper phaser effect.
Speed #	-100– +100	Speed at which to raise or lower the frequency at which the sound is modulated (+: upward / -: downward)
Resonance #	0–127	Amount of feedback
Mix #	0–127	Volume of the phase-shifted sound
Pan #	L64–63R	Panning of the output sound
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Level	0–127	Output volume

15: RING MODULATOR

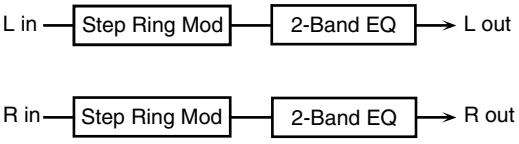
This is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds. You can also change the modulation frequency in response to changes in the volume of the sound sent into the effect.



Parameter	Value	Explanation
Frequency #	0–127	Adjusts the frequency at which modulation is applied.
Sens #	0–127	Adjusts the amount of frequency modulation applied.
Polarity	UP, DOWN	Determines whether the frequency modulation moves towards higher frequencies (**UP**) or lower frequencies (**DOWN**).
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

16: STEP RING MODULATOR

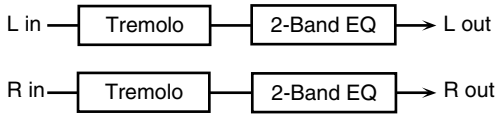
This is a ring modulator that uses a 16-step sequence to vary the frequency at which modulation is applied.



Parameter	Value	Explanation
Step 01–16	0–127	Frequency of ring modulation at each step
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the modulation frequency changes between steps
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and effect sound (W)
Level	0–127	Output volume

17: TREMOLO

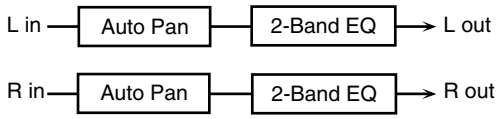
Cyclically modulates the volume to add tremolo effect to the sound.

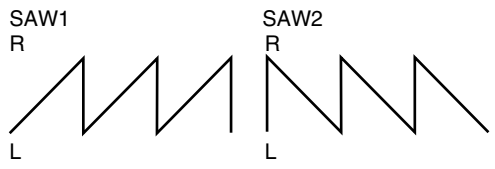


Parameter	Value	Explanation
Mod Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation Wave **TRI:** triangle wave **SQR:** square wave **SIN:** sine wave **SAW1/2:** sawtooth wave
		
Rate #	0.05–10.00 Hz, note	Frequency of the change
Depth #	0–127	Depth to which the effect is applied
Low Gain	-15– +15 dB	Gain of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

18: AUTO PAN

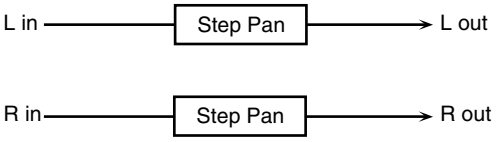
Cyclically modulates the stereo location of the sound.



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

19: STEP PAN

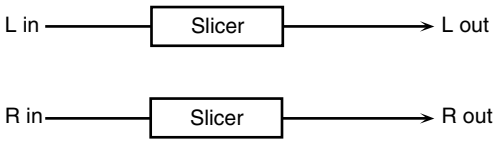
This uses a 16-step sequence to vary the panning of the sound.



Parameter	Value	Explanation
Step 01–16	L64–63R	Pan at each step
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the pan changes between steps
Input Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
Input Sync Threshold	0–127	Volume at which an input note will be detected
Level	0–127	Output volume

20: SLICER

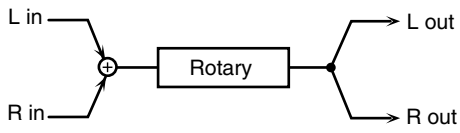
By applying successive cuts to the sound, this effect turns a conventional sound into a sound that appears to be played as a backing phrase. This is especially effective when applied to sustain-type sounds.



Parameter	Value	Explanation
Step 01–16	0–127	Level at each step
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the level changes between steps
Input Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
Input Sync Threshold	0–127	Volume at which an input note will be detected
Mode	LEGATO, SLASH	Sets the manner in which the volume changes as one step progresses to the next. **LEGATO:** The change in volume from one step's level to the next remains unaltered. If the level of a following step is the same as the one preceding it, there is no change in volume. **SLASH:** The level is momentarily set to 0 before progressing to the level of the next step. This change in volume occurs even if the level of the following step is the same as the preceding step.
Shuffle #	0–127	Timing of volume changes in levels for even-numbered steps (step 2, step 4, step 6...). The higher the value, the later the beat progresses.
Level	0–127	Output level

21: ROTARY

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

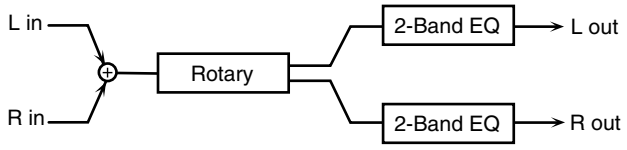


Parameter	Value	Explanation
Speed #	SLOW, FAST	Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor. **SLOW:** Slows down the rotation to the Slow Rate. **FAST:** Speeds up the rotation to the Fast Rate.
Woofer Slow Speed	0.05–10.00 Hz	Slow speed (SLOW) of the low frequency rotor
Woofer Fast Speed	0.05–10.00 Hz	Fast speed (FAST) of the low frequency rotor
Woofer Acceleration	0–15	Adjusts the time it takes the low frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times.
Woofer Level	0–127	Volume of the low frequency rotor
Tweeter Slow Speed	0.05–10.00 Hz	Settings of the high frequency rotor The parameters are the same as for the low frequency rotor
Tweeter Fast Speed	0.05–10.00 Hz	
Tweeter Acceleration	0–15	
Tweeter Level	0–127	
Separation	0–127	Spatial dispersion of the sound
Level #	0–127	Output Level

22: VK ROTARY

This type provides modified response for the rotary speaker, with the low end boosted further.

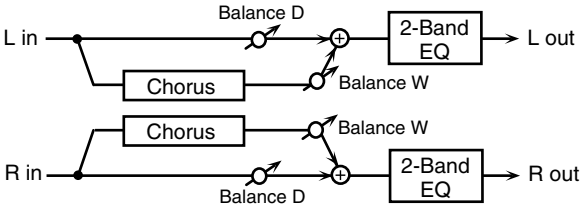
This effect features the same specifications as the VK-7's built-in rotary speaker.



Parameter	Value	Explanation
Speed #	SLOW, FAST	Rotational speed of the rotating speaker
Brake #	OFF, ON	Switches the rotation of the rotary speaker. When this is turned on, the rotation will gradually stop. When it is turned off, the rotation will gradually resume.
Woofer Slow Speed	0.05–10.00 Hz	Low-speed rotation speed of the woofer
Woofer Fast Speed	0.05–10.00 Hz	High-speed rotation speed of the woofer
Woofer Trans Up	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Slow to Fast.
Woofer Trans Down	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Fast to Slow.
Woofer Level	0–127	Volume of the woofer
Tweeter Slow Speed	0.05–10.00 Hz	Settings of the tweeter The parameters are the same as for the woofer.
Tweeter Fast Speed	0.05–10.00 Hz	
Tweeter Trans Up	0–127	
Tweeter Trans Down	0–127	
Tweeter Level	0–127	
Spread	0–10	Sets the rotary speaker stereo image. The higher the value set, the wider the sound is spread out.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level #	0–127	Output Level

23: CHORUS

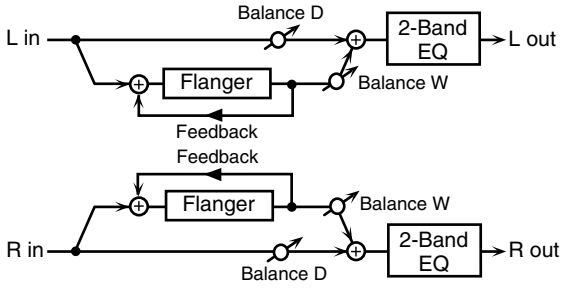
This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorus sound.



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

24: FLANGER

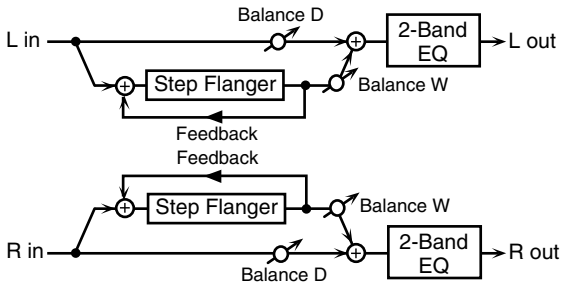
This is a stereo flanger. (The LFO has the same phase for left and right.) It produces a metallic resonance that rises and falls like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.



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

25: STEP FLANGER

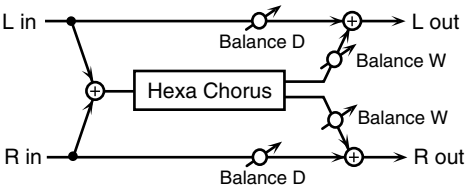
This is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00 Hz, note	Rate (period) of pitch change
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

26: HEXA-CHORUS

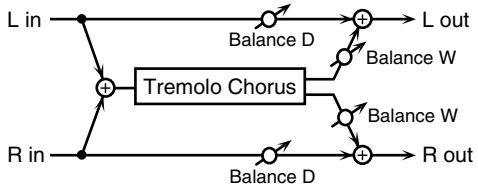
Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



Parameter	Value	Explanation
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Pre Delay Deviation	0–20	Adjusts the differences in Pre Delay between each chorus sound.
Depth Deviation	-20– +20	Adjusts the difference in modulation depth between each chorus sound.
Pan Deviation	0–20	Adjusts the difference in stereo location between each chorus sound. **0:** All chorus sounds will be in the center. **20:** Each chorus sound will be spaced at 60 degree intervals relative to the center.
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

27: TREMOLO CHORUS

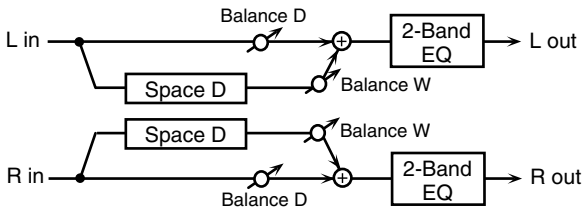
This is a chorus effect with added Tremolo (cyclic modulation of volume).



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

28: SPACE-D

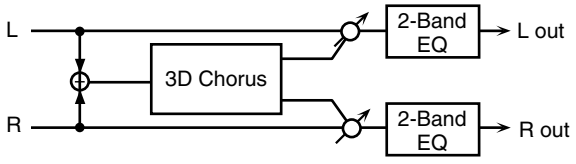
This is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.



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

29: 3D CHORUS

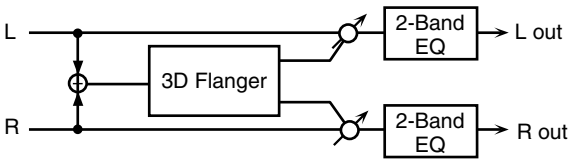
This applies a 3D effect to the chorus sound. The chorus sound will be positioned 90 degrees left and 90 degrees right.



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

30: 3D FLANGER

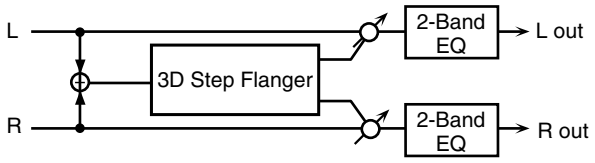
This applies a 3D effect to the flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

31: 3D STEP FLANGER

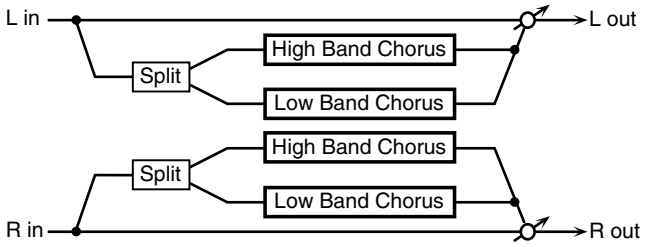
This applies a 3D effect to the step flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00 Hz, note	Rate (period) of pitch change
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

32: 2BAND CHORUS

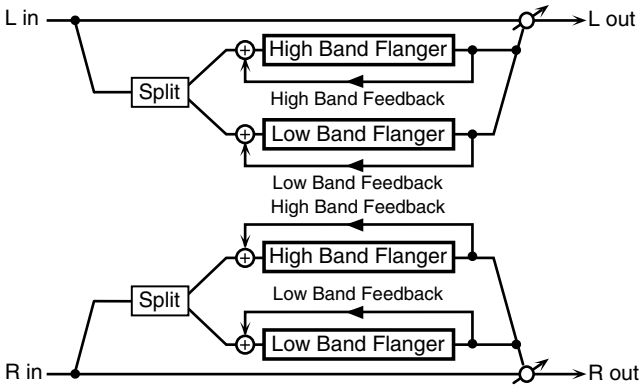
A chorus effect that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Value	Explanation
Split Freq	200–8000 Hz	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the low-range chorus sound is heard
Low Rate #	0.05–10.00 Hz, note	Rate at which the low-range chorus sound is modulated
Low Depth	0–127	Modulation depth for the low-range chorus sound
Low Phase	0–180 deg	Spaciousness of the low-range chorus sound
High Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the high-range chorus sound is heard
High Rate #	0.05–10.00 Hz, note	Rate at which the low-range chorus sound is modulated
High Depth	0–127	Modulation depth for the high-range chorus sound
High Phase	0–180 deg	Spaciousness of the high-range chorus sound
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and chorus sound (W)
Level	0–127	Output volume

33: 2BAND FLANGER

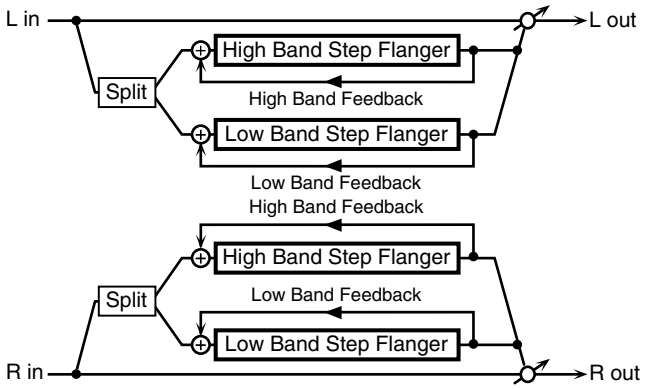
A flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Value	Explanation
Split Freq	200–8000 Hz	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the low-range flanger sound is heard
Low Rate #	0.05–10.00 Hz, note	Rate at which the low-range flanger sound is modulated
Low Depth	0–127	Modulation depth for the low-range flanger sound
Low Phase	0–180 deg	Spaciousness of the low-range flanger sound
Low Feedback #	-98– +98%	Proportion of the low-range flanger sound that is to be returned to the input (negative values invert the phase)
High Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the high-range flanger sound is heard
High Rate #	0.05–10.00 Hz, note	Rate at which the high-range flanger sound is modulated
High Depth	0–127	Modulation depth for the high-range flanger sound
High Phase	0–180 deg	Spaciousness of the high-range flanger sound
High Feedback #	-98– +98%	Proportion of the high-range flanger sound that is to be returned to the input (negative values invert the phase)
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and flanger sound (W)
Level	0–127	Output volume

34: 2BAND STEP FLANGER

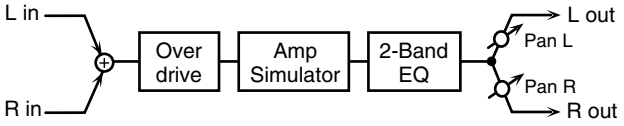
A step flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Value	Explanation
Split Freq	200–8000 Hz	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the low-range flanger sound is heard
Low Rate #	0.05–10.00 Hz, note	Rate at which the low-range flanger sound is modulated
Low Depth	0–127	Modulation depth for the low-range flanger sound
Low Phase	0–180 deg	Spaciousness of the low-range flanger sound
Low Feedback #	-98– +98%	Proportion of the low-range flanger sound that is to be returned to the input (negative values invert the phase)
Low Step Rate #	0.10–20.00 Hz, note	Rate at which the steps will cycle for the low-range flanger sound
High Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the high-range flanger sound is heard
High Rate #	0.05–10.00 Hz, note	Rate at which the high-range flanger sound is modulated
High Depth	0–127	Modulation depth for the high-range flanger sound
High Phase	0–180 deg	Spaciousness of the high-range flanger sound
High Feedback #	-98– +98%	Proportion of the high-range flanger sound that is to be returned to the input (negative values invert the phase)
High Step Rate #	0.10–20.00 Hz, note	Rate at which the steps will cycle for the high-range flanger sound
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and flanger sound (W)
Level	0–127	Output volume

35: OVERDRIVE

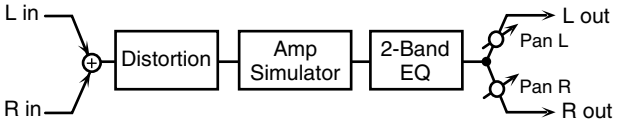
Creates a soft distortion similar to that produced by vacuum tube amplifiers.



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

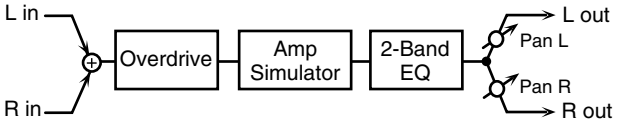
36: DISTORTION

Produces a more intense distortion than Overdrive. The parameters are the same as for "35: OVERDRIVE."



37: VS OVERDRIVE

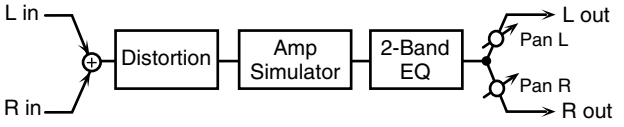
This is an overdrive that provides heavy distortion.



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

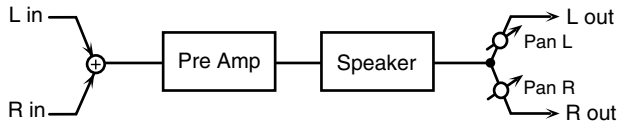
38: VS DISTORTION

This is a distortion effect that provides heavy distortion. The parameters are the same as for "37: VS OVERDRIVE."



39: GUITAR AMP SIMULATOR

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



Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type	JC-120, CLEAN TWIN, MATCH DRIVE, BG LEAD, MS1959I, MS1959II, MS1959I+II, SLDN LEAD, METAL5150, METAL LEAD, OD-1, OD-2 TURBO, DISTORTION, FUZZ	Type of guitar amp
Pre Amp Volume #	0–127	Volume and amount of distortion of the amp
Pre Amp Master #	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127	Tone of the bass/mid/treble frequency range * Middle cannot be set if "Match Drive" is selected as the Pre Amp Type.
Pre Amp Middle		
Pre Amp Treble		
Pre Amp Presence	0–127 (MATCH DRIVE: -127 - 0)	Tone for the ultra-high frequency range
Pre Amp Bright	OFF, ON	Turning this "On" produces a sharper and brighter sound. * This parameter applies to the "JC-120," "Clean Twin," and "BG Lead" Pre Amp Types.
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).
Speaker Type	(See the table below.)	Type of speaker
Mic Setting	1, 2, 3	Adjusts the location of the mic that's capturing the sound of the speaker. This can be adjusted in three steps, from 1 to 3, with the mic becoming more distant as the value increases.
Mic Level	0–127	Volume of the microphone
Direct Level	0–127	Volume of the direct sound
Pan #	L64–63R	Stereo location of the output
Level #	0–127	Output level

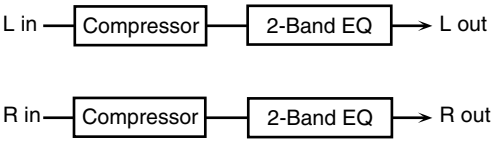
Specifications for each Speaker Type

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

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

40: COMPRESSOR

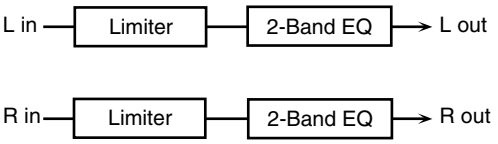
Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Explanation
Attack #	0–127	Sets the speed at which compression starts
Threshold #	0–127	Adjusts the volume at which compression begins
Post Gain	0– +18 dB	Adjusts the output gain.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level #	0–127	Output level

41: LIMITER

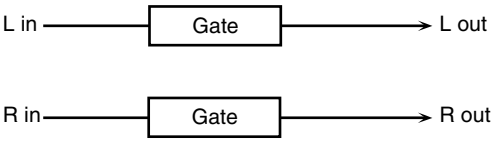
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



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

42: GATE

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



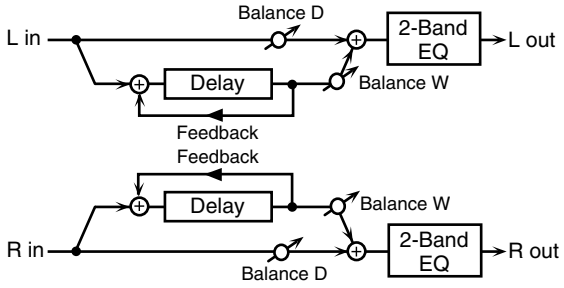
Parameter	Value	Explanation
Threshold #	0–127	Volume level at which the gate begins to close
Mode	GATE, DUCK	Type of gate **GATE:** The gate will close when the volume of the original sound decreases, cutting the original sound. **DUCK (Ducking):** The gate will close when the volume of the original sound increases, cutting the original sound.
Attack	0–127	Adjusts the time it takes for the gate to fully open after being triggered.
Hold	0–127	Adjusts the time it takes for the gate to start closing after the source sound falls beneath the Threshold.

Parameter	Value	Explanation
Release	0–127	Adjusts the time it takes the gate to fully close after the hold time.
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

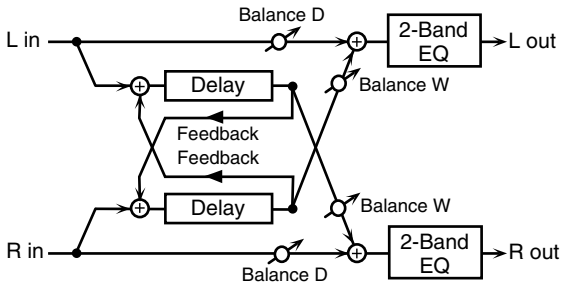
43: DELAY

This is a stereo delay.

When Feedback Mode is NORMAL:



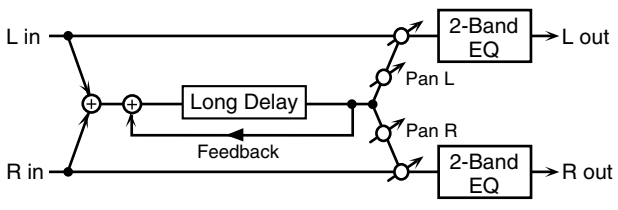
When Feedback Mode is CROSS:



Parameter	Value	Explanation
Delay Left	0–1300 ms, note	Adjusts the time until the delay sound is heard.
Delay Right		
Phase Left	NORMAL, INVERSE	Phase of the delay sound
Phase Right		
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures above.)
Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

44: LONG DELAY

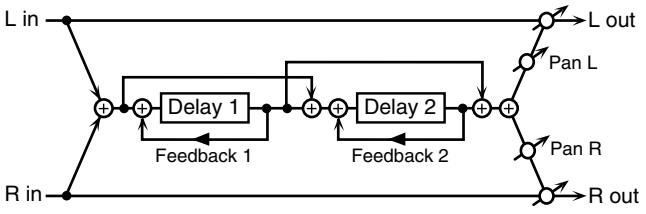
A delay that provides a long delay time.



Parameter	Value	Explanation
Delay Time	0–2600 ms, note	Delay time from when the original sound is heard to when the delay sound is heard
Phase	NORMAL, INVERSE	Phase of the delay (NORMAL: non-inverted, INVERT: inverted)
Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input (negative values invert the phase)
HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the delayed sound will be cut (BYPASS: no cut)
Pan #	L64–63R	Panning of the delay sound
Low Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0–127	Output volume

45: SERIAL DELAY

This delay connects two delay units in series. Feedback can be applied independently to each delay unit, allowing you to produce complex delay sounds.

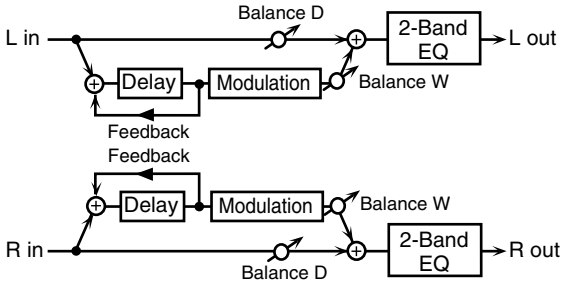


Parameter	Value	Explanation
Delay1 Time	0–1300 ms, note	Delay time from when sound is input to delay 1 until the delay sound is heard
Delay1 Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of delay 1 (negative values invert the phase)
Delay1 HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the delayed sound of delay 1 will be cut (BYPASS: no cut)
Delay2 Time	0–1300 ms, note	Delay time from when sound is input to delay 2 until the delay sound is heard
Delay2 Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of delay 2 (negative values invert the phase)
Delay2 HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the delayed sound of delay 2 will be cut (BYPASS: no cut)
Pan #	L64–63R	Panning of the delay sound
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0–127	Output volume

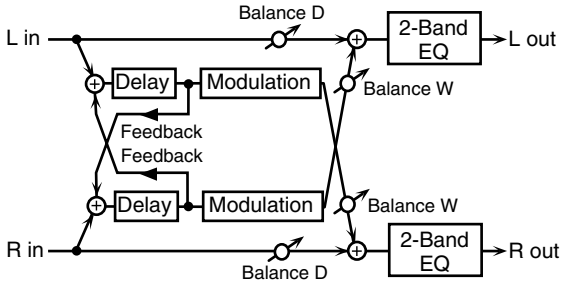
46: MODULATION DELAY

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



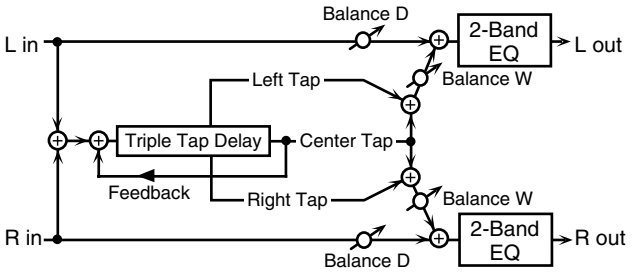
When Feedback Mode is CROSS:



Parameter	Value	Explanation
Delay Left Delay Right	0–1300 ms, note	Adjusts the time until the delay sound is heard.
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect (See the figures above.)
Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0-180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

47: 3TAP PAN DELAY

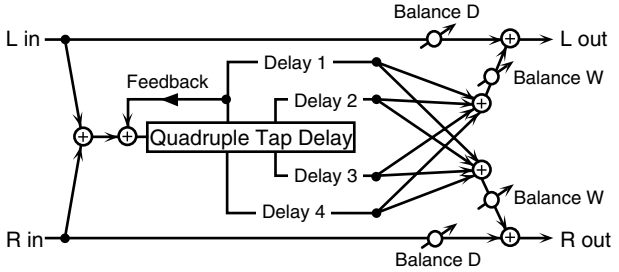
Produces three delay sounds; center, left and right.



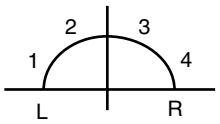
Parameter	Value	Explanation
Delay Left/ Right/Center	0–2600 ms, note	Adjusts the time until the delay sound is heard.
Center Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Left/Right/ Center Level	0–127	Volume of each delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

48: 4TAP PAN DELAY

This effect has four delays.



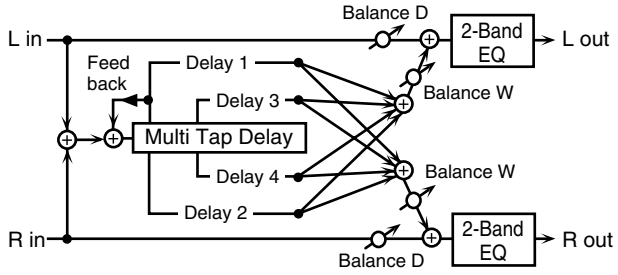
Stereo location of each delay



Parameter	Value	Explanation
Delay 1–4 Time	0–2600 ms, note	Adjusts the time until the delay sound is heard.
Delay 1 Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Delay 1–4 Level	0–127	Volume of each delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

49: MULTI TAP DELAY

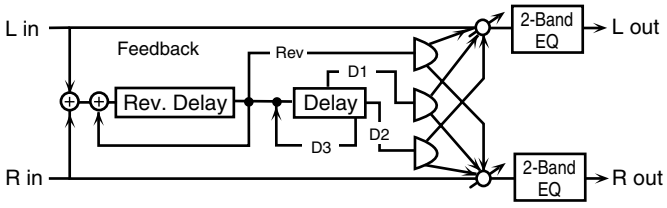
This effect provides four delays. Each of the Delay Time parameters can be set to a note length based on the selected tempo. You can also set the panning and level of each delay sound.



Parameter	Value	Explanation
Delay 1–4 Time	0–2600 ms, note	Adjusts the time until Delays 1–4 are heard.
Delay 1 Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any the high frequencies, set this parameter to BYPASS.
Delay 1–4 Pan	L64–63R	Stereo location of Delays 1–4
Delay 1–4 Level	0–127	Output level of Delays 1–4
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

50: REVERSE DELAY

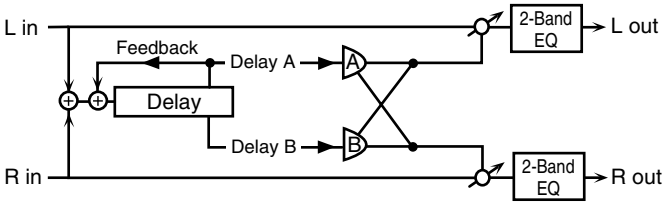
This is a reverse delay that adds a reversed and delayed sound to the input sound. A tap delay is connected immediately after the reverse delay.



Parameter	Value	Explanation
Threshold	0–127	Volume at which the reverse delay will begin to be applied
Rev Delay Time	0–1300 ms, note	Delay time from when sound is input into the reverse delay until the delay sound is heard
Rev Delay Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of the reverse delay (negative values invert the phase)
Rev Delay HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the reverse-delayed sound will be cut (BYPASS: no cut)
Rev Delay Pan	L64–63R	Panning of the reverse delay sound
Rev Delay Level	0–127	Volume of the reverse delay sound
Delay 1 – 3 Time	0–1300 ms, note	Delay time from when sound is input into the tap delay until the delay sound is heard
Delay 3 Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of the tap delay (negative values invert the phase)
Delay HF Damp	200–8000 Hz, BYPASS	Frequency at which the low-frequency content of the tap delay sound will be cut (BYPASS: no cut)
Delay 1 Pan', 'Delay 2 Pan	L64–63R	Panning of the tap delay sounds
Delay 1 Level', 'Delay 2 Level	0–127	Volume of the tap delay sounds
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0–127	Output volume

51: SHUFFLE DELAY

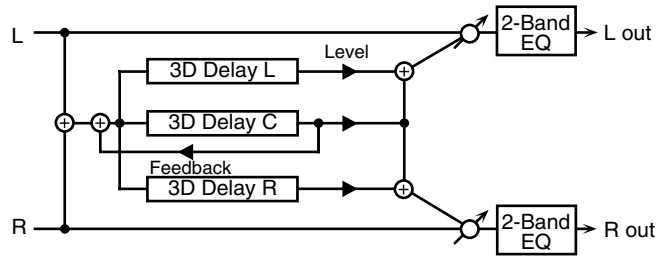
Adds a shuffle to the delay sound, giving the sound a bouncy delay effect with a swing feel.



Parameter	Value	Explanation
Delay Time #	0–2600 ms, note	Adjusts the time until the delay sound is heard.
Shuffle Rate #	0–100 %	Adjusts the ratio (as a percentage) of the time that elapses before Delay B sounds relative to the time that elapses before the Delay A sounds. When set to 100%, the delay times are the same.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to its specified new setting.
Feedback #	-98– +98 %	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Pan A/B	L64–63R	Stereo location of Delay A/B
Level A/B	0–127	Volume of delay A/B
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

52: 3D DELAY

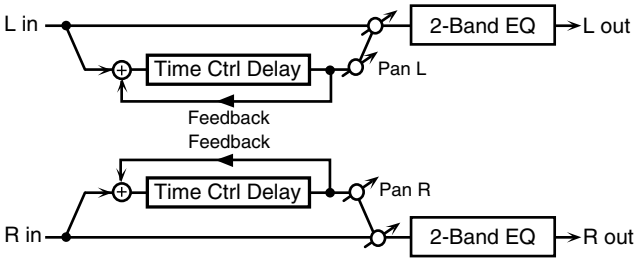
This applies a 3D effect to the delay sound. The delay sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Delay Left Delay Right Delay Center	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Center Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Left Level Right Level Center Level	0–127	Output level of the delay sound
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

53: TIME CTRL DELAY

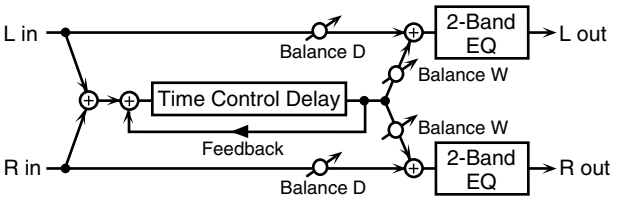
A stereo delay in which the delay time can be varied smoothly.



Parameter	Value	Explanation
Delay Time #	0–1300 ms, note	Adjusts the time until the delay is heard.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
Feedback #	-98– +98 %	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

54: LONG TIME CTRL DELAY

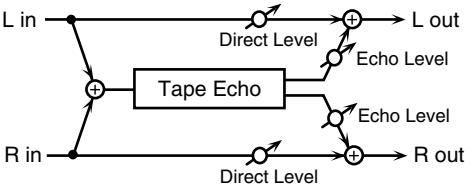
A delay in which the delay time can be varied smoothly, and allowing an extended delay to be produced.



Parameter	Value	Explanation
Delay Time #	0–2600 ms, note	Adjusts the time until the delay is heard.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
Feedback #	-98– +98 %	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Pan #	L64–63R	Stereo location of the delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

55: TAPE ECHO

A virtual tape echo that produces a realistic tape delay sound. This simulates the tape echo section of a Roland RE-201 Space Echo.

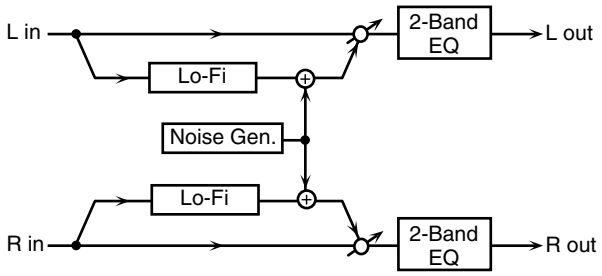


Parameter	Value	Explanation
Mode	S, M, L, S+M, S+L, M+L, S+M+L	Combination of playback heads to use Select from three different heads with different delay times. **S:** short **M:** middle **L:** long
Repeat Rate #	0–127	Tape speed Increasing this value will shorten the spacing of the delayed sounds.
Intensity #	0–127	Amount of delay repeats
Bass	-15– +15 dB	Boost/cut for the lower range of the echo sound

Parameter	Value	Explanation
Treble	-15– +15 dB	Boost/cut for the upper range of the echo sound
Head S Pan	L64–63R	Independent panning for the short, middle, and long playback heads
Head M Pan		
Head L Pan		
Tape Distortion	0–5	Amount of tape-dependent distortion to be added This simulates the slight tonal changes that can be detected by signal-analysis equipment. Increasing this value will increase the distortion.
Wow/Flutter Rate	0–127	Speed of wow/flutter (complex variation in pitch caused by tape wear and rotational irregularity)
Wow/Flutter Depth	0–127	Depth of wow/flutter
Echo Level #	0–127	Volume of the echo sound
Direct Level #	0–127	Volume of the original sound
Level	0–127	Output level

56: LOFI NOISE

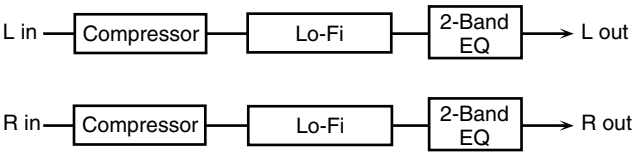
In addition to a Lo-Fi effect, this adds various types of noise such as white noise and disc noise.



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

57: LOFI COMPRESS

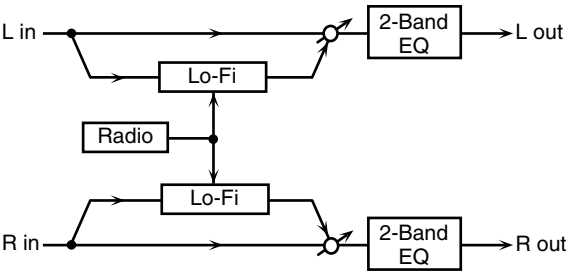
This is an effect that intentionally degrades the sound quality for creative purposes.



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

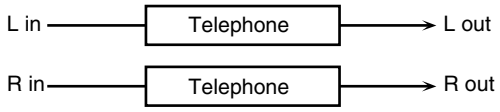
58: LOFI RADIO

In addition to a Lo-Fi effect, this effect also generates radio noise.



Parameter	Value	Explanation
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff **HPF:** cuts the frequency range below the Cutoff
Post Filter Cutoff	200–8000 Hz	Basic frequency of the Post Filter
Radio Detune #	0–127	Simulates the tuning noise of a radio. As this value is raised, the tuning drifts further.
Radio Noise Level #	0–127	Volume of the radio noise
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

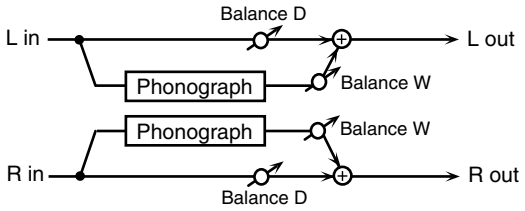
59: TELEPHONE



Parameter	Value	Explanation
Voice Quality #	0–15	Audio quality of the telephone voice
Treble	-15– +15 dB	Bandwidth of the telephone voice
Balance #	D100:0–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

60: PHONOGRAPH

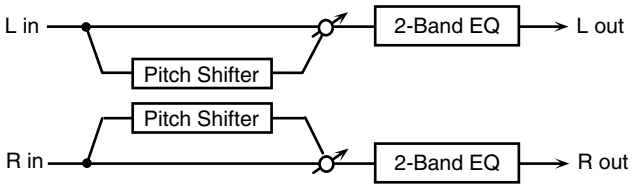
Simulates a sound recorded on an analog record and played back on a record player. This effect also simulates the various types of noise that are typical of a record, and even the rotational irregularities of an old turntable.



Parameter	Value	Explanation
Signal Distortion	0–127	Depth of distortion
Frequency Range	0–127	Frequency response of the playback system Decreasing this value will produce the impression of an old system with a poor frequency response.
Disc Type	LP, EP, SP	Rotational speed of the turntable This will affect the frequency of the scratch noise.
Scratch Noise Level	0–127	Amount of noise due to scratches on the record
Dust Noise Level	0–127	Volume of noise due to dust on the record
Hiss Noise Level	0–127	Volume of continuous "hiss"
Total Noise Level #	0–127	Volume of overall noise
Wow	0–127	Depth of long-cycle rotational irregularity
Flutter	0–127	Depth of short-cycle rotational irregularity
Random	0–127	Depth of indefinite-cycle rotational irregularity
Total Wow / Flutter #	0–127	Depth of overall rotational irregularity
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

61: PITCH SHIFTER (Feedback Pitch Shifter)

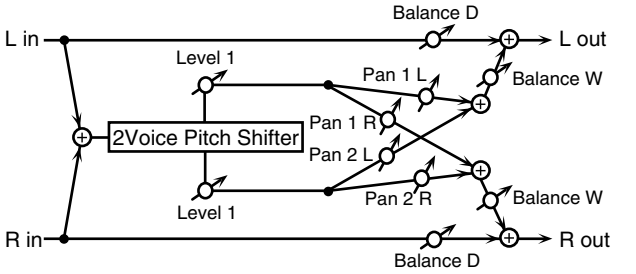
A stereo pitch shifter.



Parameter	Value	Explanation
Coarse #1	-24– +12 semi	Adjusts the pitch of the pitch shifted sound in semitone steps.
Fine #1	-100– +100 cent	Adjusts the pitch of the pitch shifted sound in 2-cent steps.
Delay Time	0–1300 ms, note	Adjusts the delay time from the direct sound until the pitch shifted sound is heard.
Feedback #	-98– +98 %	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output Level

62: 2VOICE PITCH SHIFTER

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

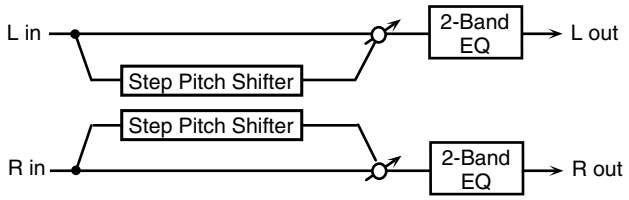


Parameter	Value	Explanation
Pitch 1: Coarse #1	-24-+12 semi	Adjusts the pitch of Pitch Shift 1 in semitone steps.
Pitch 1:Fine #1	-100-+100 cent	Adjusts the pitch of Pitch Shift Pitch 1 in 2-cent steps.
Pitch 1:Delay	0–1300 ms, note	Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard.
Pitch 1:Feedback #	-98– +98 %	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Pitch 1:Pan #	L64-63R	Stereo location of the Pitch Shift 1 sound
Pitch 1:Level	0–127	Volume of the Pitch Shift1 sound
Pitch 2: Coarse #2	-24-+12 semi	Settings of the Pitch Shift 2 sound. The parameters are the same as for the Pitch Shift 1 sound.
Pitch 2:Fine #2	-100-+100 cent	
Pitch 2:Delay	0–1300 ms, note	
Pitch 2:Feedback #	-98– +98 %	
Pitch 2:Pan #	L64-63R	
Pitch 2:Level	0–127	
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range

Parameter	Value	Explanation
Level Balance	A100:0B-A0:100B	Volume balance between the Pitch Shift 1 and Pitch Shift 2 sounds
Balance	D100:0W-D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0-127	Output Level

63: STEP PITCH SHIFTER

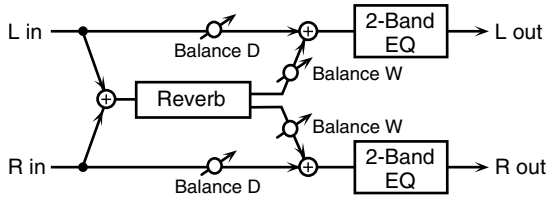
A pitch shifter in which the amount of pitch shift is varied by a 16-step sequence.



Parameter	Value	Explanation
Step 01–16	-24–+12 semi	Amount of pitch shift at each step (semitone units)
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the amount of pitch shift changes between steps
Gate Time #	0–127	Duration of the pitch shifted sound at each step
Fine	-100– +100 cent	Pitch shift adjustment for all steps (2-cent units)
Delay Time	0–1300 ms, note	Delay time from the original sound until the pitch-shifted sound is heard
Feedback #	-98– +98%	Proportion of the pitch-shifted sound that is to be returned to the input (negative values invert the phase)
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and pitch-shifted sound (W)
Level	0–127	Output volume

64: REVERB

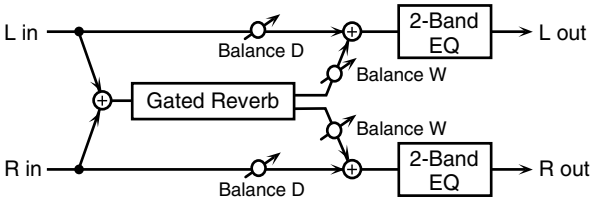
Adds reverberation to the sound, simulating an acoustic space.



Parameter	Value	Explanation
Type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2	Type of reverb **ROOM1:** dense reverb with short decay **ROOM2:** sparse reverb with short decay **STAGE1:** reverb with greater late reverberation **STAGE2:** reverb with strong early reflections **HALL1:** reverb with clear reverberance **HALL2:** reverb with rich reverberance
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time #	0–127	Time length of reverberation
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which the reverberant sound will be cut. As the frequency is set lower, more of the high frequencies will be cut, resulting in a softer and more muted reverberance. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level	0–127	Output Level

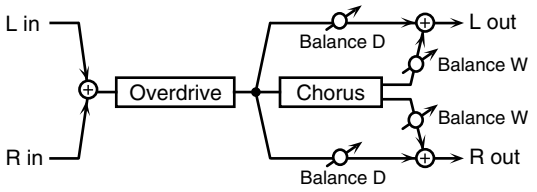
65: GATED REVERB

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



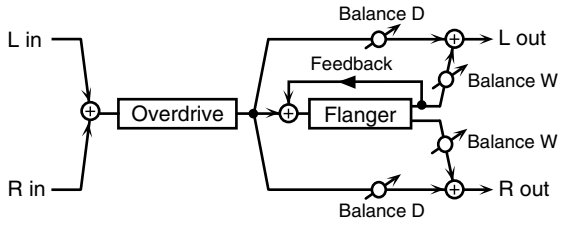
Parameter	Value	Explanation
Type	NORMAL, REVERSE, SWEEP1, SWEEP2	Type of reverb **NORMAL:** conventional gated reverb **REVERSE:** backwards reverb **SWEEP1:** the reverberant sound moves from right to left **SWEEP2:** the reverberant sound moves from left to right
Pre Delay	0.0–100.0 ms	Adjusts the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

66: OVERDRIVE → CHORUS



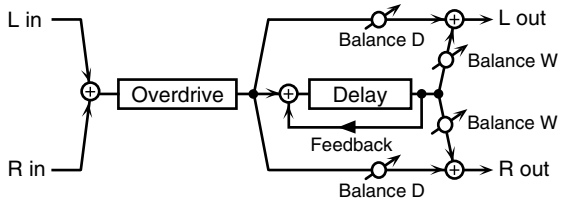
Parameter	Value	Explanation
Overdrive Drive #	0–127	Degree of distortion Also changes the volume.
Overdrive Pan #	L64–63R	Stereo location of the overdrive sound
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Frequency of modulation
Chorus Depth	0–127	Depth of modulation
Chorus Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

67: OVERDRIVE → FLANGER



Parameter	Value	Explanation
Overdrive Drive #	0–127	Degree of distortion Also changes the volume.
Overdrive Pan #	L64–63R	Stereo location of the overdrive sound
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

68: OVERDRIVE → DELAY

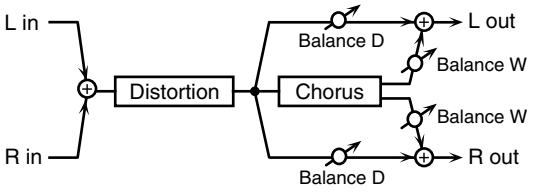


Parameter	Value	Explanation
Overdrive Drive #	0–127	Degree of distortion Also changes the volume.
Overdrive Pan #	L64–63R	Stereo location of the overdrive sound
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

69: DISTORTION → CHORUS

The parameters are essentially the same as in "66: OVERDRIVE → CHORUS," with the exception of the following two.

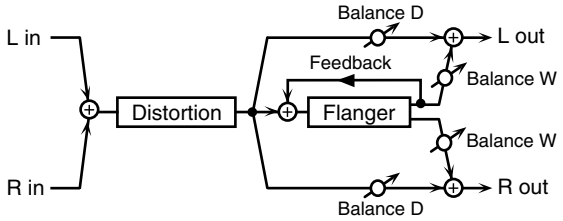
Overdrive Drive → Distortion Drive, Overdrive Pan → Distortion Pan



70: DISTORTION → FLANGER

The parameters are essentially the same as in "67: OVERDRIVE → FLANGER," with the exception of the following two.

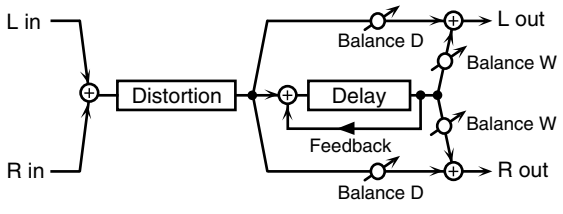
Overdrive Drive → Distortion Drive, Overdrive Pan → Distortion Pan



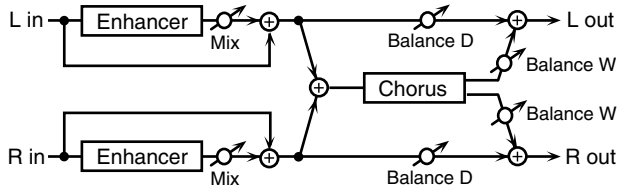
71: DISTORTION → DELAY

The parameters are essentially the same as in "68: OVERDRIVE → DELAY," with the exception of the following two.

Overdrive Drive → Distortion Drive, Overdrive Pan → Distortion Pan

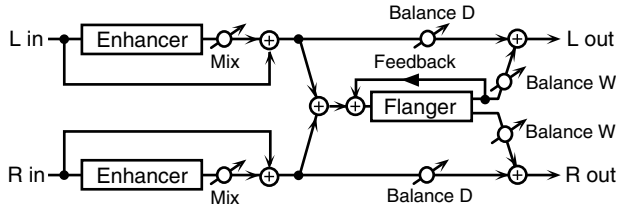


72: ENHANCER → CHORUS



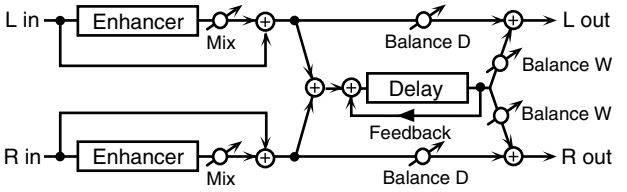
Parameter	Value	Explanation
Enhancer Sens #	0–127	Sensitivity of the enhancer
Enhancer Mix #	0–127	Level of the overtones generated by the enhancer
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Frequency of modulation
Chorus Depth	0–127	Depth of modulation
Chorus Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

73: ENHANCER → FLANGER



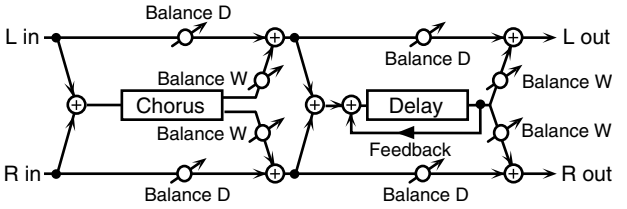
Parameter	Value	Explanation
Enhancer Sens #	0–127	Sensitivity of the enhancer
Enhancer Mix #	0–127	Level of the overtones generated by the enhancer
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

74: ENHANCER → DELAY



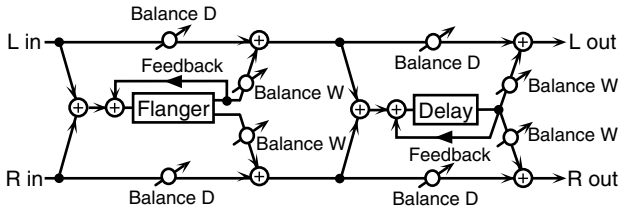
Parameter	Value	Explanation
Enhancer Sens #	0–127	Sensitivity of the enhancer
Enhancer Mix #	0–127	Level of the overtones generated by the enhancer
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

75: CHORUS → DELAY



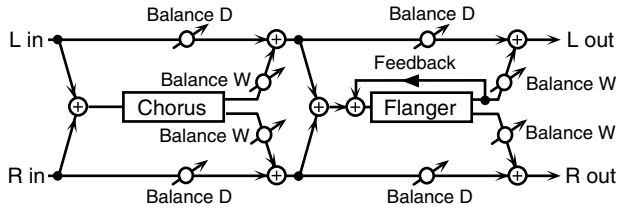
Parameter	Value	Explanation
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Frequency of modulation
Chorus Depth	0–127	Depth of modulation
Chorus Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

76: FLANGER → DELAY



Parameter	Value	Explanation
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

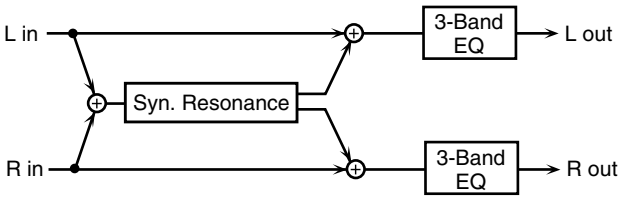
77: CHORUS → FLANGER



Parameter	Value	Explanation
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Chorus Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Modulation frequency of the flanger effect
Flanger Depth	0–127	Modulation depth of the flanger effect
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

78: SYMPATHETIC RESONANCE

On an acoustic piano, holding down the damper pedal allows other strings to resonate in sympathy with the notes you play, creating rich and spacious resonances. This effect simulates these sympathetic resonances.



Parameter	Value	Explanation
Depth #	0–127	Depth of the effect
Damper #	0–127	Depth to which the damper pedal is pressed (controls the resonant sound)
Pre LPF	16–15000 Hz, BYPASS	Frequency of the filter that cuts the high-frequency content of the input sound (BYPASS: no cut)
Pre HPF	BYPASS, 16–15000 Hz	Frequency of the filter that cuts the low-frequency content of the input sound (BYPASS: no cut)
Peaking Freq	200–8000 Hz	Frequency of the filter that boosts/cuts a specific frequency region of the input sound
Peaking Gain	-15– +15 dB	Amount of boost/cut produced by the filter at the specified frequency region of the input sound
Peaking Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the frequency region boosted/cut by the 'Peaking Gain' parameter (larger values make the region narrower)
HF Damp	16–15000 Hz, BYPASS	Frequency at which the high-frequency content of the resonant sound will be cut (BYPASS: no cut)
LF Damp	BYPASS, 16–15000 Hz	Frequency at which the low-frequency content of the resonant sound will be cut (BYPASS: no cut)
Lid	1–6	This simulates the actual changes in sound that occur when the lid of a grand piano is set at different heights.
EQ Low Freq	200, 400 Hz	Frequency of the low-range EQ
EQ Low Gain	-15– +15 dB	Amount of low-range boost/cut
EQ Mid Freq	200–8000 Hz	Frequency of the midrange EQ
EQ Mid Gain	-15– +15 dB	Amount of midrange boost/cut
EQ Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of midrange (larger values make the region narrower)
EQ High Freq	2000, 4000, 8000 Hz	Frequency of the high-range EQ
EQ High Gain	-15–+15 dB	Amount of high-range boost/cut
Level	0–127	Output Level

note:

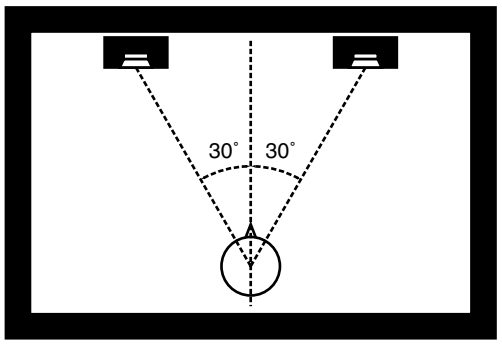
(Sixty-fourth-note triplet), (Sixty-fourth note), (Thirty-second-note triplet),
(Thirty-second note), (Sixteenth-note triplet), (Dotted thirty-second note),
(Sixteenth note), (Eighth-note triplet), (Dotted sixteenth note),
(Eighth note), (Quarter-note triplet), (Dotted eighth note),
(Quarter note), (Half-note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

When Using 3D Effects

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

52: 3D DELAY
29: 3D CHORUS
30: 3D FLANGER
31: 3D STEP FLANGER

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



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

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

About the STEP RESET function

06: STEP FILTER
16: STEP RING MODULATOR
19: STEP PAN
20: SLICER
63: STEP PITCH SHIFTER

The above five types contain a sixteen-step sequencer.
For these types, you can use a multi-effect control to reset the sequence to play from the first step.
To do this, set the multi-effect control Destination to "Step Reset."

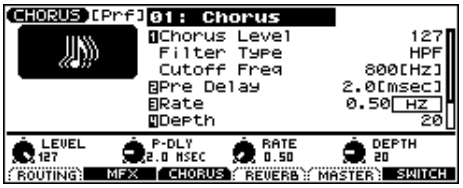
For example if you are using the modulation lever to control the effect, you would make the following settings.

Source: CC01: MODULATION
Destination: Step Reset
Sens: +63

With these settings, the sequence will play back from the first step whenever you operate the modulation lever.

Making Chorus Settings

* *The JUNO-G's Chorus effect unit can also be used as a stereo delay unit.*



cf.

For details on these settings, refer to **Making Effect Settings** (p. 125).

Parameter	Value	Explanation
(Chorus Type)	00 (OFF)–03	Selects either chorus or delay.
Chorus Level	0–127	Volume of the sound passed through chorus
Type 01: Chorus		
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Delay time from the direct sound until the chorus sound is heard
Rate	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180°	Spatial spread of the sound
Feedback	0–127	Amount of the chorus sound fed back into the effect
Type 02: Delay		
Dly Left	0–1000 ms, note	Delay time from the direct sound until the delay sound is heard
Dly Right		
Dly Center		
Center Feedback	-98–+98 %	Proportion of the delay sound fed back into the effect Negative (-) settings will invert the phase.
HF Damp	200–8000 Hz, BYPASS	Frequency above which sound fed back to the effect will be cut If you do not want to cut the high frequencies, set this parameter to BYPASS.
Left Level	0–127	Volume of each delay sound
Right Level		
Center Level		
Type 03: GM2 Chorus		
Pre-LPF	0–7	Cuts the high frequency range of the sound coming into the chorus. Higher values will cut more of the high frequencies.
Level	0–127	Volume of the chorus sound
Feedback	0–127	Amount of the chorus sound fed back into the effect
Delay	0–127	Delay time from the direct sound until the chorus sound is heard
Rate	0–127	Frequency of modulation
Depth	0–127	Depth of modulation
Send Level To Reverb	0–127	Amount of chorus sound that will be sent to the reverb

note:

𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯₃ (Sixty-fourth-note triplet), 𝅘𝅥𝅯𝅘𝅥𝅯 (Sixty-fourth note), 𝅘𝅥𝅰𝅘𝅥𝅰𝅘𝅥𝅰₃ (Thirty-second-note triplet),

𝅘𝅥𝅰𝅘𝅥𝅰 (Thirty-second note), 𝅘𝅥𝅯𝅘𝅥𝅯₃ (Sixteenth-note triplet), 𝅘𝅥𝅯𝅘𝅥𝅯. (Dotted thirty-second note),

𝅘𝅥𝅯𝅘𝅥𝅯 (Sixteenth note), 𝅘𝅥𝅮₃ (Eighth-note triplet), 𝅘𝅥𝅮. (Dotted sixteenth note),

𝅘𝅥𝅮 (Eighth note), 𝅗𝅥₃ (Quarter-note triplet), 𝅘𝅥𝅮. (Dotted eighth note),

𝅗𝅥 (Quarter note), 𝅗𝅥₃ (Half-note triplet), 𝅗𝅥. (Dotted quarter note), 𝅗𝅥 (Half note),

𝅝₃ (Whole-note triplet), 𝅗𝅥. (Dotted half note), 𝅝 (Whole note),

𝅜₃ (Double-note triplet), 𝅝. (Dotted whole note), 𝅜 (Double note)

Making Reverb Settings

cf.

For details on these settings, refer to **Making Effect Settings** (p. 125).

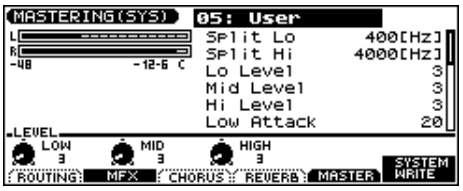
Parameter	Value	Explanation
(Reverb Type)	00 (OFF)–05	Type of Reverb
Reverb Level	0–127	
Type 01: Reverb (Normal Reverb)		
Type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DELAY	Type of reverb/delay **ROOM1:** short reverb with high density **ROOM2:** short reverb with low density **STAGE1:** reverb with greater late reverberation **STAGE2:** reverb with strong early reflections **HALL1:** very clear-sounding reverb **HALL2:** rich reverb **DELAY:** conventional delay effect **PAN-DELAY:** delay effect with echoes that pan left and right
Time	0–127	Time length of reverberation (Type: ROOM1–HALL2) Delay time (Type: DELAY, PAN-DELAY)
HF Damp	200–8000 Hz, BYPASS	Frequency above which the high-frequency content of the reverb sound will be cut or "damped" If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Feedback	0–127	Amount of delay feedback when the Type setting is DELAY or PAN-DELAY
Type 02: SRV Room (Simulates typical room acoustic reflections.) **Type 03: SRV Hall** (Simulates typical concert hall acoustic reflections.) **Type 04: SRV Plate** (Simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate.)		
Pre Delay	0.0–100.0 ms	Delay time from the direct sound until the reverb sound is heard
Time	0–127	Time length of reverberation
Size	1–8	Size of the simulated room or hall
High Cut	160 Hz–12.5 kHz, BYPASS	Frequency above which the high-frequency content of the reverb will be reduced If you do not want to reduce the high frequencies, set this parameter to BYPASS.
Density	0–127	Density of reverb
Diffusion	0–127	Change in the density of the reverb over time The higher the value, the more the density increases with time. (The effect of this setting is most pronounced with long reverb times.)
LF Damp	50–4000 Hz	Frequency below which the low-frequency content of the reverb sound will be reduced or "damped"
LF Damp Gain	-36–0 dB	Amount of damping applied to the frequency range selected with LF Damp With a setting of "0," there will be no reduction of the reverb's low-frequency content.
HF Damp	4000 Hz–12.5 kHz	Frequency above which the high-frequency content of the reverb sound will be reduced or "damped"
HF Damp Gain	-36–0 dB	Amount of damping applied to the frequency range selected with HF Damp With a setting of "0," there will be no reduction of the reverb's high-frequency content.
Type 05: GM2 Reverb		
Character	0–7	Type of reverb **0–5:** reverb **6, 7:** delay
Pre-LPF	0–7	Cuts the high frequency range of the sound coming into the reverb. Higher values will cut more of the high frequencies.
Level	0–127	Output level of reverberation
Time	0–127	Time length of reverberation
Delay Feedback	0–127	Amount of the delay sound fed back into the effect when the Reverb Character setting is 6 or 7

Mastering Effect

This is a stereo compressor (limiter) that is applied to the final output of the JUNO-G. It has independent high, mid, and low ranges. Independently for the high-frequency, mid-frequency, and low-frequency regions, this compresses any sounds that exceed the specified level, making the volume more consistent. When mixing down to MD, or DAT, or when you procedure your own original audio CD, this lets you master at an optimized level.

* *Mastering effect settings apply to the entire JUNO-G. These settings are not for individual patches or performances.*

* *The mastering effect is applied to the sound that is output from the OUTPUT A (MIX) jacks. It will not be applied to the sound that is output from the OUTPUT B jacks.*



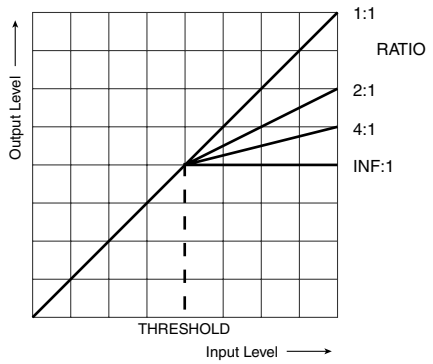
cf.

For details on these settings, refer to **Making Effect Settings** (p. 125).

Parameter	Value	Explanation
(Type)	00: Hard Comp, 01: Soft Comp, 02: Low Boost, 03: Mid Boost, 04: Hi Boost, 05: User	Recalls effect settings. **00–04:** Preset settings **05:** User settings By pressing [F6 (SYSTEM WRITE)] you can save the current settings as user settings. * *Only one set of user settings can be saved.*
Split Lo	200–800 Hz	Frequency at which the low-frequency (LO) and mid-frequency (MID) bands are split
Split Hi	2000–8000 Hz	Frequency at which the high-frequency (HI) and mid-frequency (MID) bands are split
Lo/Mid/Hi Level	0–24 dB	Output volume
Low/Mid/Hi Attack	0–100 ms	Time from when the volume goes up the threshold level until the compressor effect applies
Low/Mid/Hi Release	50–5000 ms	Time from when the volume falls below the threshold level until the compressor effect no longer applies
Low/Mid/Hi Thresh	-36–0 dB	Volume level at which compression begins
Low/Mid/Hi Ratio	1.00:1–INF:1 (INF: infinity)	Compression ratio

About THRESHOLD (Thresh) and RATIO

As shown in the diagram below, these parameters determine how the volume is to be compressed.



Settings Common to All Modes (System Function)

Settings that affect the entire operating environment of the JUNO-G, such as tuning and MIDI message reception, are referred to as **system functions**. This section explains how to make settings for the System functions and describes the functions of the different System parameters.

How to Make System Function Settings

1. **From the PATCH PLAY, PERFORM PLAY, or PART MIXER screen, press EDIT [MENU].**
2. **Use the VALUE dial or [INC] [DEC] [▲] [▼] to select "2. System," and press [ENTER].**
   The System Menu window appears.

3. **Press [F1]–[F5] to select the parameter group.**
   A SYSTEM SETUP screen appears.
4. **Press [F1]–[F4] or [▲] [▼] to select the parameter you wish to change.**
5. **Use the VALUE dial or [INC] [DEC] to change the setting.**
6. **Repeat steps 3–5 to set each system parameter you want to change.**
7. **To save the settings you changed, press [F6 (WRITE)].**
8. **Press [EXIT] to return to the previous screen.**

Saving the System Settings (System Write)

Changes you make to the System function settings are only temporary—they will be discarded as soon as the power is turned off. If you want to keep any changes you've made in the system settings, you must save them in internal system memory.

NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost. However, the factory setting data can be recovered by performing the Factory Reset procedure.

1. **Change the system function settings, and press [F6 (WRITE)].**

   The display will indicate "System Write Completed!" The data will be saved, and you're returned to the SYSTEM SETUP screen.

System Information

1. **Press EDIT [MENU].**
2. **Use the VALUE dial or [INC] [DEC] [▲] [▼] to select "2. System," and press [ENTER].**
   The System Menu window appears.
3. **Press [F6 (INFORMATION)].**
   The SYSTEM INFO screen appears.
4. **Press [F1]–[F3] to display the information you wish to see.**
   [F1 (MEMORY)]: Amount of memory installed
   [F2 (SRX)]: Name of the wave expansion board that is installed
   [F3 (VERSION)]: Version of the JUNO-G's system program
5. **Press [F6 (EXIT)] or [EXIT] to return to the previous screen.**

Functions of System Parameters

This section explains what the different System parameters do, and also how these parameters are organized.

System Menu [F1 (GENERAL)]

[F1 (COMMON)]

Parameter	Value	Explanation
System Common		
Power Up Mode	PATCH, PERFORMANCE	Mode that the JUNO-G will be in when it is powered up. **PATCH:** Patch mode **PERFORMANCE:** Performance mode
Patch Remain	OFF, ON	Specifies whether currently sounding notes will continue sounding when another patch or rhythm set is selected (ON), or not (OFF). Also, when this is "ON," changes produced by incoming MIDI messages such as Volume or Pan (CC 5, 7, 10, 65, 68, 71–74, RPN 0, 1, 2, MONO ON, POLY ON), as well as tonal quality and volume changes produced by the various controllers will be inherited. * *Effects settings change as soon as you switch to a new patch or rhythm set, without being influenced by the Patch Remain setting. Because of this, certain effects settings can cause notes that were until then sounding to no longer be heard, even though Patch Remain has been set to "ON."*
Audio Rec		
Default File Type	WAV, AIFF	File format used when saving a sample
Input Select	LINE IN L/R, LINE IN L, MICROPHONE	Input source of the external input sound **LINE IN L/R:** L/R (stereo) **LINE IN L:** L (mono) **MICROPHONE:** L (mono, mic level)

[F2 (AUTO LD)]

Parameter	Value	Explanation
Load Preset Samples at Startup	OFF, ON	Specifies whether the preset samples will be loaded into memory at power-on (ON) or not (OFF).
Load User Samples at Startup	OFF, ON	Specifies whether the samples of the user area and memory card will be loaded into memory at power-on (ON) or not (OFF).
Load Demo Song at Startup	OFF, ON	Specifies whether the demo song will be loaded into the temporary area at power-on (ON), or not (OFF).

[F3 (SOUND)]

Parameter	Value	Explanation
Sound Generator		
Master Tune	415.3–466.2 Hz	Overall tuning of the JUNO-G The display shows the frequency of the A4 note (center A).
Master Key Shift	-24– +24	Shifts the overall pitch of the JUNO-G in semitone steps.
Master Level	0–127	Volume of the entire JUNO-G
Output Gain	-12– 12 dB	Output gain from the JUNO-G's Output When, for example, there are relatively few voices being sounded, boosting the output gain can let you attain the most suitable output level for recording and other purposes.
Mix/Parallel	MIX, PARALLEL	How the sound of the entire JUNO-G will be output **MIX:** Set this to have the collective output of all sounds output from the OUTPUT A (MIX) jacks. When you want to check the final overall sound being output, set to MIX. **PARALLEL:** Output according to each Output Assign settings. * *Sounds which are set in the respective Output Assign to be output from the INDIVIDUAL 3 jack are output from the left OUTPUT A (MIX) jack; sounds which are set to be output from the INDIVIDUAL 4 jack are output from the right OUTPUT A (MIX) jack.* * *Sounds output from the PHONES jack are the same as those output from the OUTPUT A (MIX) jacks. Therefore, any sounds set with Output Assign to be output from the OUTPUT B jacks is not output from the PHONES jack. Be sure to have any sound you want to hear through the headphones set to "MIX."*
Preview		
Preview Mode	SINGLE, CHORD, PHRASE	**SINGLE:** The notes specified by Preview 1–4 Note Number will sound successively one by one. **CHORD:** The notes specified by Preview 1–4 Note Number will sound simultaneously. **PHRASE:** The Phrase associated with the patch's type/category is played.
Preview 1–4 Note Number	C - –G9	Specify the pitch of the four notes that will sound when the Preview Mode is set to "SINGLE" or "CHORD." * *If "PHRASE" is selected for the Preview Mode parameter, these settings will have no effect.*
Preview 1–4 Velocity	OFF, 1–127	Specify the velocity of the four notes that will sound when the Preview Mode is set to "SINGLE" or "CHORD." * *If "PHRASE" is selected for the Preview Mode parameter, these settings will have no effect.*

Parameter	Value	Explanation
Scale Tune for Patch Mode The JUNO-G allows you to play the keyboard using temperaments other than equal temperament. The pitch is specified in one-cent units relative to the equal tempered pitch. * *One-cent is 1/100th of a semitone.* One set of Scale Tune settings can be created in Patch mode. In Performance mode, this can be set for each part of the performance (p. 66). * *In Patch mode, this is valid only for the keyboard part.* • The selected scale applies to MIDI messages received from an external MIDI device.		
Scale Tune Switch	OFF, ON	Turn this on when you wish to use a tuning scale other than equal temperament.
Patch Scale Tune for C–B	-64– +63	Make scale tune settings for Patch mode.

[F4 (USB)]

Parameter	Value	Explanation
USB Mode	STORAGE, MIDI	Specifies the operating mode of the USB connector when the power is turned on. **STORAGE:** Storage mode. Select this if you want to transfer files. **MIDI:** MIDI mode. Select this if you want to exchange MIDI messages with a sequencer or other program. * *For details on switching the USB mode, refer to* ***Selecting the USB Operating Mode*** *(p. 167)*
USB-MIDI Thru	OFF, ON	When USB Mode is set to "MIDI," this switch specifies whether MIDI messages received at the MIDI connector will be retransmitted from the MIDI OUT connector (ON) or not (OFF).

NOTE

You must switch the USB Mode before you connect the JUNO-G to your computer via the USB cable. If you change this setting while the JUNO-G is connected, the computer may fail to recognize it correctly.

cf.

For details on connections to your computer in each USB Mode, refer to p. 167.

System Menu [F2 (KBD/CTRL)]

[F1 (KBD)]

Parameter	Value	Explanation
Keyboard Velocity	REAL, 1–127	Velocity value that will be transmitted when you play the keyboard **REAL:** Actual keyboard velocity will be transmitted. **1–127:** A fixed velocity value will be transmitted regardless of how you play.
Touch Sens	LIGHT, MEDIUM, HEAVY	Keyboard's touch **LIGHT:** Light weight synthesizer keyboard like **MEDIUM:** Standard **HEAVY:** Acoustic piano simulation

[F2 (PDL BND)]

Parameter	Value	Explanation
Pedal		
Control Pedal Assign	CC01–31, 33–95, BEND UP, BEND DOWN, AFTERTOUCH, OCT UP, OCT DOWN, START/STOP, PUNCH IN/OUT, TAP TEMPO, PROG UP, PROG DOWN, FAVORITE UP, FAVORITE DOWN, ARP SW, RHY START/STOP, CHORD SW, LIVE SET UP, LIVE SET DOWN, LOOP	Function of the pedal connected to the PEDAL CONTROL jacks **CC01–31, 33–95:** Controller numbers 1-31, 33-95 **BEND UP:** The pitch will rise in semitone steps (maximum 4 octaves) each time you press the pedal. **BEND DOWN:** The pitch will fall in semitone steps (maximum 4 octaves) each time you press the pedal. **AFTERTOUCH:** Aftertouch **OCT UP:** Each pedal press raises the key range in octave steps (up to 3 octaves higher). **OCT DOWN:** Each pedal press lowers the key range in octave steps (up to 3 octaves lower). **START/STOP:** The song recorder will start/stop. **PUNCH IN/OUT:** Manual punch-in/out recording will start/stop. **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you press the pedal). **PROG UP:** The next sound number will be selected. **PROG DOWN:** The previous sound number will be selected. **FAVORITE UP:** The favorite patch/performance of the next number or bank will be selected. **FAVORITE DOWN:** The favorite patch/performance of the previous number or bank will be selected. **ARP SW:** Arpeggio/Rhythm function on/off **RHY START/STOP:** Rhythm pattern playback on/off **CHORD SW:** Chord memory function on/off **LIVE SET UP:** Switches to the next step within a Live Setting list. **LIVE SET DOWN:** Switches to the previous step within a Live Setting list. **LOOP:** Loop play on/off
Control Pedal Polarity	STANDARD, REVERSE	Selects the polarity of the pedal. On some pedals, the electrical signal output by the pedal when it is pressed or released is the opposite of other pedals. If your pedal has an effect opposite of what you expect, set this parameter to "REVERSE." If you are using a Roland pedal (that has no polarity switch), set this parameter to "STANDARD."
Hold Pedal Polarity	STANDARD, REVERSE	
Continuous Hold Pedal	OFF, ON	Determines whether the HOLD PEDAL jack will provide support for half-pedaling (ON), or not (OFF). When this is set to support use of half-pedaling techniques, you can then connect an optional expression pedal (DP-10, etc.), and employ pedal work to achieve even finer control in performances in which piano tones are used.

[F3 (CTRL)]

Parameter	Value	Explanation
Sys Ctrl 1–4 Source	OFF, CC01–95, PITCH BEND, AFTERTOUCH	Selects the MIDI message used as the System Control. **OFF:** The system control knob will not be used. **CC01–95:** Controller numbers 1–95 **PITCH BEND:** Pitch Bend **AFTERTOUCH:** Aftertouch

System Control

This function, which departs from previously used methods, and instead allows you to use MIDI messages to change tone settings in realtime, is called the **Matrix Control** (p. 44). Similarly, the function allowing you to use MIDI messages to change multi-effects settings in realtime is called the **Multi-effects Control** (p. 129).

Normally, the Matrix Control is used for making patch settings, and the Multi-effects Control for making settings to patches, rhythm sets, and performances.

However, if you do not need to change the MIDI messages used for matrix control or multi-effects control by each patch/rhythm set/performance, or if you want to use a specific MIDI message for matrix control or multi-effects control, you will want to make use of **System Control**. In other words, you could call the System Controls global Matrix Control/Multi-effects Control for the entire JUNO-G.

You can use up to four System Controls.

System Menu [F3 (MIDI)]

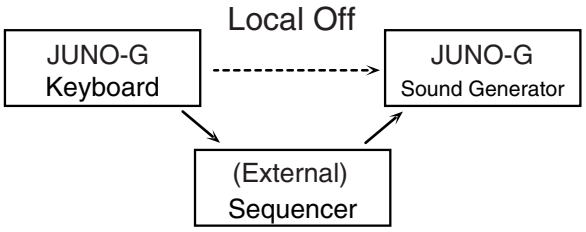
[F1 (GENERL)]

Parameter	Value	Explanation
Local Switch	OFF, ON	Determines whether the internal sound generator is disconnected (OFF) from the controller section (keyboard, pitch bend/modulation lever, knobs, buttons, D Beam controller, pedal, and so on); or not disconnected (ON). Normally this is left "ON," but if you wish to use the JUNO-G's keyboard and controllers to control only external sound modules, set it to "OFF."
Device ID	17–32	When you want to transmit or receive System Exclusive messages, set this parameter to match the Device ID number of the other MIDI device.
Remote Keyboard Switch	OFF, ON	Set this parameter "ON" when you want to use an external MIDI keyboard instead of the JUNO-G's keyboard. In this case, the MIDI transmit channel of the external MIDI keyboard can be set to any channel. Normally you will leave this parameter "OFF." * *Turn this "ON" when you want to control the JUNO-G from an external MIDI device when performing with the Arpeggio function.*
Performance Control Channel	1–16, OFF	Selects the MIDI receive channel used during switching of performances when MIDI messages (Program Change/Bank Select) are sent from an external MIDI device. Set this to "OFF" if performances are not to be switched from an external MIDI device. * *If only a program change is received, and if this parameter setting coincides with the MIDI receive channel of a part, priority will be given to switching the performance.*
Kbd Patch Rx/Tx Channel	1–16	Channel used to transmit and receive MIDI messages for the Keyboard part in Patch mode

Using the Local Switch

When you're using the JUNO-G with external sequencer software, leave the Local Switch turned off. Read the following for details.

Connecting the JUNO-G to an external sequencer



Typically, things are hooked up so the data travels as follows: the JUNO-G's keyboard → your external sequencer software → the JUNO-G's sound generator. Normally, the JUNO-G's keyboard section is internally connected to its sound generator section; this internal connection is controlled by the Local Switch. If you turn the Local Switch off, the JUNO-G's keyboard and sound generator sections will be independent, allowing you to use the connection described above with your external sequencer software.

[F2 (TX)]

Parameter	Value	Explanation
Transmit Program Change	OFF, ON	Specifies whether Program Change messages will be transmitted (ON) or not (OFF).
Transmit Bank Select	OFF, ON	Specifies whether Bank Select messages will be transmitted (ON) or not (OFF).
Transmit Active Sensing	OFF, ON	Specifies whether Active Sensing messages will be transmitted (ON) or not (OFF).
Transmit Edit Data	OFF, ON	Specify whether changes you make in the settings of a patch, performance will be transmitted as system exclusive messages (ON), or will not be transmitted (OFF).
Soft Through	OFF, ON	Thru function re-transmits all messages received at the MIDI IN connector to the MIDI OUT connector without modifying them in any way.

[F3 (RX)]

Parameter	Value	Explanation
Receive Program Change	OFF, ON	Specifies whether Program Change messages will be received (ON) or not (OFF).
Receive Bank Select	OFF, ON	Specifies whether Bank Select messages will be received (ON) or not (OFF).
Receive Exclusive	OFF, ON	Specifies whether System Exclusive messages will be received (ON) or not (OFF).
Receive GM System On	OFF, ON	Specifies whether General MIDI System On messages will be received (ON) or not (OFF).
Receive GM2 System On	OFF, ON	Specifies whether General MIDI 2 System On messages will be received (ON) or not (OFF).
Receive GS Reset	OFF, ON	Specifies whether GS Reset messages will be received (ON) or not (OFF).

[F4 (MMC MTC)]

Parameter	Value	Explanation
MMC MMC (MIDI Machine Control) is a specification that allows MIDI messages to be used to control devices such as tape recorders, VTR's, and digital recording systems. Thirty-seven MMC commands are available, including Stop and Play.		
MMC Mode	MASTER, SLAVE	When synchronizing the JUNO-G with a hard disk recorder, such as one from the Roland VS series, specify which synchronization signal the JUNO-G's song recorder will use for operation. **MASTER:** The JUNO-G will be the master. Use this setting when you want other devices to follow the operation of the JUNO-G. **SLAVE:** The JUNO-G will be the slave. Use this setting when you want the JUNO-G to receive MMC (MIDI Machine Control) from an external device and operate accordingly.
MMC Output	OFF, ON	Turn this "ON" if you want to synchronize with a hard disk recorder, such as one from the Roland VS series. When set "ON," MMC (MIDI Machine Control) related commands (Play, Stop and Locate) will be transmitted.
MTC		
MTC Sync Output	OFF, ON	Set this parameter "ON" when you want MTC (MIDI Time Code) to be transmitted to an external MIDI device. If not, set it "OFF."
MTC Frame Rate	24, 25, 29N, 29D, 30	MTC frame rate Make sure that the same mode is set in both master and slave devices. **24:** 24 frames per second **25:** 25 frames per second **29N:** 29 frames per second, non-drop format **29D:** 29 frames per second, drop format **30:** 30 frames per second, non-drop format * *When synchronizing with a hard disk recorder such as the Roland VS series, any frame rate is all right—as long as the setting matches that of the JUNO-G. However, when synchronizing operation with video devices such as video decks, the video device's frame rate is fixed, so the JUNO-G's setting must correspond to that frame rate.*
MTC Offset Time Hour	0–23 (hours)	Coordinates the playback timing of the JUNO-G and the external device in an hour units.
MTC Offset Time Minute	0–59 (minutes)	Coordinates the playback timing of the JUNO-G and the external device in a minute units.
MTC Offset Time Second	0–59 (seconds)	Coordinates the playback timing of the JUNO-G and the external device in a second units.
MTC Offset Time Frame	0–29 (frames)	Coordinates the playback timing of the JUNO-G and the external device in a frame units.
MTC Error Level	0–10	Determines how often the reception status is checked when MTC is being received from an external device. Stop synchronization if a problem becomes apparent with the check. The checking interval will be longer for larger values. In strict terms, the lower the numerical value set, the more accurate the check is. However, playback may be stopped overly frequently if too rigorous a check is made, and this soon becomes inconvenient. By raising the Error Level setting, then even if problems with the reception of MTC do occur, synchronization can then continue as long as such problems remain at a level that does not cause undue problems.

MIDI Clock and MTC

MIDI Clock and MTC (MIDI Time Code) are both messages used for synchronization. Select either of them depending on the application.

MIDI Clock transmits and synchronizes operations to a song recorder's performance tempo, whereas MTC synchronizes operations between devices based on an absolute time. Since Roland VS Series workstations are hard disk recorders, they cannot send MIDI Clock. Therefore, using a MTC is convenient for synchronization of the hard disk recorder and the JUNO-G. However, VS Series devices also feature specialized tracks for recording MIDI Clock, so with the JUNO-G's MIDI Clock recorded in this manner, we have another synchronizing technique in which the VS device appears to be sending MIDI Clock (although it is actually playing back tracks to which MIDI Clock has been recorded). However, since the tempo must be recorded to the VS sync track beforehand, MTC is only convenient in synchronizing with songs that do not contain great amounts of tempo data.

Types of MTC

The types of MTC that can be selected by the JUNO-G are shown below. Select the same frame rate as that set for the external device. When not using a video device, then any frame rate may be selected as long as the rates are the same on both devices being synchronized.

- **30:** This is 30 frames per second, non-drop format. This is used by audio devices such as analog tape recorders, and for NTSC format black and white video (used in Japan and the U.S.).
- **29N:** This is 29.97 frames per second, non-drop format. This is used for NTSC format color video (used in Japan and the U.S.).
- **29D:** 29.97 frames per second drop format. This is used for NTSC format color video (used in Japan and the U.S.).
- **25:** 25 frame per second frame rate. This is used for SECAM or PAL format video, audio equipment, and film (used in Europe and elsewhere).
- **24:** 24 frame per second frame rate. This is used for video, audio devices, and film in the US.

Non-Drop Format and Drop Format

There are two types of format used by NTSC video cassette recorders, non-drop and drop. Non-drop format features continuous time code, whereas in drop format, which is used for NTSC color video format, the first two frames of every minute are dropped, except for those at ten-minute intervals. In most video and audio production, since formats with continuous frames are easier to deal with, non-drop is generally used. In contrast, in situations such as in broadcast, where the time code must match actual clock time, drop is used.

System Menu [F4 (METRO/SYNC)]

[F1 (METRO)]

Parameter	Value	Explanation
Metronome Mode	OFF, PLAY-ONLY, REC-ONLY, PLAY&REC, ALWAYS	Specifies when you want the metronome to sound. **OFF:** Will not sound. **PLAY-ONLY:** Will sound only during playback. **REC-ONLY:** Metronome will sound only for recording. **PLAY&REC:** Metronome will sound for playback and recording. **ALWAYS:** Metronome will always sound. * *If a check mark (✔) is added by pressing [F5 (CLICK)] in the Tempo window which appears when you press [TEMPO], the metronome will always sound.*
Metronome Level	0–10	Volume of the metronome
Metronome Sound	TYPE1–TYPE4	**TYPE 1:** A conventional metronome sound (A bell will sound on the first beat.) **TYPE 2:** Clicks **TYPE 3:** Beeps **TYPE 4:** Cowbell
Beat Indicator Mode	REC&PLAY, ALWAYS	How the beat indicator on the panel will blink **ALWAYS:** always blinks at the specified tempo **REC&PLAY:** blinks only during playback and recording

[F2 (SYNC)]

Parameter	Value	Explanation
Sync Mode	MASTER, SLAVE-MIDI, SLAVE-MTC, REMOTE	Synchronization message that the JUNO-G's song recorder will use for operation **MASTER:** The JUNO-G will be the master. Choose this setting when using the JUNO-G by itself without synchronizing to another device, or when you want other MIDI devices to synchronize to the JUNO-G. **SLAVE-MIDI:** The JUNO-G will be the slave. Choose this setting when you want the JUNO-G to synchronize to MIDI Clock messages received from another MIDI device. **SLAVE-MTC:** The JUNO-G will be the slave. Choose this setting when you want the JUNO-G to synchronize to MTC (MIDI Time Code) received from an external device. **REMOTE:** Use this setting when you wish an external MIDI device to have remote start/stop control. The tempo will be in accord with what has been set on the JUNO-G.
Sync Output	OFF, ON	Set this parameter "ON" when you want synchronization related MIDI messages (MIDI Clock, Start, Continue, Stop, Song Position Pointer and Song Select) to be transmitted to an external MIDI device. If not, set it "OFF."
Arp/Rhythm Sync Switch	OFF, ON	Specifies whether the arpeggio or rhythm pattern will start/stop in synchronization with the song recorder. **OFF:** Start/stop will not synchronize to the song recorder. **ON:** While the song recorder is running, the arpeggio or rhythm pattern will start at the beginning of the next measure. When you stop the song recorder, the arpeggio or rhythm pattern will also stop.
Tempo Override	OFF, ON	Specifies whether the song recorder tempo will change (ON), or will not change (OFF) when you switch performance.

System Menu [F5 (D BEAM)]

[F1 (GENERL)]

Parameter	Value	Explanation
SENSIBILITY		
D Beam Sens	0–127	This sets the D Beam controller's sensitivity. The higher the value set, the more readily the D Beam Controller goes to into erect.

[F2 (ASSIGN)]

Parameter	Value	Explanation
Type	CC01–31, 33–95, BEND UP, BEND DOWN, START/STOP, TAP TEMPO, ARP GRID, ARP DURATION, ARP MOTIF, ARP OCTAVE UP, ARP OCTAVE DOWN	Function controlled by the D Beam controller **CC01–31, 33–95:** Controller numbers 1–31, 33–95 **BEND UP:** Controls the pitch as specified by the "Pitch Bend Range Up" setting (p. 37). **BEND DOWN:** Controls the pitch as specified by the "Pitch Bend Range Down" setting (p. 37). **START/STOP:** Starts/Stops the song recorder. **TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you move your hand over the D Beam controller). **ARP GRID:** Arpeggio Grid **ARP DURATION:** Duration of each arpeggiated note **ARP MOTIF:** Arpeggio Motif **ARP OCTAVE UP:** The range in which the arpeggio is sounded will rise in steps of an octave (maximum 3 octaves). **ARP OCTAVE DOWN:** The range in which the arpeggio is sounded will lower in steps of an octave (maximum 3 octaves).
Range Min	0–127	Lower limit of the range of the D Beam controller.
Range Max	0–127	Upper limit of the range of the D Beam controller. By setting Range Max below Range Min you can invert the range of change.

[F3 (ATV EXP)]

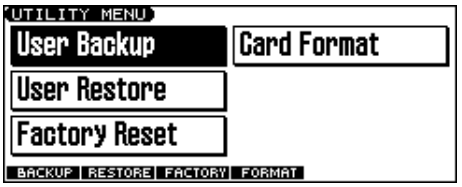
Parameter	Value	Explanation
Range Min	0–127	Lower limit of the range of the Active Expression.
Range Max	0–127	Upper limit of the range of the Active Expression. By setting Range Max below Range Min you can invert the range of change.

[F4 (SYNTH)]

Parameter	Value	Explanation
Level & Range		
Level	0–127	Sets the volume.
Chorus Send Level	0–127	Level of the signal sent to chorus
Reverb Send Level	0–127	Level of the signal sent to reverb
Range	2OCT, 4OCT, 8OCT	Range in which the pitch of the solo synth will vary
Osc1		
Osc 1 Waveform	SAW, SQR	Waveform **SAW:** Sawtooth wave **SQR:** Square wave
Osc 1 Pulse Width	0–127	Pulse width of the waveform By cyclically modifying the pulse width you can create subtle changes in the tone. * *The Pulse Width is activated when "SQR" is selected with OSC1/2 waveform.*
Osc 1 Coarse Tune	-48– +48	Pitch of the tone's sound (in semitones, +/-4 octaves)
Osc 1 Fine Tune	-50– +50	Pitch of the tone's sound (in 1-cent steps)
Osc2 & Sync		
Osc 2 Waveform	(same as Osc 1)	
Osc 2 Pulse Width		
Osc 2 Coarse Tune		
Osc 2 Fine Tune		
Osc 2 Level	0–127	Adjust the level.
Osc Sync Switch	OFF, ON	Turning this switch on produces a complex sound with many harmonics. This is effective when the OSC1 pitch is higher than the OSC2 pitch.
Filter		
Filter Type	OFF, LPF, BPF, HPF, PKG	Type of filter **OFF:** No filter is used. **LPF:** Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff) in order to round off, or un-brighten the sound. **BPF:** Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. **HPF:** High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. **PKG:** Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency.
Cutoff	0–127	Frequency at which the filter begins to have an effect on the waveform's frequency components
Resonance	0–127	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort.
LFO		
LFO Rate	0–127	Modulation speed of the LFO
LFO Osc 1 Pitch Depth	-63– +63	Depth to which the LFO will modulate the Osc 1 pitch
LFO Osc 2 Pitch Depth	-63– +63	Depth to which the LFO will modulate the Osc 2 pitch
LFO Osc 1 Pulse Width Depth	-63– +63	Depth to which the LFO will modulate the pulse width of the Osc 1 waveform * *The Pulse Width is activated when "SQR" is selected with Osc 1 waveform.*
LFO Osc 2 Pulse Width Depth	-63– +63	Depth to which the LFO will modulate the pulse width of the Osc 2 waveform * *The Pulse Width is activated when "SQR" is selected with Osc 2 waveform.*

Data Management Functions/ Reset to Factory Settings (Factory Reset)

UTILITY MENU screen



Backing Up User Data (User Backup)

Here's how all user data in the user area can be saved on a memory card.

The following user data will be saved.

- Performances
- Rhythm Patterns
- Songs
- Chord forms
- Patches
- Rhythm Groups
- Samples
- System settings
- Rhythm sets
- Arpeggio styles

* *In order to execute User Backup, the memory card must have approximately 16MB or more free area.*

1. **Insert a memory card into the slot.**
2. **Press EDIT [MENU] to open the Top Menu window.**
3. **Press [▲] [▼] to select "3. Utility," and then press [ENTER].**
   The UTILITY MENU screen appears.
4. **Press [F1 (BACKUP)].**
   A message will ask you for confirmation.
5. **To execute the backup, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

NOTE

Data that's been backed up on a JUNO-G must not be used to perform a restore into some other device.

Restoring User Data that You Backed Up (User Restore)

Here's how user data saved on a memory card by the User Backup operation can be reloaded back into the user memory of the JUNO-G.

* *When you execute User Restore, the current contents of the user area will be completely erased.*

* *Data resulting from a backup performed on some other device must not be used to perform a restore into a JUNO-G.*

1. **Into the slot, insert the memory card on which user data has been saved.**
2. **Press EDIT [MENU] to open the Top Menu window.**
3. **Press [▲] [▼] to select "3. Utility," and then press [ENTER].**
   The UTILITY MENU screen appears.
4. **Press [F2 (RESTORE)].**
   A message will ask you for confirmation.
5. **To proceed with the restoration, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

6. **When the display indicates "Completed. Turn the Power off and on again," turn the power off, then on again.**

NOTE

If, after executing the User Backup operation, you add a file to the JUNO-G's internal memory (e.g., the TMP folder), the message "User Area Full!" may appear when you execute the User Restore operation, making it impossible to successfully carry out the restoration. In this case, delete (p. 166) the file that you added after performing the backup, and then execute the Restore operation once again.

Factory Reset

This restores all data in the JUNO-G to the factory-set condition (**Factory Reset**).

NOTE

If there is important data you've created that's stored in the JUNO-G's User memory, all such data is discarded when a Factory Reset is performed (**the data of the internal user memory will be lost**). If you want to keep the existing data, save it on a memory card (User Backup) or save it via USB to your computer (**Using JUNO-G Editor/Librarian** (p. 170)).

1. **Press EDIT [MENU] to open the Top Menu window.**
2. **Press [▲] [▼] to select "3. Utility," and then press [ENTER].**
   The UTILITY MENU screen appears.
3. **Press [F3 (FACTORY)].**
   A message will ask you for confirmation.
4. **To execute the Factory Reset, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

5. **When the display indicates "Completed. Turn the Power off and on again," turn the power off, then on again.**

NOTE

Never switch off the JUNO-G while executing the Factory Reset.

Initializing a Memory Card (Card Format)

Here's how to format (initialize) a memory card.

NOTE

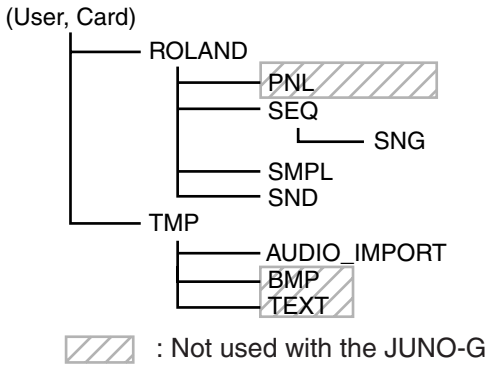
When you execute the Format operation, the contents of the memory card will be completely erased.

1. **Insert a memory card into the slot.**
2. **Press EDIT [MENU] to open the Top Menu window.**
3. **Press [▲] [▼] to select "3. Utility," and then press [ENTER].**
   The UTILITY MENU screen appears.
4. **Press [F4 (FORMAT)].**
   A message will ask you for confirmation.
5. **To format the card, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

File-Related Functions (File Utility)

Here you can perform a variety of operations related to the files stored in the JUNO-G's user memory, and on memory cards. You can copy, delete, or move files, as well as format memory cards.
The folder structure of the user area and memory card is as follows.



NOTE

You must observe the following points when managing files with the JUNO-G connected to your computer via USB.

- Don't use your computer to move or delete folders within the JUNO-G.
- Don't use your computer to format or optimize the JUNO-G's user memory or memory card, or execute operations such as Scan Disk.
- The JUNO-G can only handle filenames consisting of single-byte alphanumeric characters.
- Don't use your computer to delete or overwrite the files located in the ROLAND/SND folder.

When copying files from your computer into the JUNO-G's user area or memory card, place them in the following folders.

Computer	JUNO-G
SONG file (.SVQ, .SVA)	ROLAND/SEQ/SNG
Standard MIDI file (SMF format 0, 1)	ROLAND/SEQ/SNG
Audio file (WAV/AIFF)	TMP/AUDIO_IMPORT

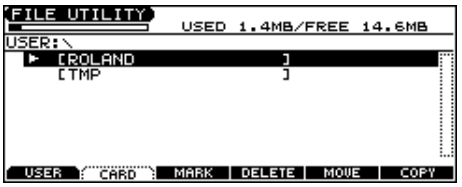
NOTE

Don't place any files in the ROLAND/SMPL folder.
Don't place files of any other format in the user memory or memory card.

Basic Procedure

1. Press EDIT [MENU] to open the Top Menu window.

2. Press [▲] [▼] to select "4. File Utility," and then press [ENTER].
The FILE UTILITY screen appears.



3. Press [F1]–[F6] to select the operation you want to carry out.

[F1 (USER)]: Select a file in user memory.
[F2 (CARD)]: Select a file on the memory card.
[F3 (MARK)]: If you want to select two or more files, add a check mark (✔) to the files. To remove the check mark from a selected file, select and press this button again.
[F4 (DELETE)]: Delete a selected file or files with check marks.
[F5 (MOVE)]: Move a file or files with check marks to a different folder.
[F6 (COPY)]: Copy a file or files with check marks to a different folder.
[▲] [▼]: Select the folder.
[◀] [▶]: Move between folder levels.

MEMO

If you hold down [SHIFT] and press [F5 (SET ALL)], check marks will be added to all files.
If you hold down [SHIFT] and press [F4 (CLR ALL)], check marks will be removed from all files.

* *You can also perform these operations from the FILE UTILITY screen by pressing EDIT [MENU] and selecting "1. Mark Set ALL" or "2. Mark Clear ALL."*

Copying a File (Copy)

Here's how you can copy a file to a different folder.

1. **As described in the basic procedure, select the file that you want to copy.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   [▲] [▼]: Select the folder
   [◀] [▶]: Move between folder levels

2. **Press [F6 (COPY)].**
   A screen will appear, allowing you to select the folder to which the file is to be copied.

3. **View the contents of the copy-destination folder.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   [▲] [▼]: Select the folder
   [◀] [▶]: Move between folder levels

4. **To copy the file, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

Deleting a File (Delete)

Here's how you can delete an unwanted file from a folder.

1. **As described in the basic procedure, select the file that you want to delete.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   [▲] [▼]: Select the folder
   [◀] [▶]: Move between folder levels

2. **Press [F4 (DELETE)].**
   A message will ask you for confirmation.

3. **To delete the file, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

Moving a File (Move)

Here's how you can move a file to a different folder.

1. **As described in the basic procedure, select the file that you want to move.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   [▲] [▼]: Select the folder
   [◀] [▶]: Move between folder levels

2. **Press [F5 (MOVE)].**
   A screen will appear, allowing you to select the folder to which the file is to be moved.

3. **View the contents of the move-destination folder.**
   [F1 (USER)] [F2 (CARD)]: Select the memory
   [▲] [▼]: Select the folder
   [◀] [▶]: Move between folder levels

4. **To move the file, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

Initializing a Memory Card (Card Format)

Here's how to initialize a memory card.

NOTE

When you execute the Format operation, the contents of the memory card will be completely erased.

1. **From the File Utility screen, press EDIT [MENU].**

2. **Press [▲] [▼] to select "3. Card Format," and then press [ENTER].**
   A message will ask you for confirmation.

3. **To format the card, press [F6 (EXEC)].**

* *To cancel, press [F5 (CANCEL)].*

Connecting to Your Computer via USB

About USB Functions

The JUNO-G has two modes of USB functionality: **storage mode** for transferring files, and **MIDI mode** for sending and receiving MIDI messages. You must switch between these two modes on the JUNO-G; they cannot be used simultaneously.

Each mode can be used with the following operating systems.

Operating System	Storage Mode	MIDI Mode
Windows XP/2000r	✔	✔
Windows Me	✔	not supported
Mac OS X	✔	✔
Mac OS 9	✔	not supported

* *This may not work correctly with some types of computer.*

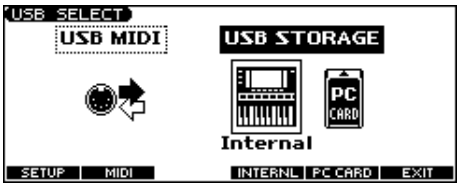
Selecting the USB Operating Mode

Using MIDI Mode

* *If you've selected USB MIDI mode, nothing can be received from the MIDI IN connector.*

1. Press MODE [USB].

The USB SELECT screen appears.



2. Press [F2 (MIDI)].

The USB connector will switch to MIDI mode.

* *If USB Storage mode was selected, a warning will appear. Press [F6 (OK)] if you want to switch to MIDI mode. Press [F5 (CANCEL)] if you decide to cancel.*

3. Press [F1 (SETUP)].

The SYSTEM SETUP USB screen will appear.

4. Press [▼] to select "USB-MIDI Thru."

5. Use the VALUE dial or [INC] [DEC] to make settings for USB-MIDI Thru.

This switch specifies whether MIDI messages received at the USB connector or the MIDI IN connector will be retransmitted from the USB connector or the MIDI OUT connector (ON) or not (OFF).

* *If you want the JUNO-G to start up with the USB connector in MIDI mode the next time it's powered up, press [F6 (WRITE)] to save the system settings.*

6. Press [EXIT] to return to the previous screen.

cf.

For details on operations in MIDI mode, refer to **Exchanging MIDI Messages with Your Computer (MIDI Mode)** (p. 169).

Transferring Files to or from Your Computer (Storage Mode)

By connecting the JUNO-G with your computer via a USB cable, you can transfer files from Internal user area or a memory card to and from the hard disk or other media of your computer, in order to back up your data.

You can use software on your computer to edit wave data you've created on the JUNO-G. Conversely, wave data that you've created on your computer can be used on the JUNO-G.

In this way, USB Storage mode lets you transfer audio files to or from a connected computer.

NOTE

Never disconnect the USB cable or turn off the power if USB Storage mode is selected.

1. With the JUNO-G not connected, start up your computer.

2. Use a USB cable to connect the JUNO-G to your computer.

3. Turn on the power (POWER switch) of the JUNO-G.

4. Press MODE [USB].

The USB SELECT screen appears.

5. Press [F4 (INTERNAL)] or [F5 (PC CARD)] to connect with your computer.

[F4 (INTERNAL)]: Connect to the user memory

[F5 (PC CARD)]: Connect to the memory card

* *If MIDI mode was selected, a warning will appear. Press [F6 (OK)] if you want to switch to USB Storage mode. Press [F5 (CANCEL)] if you decide to cancel.*

* *To cancel the connection, press [F6 (EXIT)].*

6. When you make the connection, one of the following indications will appear depending on the computer you're using.

- **Windows XP users**

  A drive named "JUNO-G USER" will be displayed within My Computer. Below that drive there will be folders named "ROLAND" and "TMP."

- **Windows 2000 users**

  A drive named "Removable disk" will be displayed within My Computer. Below that drive there will be folders named "ROLAND" and "TMP."

- **Macintosh users**

  A drive icon named "JUNO-G USER" will appear on the desktop. If a memory card is connected, the volume name of the memory card will be displayed.

  Below it will be folders named "ROLAND" and "TMP."

Cautions Regarding Folders and Files

You must observe the following points when the JUNO-G is connected to your computer via USB.

- Don't use your computer to move or delete folders within the JUNO-G.
- Don't use your computer to format or optimize the JUNO-G's user memory or memory card, or execute operations such as Scan Disk.
- The JUNO-G can only handle filenames consisting of single-byte alphanumeric characters.
- Only the following types of files can be transferred between the JUNO-G and your computer.

  Song files (.SVQ, .SVA)

  Standard MIDI Files (.MID)

  Audio files (.WAV/AIFF)
- To handle these files, use the appropriate method described below.

Song files, Standard MIDI Files	Place the files in the following folder. **ROLAND/SEQ/SNG** folder
Audio files	When placing the files from your computer, place them in the following location. **TMP/AUDIO_IMPORT** folder Then import the audio files. If you want to use your computer to read samples that were written by the JUNO-G, load the files from the ROLAND/SMPL folder into your computer.

- Don't use your USB-connected computer to delete or rewrite any files placed in the ROLAND/SND folder.
- Don't place any files in the ROLAND/SMPL folder.

Exiting Storage Mode

Windows Me/2000/XP Users

1. In My Computer, right-click the "removable hard disk" icon and execute "Remove."

Macintosh Users

1. Drag the JUNO-G drive icon into the trash.

Canceling USB Communication

If you want to power off the JUNO-G when it is connected to your computer in Storage mode, you must first cancel USB communication on your computer as described here.

Windows Me/2000/XP Users

1. Use the device eject button shown in the taskbar at the lower right of your computer screen to cancel the connection with the JUNO-G.

Macintosh Users

1. Make sure that the JUNO-G drive icon is not on your desktop.

Importing an Audio File (Import Audio)

Here's how to import an audio file (WAV/AIFF).

In order to import a file, it must be located in the following folder found on your computer.

- **Windows XP, Macintosh users**
  JUNO-G USER (in the case of a card, the card volume)/ TMP/AUDIO_IMPORT folder
- **Windows Me/2000 users**
  Removable disk (in the case of a card, the card volume)/ TMP/AUDIO_IMPORT folder

* *"/" indicates a directory level.*

cf.

For details on how you can use your computer to copy files to user memory or to a memory card, refer to p. 167.

1. Press EDIT [AUDIO].
The SAMPLE EDIT screen appears.

2. Press [F4 (LIST)] and then press [F5 (UTILITY)].
The Sample List Utility Menu appears.

3. Press [F1 (IMPORT AUDIO)].
The IMPORT AUDIO screen appears.

4. Press [F1 (USER)] or [F2 (CARD)] to select the import-source area.
[F1 (USER)]: Import from user memory
[F2 (CARD)]: Import from a memory card

5. Press [▲] [▼] to select the file that you want to import.
If you want to select two or more files, press [F3 (MARK)] to add a check mark (✔) to the files that you want to select.
To remove the check mark from a selected file, select and press [F3 (MARK)] again.
If you press [F5 (SET ALL)], a check mark will be added to all files of the selected folder. If you press [F4 (CLR ALL)], check marks will be removed from all selected files.

6. Press [F6 (IMPORT)].
A message will ask you for confirmation.

7. Press [F6 (EXEC)].
The file will be imported, and the SAMPLE LIST screen will appear.

* *To cancel, press [F5 (CANCEL)].*

MEMO

The imported file will be added to the sample list as a sample. This sample is temporary, and will be lost when you turn off the power. If you want to keep it, press [WRITE] to save the data.

Exchanging MIDI Messages with Your Computer (MIDI Mode)

Driver Installation and Settings

In order to use the JUNO-G as a USB MIDI device from your computer, you must first install the USB MIDI driver. The USB MIDI driver is on the included "JUNO-G Editor CD" CD-ROM.

In order to use USB in MIDI mode, you must install the driver from the included CD-ROM into your computer.

The correct driver and the installation procedure will depend on your system and on the other programs you are using. Be sure to read the Readme file on the CD-ROM before installation.

Windows XP/2000

\Win2kXP\Readme_E.htm

Mac OS X

\JUNO-G Driver OS X\Readme_E.htm

Before Installing the Driver

You must set the USB Mode of the JUNO-G to "MIDI mode." (p. 167)

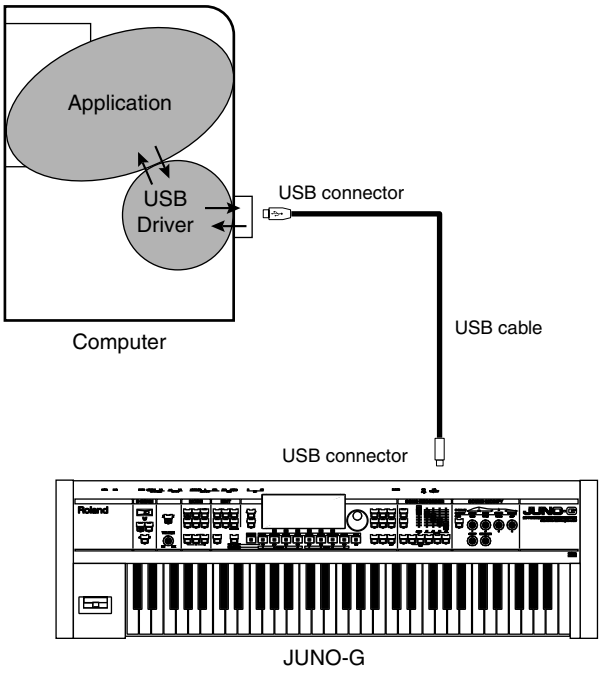
Caution when disconnecting the USB cable

You must shut down your computer before disconnecting the USB cable. Disconnecting the cable while your computer's power is on may destabilize its operation.

What is the USB MIDI Driver?

The USB MIDI Driver is a software which passes data between the JUNO-G and the application (sequencer software, etc.) that is running on the USB-connected computer.

The USB MIDI Driver sends data from the application to the JUNO-G, and passes data from the JUNO-G to the application.



Using the Included SONAR LE

To install the included SONAR LE sequencing software for Windows XP/2000 into your computer, follow the instructions given in "To install SONAR LE" in the SONAR LE package.

You must perform the following steps before using SONAR LE.

* *Make sure that the included USB MIDI driver is installed. This is not necessary if you're using MIDI cables to connect the JUNO-G to your computer.*

1. **Power up your computer and start up Windows.**
2. **Power up the JUNO-G, and switch the JUNO-G to MIDI mode as described in "Using MIDI mode" (p. 167).**
3. **Use a USB cable to connect the JUNO-G to your computer.**

* *If you're using MIDI cables to connect the JUNO-G to your computer, there's no need to switch the JUNO-G to MIDI mode in step 2. In this case, use MIDI cables to connect the JUNO-G's rear panel MIDI connectors to the MIDI interface that's connected to your computer.*

4. **Start up SONAR LE.**
   Make MIDI device settings as described in SONAR LE's Help.

Using JUNO-G Editor/Librarian

To help you take even greater advantage of its functionality, the JUNO-G comes with JUNO-G Editor/Librarian software.

JUNO-G Editor assigns parameters to sliders and knobs in the computer screen, allowing you to work efficiently in a graphical editing environment.

UNO-G Librarian is software that lets you manage libraries of JUNO-G parameter data on your computer. It provides an efficient way to manage patch, rhythm set, and performance data.

Installing JUNO-G Editor/ Librarian into Your Computer

Carefully read the Readme file on the "JUNO-G Editor CD" CD-ROM included with the JUNO-G, and then install the JUNO-G editor/librarian.

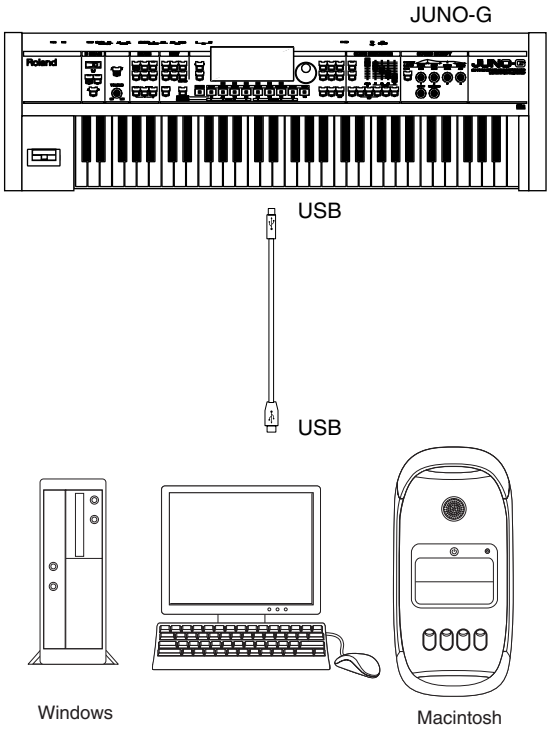
- **Windows users**
  In the "JUNO-G Editor CD" CD-ROM, open the "Readme_E.txt."
- **Macintosh users**
  In the "JUNO-G Editor CD" CD-ROM, open the "ReadMe(English)."

Making Connections

1. **Make sure that the USB Mode parameter is set to "MIDI."**
   Refer to "Using MIDI Mode" (p. 167).

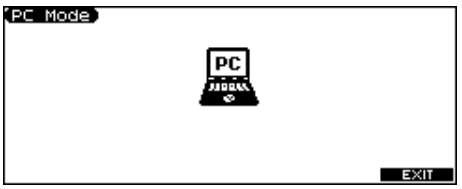
* *If it is set to STORAGE, you cannot use the editor/librarian via a USB connection.*

2. **Use an USB cable (sold separately) to connect the JUNO-G and your computer.**



About PC Mode

If you start up the sample editor within JUNO-G editor or perform a Write operation from JUNO-G librarian, the JUNO-G will automatically switch to PC mode and will be inoperable from its own panel. This prevents conflict between operations on your computer and on the JUNO-G itself.



When you finish using the editor/librarian, the JUNO-G will exit PC mode, and the normal screen will reappear.

NOTE

Only in the event of emergencies, such as when your computer has crashed, you can press [F6 (EXIT)] to exit PC mode. A screen will ask you for confirmation; press [F6 (OK)] and the JUNO-G will be forcibly returned to the normal screen.

JUNO-G Editor/Librarian System Requirements

System Requirements (Windows)

- Operating System
  Microsoft® Windows® XP
  Microsoft® Windows® 2000 Professional
- CPU/Clock
  Pentium®/Celeron® processor 800 MHz or higher
- Memory (RAM)
  384 M bytes or more
- Hard Disk
  110 MB or more
- Display/Colors
  800 x 600 or higher/65,536 colors (16 bit High Color) or more

* *Microsoft and Windows are registered trademarks of Microsoft Corporation.*

* *Windows® is known officially as: "Microsoft® Windows® operating system."*

* *Pentium is a registered trademark of Intel Corporation.*

System Requirements (Mac OS)

- Operating System
  Mac OS X 10.2 or later
- CPU/Clock
  PowerPC G4 867 MHz or higher
- Memory (RAM)
  384 MB or more
- Hard Disk
  110 M bytes or more
- Display/Colors
  800 x 600 or higher/32,000 colors or more

* *Apple and Macintosh are registered trademarks of Apple Computer, Inc.*

* *Mac OS is a trademark of Apple Computer, Inc.*

NOTE

While under most conditions, a computer similar to the above will permit normal operation of the JUNO-G Editor, Roland cannot guarantee compatibility solely on these factors. This is due to numerous variables that may influence the processing environment, such as differences in motherboard design and the particular combination of other devices involved.

- Unauthorized duplication, reproduction, hiring, and lending prohibited.
- Before you open the included CD-ROM, you must read the "license agreement." Opening the CD-ROM will be taken to mean your acceptance of the license agreement.

About V-LINK

What is V-LINK?

V-LINK is a function that allows music and images to be performed together. By using MIDI to connect two or more V-LINK compatible devices, you can easily enjoy performing a wide range of visual effects that are linked to the expressive elements of a music performance.

For example if you use the JUNO-G in conjunction with Edirol motion dive .tokyo Performance Package, you'll be able to do the following things.

- Operate the JUNO-G to make the necessary settings for performing with motion dive .tokyo Performance Package.
- Use the JUNO-G's song recorder to enjoy synchronized performances of music and video.
- Use the JUNO-G's keyboard to switch images in motion dive .tokyo Performance Package.
- Use the JUNO-G's CUTOFF knob and RESONANCE knob to control the brightness and hue of the image.

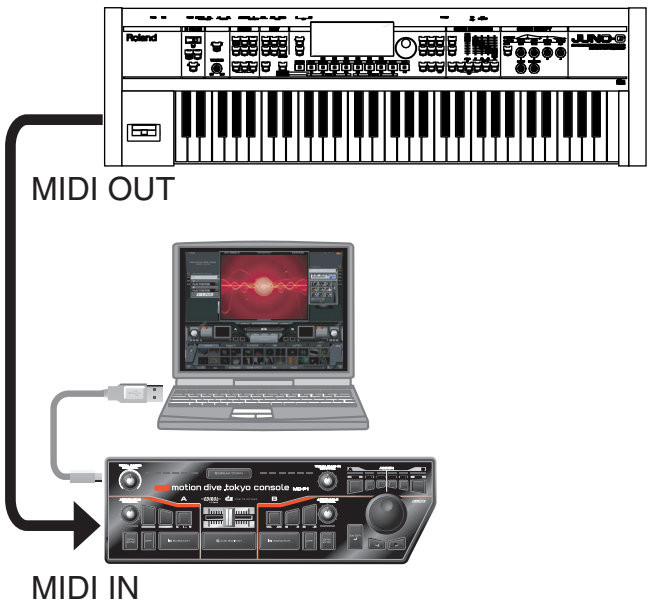
Connection Example

Connect the JUNO-G's MIDI OUT connector to your V-LINK compatible device.

We will use Edirol motion dive .tokyo Performance Package as an example.

NOTE

Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.



Turning the V-LINK ON/OFF

1. Press [V-LINK] so the indicator is lit.

The V-LINK screen appears, and the V-LINK setting will be on.

Operations on the JUNO-G

By operating the JUNO-G's keyboard and knobs, you can control the image along with your performance on the JUNO-G.

- [F1 (CLIP)] (Clip Reset): Turns the image off (solid black).
- [F2 (ALL)] (All Reset): Resets the effect applied to the image, and restores all settings such as brightness and hue to their default values.
- [F5 (SETUP)]: Accesses the V-LINK SETUP screen.
- Black keys: Switch tabs.
- White keys: Switch clips.
- CUTOFF knob: Controls VISUAL PLUG-IN CONTROL.
- RESONANCE knob: Controls COLOR EQ (Back).
- D BEAM: Controls the parameter specified in V-LINK setup.

* *When you turn V-LINK on, the settings in V-LINK setup will take priority for D Beam operation.*

2. With the V-LINK screen shown, Press [V-LINK] again.

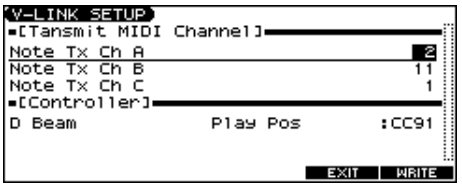
The V-LINK button will go dark, and the V-LINK setting will be off.

V-LINK Settings (V-LINK SETUP)

1. Press [V-LINK] to access the V-LINK screen.

2. Press [F6 (SETUP)].

The V-LINK SETUP screen appears.



3. Use [▲] [▼] to move the cursor to the parameter you want to edit.

4. Use the VALUE dial or [INC] [DEC] to set the value.

Parameter	Value	Explanation	
Note Tx Channel A	1–16	Controls the V-LINK device. Specify the MIDI channel. (*)	
Note Tx Channel B			
Note Tx Channel C			
D BEAM	Assigns a V-LINK function to the D Beam controller.		
	OFF	The operation selected by [D BEAM] will occur regardless of whether V-LINK is on or off.	
	ColorEQ Fore	CC1 (Modulation)	Used with motion dive .tokyo Performance Package
	ColorEQ Back	CC71 (Resonance)	
	Scratch SW	CC3	
	Speed Knob	CC8 (Balance)	
	Total Fader	CC10 (Panpot)	
	Cross Fader	CC11 (Expression)	
	BPM Sync SW	CC64 (Hold)	
	Clip Loop SW	CC65 (Portamento)	
	Assign Knob	CC72 (Release)	
	Fade Time SW	CC73 (Attack)	
	Visual Knob	CC74 (Cutoff)	
	AB SW	CC81 (General-6)	
	Tap SW	CC83 (General-8)	
	Total Select	CC85	
	FX Select	CC86	
	Play Pos	CC91 (Reverb)	
	LoopStartPos	CC92 (Tremolo)	
	Loop End Pos	CC93 (Chorus)	
	LayerModeSel	CC94 (Celeste)	
	Dissolve Time	CC73 (Attack)	Used with the DV-7PR and similar devices.
	Color Cb Ctrl	CC1 (Modulation)	
	Color Cr Ctrl	CC71 (Resonance)	
	Brightness Ctrl	CC74 (Cutoff)	
	VFX1 Ctrl	CC72 (Release)	
	VFX2 Ctrl	CC91 (Reverb)	
	VFX3 Ctrl	CC92 (Tremolo)	
	VFX4 Ctrl	CC93 (Chorus)	
	Fade Ctrl	CC10 (Panpot)	

*** :** On V-LINK compatible devices such as the Edirol DV-7PR/P-1, only Note Tx Channel A is used.

In motion dive .tokyo Performance Package, the Note Tx Channel corresponds as follows.

A: The MIDI channel that controls section A

B: The MIDI channel that controls section B

C: The MIDI channel that controls the MIDI note plug-in

5. If you want to keep your settings, press [F6 (WRITE)].

6. Press [F5 (EXIT)] or [EXIT] to return to the previous screen.

Installing the Wave Expansion Board

An optional Wave Expansion Board (SRX series; sold separately) can be installed in the JUNO-G.

Wave Expansion Boards store Wave data, patches, and rhythm sets, and by equipping the JUNO-G with these boards, you can greatly expand your sound palette.

Cautions When Installing a Wave Expansion Board

- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
  - Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.
  - When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.
- Use a Phillips screwdriver that is suitable for the size of the screw (a number 2 screwdriver). If an unsuitable screwdriver is used, the head of the screw may be stripped.
- To remove a screw, rotate the screwdriver counter-clockwise. To tighten the screws, rotate the screwdriver clockwise.

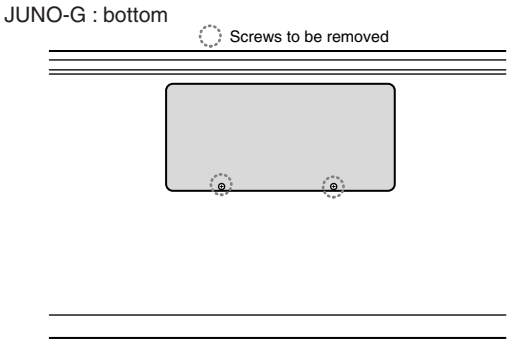
- When installing a Wave Expansion Board, remove only the specified screws.
- Be careful that the screws you remove do not drop into the interior of the JUNO-G.
- Do not leave the bottom cover removed. After installation of the Wave Expansion Board is complete, be sure to replace the cover.
- Be careful not to cut your hand on the edge of the cover or the opening edge while removing the cover.
- Do not touch any of the printed circuit pathways or connection terminals.
- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.
- When circuit board installation is complete, double-check your work.

How to Install a Wave Expansion Board

Install the Wave Expansion Board after removing the bottom panel cover.

1. **Before installing the Wave Expansion Board, turn off the power of the JUNO-G and all connected devices, and disconnect all cables, including the AC adaptor, from the JUNO-G.**

2. **From the JUNO-G, remove only the screws shown in the following diagram, and detach the cover.**

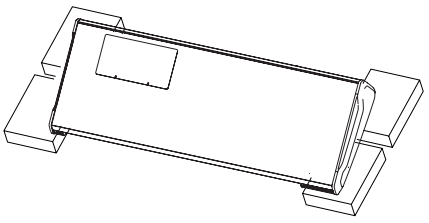


NOTE

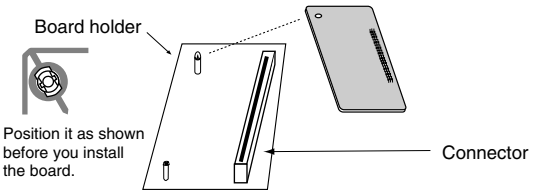
When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.

NOTE

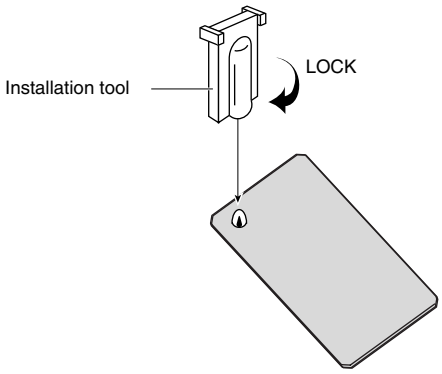
When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.



3. **As shown in the following illustration, plug the connector of the Wave Expansion Board into the connector of the relevant slot, and at the same time insert the board holder through the hole of the Wave Expansion Board.**



4. Use the Installation Tool supplied with the Wave Expansion Board to turn the holders in the LOCK direction, so the board will be fastened in place.



5. Use the screws that you removed in step 2 to fasten the cover back in place.

Checking the Installed Wave Expansion Board

After installation of the Wave Expansion Board has been completed, check to confirm that the installed board is being recognized correctly.

1. Turn on the power, as described in p. 15.

2. Press EDIT [MENU] to open the Top Menu window.

3. Press [▲] [▼] to select "2. System," and then press [ENTER].

4. Press [F6 (INFORMATION)].
The SYSTEM INFO screen appears.

5. Press [F2 (SRX)].
Verify that the name of the installed Wave Expansion Board is displayed.

* *If the name of the board does not appear, it is possible that the board is not being recognized correctly. Turn off the power as described in* ***Turning Off the Power*** *(p. 15), and re-install the Wave Expansion Board correctly.*

6. Press [EXIT] to exit the SYSTEM INFO screen.

Expanding the Memory

The JUNO-G comes with 4 MB of memory into which audio samples can be loaded. However, in some cases, 4 MB of memory will be insufficient for loading large amounts of data. In such a case, you will have to add separately sold memory (DIMM). Memory can be expanded up to 64/128/256/512 MB.

Before expanding the memory, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor.

Precautions for Expanding Memory

- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
  - Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.
  - When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.
- Use a Phillips screwdriver that is suitable for the size of the screw (a number 2 screwdriver). If an unsuitable screwdriver is used, the head of the screw may be stripped.
- To remove a screw, rotate the screwdriver counter-clockwise. To tighten the screws, rotate the screwdriver clockwise.

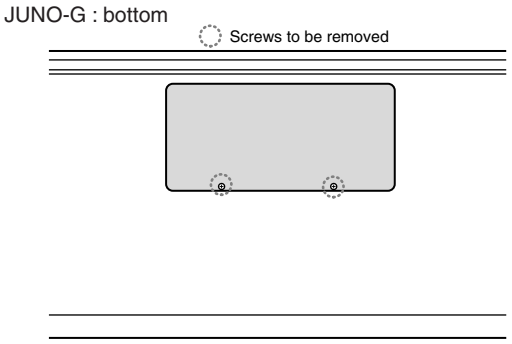
- Install only the specified memory DIMM board. Remove only the specified screws.
- Be careful that the screws you remove do not drop into the interior of the JUNO-G.
- Do not leave the bottom cover removed. After installation of the memory module is complete, be sure to replace the cover.
- Be careful not to cut your hand on the edge of the cover or the opening edge while removing the cover.
- Do not touch any of the printed circuit pathways or connection terminals.
- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.
- When circuit board installation is complete, double-check your work.

How to Expand the Memory

Install the memory module after removing the bottom panel cover.

1. **Before expanding the memory, turn off the power of the JUNO-G and all connected devices, and disconnect all cables, including the AC adaptor, from the JUNO-G.**

2. **From the JUNO-G, remove only the screws shown in the following diagram, and detach the cover.**

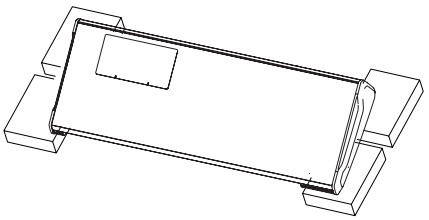


NOTE

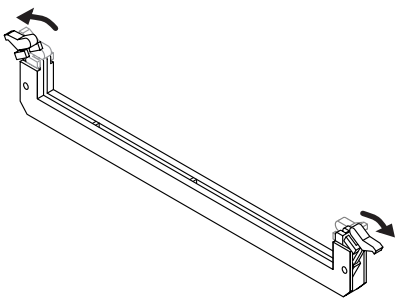
When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.

NOTE

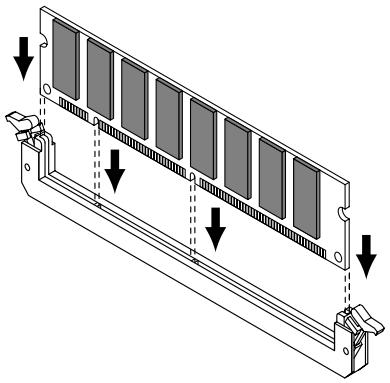
When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.



3. **Press outward the white clips at either end of the socket should be in the downward position.**



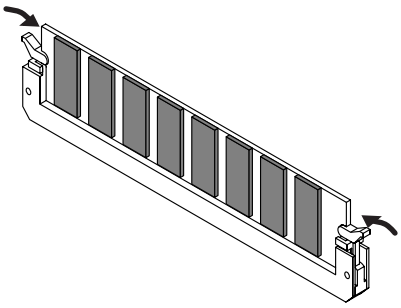
4. Paying attention to the location of the notch on the memory module and the orientation, insert it vertically within the guides at either side of the socket.



TIP

If you have difficulty inserting the memory module, try tilting it a bit and inserting one end at a time.

5. Move the white clips upward, and press them until the memory module is locked in place.

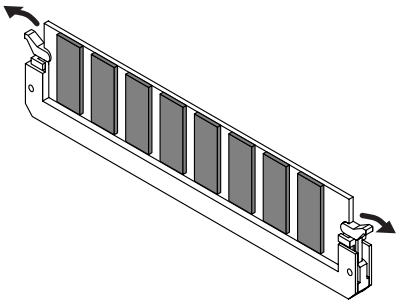


6. Use the screws that you removed in step 2 to fasten the cover back in place.

Removing the Memory

To remove the memory module, reverse the installation procedure.

1. Simultaneously press outward the white clips located at either end of the socket.



2. Remove the memory module from the socket.

Checking that memory is installed correctly

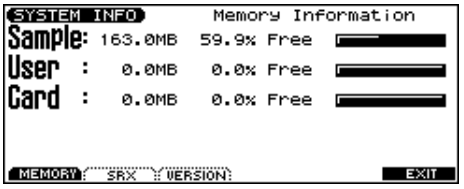
1. Turn on the power, as described in p. 15.

2. Press EDIT [MENU] to open the Top Menu window.

3. Press [▲] [▼] to select "2. System," and then press [ENTER].

4. Press [F6 (INFORMATION)].
The SYSTEM INFO screen appears.

5. Press [F1 (MEMORY)].
Verify that the screen correctly shows the amount of memory you installed.



* *If the correct amount of memory is not shown, it is possible that the memory is not being recognized properly. Turn off the power as described in* ***Turning Off the Power*** *(p. 15), and re-install the memory correctly.*

6. Press [EXIT] to exit the SYSTEM INFO screen.

Specifications of the expansion memory (DIMM) that can be used

Number of pins: 168-pin
Speed: 100 MHz (PC100 CL=2)
133 MHz (PC133 CL=3)
Voltage: 3.3 V
Capacity: 64/128/256/512 MB
Board height: 38 mm or less

NOTE

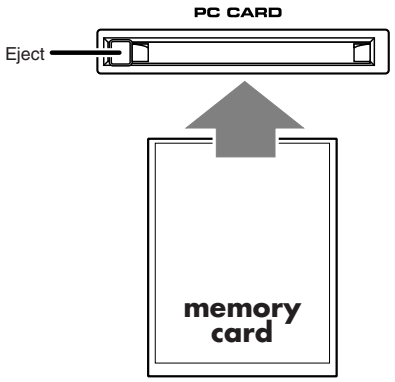
The JUNO-G has been confirmed to work with standard memory that meets the above specifications. However, we cannot guarantee that all memory of these specifications will work correctly. Please be aware that even with identical specifications, differences in the design of the memory module or the conditions of use may mean that a memory module may not be usable.

Using a Memory Card

The JUNO-G features a PC card slot, allowing you to use CompactFlash or SmartMedia via the appropriate PC card adaptor.

Before Using the Memory Card

Make sure that the correct side of the card is facing upward, and insert it into the JUNO-G's PC card slot. When you need to remove the card, press the eject button located beside the card.



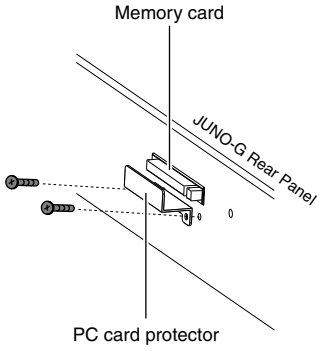
Writing data to the card

Patches, rhythm sets, performances, samples, and song data can be written to the card. For details on the writing procedure, refer to the explanation for the corresponding parameters.

Installing the PC Card Protector

The JUNO-G provides a PC card protector to prevent theft of the memory card. To install the PC card protector, use the following procedure.

1. **Use a screwdriver to remove both of the screws from the bottom side of the PC CARD slot.**
2. **Insert the memory card into the PC CARD card slot.**
3. **Use the screws to fasten the PC card protector as shown below.**



Troubleshooting

If the JUNO-G does not function in the way you expect, first check the following points. If this does not resolve the problem, consult your dealer or a nearby Roland Service Station.

* *If any sort of message is being displayed on the screen during an operation, refer to* ***Error Messages*** *(p. 186).*

Problems Concerning the Entire JUNO-G

Q The power does not turn on.

A Make sure that the JUNO-G's AC adaptor is correctly connected to an AC outlet and to the rear panel power connector, and that the adaptor itself and AC power cable are connected correctly (p. 14).

Issues Related to Sound

Q There is no sound.

A Check the following points.

- Is the power for connected amps and speakers turned on? Is the volume turned all the way down?
- Is the VOLUME knob turned all the way down?
- Have connections been made correctly?
- Can you hear sound through headphones?
  If there is sound in the headphones, it is possible that the connection cables are broken, or that your amp/mixer has malfunctioned. Check your cables and amp/mixer system once again.
- If you do not hear sound when you play the keyboard, check whether the Local Switch is turned OFF.
  Make sure that the Local Switch parameter is turned on (p. 160).
- Have all tones in the patch been turned off?
  Turn on "Tone Switch."
- The Part level settings may be too low.
  Access the Level parameter, and check the level of each part (p. 64).
- Are the Effect settings correct?
  Check the Effect settings ON or OFF, the Effect Balance or Level (p. 125).
- Are the settings for the output destination correct?
  Check the various output assign settings (p. 48, p. 57, p. 65, p. 126, p. 127).
- Is the Wave Expansion Board properly installed?
  When selecting the settings that stipulate the use of EXP waves, Patches, or Rhythm Sets, check that the Wave Expansion Board is installed properly in the slot (p. 174).
- Has the volume been lowered by pedal operations or by MIDI messages (volume messages or expression messages) received from an external MIDI device?
- Have the samples been loaded correctly? (p. 115)

Q A specific Part does not sound.

A Check the following points.

- Has the volume level of the part been lowered?
  Adjust the Level parameter to raise the volume of the part that is not heard (p. 64).
- Is the part being muted?
  Set the Mute parameter to "OFF" (p. 64).

Q Specific pitch ranges do not sound.

A Has a restricted range of notes been set?

If a specific range of notes does not sound, check the Key Range settings for the Patch Tone, the Performance Part.

- Tone Key Range
  Key Range Lower/Key Range Upper parameter (p. 37)
- Part Key Range
  K.L/K.U parameter (p. 66)

Q The sound is distorted.

A Check the following points.

- Is an effect which distorts the sound being applied?
  If the sound for a specific patch or part is distorted, lower the volume level on that part.
- If all sounds are distorted, use the VOLUME knob to lower the volume level.
- Could the Output Gain be excessively high?
  In "System," check the "Sound" parameter.

Q Pitch is incorrect.

A Check the following points.

- Is the tuning of the JUNO-G incorrect?
  Check the Master Tune parameter setting (p. 158).
- Has the pitch been changed by pedal operations or by Pitch Bend messages received from an external MIDI device?
- Have the Coarse Tune or Fine Tune parameters been set for specific Parts?
  Check the Coarse Tune parameter and Fine Tune parameter settings (p. 65).

Q The sound is interrupted.

A Sounds will be interrupted if more than 128 voices are used simultaneously.

- Reduce the number of Tones that you are using.
- Increase the Voice Reserve setting for parts that must not drop out (p. 66).

Q When I play the keyboard, notes do not stop.

A Is the pedal polarity of the Hold Pedal reversed?

Check the Hold Pedal Polarity parameter setting (p. 159).

Q The sound cuts off when I switch Patches in Patch mode.

A Although you can apply a wide variety of multi-effects with the JUNO-G's multi-effects, switching the Patch also switches the type of multi-effects used.
In such instances, discrepancies between the sound being produced and the multi-effects type can arise, which may result in sounds being different than intended, so sounds produced when Patches are switched may be muted when factory settings are in effect. In certain situations, such as when not using multi-effects that have a great influence on the sound, remembering to set Patch Remain parameter (p. 158) to "ON" allows you to switch Patches without sounds being muted.

Q When switching Patches in Patch mode, the volume and other parameters set with Control Changes end up being reset.

A Set Patch Remain parameter (p. 158) to "ON." Even once they have switched Patches, Control Change messages that have been received are carried forward, so even when switching a Patch whose level is turned all the way down by a Control Change volume message, the level remains unchanged.

Q If the Tone Delay time value is set to the note, then does the delay time not change beyond a fixed length when the tempo is slowed down?

A There is a maximum permissible value for the Tone Delay Time parameter (p. 45). So, if the time setting is specified in terms of a note value, and the tempo is slowed down, this maximum permissible value will be reached, and it cannot be increased further. The upper time limit for each is the maximum value that can be set other than the numerical value for the beat.

Q Even when I set the Pan for a Patch completely to one side, sound still comes from the other channel.

A The JUNO-G's internal effects are in stereo, so if you have effects applied to a Patch, even if the Pan is set all the way to one side, you will still be able to hear sounds of the effect component from the other channel.

Q Sometimes, when playing legato, the pitch won't rise. Why is this?

A When the Legato Switch parameter (p. 37) is "ON," and the Legato Retrigger parameter (p. 37) is "OFF," and you hold down keys in the high register to play legato, the upper pitch limit of the wave may be exceeded, so that the pitch does not rise as far as you expect, but will stop rising at a certain point. Additionally, if differing upper pitch limits are used for the waves of a Patch that uses multiple tones, it may stop being heard in MONO. When making large pitch changes, set the Legato Retrigger parameter to "ON."

Q The notes sound strange in the upper registers of the keyboard.

A Sometimes when playing the keys in the upper part of the JUNO-G's keyboard, the sound may stop, or the pitch may stop rising; or with certain keys, there may be intermittent noise. This occurs mainly when the JUNO-G's upper pitch limit is exceeded, so this issue doesn't arise in the ranges normally used. But, in any case, it does not indicate a malfunction.

Q Although the same Patch is selected, it sounds different when I listen to it in the Performance.

A In Performance mode, the parameters of each part of the performance can apply further modification to parameters such as pan, octave, and filter, relative to the settings specified by the patch. Thus, Patches in a Performance may sound different than they do when heard in Patch mode.
Additionally, although a Patch may comprise tones created with the use of the multi-effects, the multi-effects used in the Performance may differ from the multi-effects selected by the Patch. Check the multi-effect settings of the performance. Also do the same for the Chorus and Reverb settings.

Q The volume level of the instrument connected to JUNO-G is too low.

A Could you be using a connection cable that contains a resistor? Use a connection cable that does not contain a resistor.

Issues Related to Effects

Q Effects not applied.

A Check the following points.

- The "MFX," "CHO," "REV" or "MASTER" effect switches located in the upper part of the PLAY screen may have been turned off.
  Press [EFFECTS]/[F6 (SWITCH)] to turn them on.
- Are the various effect settings correct? (p. 125)
- If the send level of each effect is set to 0, the effect will not be applied. Check the settings.
- Even with send levels to each effect set at 0, effects are not applied if the Multi-effects Output Level, the Chorus Level, or the Reverb Level is set to 0. Check each setting.
- If Output Assign is set to other than "MFX," the Multi-effects sound will not be output.
- If Output Assign is set to "PATCH" for each Part of the Performance, the sound will be output according to the Output Assign settings of the Patch (for each Tone) which is assigned to those Parts. This means that if Output Assign for the Patch (each Tone) is set to other than "MFX," the Multi-effects sound will not be output.

Q The Modulation or other controller is always on.

A Check the Matrix Controller settings (p. 44).
The JUNO-G allows you to use the Matrix Control to control Patches in real time. The Matrix Control functions as the control source for the Control Change and other MIDI messages received by the JUNO-G, and makes changes to the various Patch parameters based on these messages.
Depending on these settings, the JUNO-G may be responding to MIDI messages sent from external MIDI devices, and may result

the Patches sounding different than intended.

Q Raising the chorus or reverb send level for each part of a performance still does not cause the effect to be applied sufficiently.

A Although you can make Send level settings to the Chorus and Reverb for each individual Part in a Performance, these values only set the upper limit of the Chorus and Reverb Send levels for the Patch used. Accordingly, even when the value is set to the maximum of 127, if the Send level is lowered in the Patch being used, there will be no effect. In addition, different Patch Chorus and Reverb Send level settings can be used according to whether or not the multi-effects are used.

Q Using the Matrix Control or other such means to control the LFO results in noise when the Pan is changed suddenly.

A Lower the change in speed (LFO Rate).

Due to the specialized processing used for the Pan, which alters the volume level in each of the left and right sides, sudden Pan movements causing rapid changes in these levels creates large changes in volume, and noise from this may be audible as a result.

Q Multi-effect 43: TAP DELAY or other delay time value is set to the note, and then the tempo is slowed down, does the delay time not change beyond a fixed length?

A Such Delay time settings have an upper limit, so if the upper limit of a value set to the note is exceeded when the tempo is retarded, that upper value cannot rise any further. The upper time limit for each is the maximum value that can be set other than the numerical value for the beat.

Issues Related to Saving Data

Q The Performance sounds different than when it was written.

A Check the following points.

- If you have modified the settings of a patch used by a performance, or if the temporary patch of the performance has been modified by an external MIDI device, these patches must also be saved.

  If patches used by a performance have been edited when you write that performance, the JUNO-G will display a message asking whether you want to discard these patches. In such cases, first save the patch (p. 32) or rhythm set (p. 51), and then save the performance (p. 63) again.
- The Mastering Effect settings may have changed. (These settings are not stored as part of a performance.)

Q Patches sound different than when written.

A Check the following points.

- The write operation cannot be used to save Patches as changed in Patch mode using Control Change messages from an external MIDI device.
- The Mastering Effect settings may have changed. (These settings are not stored as part of a patch.)

Q The Arpeggio and D Beam controller settings in the Performance are different than those for the Patch.

A Since the JUNO-G stores arpeggio and D Beam controller settings for each performance, it will operate according to the arpeggio and D Beam controller settings that were specified for each performance.

Issues Related to Song Recorder

Q Song data is not played back correctly. (Only one instrumental sound is heard, the wrong sound is heard, there's no sound, etc.)

A Check the following points.

- Could the JUNO-G be in Patch mode?
  In Patch mode, it may be that only a single instrumental sound can be heard. Put the JUNO-G in Performance mode if you're playing back song data that consists of multiple channels.
- Could you be playing back the song data from the middle of the song?
  If the song doesn't sound right, execute MIDI Update (p. 86).
- Could the patches used by the song be using samples that aren't loaded?
  You'll need to load the necessary samples before you carry out playback (p. 115).
- Could you have activated Track Mute?
  Cancel the muting (p. 85).
- Could you be using Quick Play?
  If you're using Quick Play, audio tracks won't play back (p. 84).
- Are the sound generator settings correct?
  (Refer to: Issues Related to Sound, p. 179)

Q The tempo is different than the last time I played back the song.

A If a song is played back after the tempo is changed, then the new tempo is not saved unless the song is saved to the user memory or memory card. Conversely, the previous tempo will be erased when you save the song. When saving songs, carefully check the current tempo.

Q Marker locations set in song have disappeared.

A Check the following points.

- Was the disk saved in a format other than Song File format (SMF 0 or 1)?
  Marker locations will be saved with the song data only when saving in Song File format.
- Are you using Quick Play?
  In order to use Marker locations, the song must be loaded into the JUNO-G.

Q Can I easily move to a desired measure?

A Yes, you can. The JUNO-G's Marker function lets you easily move to a desired measure by pressing a switch.

Q Can I record an audio source such as guitar or vocals at the same time that I record a MIDI performance from the JUNO-G's keyboard?

A It's not possible to record on an audio track at the same time that you record MIDI from the JUNO-G's keyboard. Record your performance on the JUNO-G's keyboard as MIDI, and then overdub your audio performance on an audio track.

Q Sound Device Tones Are Switched Arbitrarily

A Use the Microscope (p. 99) to check the following points.

- Has an unneeded program change been input? Or are there duplicate program changes?
- Were any mistakes made in setting the data MIDI channels when Program Change messages were input?

Q Data supposed to be present does not appear in microscope.

A Check the following points.

- Are the wrong tracks selected?
- In View Select (p. 101), is any data set not to be displayed?

Q When I play back song data, I hear the sounds of the GM sound generator.

A If the song data contains GM System On, GM2 System On, or GS Reset MIDI messages, the sound generator will switch to GM mode. To prevent this, turn the following reception settings "OFF" (p. 161).
[SYSTEM SETUP] MIDI Receive: Receive GM System On, Receive GM2 System On, and Receive GS Reset On

Q Music data (GM scores) does not play back correctly

A Check the following points.

- Has the Receive General MIDI/General MIDI 2 System On Switch been turned ON?
  Set the Receive GM System ON/Receive GM2 System ON parameter (SYSTEM/MIDI/RX) to "ON" (p. 161).
- Are you trying to start playback from midway through the song?
  The beginning of a GM score song contains a General MIDI/ General MIDI 2 System On message. In some cases, a GM score cannot be played back correctly unless this message is received.
- Are you trying to play song data designed for the GS Format?
  When the JUNO-G receives a GS Reset message, the JUNO-G is enabled for the GS format. This permits playback of music data bearing the GS logo (GS music data). However, data created exclusively for the Sound Canvas Series may not play back properly on the JUNO-G.

Q After using a song recorder to play a song, sounds stopped playing, and no sound is played even when Program Changes are sent.

A It could be that a Bank Select in the song data that is not specified by the JUNO-G was encountered in the song. No sound is played if the tone group is not one designated by the JUNO-G with Bank Select MSB/LSB. Note that if you omit the Bank Select, and send only the Program Change, the tone in the currently selected group that has the specified Program Change number will play. Try reselecting the tone using the panel controls. Furthermore, when selecting tones from an external MIDI device, be sure to send the Bank Select MSB/LSB and the Program Change as a single set for reliable reproduction. First sending the MSB and LSB (the order in which these are sent does not matter), followed by the Program Change.
In some cases, you may be unable to hear any sound after playing the last song that was faded-out. This may be because the volume has been lowered by volume messages or expression messages. Check the value of these messages, and set them to appropriate values.

Q Performances are sluggish, or have interruptions.

A Problems of sluggish and interrupted performances can crop up very easily when the song recorder or sound generator used for the performance has to handle heavy data loads.
Main causes and possible corrective measures are considered below.

- Are more than 128 voices playing simultaneously?
  Reduce the number of voices. The composition of JUNO-G Patches is such that up to eight Waves may be used for one Patch. When using such Patches, even though only one sound may be heard, it is actually eight sounds that are being played simultaneously. In addition, with certain sounds like continuous sounds with long releases, even though the actual sound may not be audible to you, processing for playing the sound is still underway, so in these cases as well, the performance data can differ from the actual number of voices being played.
- Are you using a Patch that uses a lot of LFO?
  Try changing to a different Patch. LFO processing invariably places a big load on the machine, so heavy use of the LFO slows down processing for the JUNO-G overall, which can end up having affecting the expression of sounds themselves.
- Is the data concentrated at the beginning of the beats in the sequence data?
  Avoid overlapping data with the same timing by setting an offset of 1–2 clocks instead. Data may easily become concentrated at the beginning of the beats in the song data when, for example, the song data is input using Step Recording, or if the data is quantized after being input with a keyboard in real time. Because of this, large amounts of data are sent to the JUNO-G, and the processing for expressing sounds becomes bogged down.
- Is there a Program Change at the point where the song performance is sluggish?
  Change the position of the Program Change. When Program Changes are inserted in songs, processing time for switching patches increases, which may then cause the performance to become sluggish.
- Is there a System Exclusive message at the point where the song performance is sluggish?
  Move the location of the data. System Exclusive messages

contain large amounts of data, thus placing a heavy burden on song recorders and sound modules. Try repositioning data and changing System Exclusive messages to Control Changes for any data for which Control Changes can be substituted.

- Is there an Aftertouch or other such large Control Change at the point where the song performance is sluggish?
  Move the location of the data. If the data is no longer needed, delete the data. In some cases, when using a keyboard that features aftertouch to input data, you may end up inputting huge amounts of data before realizing this is happening. Such large amounts of data can place an excessive load on your song recorder and sound module.

Q Can I load "MRC Pro songs (SVQ files)" that were created on other Roland products (such as one from the Fantom-X series)?

A It's not possible to load such data. The filename extension is the same, but the data cannot be loaded because the song format is different.

Q How can I delete a song that I saved to user memory or a memory card?

A You can delete songs in the SONG LIST screen. Access the SONG LIST screen, select the song that you want to delete, and then press [F4 (DEL SONG)] to delete it (p. 116).

Q When I attempt to save a JUNO-G song as SMF, I can't select "Save As SMF."

A If you're unable to save a song as SMF, it's possible that the song contains copyright information. For example if you use the JUNO-G to create a song based on commercially available SMF data containing copyright information, you won't be able to re-save that song as SMF data. (You will be able to save it as a song (SVQ) file.) Copyright information included in a song cannot be removed using the JUNO-G. Nor is it possible to use the JUNO-G to add copyright information to a song or view it in the display. Since the demo songs also contain copyright information, you won't be able to save them as an SMF even if you've deleted the track data to create your own song.

Q How much song data (what size, and how many songs) can the JUNO-G's internal memory hold? How much song data can an external memory card (PC card) hold?

A The JUNO-G's internal memory or an external memory card can both hold up to 999 songs with up to 9,990 measures. The maximum number of measures and the maximum number of songs may be less depending on how they occupy the memory capacity.

Q When I record sequence data from an external source into the JUNO-G's song recorder, all of the data becomes a single MIDI channel.

A To prevent this from happening, so that the data is recorded separately for each MIDI channel (part), go to the System settings and turn the Remote Keyboard Switch "OFF" (p. 160).

Q What types of synchronization signals does the JUNO-G's internal song recorder support?

A The song recorder supports either Slave or Master synchronization for both MIDI Clock and MTC.

Q Can I make settings so that when I play back a song on the JUNO-G, a specific channel is played only by an external sound module and not by the internal sound generator?

A Since the JUNO-G is designed to play both the internal sound generator and an external sound module simultaneously, you will have to mute the internal sound generator for channels that you want to play only on your external sound module. Mute your external sound module for channels that you want to play only on the internal sound generator.

Q There's no indication of which MIDI track Ch/Part (channel/part) was recorded. Which channel and part are used to record the data I play on the keyboard?

A The data is recorded on the channel and part that are assigned to the keyboard. If you're in Performance mode, press MODE [PERFORM] and then press [F2 (KBD SW)] to check this (p. 60). If you're in Patch mode, press MODE[PATCH], then press EDIT [MENU], select "2. System," press [F3 (MIDI)], and check the Kbd Patch Rx/Tx Channel (p. 160).

Q Can I apply the JUNO-G's internal effects to the audio tracks?

A Yes, you can. The following effects can be applied (p. 104, p. 125). Multi-effects (MFX 1–MFX 3), chorus (CHO), reverb (REV), mastering (MASTER)

Q Can a song I created using MIDI tracks be mixed down to an audio track?

A Yes. The JUNO-G provides a Mixdown function that lets you mix down the performance of the MIDI tracks and audio tracks in the specified region to the single audio track you choose (p. 110).

Q Can I transpose (change the key of) the audio data?

A Yes, you can do this in the AUDIO MIXER screen. Set the Audio Track Key Shift parameter (p. 111).

Q Can I record in mono on an audio track?

A Yes, you can. In the Audio Rec Standby window, set Audio Rec Channel to "MONO" (p. 106).

Q While recording on an audio track, the "Sample Memory Full" error appears, and recording stops.

A Sample memory has become full. If this occurs, you can create free sample memory in either of the following ways.

- Delete unneeded sample data (p. 118).
- Install more memory (p. 176).

Issues Related to MIDI and External Devices

Q No Sound from connected MIDI device.

A Check the following points.

- Is the instrument set to transmit MIDI messages?
- In Patch Mode
  Kbd Patch Rx/Tx Channel parameter (p. 160)
- In Performance Mode
  KBD switch (p. 60).

Q Exclusive messages are not received.

A Check the following points.

- Is the instrument set to receive Exclusive messages?
  Set the Receive Exclusive parameter to "ON" (p. 161).
- Does the Device ID number of the transmitting device match the Device ID number of the JUNO-G?
  Check the Device ID parameter (p. 160).

Q I connected an external sequencer or MIDI keyboard to the MIDI IN connector, and attempted to play a JUNO-G rhythm set, but there was no sound. Why?

A Check to make sure that the MIDI Transmit channel of the external MIDI device and the JUNO-G's MIDI Receive channel are matched. The MIDI Receive channel used by the JUNO-G in Patch mode is set with the Kbd Patch RX/TX Channel parameter. Rhythm Set performance data is generally received on MIDI Channel 10.

Q Messages from MIDI IN are not being received.

A Additionally, the MIDI IN connector cannot be used if USB Mode (p. 167) is set to MIDI. Set the USB mode to Storage.

Q When using sequencing software, operating the knobs or other controls does not affect the sound.

A For some sequencing programs, System Exclusive messages are not transmitted by the Thru function. If you are using such sequencer software and want to record system exclusive messages, turn on the following parameters.

- In Patch Mode
  Local Switch parameter (p. 160).
- In Performance Mode
  KBD switch (p. 60).

Q When the Bend Range for a Patch is increased (48), the pitch does not rise sufficiently, even when a MIDI Pitch Bend message is received.

A While Patch Bend Ranges can be set anywhere between 0 and 48, when certain Waves in which the pitch is raised (in the + direction) are used, the pitch may stop rising at a fixed point, rather than continuing to go up. Although a value of 12 is ensured for the upper limit of raised pitches, use caution when setting the Bend Range above this figure.

Issues Related to Audio Recording

Q External input sound cannot be heard/volume is too low.

A Check the following points.

- Could the level of the external input source be too low?
  Could the top panel AUDIO IN slider be turned down?
  Could the rear panel AUDIO INPUT LEVEL knob be turned down?
- The volume of the device connected to AUDIO INPUT may be lowered.
  Adjust it to an appropriate level.
- Are the audio cables connected correctly?
  Check the connections.
- An audio cable may be broken.
- Could you be using an audio cable with a built-in resistor?
  Use a connection cable that does not contain a resistor (e.g., Roland PCS series).

Q External input sound is not stereo/is not monaural.

A Check the following points.

- In the INPUT SETTING screen that appears when you hold down [SHIFT] and operate the AUDIO IN slider, could Input Select be set to "LINE IN L" or "MICROPHONE"?
  Set "Input Select" to "LINE IN L/R" (p. 104).

Q Mic sound is not output/is too weak.

A Check the following points.

- Is the mic cable connected correctly?
  Check the connection.
- The mic cable may be broken.
- The input source may be set to something other than mic.
  In the INPUT SETTING screen that appears when you hold down [SHIFT] and operate the AUDIO IN slider, set Input Select to "MICROPHONE" (p. 104).
- The mic level may have been lowered.
  Could the top panel AUDIO IN slider be turned down?
  Could the rear panel AUDIO INPUT LEVEL knob be turned down?

Q Can't record a sample.

A Check the following points.

- Is there enough memory capacity?
  If there is insufficient sample memory, a message of "Sample Memory Full!" will appear when you attempt to sample (p. 118).
  Erase unneeded samples to increase the amount of free space.
  If there is still not enough, install additional memory (DIMM modules). (p. 176)

Q Recorded sound contains excessive noise or distortion.

A Check the following points.

- Is the input level appropriate? If the input level is too high, the recorded sound will be distorted. If it is too low, noise will be heard. When audio recording, turn the AUDIO IN slider in the AUDIO TRACK screen or AUDIO MIXER screen to adjust the level while watching the level meter displayed in the upper part of the display (p. 104).
- Are the effect settings appropriate?
  Some types of effect may increase the level louder than the original sample, or may intentionally distort the sound. Some effects will also cause noise to be emphasized.
  Temporarily turn off effects, and check whether the sample itself contains noise or distortion. Then adjust the effect settings appropriately.
- Are multiple samples being played simultaneously?
  Even if the level of each individual sample is appropriate, simultaneously playing multiple samples may cause the overall level to be excessively high, causing distortion. Lower the level of each sample so that the sound is not distorted.

Issues Related to a Memory Card

Q Can't select data from a memory card.

A Check the following points.

- Is the memory card inserted correctly?
  Turn off the power, remove the memory card, then re-insert the memory card correctly.
- Is the memory card an appropriate type?
  The JUNO-G can use either PC card type memory cards, or another type of memory card via a PC card adaptor.

Q I can't use a memory card.

A Is the memory card formatted?

An unformatted floppy disk cannot be used. Perform the Format procedure (p. 164).

Error Messages

If an incorrect operation is performed, or if processing could not be performed as you specified, an error message will appear. Refer to the explanation for the error message that appears, and take the appropriate action.

Message	Meaning	Action
Cannot Edit Preset Sample!	This is a preset sample, and therefore cannot be edited.	—
Card Not Ready!	A memory card is not inserted in the slot.	Insert a memory card into the slot.
Data not found	The data for placement is not specified.	—
Empty Sample!	The sample contains no data.	Select a sample that contains data.
Empty Song!	The song has not been recorded, and therefore cannot be played.	Select a song that contains data.
File Name Duplicate	A file with the same name already exists.	Delete the file bearing the same name from the disk, and if overwriting and saving the data, merely save the file. If you do not want to delete the file with the same name from the disk, either save the file with a different name.
Illegal File!	The JUNO-G cannot use this file.	—
Memory Damaged!	The contents of memory may have been damaged.	Please perform the Factory Reset operation. If this does not resolve the problem, please contact your dealer or the nearest Roland Service Center.
Memory Full!	Saving is not possible because there is insufficient space in the user area or memory card.	Delete unneeded data.
MIDI Offline!	There is a problem with the MIDI cable connection.	Check that the MIDI cable has not been disconnected or broken.
Movable onto Bar Line Only	The beat change event can be put only on bar line (beginning of a measure).	—
No More Note Numbers!	A maximum of 16 different note numbers can be used in one style of the arpeggio/rhythm function.	Please delete unneeded notes.
No More Sample Numbers!	The sample cannot be divided any further. Since fewer than 256 consecutive sample numbers are vacant, no further sampling is possible.	Erase unneeded samples in order to allocate 256 or more consecutive sample numbers.
No More Song Numbers!	No more songs can be saved. A maximum of 256 songs can be handled simultaneously for both the user bank and card bank.	Please delete unneeded songs.
Now Playing!	Since the JUNO-G is playing, this operation cannot be executed.	Stop playback before you execute the operation.
Permission Denied!	The file is protected.	—
Playback Tempo Range Over	Tempo values exceed the allowable limit, and data is created in which the closest time available within the allowable range is specified.	—
Power off and check DIMM	Turn off the power immediately, and re-insert the DIMM memory correctly.	—
Recording Parameter Error	You are attempting to begin recording after a looped segment.	You are attempting to begin recording within or before a looped segment.
Rec Over Flow	Since a large amount of recorded data was input all at once, it could not be processed correctly.	Reduce the amount of recorded data.
Sample Length Too Short!	The sample is too short, and cannot be edited correctly.	If the sample is extremely short, editing may not produce the desired result.
Sample Memory Full!	Since there is insufficient sample memory, no further sampling or sample editing is possible.	Erase unneeded samples.
Song Format Error	This song is damaged.	This song cannot be used.
Song Full	Since the maximum number of notes that can be recorded in a song has been exceeded, no further recording/editing is possible.	Use the track edit Delete or Erase commands to remove unneeded data from the song that you are recording/editing.
Song Not Found	The selected song cannot be found.	—
Too Many Sample Selected!	The operation cannot be executed, since marks are assigned to more than one sample.	Either clear the marks, or mark only one sample.
Unformatted!	The memory card is in an unsupported format.	Format the memory card.
You Cannot Copy This Message	This message cannot be copied.	—
You Cannot Erase This Message	This message cannot be erased.	—
You Cannot Move This Message	This message cannot be moved.	—

Performance List

USER (User Group)

No.	Name	No.	Name
001	Grand Orch	033	Rotary Multi
002	Clone Zone	034	Dist Gt Mult
003	Burning Lead	035	FreeFall Pad
004	1:00AM	036	Delay Santur
005	SweetTheramx	037	Str Stack
006	Brass Sect	038	JUNO Pop 2
007	Jupiter8 Str	039	Triple Int
008	Japan Arp	040	Piano+Pad 2
009	CompuTekno	041	Fat Synth
010	Infinite Phr	042	R&B Set
011	Groove 007	043	RolldHrp/Vel
012	Auto Trance	044	Bump It Up!
013	Pno/Bs Split	045	Slice Trance
014	Digi & Ana	046	SyncLead Seq
015	JUNO Split	047	Merry Festa
016	Bari Arp	048	OrganAns/Mod
017	Tempest	049	90's Set
018	Highland	050	80's Set
019	Sound Alarm	051	Angelis Pad
020	JUNO Pop 1	052	Motown
021	HipHop Set 1	053	Nwcomers/Mod
022	Rnd Rhythm	054	Night Gig
023	Reflector	055	Disco Set
024	FiltrHus/Mod	056	Seaside
025	BrekBts Set	057	South Wind
026	Fusion Set	058	HipHop Set 2
027	1 Note Pop	059	Reggae Set
028	Piano+Pad 1	060	Light Step
029	R&B E.Piano	061	Phase D
030	TrncyPad/Mod	062	TrioPly Tmpl
031	AutoSequence	063	Seq:Template
032	Jazzy Arps	064	GM2 Template

PRST (Preset Group)

No.	Name	No.	Name
001	TrioPly Tmpl	033	AutoSequence
002	Seq:Template	034	Jazzy Arps
003	Grand Orch	035	Rotary Multi
004	Clone Zone	036	Dist Gt Mult
005	Burning Lead	037	FreeFall Pad
006	1:00AM	038	Delay Santur
007	SweetTheramx	039	Str Stack
008	Brass Sect	040	JUNO Pop 2
009	Jupiter8 Str	041	Triple Int
010	Japan Arp	042	Piano+Pad 2
011	CompuTekno	043	Fat Synth
012	Infinite Phr	044	R&B Set
013	Groove 007	045	RolldHrp/Vel
014	Auto Trance	046	Bump It Up!
015	Pno/Bs Split	047	Slice Trance
016	Digi & Ana	048	SyncLead Seq
017	JUNO Split	049	Merry Festa
018	Bari Arp	050	OrganAns/Mod
019	Tempest	051	90's Set
020	Highland	052	80's Set
021	Sound Alarm	053	Angelis Pad
022	JUNO Pop 1	054	Motown
023	HipHop Set 1	055	Nwcomers/Mod
024	Rnd Rhythm	056	Night Gig
025	Reflector	057	Disco Set
026	FiltrHus/Mod	058	Seaside
027	BrekBts Set	059	South Wind
028	Fusion Set	060	HipHop Set 2
029	1 Note Pop	061	Reggae Set
030	Piano+Pad 1	062	Light Step
031	R&B E.Piano	063	Phase D
032	TrncyPad/Mod	064	GM2 Template

Patch List

USER (User Group)

No.	Name	Voices	Category
001	Juno-G Grand	2	AC.PIANO
002	Autotrance	4	BEAT&GROOVE
003	Magestic Str	8	STRINGS
004	Rubber Bass	3	SYNTH BASS
005	106 String 1	2	BRIGHT PAD
006	Searing COSM	2	DIST.GUITAR
007	Dreaming Box	4	BELL
008	Brass & Sax	5	AC.BRASS
009	Xadecimal	4	PULSATING
010	Mk2 Stg Phsr	3	EL.PIANO
011	80's Combo	3	COMBINATION
012	Aerial Choir	4	VOX
013	Peep Durple	5	ORGAN
014	Fairy's Song	4	SOFT PAD
015	Wide SynBrs	2	SYNTH BRASS
016	Juno-60 Str	2	BRIGHT PAD
017	Pat is away	5	PLUCKED
018	Dusty Sndtrk	4	COMBINATION
019	Angelis Pad	4	SOFT PAD
020	Groove 007	4	BEAT&GROOVE
021	Trance Keys	2	OTHER SYNTH
022	Wet Nyln Gtr	4	AC.GUITAR
023	Curly Wurly	2	EL.PIANO
024	Comp'd JBass	2	BASS
025	Timeless Ld	2	HARD LEAD
026	Pipe Org/Mod	4	ORGAN
027	Mix Hit 2	4	HIT&STAB
028	106 Brass	1	SYNTH BRASS
029	LostParadise	5	PLUCKED
030	Jazzy Arps	4	PULSATING
031	Vibrations	2	MALLET
032	Killerbeez	3	TECHNO SYNTH
033	Himalaya Ice	2	BELL
034	Analog Days	3	COMBINATION
035	Try This!	3	SYNTH FX
036	Hot Coffee	2	HARD LEAD
037	Uni-G	2	TECHNO SYNTH
038	Analog Pad	3	SOFT PAD
039	Punch MG 2	2	SYNTH BASS
040	Detune Lead	4	HARD LEAD
041	Straight Str	4	SOFT PAD
042	Pulstar Ld	1	SOFT LEAD
043	DelicatePizz	4	STRINGS
044	106 String 2	1	BRIGHT PAD
045	Over-D6	2	KEYBOARDS
046	Sweet Keys	2	OTHER SYNTH
047	Atmospherics	2	SOFT PAD
048	Sweet 80s	4	BEAT&GROOVE
049	Waspy Synth	2	OTHER SYNTH
050	Warm Str Pno	6	AC.PIANO
051	Ending Scene	4	ORCHESTRA
052	JG Clavi	2	KEYBOARDS
053	Sitar on C	6	PLUCKED
054	SH-101 Bs 1	2	SYNTH BASS
055	PulsArt	2	PULSATING
056	Rotary Organ	4	ORGAN
057	Thick Steel	2	AC.GUITAR
058	Evangelized	2	SOFT LEAD
059	Vintage Tine	1	EL.PIANO
060	JX Strings	1	SOFT PAD
061	Nice Dist Gt	1	DIST.GUITAR
062	Alpha Spit	1	SOFT LEAD
063	HimalayaPipe	3	FLUTE
064	303 NRG	2	HARD LEAD
065	PG Chimes	4	BRIGHT PAD
066	Analog Times	4	SOFT PAD
067	Ulti Ac Bass	2	BASS
068	Techno Dream	3	TECHNO SYNTH
069	Pulsatron	4	PULSATING
070	Biting Clav	2	KEYBOARDS
071	TrnsSweepPad	6	SOFT PAD
072	Nice Oct Gtr	2	EL.GUITAR
073	D-50 Fantsia	4	BELL
074	SH-101 Bs 2	2	SYNTH BASS
075	Ju-D Major7	4	TECHNO SYNTH
076	Ju-D Pulsed	3	PULSATING
077	Analog Dream	3	OTHER SYNTH
078	Passing by	4	SYNTH FX
079	E-Grand	4	AC.PIANO
080	Juno-60 Bass	2	SYNTH BASS
081	Latin Gtr	1	AC.GUITAR
082	Ju-D Lead	2	HARD LEAD
083	DramaSect/Sw	4	STRINGS
084	Simply Fat	3	OTHER SYNTH
085	Crummy Organ	2	ORGAN
086	Sub Hit	3	HIT&STAB
087	PeakArpSine	1	SOFT LEAD
088	Harpiness	2	PLUCKED
089	JG Hollow	4	SOFT PAD
090	Alpha Stack	3	TECHNO SYNTH
091	Choir Aahs 2	4	VOX
092	LonesomeRoad	2	EL.PIANO
093	Clean Gtr	1	EL.GUITAR
094	Alpha Bass 1	1	SYNTH BASS
095	Vintagolizer	4	HARD LEAD
096	Stereo Brass	4	AC.BRASS
097	Air Pluck	4	MALLET
098	VintageBrite	2	BRIGHT PAD
099	ElectroDisco	5	BEAT&GROOVE
100	GR Lead	2	SOFT LEAD
101	TroubadorEns	4	ETHNIC
102	JupiterMoves	2	SOFT PAD
103	Alpha Said..	1	TECHNO SYNTH
104	Faked Piano	4	SYNTH FX
105	Denial River	6	PULSATING
106	Amadeus	8	KEYBOARDS
107	Return2Base!	1	BASS
108	MODified Ld	2	HARD LEAD
109	Good Old Day	3	WIND
110	Stacc Heaven	4	OTHER SYNTH
111	Chapel Organ	2	ORGAN
112	Ju-D Space	4	BRIGHT PAD
113	Ju-D Soft Ld	1	SOFT LEAD
114	Timpani+Low	4	PERCUSSION
115	Poly Brass	2	SYNTH BRASS
116	Angels Choir	4	VOX
117	Mr. 4ier	3	PULSATING
118	Amped EP	5	EL.PIANO
119	Alpha Bass 2	1	SYNTH BASS
120	Funk Guitar	2	EL.GUITAR
121	Squarely	2	HARD LEAD
122	Farewell	6	ORCHESTRA
123	Europe Xpres	2	OTHER SYNTH
124	Music Bells	2	BELL
125	Giant Sweep	2	BRIGHT PAD
126	In da Cave	2	HIT&STAB
127	Theramax	1	SOFT LEAD
128	Soft Breeze	2	SOFT PAD
129	FX World	2	PULSATING
130	Imagination	4	AC.PIANO
131	MC-404 Bass	2	SYNTH BASS
132	12string Gtr	3	AC.GUITAR
133	Sqr Sequence	1	HARD LEAD
134	Solo Sop Sax	1	SAX
135	Ju-D Fifths	2	OTHER SYNTH
136	Vodkakordion	3	ACCORDION
137	Alpha Str 1	2	BRIGHT PAD
138	Krafty	3	BEAT&GROOVE
139	SoloNzPeaker	1	SOFT LEAD
140	X-cultural	3	ETHNIC
141	SoftSynBrass	2	SYNTH BRASS
142	Synvox	2	VOX
143	Space Ocean	4	PULSATING
144	Wurly Trem	2	EL.PIANO
145	106 Bass 1	2	SYNTH BASS
146	Lone Prophat	1	HARD LEAD
147	Atk Flute	2	FLUTE
148	X-Racer	2	OTHER SYNTH
149	FM Wood	4	MALLET
150	Alpha Str 2	3	BRIGHT PAD
151	Good Old Hit	4	HIT&STAB
152	Naked Lead	1	SOFT LEAD
153	Bass Drum	4	PERCUSSION
154	OB Slow Str	2	SOFT PAD
155	Hoover Again	4	TECHNO SYNTH
156	Oblivion	3	SYNTH FX
157	sin(EP)	2	EL.PIANO
158	Fretnot 2	3	BASS
159	In Canada	3	HARD LEAD
160	JG Violin	1	STRINGS
161	Wire Keys	2	OTHER SYNTH
162	Rochno Org	4	ORGAN
163	Ju-D CombPad	3	BRIGHT PAD
164	Beat (C4)	4	BEAT&GROOVE
165	Mini Growl	2	SOFT LEAD
166	C. McFizzy	4	ETHNIC
167	Final Run	6	TECHNO SYNTH
168	Firefly	2	SYNTH FX
169	Sine Magic	3	PULSATING
170	FM EP	2	EL.PIANO
171	106 Bass 2	1	SYNTH BASS
172	Amped Jazz	1	EL.GUITAR
173	Bon Voyage	3	HARD LEAD
174	JG Brass	7	AC.BRASS
175	Sugar Synth	5	OTHER SYNTH
176	Harmonderca	2	HARMONICA
177	Life-on	4	BRIGHT PAD
178	Magma Bubble	4	BEAT&GROOVE
179	JG Jamisen	2	PLUCKED
180	Day After...	3	SOFT PAD
181	Bounsynth	4	TECHNO SYNTH
182	Sad ceremony	8	VOX
183	Step In	3	PULSATING
184	JD-800 Piano	1	AC.PIANO
185	JBass /Thumb	2	BASS
186	D-50 Fat Saw	2	HARD LEAD
187	Clarence.net	2	WIND
188	RAVtune	2	OTHER SYNTH
189	Distord Bee	1	ORGAN
190	In The Pass	2	BRIGHT PAD
191	Compusonic 1	4	BEAT&GROOVE
192	Flat SynBs	3	SYNTH BASS
193	Ambi Shaku	3	ETHNIC
194	Neo SuperBrs	4	SYNTH BRASS
195	Electrostars	4	TECHNO SYNTH
196	Retro Sci-Fi	4	SYNTH FX
197	Auto Mouths	3	PULSATING
198	Spirit Tines	3	EL.PIANO
199	Sub Sonic	4	SYNTH BASS
200	Pre Mass Hum	4	AC.GUITAR
201	Tape Memory	2	STRINGS
202	Atmorave	4	OTHER SYNTH
203	Smoky Organ	1	ORGAN
204	101 Basic	1	SYNTH BASS
205	Quiet River	4	PLUCKED
206	Chariots	4	SOFT PAD
207	Techno Pizz	2	TECHNO SYNTH
208	Angel Breath	4	BRIGHT PAD
209	Saw Dogs	1	PULSATING
210	Tine EP	1	EL.PIANO
211	Garage Bs 2	2	SYNTH BASS
212	Get it LOUD!	3	DIST.GUITAR
213	JC Strat Bdy	1	EL.GUITAR
214	Legato Saw	2	HARD LEAD
215	Chamber Str	3	STRINGS
216	Flip Pad	3	OTHER SYNTH
217	Magic Wave	2	BRIGHT PAD
218	Detune Bass	2	SYNTH BASS
219	Orch & Horns	5	ORCHESTRA
220	Teky Drop	4	PLUCKED
221	Heatstroke	2	SYNTH FX
222	Are U Ready?	4	PULSATING
223	LEO EP	4	EL.PIANO
224	Basement	1	BASS
225	Digital Edge	2	HARD LEAD
226	MistOver5ths	4	BRIGHT PAD
227	Angel Pipes	2	FLUTE
228	Liquid Air	4	BRIGHT PAD
229	Storm Bass	4	SYNTH BASS
230	Far East	4	ETHNIC
231	Strobot	2	PULSATING
232	Coffee Bee	2	TECHNO SYNTH
233	JG Wurly	1	EL.PIANO
234	Rezo Sync	3	HARD LEAD
235	Solo Tp	2	AC.BRASS
236	Pressyn	2	OTHER SYNTH
237	ReverseSweep	2	BRIGHT PAD
238	Jucy Saw	3	OTHER SYNTH
239	Bosporus	2	PLUCKED
240	SaturnHolida	2	BRIGHT PAD
241	OilDrum Bass	3	SYNTH BASS
242	JG Cello	1	STRINGS
243	JG Strobe	4	PULSATING
244	FaceOfMars	3	SYNTH FX
245	Potted Pixie	1	OTHER SYNTH
246	Alto Sax	1	SAX
247	Big Mini	3	SYNTH BASS
248	Crystal	2	SYNTH FX
249	Monsoon	4	PLUCKED
250	Stringship	4	BRIGHT PAD
251	Alpha ResoBs	1	SYNTH BASS
252	VirtualHuman	4	PULSATING
253	Howards Lead	3	SOFT LEAD
254	DCO Bass	4	SYNTH BASS
255	Sax Sect. 2	4	SAX
256	Philly Hit	1	HIT&STAB

PR-A (Preset A Group)

No.	Name	Voices	Category
001	Juno-G Grand	2	AC.PIANO
002	Bright Grand	2	AC.PIANO
003	Soft Grand	2	AC.PIANO
004	A'live Piano	2	AC.PIANO
005	SoundCheck	2	AC.PIANO
006	JD-800 Piano	1	AC.PIANO
007	E-Grand	4	AC.PIANO
008	Blend Piano	5	AC.PIANO
009	LA Piano	3	AC.PIANO
010	Warm Pad Pno	4	AC.PIANO
011	Warm Str Pno	6	AC.PIANO
012	Imagination	4	AC.PIANO
013	Tine EP	1	EL.PIANO
014	Vintage Tine	1	EL.PIANO
015	LonesomeRoad	2	EL.PIANO
016	LEO EP	4	EL.PIANO
017	70's EP	5	EL.PIANO
018	Stage Tremlo	2	EL.PIANO
019	Stage Phaser	3	EL.PIANO
020	Back2the60s	2	EL.PIANO
021	Mk2 Stg Phsr	3	EL.PIANO
022	Amped EP	5	EL.PIANO
023	Backing PhEP	5	EL.PIANO
024	Psycho EP	4	EL.PIANO
025	Crystal EP	2	EL.PIANO
026	Celestial EP	4	EL.PIANO
027	Celestial EP	3	EL.PIANO
028	FM EP	2	EL.PIANO
029	FM E.Pad	3	EL.PIANO
030	sin(EP)	2	EL.PIANO
031	Pulse EP	2	EL.PIANO
032	Ballader	3	EL.PIANO
033	Spirit Tines	3	EL.PIANO
034	Remember	2	EL.PIANO
035	So story...	6	EL.PIANO
036	JG Wurly	1	EL.PIANO
037	Wurly Trem	2	EL.PIANO
038	Curly Wurly	2	EL.PIANO
039	Super Wurly	2	EL.PIANO
040	JG Clavi	2	KEYBOARDS
041	Cutter Clavi	2	KEYBOARDS
042	D6 Clavi	3	KEYBOARDS
043	Over-D6	2	KEYBOARDS
044	Phase Clavi	2	KEYBOARDS
045	BPFaze Clavi	2	KEYBOARDS
046	Analog Clavi	1	KEYBOARDS
047	Biting Clav	2	KEYBOARDS
048	Pulse Clavi	2	KEYBOARDS
049	PWM Clav	1	KEYBOARDS
050	Funky Line	2	KEYBOARDS
051	Harpsy Clavi	2	KEYBOARDS
052	JG Harpsi	4	KEYBOARDS
053	CoupleHarpsi	6	KEYBOARDS
054	Amadeus	8	KEYBOARDS
055	JG Celesta	1	KEYBOARDS
056	JG Glocken	1	BELL
057	Music Box	1	BELL
058	Kalimbells	2	BELL
059	FM Syn Bell	4	BELL
060	FM Heaven	4	BELL
061	Music Bells	2	BELL
062	MuBox Pad	4	BELL
063	Dreaming Box	4	BELL
064	Himalaya Ice	2	BELL
065	D-50 Fantsia	4	BELL
066	JG Bell 1	4	BELL
067	JG Bell 2	2	BELL
068	Candy Bell	4	BELL
069	JG Chime	1	BELL
070	Tubular Bell	1	BELL
071	Bell Ring	8	BELL
072	JG Vibe	1	MALLET
073	Vibrations	2	MALLET
074	JG Marimba	2	MALLET
075	JG Xylo	1	MALLET
076	Steel Drums	1	MALLET
077	Air Pluck	4	MALLET
078	Synergy MLT	2	MALLET
079	FM Wood	4	MALLET
080	Icy Keys	4	MALLET
081	Toy Box	3	MALLET
082	Rotary Organ	4	ORGAN
083	Zepix Organ	4	ORGAN
084	Peep Durple	5	ORGAN
085	R&B Organ	2	ORGAN
086	X Perc Organ	3	ORGAN
087	Rhythm'n'B	4	ORGAN
088	Rochno Org	4	ORGAN
089	LoFi PercOrg	1	ORGAN
090	Perky Organ	1	ORGAN
091	Euro Organ	2	ORGAN
092	FullStop Org	3	ORGAN
093	StakDraw Org	4	ORGAN
094	Crummy Organ	2	ORGAN
095	60's Organ	2	ORGAN
096	Smoky Organ	1	ORGAN
097	Soap Opera	1	ORGAN
098	Distord Bee	1	ORGAN
099	Chapel Organ	2	ORGAN
100	Grand Pipes	4	ORGAN
101	Pipe Org/Mod	4	ORGAN
102	Masked Opera	4	ORGAN
103	Vodkakordion	3	ACCORDION
104	Squeeze Me!	2	ACCORDION
105	Guinguette	3	ACCORDION
106	Harmonderca	2	HARMONICA
107	BluesHrp /Sw	1	HARMONICA
108	Green Bullet	2	HARMONICA
109	Wet Nyln Gtr	4	AC.GUITAR
110	Nylon Guitar	2	AC.GUITAR
111	Latin Gtr	1	AC.GUITAR
112	Thick Steel	2	AC.GUITAR
113	Comp Stl Gtr	2	AC.GUITAR
114	Stl Gtr Duo	2	AC.GUITAR
115	Wide Ac Gtr	4	AC.GUITAR
116	So good!	2	AC.GUITAR
117	12string Gtr	3	AC.GUITAR
118	Pre Mass Hum	4	AC.GUITAR
119	DynoJazz Gtr	1	EL.GUITAR
120	Wet TC	1	EL.GUITAR
121	Clean Gtr	1	EL.GUITAR
122	Amped Jazz	1	EL.GUITAR
123	Kinda Kurt	2	EL.GUITAR
124	Crimson Gtr	2	EL.GUITAR
125	Plug n' Gig	1	EL.GUITAR
126	Nice Oct Gtr	2	EL.GUITAR
127	Strat Gtr	1	EL.GUITAR
128	JC Strat Bdy	1	EL.GUITAR

PR-B (Preset B Group)

No.	Name	Voices	Category
001	BluNoteStrat	1	EL.GUITAR
002	Funk Guitar	2	EL.GUITAR
003	Fixx it	1	EL.GUITAR
004	& Scratchee	4	EL.GUITAR
005	Flexa Guitar	4	EL.GUITAR
006	Dub Tales	2	EL.GUITAR
007	GK Dubguitar	4	EL.GUITAR
008	Mystic Gtr	2	EL.GUITAR
009	Trem-o-Vibe	2	DIST.GUITAR
010	Nice Dist Gt	1	DIST.GUITAR
011	Get it LOUD!	3	DIST.GUITAR
012	Searing COSM	2	DIST.GUITAR
013	Plugged!!!	1	DIST.GUITAR
014	Rockin' Dly	3	DIST.GUITAR
015	Punker	2	DIST.GUITAR
016	Hurting Gtr	3	DIST.GUITAR
017	Touch Drive	1	DIST.GUITAR
018	JG Chunk	4	DIST.GUITAR
019	Power Chord	2	DIST.GUITAR
020	Ulti Ac Bass	2	BASS
021	All Round Bs	2	BASS
022	Roomy Bass	2	BASS
023	FingerMaster	2	BASS
024	Comp'd JBass	2	BASS
025	CompressBass	2	BASS
026	Tubby Mute	2	BASS
027	Thumb Up!	1	BASS
028	JBass /Thumb	2	BASS
029	Slap Bass	2	BASS
030	Got Pop?	1	BASS
031	Snug Bass	2	BASS
032	Chicken Bass	2	BASS
033	Return2Base!	1	BASS
034	A Big Pick	2	BASS
035	Basement	1	BASS
036	Fretnot 1	2	BASS
037	Fretnot 2	3	BASS
038	RichFretless	2	BASS
039	NewAge Frtls	3	BASS
040	Alpha Bass 1	1	SYNTH BASS
041	Alpha Bass 2	1	SYNTH BASS
042	106 Bass 1	2	SYNTH BASS
043	106 Bass 2	1	SYNTH BASS
044	Intrusive Bs	2	SYNTH BASS
045	Big Mini	3	SYNTH BASS
046	Muffled MG	2	SYNTH BASS
047	TransistorBs	3	SYNTH BASS
048	Mini Like!	2	SYNTH BASS
049	Da Chronic	2	SYNTH BASS
050	SH-101 Bs 1	2	SYNTH BASS
051	SH-101 Bs 2	2	SYNTH BASS
052	Flat SynBs	3	SYNTH BASS
053	Smooth Bass	2	SYNTH BASS
054	MC-404 Bass	2	SYNTH BASS
055	MC+TB Bass	2	SYNTH BASS
056	Juno-60 Bass	2	SYNTH BASS
057	Poly Bass	1	SYNTH BASS
058	SH-1 Bass	2	SYNTH BASS
059	Nu Bace	2	SYNTH BASS
060	R&B Bass 1	2	SYNTH BASS
061	R&B Bass 2	1	SYNTH BASS
062	R&B Bass 3	2	SYNTH BASS
063	R&B Bass 4	1	SYNTH BASS
064	Kickin' Bass	2	SYNTH BASS
065	Electro Rubb	2	SYNTH BASS
066	Enorjizor	2	SYNTH BASS
067	Solid Goa	1	SYNTH BASS
068	Punch MG 1	2	SYNTH BASS
069	Punch MG 2	2	SYNTH BASS
070	Foundation	2	SYNTH BASS
071	Reso SynBs 1	2	SYNTH BASS
072	Reso SynBs 2	2	SYNTH BASS
073	Alpha ResoBs	1	SYNTH BASS
074	Fazee Bass	4	SYNTH BASS
075	MG+SubOsc Bs	2	SYNTH BASS
076	Hi-Energy Bs	2	SYNTH BASS
077	Storm Bass	4	SYNTH BASS
078	Beepin Bass	2	SYNTH BASS
079	Nu RnB Bass	2	SYNTH BASS
080	Rubber Bass	3	SYNTH BASS
081	Acdg Bass	2	SYNTH BASS
082	SQ Pan	2	SYNTH BASS
083	Glide-iator	1	SYNTH BASS
084	Detune Bass	2	SYNTH BASS
085	Nu Saw Bass	3	SYNTH BASS
086	LowFat Bass	3	SYNTH BASS
087	Sub Sonic	4	SYNTH BASS
088	Jungle Bass	2	SYNTH BASS
089	101 Vibe	4	SYNTH BASS
090	101 Basic	1	SYNTH BASS
091	Garage Bs 1	3	SYNTH BASS
092	Garage Bs 2	2	SYNTH BASS
093	Gashed Bass	2	SYNTH BASS
094	Unison Bass	2	SYNTH BASS
095	OilDrum Bass	3	SYNTH BASS
096	Acid SynBs	2	SYNTH BASS
097	TexturedBusy	3	SYNTH BASS
098	Vintage Sub	3	SYNTH BASS
099	Super-G DX	3	SYNTH BASS
100	SuBASSembly	3	SYNTH BASS
101	DCO Bass	4	SYNTH BASS
102	Destroyed Bs	2	SYNTH BASS
103	Saturator	2	SYNTH BASS
104	Loco Voco	2	SYNTH BASS
105	TBasic	1	SYNTH BASS
106	Unplug it!	1	SYNTH BASS
107	JG Violin	1	STRINGS
108	JG Viola	3	STRINGS
109	JG Cello	1	STRINGS
110	Contrabass	4	STRINGS
111	Dolce Qrt	1	STRINGS
112	Chamber Str	3	STRINGS
113	Magestic Str	8	STRINGS
114	Studio Sect.	4	STRINGS
115	Stringz 101	2	STRINGS
116	Crossed Bows	5	STRINGS
117	Warm Strings	5	STRINGS
118	JG Strings	8	STRINGS
119	Stacc Str mp	4	STRINGS
120	DelicatePizz	4	STRINGS
121	Orch. Pizz	4	STRINGS
122	DramaSect/Sw	4	STRINGS
123	Clustered!?!	8	STRINGS
124	Gang Strangs	6	STRINGS
125	Magnolia Str	3	STRINGS
126	Tape Memory	2	STRINGS
127	Mellow Tron	3	STRINGS
128	Wind & Str 1	7	ORCHESTRA

PR-C (Preset C Group)

No.	Name	Voices	Category
001	Wind & Str 2	5	ORCHESTRA
002	Farewell	6	ORCHESTRA
003	Orch & Horns	5	ORCHESTRA
004	Soft Orch 1	4	ORCHESTRA
005	Soft Orch 2	7	ORCHESTRA
006	Ending Scene	4	ORCHESTRA
007	Sub Hit	3	HIT&STAB
008	In da Cave	2	HIT&STAB
009	Orange Skin	4	HIT&STAB
010	Venus	2	HIT&STAB
011	Mojo Man	2	HIT&STAB
012	Good Old Hit	4	HIT&STAB
013	Mix Hit 1	4	HIT&STAB
014	Mix Hit 2	4	HIT&STAB
015	Lo-Fi Hit	4	HIT&STAB
016	Cheezy Movie	4	HIT&STAB
017	Philly Hit	1	HIT&STAB
018	BlastfrmPast	2	HIT&STAB
019	Smear Hit 1	2	HIT&STAB
020	Smear Hit 2	2	HIT&STAB
021	2ble Action	2	HIT&STAB
022	Funk Chank	2	HIT&STAB
023	Disto Stab!	5	HIT&STAB
024	Good Old Day	3	WIND
025	Wind 'n Wood	3	WIND
026	Clarence.net	2	WIND
027	JG Oboe	1	WIND
028	JG Bassoon	1	WIND
029	English Horn	1	WIND
030	Atk Flute	2	FLUTE
031	JG Flute	2	FLUTE
032	Piccolo	2	FLUTE
033	Angel Pipes	2	FLUTE
034	Pan Pipes	1	FLUTE
035	Andes Mood	3	FLUTE
036	HimalayaPipe	3	FLUTE
037	F.Horns Sect	3	AC.BRASS
038	Tpts & Tmbs	2	AC.BRASS
039	TpTb Sect/Sw	2	AC.BRASS
040	Brass & Sax	5	AC.BRASS
041	JG Brass	7	AC.BRASS
042	StackTp Sect	4	AC.BRASS
043	Stereo Brass	4	AC.BRASS
044	DynamicBrass	8	AC.BRASS
045	BrassFall/Sw	2	AC.BRASS
046	Solo Tp	2	AC.BRASS
047	Horn Chops	2	AC.BRASS
048	Flugel Horn	1	AC.BRASS
049	Spit Flugel	3	AC.BRASS
050	Mute Tp /Mod	3	AC.BRASS
051	Harmon Mute	1	AC.BRASS
052	Soft Tb	2	AC.BRASS
053	Solo Bone	2	AC.BRASS
054	JG Tuba	1	AC.BRASS
055	Grande Tuba	2	AC.BRASS
056	Tb Section	5	AC.BRASS
057	Analog Brass	3	SYNTH BRASS
058	106 Brass	1	SYNTH BRASS
059	Neo SuperBrs	4	SYNTH BRASS
060	Brash!	4	SYNTH BRASS
061	Bend SynBrs	4	SYNTH BRASS
062	Wide SynBrs	2	SYNTH BRASS
063	DetuneSawBrs	2	SYNTH BRASS
064	PolyFlagship	2	SYNTH BRASS
065	Poly Brass	2	SYNTH BRASS
066	Saw Brass	4	SYNTH BRASS
067	Cheesy Brass	4	SYNTH BRASS
068	Dual Saw Brs	2	SYNTH BRASS
069	Silky JP	2	SYNTH BRASS
070	SoftSynBrass	2	SYNTH BRASS
071	Silk Brs Pad	1	SYNTH BRASS
072	Fat SynBrass	4	SYNTH BRASS
073	VangJarris	1	SYNTH BRASS
074	Solo Sop Sax	1	SAX
075	Alto Sax mp	1	SAX
076	Alto Sax	1	SAX
077	Solo AltoSax	1	SAX
078	AltoLead Sax	1	SAX
079	SoloTenorSax	2	SAX
080	Fat TenorSax	3	SAX
081	Baritone Sax	1	SAX
082	Sax Sect. 1	3	SAX
083	Sax Sect. 2	4	SAX
084	Brassy Lead	2	HARD LEAD
085	Timeless Ld	2	HARD LEAD
086	Follow Me	2	HARD LEAD
087	Porta SoloLd	2	HARD LEAD
088	MODified Ld	2	HARD LEAD
089	Unleaded	3	HARD LEAD
090	Legato Tkno	1	HARD LEAD
091	HyperJupiter	3	HARD LEAD
092	Vintagolizer	4	HARD LEAD
093	Classic Lead	4	HARD LEAD
094	Squarely	2	HARD LEAD
095	Sqr Sequence	1	HARD LEAD
096	Square Times	4	HARD LEAD
097	Tristar	2	HARD LEAD
098	Eye see DC	2	HARD LEAD
099	Ju-D Lead	2	HARD LEAD
100	Legato Saw	2	HARD LEAD
101	D-50 Fat Saw	2	HARD LEAD
102	Gwyo Press	2	HARD LEAD
103	Dual Profs	2	HARD LEAD
104	Lone Prophat	1	HARD LEAD
105	Detune Lead	4	HARD LEAD
106	Syn Lead	2	HARD LEAD
107	Space Lead	3	HARD LEAD
108	SynLead 0322	2	HARD LEAD
109	Crumble Syn	2	HARD LEAD
110	Clean?	2	HARD LEAD
111	Distortion	4	HARD LEAD
112	Squareheads	2	HARD LEAD
113	303 NRG	2	HARD LEAD
114	Hot Coffee	2	HARD LEAD
115	In Canada	3	HARD LEAD
116	DirtyVoltage	2	HARD LEAD
117	Bon Voyage	3	HARD LEAD
118	Modulator Ld	2	HARD LEAD
119	Beambreaker	2	HARD LEAD
120	Sync Tank	2	HARD LEAD
121	Synchro Lead	2	HARD LEAD
122	Stimulation	4	HARD LEAD
123	X-Sink Delay	3	HARD LEAD
124	Rezo Sync	3	HARD LEAD
125	Digital Edge	2	HARD LEAD
126	Griggley	2	HARD LEAD
127	SonicVampire	2	HARD LEAD
128	Destroyed Ld	2	HARD LEAD

PR-D (Preset D Group)

No.	Name	Voices	Category
001	Distorted MG	1	HARD LEAD
002	C64 Lead	2	HARD LEAD
003	Noized Lead	3	HARD LEAD
004	Epic Lead	2	HARD LEAD
005	Digital Ld 1	3	HARD LEAD
006	Digital Ld 2	3	HARD LEAD
007	PeakArpSine	1	SOFT LEAD
008	R&B TriLead	1	SOFT LEAD
009	JG Soft Ld	2	SOFT LEAD
010	Shy Soloist	1	SOFT LEAD
011	Reso Lead	3	SOFT LEAD
012	Mid Saw Ld	4	SOFT LEAD
013	Modulated Ld	1	SOFT LEAD
014	Naked Lead	1	SOFT LEAD
015	Waspy Lead	1	SOFT LEAD
016	GR Lead	2	SOFT LEAD
017	Pulstar Ld	1	SOFT LEAD
018	Evangelized	2	SOFT LEAD
019	Alpha Spit	1	SOFT LEAD
020	JP Saw Lead	2	SOFT LEAD
021	DC Triangle	2	SOFT LEAD
022	Mini Growl	2	SOFT LEAD
023	Theramax	1	SOFT LEAD
024	Ju-D Soft Ld	1	SOFT LEAD
025	Howards Lead	3	SOFT LEAD
026	Dawn Of Pan	4	SOFT LEAD
027	SoloNzPeaker	1	SOFT LEAD
028	Dig-n-Duke	2	SOFT LEAD
029	Square Lead	2	SOFT LEAD
030	Round SQR	2	SOFT LEAD
031	Sqr Diamond	2	SOFT LEAD
032	Clone Zone	2	SOFT LEAD
033	Sneaky Leady	2	SOFT LEAD
034	Chubby Lead	2	SOFT LEAD
035	Tranceformer	1	TECHNO SYNTH
036	Shroomy	3	TECHNO SYNTH
037	HPF Sweep	2	TECHNO SYNTH
038	Uni-G	2	TECHNO SYNTH
039	Power Synth	4	TECHNO SYNTH
040	Ju-D Trance	4	TECHNO SYNTH
041	DelyResoSaws	2	TECHNO SYNTH
042	Moon Synth	2	TECHNO SYNTH
043	R-Trance	7	TECHNO SYNTH
044	Killerbeez	3	TECHNO SYNTH
045	Alpha Stack	3	TECHNO SYNTH
046	Technocraft	4	TECHNO SYNTH
047	Bounsynth	4	TECHNO SYNTH
048	Trancepire	1	TECHNO SYNTH
049	Nu Hoover	4	TECHNO SYNTH
050	Alpha Said..	1	TECHNO SYNTH
051	Alpha Hoover	1	TECHNO SYNTH
052	Hoover Again	4	TECHNO SYNTH
053	Raven Chord	4	TECHNO SYNTH
054	Ju-D Major7	4	TECHNO SYNTH
055	Braatz...	6	TECHNO SYNTH
056	Morpher	8	TECHNO SYNTH
057	AllinOneRiff	7	TECHNO SYNTH
058	YZ Again	7	TECHNO SYNTH
059	Going Mad!	4	TECHNO SYNTH
060	Electrostars	4	TECHNO SYNTH
061	Periscope	4	TECHNO SYNTH
062	DreamInColor	3	TECHNO SYNTH
063	Sweet House	4	TECHNO SYNTH
064	Mad Dentist	2	TECHNO SYNTH
065	Projector	1	TECHNO SYNTH
066	Coffee Bee	2	TECHNO SYNTH
067	MetalVoxBox	3	TECHNO SYNTH
068	Teethy Grit	3	TECHNO SYNTH
069	Flazzynth	8	TECHNO SYNTH
070	In-dee-yah	3	TECHNO SYNTH
071	Bend'nMod Me	5	TECHNO SYNTH
072	Final Run	6	TECHNO SYNTH
073	Reso Seq Saw	1	TECHNO SYNTH
074	DetuneSeqSaw	2	TECHNO SYNTH
075	No Left Turn	5	TECHNO SYNTH
076	Digi-Seq	2	TECHNO SYNTH
077	Techno Dream	3	TECHNO SYNTH
078	Techno Pizz	2	TECHNO SYNTH
079	Techno Snips	2	TECHNO SYNTH
080	Alien Bubble	1	TECHNO SYNTH
081	MelodicDrums	2	TECHNO SYNTH
082	Technotribe	2	TECHNO SYNTH
083	Autolicker	3	TECHNO SYNTH
084	Pulsator	4	PULSATING
085	Motion Bass	2	PULSATING
086	Arposphere	4	PULSATING
087	Voco Riff	4	PULSATING
088	Jazzy Arps	4	PULSATING
089	Pulsatron	4	PULSATING
090	Mega Sync	2	PULSATING
091	Ju-D Sliced	3	PULSATING
092	Sine Magic	3	PULSATING
093	JG Strobe	4	PULSATING
094	Strobe X	5	PULSATING
095	VirtualHuman	4	PULSATING
096	Xadecimal	4	PULSATING
097	ShapeURMusic	5	PULSATING
098	Denial River	6	PULSATING
099	Alpha Rave	5	PULSATING
100	Synth Force	4	PULSATING
101	Step In	3	PULSATING
102	Eureggae	1	PULSATING
103	Echo Echo	8	PULSATING
104	Throbulax	2	PULSATING
105	Rhythmic 5th	4	PULSATING
106	Up For Air	1	PULSATING
107	PulsArt	2	PULSATING
108	ZipDoggyDoDa	7	PULSATING
109	ThujonGroove	2	PULSATING
110	Ju-D Pulsed	3	PULSATING
111	Auto Trance	2	PULSATING
112	Euro Teuro	6	PULSATING
113	HPF Slicer	3	PULSATING
114	Sorry4theDLY	1	PULSATING
115	Are U Ready?	4	PULSATING
116	Strobot	2	PULSATING
117	H-Pathetique	1	PULSATING
118	Auto Mouths	3	PULSATING
119	TMT Seq Pad	4	PULSATING
120	Beat Pad	3	PULSATING
121	Brisk Vortex	3	PULSATING
122	PanninFormnt	2	PULSATING
123	DarknessSide	6	PULSATING
124	Vocastic	8	PULSATING
125	SpacePulse	4	PULSATING
126	Keep Running	3	PULSATING
127	StepPitShift	2	PULSATING
128	Dancefloor	4	PULSATING

PR-E (Preset E Group)

No.	Name	Voices	Category
001	Regenerator	2	PULSATING
002	Ionizer	4	PULSATING
003	Newcomers	4	PULSATING
004	Tumblerz	2	PULSATING
005	FX World	2	PULSATING
006	Mr. 4ier	3	PULSATING
007	Space Ocean	4	PULSATING
008	Hellrazor	3	PULSATING
009	Dirty Beat	7	PULSATING
010	Electrons	1	PULSATING
011	Protons	2	PULSATING
012	Saw Dogs	1	PULSATING
013	F1 Pad	8	PULSATING
014	Inverse Sqr	4	PULSATING
015	Myxlptylk	2	PULSATING
016	Robot Sci-Fi	4	PULSATING
017	Ourobotos	2	PULSATING
018	ARP x Race	1	PULSATING
019	Faked Piano	4	SYNTH FX
020	Chaos 2003	4	SYNTH FX
021	Shangri-La	5	SYNTH FX
022	12th Planet	2	SYNTH FX
023	Crystal	2	SYNTH FX
024	Magic Chime	4	SYNTH FX
025	SoundStrange	3	SYNTH FX
026	FaceOfMars	3	SYNTH FX
027	Scatter	7	SYNTH FX
028	SolarPleXus	2	SYNTH FX
029	Heatstroke	2	SYNTH FX
030	Oblivion	3	SYNTH FX
031	South Pole	2	SYNTH FX
032	Ambience	3	SYNTH FX
033	Neverville	6	SYNTH FX
034	Strange Land	6	SYNTH FX
035	Firefly	2	SYNTH FX
036	Breath Echo	1	SYNTH FX
037	Jet Noise	4	SYNTH FX
038	Passing by	4	SYNTH FX
039	Fantom Noise	4	SYNTH FX
040	Low Beat-S	5	SYNTH FX
041	CerealKiller	1	SYNTH FX
042	New Planetz	4	SYNTH FX
043	ResoSweep Dn	1	SYNTH FX
044	ResoSweep Up	1	SYNTH FX
045	Zap B3 & C4	1	SYNTH FX
046	Retro Sci-Fi	4	SYNTH FX
047	Space Echo	4	SYNTH FX
048	Lazer Points	2	SYNTH FX
049	PolySweep Nz	4	SYNTH FX
050	Bending Logo	8	SYNTH FX
051	Trancer	4	SYNTH FX
052	Try This!	3	SYNTH FX
053	Control Room	4	SYNTH FX
054	S&H Voc	2	SYNTH FX
055	WaitnOutside	2	SYNTH FX
056	Simply Fat	3	OTHER SYNTH
057	G PolySynth	4	OTHER SYNTH
058	Ju-D Fifths	2	OTHER SYNTH
059	Analog Dream	3	OTHER SYNTH
060	DCO Bell Pad	4	OTHER SYNTH
061	DigitalDream	2	OTHER SYNTH
062	Stacc Heaven	4	OTHER SYNTH
063	Sweet Keys	2	OTHER SYNTH
064	Sugar Synth	5	OTHER SYNTH
065	Ju-D Fantasy	3	OTHER SYNTH
066	Sleeper	4	OTHER SYNTH
067	Cosmic Drops	1	OTHER SYNTH
068	DoubleBubble	4	OTHER SYNTH
069	Big Planet	2	OTHER SYNTH
070	Digitaless	2	OTHER SYNTH
071	Xtatic	4	OTHER SYNTH
072	Houze Clavi	2	OTHER SYNTH
073	Tempest	2	OTHER SYNTH
074	Squeepy	1	OTHER SYNTH
075	Bustranza	2	OTHER SYNTH
076	SuperSaw	2	OTHER SYNTH
077	Saw Stack	2	OTHER SYNTH
078	Trance Keys	2	OTHER SYNTH
079	TranceSaws	4	OTHER SYNTH
080	JP OctAttack	2	OTHER SYNTH
081	DOC Stack	2	OTHER SYNTH
082	RAVtune	2	OTHER SYNTH
083	Atmorave	4	OTHER SYNTH
084	High Five	2	OTHER SYNTH
085	Steamed Sawz	2	OTHER SYNTH
086	Fragile Saws	4	OTHER SYNTH
087	Short Detune	2	OTHER SYNTH
088	Flip Pad	3	OTHER SYNTH
089	Waspy Synth	2	OTHER SYNTH
090	Memory Pluck	2	OTHER SYNTH
091	Europe Xpres	2	OTHER SYNTH
092	Wet Atax	2	OTHER SYNTH
093	Pressyn	2	OTHER SYNTH
094	Jucy Saw	3	OTHER SYNTH
095	Cue Tip	1	OTHER SYNTH
096	Potted Pixie	1	OTHER SYNTH
097	TB Sequence	1	OTHER SYNTH
098	TB Booster	2	OTHER SYNTH
099	SynOrch /Mod	6	OTHER SYNTH
100	DigimaX	2	OTHER SYNTH
101	X-Racer	2	OTHER SYNTH
102	Wire Keys	2	OTHER SYNTH
103	Metalizer	2	OTHER SYNTH
104	Fairy Factor	6	OTHER SYNTH
105	Orgaenia	5	OTHER SYNTH
106	4DaCommonMan	4	OTHER SYNTH
107	Digi-Vox	1	OTHER SYNTH
108	106 String 1	2	BRIGHT PAD
109	106 String 2	1	BRIGHT PAD
110	Giant Sweep	2	BRIGHT PAD
111	Phat Strings	4	BRIGHT PAD
112	Alpha Str 1	2	BRIGHT PAD
113	Alpha Str 2	3	BRIGHT PAD
114	Juno-60 Str	2	BRIGHT PAD
115	VintageBrite	2	BRIGHT PAD
116	Neo RS-202	2	BRIGHT PAD
117	Electric Pad	3	BRIGHT PAD
118	Stringship	4	BRIGHT PAD
119	NuSoundtrack	4	BRIGHT PAD
120	Ju-D CombPad	3	BRIGHT PAD
121	ReverseSweep	2	BRIGHT PAD
122	OB Rezo Pad	3	BRIGHT PAD
123	InfinitePhsr	6	BRIGHT PAD
124	Synthi Ens	4	BRIGHT PAD
125	In The Pass	2	BRIGHT PAD
126	Mod Dare	4	BRIGHT PAD
127	Voyager	4	BRIGHT PAD
128	Magic Wave	2	BRIGHT PAD

PR-F (Preset F Group)

No.	Name	Voices	Category
001	Liquid Air	4	BRIGHT PAD
002	New Year Day	4	BRIGHT PAD
003	Polar Morn	4	BRIGHT PAD
004	PG Chimes	4	BRIGHT PAD
005	Distant Sun	4	BRIGHT PAD
006	Ju-D Space	4	BRIGHT PAD
007	MistOver5ths	4	BRIGHT PAD
008	Filmscape	5	BRIGHT PAD
009	Cosmic Rays	4	BRIGHT PAD
010	Neuro-Drone	7	BRIGHT PAD
011	diGital Pad	4	BRIGHT PAD
012	two.two Pad	4	BRIGHT PAD
013	2.2 Pad	7	BRIGHT PAD
014	Digi-Swell	3	BRIGHT PAD
015	Angel Breath	4	BRIGHT PAD
016	XA:YTEM	4	BRIGHT PAD
017	Life-on	4	BRIGHT PAD
018	SaturnHolida	2	BRIGHT PAD
019	HugeSoundMod	4	BRIGHT PAD
020	Strangers	4	BRIGHT PAD
021	Analog Pad	3	SOFT PAD
022	JG Soft Pad	3	SOFT PAD
023	Soft Breeze	2	SOFT PAD
024	JP Strings 1	3	SOFT PAD
025	JP Strings 2	6	SOFT PAD
026	Fading Str	2	SOFT PAD
027	Straight Str	4	SOFT PAD
028	JX Strings	1	SOFT PAD
029	Super SynStr	2	SOFT PAD
030	TrnsSweepPad	6	SOFT PAD
031	JX Warm Pad	2	SOFT PAD
032	Strings Pad	2	SOFT PAD
033	Nu Epic Pad	2	SOFT PAD
034	Day After...	3	SOFT PAD
035	Syn Strings	5	SOFT PAD
036	OB Slow Str	2	SOFT PAD
037	Phaser Pad	2	SOFT PAD
038	Flange Dream	4	SOFT PAD
039	Organic Pad	3	SOFT PAD
040	Atmospherics	2	SOFT PAD
041	Magnetic 5th	2	SOFT PAD
042	Soft OB Pad	3	SOFT PAD
043	JG Hollow	4	SOFT PAD
044	Fairy's Song	4	SOFT PAD
045	Glass Organ	3	SOFT PAD
046	FreezinNight	5	SOFT PAD
047	Lostscapes	2	SOFT PAD
048	Combination	4	SOFT PAD
049	Moving Pad	8	SOFT PAD
050	Wind Pad	4	SOFT PAD
051	Angelis Pad	4	SOFT PAD
052	JupiterMoves	2	SOFT PAD
053	Reso Pad	3	SOFT PAD
054	Silk Pad	3	SOFT PAD
055	As It Is	5	SOFT PAD
056	HumanKindnes	4	SOFT PAD
057	Chariots	4	SOFT PAD
058	Terra Nostra	8	SOFT PAD
059	Cloud #9	3	SOFT PAD
060	Analog Times	4	SOFT PAD
061	Oceanic Pad	2	SOFT PAD
062	Jazz Doos	4	VOX
063	Choir Aahs 1	4	VOX
064	Choir Aahs 2	4	VOX
065	Angels Choir	4	VOX
066	Choir Ooh	4	VOX
067	Angelique	4	VOX
068	Gospel Oohs	2	VOX
069	Aerial Choir	4	VOX
070	Uhmmm	8	VOX
071	Sad ceremony	8	VOX
072	Syn Opera	4	VOX
073	3D Vox	3	VOX
074	Morning Star	3	VOX
075	BeautifulOne	4	VOX
076	Aah Vox	2	VOX
077	Synvox	2	VOX
078	FM Vox	4	VOX
079	Let's Talk!	3	VOX
080	Aerial Harp	2	PLUCKED
081	Harpiness	2	PLUCKED
082	AndreaIsBack	4	PLUCKED
083	LostParadise	5	PLUCKED
084	Ice Palace	5	PLUCKED
085	Nice Kalimba	1	PLUCKED
086	Quiet River	4	PLUCKED
087	Sitar on C	6	PLUCKED
088	Neo Sitar	1	PLUCKED
089	JG Sitar	6	PLUCKED
090	Electr Sitar	3	PLUCKED
091	SaraswatiRvr	3	PLUCKED
092	Pat is away	5	PLUCKED
093	Santur Stack	4	PLUCKED
094	Teky Drop	4	PLUCKED
095	Bosporus	2	PLUCKED
096	JG Jamisen	2	PLUCKED
097	JG Koto	8	PLUCKED
098	Monsoon	4	PLUCKED
099	LongDistance	1	ETHNIC
100	Ambi Shaku	3	ETHNIC
101	C. McFizzy	4	ETHNIC
102	Lochscape	2	ETHNIC
103	Far East	4	ETHNIC
104	X-cultural	3	ETHNIC
105	TroubadorEns	4	ETHNIC
106	JG Banjo	2	FRETTED
107	Timpani+Low	4	PERCUSSION
108	Timpani Roll	2	PERCUSSION
109	Bass Drum	4	PERCUSSION
110	Mobile Phone	1	SOUND FX
111	En-co-re	4	SOUND FX
112	Ambidextrous	2	SOUND FX
113	ElectroDisco	5	BEAT&GROOVE
114	Groove 007	4	BEAT&GROOVE
115	In Da Groove	4	BEAT&GROOVE
116	Sweet 80s	4	BEAT&GROOVE
117	Autotrance	4	BEAT&GROOVE
118	Juno Pop	4	BEAT&GROOVE
119	Krafty	3	BEAT&GROOVE
120	Compusonic 1	4	BEAT&GROOVE
121	Compusonic 2	4	BEAT&GROOVE
122	Beat (C4)	4	BEAT&GROOVE
123	Naughty Bits	4	BEAT&GROOVE
124	Magma Bubble	4	BEAT&GROOVE
125	80's Combo	3	COMBINATION
126	Analog Days	3	COMBINATION
127	Techno Craft	3	COMBINATION
128	Dusty Sndtrk	4	COMBINATION

GM (GM2 Group)

Voice: number of voice LSB: Bank Select LSB (CC#32), MSB (CC#0) is all 121 PC: Program Change Number

No.	Name	Voices	LSB	PC
001	Piano 1	4	0	1
002	Piano 1w	4	1	1
003	European Pf	4	2	1
004	Piano 2	4	0	2
005	Piano 2w	4	1	2
006	Piano 3	2	0	3
007	Piano 3w	2	1	3
008	Honky-tonk	2	0	4
009	Honky-tonk 2	2	1	4
010	E.Piano 1	3	0	5
011	St.Soft EP	3	1	5
012	FM+SA EP	2	2	5
013	60's EP	2	3	5
014	E.Piano 2	2	0	6
015	Detuned EP 2	2	1	6
016	St.FM EP	3	2	6
017	EP Legend	2	3	6
018	EP Phase	2	4	6
019	Harpsichord	1	0	7
020	Coupled Hps.	2	1	7
021	Harpsi.w	1	2	7
022	Harpsi.o	2	3	7
023	Clav.	1	0	8
024	Pulse Clav	1	1	8
025	Celesta	1	0	9
026	Glockenspiel	1	0	10
027	Music Box	1	0	11
028	Vibraphone	2	0	12
029	Vibraphone w	2	1	12
030	Marimba	1	0	13
031	Marimba w	1	1	13
032	Xylophone	1	0	14
033	Tubular-bell	1	0	15
034	Church Bell	1	1	15
035	Carillon	1	2	15
036	Santur	1	0	16
037	Organ 1	2	0	17
038	Trem. Organ	2	1	17
039	60's Organ 1	1	2	17
040	70's E.Organ	2	3	17
041	Organ 2	2	0	18
042	Chorus Or.2	2	1	18
043	Perc. Organ	2	2	18
044	Organ 3	3	0	19
045	Church Org.1	1	0	20
046	Church Org.2	2	1	20
047	Church Org.3	2	2	20
048	Reed Organ	2	0	21
049	Puff Organ	1	1	21
050	Accordion Fr	1	0	22
051	Accordion It	2	1	22
052	Harmonica	1	0	23
053	Bandoneon	2	0	24
054	Nylon-str.Gt	1	0	25
055	Ukulele	2	1	25
056	Nylon Gt.o	2	2	25
057	Nylon Gt.2	2	3	25
058	Steel-str.Gt	1	0	26
059	12-str.Gt	2	1	26
060	Mandolin	2	2	26
061	Steel + Body	2	3	26
062	Jazz Gt.	1	0	27
063	Pedal Steel	1	1	27
064	Clean Gt.	1	0	28
065	Chorus Gt.	2	1	28
066	Mid Tone GTR	1	2	28
067	Muted Gt.	1	0	29
068	Funk Pop	1	1	29
069	Funk Gt.2	2	2	29
070	Jazz Man	1	3	29
071	Overdrive Gt	2	0	30
072	Guitar Pinch	2	1	30
073	DistortionGt	2	0	31
074	Feedback Gt.	2	1	31
075	Dist Rtm GTR	2	2	31
076	Gt.Harmonics	1	0	32
077	Gt. Feedback	1	1	32
078	Acoustic Bs.	2	0	33
079	Fingered Bs.	1	0	34
080	Finger Slap	2	1	34
081	Picked Bass	2	0	35
082	Fretless Bs.	2	0	36
083	Slap Bass 1	2	0	37
084	Slap Bass 2	3	0	38
085	Synth Bass 1	2	0	39
086	SynthBass101	1	1	39
087	Acid Bass	1	2	39
088	Clavi Bass	2	3	39
089	Hammer	2	4	39
090	Synth Bass 2	3	0	40
091	Beef FM Bass	2	1	40
092	RubberBass 2	2	2	40
093	Attack Pulse	1	3	40
094	Violin	1	0	41
095	Slow Violin	1	1	41
096	Viola	1	0	42
097	Cello	1	0	43
098	Contrabass	1	0	44
099	Tremolo Str	3	0	45
100	PizzicatoStr	2	0	46
101	Harp	1	0	47
102	Yang Qin	2	1	47
103	Timpani	3	0	48
104	Orche str	2	0	49
105	Orchestra	4	1	49
106	60s Strings	4	2	49
107	Slow Strings	2	0	50
108	Syn.Strings1	3	0	51
109	Syn.Strings3	3	1	51
110	Syn.Strings2	3	0	52
111	Choir Aahs	2	0	53
112	Chorus Aahs	2	1	53
113	Voice Oohs	3	0	54
114	Humming	2	1	54
115	SynVox	3	0	55
116	Analog Voice	1	1	55
117	OrchestraHit	2	0	56
118	Bass Hit	2	1	56
119	6th Hit	2	2	56
120	Euro Hit	2	3	56
121	Trumpet	1	0	57
122	Dark Trumpet	1	1	57
123	Trombone	1	0	58
124	Trombone 2	1	1	58
125	Bright Tb	1	2	58
126	Tuba	1	0	59
127	MutedTrumpet	1	0	60
128	MuteTrumpet2	1	1	60
129	French Horns	2	0	61
130	Fr.Horn 2	1	1	61
131	Brass 1	4	0	62
132	Brass 2	4	1	62
133	Synth Brass1	3	0	63
134	Pro Brass	3	1	63
135	Oct SynBrass	3	2	63
136	Jump Brass	3	3	63
137	Synth Brass2	3	0	64
138	SynBrass sfz	2	1	64
139	Velo Brass 1	2	2	64
140	Soprano Sax	1	0	65
141	Alto Sax	1	0	66
142	Tenor Sax	2	0	67
143	Baritone Sax	2	0	68
144	Oboe	2	0	69
145	English Horn	1	0	70
146	Bassoon	1	0	71
147	Clarinet	1	0	72
148	Piccolo	1	0	73
149	Flute	1	0	74
150	Recorder	1	0	75
151	Pan Flute	1	0	76
152	Bottle Blow	2	0	77
153	Shakuhachi	2	0	78
154	Whistle	1	0	79
155	Ocarina	2	0	80
156	Square Wave	2	0	81
157	MG Square	1	1	81
158	2600 Sine	1	2	81
159	Saw Wave	2	0	82
160	OB2 Saw	1	1	82
161	Doctor Solo	2	2	82
162	Natural Lead	2	3	82
163	SequencedSaw	2	4	82
164	Syn.Calliope	2	0	83
165	Chiffer Lead	2	0	84
166	Charang	2	0	85
167	Wire Lead	2	1	85
168	Solo Vox	2	0	86
169	5th Saw Wave	2	0	87
170	Bass & Lead	2	0	88
171	Delayed Lead	2	1	88
172	Fantasia	2	0	89
173	Warm Pad	1	0	90
174	Sine Pad	2	1	90
175	Polysynth	2	0	91
176	Space Voice	4	0	92
177	Itopia	3	1	92
178	Bowed Glass	3	0	93
179	Metal Pad	3	0	94
180	Halo Pad	3	0	95
181	Sweep Pad	2	0	96
182	Ice Rain	2	0	97
183	Soundtrack	2	0	98
184	Crystal	2	0	99
185	Syn Mallet	1	1	99
186	Atmosphere	2	0	100
187	Brightness	3	0	101
188	Goblin	2	0	102
189	Echo Drops	2	0	103
190	Echo Bell	3	1	103
191	Echo Pan	2	2	103
192	Star Theme	2	0	104
193	Sitar	1	0	105
194	Sitar 2	2	1	105
195	Banjo	1	0	106
196	Shamisen	2	0	107
197	Koto	2	0	108
198	Taisho Koto	2	1	108
199	Kalimba	1	0	109
200	Bagpipe	3	0	110
201	Fiddle	2	0	111
202	Shanai	1	0	112
203	Tinkle Bell	3	0	113
204	Agogo	1	0	114
205	Steel Drums	1	0	115
206	Woodblock	1	0	116
207	Castanets	1	1	116
208	Taiko	3	0	117
209	Concert BD	4	1	117
210	Melo. Tom 1	1	0	118
211	Melo. Tom 2	1	1	118
212	Synth Drum	2	0	119
213	808 Tom	2	1	119
214	Elec Perc	1	1	119
215	Reverse Cym.	1	0	120
216	Gt.FretNoise	1	0	121
217	Gt.Cut Noise	1	1	121
218	String Slap	1	2	121
219	Breath Noise	1	0	122
220	Fl.Key Click	1	1	122
221	Seashore	2	0	123
222	Rain	2	1	123
223	Thunder	1	2	123
224	Wind	2	3	123
225	Stream	2	4	123
226	Bubble	2	5	123
227	Bird	2	0	124
228	Dog	1	1	124
229	Horse-Gallop	1	2	124
230	Bird 2	1	3	124
231	Telephone 1	1	0	125
232	Telephone 2	1	1	125
233	DoorCreaking	1	2	125
234	Door	1	3	125
235	Scratch	2	4	125
236	Wind Chimes	2	5	125
237	Helicopter	2	0	126
238	Car-Engine	1	1	126
239	Car-Stop	1	2	126
240	Car-Pass	1	3	126
241	Car-Crash	2	4	126
242	Siren	1	5	126
243	Train	1	6	126
244	Jetplane	2	7	126
245	Starship	2	8	126
246	Burst Noise	2	9	126
247	Applause	2	0	127
248	Laughing	1	1	127
249	Screaming	1	2	127
250	Punch	1	3	127
251	Heart Beat	1	4	127
252	Footsteps	1	5	127
253	Gun Shot	1	0	128
254	Machine Gun	1	1	128
255	Lasergun	1	2	128
256	Explosion	2	3	128

Rhythm Set List

PRST (Preset Group)

No.	Name
001	StandardKit1
002	StandardKit2
003	StandardKit3
004	Rock Kit 1
005	Rock Kit 2
006	Brush Jz Kit
007	Orch Kit
008	909 808 Kit
009	Limiter Kit
010	HipHop Kit 1
011	HipHop Kit 2
012	HipHop&Latin
013	Machine&Hip
014	R&B Kit
015	HiFi R&B Kit
016	Machine Kit1
017	4 Kit MIX
018	Kit-Euro:POP
019	House Kit
020	Nu Technica
021	Machine Kit2
022	ArtificalKit
023	Noise Kit
024	Kick Menu
025	Snare Menu 1
026	Snare Menu 2
027	HiHat Menu
028	Rim&Tom Menu
029	Clp&Cym&Hit
030	FX/SFX Menu
031	Percussion
032	Scrh&Voi&Wld
033	JG Break Kit
034	PassionDrums
035	Arpeggiate!?
036	De Facto Kit

USER (User Group)

No.	Name
001	StandardKit1
002	StandardKit2
003	StandardKit3
004	Rock Kit 1
005	Rock Kit 2
006	Brush Jz Kit
007	Orch Kit
008	909 808 Kit
009	Limiter Kit
010	HipHop Kit 1
011	HipHop Kit 2
012	HipHop&Latin
013	Machine&Hip
014	R&B Kit
015	HiFi R&B Kit
016	Machine Kit1
017	4 Kit MIX
018	Kit-Euro:POP
019	House Kit
020	Nu Technica
021	Machine Kit2
022	ArtificalKit
023	Noise Kit
024	Kick Menu
025	Snare Menu 1
026	Snare Menu 2
027	Percussion
028	Scrh&Voi&Wld
029	JG Break Kit
030	PassionDrums
031	Arpeggiate!?
032	De Facto Kit

GM (GM2 Group)

No.	Name
001	GM2 STANDARD
002	GM2 ROOM
003	GM2 POWER
004	GM2 ELECTRIC
005	GM2 ANALOG
006	GM2 JAZZ
007	GM2 BRUSH
008	GM2 ORCHESTRA
009	GM2 SFX

Rhythm Set List

Prst:	001	002	003	004	005	006
User:	001	002	003	004	005	006
Note No.	**StandardKit1**	**StandardKit2**	**StandardKit3**	**Rock Kit 1**	**Rock Kit 2**	**Brush Jz Kit**
28	MaxLow Kick3	Dance Kick	HipHop Kick2	R&B Kick	MaxLow Kick2	TR909 Kick 1
29	Rk CmpKick	Dry Kick 1	Frenzy Kick	Rk CmpKick	MaxLow Kick1	TR909 Kick
30	Gospel Clap	Snr Roll	Low Down Snr	Snr Roll	Pop Snr Rim	Jz Brsh Slap
31	Boys Kick	Power Kick	TR707 Kick	Bright Kick	Power Kick	Old Kick
32	Snr Roll	Amb.Snr 2	Frenzy Snr 1	Snr Roll Lp	Med Snare	Soft Jz Roll
33	HipHop Kick2	Power Kick	TR606DstKick	SH32 Kick	Bright Kick	R&B Kick
34	Reg.PHH mf	Reg.PHH	Reg.PHH	Reg.PHH	Rock CHH 2	Reg.PHH
35	Reg.Kick	Reg.Kick	Low Kick 1	Reg.Kick	Rock Kick	Jazz Kick
C2 36	Reg.Kick	Reg.Kick	Old Kick	Reg.Kick	Rk CmpKick	Jazz Kick
37	Reg.Stick	Wild Stick	Lo-Bit Stk 4	Reg.Stick	Rock Stick	Reg.Stick
38	Reg.Snr 2	Amb.Snr 1	Reg.Snr 1	Reg.Snr 2	Maple Snr	Jazz Rim
39	Reg.SnrGst	Reg.SnrGst	Amb Clap	Reg.SnrGst	Sft Snr Gst	Jz Brsh Swsh
40	Reg.Snr 1	Amb.Snr 2	Med Snare	Reg.Snr 1	Rock Snr	Jazz Snr
41	Reg.F.Tom	Reg.F.Tom	Jazz Lo Tom	Reg.F.Tom	Sharp L.Tom6	Reg.F.Tom
42	Reg.CHH 1	Reg.CHH 1	Reg.CHH 1	Reg.CHH 1	Rock CHH 1	Reg.CHH 1
43	Reg.L.Tom	Reg.L.Tom	Jazz Lo Tom	Reg.L.Tom	Sharp L.Tom5	Reg.L.Tom
44	Reg.CHH 2	Reg.CHH 2	Reg.CHH 2	Reg.CHH 2	Rock PHH	Reg.CHH 2
45	Reg.M.Tom	Reg.M.Tom	Jazz Mid Tom	Reg.M.Tom	Sharp L.Tom4	Reg.M.Tom
46	Reg.OHH	Reg.OHH	Reg.OHH	Reg.OHH	Rock OHH	Reg.OHH
47	Reg.M.Tom	Reg.M.TomFlm	Jazz Mid Tom	Reg.M.TomFlm	Sharp H.Tom3	Reg.M.Tom
C3 48	Reg.H.Tom	Reg.H.Tom	Jazz Hi Tom	Reg.H.Tom	Sharp H.Tom2	Reg.H.Tom
49	Crash Cym 1	Crash Cym 1	Crash Cym1	Crash Cym 1	Crash Cym 1	Jazz Crash
50	Reg.H.Tom	Reg.H.TomFlm	Jazz Hi Tom	Reg.H.TomFlm	Sharp H.Tom1	Reg.H.Tom
51	Rock Ride	Rock Ride	Rock Rd Edge	Rock Ride	Ride Cymbal	Jazz Ride
52	China Cymbal	China Cymbal	China Cymbal	China Cymbal	China Cymbal	China Cymbal
53	Ride Edge	Splash Cym	Rock Rd Cup	Splash Cym	Ride Bell	Ride Edge
54	Tamborine	Tamborine	Tamborine	Tamborine	Tamborine 3	Tamborine
55	Crash Cym	Rock Crash 1	Splash Cym	Rock Crash 1	Rock Crash 2	Crash Cym
56	Cowbell Low	Cowbell Hi	Cowbell	Cowbell Hi	Cowbell Mute	Cowbell Low
57	Crash Cym 2	Crash Cym 1	Rock Crash 2	Crash Cym 1	Splash Cym	Crash Cym
58	Cowbell Hi	Cowbell Low	CR78 Guiro	Cowbell Low	Cowbell	Cowbell Hi
59	Ride Bell	Rock Ride	Jazz Ride	Rock Ride	Rock Rd Cup	Ride Bell
C4 60	Conga Hi Mt	Conga Hi Mt	Bongo Hi	Conga Hi Mt	Conga Hi Mt	Conga Hi Mt
61	Conga Lo Mt	Conga Lo Mt	Bongo Lo	Conga Lo Mt	Conga Lo Mt	Conga Lo Mt
62	Conga Lo	Conga Hi Slp	Conga Hi Mt	Conga Hi Slp	Conga Slp Op	Conga Lo Slp
63	Conga Hi Op	Conga Hi Op	Conga Hi	Conga Hi Op	Conga Hi Op	Conga Hi Op
64	Conga Lo Op	Conga Lo Op	Conga Lo	Conga Lo Op	Conga Lo Op	Conga Lo Op
65	Timbale Hi	Timbale Hi	Timbale Hi	Timbale Hi	Timbale Hi	Timbale Hi
66	Timbale Low	Timbale Low	Timbale Low	Timbale Low	Timbale Low	Timbale Low
67	Agogo Bell H	Mild Agogo H	Cowbell Hi	Agogo Bell H	Agogo Bell H	Agogo Bell H
68	Agogo Bell L	Mild Agogo L	Cowbell Low	Agogo Bell L	Agogo Bell L	Agogo Bell L
69	Cabasa Up	Cabasa Up	Cabasa	Cabasa Up	Cabasa Up	Cabasa Up
70	Maracas	Maracas	Shaker	Maracas	Maracas	Maracas
71	Whistle Shrt	Whistle Shrt	Urban CHH	Whistle Shrt	Whistle Shrt	Jazz Kick
C5 72	Whistle Long	Whistle Long	Scratch 5	Whistle Long	Whistle Long	Jazz Kick
73	Guiro Short	Guiro Short	Syn Low Atk2	Guiro Short	Guiro Short	Reg.Stick
74	Guiro Long	Guiro Long	MG Zap 3	Guiro Long	Guiro Long	Jazz Rim
75	Claves	Claves	Syn Swt Atk1	Claves	Claves	Sft Snr Gst
76	Wood Block H	Wood Block H	Syn Swt Atk4	Wood Block H	Wood Block H	Jazz Snr
77	Wood Block L	Wood Block L	Bongo Hi Slp	Wood Block L	Wood Block L	Reg.F.Tom
78	Cuica Mute	Cuica Mute	Vox Hihat 2	Cuica Mute	Cuica Mute	Reg.CHH 1
79	Cuica Open	Cuica Open	Vox Hihat 3	Cuica Open	Cuica Open	Reg.L.Tom
80	Triangle Mt	Triangle Mt	Triangle 1	Triangle Mt	Triangle Mt	Reg.CHH 2
81	Triangle Op	Triangle Op	Triangle 2	Triangle Op	Triangle Op	Reg.M.Tom
82	Cabasa Cut	Cabasa Cut	Cajon	Cabasa Cut	Cabasa Cut	Reg.OHH
83	Castanet	DigiSpectrum	Cajon 3	DigiSpectrum	Wind Chime	Reg.M.TomFlm
C6 84	Bongo Hi Mt	Wind Chime	Wind Chime	Wind Chime	Dst Gtr Riff	Reg.H.Tom p
85	Bongo Hi Slp	Wood Block	SprgDrm Hit	Gtr Cut 1	Gtr Trill	Jazz Cymbal
86	Bongo Lo Slp	Cajon 2	Crotale	Gtr Cut 2	Gtr Cut 1	Reg.H.TomFlm
87	Bongo Hi Op	ConcertBD	R8 Click	Gtr Cut 3	Gtr Cut 2	Jazz Ride
88	Bongo Lo Op	R&B Kick	Metro Bell	Gtr Cut 4	Gtr Cut 3	China Cymbal
89	Cajon 1	Dry Kick 2	DR202 Beep	Rock PHH	Gtr Cut 4	Cajon 1
90	Cajon 2	Old Kick	Reverse Cym	Rock CHH 2	Dist Mute	Cajon 2
91	Cajon 3	Jazz Doos	Xylo Seq.	TablaBayam 1	Dist Chord	Cajon 3
92	Udo	Agogo Noise	Vinyl Noise	Rock CHH 1	DistGtr Nz 1	Udo
93	Udu Pot Hi	Rock OHH	Mobile Phone	TablaBayam 2	DistGtr Nz 2	Udu Pot Hi
94	Udu Pot Slp	JD Anklungs	Group Snap	Rock OHH	DistGtr Nz 3	Udu Pot Slp
95	TablaBayam 1	Rock OHH	Laser	TablaBayam 5	JD Switch	TablaBayam 1
C7 96	TablaBayam 2	Udo	Siren	Cajon 3	Cajon 3	TablaBayam 2
97	TablaBayam 3	Cajon 1	AnalogKick 3	Cajon 2	Cajon 2	TablaBayam 3
98	TablaBayam 4	Udu Pot Hi	TR909 Kick 1	Cajon 1	Cajon 1	TablaBayam 4
99	TablaBayam 5	Gospel Clap	Reg.Kick	Gospel Clap	Real Clap	TablaBayam 5
100	TablaBayam 6	Bright Clap	TR909 Snr 4	Rock Crash 2	Gospel Clap	TablaBayam 6
101	Wind Chime	Rock Rd Cup	TR808 Snr 2	Rock Rd Cup	Tibet Cymbal	Wind Chime
102	Tibet Cymbal	Cowbell	Artful Snr	Club FinSnap	Tamborine 1	Tibet Cymbal
103	Slight Bell	Crash Cym 2	Cross Snr	TR909 Snr 6	Tamborine 2	Slight Bell

Prst: User: Note No.	007 007 Orch Kit	008 008 909 808 Kit	009 009 Limiter Kit	010 010 HipHop Kit 1	011 011 HipHop Kit 2	012 012 HipHop&Latin
28	Timpani Roll	TR909 Kick 2	Skool Kick	PlasticKick2	HipHop Kick1	Syn Low Atk1
29	ConcertBD	TR909 Kick 4	HipHop Kick1	Low Kick 2	HipHop Kick2	Rk CmpKick
30	Shaker 2	Urbn Sn Roll	Dry Stick 1	Snr Roll Lp	Grit Snr 4	Grit Snr 1
31	Jngl pkt Snr	TR909 Kick 5	Low Kick 3	AnalogKick 3	FB Kick	HipHop Kick2
32	Reverse Cym	TR909 Snr 3	Dry Stick 4	GoodOld Snr5	Boys Snr 2	Jz Brsh Swsh
33	Snr Roll Lp	TR909 Kick 3	Boys Kick	Dist Kick	Low Kick 2	Pin Kick
34	Jazz Ride	TR909 PHH 2	Swallow PHH	Bang CHH	Lo-Bit PHH	Lo-Bit CHH 1
35	Timpani Roll	TR909 Kick 6	Rough Kick 3	TR707 Kick	Skool Kick	Back Kick
C2 36	ConcertBD	TR909 Kick 1	R&B Kick	Skool Kick	Low Kick 1	Back Kick
37	Hard Stick	TR909 Rim	Lo-Bit Stk 4	Lo-Bit Stk 4	Swag Rim	R&B Rim 4
38	Amb.Snr 2	TR909 Snr 1	Grit Snr 2	Ballad Snr	Back Snr	Pocket Snr
39	Gospel Clap	TR909 Clap 1	Dist Clap	Old Clap	Planet Clap	Old Clap
40	Snr Roll	TR909 Snr 2	Lo-Bit Snr 3	Lo-Bit Snr 2	R&B Snare 1	Grit Snr 1
41	Timpani	TR909 Tom L	Reg.F.Tom	TR909 Tom L	TR808 Tom L	CR78 Guiro
42	Timpani	TR909 CHH 1	Lo-Bit CHH 2	Urban CHH	Bang CHH	LowDwn CHH
43	Timpani	TR909 Tom L	Reg.F.Tom	Deep Tom L	TR808 Tom L	7th Hit
44	Timpani	TR909 PHH 1	Lo-Bit CHH 4	Swallow PHH	TR808 CHH 1	Swallow PHH
45	Timpani	TR909 Tom M	Reg.L.Tom	TR909 Tom M	TR808 Tom M	DistGtr Nz 1
46	Timpani	TR909 OHH 2	Lo-Bit OHH 2	Lo-Bit OHH 2	Reg.OHH ff	Reg.OHH
47	Timpani	TR909 Tom M	Reg.L.TomFlm	Deep Tom M	TR808 Tom M	Pick Kick
C3 48	Timpani	TR909 Tom H	Reg.H.Tom	TR909 Tom H	TR808 Tom H	Skool Kick
49	Timpani	TR909 Crash	Crash Cym 1	Crash Cym 1	TR909 Crash	Regular Rim
50	Timpani	TR909 Tom H	Reg.H.TomFlm	Deep Tom H	TR808 Tom H	Keen Snr 2
51	Timpani	TR909 Ride	Lo-Bit OHH 1	Rock Crash 1	Jazz Ride	Hip Clap
52	Timpani	TR909 Crash	TR606 Cym	Rock Rd Edge	Crash Cym 1	Boys Snr 1
53	Timpani	TR909 Ride	Jazz Ride	China Cymbal	Ride Cymbal	Funk Clap
54	Tamborine 3	CR78 Tamb	Tamborine 1	Snap	Lo-Bit Snr	Bang CHH
55	Concert Cym	TR909 Crash	TR606 OHH	Udo	Lo-Bit PHH	Real Clap
56	Cowbell Mute	JD Sm Metal	Vibraslap	Op Pandeiro	HipHop OHH	Street PHH
57	Crash Cym 1	TR909 Ride	Neck Kick	Mt Pandeiro	TR808 PHH	Gospel Clap
58	Ride Cymbal	Syn Swt Atk3	Hip PHH	Guiro Long	Euro Hit	Bang OHH
59	Crash Cym 1	TR808 Kick	TR808 Kick	Guiro Short2	Low Kick 3	Boys Kick
C4 60	Bongo Hi Op	TR808 Kick	Neck Kick	Guiro Short1	HipHop Kick1	Low Kick 1
61	Bongo Lo Op	TR808 Rim	Neck Rim	Shaker 2	R&B Rim 2	Lo-Bit Stk 1
62	Conga Hi Mt	TR808 Snr 2	Neck Snr	Shaker 1	Jngl pkt Snr	GoodOld Snr1
63	Conga Hi Op	TR808 Clap 2	R8 Clap	Bone Shake	Claptail	LoBit SnrFlm
64	Conga Lo Op	TR808 Snr 4	Boys Snr 1	Vibraslap	Dirty Snr 6	Dirty Snr 6
65	Timbale Hi	TR808 Tom L	TR808 Tom	Vox Kick 1	Scratch 1	Grit Snr 2
66	Timbale Low	TR808 CHH 1	Shaky CHH	Vox Snare 1	HipHop CHH 1	Lo-Bit CHH 1
67	Agogo Bell H	TR808 Tom L	TR808 Tom	VoxKickSweep	Scratch 1	Dirty Snr 8
68	Agogo Bell L	TR808 CHH 2	Shaky CHH	Vox Snare 2	Urban CHH	Lo-Bit CHH 1
69	Cabasa Up	TR808 Tom M	TR606 Tom L	Vox Hihat 2	Scratch 4	Dirty Snr 2
70	Maracas	TR808 OHH 1	Lo-Bit OHH 2	Vox Hihat 3	Neck OHH	Lo-Bit OHH 3
71	Whistle Shrt	TR808 Tom M	TR606 Tom L	Vox Hihat 1	Scratch 5	Lo-Bit Snr 2
C5 72	Whistle Long	TR808 Tom H	TR606 Tom H	Vox Cymbal	Syn Mtl Atk1	Cajon 3
73	Guiro Short	TR606 Cym	Crash Cym 2	Slight Bell	Crash Cym 1	TablaBayam 6
74	Guiro Long	TR808 Tom H	TR606 Tom H	Tibet Cymbal	Syn Mtl Atk2	Cajon 1
75	Claves	TR606 Cym	Jazz Ride	Wind Chime	TR909 Ride	Shaker 2
76	Wood Block H	TR606 OHH	Splash Cym	Scratch 2	DistGtr Nz 1	Cajon 2
77	Wood Block L	TR606 OHH	Rock Rd Edge	Scratch 1	Rough Kick 3	Timbale Hi
78	Cuica Mute	CR78 Tamb	Tamborine 3	Scratch 10	Reg.Snr1	Conga Lo Mt
79	Cuica Open	CR78 OHH	Guiro Long	Scratch 9	Funk Clap	Timbale Hi
80	Triangle Mt	Cowbell Mute	Gospel Clap	OrangeHit 2	Real Clap	Conga Lo Op
81	Triangle Op	CR78 OHH	Tibet Cymbal	LoFi Min Hit	Happy Clap	Timbale Low
82	Cabasa Cut	Syn Swt Atk5	Wind Chime	Thin Beef	Gospel Clap	Conga Slp Op
83	Finger Snap	TR808 OHH 2	VoxKickSweep	Dist Hit	SBF Hrd Ld 1	Timbale Low
C6 84	Wind Chime	808 Maracas	Vox Kick 2	Narrow Hit 2	MG Zap 4	Cowbell Low
85	Slight Bell	TR808 Claves	Vox Kick 1	MG Attack	Scratch 9	Triangle Mt
86	Vibraslap	Triangle Mt	Vox Snare 1	MG Zap 9	Crotale	Cowbell Hi
87	Crotale	Triangle Op	Pa!	Pa!	HipHop OHH	Triangle Op
88	Applause	Narrow Hit 2	Vox Snare 2	R8 Shaker 1	OrangeHit 3	Claves
89	Tubular Bell	Easy Gtr	Chiki!	Cabasa Down	DistGtr Nz 3	Castanet
90	Tubular Bell	MG Zap	Vox Hihat 2	Cabasa Cut	Drive Hit	Club Clap
91	Tubular Bell	Scratch 1	Vox Hihat 1	MaxLow Kick1	JD ScrapeGut	Guiro 2
92	Tubular Bell	MG Zap 1	Vox Hihat 2	MaxLow Kick2	Office Phone	Cabasa Down
93	Tubular Bell	TR606 Snr 2	Vox Cymbal	Lo-Bit Snr 1	Bird Song	Crash Cym 1
94	Tubular Bell	Synth Saw	Vox Hihat 3	LowDwn CHH	Polishing Nz	TR707 Ride
95	Tubular Bell	Digi Breath	Heartbeat	Wild Stick	Dentist Nz	TR606 Cym
C7 96	Tubular Bell	Polishing Nz	Scratch 2	MC500 Beep 1	Vinyl Noise	CR78 OHH
97	Tubular Bell	TablaBayam 7	Scratch 5	MC500 Beep 2	Lo-Bit CHH 2	Agogo Bell H
98	Tubular Bell	TablaBayam 6	Scratch 1	Gospel Clap	Dirty Snr 7	Agogo Bell L
99	Tubular Bell	Cajon 1	Scratch 4	TR606 Cym	Lo-Bit CHH 2	Wood Block H
100	Tubular Bell	Filtered Hit	Scratch 6	China Cymbal	Dirty Snr 9	Wood Block L
101	Tubular Bell	Door Creak	Mobile Phone	Rock Crash 2	Lo-Bit Snr 1	Tamborine 2
102	Church Bell	Vint.Phone	Wah Gtr Riff	CR78 OHH	Neck OHH	Whistle
103	Church Bell	AnalogKick	Wah Gtr Riff	Concert Cym	Lo-Bit Snr 2	Conga Thumb

Rhythm Set List

Prst: User: Note No.	013 013 Machine&Hip	014 014 R&B Kit	015 015 HiFi R&B Kit	016 016 Machine Kit1	017 017 4 Kit MIX	018 018 Kit-Euro:POP
28	TR909 Kick 2	70's Kick	MaxLow Kick2	TR909 Kick 2	FB Kick	TR707 Kick
29	TR909 Kick 4	Skool Kick	FB Kick	TR909 Kick 4	Pick Kick	AnalogKick 1
30	Chemical Snr	Urbn Sn Roll	Rough Kick1	Light Snr	Tiny Snare	Dirty Snr 6
31	AnalogKick 6	HipHop Kick2	MaxLow Kick1	Back Kick	TR606DstKick	FB Kick
32	TR808 Snr 1	Slap Snr 2	Rough Kick3	DR660 Snr	TR808 Snr 7	Artful Snr
33	70's Kick	Old Kick	Rk CmpKick	Pick Kick	Hippie Kick	PlasticKick2
34	TR808 PHH	HipHop CHH 2	Swallow Kick	TR808 PHH	TR606 PHH 2	Shaky CHH
35	SH32 Kick	Filtered Hit	Low Kick 1	AnalogKick 6	SH32 Kick	Swallow Kick
C2 36	Low Kick 2	Vinyl Kick	Boys Kick	Pick Kick	TR707 Kick	TR909 Kick 6
37	TR808 Rim	Dry Stick 4	Hard Stick	TR808 Rim	R&B Rim 4	R&B Rim 4
38	Lite Snare	Dirty Snr 3	GoodOld Snr3	Jngl pkt Snr	Dirty Snr 6	TR909 Snr 3
39	Short Clap	Frenzy Snr 1	GoodOld Snr4	Funk Clap	TR808 Clap 2	TR909 Clap 1
40	CR78 Snare	Boys Snr 2	GoodOld Snr2	Jngl pkt Snr	Keen Snr 1	TR909 Snr 4
41	CR78 Tamb	VoxKickSwepL	Lo-Bit Snr 1	MG Attack	TablaBayam 7	Sharp L.Tom2
42	Lite CHH	Club CHH 1	Shaky CHH	TR808 CHH 1	Lo-Bit CHH 3	TR909 CHH 1
43	CR78 Tamb	Reg.F.Tom	Slap Snr 3	MG Attack	TablaBayam 7	Sharp L.Tom1
44	Lite OHH	Neck CHH	Club CHH 2	TR808 PHH	TR606 PHH 1	Urban CHH
45	CR78 Beat	VoxKickSwepM	Keen Snr 1	MG Blip	TR909 DstTom	Sharp M.Tom
46	Lite OHH	Lo-Bit OHH 2	Reg.OHH	TR808 OHH 1	TR606 OHH	TR909 OHH 2
47	CR78 Beat	Reg.M.Tom	Keen Snr 1	MG Blip	Skool Kick	Sharp M.Tom
C3 48	CR78 Guiro	VoxKickSwepH	BmbCmp Snr	Beam HiQ	Low Kick 1	Sharp H.Tom
49	TR606 Cym	Rock Crash 1	TR606 Cym	TR606 Cym	R&B Rim 4	TR909 Crash
50	CR78 Guiro	Reg.H.Tom	GoodOld Snr6	Beam HiQ	TR909 Snr 3	Sharp H.Tom
51	Lo-Bit OHH 1	Splash Cym	TR606 Cym	Lo-Bit OHH 1	R8 Clap	TR909 Ride
52	TR606 Cym	Rock Rd Edge	White Noise	TR606 Cym	Boys Snr 1	China Cymbal
53	Lo-Bit OHH 1	Concert Cym	SBF Cym Lp	Lo-Bit OHH 1	Bongo Hi Mt	TR707 Ride
54	CR78 Tamb	Cheap Clap	CR78 Tamb	CR78 Tamb	Reg.OHH	Tamborine 3
55	TR606 Cym	Snap	SBF Bell Lp	TR606 Cym	Bongo Hi Mt	Crash Cym 1
56	JD Sm Metal	Low Down Snr	JD Sm Metal	JD Sm Metal	TR606 PHH 1	Cowbell
57	Lo-Bit OHH 1	Wood Block	TR606 Cym	Lo-Bit OHH 1	Bongo Lo Op	Rock Crash 2
58	Syn Swt Atk3	Shaku Noise	Syn Swt Atk3	Syn Swt Atk3	Reg.OHH ff	Vibraslap
59	Low Kick 3	Syn Hrd Atk1	TR909 Kick 4	AnalogKick 6	TR909 Kick 3	TR606 Cym
C4 60	Low Kick 2	Digi Loop 2	TR909 Kick 4	Back Kick	Click Kick	Bongo Lo
61	R&B Rim 2	Maracas	TR808 Rim	R8 Comp Rim	Swag Rim	Bongo Hi
62	Keen Snr 2	Cabasa Up	TR808 Snr 2	Pocket Snr	Cross Snr	Conga Hi Mt
63	TR808 Clap 2	Cabasa Down	TR808 Clap 2	TR909 Clap 2	Snap	Conga Hi
64	Back Snr	Cabasa Cut	TR808 Snr 4	Boys Snr 3	R&B Snare 1	Conga Lo
65	TR606 Tom L	Tamborine 1	TR808 Tom 4	TR606 Tom L	Vox Snare 1	Conga Efx
66	HipHop CHH 2	Tamborine 2	TR808 CHH 1	Neck CHH	Reg.CHH 2	Vox Hihat 2
67	TR606 Tom L	Tamborine 1	TR808 Tom 3	TR606 Tom	Vox Snare 2	Vox Hihat 3
68	TR808 PHH	Triangle Mt	TR808 CHH 2	Lo-Bit CHH 1	Hip PHH	CR78 Beat
69	TR606 Tom M	Triangle Op	TR808 Tom 2	TR606 Tom L	Triangle 1	Cabasa Cut
70	TR808 OHH 2	Xylo Seq.	TR808 OHH 1	Reg.OHH	Reg.OHH	Shaker 1
71	TR606 Tom M	7th Hit	TR808 Tom 1	TR606 Tom M	AnalogKick 5	Street PHH
C5 72	TR606 Tom H	Mild Hit	Scratch 3	TR606 Tom H	TR808 Kick	Scratch 7
73	Lo-Bit OHH 3	Vinyl Noise	Scratch 4	TR909 Crash	Scratch 5	Syn Low Atk2
74	TR606 Tom H	Cajon 1	Scratch 5	TR606 Tom H	Grit Snr 3	MG Zap 7
75	Lo-Bit OHH 1	Cajon 2	Scratch 6	Lite OHH	Happy Clap	Syn Swt Atk1
76	TR909 Crash	Cajon 3	Short Clap	TR909 Crash	Grit Snr 3	Syn Swt Atk4
77	Lite OHH	Conga Hi Mt	Hand Clap	Lite OHH	Snap	Conga Thumb
78	CR78 Tamb	Conga Lo Mt	R8 Clap	CR78 Tamb	CR78 CHH	Triangle 1
79	TR909 Crash	Conga Hi Slp	Cabasa Cut	TR909 Crash	Snap	Triangle 2
80	JD Sm Metal	Conga Lo Slp	R8 Shaker 2	JD Sm Metal	CR78 OHH	Drive Hit
81	Lite OHH	Conga Hi Op	Tamborine 2	Lite OHH	TablaBayam 3	Tao Hit
82	Syn Swt Atk1	Conga Lo Op	Shaker 1	Syn Swt Atk1	CR78 OHH	Filtered Hit
83	TR808 OHH 2	Conga Slp Op	Bone Shake	TR808 OHH 2	TablaBayam 3	Euro Hit
C6 84	808 Maracas	Conga Efx	Tibet Cymbal	808 Maracas	Udu Pot Hi	Wind Chime
85	TR808 Claves	Conga Thumb	Crotale	TR808 Claves	TR606 Cym	Timpani Roll
86	Triangle Mt	Vox Cymbal	Slight Bell	Triangle Mt	Udu Pot Hi	Crotale
87	Triangle Op	Chiki!	Wind Chime	Triangle Op	Lo-Bit OHH 1	R8 Click
88	OrangeHit 1	Castanet	Triangle 1	Narrow Hit 2	Crash Cym 1	Metro Bell
89	Punch	CR78 Beat	Mild CanWave	OrangeHit 1	TR707 Ride	MC500 Beep 1
90	MG Zap 1	CR78 OHH	JDStrikePole	MG Zap 4	Maracas	MC500 Beep 2
91	Scratch 1	CR78 CHH	JD Plunk	Scratch 1	TR707 Ride	Atmosphere
92	MG Zap 1	Lite OHH	Syn Swt Atk2	MG Zap 1	Scratch 6	Polishing Nz
93	TR606 Snr 2	CR78 Tamb	GtrStroke Nz	TR606 Snr 2	TR606 Cym	Car Slip
94	Synth Saw	JD Vox Noise	River	Synth Saw	SBF Nz Lp	Group Snap
95	Digi Breath	CR78 Guiro	Bubble	Digi Breath	SBF Cym Lp	Laser
C7 96	Polishing Nz	Metro Click	Train Pass	Polishing Nz	Agogo Noise	ConcertBD Lp
97	Vibraslap	Metro Bell	Dentist Nz	TablaBayam 7	TablaBayam 7	AnalogKick 3
98	Door Creak	Wind Chime	Org Leakage	TablaBayam 6	TablaBayam 6	Old Kick
99	Filtered Hit	Slight Bell	Agogo Noise	Cajon 1	Cajon 1	Reg.Kick
100	TR909 Ride	Crash Cym 1	SBF Vox Lp	Filtered Hit	Filtered Hit	TR909 Snr 4
101	EP Release	TR909 Crash	SynVox Noise	Door Creak	Laugh	TR808 Snr 2
102	Syn Low Atk1	CR78 OHH	R8 Click	Vint.Phone	JD Triangle	Artful Snr
103	AnalogKick 6	Lite OHH	Syn Swt Atk1	AnalogKick 6	AnalogKick 6	Cross Snr

Prst: / User: / Note No.	019 / 019 House Kit	020 / 020 Nu Technica	021 / 021 Machine Kit2	022 / 022 ArtificalKit	023 / 023 Noise Kit	024 / 024 Kick Menu
28	TR909 Kick 3	SH32 Kick	AnalogKick 5	TR909 Kick 2	TR909 Kick 2	-----
29	SH32 Kick	JD EML 5th	AnalogKick 6	AnalogKick 2	TR909 Kick 4	-----
30	Urbn Sn Roll	AnalogKick 6	Analog Snr 1	TR808 Snr 5	Urbn Sn Roll	-----
31	TR909 Kick 2	Low Kick 2	AnalogKick 1	TR909 Kick 3	TR909 Kick 5	-----
32	TR909 Snr 6	PlasticKick3	TR808 Snr 4	Boys Snr 3	SBF Nz Lp	-----
33	TR909 Kick 5	Low Kick 1	FB Kick	FB Kick	TR909 Kick 1	-----
34	TR909 PHH 2	TR707 Kick	TR808 PHH	TR606 Cym	Syn Swt Atk7	-----
35	TR909 Kick 4	PlasticKick3	AnalogKick 6	AnalogKick 3	SBF Vox Kick	Reg.Kick p
C2 36	TR909 Kick 4	SH32 Kick	AnalogKick 6	TVF Trigger	SBF Vox Kick	Reg.Kick f
37	TR909 Rim	TR909 Snr 5	Swag Rim	TR909 Rim	Laser	Reg.Kick ff
38	TR909 Snr 4	TR909 Snr 2	TR909 Snr 1	TR909 Snr 1	SBF Nz Lp	Reg.Kick
39	TR909 Clap 2	Flange Snr	TR707 Clap	Claptail	Train Pass	Rock Kick p
40	TR909 Snr 5	Disc Clap	Frenzy Snr 1	TR909 Snr 3	SBF Nz Lp	Rock Kick mf
41	TR909 Tom L	Dance CHH	Deep Tom L	TR909 Tom L2	Syn Swt AtkL	Rock Kick
42	TR909 CHH 2	TR606 DstCHH	TR606 CHH 1	TR909 CHH 1	Syn Swt Atk7	Jazz Kick p
43	TR909 Tom L	TR909 PHH 2	Deep Tom L	TR909 Tom L1	Syn Swt AtkL	Jazz Kick mf
44	TR909 PHH 2	TR606 PHH 2	TR606 PHH 1	TR909 PHH 1	Syn Mtl Atk2	Jazz Kick f
45	TR909 Tom M	TR909 OHH 1	Deep Tom M	TR909 Tom M2	Syn Swt AtkM	Jazz Kick
46	TR909 OHH 2	Lite OHH	TR909 OHH 2	TR909 OHH 2	SBF Nz Lp	Dry Kick 1
47	TR909 Tom M	Rock Rd Cup	Deep Tom M	TR909 Tom M1	Syn Swt AtkM	Tight Kick 1
C3 48	TR909 Tom H	Syn Hrd Atk4	Deep Tom H	TR909 Tom H2	Syn Swt AtkH	Tight Kick 2
49	TR909 Crash	MG Zap 7	Lite OHH	TR909 Crash	Digi Loop 1	Old Kick
50	TR909 Tom H	MG Zap 9	Deep Tom H	TR909 Tom H1	Syn Swt AtkH	Jz Dry Kick
51	TR909 Ride	MG Zap 8	TR808 OHH 1	TR909 Ride	Calc.Saw	Bright Kick
52	TR909 Crash	MG Zap 10	TR606 Cym	White Noise	Crotale	Dry Kick 2
53	TR909 Ride	HipHop CHH 2	TR909 Ride	CR78 Beat	Laser	Dry Kick 3
54	CR78 Tamb	Syn Swt Atk3	CR78 Tamb	Tamborine 3	MG Zap 11	Power Kick
55	MG Zap 4	Street PHH	TR606 Cym	Atmosphere	Laser	R&B Kick
56	JD Sm Metal	Syn Swt Atk6	JD Sm Metal	Cowbell Mute	MG Zap 4	Rk CmpKick
57	MG Zap 5	HipHop OHH	TR909 Ride	Digi Loop 2	Digi Loop 1	MaxLow Kick1
58	Syn Swt Atk3	TR909 OHH 2	Syn Swt Atk3	Cowbell	MG Zap 6	MaxLow Kick2
59	AnalogKick 2	TR909 R.Crsh	AnalogKick 1	Reverse Cym	Syn Low AtkL	MaxLow Kick3
C4 60	TR909 Kick 2	TR909 Crash	AnalogKick 4	AnalogKick 5	Syn Low AtkH	Dist Kick
61	TR909 Rim	Rock Crash 1	Urbn Sn Roll	Metal Vox W1	MG Attack	FB Kick
62	TR909 Snr 1	MG Zap 2	Analog Snr 2	Metal Vox W2	Syn Hrd Atk4	Rough Kick1
63	TR909 Clap 1	MG Zap 9	Dist Clap	Metal Vox W3	Train Pass	Rough Kick2
64	TR909 Snr 2	Smear Hit 2	Analog Snr 3	White Noise1	Syn Mtl Atk1	Rough Kick3
65	TR909 D.TomL	Low Square	R8 Shaker 1	White Noise2	Syn Swt AtkL	Click Kick
66	TR909 CHH 1	JD Wood Crak	TR909 CHH 2	TR606 Cym	Syn Swt Atk7	Pick Kick
67	TR909 D.TomL	Piano Atk Nz	R8 Shaker 1	MG Blip	Syn Swt AtkL	Back Kick
68	TR808 CHH 2	JD Wood Crak	TR909 PHH 2	MG Blip Rev.	Syn Mtl Atk2	Vinyl Kick
69	TR909 D.TomM	DR202 Beep	SBF Bell Lp1	Polishing Nz	Syn Swt AtkM	Low Kick 1
70	TR909 OHH 1	JD Wood Crak	TR909 OHH 2	Ice Crash	SBF Nz Lp	Boys Kick
71	TR909 D.TomM	Saw Sync B	SBF Bell Lp2	Metal Vox L2	Syn Swt AtkM	Hippie Kick
C5 72	TR909 D.TomH	DR202 Beep	SBF Bell Lp3	Thin Beef	Syn Swt AtkH	Frenzy Kick
73	TR909 Crash	OrangeHit 1	TR909 Crash	7th Hit	Digi Loop 1	PlasticKick1
74	TR909 D.TomH	E.Gtr Harm	SBF Bell Lp4	Alpha Rave	Syn Swt AtkH	Swallow Kick
75	TR909 Ride	Filtered Hit	TR909 Ride	DistTB Sqr	Calc.Saw	Neck Kick
76	TR909 Crash	Euro Hit	TR909 Crash	Finger Snap	Crotale	70's Kick
77	TR909 Ride	Jazz Tom L	TR909 Ride	Conga Slp Op	Laser	Skool Kick
78	Tamborine 2	TR909 D.TomL	CR78 Tamb	Conga Lo Op	MG Zap 11	Dance Kick
79	MG Zap 2	Jazz Tom M	MG Zap 2	Conga Hi Op	Laser	HipHop Kick1
80	Cowbell Low	TR909 D.TomM	JD Sm Metal	Triangle Mt	MG Zap 4	HipHop Kick2
81	MG Zap 6	Jazz Tom H	MG Zap 6	Triangle Op	Crotale	Pin Kick
82	Cowbell Hi	TR909 D.TomH	Syn Swt Atk1	Cabasa Cut	MG Zap 6	Low Kick 2
83	MG Zap 7	AnalogKick 3	MG Zap 7	R8 Shaker 1	Syn Low Atk2	Low Kick 3
C6 84	Conga Hi Mt	AnalogKick 5	808 Maracas	AnalogKick 1	808 Maracas	AnalogKick 1
85	Conga Lo Mt	Happy Clap	TR808 Claves	PlasticKick2	TR808 Claves	PlasticKick2
86	Conga Lo Slp	TR808 Snr 7	Triangle Mt	PlasticKick3	Triangle Mt	PlasticKick3
87	Conga Hi Op	TR808 Snr 3	Triangle Op	TR909 Kick 1	Triangle Op	TR909 Kick 1
88	Conga Lo Op	TR909 Snr 6	Euro Hit	AnalogKick 4	Udo	TR909 Kick 2
89	Timbale Hi	TR909 CHH 2	Scratch 4	AnalogKick 6	Conga Thumb	AnalogKick 2
90	Timbale Low	TR606 DstCHH	Easy Gtr	TR909 Snr 2	Easy Gtr A	TR909 Kick 3
91	Agogo Bell H	Dance CHH	Crotale	TR909 Snr 4	Digi Loop 1	AnalogKick 3
92	Agogo Bell L	TR606 PHH 2	MG Zap 4	TR909 Snr 5	MG Zap 4	AnalogKick 4
93	Cabasa Down	TR909 OHH 2	Urbn Sn Roll	TR909 Snr 6	Urbn Sn Roll	AnalogKick 5
94	Maracas	TR606 OHH	Calc.Saw	TR808 Snr 1	Calc.Saw	AnalogKick 6
95	Guiro Short	CR78 OHH	White Noise	TR808 Snr 2	White Noise	TR606DstKick
C7 96	Guiro Long	106SubOsc HD	Polishing Nz	TR808 CHH 1	Polishing Nz	TR808 Kick
97	Claves	TR909 Snr 6	TablaBayam 7	TR808 OHH 1	TablaBayam 7	TR909 Kick 4
98	Wood Block L	MG Blip	TablaBayam 6	TR909 CHH 2	Scream	TR909 Kick 5
99	Wood Block H	JD EML 5th	Cajon 1	TR909 OHH 2	Cajon 1	SH32 Kick
100	Triangle Mt	TR707 Clap	Filtered Hit	Lite CHH	Filtered Hit	TR707 Kick
101	Triangle Op	Dist Clap	Laugh	Lite OHH	Laugh	TR909 Kick 6
102	Castanet	MG Zap 5	Office Phone	TR606 Cym	ConcertBD Lp	Roll Kick
103	Whistle	MG Zap 7	AnalogKick 6	China Cymbal	Timpani Lp	-----

Rhythm Set List

Prst:	025	026	027	028	029	030
User:	025	026	---	---	---	---
Note No.	**Snare Menu 1**	**Snare Menu 2**	**HiHat Menu**	**Rim&Tom Menu**	**Clp&Cym&Hit**	**FX/SFX Menu**
28	Reg.Snr1 p	-----	-----	-----	-----	-----
	Reg.Snr1 mf	-----	-----	-----	-----	-----
29 30	Reg.Snr1 f	-----	-----	-----	-----	-----
31	Reg.Snr1 ff	-----	Reg.CHH 1 p	-----	-----	-----
32	Reg.Snr1	-----	Reg.CHH 1 mf	-----	-----	-----
33	Reg.Snr2 p	-----	Reg.CHH 1 f	-----	-----	-----
34	Reg.Snr2 f	-----	Reg.CHH 1 ff	-----	-----	-----
35	Reg.Snr2 ff	Grit Snr 1	Reg.CHH 1	Reg.Stick	Hand Clap	MG Zap 1
C2 36	Reg.Snr2	Grit Snr 2	Reg.CHH 2 mf	Soft Stick	Club Clap	MG Zap 2
37	Reg.Snr Flm	Grit Snr 3	Reg.CHH 2 f	Hard Stick	Short Clap	MG Zap 3
38	Amb.Snr1 p	Grit Snr 4	Reg.CHH 2 ff	Wild Stick	Real Clap	MG Zap 4
39	Amb.Snr1 f	LoBit SnrFlm	Reg.CHH 2	Rock Stick	Bright Clap	MG Zap 5
40	Amb.Snr1	Lo-Bit Snr 1	Rock CHH1 mf	Lo-Bit Stk 1	R8 Clap	MG Zap 6
41	Amb.Snr2 p	Lo-Bit Snr 2	Rock CHH1 f	Lo-Bit Stk 2	Gospel Clap	MG Zap 7
42	Amb.Snr2 f	Lo-Bit Snr 3	Rock CHH1	Lo-Bit Stk 3	Amb Clap	MG Zap 8
43	Piccolo Snr	BmbCmp Snr	Rock CHH2 mf	Lo-Bit Stk 4	Hip Clap	MG Zap 9
44	Maple Snr	MrchCmp Snr	Rock CHH2 f	Dry Stick 1	Funk Clap	MG Zap 10
45	Natural Snr1	Frenzy Snr 1	Rock CHH2	Dry Stick 2	Group Clap	MG Zap 11
46	Natural Snr2	Frenzy Snr 2	Rock PHH	Dry Stick 3	Claptail	MG Blip
47	Dry Snr p	Slap Snr 1	Lo-Bit CHH 1	Click Snr p	Planet Clap	Beam HiQ
C3 48	Dry Snr f	Keen Snr 1	Lo-Bit CHH 2	Click Snr f	Royal Clap	MG Attack
49	Ballad Snr	Reggae Snr	Lo-Bit CHH 3	Click Snr ff	Happy Clap	Syn Low Atk1
50	Light Snr p	DR660 Snr	Lo-Bit CHH 4	Dry Stick 4	TR808 Clap 1	Syn Low Atk2
51	Light Snr f	Pop Snr p	Lo-Bit CHH 5	Dry Stick 5	Disc Clap	Syn Hrd Atk1
52	Light Snr ff	Pop Snr f	Modern CHH	R8 Comp Rim	Dist Clap	Syn Hrd Atk2
53	Light SnrRim	Pop Snr Rim	HipHop CHH 1	R&B Rim 1	Old Clap	Syn Hrd Atk3
54	Rock Snr p	Pop Snr	Urban CHH	R&B Rim 2	TR909 Clap 1	Syn Hrd Atk4
55	Rock Snr mf	Med Snare	Bang CHH	R&B Rim 3	TR909 Clap 2	Syn Mtl Atk1
56	Rock Snr f	Jngl pkt Snr	LowDwn CHH	Neck Rim	TR808 Clap 2	Syn Mtl Atk2
57	Rock Snr	Pocket Snr	Disc CHH	Swag Rim	TR707 Clap	Syn Swt Atk1
58	Rock Rim p	Flange Snr	Club CHH 1	Step Rim	Cheap Clap	Syn Swt Atk2
59	Rock Rim mf	Slap Snr 2	HipHop CHH 2	R&B Rim 4	Crash Cym1 p	Syn Swt Atk3
C4 60	Rock Rim f	Analog Snr 1	TR909 CHH 1	Street Rim	Crash Cym1 f	Syn Swt Atk4
61	Rock Rim	Analog Snr 2	TR909 CHH 2	Regular Rim	Crash Cym 1	Syn Swt Atk5
62	Reg.SnrGst	Analog Snr 3	Shaky CHH	TR909 Rim	Crash Cym 2	Syn Swt Atk6
63	Rock Snr Gst	Jam Snr	Club CHH 2	TR808 Rim	Rock Crash 1	Syn Swt Atk7
64	Sft Snr Gst	Back Snr	TR808 CHH 1	Reg.F.Tom p	Rock Crash 2	R8 Click
65	Jazz Snr p	Keen Snr 2	TR808 CHH 2	Reg.F.Tom f	Splash Cym	MC500 Beep 1
66	Jazz Snr mf	Boys Snr 1	TR606 CHH 1	Reg.F.Tom	Jazz Crash	MC500 Beep 2
67	Jazz Snr f	Slap Snr 3	TR606 CHH 2	Reg.L.Tom p	TR909 Crash	DR202 Beep
68	Jazz Snr ff	Neck Snr	TR606 DstCHH	Reg.L.Tom f	TR606 Cym	JD Switch
69	Jazz Snr	Artful Snr	Lite CHH	Reg.L.Tom	Ride Cymbal	Cutting Nz
70	Jazz Rim p	Pin Snr	CR78 CHH	Reg.M.Tom p	Ride Bell	Vinyl Noise
71	Jazz Rim mf	Chemical Snr	DR55 CHH	Reg.M.Tom f	Rock Rd Cup	Applause
C5 72	Jazz Rim f	Sizzle Snr	Neck CHH	Reg.M.Tom	Rock Rd Edge	River
73	Jazz Rim ff	Tiny Snare	Dance CHH	Reg.H.Tom p	Jazz Ride p	Thunder
74	Jazz Rim	R&B Snare 1	Reg.PHH mf	Reg.H.Tom f	Jazz Ride mf	Monsoon
75	Jz Brsh Slap	R&B Snare 2	Reg.PHH f	Reg.H.Tom	TR909 Ride	Stream
76	Jz Brsh Swsh	Cross Snr	Reg.PHH	Reg.L.TomFlm	TR707 Ride	Bubble
77	Swish&Turn p	Grave Snr	Street PHH	Reg.M.TomFlm	China Cymbal	Bird Song
78	Swish&Turn f	Boys Snr 2	Swallow PHH	Reg.H.TomFlm	Concert Cym	Dog Bark
79	Swish&Turn	Boys Snr 3	Hip PHH	Jazz Lo Tom	ClassicHseHt	Gallop
80	Snr Roll	Low Down Snr	TR909 PHH 1	Jazz Mid Tom	OrangeHit 1	Vint.Phone
81	Snr Roll Lp	TR909 Snr 1	TR909 PHH 2	Jazz Hi Tom	OrangeHit 2	Office Phone
82	Soft Jz Roll	TR909 Snr 2	TR808 PHH	Jazz Lo Flm	OrangeHit 3	Mobile Phone
83	BrushRoll Lp	TR909 Snr 3	TR606 PHH 1	Jazz Mid Flm	7th Hit	Door Creak
C6 84	GoodOld Snr1	TR909 Snr 4	TR606 PHH 2	Jazz Hi Flm	Brassy Hit	Door Slam
85	GoodOld Snr2	TR909 Snr 5	Lo-Bit PHH	Sharp Lo Tom	Drive Hit	Car Engine
86	GoodOld Snr3	TR909 Snr 6	Lo-Bit OHH 1	Sharp Hi Tom	Filtered Hit	Car Slip
87	GoodOld Snr4	TR808 Snr 1	Rock OHH	Dry Lo Tom	Mild Hit	Car Pass
88	GoodOld Snr5	TR808 Snr 2	Reg.OHH mf	Dry Hi Tom	Narrow Hit 1	Crash Seq.
89	GoodOld Snr6	TR808 Snr 3	Reg.OHH f	TR909 Tom	Narrow Hit 2	Gun Shot
90	Dirty Snr 1	TR808 Snr 4	Reg.OHH ff	TR909 DstTom	Euro Hit	Siren
91	Dirty Snr 2	Lite Snare	Reg.OHH	TR808 Tom	Dist Hit	Train Pass
92	Dirty Snr 3	TR808 Snr 5	Lo-Bit OHH 2	TR606 Tom	Thin Beef	Airplane
93	Dirty Snr 4	TR808 Snr 6	Lo-Bit OHH 3	Deep Tom	Tao Hit	Laugh
94	Dirty Snr 5	TR808 Snr 7	Neck OHH	-----	Smear Hit 1	Scream
95	Dirty Snr 6	TR606 Snr 1	Bang OHH	-----	Philly Hit	Punch
C7 96	Dirty Snr 7	TR606 Snr 2	HipHop OHH	-----	Smear Hit 2	Heartbeat
97	Dirty Snr 8	CR78 Snare	TR909 OHH 1	-----	LoFi Min Hit	Footsteps
98	Dirty Snr 9	Urbn Sn Roll	TR909 OHH 2	-----	Orch. Hit	Machine Gun
99	Dirty Snr 10	Jngl SnrRoll	TR808 OHH 1	-----	Punch Hit	Laser
100	-----	-----	TR808 OHH 2	-----	O'Skool Hit	Thunder Lp
101	-----	-----	TR606 OHH	-----	-----	Metro Bell
102	-----	-----	Lite OHH	-----	-----	Metro Click
103	-----	-----	CR78 OHH	-----	-----	-----

Prst: User: Note No.	031 027 Percussion	032 028 Scrh&Voi&Wld	033 029 JG Break Kit	034 030 PassionDrums	035 031 Arpeggiate!?	036 032 De Facto Kit
28	-----	-----	JG Brk AKick	SH32 Kick	MaxLow Kick3	SBF Nz Lp
29	-----	-----	JG Brk BKick	JD EML 5th	Rk CmpKick	Metal Vox L2
30	-----	-----	JG Brk CKick	AnalogKick 6	Gospel Clap	Org Leakage
31	-----	-----	JG Brk DKick	Low Kick 2	Boys Kick	Gallop
32	-----	-----	JG Brk EKick	Low Kick 3	Snr Roll	Org Click 1
33	-----	-----	JG Brk FKick	Back Kick	HipHop Kick2	Thunder
34	-----	-----	JG Brk GKick	Car Pass	Reg.PHH	River
35	Finger Snap	Scratch 1	JG Brk HKick	PlasticKick3	Reg.Kick	MG Noise Fx
C2 36	Club FinSnap	Scratch 2	JG Brk IKick	TR909 Kick 4	Frenzy Kick	Heartbeat
37	Single Snap	Scratch 3	JG Brk BClap	R&B Rim 2	Vinyl Kick	Car Slip
38	Snap	Scratch 4	JG Brk ASnar	TR909 Snr 5	Boys Kick	Crash Seq.
39	Group Snap	Scratch 5	JG Brk RStck	Back Snr	Reg.Kick	Car Pass
40	Cowbell	Scratch 6	JG Brk BSnar	Boys Snr 2	Reg.Kick	Gun Shot
41	Cowbell Mute	Scratch 7	JG Brk DTomL	Reg.L.Tom	Low Kick 2	Train Pass
42	Wood Block	Scratch 8	JG Brk RCHH	TR606 CHH 2	TR909 Kick 3	Airplane
43	Claves	Scratch 9	JG Brk DTomL	Reg.M.Tom	Conga Hi Mt	Laugh
44	TR808 Claves	Scratch 10	JG Brk RCHH	Lo-Bit PHH	Jz Slap Bass	Scream
45	CR78 Beat	Vox Kick 1	JG Brk DTomM	Reg.F.Tom	Gtr Cut 3	Car Engine
46	Castanet	Vox Kick 2	JG Brk RCHH	Lite OHH	Scratch 1	Door Slam
47	Whistle	VoxKickSweep	JG Brk DTomM	Reg.M.Tom	Scratch 7	Footsteps
C3 48	Bongo Hi Mt	Vox Snare 1	JG Brk DTomH	ConcertBD	Syn Swt Atk1	Machine Gun
49	Bongo Hi Slp	Vox Snare 2	JG Brk RCrsh	Crash Cym 2	TablaBayam 1	Laser
50	Bongo Lo Slp	Vox Hihat 1	JG Brk DTomH	Reg.H.Tom	Udo	DistGtr Nz 2
51	Bongo Hi Op	Vox Hihat 2	JG Brk CRide	Jazz Ride	VoxKickSweep	Ac.Bass Nz 2
52	Bongo Lo Op	Vox Hihat 3	JG Brk JCrsh	TR909 Kick 3	Vox Hihat 1	Punch
53	Conga Hi Mt	Vox Cymbal	JG Brk CCrsh	Disc CHH	Cowbell	DistGtr Nz 1
54	Conga Lo Mt	Pa!	JG Brk Noise	CR78 Tamb	Bongo Hi Mt	DistGtr Nz 3
55	Conga Hi Slp	Chiki!	JG Brk RCup	Bang CHH	ClassicHseHt	GtrStroke Nz
56	Conga Lo Slp	Aah Formant	JG Brk LScra	ConcertBD Lp	Reg.CHH 1	E.Bass Nz 2
57	Conga Hi Op	Eeh Formant	JG Brk CCrsh	TR909 OHH 2	Org Click 1	ClassicHseHt
58	Conga Lo Op	Iih Formant	JG Brk LScra	Cowbell	Digi Breath	7th Hit
59	Conga Slp Op	Ooh Formant	JG Brk JKick	TR606 Cym	SynVox Noise	OrangeHit 3
C4 60	Conga Efx	Uuh Formant	JG Brk KKick	TR909 Crash	JP8 Pls 3 HD	OrangeHit 1
61	Conga Thumb	Metal Vox W1	JG Brk RClap	Jazz Ride	Metal Vox W1	Brassy Hit
62	Timbale 1	Metal Vox W2	JG Brk CSnar	Filtered Hit	Harmonica	Filtered Hit
63	Timbale 2	Metal Vox W3	JG Brk RStck	P5 Sqr HD	Shamisen	Mild Hit
64	Cabasa Up	JD Gamelan	JG Brk DSnar	Custm Sqr HD	Flute	Narrow Hit 1
65	Cabasa Down	JD Gamelan	JG Brk STomH	TR808 Snr 3	Dyno EP mp	Euro Hit
66	Cabasa Cut	JD Gamelan	JG Brk SCHH	Alpha Rave	SlwPick70s	Dist Hit
67	Maracas	JD Gamelan	JG Brk STomH	Jazz Crash	Cln Gtr Cut	Thin Beef
68	808 Maracas	JD Gamelan	JG Brk SPHH	Funk Clap	Hard Clav	Tao Hit
69	R8 Shaker 1	JD Gamelan	JG Brk STomH	TR909 CHH 2	TVF Trigger	Smear Hit 1
70	R8 Shaker 2	JD Gamelan	JG Brk SOHH	TR909 OHH 2	Applause	Smear Hit 2
71	Shaker 1	JD Gamelan	JG Brk STomH	Mute Tp	Euro Hit	LoFi Min Hit
C5 72	Shaker 2	JD Gamelan	JG Brk STomH	Ride Cymbal	MG Zap 1	Orch. Hit
73	Bone Shake	JD Gamelan	JG Brk RevON	MrchCmp Snr	Syn Swt Atk2	Punch Hit
74	CR78 Guiro	JD Gamelan	JG Brk STomH	Pick Kick	Syn Hrd Atk2	O'Skool Hit
75	Guiro 1	JD Gamelan	JG Brk RevOF	Lo-Bit Stk 1	GtrStroke Nz	Philly Hit
76	Guiro 2	TablaBayam 1	JG Brk ATabl	TR909 Snr 3	JDStrikePole	Scratch 2
77	Guiro Long	TablaBayam 2	JG Brk BTabl	Claptail	Vint.Phone	Scratch 3
78	TR727Quijada	TablaBayam 3	JG Brk CTabl	Siren	DistGtr Nz 1	Scratch 4
79	Vibraslap	TablaBayam 4	JG Brk DTabl	TR808 OHH 1	Reg.M.Tom	Scratch 5
80	Tamborine 1	TablaBayam 5	JG Brk SDrum	Rk CmpKick	Jazz Lo Tom	Scratch 8
81	Tamborine 2	TablaBayam 6	JG Brk AUdu	TR606 CHH 2	Reg.L.TomFlm	Scratch 9
82	Tamborine 3	TablaBayam 7	JG Brk AUdu	Syn Low Atk1	TR909 Clap 2	Scratch 10
83	CR78 Tamb	Cajon 1	JG Brk AUdu	Low White Nz	Vox Snare 1	MG Zap 1
C6 84	Timpani p	Cajon 2	JG Brk ACong	MG Zap 9	Cabasa Down	MG Zap 10
85	Timpani f	Cajon 3	JG Brk ACong	Happy Clap	SprgDrm Hit	MG Zap 2
86	Timpani Roll	Udo	JG Brk ACong	TR808 Snr 7	Digital Vox	Syn Low Atk1
87	Timpani Lp	Udu Pot Hi	JG Brk ACong	TR808 Snr 3	JD Nasty	Syn Hrd Atk2
88	ConcertBD p	Udu Pot Slp	JG Brk ACong	TR808 Snr 2	Vib Wave	Syn Hrd Atk3
89	ConcertBD f	SprgDrm Hit	JG Brk AHitL	Club CHH 2	Kalimba	Syn Hrd Atk4
90	ConcertBD ff	Op Pandeiro	JG Brk AHitL	CR78 OHH	JD Tabla	Syn Mtl Atk1
91	ConcertBD Lp	Mt Pandeiro	JG Brk BHitL	LowDwn CHH	JD Log Drum	Syn Mtl Atk2
92	ConcertBD	Cuica	JG Brk BHitL	Lo-Bit OHH 1	Bell Organ	Syn Swt Atk1
93	Triangle1 Mt	JD Anklungs	JG Brk CHitL	TR909 OHH 2	Gtr Cut 1	Syn Swt Atk2
94	Triangle1 Op	-----	JG Brk CHitU	TR606 OHH	Eeh Formant	Syn Swt Atk4
95	Triangle2 Mt	-----	JG Brk DHit	CR78 OHH	Xylo Seq.	Syn Swt Atk5
C7 96	Triangle2 Op	-----	JG Brk ESnar	106SubOsc HD	Gun Shot	Vox Kick 2
97	Tibet Cymbal	-----	JG Brk FSnar	TR909 Snr 6	TablaBayam 3	VoxKickSweep
98	Slight Bell	-----	JG Brk GSnar	AnalogKick 3	TablaBayam 4	Vox Snare 2
99	Wind Chime	-----	JG Brk ISnar	MG Bass 2	TablaBayam 5	Vox Cymbal
100	Crotale	-----	JG Brk ISnar	TR808 Clap 1	TablaBayam 6	Pa!
101	Agogo Bell H	-----	JG Brk JSnar	Dist Clap	Wind Chime	Chiki!
102	Agogo Bell L	-----	JG Brk KSnar	Super Saw	Tibet Cymbal	MC500 Beep 2
103	-----	-----	JG Brk HSnar	MG Zap 7	Slight Bell	MC500 Beep 1

GM (GM2 Group)

Note No.	001 (PC: 1) GM2 STANDARD	002 (PC: 9) GM2 ROOM	003 (PC: 17) GM2 POWER	004 (PC: 25) GM2 ELECTRIC	005 (PC: 26) GM2 ANALOG	006 (PC: 33) GM2 JAZZ
27	High-Q	High-Q	High-Q	High-Q	High-Q	High-Q
28	Slap	Slap	Slap	Slap	Slap	Slap
29	ScratchPush	ScratchPush	ScratchPush	ScratchPush	ScratchPush	ScratchPush
30	ScratchPull	ScratchPull	ScratchPull	ScratchPull	ScratchPull	ScratchPull
31	Sticks	Sticks	Sticks	Sticks	Sticks	Sticks
32	SquareClick	SquareClick	SquareClick	SquareClick	SquareClick	SquareClick
33	Mtrnm.Click	Mtrnm.Click	Mtrnm.Click	Mtrnm.Click	Mtrnm.Click	Mtrnm.Click
34	Mtrnm. Bell	Mtrnm. Bell	Mtrnm. Bell	Mtrnm. Bell	Mtrnm. Bell	Mtrnm. Bell
35	Mix Kick	Mix Kick	Mix Kick	Mix Kick	Mix Kick	Jazz Kick 2
C2 36	Standard KK1	Standard KK1	Power Kick1	Elec Kick 1	TR-808 Kick	Jazz Kick 1
37	Side Stick	Side Stick	Side Stick	Side Stick	808 Rimshot	Side Stick
38	Standard SN1	Standard SN1	Dance Snare1	Elec. Snare	808 Snare 1	Standard SN1
39	909 HandClap	909 HandClap	909 HandClap	909 HandClap	909 HandClap	909 HandClap
40	Elec Snare 3	Elec Snare 3	Elec Snare 3	Elec Snare 2	Elec Snare 3	Elec Snare 3
41	Real Tom 6	Room Tom 5	Rock Tom 4	Synth Drum 2	808 Tom 2	Real Tom 6
42	Close HiHat2	Close HiHat2	Close HiHat2	Close HiHat2	TR-808 CHH	Close HiHat2
43	Real Tom 6	Room Tom 5	Rock Tom 4	Synth Drum 2	808 Tom 2	Real Tom 6
44	Pedal HiHat2	Pedal HiHat2	Pedal HiHat2	Pedal HiHat2	808__chh	Pedal HiHat2
45	Real Tom 4	Room Tom 2	Rock Tom 4	Synth Drum 2	808 Tom 2	Real Tom 4
46	Open HiHat2	Open HiHat2	Open HiHat2	Open HiHat2	TR-808 OHH	Open HiHat2
47	Real Tom 4	Room Tom 2	Rock Tom 4	Synth Drum 2	808 Tom 2	Real Tom 4
C3 48	Real Tom 1	Room Tom 2	Rock Tom 1	Synth Drum 2	808 Tom 2	Real Tom 1
49	Crash Cym.1	Crash Cym.1	Crash Cym.1	Crash Cym.1	808 Crash	Crash Cym.1
50	Real Tom 1	Room Tom 2	Rock Tom 1	Synth Drum 2	808 Tom 2	Real Tom 1
51	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal
52	ChinaCymbal	ChinaCymbal	ChinaCymbal	ReverseCymbl	ChinaCymbal	ChinaCymbal
53	Ride Bell	Ride Bell	Ride Bell	Ride Bell	Ride Bell	Ride Bell
54	Tambourine	Tambourine	Tambourine	Tambourine	Tambourine	Tambourine
55	Splash Cym.	Splash Cym.	Splash Cym.	Splash Cym.	Splash Cym.	Splash Cym.
56	Cowbell	Cowbell	Cowbell	Cowbell	808cowbe	Cowbell
57	Crash Cym.2	Crash Cym.2	Crash Cym.2	Crash Cym.2	Crash Cym.2	Crash Cym.2
58	Vibraslap	Vibraslap	Vibraslap	Vibraslap	Vibraslap	Vibraslap
59	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal	Ride Cymbal
C4 60	Bongo High	Bongo High	Bongo High	Bongo High	Bongo High	Bongo High
61	Bongo Lo	Bongo Lo	Bongo Lo	Bongo Lo	Bongo Lo	Bongo Lo
62	Mute H.Conga	Mute H.Conga	Mute H.Conga	Mute H.Conga	808 Conga	Mute H.Conga
63	Conga Hi Opn	Conga Hi Opn	Conga Hi Opn	Conga Hi Opn	808 Conga	Conga Hi Opn
64	Conga Lo Opn	Conga Lo Opn	Conga Lo Opn	Conga Lo Opn	808 Conga	Conga Lo Opn
65	High Timbale	High Timbale	High Timbale	High Timbale	High Timbale	High Timbale
66	Low Timbale	Low Timbale	Low Timbale	Low Timbale	Low Timbale	Low Timbale
67	Agogo	Agogo	Agogo	Agogo	Agogo	Agogo
68	Agogo	Agogo	Agogo	Agogo	Agogo	Agogo
69	Cabasa	Cabasa	Cabasa	Cabasa	Cabasa	Cabasa
70	Maracas	Maracas	Maracas	Maracas	808marac	Maracas
71	ShrtWhistle	ShrtWhistle	ShrtWhistle	ShrtWhistle	ShrtWhistle	ShrtWhistle
C5 72	LongWhistle	LongWhistle	LongWhistle	LongWhistle	LongWhistle	LongWhistle
73	Short Guiro	Short Guiro	Short Guiro	Short Guiro	Short Guiro	Short Guiro
74	Long Guiro	Long Guiro	Long Guiro	Long Guiro	Long Guiro	Long Guiro
75	Claves	Claves	Claves	Claves	808clave	Claves
76	Woodblock	Woodblock	Woodblock	Woodblock	Woodblock	Woodblock
77	Woodblock	Woodblock	Woodblock	Woodblock	Woodblock	Woodblock
78	Mute Cuica	Mute Cuica	Mute Cuica	Mute Cuica	Mute Cuica	Mute Cuica
79	Open Cuica	Open Cuica	Open Cuica	Open Cuica	Open Cuica	Open Cuica
80	MuteTriangl	MuteTriangl	MuteTriangl	MuteTriangl	MuteTriangl	MuteTriangl
81	OpenTriangl	OpenTriangl	OpenTriangl	OpenTriangl	OpenTriangl	OpenTriangl
82	Shaker	Shaker	Shaker	Shaker	Shaker	Shaker
83	Jingle Bell	Jingle Bell	Jingle Bell	Jingle Bell	Jingle Bell	Jingle Bell
C6 84	Bell Tree	Bell Tree	Bell Tree	Bell Tree	Bell Tree	Bell Tree
85	Castanets	Castanets	Castanets	Castanets	Castanets	Castanets
86	Mute Surdo	Mute Surdo	Mute Surdo	Mute Surdo	Mute Surdo	Mute Surdo
87	Open Surdo	Open Surdo	Open Surdo	Open Surdo	Open Surdo	Open Surdo
88	-----	-----	-----	-----	-----	-----

PC: Program Change Number Bank Select MSB is all 120, LSB is all 0

GM (GM2 Group)

Note No.	007 (PC: 41) GM2 BRUSH	008 (PC: 49) GM2 ORCHSTRA	009 (PC: 57) GM2 SFX
27	High-Q	Close HiHat2	-----
28	Slap	Pedal HiHat2	-----
29	ScratchPush	Open HiHat2	-----
30	ScratchPull	Ride Cymbal	-----
31	Sticks	Sticks	-----
32	SquareClick	SquareClick	-----
33	Mtrnm.Click	Mtrnm.Click	-----
34	Mtrnm. Bell	Mtrnm. Bell	-----
35	Jazz Kick 2	Concert BD	-----
C2 36	Jazz Kick 1	ConcertBD Mt	-----
37	Side Stick	Side Stick	-----
38	Brush Swirl	Concert Snr	-----
39	Brush Slap1	Castanets	High-Q
40	Brush Swirl	Concert Snr	Slap
41	Real Tom 6	Timpani	ScratchPush
42	Close HiHat2	Timpani	ScratchPull
43	Real Tom 6	Timpani	Sticks
44	Pedal HiHat2	Timpani	SquareClick
45	Real Tom 4	Timpani	Mtrnm.Click
46	Open HiHat2	Timpani	Mtrnm. Bell
47	Real Tom 4	Timpani	Gt.FretNoiz
C3 48	Real Tom 1	Timpani	Gt.CutNoise
49	Crash Cym.1	Timpani	Gt.CutNoise
50	Real Tom 1	Timpani	String Slap
51	Ride Cymbal	Timpani	Fl.KeyClick
52	ChinaCymbal	Timpani	Laughing
53	Ride Bell	Timpani	Screaming
54	Tambourine	Tambourine	Punch
55	Splash Cym.	Splash Cym.	Heart Beat
56	Cowbell	Cowbell	Footsteps
57	Crash Cym.2	Con.Cymbal2	Footsteps
58	Vibraslap	Vibraslap	Applause
59	Ride Cymbal	Concert Cym.	Creaking
C4 60	Bongo High	Bongo High	Door
61	Bongo Lo	Bongo Lo	Scratch
62	Mute H.Conga	Mute H.Conga	Wind Chimes
63	Conga Hi Opn	Conga Hi Opn	Car-Engine
64	Conga Lo Opn	Conga Lo Opn	Car-Stop
65	High Timbale	High Timbale	Car-Pass
66	Low Timbale	Low Timbale	Car-Crash
67	Agogo	Agogo	Siren
68	Agogo	Agogo	Train
69	Cabasa	Cabasa	Jetplane
70	Maracas	Maracas	Helicopter
71	ShrtWhistle	ShrtWhistle	Starship
C5 72	LongWhistle	LongWhistle	Gun Shot
73	Short Guiro	Short Guiro	Machine Gun
74	Long Guiro	Long Guiro	Lasergun
75	Claves	Claves	Explosion
76	Woodblock	Woodblock	Dog
77	Woodblock	Woodblock	HorseGallop
78	Mute Cuica	Mute Cuica	Bird
79	Open Cuica	Open Cuica	Rain
80	MuteTriangl	MuteTriangl	Thunder
81	OpenTriangl	OpenTriangl	Wind
82	Shaker	Shaker	Seashore
83	Jingle Bell	Jingle Bell	Stream
C6 84	Bell Tree	Bell Tree	Bubble
85	Castanets	Castanets	-----
86	Mute Surdo	Mute Surdo	-----
87	Open Surdo	Open Surdo	-----
88	-----	Applause	-----

PC: Program Change Number Bank Select MSB is all 120, LSB is all 0

Waveform List

No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name
0001	Juno Saw HD	0081	DigiSpectrum	0161	Ac.Pno f C L	0241	3rd Perc Org	0321	Funk Gtr B	0401	ThumbMtBs fB
0002	TB303 Saw HD	0082	JD Vox Noise	0162	Ac.Pno f C R	0242	Lo-Fi Organ	0322	Funk Gtr C	0402	ThumbMtBs fC
0003	Custm Saw HD	0083	SynVox Noise	0163	JD Piano A	0243	Perc Organ 1	0323	Funk MtGtr A	0403	Fretlss Bs A
0004	Real MG Saw	0084	Shaku Noise	0164	JD Piano B	0244	Perc Organ 2	0324	Funk MtGtr B	0404	Fretlss Bs B
0005	MG Saw HD	0085	Digi Breath	0165	JD Piano C	0245	Rock Organ A	0325	Funk MtGtr C	0405	Fretlss Bs C
0006	700 Saw A	0086	Agogo Noise	0166	Piano Atk Nz	0246	Rock Organ B	0326	Easy Gtr A	0406	Fretlss SftA
0007	700 Saw B	0087	Polishing Nz	0167	MKS Piano A	0247	Rock Organ C	0327	Easy Gtr B	0407	Fretlss SftB
0008	700 Saw C	0088	Dentist Nz	0168	MKS Piano B	0248	RtryOrg1 A L	0328	Easy Gtr C	0408	Fretlss SftC
0009	OB2 Saw HD	0089	Vinyl Noise	0169	MKS Piano C	0249	RtryOrg1 A R	0329	Nasty Gtr	0409	Pick Bass 1A
0010	DigitalSawHD	0090	White Noise	0170	Stage EP p A	0250	RtryOrg1 B L	0330	Clean TC A	0410	Pick Bass 1B
0011	Calc.Saw	0091	Pink Noise	0171	Stage EP p B	0251	RtryOrg1 B R	0331	Clean TC B	0411	Pick Bass 1C
0012	Calc.Saw inv	0092	SBF Cym Lp	0172	Stage EP p C	0252	RtryOrg1 C L	0332	Clean TC C	0412	Pick Bass 2
0013	Synth Saw	0093	SBF Bell Lp	0173	Stage EP f A	0253	RtryOrg1 C R	0333	Overdrive A	0413	Slap Bass
0014	JD Syn Saw	0094	SBF Nz Lp	0174	Stage EP f B	0254	RtryOrg2 A L	0334	Overdrive C	0414	Slap +Pull 1
0015	JD Fat Saw	0095	MG Bass 1 A	0175	Stage EP f C	0255	RtryOrg2 A R	0335	Distortion A	0415	Slap +Pull 2
0016	JP-8 Saw	0096	MG Bass 1 B	0176	Tine EP p A	0256	RtryOrg2 B L	0336	Distortion B	0416	Slap +Pull 3
0017	P5 Saw HD	0097	MG Bass 1 C	0177	Tine EP p B	0257	RtryOrg2 B R	0337	Distortion C	0417	Jz Slap Bass
0018	D-50 Saw	0098	DistTB Sqr	0178	Tine EP p C	0258	RtryOrg2 C L	0338	Dist Mute A	0418	Jz Slp+Pull1
0019	Air Wave	0099	DistTBSqr Lp	0179	Tine EP mf A	0259	RtryOrg2 C R	0339	Dist Mute B	0419	Jz Slp+Pull2
0020	Unison Saw A	0100	Solid Bass	0180	Tine EP mf B	0260	LoFi RtryOrg	0340	Dist Mute C	0420	Jz Slp+Pull3
0021	Unison Saw B	0101	MG Big Bass	0181	Tine EP mf C	0261	Vint.Org 1	0341	Dist Chord A	0421	Atk Flute A
0022	Unison Saw C	0102	Jungle Bass	0182	Tine EP ff A	0262	Vint.Org 2	0342	Dist Chord B	0422	Atk Flute B
0023	Super Saw A	0103	Garage Bass	0183	Tine EP ff B	0263	Vint.Org 3	0343	Dist Chord C	0423	Atk Flute C
0024	Super Saw B	0104	106 Bs56	0184	Tine EP ff C	0264	Vint.Org 4	0344	Dst Gtr Riff	0424	Flute A
0025	Super Saw C	0105	SH-101 Bs A	0185	Dyno EP mp A	0265	R_ORGAN A	0345	Gtr Trill	0425	Flute B
0026	Trance Saw A	0106	SH-101 Bs B	0186	Dyno EP mp B	0266	Lite Dst Org	0346	Cln Gtr Cut	0426	Flute C
0027	Trance Saw B	0107	SH-101 Bs C	0187	Dyno EP mp C	0267	Positive '8	0347	Gtr Cut 1	0427	Piccolo A
0028	Trance Saw C	0108	TB Natural	0188	Dyno EP mf A	0268	Pipe Organ	0348	Gtr Cut 2	0428	Piccolo B
0029	Alpha Rave	0109	Poly Bass	0189	Dyno EP mf B	0269	Cathedrl Org	0349	Gtr Cut 3	0429	Piccolo C
0030	Saw Sync A	0110	Organ Bass	0190	Dyno EP mf C	0270	Nylon Gtr1 A	0350	Gtr Cut 4	0430	Pan Flute
0031	Saw Sync B	0111	Voco Bass	0191	Dyno EP ff A	0271	Nylon Gtr1 B	0351	Wah Gtr Riff	0431	JD Rad Hose
0032	Saw Sync C	0112	MG Bass 2 A	0192	Dyno EP ff B	0272	Nylon Gtr1 C	0352	E.Gtr Harm	0432	Shakuhachi
0033	TB Dst Saw A	0113	MG Bass 2 B	0193	Dyno EP ff C	0273	Nylon Gtr2 A	0353	JD ScrapeGut	0433	JD Fl Push
0034	TB Dst Saw B	0114	MG Bass 2 C	0194	Wurly mp A	0274	Nylon Gtr2 B	0354	Harp A	0434	Clarinet A
0035	TB Dst Saw C	0115	MG Bass 3	0195	Wurly mp B	0275	Nylon Gtr2 C	0355	Harp B	0435	Clarinet B
0036	Juno Sqr HD	0116	MG Bass 4	0196	Wurly mp C	0276	Bright Gtr A	0356	Harp C	0436	Clarinet C
0037	MG Sqr HD	0117	MC Bass A	0197	Wurly mf A	0277	Bright Gtr B	0357	Banjo A	0437	Oboe Mezzo A
0038	P5 Sqr HD	0118	MC Bass B	0198	Wurly mf B	0278	Bright Gtr C	0358	Banjo B	0438	Oboe Mezzo B
0039	OB2 Sqr HD	0119	MC Bass C	0199	Wurly mf C	0279	Ac.Gtr mp A	0359	Banjo C	0439	Oboe Mezzo C
0040	Custm Sqr HD	0120	SH-101 Bs 4A	0200	Wurly ff A	0280	Ac.Gtr mp B	0360	Sitar A	0440	Oboe Forte A
0041	106SubOsc HD	0121	SH-101 Bs 4B	0201	Wurly ff B	0281	Ac.Gtr mp C	0361	Sitar B	0441	Oboe Forte B
0042	TB303 Sqr HD	0122	SH-101 Bs 4C	0202	Wurly ff C	0282	Ac.Gtr mf A	0362	Sitar C	0442	Oboe Forte C
0043	Fat Square	0123	Atk Syn Bass	0203	Lo-Fi Wurly	0283	Ac.Gtr mf B	0363	Sitar Drn A	0443	E.Horn A
0044	JP-8 Square	0124	Warm Pad A	0204	Soft SA EP A	0284	Ac.Gtr mf C	0364	Sitar Drn B	0444	E.Horn B
0045	TB DstSqr 1A	0125	Warm Pad B	0205	Soft SA EP B	0285	Ac.Gtr ff A	0365	Sitar Drn C	0445	E.Horn C
0046	TB DstSqr 1B	0126	Warm Pad C	0206	Soft SA EP C	0286	Ac.Gtr ff B	0366	E.Sitar A	0446	Bassoon A
0047	TB DstSqr 1C	0127	OB2 Pad 1 A	0207	Hard SA EP A	0287	Ac.Gtr ff C	0367	E.Sitar B	0447	Bassoon B
0048	Dist SquareA	0128	OB2 Pad 1 B	0208	Hard SA EP B	0288	Ac.Gtr Sld A	0368	E.Sitar C	0448	Bassoon C
0049	Dist SquareB	0129	OB2 Pad 1 C	0209	Hard SA EP C	0289	Ac.Gtr Sld B	0369	Santur A	0449	Recorder A
0050	Dist SquareC	0130	OB2 Pad 2 A	0210	SA EP Ens A	0290	Ac.Gtr Sld C	0370	Santur B	0450	Recorder B
0051	Juno Pls HD	0131	OB2 Pad 2 B	0211	SA EP Ens B	0291	Ac.Gtr Hrm A	0371	Santur C	0451	Recorder C
0052	JP8 Pls 05HD	0132	OB2 Pad 2 C	0212	SA EP Ens C	0292	Ac.Gtr Hrm B	0372	Dulcimer A	0452	SopranoSax A
0053	JP8 Pls 15HD	0133	D-50 HeavenA	0213	SA E.Piano A	0293	Ac.Gtr Hrm C	0373	Dulcimer B	0453	SopranoSax B
0054	JP8 Pls 25HD	0134	D-50 HeavenB	0214	SA E.Piano B	0294	Jazz Gtr A	0374	Dulcimer C	0454	SopranoSax C
0055	JP8 Pls 30HD	0135	D-50 HeavenC	0215	SA E.Piano C	0295	Jazz Gtr B	0375	Shamisen A	0455	Alto Sax Vib
0056	JP8 Pls 40HD	0136	Syn Vox 1 A	0216	80's E.Pno 1	0296	Jazz Gtr C	0376	Shamisen B	0456	Soft Alto A
0057	JP8 Pls 45HD	0137	Syn Vox 1 B	0217	80's E.Pno 2	0297	Clean Gtr A	0377	Shamisen C	0457	Soft Alto B
0058	Syn Pulse 1	0138	Syn Vox 1 C	0218	Hard E.Pno	0298	Clean Gtr B	0378	Koto A	0458	Soft Alto C
0059	Syn Pulse 2	0139	Syn Vox 2 A	0219	Celesta	0299	Clean Gtr C	0379	Koto B	0459	Wide Sax A
0060	MG Tri HD	0140	Syn Vox 2 B	0220	Music Box	0300	Clr Mt Gtr A	0380	Koto C	0460	Wide Sax B
0061	700 Triangle	0141	Syn Vox 2 C	0221	Reg.Clav A	0301	Clr Mt Gtr B	0381	Ac.Bass A	0461	Wide Sax C
0062	Syn Triangle	0142	SBF Vox A	0222	Reg.Clav B	0302	Clr Mt Gtr C	0382	Ac.Bass B	0462	BreathySax A
0063	JD Triangle	0143	SBF Vox B	0223	Reg.Clav C	0303	E.Gtr Ld 1	0383	Ac.Bass C	0463	BreathySax B
0064	ARP Sine HD	0144	SBF Vox C	0224	Retro Clav A	0304	E.Gtr Ld 2	0384	FngrCmp Bs A	0464	BreathySax C
0065	Sine	0145	SBF Vox Lp	0225	Retro Clav B	0305	Brt Strat A	0385	FngrCmp Bs B	0465	Tenor Sax A
0066	CalcSIN2	0146	Aah Formant	0226	Retro Clav C	0306	Brt Strat B	0386	FngrCmp Bs C	0466	Tenor Sax B
0067	KG800 Lead	0147	Eeh Formant	0227	Tight Clav A	0307	Brt Strat C	0387	Finger Bs A	0467	Tenor Sax C
0068	MG Fs Lead	0148	Iih Formant	0228	Tight Clav B	0308	SlwPick70s A	0388	Finger Bs B	0468	Bari.Sax 1 A
0069	Juno Saw+Sub	0149	Ooh Formant	0229	Tight Clav C	0309	SlwPick70s B	0389	Finger Bs C	0469	Bari.Sax 1 B
0070	260 Sub OSC	0150	Uuh Formant	0230	Hard Clav A	0310	SlwPick70s C	0390	Precision Bs	0470	Bari.Sax 1 C
0071	Spct2 20	0151	Ac.Pno p A L	0231	Hard Clav B	0311	FstPick70s A	0391	Jz Bs Soft A	0471	Bari.Sax 2 A
0072	JD EML 5th	0152	Ac.Pno p A R	0232	Hard Clav C	0312	FstPick70s B	0392	Jz Bs Soft B	0472	Bari.Sax 2 B
0073	SBF Hrd Ld 1	0153	Ac.Pno p B L	0233	JD Clav	0313	FstPick70s C	0393	Jz Bs Soft C	0473	Bari.Sax 2 C
0074	SBF Hrd Ld 2	0154	Ac.Pno p B R	0234	Harpsi A	0314	Plk Strat A	0394	6-FngBsSft A	0474	Musette
0075	Digi Attack	0155	Ac.Pno p C L	0235	Harpsi B	0315	Plk Strat B	0395	6-FngBsSft B	0475	Harmonica A
0076	JD Fine Wine	0156	Ac.Pno p C R	0236	Harpsi C	0316	Plk Strat C	0396	6-FngBsSft C	0476	Harmonica B
0077	Digi Loop 1	0157	Ac.Pno f A L	0237	JD Full Draw	0317	Strat Mute A	0397	ThumbMtBs pA	0477	Harmonica C
0078	Digi Loop 2	0158	Ac.Pno f A R	0238	Org Basic 1	0318	Strat Mute B	0398	ThumbMtBs pB	0478	Blues G-harp
0079	JD MetalWind	0159	Ac.Pno f B L	0239	Org Basic 2	0319	Strat Mute C	0399	ThumbMtBs pC	0479	Flugel A
0080	Atmosphere	0160	Ac.Pno f B R	0240	Ballad Org	0320	Funk Gtr A	0400	ThumbMtBs fA	0480	Flugel B

No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name
0481	Flugel C	0561	Full Str C L	0641	JD Nasty	0721	Drive Hit	0801	Power Kick	0881	Dry Snr f
0482	Trumpet A	0562	Full Str C R	0642	Fat SparkVox	0722	Filtered Hit	0802	R&B Kick L	0882	Ballad Snr
0483	Trumpet B	0563	ChmbrStrAtkA	0643	JD Spark Vox	0723	Mild Hit	0803	R&B Kick R	0883	Light Snr p
0484	Trumpet C	0564	ChmbrStrAtkB	0644	JD Cutters	0724	Narrow Hit 1	0804	Rk CmpKick L	0884	Light Snr f
0485	Wide Tp A	0565	ChmbrStrAtkC	0645	JD Rattles	0725	Narrow Hit 2	0805	Rk CmpKick R	0885	Light Snr ff
0486	Wide Tp B	0566	ChmbrStrRevA	0646	Xylo Seq.	0726	Euro Hit	0806	MaxLow Kick1	0886	Light SnrRim
0487	Wide Tp C	0567	ChmbrStrRevB	0647	JD Tin Wave	0727	Dist Hit	0807	MaxLow Kick2	0887	Click Snr p
0488	Mute Tp A	0568	ChmbrStrRevC	0648	JD Anklungs	0728	Thin Beef	0808	MaxLow Kick3	0888	Click Snr f
0489	Mute Tp B	0569	Vls Pizz A	0649	JD Shami	0729	Tao Hit	0809	Dist Kick	0889	Click Snr ff
0490	Mute Tp C	0570	Vls Pizz B	0650	SynBassClick	0730	Smear Hit 1	0810	FB Kick	0890	Rock Snr p
0491	Trombone A	0571	Vls Pizz C	0651	JD EP Atk	0731	Smear Hit 2	0811	Rough Kick1	0891	Rock Snr mf
0492	Trombone B	0572	VlsPizzRev A	0652	EP Release	0732	LoFi Min Hit	0812	Rough Kick2	0892	Rock Snr f
0493	Trombone C	0573	VlsPizzRev B	0653	Org Click 1	0733	Orch. Hit	0813	Rough Kick3	0893	Rock Rim p
0494	Tbn mf A	0574	VlsPizzRev C	0654	Org Click 2	0734	Punch Hit	0814	Click Kick	0894	Rock Rim mf
0495	Tbn mf B	0575	Vcs Pizz A	0655	Org Click 3	0735	O'Skool Hit	0815	Pick Kick	0895	Rock Rim f
0496	Tbn mf C	0576	Vcs Pizz B	0656	Org Click 4	0736	Philly Hit	0816	Back Kick	0896	Reg.SnrGst L
0497	Tuba A	0577	Vcs Pizz C	0657	Org Click 5	0737	Metal Vox W1	0817	Vinyl Kick	0897	Reg.SnrGst R
0498	Tuba B	0578	VcsPizzRev A	0658	Org Leakage	0738	Metal Vox L1	0818	Low Kick 1	0898	Rock Snr Gst
0499	Tuba C	0579	VcsPizzRev B	0659	MG Noise Fx	0739	Metal Vox W2	0819	Boys Kick	0899	Sft Snr Gst
0500	Sft F.Horn A	0580	VcsPizzRev C	0660	JD Sm Metal	0740	Metal Vox L2	0820	Hippie Kick	0900	Jazz Snr p
0501	Sft F.Horn B	0581	PizzyTechno	0661	JDStrikePole	0741	Metal Vox W3	0821	Frenzy Kick	0901	Jazz Snr mf
0502	Sft F.Horn C	0582	Female Ahs A	0662	Ice Crash	0742	Metal Vox L3	0822	PlasticKick1	0902	Jazz Snr f
0503	French Hrn A	0583	Female Ahs B	0663	JD Switch	0743	Scratch 1	0823	Swallow Kick	0903	Jazz Snr ff
0504	French Hrn C	0584	Female Ahs C	0664	JD Tuba Slap	0744	Scratch 2	0824	Neck Kick	0904	Jazz Rim p
0505	F.HornSect A	0585	Female Oos A	0665	JD Plink	0745	Scratch 3	0825	70's Kick	0905	Jazz Rim mf
0506	F.HornSect B	0586	Female Oos B	0666	JD Plunk	0746	Scratch 4	0826	Skool Kick	0906	Jazz Rim f
0507	F.HornSect C	0587	Female Oos C	0667	TVF Trigger	0747	Scratch 5	0827	Dance Kick	0907	Jazz Rim ff
0508	Tp Section A	0588	Male Aahs A	0668	Cutting Nz	0748	Scratch 6	0828	HipHop Kick1	0908	Jz Brsh Slap
0509	Tp Section B	0589	Male Aahs B	0669	Ac.Bass Body	0749	Scratch 7	0829	HipHop Kick2	0909	Jz Brsh Swsh
0510	Tp Section C	0590	Male Aahs C	0670	Flute Pad Nz	0750	Scratch 8	0830	Pin Kick	0910	Swish&Turn p
0511	OctBrs p A L	0591	Jazz Doos A	0671	Applause	0751	Scratch 9	0831	Low Kick 2	0911	Swish&Turn f
0512	OctBrs p A R	0592	Jazz Doos B	0672	River	0752	Scratch 10	0832	Low Kick 3	0912	Snr Roll
0513	OctBrs p B L	0593	Jazz Doos C	0673	Thunder	0753	MG Zap 1	0833	AnalogKick 1	0913	Snr Roll Lp
0514	OctBrs p B R	0594	Jz Doos Lp A	0674	Monsoon	0754	MG Zap 2	0834	PlasticKick2	0914	Soft Jz Roll
0515	OctBrs p C L	0595	Jz Doos Lp B	0675	Stream	0755	MG Zap 3	0835	PlasticKick3	0915	BrushRoll Lp
0516	OctBrs p C R	0596	Jz Doos Lp C	0676	Bubble	0756	MG Zap 4	0836	TR909 Kick 1	0916	GoodOld Snr1
0517	OctBrs f A L	0597	Gospel Hum A	0677	Bird Song	0757	MG Zap 5	0837	TR909 Kick 2	0917	GoodOld Snr2
0518	OctBrs f A R	0598	Gospel Hum B	0678	Dog Bark	0758	MG Zap 6	0838	AnalogKick 2	0918	GoodOld Snr3
0519	OctBrs f B L	0599	Gospel Hum C	0679	Gallop	0759	MG Zap 7	0839	TR909 Kick 3	0919	GoodOld Snr4
0520	OctBrs f B R	0600	Soprano Vox	0680	Vint.Phone	0760	MG Zap 8	0840	AnalogKick 3	0920	GoodOld Snr5
0521	OctBrs f C L	0601	Kalimba	0681	Office Phone	0761	MG Zap 9	0841	AnalogKick 4	0921	GoodOld Snr6
0522	OctBrs f C R	0602	JD Klmba Atk	0682	Mobile Phone	0762	MG Zap 10	0842	AnalogKick 5	0922	Dirty Snr 1
0523	Brs Fall 1 L	0603	JD Wood Crak	0683	Door Creak	0763	MG Zap 11	0843	AnalogKick 6	0923	Dirty Snr 2
0524	Brs Fall 1 R	0604	JD Gamelan 1	0684	Door Slam	0764	MG Blip	0844	TR606DstKick	0924	Dirty Snr 3
0525	Brs Fall 2 L	0605	JD Gamelan 2	0685	Car Engine	0765	Beam HiQ	0845	TR808 Kick	0925	Dirty Snr 4
0526	Brs Fall 2 R	0606	JD Gamelan 3	0686	Car Slip	0766	MG Attack	0846	TR909 Kick 4	0926	Dirty Snr 5
0527	OrchUnis A L	0607	JD Log Drum	0687	Car Pass	0767	Syn Low Atk1	0847	TR909 Kick 5	0927	Dirty Snr 6
0528	OrchUnis A R	0608	JD Hooky	0688	Crash Seq.	0768	Syn Low Atk2	0848	SH32 Kick	0928	Dirty Snr 7
0529	OrchUnis B L	0609	JD Tabla	0689	Gun Shot	0769	Syn Hrd Atk1	0849	TR707 Kick	0929	Dirty Snr 8
0530	OrchUnis B R	0610	JD Xylo	0690	Siren	0770	Syn Hrd Atk2	0850	TR909 Kick 6	0930	Dirty Snr 9
0531	OrchUnis C L	0611	Marimba	0691	Train Pass	0771	Syn Hrd Atk3	0851	Roll Kick	0931	Dirty Snr 10
0532	OrchUnis C R	0612	Vibraphone	0692	Airplane	0772	Syn Hrd Atk4	0852	Reg.Snr1 p L	0932	Grit Snr 1
0533	Violin Vib A	0613	Glocken	0693	Space Voyage	0773	Syn Mtl Atk1	0853	Reg.Snr1 p R	0933	Grit Snr 2
0534	Violin Vib B	0614	Steel Drums	0694	Blow Loop	0774	Syn Mtl Atk2	0854	Reg.Snr1mf L	0934	Grit Snr 3
0535	Violin Vib C	0615	JD Pole Lp	0695	Laugh	0775	Syn Swt Atk1	0855	Reg.Snr1mf R	0935	Grit Snr 4
0536	Violin A	0616	JD BottleHit	0696	Scream	0776	Syn Swt Atk2	0856	Reg.Snr1 f L	0936	LoBit SnrFlm
0537	Violin B	0617	D-50 Bell A	0697	Punch	0777	Syn Swt Atk3	0857	Reg.Snr1 f R	0937	Lo-Bit Snr 1
0538	Violin C	0618	D-50 Bell B	0698	Heartbeat	0778	Syn Swt Atk4	0858	Reg.Snr1ff L	0938	Lo-Bit Snr 2
0539	Cello Vib A	0619	D-50 Bell C	0699	Footsteps	0779	Syn Swt Atk5	0859	Reg.Snr1ff R	0939	Lo-Bit Snr 3
0540	Cello Vib B	0620	D-50 Bell Lp	0700	Machine Gun	0780	Syn Swt Atk6	0860	Reg.Snr2 p L	0940	BmbCmp Snr
0541	Cello Vib C	0621	Agogo Bell	0701	Laser	0781	Syn Swt Atk7	0861	Reg.Snr2 p R	0941	MrchCmp Snr
0542	Cello A	0622	Finger Bell	0702	Thunder Lp	0782	Reg.Kick p L	0862	Reg.Snr2 f L	0942	Frenzy Snr 1
0543	Cello B	0623	JD Cowbell	0703	Ac.Bass Nz 1	0783	Reg.Kick p R	0863	Reg.Snr2 f R	0943	Frenzy Snr 2
0544	Cello C	0624	Tubular Bell	0704	Ac.Bass Nz 2	0784	Reg.Kick f L	0864	Reg.Snr2ff L	0944	Slap Snr 1
0545	Vl Sect. A L	0625	Church Bell	0705	E.Bass Nz 1	0785	Reg.Kick f R	0865	Reg.Snr2ff R	0945	Keen Snr 1
0546	Vl Sect. A R	0626	Mild CanWave	0706	E.Bass Nz 2	0786	Reg.Kick ffL	0866	Reg.SnrFlm L	0946	Reggae Snr
0547	Vl Sect. B L	0627	JD Crystal	0707	E.Bass Slide	0787	Reg.Kick ffR	0867	Reg.SnrFlm R	0947	DR660 Snr
0548	Vl Sect. B R	0628	Bell Organ	0708	DistGtr Nz 1	0788	Rock Kick p	0868	Amb.Snr1 p L	0948	Pop Snr p
0549	Vl Sect. C L	0629	Old DigiBell	0709	DistGtr Nz 2	0789	Rock Kick f	0869	Amb.Snr1 p R	0949	Pop Snr f
0550	Vl Sect. C R	0630	JD Bell Wave	0710	DistGtr Nz 3	0790	Jazz Kick p	0870	Amb.Snr1 f L	0950	Pop Snr Rim
0551	Vc Sect. A L	0631	TinyBellWave	0711	GtrStroke Nz	0791	Jazz Kick mf	0871	Amb.Snr1 f R	0951	Med Snare
0552	Vc Sect. A R	0632	Vib Wave	0712	Gtr Fret Nz1	0792	Jazz Kick f	0872	Amb.Snr2 p L	0952	Jngl pkt Snr
0553	Vc Sect. B L	0633	JD Brt Digi	0713	Gtr Fret Nz2	0793	Dry Kick 1	0873	Amb.Snr2 p R	0953	Pocket Snr
0554	Vc Sect. B R	0634	Med Digi	0714	Gtr Fret Nz3	0794	Tight Kick 1	0874	Amb.Snr2 f L	0954	Flange Snr
0555	Vc Sect. C L	0635	Bagpipe	0715	ClassicHseHt	0795	Tight Kick 2	0875	Amb.Snr2 f R	0955	Slap Snr 2
0556	Vc Sect. C R	0636	Digital Vox	0716	OrangeHit 1	0796	Old Kick	0876	Piccolo Snr	0956	Analog Snr 1
0557	Full Str A L	0637	JD WallyWave	0717	OrangeHit 2	0797	Jz Dry Kick	0877	Maple Snr	0957	Analog Snr 2
0558	Full Str A R	0638	JD Brusky Lp	0718	OrangeHit 3	0798	Bright Kick	0878	Natural Snr1	0958	Analog Snr 3
0559	Full Str B L	0639	Bright Form	0719	7th Hit	0799	Dry Kick 2	0879	Natural Snr2	0959	Jam Snr
0560	Full Str B R	0640	Mild Form	0720	Brassy Hit	0800	Dry Kick 3	0880	Dry Snr p	0960	Back Snr

Waveform List

No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name
0961	Keen Snr 2	1041	Sharp Hi Tom	1121	Splash Cym	1201	Cabasa Cut
0962	Boys Snr 1	1042	Dry Lo Tom	1122	Jazz Crash	1202	Maracas
0963	Slap Snr 3	1043	Dry Hi Tom	1123	TR909 Crash	1203	808 Maracas
0964	Neck Snr	1044	TR909 Tom	1124	TR606 Cym	1204	R8 Shaker 1
0965	Artful Snr	1045	TR909 DstTom	1125	Ride Cymbal	1205	R8 Shaker 2
0966	Pin Snr	1046	TR808 Tom	1126	Ride Bell	1206	Shaker 1
0967	Chemical Snr	1047	TR606 Tom	1127	Rock Rd Cup	1207	Shaker 2
0968	Sizzle Snr	1048	Deep Tom	1128	Rock Rd Edge	1208	Bone Shake
0969	Tiny Snare	1049	Reg.CHH 1 p	1129	Jazz Ride p	1209	CR78 Guiro
0970	R&B Snare 1	1050	Reg.CHH 1 mf	1130	Jazz Ride mf	1210	Guiro 1
0971	R&B Snare 2	1051	Reg.CHH 1 f	1131	TR909 Ride	1211	Guiro 2
0972	Cross Snr	1052	Reg.CHH 1 ff	1132	TR707 Ride	1212	Guiro Long
0973	Grave Snr	1053	Reg.CHH 2 mf	1133	China Cymbal	1213	TR727Quijada
0974	Boys Snr 2	1054	Reg.CHH 2 f	1134	Concert Cym	1214	Vibraslap
0975	Boys Snr 3	1055	Reg.CHH 2 ff	1135	Hand Clap	1215	Tamborine 1
0976	Low Down Snr	1056	Reg.PHH mf	1136	Club Clap	1216	Tamborine 2
0977	TR909 Snr 1	1057	Reg.PHH f	1137	Short Clap	1217	Tamborine 3
0978	TR909 Snr 2	1058	Reg.OHH mf	1138	Real Clap	1218	CR78 Tamb
0979	TR909 Snr 3	1059	Reg.OHH f	1139	Bright Clap	1219	TablaBayam 1
0980	TR909 Snr 4	1060	Reg.OHH ff	1140	R8 Clap	1220	TablaBayam 2
0981	TR909 Snr 5	1061	Rock CHH1 mf	1141	Gospel Clap	1221	TablaBayam 3
0982	TR909 Snr 6	1062	Rock CHH1 f	1142	Amb Clap	1222	TablaBayam 4
0983	TR808 Snr 1	1063	Rock CHH2 mf	1143	Hip Clap	1223	TablaBayam 5
0984	TR808 Snr 2	1064	Rock CHH2 f	1144	Funk Clap	1224	TablaBayam 6
0985	TR808 Snr 3	1065	Rock PHH	1145	Group Clap	1225	TablaBayam 7
0986	TR808 Snr 4	1066	Rock OHH	1146	Claptail	1226	Cajon 1
0987	Lite Snare	1067	Lo-Bit CHH 1	1147	Planet Clap	1227	Cajon 2
0988	TR808 Snr 5	1068	Lo-Bit CHH 2	1148	Royal Clap	1228	Cajon 3
0989	TR808 Snr 6	1069	Lo-Bit CHH 3	1149	Happy Clap	1229	Udo
0990	TR808 Snr 7	1070	Lo-Bit CHH 4	1150	TR808 Clap 1	1230	Udu Pot Hi
0991	TR606 Snr 1	1071	Lo-Bit CHH 5	1151	Disc Clap	1231	Udu Pot Slp
0992	TR606 Snr 2	1072	Modern CHH	1152	Dist Clap	1232	SprgDrm Hit
0993	CR78 Snare	1073	HipHop CHH 1	1153	Old Clap	1233	Op Pandeiro
0994	Urbn Sn Roll	1074	Urban CHH	1154	TR909 Clap 1	1234	Mt Pandeiro
0995	Jngl SnrRoll	1075	Bang CHH	1155	TR909 Clap 2	1235	Cuica
0996	Reg.Stick L	1076	LowDwn CHH	1156	TR808 Clap 2	1236	Timpani p
0997	Reg.Stick R	1077	Disc CHH	1157	TR707 Clap	1237	Timpani f
0998	Soft Stick	1078	Club CHH 1	1158	Cheap Clap	1238	Timpani Roll
0999	Hard Stick	1079	HipHop CHH 2	1159	Finger Snap	1239	Timpani Lp
1000	Wild Stick	1080	TR909 CHH 1	1160	Club FinSnap	1240	ConcertBD p
1001	Rock Stick	1081	TR909 CHH 2	1161	Single Snap	1241	ConcertBD f
1002	Lo-Bit Stk 1	1082	Shaky CHH	1162	Snap	1242	ConcertBD ff
1003	Lo-Bit Stk 2	1083	Club CHH 2	1163	Group Snap	1243	ConcertBD Lp
1004	Lo-Bit Stk 3	1084	TR808 CHH 1	1164	Vox Kick 1	1244	Triangle 1
1005	Lo-Bit Stk 4	1085	TR808 CHH 2	1165	Vox Kick 2	1245	Triangle 2
1006	Dry Stick 1	1086	TR606 CHH 1	1166	VoxKickSweep	1246	Tibet Cymbal
1007	Dry Stick 2	1087	TR606 CHH 2	1167	Vox Snare 1	1247	Slight Bell
1008	Dry Stick 3	1088	TR606 DstCHH	1168	Vox Snare 2	1248	Wind Chime
1009	Dry Stick 4	1089	Lite CHH	1169	Vox Hihat 1	1249	Crotale
1010	Dry Stick 5	1090	CR78 CHH	1170	Vox Hihat 2	1250	R8 Click
1011	R8 Comp Rim	1091	DR55 CHH	1171	Vox Hihat 3	1251	Metro Bell
1012	R&B Rim 1	1092	Neck CHH	1172	Vox Cymbal	1252	Metro Click
1013	R&B Rim 2	1093	Dance CHH	1173	Pa!	1253	MC500 Beep 1
1014	R&B Rim 3	1094	Street PHH	1174	Chiki!	1254	MC500 Beep 2
1015	Neck Rim	1095	Swallow PHH	1175	Cowbell	1255	DR202 Beep
1016	Swag Rim	1096	Hip PHH	1176	Cowbell Mute	1256	Low Saw1
1017	Step Rim	1097	TR909 PHH 1	1177	Wood Block	1257	Low Saw1 inv
1018	R&B Rim 4	1098	TR909 PHH 2	1178	Claves	1258	Low Saw2
1019	Street Rim	1099	TR808 PHH	1179	TR808 Claves	1259	Low Pulse 1
1020	Regular Rim	1100	TR606 PHH 1	1180	CR78 Beat	1260	Low Pulse 2
1021	TR909 Rim	1101	TR606 PHH 2	1181	Castanet	1261	Low Square
1022	TR808 Rim	1102	Lo-Bit PHH	1182	Whistle	1262	Low Sine
1023	Reg.F.Tom p	1103	Lo-Bit OHH 1	1183	Bongo Hi Mt	1263	Low Triangle
1024	Reg.F.Tom f	1104	Lo-Bit OHH 2	1184	Bongo Hi Slp	1264	Low White Nz
1025	Reg.L.Tom p	1105	Lo-Bit OHH 3	1185	Bongo Lo Slp	1265	Low Pink Nz
1026	Reg.L.Tom f	1106	Neck OHH	1186	Bongo Hi Op	1266	DC
1027	Reg.M.Tom p	1107	Bang OHH	1187	Bongo Lo Op	1267	Reverse Cym
1028	Reg.M.Tom f	1108	HipHop OHH	1188	Conga Hi Mt		
1029	Reg.H.Tom p	1109	TR909 OHH 1	1189	Conga Lo Mt		
1030	Reg.H.Tom f	1110	TR909 OHH 2	1190	Conga Hi Slp		
1031	Reg.L.TomFlm	1111	TR808 OHH 1	1191	Conga Lo Slp		
1032	Reg.M.TomFlm	1112	TR808 OHH 2	1192	Conga Hi Op		
1033	Reg.H.TomFlm	1113	TR606 OHH	1193	Conga Lo Op		
1034	Jazz Lo Tom	1114	Lite OHH	1194	Conga Slp Op		
1035	Jazz Mid Tom	1115	CR78 OHH	1195	Conga Efx		
1036	Jazz Hi Tom	1116	Crash Cym1 p	1196	Conga Thumb		
1037	Jazz Lo Flm	1117	Crash Cym1 f	1197	Timbale 1		
1038	Jazz Mid Flm	1118	Crash Cym 2	1198	Timbale 2		
1039	Jazz Hi Flm	1119	Rock Crash 1	1199	Cabasa Up		
1040	Sharp Lo Tom	1120	Rock Crash 2	1200	Cabasa Down		

Arpeggio Style List

PRST (Preset Group)
USER (User Group)

* *Arpeggio Styles are common between Preset Group and User Group.*

No.	Name
001	Basic 1 (A)
002	Basic 2 (A)
003	Basic 3 (A)
004	Basic 4 (A)
005	Basic 5 (A)
006	Basic 6 (A)
007	Seq Ptn 1 (2)
008	Seq Ptn 2 (2)
009	Seq Ptn 3 (2)
010	Seq Ptn 4 (2)
011	Seq Ptn 5 (2)
012	Seq Ptn 6 (3)
013	Seq Ptn 7 (3)
014	Seq Ptn 8 (3)
015	Seq Ptn 9 (3)
016	Seq Ptn 10 (3)
017	Seq Ptn 11 (3)
018	Seq Ptn 12 (3)
019	Seq Ptn 13 (3)
020	Seq Ptn 14 (3)
021	Seq Ptn 15 (3)
022	Seq Ptn 16 (3)
023	Seq Ptn 17 (3)
024	Seq Ptn 18 (4)
025	Seq Ptn 19 (4)
026	Seq Ptn 20 (4)
027	Seq Ptn 21 (4)
028	Seq Ptn 22 (4)
029	Seq Ptn 23 (4)
030	Seq Ptn 24 (4)
031	Seq Ptn 25 (4)
032	Seq Ptn 26 (4)
033	Seq Ptn 27 (4)
034	Seq Ptn 28 (4)
035	Seq Ptn 29 (4)
036	Seq Ptn 30 (5)
037	Seq Ptn 31 (5)
038	Seq Ptn 32 (6)
039	Seq Ptn 33 (P)
040	Seq Ptn 34 (P)
041	Seq Ptn 35 (P)
042	Seq Ptn 36 (P)
043	Seq Ptn 37 (P)
044	Seq Ptn 38 (P)
045	Seq Ptn 39 (P)
046	Seq Ptn 40 (P)
047	Seq Ptn 41 (P)
048	Seq Ptn 42 (P)
049	Seq Ptn 43 (P)
050	Seq Ptn 44 (P)
051	Seq Ptn 45 (P)
052	Seq Ptn 46 (P)
053	Seq Ptn 47 (P)
054	Seq Ptn 48 (P)
055	Seq Ptn 49 (P)
056	Seq Ptn 50 (P)
057	Seq Ptn 51 (P)
058	Seq Ptn 52 (P)
059	Seq Ptn 53 (P)
060	Seq Ptn 54 (P)

No.	Name
061	Seq Ptn 55 (P)
062	Seq Ptn 56 (P)
063	Seq Ptn 57 (P)
064	Seq Ptn 58 (P)
065	Seq Ptn 59 (P)
066	Seq Ptn 60 (P)
067	Bassline 1 (1)
068	Bassline 2 (1)
069	Bassline 3 (1)
070	Bassline 4 (1)
071	Bassline 5 (1)
072	Bassline 6 (1)
073	Bassline 7 (1)
074	Bassline 8 (1)
075	Bassline 9 (1)
076	Bassline 10 (2)
077	Bassline 11 (2)
078	Bassline 12 (2)
079	Bassline 13 (2)
080	Bassline 14 (2)
081	Bassline 15 (2)
082	Bassline 16 (3)
083	Bassline 17 (3)
084	Bassline 18 (3)
085	Bassline 19 (3)
086	Bassline 20 (3)
087	Bassline 21 (3)
088	Bassline 22 (P)
089	Bassline 23 (P)
090	Bassline 24 (P)
091	Bassline 25 (P)
092	Bassline 26 (P)
093	Bassline 27 (P)
094	Bassline 28 (P)
095	Bassline 29 (P)
096	Bassline 30 (P)
097	Bassline 31 (P)
098	Bassline 32 (P)
099	Bassline 33 (P)
100	Bassline 34 (P)
101	Bassline 35 (P)
102	Bassline 36 (P)
103	Bassline 37 (P)
104	Bassline 38 (P)
105	Bassline 39 (P)
106	Bassline 40 (P)
107	Bassline 41 (P)
108	Sliced 1 (A)
109	Sliced 2 (A)
110	Sliced 3 (A)
111	Sliced 4 (A)
112	Sliced 5 (A)
113	Sliced 6 (A)
114	Sliced 7 (A)
115	Sliced 8 (A)
116	Sliced 9 (A)
117	Sliced 10 (A)
118	Gtr Arp 1 (4)
119	Gtr Arp 2 (5)
120	Gtr Arp 3 (6)

No.	Name
121	Gtr Backing 1(A)
122	Gtr Backing 2(A)
123	Key Bckng1 (A)
124	Key Bckng2 (A)
125	Key Bckng3 (1-3)
126	1/1 Note Trg (1)
127	1/2 Note Trg (1)
128	1/4 Note Trg (1)

Recommended number of notes to press

(1) – (6): One to six notes

(1-3): One bass note + three-note chord

(A): As desired

(P): One note, with Motif (p. 75) set to “Phrase”

Rhythm Group List

PRST (Preset Group)
USER (User Group)

* *Rhythm Groups are common between Preset Group and User Group.*

No.	Name	Recommended Rhythm Set
001	Pop 1	PRST:001 Standard Kit1
002	Pop 2	PRST:001 Standard Kit1
003	Pop 3	PRST:001 Standard Kit1
004	Pop 4	PRST:001 Standard Kit1
005	Pop 5	PRST:001 Standard Kit1
006	Pop 6	PRST:001 Standard Kit1
007	Pop 7	PRST:002 Standard Kit2
008	Pop 8	PRST:002 Standard Kit2
009	Pop 9	PRST:002 Standard Kit2
010	Rock 1	PRST:004 Rock Kit 1
011	Rock 2	PRST:005 Rock Kit 2
012	Funk	PRST:001 Standard Kit1
013	Fusion	PRST:001 Standard Kit1
014	Jazz	PRST:006 Brush Jz Kit
015	Bossa	PRST:002 Standard Kit2
016	Hip Hop 1	PRST:012 HipHop&Latin
017	Hip Hop 2	PRST:011 HipHop Kit 2
018	R&B 1	PRST:017 4 Kit MIX
019	R&B 2	PRST:015 HiFi R&B Kit
020	Reggae	PRST:018 Kit-Euro:POP
021	Trance 1	PRST:021 Machine Kit2
022	Trance 2	PRST:018 Kit-Euro:POP
023	Techno 1	PRST:022 ArtificalKit
024	Techno 2	PRST:034 PassionDrums
025	House 1	PRST:019 House Kit
026	House 2	PRST:018 Kit-Euro:POP
027	Drum'n Bs	PRST:003 Standard Kit3
028	BreakBeats	PRST:012 HipHop&Latin
029	Disco	PRST:003 Standard Kit3
030	Nu Technica	PRST:020 Nu Technica
031	Tabla Phr	PRST:032 Scrh&Voi&Wld
032	Perc Phr	PRST:031 Percussion

Rhythm Pattern List

PRST (Preset Group)
USER (User Group)

* *Rhythm Patterns are common between Preset Group and User Group.*

* *Recommended tempo is shown in parentheses ( )*

No.	Name	Recommended Rhythm Set
001	Pop 1-1 (120)	PRST:001 Standard Kit1
002	Pop 1-2 (120)	
003	Pop 1-3 (120)	
004	Pop 1-4 (120)	
005	Pop 1-5 (120)	
006	Pop 1-6 (120)	
007	Pop 1-7 (120)	
008	Pop 1-8 (120)	
009	Pop 2-1 (120)	PRST:001 Standard Kit1
010	Pop 2-2 (120)	
011	Pop 2-3 (120)	
012	Pop 2-4 (120)	
013	Pop 2-5 (120)	
014	Pop 2-6 (120)	
015	Pop 2-7 (120)	
016	Pop 2-8 (120)	
017	Pop 3-1 (150)	PRST:001 Standard Kit1
018	Pop 3-2 (150)	
019	Pop 3-3 (150)	
020	Pop 3-4 (150)	
021	Pop 3-5 (150)	
022	Pop 3-6 (150)	
023	Pop 3-7 (150)	
024	Pop 3-8 (150)	
025	Pop 4-1 (120)	PRST:001 Standard Kit1
026	Pop 4-2 (120)	
027	Pop 4-3 (120)	
028	Pop 4-4 (120)	
029	Pop 4-5 (120)	
030	Pop 4-6 (120)	
031	Pop 4-7 (120)	
032	Pop 4-8 (120)	
033	Pop 5-1 (103)	PRST:001 Standard Kit1
034	Pop 5-2 (103)	
035	Pop 5-3 (103)	
036	Pop 5-4 (103)	
037	Pop 5-5 (103)	
038	Pop 5-6 (103)	
039	Pop 5-7 (103)	
040	Pop 5-8 (103)	
041	Pop 6-1 (096)	PRST:001 Standard Kit1
042	Pop 6-2 (096)	
043	Pop 6-3 (096)	
044	Pop 6-4 (096)	
045	Pop 6-5 (096)	
046	Pop 6-6 (096)	
047	Pop 6-7 (096)	
048	Pop 6-8 (096)	
049	Pop 7-1 (104)	PRST:002 Standard Kit2
050	Pop 7-2 (104)	
051	Pop 7-3 (104)	
052	Pop 7-4 (104)	
053	Pop 7-5 (104)	
054	Pop 7-6 (104)	
055	Pop 7-7 (104)	
056	Pop 7-8 (104)	
057	Pop 8-1 (130)	PRST:002 Standard Kit2
058	Pop 8-2 (130)	
059	Pop 8-3 (130)	
060	Pop 8-4 (130)	
061	Pop 8-5 (130)	
062	Pop 8-6 (130)	
063	Pop 8-7 (130)	
064	Pop 8-8 (130)	
065	Pop 9-1 (125)	PRST:002 Standard Kit2
066	Pop 9-2 (125)	
067	Pop 9-3 (125)	
068	Pop 9-4 (125)	
069	Pop 9-5 (125)	
070	Pop 9-6 (125)	
071	Pop 9-7 (125)	
072	Pop 9-8 (125)	
073	Rock 1-1 (120)	PRST:004 Rock Kit 1
074	Rock 1-2 (120)	
075	Rock 1-3 (120)	
076	Rock 1-4 (120)	
077	Rock 1-5 (120)	
078	Rock 1-6 (120)	
079	Rock 1-7 (120)	
080	Rock 1-8 (120)	
081	Rock 2-1 (114)	PRST:005 Rock Kit 2
082	Rock 2-2 (114)	
083	Rock 2-3 (114)	
084	Rock 2-4 (114)	
085	Rock 2-5 (114)	
086	Rock 2-6 (114)	
087	Rock 2-7 (114)	
088	Rock 2-8 (114)	
089	Funk 1 (115)	PRST:001 Standard Kit1
090	Funk 2 (115)	
091	Funk 3 (115)	
092	Funk 4 (115)	
093	Funk 5 (115)	
094	Funk 6 (115)	
095	Funk 7 (115)	
096	Funk 8 (115)	
097	Fusion 1 (100)	PRST:001 Standard Kit1
098	Fusion 2 (100)	
099	Fusion 3 (100)	
100	Fusion 4 (100)	
101	Fusion 5 (100)	
102	Fusion 6 (100)	
103	Fusion 7 (100)	
104	Fusion 8 (100)	
105	Jazz 1 (136)	PRST:006 Brush Jz Kit
106	Jazz 2 (136)	
107	Jazz 3 (136)	
108	Jazz 4 (136)	
109	Jazz 5 (136)	
110	Jazz 6 (136)	
111	Jazz 7 (136)	
112	Jazz 8 (136)	
113	Bossa 1 (160)	PRST:002 Standard Kit2
114	Bossa 2 (160)	
115	Bossa 3 (160)	
116	Bossa 4 (160)	
117	Bossa 5 (160)	
118	Bossa 6 (160)	
119	Bossa 7 (160)	
120	Bossa 8 (160)	
121	HipHop 1-A (100)	PRST:012 HipHop&Latin
122	HipHop 1-B (105)	
123	HipHop 1-C (100)	
124	HipHop 1-D (095)	
125	HipHop 1-E (092)	
126	HipHop 1-F (092)	
127	HipHop 1-G (100)	
128	HipHop 1-H (097)	
129	HipHop 2-A (095)	PRST:011 HipHop Kit 2
130	HipHop 2-B (095)	
131	HipHop 2-C (095)	
132	HipHop 2-D (095)	
133	HipHop 2-E (095)	
134	HipHop 2-F (095)	
135	HipHop 2-G (095)	
136	HipHop 2-H (095)	
137	R&B 1-A (100)	PRST:017 4 Kit MIX
138	R&B 1-B (100)	
139	R&B 1-C (100)	
140	R&B 1-D (100)	
141	R&B 1-E (100)	
142	R&B 1-F (100)	
143	R&B 1-G (100)	
144	R&B 1-H (100)	
145	R&B 2-A (140)	PRST:015 HiFi R&B Kit
146	R&B 2-B (140)	
147	R&B 2-C (140)	
148	R&B 2-D (140)	
149	R&B 2-E (140)	
150	R&B 2-F (140)	
151	R&B 2-G (140)	
152	R&B 2-H (140)	
153	Reggae A (105)	PRST:018 Kit-Euro:POP
154	Reggae B (094)	
155	Reggae C (094)	
156	Reggae D (090)	
157	Reggae E (089)	
158	Reggae F (105)	
159	Reggae G (105)	
160	Reggae H (100)	
161	Trance 1-A (140)	PRST:021 Machine Kit2
162	Trance 1-B (138)	
163	Trance 1-C (142)	
164	Trance 1-D (142)	
165	Trance 1-E (142)	
166	Trance 1-F (142)	
167	Trance 1-G (138)	
168	Trance 1-H (138)	

Rhythm Pattern List

No.	Name	Recommended Rhythm Set
169	Trance 2-A (143)	PRST:018 Kit-Euro:POP
170	Trance 2-B (142)	
171	Trance 2-C (135)	
172	Trance 2-D (140)	
173	Trance 2-E (130)	
174	Trance 2-F (154)	
175	Trance 2-G (140)	
176	Trance 2-H (138)	
177	Techno 1-A (132)	PRST:022 ArtificalKit
178	Techno 1-B (142)	
179	Techno 1-C (138)	
180	Techno 1-D (141)	
181	Techno 1-E (136)	
182	Techno 1-F (143)	
183	Techno 1-G (140)	
184	Techno 1-H (140)	
185	Techno 2-A (132)	PRST:034 PassionDrums
186	Techno 2-B (126)	
187	Techno 2-C (128)	
188	Techno 2-D (128)	
189	Techno 2-E (128)	
190	Techno 2-F (130)	
191	Techno 2-G (134)	
192	Techno 2-H (130)	
193	House 1-A (126)	PRST:019 House Kit
194	House 1-B (126)	
195	House 1-C (124)	
196	House 1-D (128)	
197	House 1-E (125)	
198	House 1-F (128)	
199	House 1-G (126)	
200	House 1-H (126)	
201	House 2-A (125)	PRST:018 Kit-Euro:POP
202	House 2-B (130)	
203	House 2-C (134)	
204	House 2-D (127)	
205	House 2-E (128)	
206	House 2-F (128)	
207	House 2-G (128)	
208	House 2-H (128)	
209	Drum'n Bs A (170)	PRST:003 Standard Kit3
210	Drum'n Bs B (160)	
211	Drum'n Bs C (180)	
212	Drum'n Bs D (160)	
213	Drum'n Bs E (170)	
214	Drum'n Bs F (170)	
215	Drum'n Bs G (170)	
216	Drum'n Bs H (170)	
217	BrkBts A (130)	PRST:012 HipHop&Latin
218	BrkBts B (130)	
219	BrkBts C (130)	
220	BrkBts D (130)	
221	BrkBts E (130)	
222	BrkBts F (130)	
223	BrkBts G (130)	
224	BrkBts H (130)	
225	Disco A (125)	PRST:003 Standard Kit3
226	Disco B (125)	
227	Disco C (125)	
228	Disco D (120)	
229	Disco E (130)	
230	Disco F (124)	
231	Disco G (125)	
232	Disco H (125)	

No.	Name	Recommended Rhythm Set
233	NuTeknica A (110)	PRST:020 Nu Technica
234	NuTeknica B (110)	
235	NuTeknica C (110)	
236	NuTeknica D (110)	
237	NuTeknica E (110)	
238	NuTeknica F (110)	
239	NuTeknica G (110)	
240	NuTeknica H (110)	
241	Tabla Phr A (120)	PRST:032 Scrh&Voi&Wld
242	Tabla Phr B (120)	
243	Tabla Phr C (120)	
244	Tabla Phr D (120)	
245	Tabla Phr E (120)	
246	Tabla Phr F (120)	
247	Tabla Phr G (120)	
248	Tabla Phr H (120)	
249	Perc Phr A (120)	PRST:031 Percussion
250	Perc Phr B (120)	
251	Perc Phr C (120)	
252	Perc Phr D (120)	
253	Perc Phr E (120)	
254	Perc Phr F (120)	
255	Perc Phr G (120)	
256	Perc Phr H (120)	

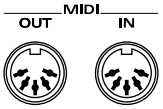
About MIDI

MIDI (Musical Instruments Digital Interface) is a standard specification that allows musical data to be exchanged between electronic musical instruments and computers. MIDI With a MIDI cable connecting MIDI devices that are equipped with MIDI connectors, you can play multiple instruments with a single keyboard, have multiple MIDI instruments perform in ensemble, program the settings to change automatically to match the performance as the song progresses, and more.

If you mainly use the JUNO-G as a standalone keyboard instrument, you may really not need to know much at all about MIDI. However, the following MIDI-related information is provided so you can play the JUNO-G using an external MIDI device, or master other advanced techniques.

About MIDI Connectors

The JUNO-G is equipped with the three types of MIDI connectors, each which works differently.



MIDI IN Connector

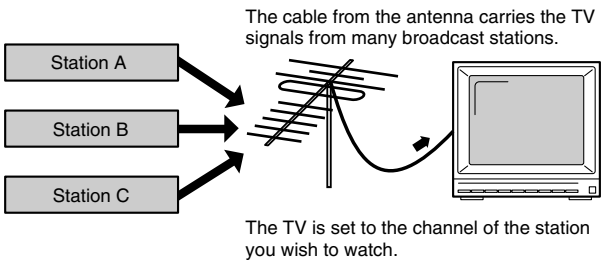
This connector receives MIDI messages that are transmitted from external MIDI devices. The JUNO-G can receive these messages to play notes or select sounds, etc.

MIDI OUT Connector

This connector transmits MIDI messages to external MIDI devices. The JUNO-G's MIDI OUT connector is used for sending the performance data of the keyboard controller section as well as data used for saving various settings.

MIDI Channels and Multi-timbral Sound Generators

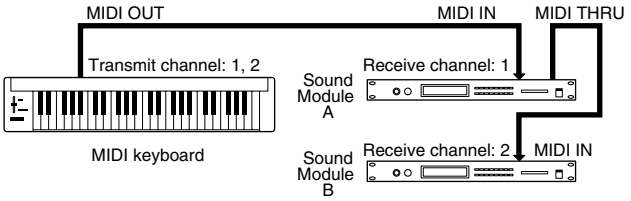
MIDI transmits many types of data over a single MIDI cable. This is made possible by the concept of **MIDI channels**. MIDI channels allow messages intended for a given instrument to be distinguished from messages intended for another instrument. In some ways, MIDI channels are similar to television channels. By changing the channel on a television set, you can view the programs that are being broadcast by different stations. In the same way, MIDI also allows a device to select the information intended for that device out of the variety of information that is being transmitted to it.



MIDI uses sixteen channels; 1 through 16. Set the receiving device so that it will receive only the channel that it needs to receive.

Example:

Set the JUNO-G to send Channel 1 and Channel 2, then set sound module A to receive only Channel 1 and sound module B only Channel 2. With this setup, you can get an ensemble performance, with, for example, a guitar sound from sound module A and bass from sound module B.



When used as a sound module, the JUNO-G can receive on up to sixteen MIDI channels. Sound modules like the JUNO-G which can receive multiple MIDI channels simultaneously to play different sounds on each channel are called multi-timbral sound modules.

General MIDI

General MIDI is a set of recommendations which seeks to provide a way to go beyond the limitations of proprietary designs, and standardize the MIDI capabilities of sound generating devices. Sound generating devices and music files that meet the General MIDI standard bear the General MIDI logo (GENERAL MIDI). Music files bearing the General MIDI logo can be played back using any General MIDI sound generating unit to produce essentially the same musical performance.

General MIDI 2

The upwardly compatible General MIDI 2 (GENERAL MIDI2) recommendations pick up where the original General MIDI left off, offering enhanced expressive capabilities, and even greater compatibility. Issues that were not covered by the original General MIDI recommendations, such as how sounds are to be edited, and how effects should be handled, have now been precisely defined. Moreover, the available sounds have been expanded. General MIDI 2 compliant sound generators are capable of reliably playing back music files that carry either the General MIDI or General MIDI 2 logo.

In some cases, the conventional form of General MIDI, which does not include the new enhancements, is referred to as "General MIDI 1" as a way of distinguishing it from General MIDI 2.

MIDI Implementation

Model: JUNO-G
Date: Feb. 1, 2006
Version: 1.00

1. Data Reception (Sound Generator Section)

■Channel Voice Messages

* Not received in Performance mode when the Receive Switch parameter (PERFORM/MIDI) is OFF.

●Note off

Status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H
n = MIDI channel number:		0H - FH (ch.1 - 16)
kk = note number:		00H - 7FH (0 - 127)
vv = note off velocity:		00H - 7FH (0 - 127)

* Not received when the Envelope Mode parameter (PATCH/CONTROL and RHYTHM/COMMON) is NO-SUS.

●Note on

Status	2nd byte	3rd byte
9nH	kkH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
kk = note number:		00H - 7FH (0 - 127)
vv = note on velocity:		01H - 7FH (1 - 127)

●Polyphonic Key Pressure

Status	2nd byte	3rd byte
AnH	kkH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
kk = note number:		00H - 7FH (0 - 127)
vv = Polyphonic Key Pressure:		00H - 7FH (0 - 127)

* Not received in Performance mode when the Receive Poly Key Pressure parameter (PERFORM/MIDI) is OFF.

●Control Change

* If the corresponding Controller number is selected for the Patch Control Source 1, 2, 3 or 4 parameter (PATCH/CONTROL/CTRL1-4), the corresponding effect will occur.
* If a Controller number that corresponds to the System Control Source 1, 2, 3 or 4 parameter (SYSTEM/CTRL) is selected, the specified effect will apply if Patch Control Source 1, 2, 3 or 4 parameter (PATCH/CONTROL/CTRL1-4) is set to SYS-CTRL1, SYS-CTRL2, SYS-CTRL3 or SYS-CTRL4.

❍Bank Select (Controller number 0, 32)

Status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH
n = MIDI channel number:		0H - FH (ch.1 - 16)
mm, ll = Bank number:		00 00H - 7F 7FH (bank.1 - bank.16384)

* Not received in Performance mode when the Receive Bank Select (PERFORM/MIDI) is OFF.
* The Performances, Patches, and Rhythms corresponding to each Bank Select are as follows.
* The SRX series corresponding to each Bank Select are to see the SRX series owner's manual.

BANK SELECT MSB	LSB	PROGRAM NUMBER	GROUP	NUMBER
000		001 - 128	GM Patch	001 - 256
:				
063		001 - 128	GM Patch	001 - 256
085	000	001 - 064	User Performance	001 - 064
	032	001 - 064	Card Performance	001 - 064
	064	001 - 064	Preset Performance	001 - 064
086	000	001 - 032	User Rhythm	001 - 032
	032	001 - 032	Card Rhythm	001 - 032
	064	001 - 036	Preset Rhythm	001 - 036
087	000	001 - 128	User Patch	001 - 128
	001	001 - 128	User Patch	129 - 256
	032	001 - 128	Card Patch	001 - 128
	033	001 - 128	Card Patch	129 - 256
	064	001 - 128	Preset Patch A	001 - 128
	065	001 - 128	Preset Patch B	001 - 128
	:		:	
092	000 -	001 -	SRX Rhythm	001 -
	:		:	
093	000 -	001 -	SRX Patch	001 -
	:		:	
120		001 - 057	GM Rhythm	001 - 009
121	000 -	001 - 128	GM Patch	001 - 256

❍Modulation (Controller number 1)

Status	2nd byte	3rd byte
BnH	01H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Modulation depth:		00H - 7FH (0 - 127)

* Not received in Performance mode when the Receive Modulation parameter (PERFORM/MIDI) is OFF.

❍Breath type (Controller number 2)

Status	2nd byte	3rd byte
BnH	02H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

* JUNO-G receives it as ACTIVE EXPRESSION.

❍Foot type (Controller number 4)

Status	2nd byte	3rd byte
BnH	04H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

❍Portamento Time (Controller number 5)

Status	2nd byte	3rd byte
BnH	05H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Portamento Time:		00H - 7FH (0 - 127)

* In Performance mode, the Part Portament Time parameter (PERFORM/PART) will change.

❍Data Entry (Controller number 6, 38)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm, ll = the value of the parameter specified by RPN/NRPN
mm = MSB, ll = LSB

❍Volume (Controller number 7)

Status	2nd byte	3rd byte
BnH	07H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Volume:		00H - 7FH (0 - 127)

* Not received in Performance mode when the Receive Volume parameter (PERFORM/MIDI) is OFF.
* In Performance mode, the Part Level parameter (PERFORM/PART) will change.

❍Balance (Controller number 8)

Status	2nd byte	3rd byte
BnH	08H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Balance:		00H - 7FH (0 - 127)

❍Panpot (Controller number 10)

Status	2nd byte	3rd byte
BnH	0AH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Panpot:		00H - 40H - 7FH (Left - Center - Right),

* Not received in Performance mode when the Receive Pan parameter (PERFORM/MIDI) is OFF.
* In Performance mode, the Part Pan parameter (PERFORM/PART) will change.

❍Expression (Controller number 11)

Status	2nd byte	3rd byte
BnH	0BH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Expression:		00H - 7FH (0 - 127)

* Not received when Tone Receive Expression parameter (PATCH/CONTROL or RHYTHM/COMMON) is OFF.
* Not received in Performance mode when Receive Expression parameter (PERFORM/MIDI) is OFF.

❍Hold 1 (Controller number 64)

Status	2nd byte	3rd byte	
BnH	40H	vvH	
n = MIDI channel number:		0H - FH (ch.1 - 16)	
vv = Control value:		00H - 7FH (0 - 127)	0-63 = OFF, 64-127 = ON

* Not received when Tone Receive Hold-1 parameter (PATCH/CONTROL or RHYTHM/COMMON) is OFF.
* Not received in Performance mode when Receive Hold-1 parameter (PERFORM/MIDI) is OFF.
* When the Tone Redamper Switch parameter (PATCH/CONTROL) is turned ON, 128 discrete steps are recognized for the value.

❍Portamento (Controller number 65)

Status	2nd byte	3rd byte	
BnH	41H	vvH	
n = MIDI channel number:		0H - FH (ch.1 - 16)	
vv = Control value:		00H - 7FH (0 - 127)	0 - 63 = OFF, 64 - 127 = ON

* In Performance mode, the Part Portamento Switch parameter (PERFORM/PART) will change.

❍Sostenuto (Controller number 66)

Status	2nd byte	3rd byte	
BnH	42H	vvH	
n = MIDI channel number:		0H - FH (ch.1 - 16)	
vv = Control value:		00H - 7FH (0 - 127)	0 - 63 = OFF, 64 - 127 = ON

❍Soft (Controller number 67)

Status	2nd byte	3rd byte	
BnH	43H	vvH	
n = MIDI channel number:		0H - FH (ch.1 - 16)	
vv = Control value:		00H - 7FH (0 - 127)	0 - 63 = OFF, 64 - 127 = ON

❍Legato Foot Switch (Controller number 68)

Status	2nd byte	3rd byte	
BnH	44H	vvH	
n = MIDI channel number:		0H - FH (ch.1 - 16)	
vv = Control value:		00H - 7FH (0 - 127)	0 - 63 = OFF, 64 - 127 = ON

* In Performance mode, the Part Legato Switch parameter (PERFORM/PART) will change.

❍Hold-2 (Controller number 69)

Status	2nd byte	3rd byte
BnH	45H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

* A hold movement isn't done.

❍Resonance (Controller number 71)

Status	2nd byte	3rd byte
BnH	47H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv= Resonance value (relative change):		00H - 40H - 7FH (-64 - 0 - +63),

* In Performance mode, the Part Resonance Offset parameter (PERFORM/PART) will change.

❍Release Time (Controller number 72)

Status	2nd byte	3rd byte
BnH	48H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Release Time value (relative change):		00H - 40H - 7FH (-64 - 0 - +63),

* In Performance mode, the Part Release Time Offset parameter (PERFORM/PART) will change.

❍Attack time (Controller number 73)

Status	2nd byte	3rd byte
BnH	49H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Attack time value (relative change):		00H - 40H - 7FH (-64 - 0 - +63),

* In Performance mode, the Part Attack Time Offset parameter (PERFORM/PART) will change.

❍Cutoff (Controller number 74)

Status	2nd byte	3rd byte
BnH	4AH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Cutoff value (relative change):		00H - 40H - 7FH (-64 - 0 - +63)

* In Performance mode, the Part Cutoff Offset parameter (PERFORM/PART) will change.

❍Decay Time (Controller number 75)

Status	2nd byte	3rd byte
BnH	4BH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Decay Time value (relative change):		00H - 40H - 7FH (-64 - 0 - +63)

* In Performance mode, the Part Decay Time Offset parameter (PERFORM/PART) will change.

❍Vibrato Rate (Controller number 76)

Status	2nd byte	3rd byte
BnH	4CH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Vibrato Rate value (relative change):		00H - 40H - 7FH (-64 - 0 - +63)

* In Performance mode, the Part Vibrato Rate parameter (PERFORM/PART) will change.

❍Vibrato Depth (Controller number 77)

Status	2nd byte	3rd byte
BnH	4DH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Vibrato Depth Value (relative change):		00H - 40H - 7FH (-64 - 0 - +63)

* In Performance mode, the Part Vibrato Depth parameter (PERFORM/PART) will change.

❍Vibrato Delay (Controller number 78)

Status	2nd byte	3rd byte
BnH	4EH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Vibrato Delay value (relative change):		00H - 40H - 7FH (-64 - 0 - +63)

* In Performance mode, the Part Vibrato Delay parameter (PERFORM/PART) will change.

❍General Purpose Controller 5 (Controller number 80)

Status	2nd byte	3rd byte
BnH	50H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

* The Tone Level parameter (PATCH/TVA) of Tone 1 will change.

❍General Purpose Controller 6 (Controller number 81)

Status	2nd byte	3rd byte
BnH	51H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

* The Tone Level parameter (PATCH/TVA) of Tone 2 will change.

❍General Purpose Controller 7 (Controller number 82)

Status	2nd byte	3rd byte
BnH	52H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

* The Tone Level parameter (PATCH/TVA) of Tone 3 will change.

❍General Purpose Controller 8 (Controller number 83)

Status	2nd byte	3rd byte
BnH	53H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

* The Tone Level parameter (PATCH/TVA) of Tone 4 will change.

❍Portamento control (Controller number 84)

Status	2nd byte	3rd byte
BnH	54H	kkH
n = MIDI channel number:		0H - FH (ch.1 - 16)
kk = source note number:		00H - 7FH (0 - 127)

* A Note-on received immediately after a Portamento Control message will change continuously in pitch, starting from the pitch of the Source Note Number.
* If a voice is already sounding for a note number identical to the Source Note Number, this voice will continue sounding (i.e., legato) and will, when the next Note-on is received, smoothly change to the pitch of that Note-on.
* The rate of the pitch change caused by Portamento Control is determined by the Portamento Time value.

❍Effect 1 (Reverb Send Level) (Controller number 91)

Status	2nd byte	3rd byte
BnH	5BH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Reverb Send Level:		00H - 7FH (0 - 127)

* In Performance mode, the Part Reverb Send Level parameter (PERFORM/PART) will change.

❍Effect 3 (Chorus Send Level) (Controller number 93)

Status	2nd byte	3rd byte
BnH	5DH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Chorus Send Level:		00H - 7FH (0 - 127)

* In Performance mode, the Part Chorus Send Level parameter (PERFORM/PART) will change.

❍RPN MSB/LSB (Controller number 100, 101)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm = upper byte (MSB) of parameter number specified by RPN
ll = lower byte (LSB) of parameter number specified by RPN

<<< RPN >>>
Control Changes include RPN (Registered Parameter Numbers), which are extended.
When using RPNs, first RPN (Controller numbers 100 and 101; they can be sent in any order) should be sent in order to select the parameter, then Data Entry (Controller numbers 6 and 38) should be sent to set the value. Once RPN messages are received, Data Entry messages that is received at the same MIDI channel after that are recognized as changing toward the value of the RPN messages. In order not to make any mistakes, transmitting RPN Null is recommended after setting parameters you need.

This device receives the following RPNs.

RPN MSB, LSB	Data entry MSB, LSB	Notes
00H, 00H	mmH, llH	Pitch Bend Sensitivity mm: 00H - 18H (0 - 24 semitones) ll: ignored (processed as 00H) Up to 2 octave can be specified in semitone steps.

* In Performance mode, the Part Bend Range parameter (PERFORM/PART) will change.

00H, 01H	mmH, llH	Channel Fine Tuning mm, ll: 20 00H - 40 00H - 60 00H (-4096 x 100 / 8192 - 0 - +4096 x 100 / 8192 cent)

* In Performance mode, the Part Fine Tune parameter (PERFORM/PART) will change.

00H, 02H	mmH, llH	Channel Coarse Tuning mm: 10H - 40H - 70H (-48 - 0 - +48 semitones) ll: ignored (processed as 00H)

* In Performance mode, the Part Coarse Tune parameter (PERFORM/PART) will change.

00H, 05H	mmH, llH	Modulation Depth Range mm, ll: 00 00H - 00 06H (0 - 16384 x 600 / 16384 cent)

* Not received in Patch mode.

7FH, 7FH	---, ---	RPN null

RPN and NRPN will be set as "unspecified." Once this setting has been made, subsequent Parameter values that were previously set will not change.
mm, ll: ignored

●Program Change

Status	2nd byte	
CnH	ppH	
n = MIDI channel number:		0H - FH (ch.1 - 16)
pp = Program number:		00H - 7FH (prog.1 - prog.128)

* Not received in Performance mode when the Receive Program Change parameter (PERFORM/MIDI) is OFF.

●Channel Pressure

Status	2nd byte	
DnH	vvH	
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Channel Pressure:		00H - 7FH (0 - 127)

* Not received in Performance mode when the Receive Channel Pressure parameter (PERFORM/MIDI) is OFF.

●Pitch Bend Change

Status	2nd byte	3rd byte
EnH	llH	mmH
n = MIDI channel number:		0H - FH (ch.1 - 16)
mm, ll = Pitch Bend value:		00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

* Not received when the Tone Receive Bender parameter (PATCH/CONTROL) is OFF.
* Not received in Performance mode when the Receive Pitch Bend parameter (PERFORM/MIDI) is OFF.

■Channel Mode Messages

* Not received in Performance mode when the Receive Switch parameter (PERFORM/MIDI) is OFF.

●All Sounds Off (Controller number 120)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)

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

●Reset All Controllers (Controller number 121)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)

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

Controller	Reset value
Pitch Bend Change	+/-0 (center)
Polyphonic Key Pressure	0 (off)
Channel Pressure	0 (off)
Modulation	0 (off)
Breath Type	0 (min)
Expression	127 (max) However the controller will be at minimum.
Hold 1	0 (off)
Sostenuto	0 (off)
Soft	0 (off)
Hold 2	0 (off)
RPN	unset; previously set data will not change
NRPN	unset; previously set data will not change

●All Notes Off (Controller number 123)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)

* When All Notes Off is received, all notes on the corresponding channel will be turned off. However, if Hold 1 or Sostenuto is ON, the sound will be continued until these are turned off.

●OMNI OFF (Controller number 124)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be carried out as when All Notes Off is received.

●OMNI ON (Controller number 125)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be carried out as when All Notes Off is received. OMNI ON will not be turned on.

●MONO (Controller number 126)

Status	2nd byte	3rd byte
BnH	7EH	mmH
n = MIDI channel number:		0H - FH (ch.1 - 16)
mm = mono number:		00H - 10H (0 - 16)

* The same processing will be carried out as when All Notes Off is received.
* In Performance mode, the Part Mono/Poly parameter (PERFORM/PART) will change.

●POLY (Controller number 127)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be carried out as when All Notes Off is received.
* In Performance mode, the Part Mono/Poly parameter (PERFORM/PART) will change.

■System Realtime Message

●Active Sensing

Status
FEH

* When Active Sensing is received, the unit will begin monitoring the intervals of all further messages. While monitoring, if the interval between messages exceeds 420 ms, the same processing will be carried out as when All Sounds Off, All Notes Off and Reset All Controllers are received, and message interval monitoring will be halted.

■System Exclusive Message

Status	Data byte	Status
F0H	iiH, ddH, ...,eeH	F7H

F0H:	System Exclusive Message status
ii = ID number:	an ID number (manufacturer ID) to indicate the manufacturer whose Exclusive message this is. Roland's manufacturer ID is 41H. ID numbers 7EH and 7FH are extensions of the MIDI standard; Universal Non-realtime Messages (7EH) and Universal Realtime Messages (7FH).
dd,...,ee = data:	00H - 7FH (0 - 127)
F7H:	EOX (End Of Exclusive)

Of the System Exclusive messages received by this device, the Universal Non-realtime messages and the Universal Realtime messages and the Data Request (RQ1) messages and the Data Set (DT1) messages will be set automatically.

●Universal Non-realtime System Exclusive Messages

❍Identity Request Message

Status	Data byte	Status
F0H	7EH, dev, 06H, 01H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
dev	Device ID (dev: 10H - 1FH, 7FH)
06H	Sub ID#1 (General Information)
01H	Sub ID#2 (Identity Request)
F7H	EOX (End Of Exclusive)

* When this message is received, Identity Reply message (p. 218) will be transmitted.

❍GM1 System On

Status	Data byte	Status
F0H	7EH, 7FH, 09H, 01H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
7FH	Device ID (Broadcast)
09H	Sub ID#1 (General MIDI Message)
01H	Sub ID#2 (General MIDI 1 On)
F7H	EOX (End Of Exclusive)

* When this messages is received, this instrument will turn to the Performance mode.
* Not received when the Receive GM1 System On parameter (SYSTEM/MIDI) is OFF.

❍GM2 System On

Status	Data byte	Status
F0H	7EH 7FH 09H 03H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
7FH	Device ID (Broadcast)
09H	Sub ID#1 (General MIDI Message)
03H	Sub ID#2 (General MIDI 2 On)
F7H	EOX (End Of Exclusive)

* When this messages is received, this instrument will turn to the Performance mode.
* Not received when the Receive GM2 System On parameter (SYSTEM/MIDI) is OFF.

❍GM System Off

Status	Data byte	Status
F0H	7EH, 7F, 09H, 02H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
7FH	Device ID (Broadcast)
09H	Sub ID#1 (General MIDI Message)
02H	Sub ID#2 (General MIDI Off)
F7H	EOX (End Of Exclusive)

* When this messages is received, this instrument will return to the Performance mode.

●Universal Realtime System Exclusive Messages

❍Master Volume

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 01H, llH, mmH	F7H

Byte	Explanation
F0H	Exclusive status
7FH	ID number (universal realtime message)
7FH	Device ID (Broadcast)
04H	Sub ID#1 (Device Control)
01H	Sub ID#2 (Master Volume)
llH	Master Volume lower byte
mmH	Master Volume upper byte
F7H	EOX (End Of Exclusive)

* The lower byte (llH) of Master Volume will be handled as 00H.
* The Master Level parameter (SYSTEM/GENERAL) will change.

❍Master Fine Tuning

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 03H, llH, mmH	F7H

Byte	Explanation
F0H	Exclusive status
7FH	ID number (universal realtime message)
7FH	Device ID (Broadcast)
04H	Sub ID#1 (Device Control)
03H	Sub ID#2 (Master Fine Tuning)
llH	Master Fine Tuning LSB
mmH	Master Fine Tuning MSB
F7H	EOX (End Of Exclusive)

mm, ll: 00 00H - 40 00H - 7F 7FH (-100 - 0 - +99.9 [cents])

* The Master Tune parameter (SYSTEM/GENERAL) will change.

❍Master Coarse Tuning

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 04H, llH, mmH	F7

Byte	Explanation
F0H	Exclusive status
7FH	ID number (universal realtime message)
7FH	Device ID (Broadcast)
04H	Sub ID#1 (Device Control)
04H	Sub ID#2 (Master Coarse Tuning)
llH	Master Coarse Tuning LSB
mmH	Master Coarse Tuning MSB
F7H	EOX (End Of Exclusive)

llH:	ignored (processed as 00H)
mmH:	28H - 40H - 58H (-24 - 0 - +24 [semitones])

* The Master Key Shift parameter (SYSTEM/GENERAL) will change.

●Global Parameter Control

* Not received in Patch mode and Piano mode.

❍Reverb Parameters

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 05H, 01H, 01H, 01H, 01H, 01H, ppH, vvH	F7H

Byte	Explanation	
F0H	Exclusive status	
7FH	ID number (universal realtime message)	
7FH	Device ID (Broadcast)	
04H	Sub ID#1 (Device Control)	
05H	Sub ID#2 (Global Parameter Control)	
01H	Slot path length	
01H	Parameter ID width	
01H	Value width	
01H	Slot path MSB	
01H	Slot path LSB (Effect 0101: Reverb)	
ppH	Parameter to be controlled.	
vvH	Value for the parameter.	
	pp=0	Reverb Type
	vv = 00H	Small Room
	vv = 01H	Medium Room
	vv = 02H	Large Room
	vv = 03H	Medium Hall
	vv = 04H	Large Hall
	vv = 08H	Plate
	pp=1	Reverb Time
	vv = 00H - 7FH	0 - 127
F7H	EOX (End Of Exclusive)	

❍Chorus Parameters

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 05H, 01H, 01H, 01H, 01H, 02H, ppH, vvH	F7H

Byte	Explanation	
F0H	Exclusive status	
7FH	ID number (universal realtime message)	
7FH	Device ID (Broadcast)	
04H	Sub ID#1 (Device Control)	
05H	Sub ID#2 (Global Parameter Control)	
01H	Slot path length	
01H	Parameter ID width	
01H	Value width	
01H	Slot path MSB	
02H	Slot path LSB (Effect 0102: Chorus)	
ppH	Parameter to be controlled.	
vvH	Value for the parameter.	
	pp=0	Chorus Type
	vv=0	Chorus1
	vv=1	Chorus2
	vv=2	Chorus3
	vv=3	Chorus4
	vv=4	FB Chorus
	vv=5	Flanger
	pp=1	Mod Rate
	vv= 00H - 7FH	0 - 127
	pp=2	Mod Depth
	vv = 00H - 7FH	0 - 127
	pp=3	Feedback
	vv = 00H - 7FH	0 - 127
	pp=4	Send To Reverb
	vv = 00H - 7FH	0 - 127
F7H	EOX (End Of Exclusive)	

❍Channel Pressure

Status	Data byte	Status
F0H	7FH, 7FH, 09H, 01H, 0nH, ppH, rrH	F7H

Byte	Explanation	
F0H	Exclusive status	
7FH	ID number (universal realtime message)	
7FH	Device ID (Broadcast)	
09H	Sub ID#1 (Controller Destination Setting)	
01H	Sub ID#2 (Channel Pressure)	
0nH	MIDI Channel (00 - 0F)	
ppH	Controlled parameter	
rrH	Controlled range	
	pp=0	Pitch Control
	rr = 28H - 58H	-24 - +24 [semitones]
	pp=1	Filter Cutoff Control
	rr = 00H - 7FH	-9600 - +9450 [cents]
	pp=2	Amplitude Control
	rr = 00H - 7FH	0 - 200%
	pp=3	LFO Pitch Depth
	rr = 00H - 7FH	0 - 600 [cents]
	pp=4	LFO Filter Depth
	rr = 00H - 7FH	0 - 2400 [cents]
	pp=5	LFO Amplitude Depth
	rr = 00H - 7FH	0 - 100%
F7H	EOX (End Of Exclusive)	

❍Controller

Status	Data byte	Status
F0H	7FH, 7FH, 09H, 03H, 0nH, ccH, ppH, rrH	F7H

Byte	Explanation	
F0H	Exclusive status	
7FH	ID number (universal realtime message)	
7FH	Device ID (Broadcast)	
09H	Sub ID#1 (Controller Destination Setting)	
03H	Sub ID#2 (Control Change)	
0nH	MIDI Channel (00 - 0F)	
ccH	Controller number (01 - 1F, 40 - 5F)	
ppH	Controlled parameter	
rrH	Controlled range	
	pp=0	Pitch Control
	rr = 28H - 58H	-24 - +24 [semitones]
	pp=1	Filter Cutoff Control
	rr = 00H - 7FH	-9600 - +9450 [cents]
	pp=2	Amplitude Control
	rr = 00H - 7FH	0 - 200%
	pp=3	LFO Pitch Depth
	rr = 00H - 7FH	0 - 600 [cents]
	pp=4	LFO Filter Depth
	rr = 00H - 7FH	0 - 2400 [cents]
	pp=5	LFO Amplitude Depth
	rr = 00H - 7FH	0 - 100%
F7H	EOX (End Of Exclusive)	

❍Scale/Octave Tuning Adjust

Status	Data byte	Status
F0H	7EH, 7FH, 08H, 08H, ffH, ggH, hhH, ssH...	F7

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
7FH	Device ID (Broadcast)
08H	Sub ID#1 (MIDI Tuning Standard)
08H	Sub ID#2 (scale/octave tuning 1-byte form)
ffH	Channel/Option byte 1
	bits 0 to 1 = channel 15 to 16
	bit 2 to 6 = Undefined
ggH	Channel byte 2
	bits 0 to 6 = channel 8 to 14
hhH	Channel byte 3
	bits 0 to 6 = channel 1 to 7
ssH	12 byte tuning offset of 12 semitones from C to B
	00H = -64 [cents]
	40H = 0 [cents] (equal temperament)
	7FH = +63 [cents]
F7H	EOX (End Of Exclusive)

❍Key-based Instrument Controllers

Status	Data byte	Status
F0H	7FH, 7FH, 0AH, 01H, 0nH, kkH, nnH, vvH	F7H

Byte	Explanation	
F0H	Exclusive status	
7FH	ID number (universal realtime message)	
7FH	Device ID (Broadcast)	
0AH	Sub ID#1 (Key-Based Instrument Control)	
01H	Sub ID#2 (Controller)	
0nH	MIDI Channel (00 - 0FH)	
kkH	Key Number	
nnH	Control Number	
vvH	Value	
	nn=07H Level	
	vv = 00H - 7FH	0 - 200% (Relative)
	nn=0AH	Pan
	vv = 00H - 7FH	Left - Right (Absolute)
	nn=5BH	Reverb Send
	vv = 00H - 7FH	0 - 127 (Absolute)
	nn=5D	Chorus Send
	vv = 00H - 7FH	0 - 127 (Absolute)
:	:	
F7	EOX (End Of Exclusive)	

* This parameter affects drum instruments only.

●Data Transmission

This instrument can use exclusive messages to exchange many varieties of internal settings with other devices.
The model ID of the exclusive messages used by this instrument is 00H 00H 15H.

❍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, 00H, 15H, 11H, aaH, bbH, ccH, ddH, ssH, ttH, uuH, vvH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H - 1FH, 7FH)
00H	model ID #1 (JUNO-G)
00H	model ID #2 (JUNO-G)
15H	model ID #3 (JUNO-G)
11H	command ID (RQ1)
aaH	address MSB
bbH	address
ccH	address
ddH	address LSB
ssH	size MSB
ttH	size
uuH	size
vvH	size LSB
sum	checksum
F7H	EOX (End Of Exclusive)

* The size of data that can be transmitted at one time is fixed for each type of data. And data requests must be made with a fixed starting address and size. Refer to the address and size given in **Parameter Address Map** (p. 222).
* For the checksum, refer to p. 239.
* Not received when the Receive Exclusive parameter (SYSTEM/MIDI) is OFF.

❍Data set 1 (DT1)

Status	Data byte	Status
F0H	41H, dev, 00H, 00H, 15H, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Explanation	
F0H	Exclusive status	
41H	ID number (Roland)	
dev	Device ID (dev: 00H - 1FH, 7FH)	
00H	Model ID #1 (JUNO-G)	
00H	Model ID #2 (JUNO-G)	
15H	Model ID #3 (JUNO-G)	
12H	Command ID (DT1)	
aaH	Address MSB:	upper byte of the starting address of the data to be sent
bbH	Address:	upper middle byte of the starting address of the data to be sent
ccH	Address:	lower middle byte of the starting address of the data to be sent
ddH	Address LSB:	lower byte of the starting address of the data to be sent.
eeH	Data:	the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address.
:	:	
ffH	Data	
sum	Checksum	
F7H	EOX (End Of Exclusive)	

* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in **Parameter Address Map** (p. 222).
* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.
* Regarding the checksum, please refer to p. 239.
* Not received when the Receive Exclusive parameter (SYSTEM/MIDI) is OFF.

Status	Data byte	Status
F0H	41H, dev, 42H, 12H, aaH, bbH, ccH, ddH, ... eeH, sum	F7H

Byte	Explanation	
F0H	Exclusive status	
41H	ID number (Roland)	
dev	Device ID (dev: 10H - 1FH, 7FH)	
42H	Model ID (GS)	
12H	Command ID (DT1)	
aaH	Address MSB:	upper byte of the starting address of the transmitted data
bbH	Address:	middle byte of the starting address of the transmitted data
ccH	Address LSB:	lower byte of the starting address of the transmitted data
ddH	Data:	the actual data to be transmitted. Multiple bytes of data are transmitted starting from the address.
:	:	
eeH	Data	
sum	Checksum	
F7H	EOX (End Of Exclusive)	

* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in **Parameter Address Map** (p. 222).
* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.
* Regarding the checksum, please refer to p. 239.
* Not received when the Receive Exclusive parameter (SYSTEM/MIDI) is OFF.

2. Data Transmission (Sound Generator Section)

■Channel Voice Messages

●Note off

Status	2nd byte	3rd byte
8nH	kkH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
kk = note number:		00H - 7FH (0 - 127)
vv = note off velocity:		00H - 7FH (0 - 127)

●Note on

Status	2nd byte	3rd byte
9nH	kkH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
kk = note number:		00H - 7FH (0 - 127)
vv = note on velocity:		01H - 7FH (1 - 127)

●Control Change

* By selecting a controller number that corresponds to the setting of parameters of controllers (REALTIME CONTROL knob, and so on), the JUNO-G can transmit any control change message.

❍Bank Select (Controller number 0, 32)

Status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH
n = MIDI channel number:		0H - FH (ch.1 - 16)
mm, ll = Bank number:		00 00H - 7F 7FH (bank.1 - bank.16384)

* These messages are transmitted when Patch, Rhythm Set or Performance is selected. But not transmitted when Transmit Program Change or Transmit Bank Select parameter (SYSTEM/MIDI) is OFF.
* In Performance mode, these messages are not transmitted when External Bank Select MSB or External PC Number parameter (PERFORMANCE/PART) is OFF.
* Although with the JUNO-G you can select the Bank Select messages to be transmitted, be sure to refer to **Bank Select and Program Change Correspondence Chart** (p. 240) for the Bank Select messages transmitted when the JUNO-G is select a Patch, Rhythm Set or Performance.
* The Bank Select Numbers corresponding to SRX series should be referred to the SRX series owner's manual.

❍Modulation (Controller number 1)

Status	2nd byte	3rd byte
BnH	01H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Modulation depth:		00H - 7FH (0 - 127)

❍Breath type (Controller number 2)

Status	2nd byte	3rd byte
BnH	02H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

* JUNO-G transmits this message when you operate ACTIVE EXPRESSION with the D Beam controller.

❍Portamento Time (Controller number 5)

Status	2nd byte	3rd byte
BnH	05H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Portamento Time:		00H - 7FH (0 - 127)

❍Data Entry (Controller number 6, 38)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm, ll = the value of the parameter specified by RPN/NRPN
mm = MSB, ll = LSB

❍Volume (Controller number 7)

Status	2nd byte	3rd byte
BnH	07H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Volume:		00H - 7FH (0 - 127)

* In Performance mode, these messages are not transmitted when External Level parameter (PERFORMANCE/PART) is OFF.

❍Panpot (Controller number 10)

Status	2nd byte	3rd byte
BnH	0AH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Panpot:		00H - 40H - 7FH (Left - Center - Right),

* In Performance mode, these messages are not transmitted when External Pan parameter (PERFORMANCE/PART) is OFF.

❍Expression (Controller number 11)

Status	2nd byte	3rd byte
BnH	0BH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Expression:		00H - 7FH (0 - 127)

❍Hold 1 (Controller number 64)

Status	2nd byte	3rd byte	
BnH	40H	vvH	
n = MIDI channel number:		0H - FH (ch.1 - 16)	
vv = Control value:		00H - 7FH (0 - 127)	0-63 = OFF, 64-127 = ON

* When Continuous Hold Pedal parameter (SYSTEM/CTRL) is OFF, just only 00H (0FF) and 7FH (0N) can be send as the control value.

❍Portamento (Controller number 65)

Status	2nd byte	3rd byte	
BnH	41H	vvH	
n = MIDI channel number:		0H - FH (ch.1 - 16)	
vv = Control value:		00H - 7FH (0 - 127)	0 - 63 = OFF, 64 - 127 = ON

❍Resonance (Controller number 71)

Status	2nd byte	3rd byte
BnH	47H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv= Resonance value (relative change):		00H - 40H - 7FH (-64 - 0 - +63)

❍Release Time (Controller number 72)

Status	2nd byte	3rd byte
BnH	48H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Release Time value (relative change):		00H - 40H - 7FH (-64 - 0 - +63)

❍Attack time (Controller number 73)

Status	2nd byte	3rd byte
BnH	49H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Attack time value (relative change):		00H - 40H - 7FH (-64 - 0 - +63)

❍Cutoff (Controller number 74)

Status	2nd byte	3rd byte
BnH	4AH	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Cutoff value (relative change):		00H - 40H - 7FH (-64 - 0 - +63)

❍General Purpose Controller 5 (Controller number 80)

Status	2nd byte	3rd byte
BnH	50H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

❍General Purpose Controller 6 (Controller number 81)

Status	2nd byte	3rd byte
BnH	51H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

❍General Purpose Controller 7 (Controller number 82)

Status	2nd byte	3rd byte
BnH	52H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

❍General Purpose Controller 8 (Controller number 83)

Status	2nd byte	3rd byte
BnH	53H	vvH
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Control value:		00H - 7FH (0 - 127)

❍Portamento control (Controller number 84)

Status	2nd byte	3rd byte
BnH	54H	kkH
n = MIDI channel number:		0H - FH (ch.1 - 16)
kk = source note number:		00H - 7FH (0 - 127)

●Program Change

Status	2nd byte	
CnH	ppH	
n = MIDI channel number:		0H - FH (ch.1 - 16)
pp = Program number:		00H - 7FH (prog.1 - prog.128)

* These messages are transmitted when Patch, Rhythm Set or Performance is selected. But not transmitted when Transmit Program Change parameter (SYSTEM/MIDI) is OFF.

* In Performance mode, these messages are not transmitted when External PC Num parameter (PERFORMANCE/PART) is OFF.

●Channel Pressure

Status	2nd byte	
DnH	vvH	
n = MIDI channel number:		0H - FH (ch.1 - 16)
vv = Channel Pressure:		00H - 7FH (0 - 127)

●Pitch Bend Change

Status	2nd byte	3rd byte
EnH	llH	mmH
n = MIDI channel number:		0H - FH (ch.1 - 16)
mm, ll = Pitch Bend value:		00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

■Channel Mode Messages

●MONO (Controller number 126)

Status	2nd byte	3rd byte
BnH	7EH	mmH
n = MIDI channel number:		0H - FH (ch.1 - 16)
mm = mono number:		00H - 10H (0 - 16)

●POLY (Controller number 127)

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

n = MIDI channel number: 0H - FH (ch.1 - 16)

■System Realtime Messages

●Active Sensing

Status
FEH

* This message is transmitted at intervals of approximately 250 msec.

* This message is not sent when Transmit Active Sensing parameter (SYSTEM/MIDI) is OFF.

■System Exclusive Messages

Universal Non-realtime System Exclusive Message" and Data Set 1 (DT1) are the only System Exclusive messages transmitted by the JUNO-G.

●Universal Non-realtime System Exclusive Message

❍Identity Reply Message (JUNO-G)

Receiving Identity Request Message (p. 213), the JUNO-G send this message.

Status	Data byte	Status
F0H	7EH, dev, 06H, 02H, 41H, 6BH, 01H, 02H, 01H, 04H, 03H, 00H, 00H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
dev	Device ID (dev: 10H - 1FH)
06H	Sub ID#1 (General Information)
02H	Sub ID#2 (Identity Reply)
41H	ID number (Roland)
6BH 01H	Device family code
02H 01H	Device family number code
04H 03H 00H 00H	Software revision level
F7H	EOX (End of Exclusive)

●Data Transmission

❍Data set 1 (DT1)

Status	Data byte	Status
F0H	41H, dev, 00H, 00H, 15H,12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Explanation	
F0H	Exclusive status	
41H	ID number (Roland)	
dev	Device ID (dev: 00H - 1FH, 7FH)	
00H	Model ID #1 (JUNO-G)	
00H	Model ID #2 (JUNO-G)	
15H	Model ID #3 (JUNO-G)	
12H	Command ID (DT1)	
aaH	Address MSB:	upper byte of the starting address of the data to be sent
bbH	Address:	upper middle byte of the starting address of the data to be sent
ccH	Address:	lower middle byte of the starting address of the data to be sent
ddH	Address LSB:	lower byte of the starting address of the data to be sent.
eeH	Data:	the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address.
:	:	
ffH	Data	
sum	Checksum	
F7H	EOX (End Of Exclusive)	

* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in **Parameter Address Map** (p. 222).

* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.

3. Data Reception (Sequencer Section)

3.1 Messages recorded during recording

■Channel Voice Messages

●Note Off

Status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H
n=MIDI channel number:		0H - FH (ch.1 - ch.16)
kk=note number:		00H - 7FH (0 - 127)
vv=note off velocity:		00H - 7FH (0 - 127)

* Not received when the Note parameter (Recording Select window) is OFF.

●Note on

Status	2nd byte	3rd byte
9nH	kkH	vvH
n=MIDI channel number:		0H - FH (ch.1 - ch.16)
kk=note number:		00H - 7FH (0 - 127)
vv=note on velocity:		01H - 7FH (1 - 127)

* Not received when the Note parameter (Recording Select window) is OFF.

●Polyphonic Aftertouch

Status	2nd byte	3rd byte
AnH	kkH	vvH
n=MIDI channel number:		0H - FH (ch.1 - ch.16)
kk=note number:		00H - 7FH (0 - 127)
vv=Polyphonic Aftertouch:		00H - 7FH (0 - 127)

* Not received when the Poly Afertouch parameter (Recording Select window) is OFF.

●Control Change

Status	2nd byte	3rd byte
BnH	kkH	vvH
n=MIDI channel number:		0H - FH (ch.1 - ch.16)
kk=Control number:		00H - 78H (0 - 120)
vv=value:		00H - 7FH (0 - 127)

* Not received when the Control Change parameter (Recording Select window) is OFF.

●Program Change

Status	2nd byte	
CnH	ppH	
n=MIDI channel number:		0H - FH (ch.1 - ch.16)
pp=Program number:		00H - 7FH (prog.1 - prog.128)

* Not received when the Program Change parameter (Recording Select window) is OFF.

●Channel Aftertouch

Status	2nd byte	
DnH	vvH	
n=MIDI channel number:		0H - FH (ch.1 - ch.16)
vv=Channel Aftertouch:		00H - 7FH (0 - 127)

* Not received when the Channel Aftertouch parameter (Recording Select window) is OFF.

●Pitch Bend Change

Status	2nd byte	3rd byte
EnH	llH	mmH
n=MIDI channel number:		0H - FH (ch.1 - ch.16)
mm, ll=Pitch Bend value:		00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

* Not received when the Pitch Bend parameter (Recording Select window) is OFF.

■Channel Mode messages

●All Sound Off (Controller number 120)

Status	2nd byte	3rd byte
BnH	78H	00H
n=MIDI channel number:		0H - FH (ch.1 - ch.16)

●Reset All Controller (Controller number 121)

Status	2nd byte	3rd byte
BnH	79H	00H
n=MIDI channel number:		0H - FH (ch.1 - ch.16)

●Omni Off (Controller number 124)

Status	2nd byte	3rd byte
BnH	7CH	00H
n=MIDI channel number:		0H - FH (ch.1 - ch.16)

* The same processing will be done as when an All Note Off message is received.

●Omni On (Controller number 125)

Status	2nd byte	3rd byte
BnH	7DH	00H
n=MIDI channel number:		0H - FH (ch.1 - ch.16)

* The same processing will be done as when an All Note Off message is received.

●Mono (Controller number 126)

Status	2nd byte	3rd byte
BnH	7EH	mmH
n=MIDI channel number:		0H - FH (ch.1 - ch.16)
mm=mono number:		00H - 10H (0 - 16)

* The same processing will be done as when an All Note Off message is received.

●Poly (Controller number 127)

Status	2nd byte	3rd byte
BnH	7FH	00H
n=MIDI channel number:		0H - FH (ch.1 - ch.16)

* The same processing will be done as when an All Note Off message is received.

■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-real-time messages (7EH) and Universal Realtime Messages (7FH).	
dd,..., ee = data:	00H - 7FH (0 - 127)	
F7H:	EOX (End of System Exclusive)	

* Not received when the System Exclusive parameter (Recording Select window) is OFF.

* MIDI Machine Control and MIDI Time code is not recorded. (Refer to "1.3 Messages acknowledged for synchronization")

3.2 Messages not recorded during recording

■Channel mode messages

●Local On/Off (Controller number 122)

Status	2nd byte	3rd byte
BnH	7AH	vvH
n=MIDI channel number:		0H - FH (ch.1 - ch.16)
vv=Value:		00H, 7FH (Local Off, Local On)

●All notes off (Controller number 123)

Status	2nd byte	3rd byte
BnH	7BH	00H
n=MIDI channel number:		0H - FH (ch.1 - ch.16)

* When an All Note Off message is received, all notes of the corresponding channel that are on will be sent Note Off's, and the resulting Note Off messages will be recorded.

3.3 Messages acknowledged for synchronization

■System Common messages

●Tune Request

Status
F6H

●MIDI Time Code Quarter Frame Messages

MIDI Time Code Quarter Frame Messages can be transmitted while the sequencer is running (Playing or Recording) if the Sync Mode parameter (SYSTEM/TEMPO/SYNC) is MASTER and MTC Sync Output parameter (SYSTEM/MIDI/MMC MTC) is ON. The transmitted time counts are summed to MTC Offset Time parameter (SYSTEM/MIDI/MMC MTC) as the song top is "00:00:00:00."
The sequencer synchronizes with the time counts which are summed to MTC Offset Time parameter (SYSTEM/MIDI/MMC MTC) as the song top is "00:00:00:00" if the Sync Mode parameter (SYSTEM/TEMPO/SYNC) is SLAVE(MTC).

Status	Second
F1H	mmH (= 0nnndddd)

nnn = Message type :
0 = Frame count LS nibble
1 = Frame count MS nibble
2 = Seconds count LS nibble
3 = Seconds count MS nibble
4 = Minutes count LS nibble
5 = Minutes count MS nibble
6 = Hours count LS nibble
7 = Hours count MS nibble
dddd = 4 bit nibble data : h - FH (0 - 15)
Bit Field is assigned as follows.

Frame Count	xxxyyyyy	
xxx	Reserved (000)	
yyyyy	Frame No.(0-29)	
Seconds Count	xxyyyyyy	
	xx	Reserved (00)
	yyyyyy	Seconds (0-59)
Minutes Count	xxyyyyyy	
	xx	Reserved (00)
	yyyyyy	Minutes (0-59)
Hours Count	xyyzzzzz	
	x	Reserved (0)
	yy	Time Code type
	0 = 24 Frames / Sec	
	1 = 25 Frames / Sec	
	2 = 30 Frames / Sec (Drop Frame)	
	3 = 30 Frames / Sec (Non Drop Frame	
	zzzzz	Hours (0-23)

●Song Position Pointer

Status	2nd byte	3rd byte
F2H	mmH	llH
mm, ll=value:	00 00H - 7F 7FH (0 - 16383)	

■System Realtime Messages

●Timing Clock

Status
F8H

* Received when Sync Mode parameter (SYSTEM/TEMPO/SYNC) is set to SLAVE-MIDI.

●Start

Status
FAH

* Received when Sync Mode parameter (SYSTEM/TEMPO/SYNC) is set to SLAVE-MIDI or REMOTE.

●Continue

Status
FBH

* Received when Sync Mode parameter (SYSTEM/TEMPO/SYNC) is set to SLAVE-MIDI or REMOTE.

●Stop

Status
FCH

* Received when Sync Mode parameter (SYSTEM/TEMPO/SYNC) is set to SLAVE-MIDI or REMOTE.

■System Exclusive Message

●MIDI Machine Control (MMC)

* Received when the MMC Mode parameter (SYSTEM/MIDI/MMC MTC) is SLAVE.

❍STOP (MCS)

Status	Data byte	Status
F0H	7FH, dev, 06H, 01H	F7H

Byte	Remarks
F0H	Exclusive status
7FH	Universal System Exclusive Realtime Header
7FH	Device ID
06H	MMC command message
01H	STOP (MCS)
F7H	EOX (End of Exclusive)

❍DEFERRED PLAY (MCS)

Status	Data byte	Status
F0H	7FH, dev, 06H, 03H	F7H

Byte	Remarks
F0H	Exclusive status
7FH	Universal System Exclusive Realtime Header
7FH	Device ID
06H	MMC command message
03H	DEFERRED PLAY (MCS)
F7H	EOX (End of Exclusive)

❍LOCATE (MCP)

❍Format2-LOCATE [TARGET]

Status	Data byte	Status
F0H	7FH, dev, 06H, 44H, 06H, 01H, hrH, mnH, scH, frH, ffH	F7H

Byte	Remarks
F0H	Exclusive status
7FH	Universal System Exclusive Realtime Header
7FH	Device ID
06H	MMC command message
44H	LOCATE (MCP)
06H	Byte count
01H	"TARGET" sub-Command
hrH	Standard Time Specification with subframes
mnH	
scH	
frH	
ffH	
F7H	EOX (End of Exclusive)

4. Data Transmission (Sequencer Section)

4.1 Messages transmitted during playing

Recorded messages are transmitted during playback.

4.2 Soft Thru setting

Messages (except System Common and System Realtime Messages) that are received are then sent out when Soft Thru parameter (SYSTEM/MIDI) is switched to ON.

4.3 Messages that are generated and transmitted

4.3.1 Messages Appearing When Synchronizing with Other Devices

■System Common Messages

* Sent when Sync Output parameter (SYSTEM/TEMPO/SYNC) is set to ON.

●Song Position Pointer

Status	2nd byte	3rd byte
F2H	mmH	llH
mm, ll=value:	00 00H - 7F 7FH (0 - 16383)	

■System Realtime Messages

* Sent when Sync Output parameter (SYSTEM/TEMPO/SYNC) is set to ON.

●Timing Clock

Status
F8H

●Start

Status
FAH

●Continue

Status
FBH

●Stop

Status
FCH

●Quarter Frame Messages

Status	2nd byte
F1H	mmH (= 0nnndddd)

* Sent when Sync Mode parameter (SYSTEM/TEMPO/SYNC) is set to MASTER and MTC Sync Output parameter (SYSTEM/MIDI/MMC MTC) is set to ON. Furthermore, sending a Quarter Frame Message with "00h00m00s00f00" at the beginning of the song adds the MTC Offset Time parameter (SYSTEM/MIDI/MMC MTC).

■System Exclusive Message

●MIDI Time code

❍Full Message

Full Messages are used, which encode the complete time into a single message.
This message transmitted when the song position moves.

Status	Data Byte	Status
F0H, 7FH	xxH, 01H, 01H, hrH, mnH, scH, frH	F7H

F0H, 7FH :	Realtime Universal System Exclusive Header
xxH :	7F (Device ID)
01H :	sub-ID #1 (MIDI Time code)
01H :	sub-ID #2 (Full Message)
hrH :	hours and type: 0 yy zzzzz
yy type:	
	00 = 24 Flame/sec
	01 = 25 Flame/sec
	10 = 30 Flame/sec
	11 = 30 Flame/sec
zzzzz :	Hours (00 - 23)
mnH :	Minutes (00 - 59)
scH :	Seconds (00 - 59)
frH :	Frames (00 - 29)
F7H :	EOX (End of Exclusive)

●MIDI Machine Control (MMC)

* Not received when the MMC Mode parameter (SYSTEM/MIDI/MMC MTC) is Master.

❍STOP (MCS)

Status	Data byte	Status
F0H	7FH, dev, 06H, 01H	F7H

Byte	Remarks
F0H	Exclusive status
7FH	Universal System Exclusive Realtime Header
7FH	Device ID
06H	MMC command message
01H	STOP (MCS)
F7H	EOX (End of Exclusive)

❍DEFFERRED PLAY (MCS)

Status	Data byte	Status
F0H	7FH, dev, 06H, 03H	F7H

Byte	Remarks
F0H	Exclusive status
7FH	Universal System Exclusive Realtime Header
7FH	Device ID
06H	MMC command message
03H	DEFERRED PLAY (MCS)
F7H	EOX (End of Exclusive)

❍LOCATE (MCP)

❍Format2-LOCATE [TARGET]

Status	Data byte	Status
F0H	7FH, dev, 06H, 44H, 06H, 01H, hrH, mnH, scH, frH, ffH	F7H

Byte	Remarks
F0H	Exclusive status
7FH	Universal System Exclusive Realtime Header
7FH	Device ID
06H	MMC command message
44H	LOCATE (MCP)
06H	Byte count
01H	"TARGET" sub-Command
hrH	Standard Time Specification with subframes
mnH	
scH	
frH	
ffH	
F7H	EOX (End of Exclusive)

5. Parameter Address Map

* Transmission of "#" marked address is divided to some packets. For example, ABH in hexadecimal notation will be divided to 0AH and 0BH, and is sent/received in this order.

* "<*>" marked address or parameters are ignored when the JUNO-G received them.

5.1 JUNO-G (ModelID = 00H 00H 15H)

Start Address	Description
01 00 00 00	Setup
02 00 00 00	System
10 00 00 00	Temporary Performance
11 00 00 00	Temporary Patch/Rhythm (Performance Mode Part 1)
11 20 00 00	Temporary Patch/Rhythm (Performance Mode Part 2)
:	
14 60 00 00	Temporary Patch/Rhythm (Performance Mode Part 16)
1E 00 00 00	Temporary Rhythm Pattern
1E 01 00 00	Temporary Arpeggio (Performance Mode)
1E 02 00 00	Temporary Chord (Performance Mode)
1E 03 00 00	Temporary Rhythm Group (Performance Mode)
1E 11 00 00	Temporary Arpeggio (Patch Mode)
1E 12 00 00	Temporary Chord (Patch Mode)
1E 13 00 00	Temporary Rhythm Group (Patch Mode)
1F 00 00 00	Temporary Patch/Rhythm (Patch Mode Part 1)
1F 20 00 00	Temporary Patch/Rhythm (Patch Mode Part 2)

❍System

Offset Address	Description
00 00 00	System Common
00 02 00	System Mastering
00 03 00	System External Input
00 40 00	System Controller

❍Temporary Patch/Rhythm

Offset Address	Description
00 00 00	Temporary Patch
10 00 00	Temporary Rhythm

❍Performance

Offset Address	Description
00 00 00	Performance Common
00 02 00	Performance Common MFX1
00 04 00	Performance Common Chorus
00 06 00	Performance Common Reverb
00 08 00	Performance Common MFX2
00 0A 00	Performance Common MFX3
00 10 00	Performance MIDI (Channel 1)
00 11 00	Performance MIDI (Channel 2)
:	
00 1F 00	Performance MIDI (Channel 16)
00 20 00	Performance Part (Part 1)
00 21 00	Performance Part (Part 2)
:	
00 2F 00	Performance Part (Part 16)
00 50 00	Performance Zone (Channel 1)
00 51 00	Performance Zone (Channel 2)
:	
00 5F 00	Performance Zone (Channel 16)
00 60 00	Performance Controller

❍Patch

Offset Address	Description
00 00 00	Patch Common
00 02 00	Patch Common MFX
00 04 00	Patch Common Chorus
00 06 00	Patch Common Reverb
00 10 00	Patch TMT (Tone Mix Table)
00 20 00	Patch Tone (Tone 1)
00 22 00	Patch Tone (Tone 2)
00 24 00	Patch Tone (Tone 3)
00 26 00	Patch Tone (Tone 4)

❍Rhythm

Offset Address	Description
00 00 00	Rhythm Common
00 02 00	Rhythm Common MFX
00 04 00	Rhythm Common Chorus
00 06 00	Rhythm Common Reverb
00 10 00	Rhythm Tone (Key # 21)
00 12 00	Rhythm Tone (Key # 22)
:	
01 3E 00	Rhythm Tone (Key # 108)

❍Arpeggio

Offset Address	Description
00 00 00	Arpeggio Common
00 10 00	Arpeggio Pattern (Note 1)
00 11 00	Arpeggio Pattern (Note 2)
:	
00 1F 00	Arpeggio Pattern (Note 16)

❍Chord

Offset Address	Description
00 00 00	Chord Pattern

❍Rhythm Group

Offset Address	Description
00 00 00	Rhythm Group

❍Setup

Offset Address		Description
00 00	0000 0aaa	Sound Mode (0 - 5) PATCH, PERFORM, GM1, GM2, GS, PIANO<*>
00 01	0aaa aaaa	Performance Bank Select MSB (CC# 0) (0 - 127)
00 02	0aaa aaaa	Performance Bank Select LSB (CC# 32) (0 - 127)
00 03	0aaa aaaa	Performance Program Number (PC) (0 - 127)
00 04	0aaa aaaa	Kbd Patch Bank Select MSB (CC# 0) (0 - 127)
00 05	0aaa aaaa	Kbd Patch Bank Select LSB (CC# 32) (0 - 127)
00 06	0aaa aaaa	Kbd Patch Program Number (PC) (0 - 127)
00 07	0aaa aaaa	Rhy Patch Bank Select MSB (CC# 0) (0 - 127)
00 08	0aaa aaaa	Rhy Patch Bank Select LSB (CC# 32) (0 - 127)
00 09	0aaa aaaa	Rhy Patch Program Number (PC) (0 - 127)
00 0A	0000 000a	MFX1 Switch (0 - 1) BYPASS, ON
00 0B	0000 000a	MFX2 Switch (0 - 1) BYPASS, ON
00 0C	0000 000a	MFX3 Switch (0 - 1) BYPASS, ON
00 0D	0000 000a	Chorus Switch (0 - 1) OFF, ON
00 0E	0000 000a	Reverb Switch (0 - 1) OFF, ON
00 0F	0000 000a	Input Effect Switch (0 - 1) OFF, ON
00 10	0000 0000	(reserve) <*>
00 11	0000 0000	(reserve) <*>
00 12	0000 aaaa	Transpose Value (59 - 70) -5 - +6
00 13	0000 0aaa	Octave Shift (61 - 67) -3 - +3
00 14	0000 0aaa	D Beam Select (0 - 3) OFF, (reserv), SOLO-SYN, ASGN
00 15	0000 0000	(reserve) <*>
00 16	0000 0000	(reserve) <*>
00 17	0aaa aaaa	Arp/Ptn Grid (0 - 8) 04_, 08_, 08L, 08H, 08t, 16_, 16L, 16H, 16t
00 18	0aaa aaaa	Arp/Ptn Duration (0 - 9) 30, 40, 50, 60, 70, 80, 90, 100, 120, FUL
00 19	0000 000a	Arpeggio Switch (0 - 1) OFF, ON
00 1A	0aaa aaaa	Arpeggio Bank (0 - 1) USER, PRESET
00 1B	0aaa aaaa	Arpeggio Style (0 - 127) 1 - 128
00 1C	0aaa aaaa	Arpeggio Motif (0 - 11) UP/L, UP/H, UP/_, dn/L, dn/H, dn/_, Ud/L, Ud/H, Ud/_, rn/L, rn/_, PHRASE
00 1D	0000 0aaa	Arpeggio Octave Range (61 - 67) -3 - +3
00 1E	0000 000a	Arpeggio Hold (0 - 1) OFF, ON
00 1F	0aaa aaaa	Arpeggio Accent Rate (0 - 100)
00 20	0aaa aaaa	Arpeggio Velocity (0 - 127) REAL, 1 - 127
00 21	0000 0000	(reserve) <*>
00 22	0aaa aaaa	Rhythm Pattern Bank (0 - 1) USER, PRESET
# 00 23	0000 aaaa 0000 bbbb	Rhythm Pattern Style (0 - 255) 1 - 256
00 25	0000 000a	Rhythm Pattern Group Bank (0 - 1) USER, PRESET
00 26	0aaa aaaa	Rhythm Pattern Group Number (0 - 31) 1 - 32
00 27	0aaa aaaa	Rhythm Pattern Accent Rate (0 - 100)
00 28	0aaa aaaa	Rhythm Pattern Velocity (1 - 127)
00 29	0000 000a	Chord Switch (0 - 1) OFF, ON
00 2A	0aaa aaaa	Chord Bank (0 - 1) USER, PRESET
00 2B	00aa aaaa	Chord Form (0 - 63)
00 2C : 00 30	0000 0000 0000 0000	(reserve) <*> (reserve) <*>
00 31	0000 000a	Rolled Chord (0 - 1) OFF, ON
00 32	0000 00aa	Rolled Chord Type (0 - 2) UP, DOWN, ALTERNATE
00 33	00aa aaaa	Arpeggio Step (0 - 32) AUTO, 1 - 32
00 00 00 34	Total Size	

❍System Common

Offset Address		Description
# 00 00	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Master Tune (24 - 2024) -100.0 - 100.0 [cent]
00 04	00aa aaaa	Master Key Shift (40 - 88) -24 - +24
00 05	0aaa aaaa	Master Level (0 - 127)
00 06	0000 000a	Scale Tune Switch (0 - 1) OFF, ON
00 07	0000 000a	Patch Remain (0 - 1) OFF, ON
00 08	0000 000a	Mix/Parallel (0 - 1) MIX, PARALLEL
00 09	000a aaaa	Performance Control Channel (0 - 16) 1 - 16, OFF
00 0A	0000 aaaa	Kbd Patch Rx/Tx Channel (0 - 15) 1 - 16
00 0B	0000 0000	(reserve) <*>
00 0C	0aaa aaaa	Patch Scale Tune for C (0 - 127) -64 - +63
00 0D	0aaa aaaa	Patch Scale Tune for C# (0 - 127) -64 - +63
00 0E	0aaa aaaa	Patch Scale Tune for D (0 - 127) -64 - +63
00 0F	0aaa aaaa	Patch Scale Tune for D# (0 - 127) -64 - +63
00 10	0aaa aaaa	Patch Scale Tune for E (0 - 127) -64 - +63
00 11	0aaa aaaa	Patch Scale Tune for F (0 - 127) -64 - +63
00 12	0aaa aaaa	Patch Scale Tune for F# (0 - 127) -64 - +63
00 13	0aaa aaaa	Patch Scale Tune for G (0 - 127) -64 - +63
00 14	0aaa aaaa	Patch Scale Tune for G# (0 - 127) -64 - +63
00 15	0aaa aaaa	Patch Scale Tune for A (0 - 127) -64 - +63
00 16	0aaa aaaa	Patch Scale Tune for A# (0 - 127) -64 - +63
00 17	0aaa aaaa	Patch Scale Tune for B (0 - 127) -64 - +63
00 18	0aaa aaaa	System Control 1 Source (0 - 97) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT
00 19	0aaa aaaa	System Control 2 Source (0 - 97) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT
00 1A	0aaa aaaa	System Control 3 Source (0 - 97) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT
00 1B	0aaa aaaa	System Control 4 Source (0 - 97) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT
00 1C	0000 000a	Receive Program Change (0 - 1) OFF, ON
00 1D	0000 000a	Receive Bank Select (0 - 1) OFF, ON
00 00 00 1E	Total Size	

❍System Mastering

Offset Address		Description
00 00	0000 000a	Mastering Switch (0 - 1) OFF, ON
00 01	0aaa aaaa	Low band Attack time (0 - 100)
00 02	0aaa aaaa	Low band Release time (0 - 100)
00 03	00aa aaaa	Low band Threshold (0 - 36) -36, -35, -34, -33, -32, -31, -30, -29, -28, -27, -26, -25, -24, -23, -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0 [dB]
00 04	0000 aaaa	Low band Ratio (0 - 13) 1:1.0, 1:1.1, 1:1.2, 1:1.4, 1:1.6, 1:1.8, 1:2.0, 1:2.5, 1:3.2, 1:4.0, 1:5.6, 1:8.0, 1:16, 1:INF
00 05	000a aaaa	Low band Level (0 - 24) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 [dB]
00 06	0aaa aaaa	Mid band Attack time (0 - 100)
00 07	0aaa aaaa	Mid band Release time (0 - 100)
00 08	00aa aaaa	Mid band Threshold (0 - 36) -36, -35, -34, -33, -32, -31, -30, -29, -28, -27, -26, -25, -24, -23, -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0 [dB]
00 09	0000 aaaa	Mid band Ratio (0 - 13) 1:1.0, 1:1.1, 1:1.2, 1:1.4, 1:1.6, 1:1.8, 1:2.0, 1:2.5, 1:3.2, 1:4.0, 1:5.6, 1:8.0, 1:16, 1:INF
00 0A	000a aaaa	Mid band Level (0 - 24) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 [dB]
00 0B	0aaa aaaa	High band Attack time (0 - 100)
00 0C	0aaa aaaa	High band Release time (0 - 100)
00 0D	00aa aaaa	High band Threshold (0 - 36) -36, -35, -34, -33, -32, -31, -30, -29, -28, -27, -26, -25, -24, -23, -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0 [dB]
00 0E	0000 aaaa	High band Ratio (0 - 13) 1:1.0, 1:1.1, 1:1.2, 1:1.4, 1:1.6, 1:1.8, 1:2.0, 1:2.5, 1:3.2, 1:4.0, 1:5.6, 1:8.0, 1:16, 1:INF
00 0F	000a aaaa	High band Level (0 - 24) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22,

			23, 24 [dB]
00 10	0000 0aaa	Split Freq Low	(0 - 6) 200, 250, 315, 400, 500, 630, 800 [Hz]
00 11	0000 0aaa	Split Freq High	(0 - 6) 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]
00 00 00 12	Total Size		

❍System External Input

Offset Address		Description	
00 00	0aaa aaaa	External Dry Send Level	(0 - 127)
00 01	0aaa aaaa	External Chorus Send Level	(0 - 127)
00 02	0aaa aaaa	External Reverb Send Level	(0 - 127)
00 03	0000 aaaa	External Output Assign	(0 - 1) MFX, DRY
00 04	0000 00aa	External Output MFX Select	(0 - 2) MFX1, MFX2, MFX3
00 05	0000 aaaa	Input Effect Type	(1 - 6)
# 00 06	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 1	(12768 - 52768) -20000 - +20000
# 00 0A	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 2	(12768 - 52768) -20000 - +20000
# 00 0E	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 3	(12768 - 52768) -20000 - +20000
# 00 12	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 4	(12768 - 52768) -20000 - +20000
# 00 16	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 5	(12768 - 52768) -20000 - +20000
# 00 1A	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 6	(12768 - 52768) -20000 - +20000
# 00 1E	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 7	(12768 - 52768) -20000 - +20000
# 00 22	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 8	(12768 - 52768) -20000 - +20000
# 00 26	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 9	(12768 - 52768) -20000 - +20000
# 00 2A	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 10	(12768 - 52768) -20000 - +20000
# 00 2E	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 11	(12768 - 52768) -20000 - +20000
# 00 32	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 12	(12768 - 52768) -20000 - +20000
# 00 36	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 13	(12768 - 52768) -20000 - +20000
# 00 3A	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 14	(12768 - 52768) -20000 - +20000
# 00 3E	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 15	(12768 - 52768) -20000 - +20000
# 00 42	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 16	(12768 - 52768) -20000 - +20000
# 00 46	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 17	(12768 - 52768) -20000 - +20000
# 00 4A	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 18	(12768 - 52768) -20000 - +20000
# 00 4E	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 19	(12768 - 52768) -20000 - +20000
# 00 52	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Input Effect Parameter 20	(12768 - 52768) -20000 - +20000
00 00 00 56	Total Size		

❍System Controller

Offset Address		Description	
00 00	0000 000a	Transmit Program Change	(0 - 1) OFF, ON
00 01	0000 000a	Transmit Bank Select	(0 - 1) OFF, ON
00 02	0aaa aaaa	Keyboard Velocity	(0 - 127) REAL, 1 - 127
00 03	0000 00aa	Keyboard Sens	(0 - 2) LIGHT, MEDIUM, HEAVY
00 04	0000 0000	(reserve) <*>	
00 05	0000 0aaa	Hold Pedal Polarity	(0 - 1) STANDARD, REVERSE
00 06	0000 000a	Continuous Hold Pedal	(0 - 1) OFF, ON
00 07	0aaa aaaa	Pedal Assign	(0 - 111) CC01 - CC31, CC33 - CC95, BEND-UP, BEND-DOWN, AFT, OCT-UP, OCT-DOWN, START/STOP, PUNCH-I/O, TAP-TEMPO, PROG-UP, PROG-DOWN, FAV-UP, FAV-DOWN, ARP-SW, RHY-START/STOP, CHD-SW, LIVESET-UP, LIVESET-DOWN, SEQ-LOOP
00 08	0000 0aaa	Pedal Polarity	(0 - 1) STANDARD, REVERSE
00 09	0000 aaaa	Beam Sens	(1 - 10)
00 0A	0aaa aaaa	Beam Assign	(0 - 104) CC01 - CC31, CC33 - CC95, BEND-UP, BEND-DOWN, START/STOP, TAP-TEMPO, ARP-GRID, ARP-DUR, ARP-MOTIF, ARP-OCT-UP, ARP-OCT-DW, ARP-STEP, AFT
00 0B	0aaa aaaa	Beam Range Lower	(0 - 127)
00 0C	0aaa aaaa	Beam Range Upper	(0 - 127)
00 0D	0000 0000	(reserve) <*>	
:			
00 4B	0000 0000	(reserve) <*>	
00 00 00 4C	Total Size		

❍Performance Common

Offset Address		Description	
00 00	0aaa aaaa	Performance Name 1	(32 - 127) 32 - 127 [ASCII]
00 01	0aaa aaaa	Performance Name 2	(32 - 127) 32 - 127 [ASCII]
00 02	0aaa aaaa	Performance Name 3	(32 - 127) 32 - 127 [ASCII]
00 03	0aaa aaaa	Performance Name 4	(32 - 127) 32 - 127 [ASCII]
00 04	0aaa aaaa	Performance Name 5	(32 - 127) 32 - 127 [ASCII]
00 05	0aaa aaaa	Performance Name 6	(32 - 127) 32 - 127 [ASCII]
00 06	0aaa aaaa	Performance Name 7	(32 - 127) 32 - 127 [ASCII]
00 07	0aaa aaaa	Performance Name 8	(32 - 127) 32 - 127 [ASCII]
00 08	0aaa aaaa	Performance Name 9	(32 - 127) 32 - 127 [ASCII]
00 09	0aaa aaaa	Performance Name 10	(32 - 127) 32 - 127 [ASCII]
00 0A	0aaa aaaa	Performance Name 11	(32 - 127) 32 - 127 [ASCII]
00 0B	0aaa aaaa	Performance Name 12	(32 - 127) 32 - 127 [ASCII]
00 0C	00aa aaaa	Solo Part Select	(0 - 16) OFF, 1 - 16
00 0D	000a aaaa	MFX1 Control Channel	(0 - 16) 1 - 16, OFF
00 0E	0000 0000	(reserve) <*>	
00 0F	0000 0000	(reserve) <*>	
00 10	0aaa aaaa	Voice Reserve 1	(0 - 64) 0 - 63, FULL
00 11	0aaa aaaa	Voice Reserve 2	(0 - 64) 0 - 63, FULL
00 12	0aaa aaaa	Voice Reserve 3	(0 - 64) 0 - 63, FULL
00 13	0aaa aaaa	Voice Reserve 4	(0 - 64) 0 - 63, FULL
00 14	0aaa aaaa	Voice Reserve 5	(0 - 64) 0 - 63, FULL
00 15	0aaa aaaa	Voice Reserve 6	(0 - 64) 0 - 63, FULL
00 16	0aaa aaaa	Voice Reserve 7	(0 - 64) 0 - 63, FULL
00 17	0aaa aaaa	Voice Reserve 8	(0 - 64) 0 - 63, FULL
00 18	0aaa aaaa	Voice Reserve 9	(0 - 64) 0 - 63, FULL
00 19	0aaa aaaa	Voice Reserve 10	(0 - 64) 0 - 63, FULL
00 1A	0aaa aaaa	Voice Reserve 11	(0 - 64) 0 - 63, FULL
00 1B	0aaa aaaa	Voice Reserve 12	(0 - 64) 0 - 63, FULL
00 1C	0aaa aaaa	Voice Reserve 13	(0 - 64) 0 - 63, FULL
00 1D	0aaa aaaa	Voice Reserve 14	(0 - 64) 0 - 63, FULL
00 1E	0aaa aaaa	Voice Reserve 15	(0 - 64) 0 - 63, FULL
00 1F	0aaa aaaa	Voice Reserve 16	(0 - 64) 0 - 63, FULL
00 20	0000 0000	(reserve) <*>	
:			
00 2F	0000 0000	(reserve) <*>	
00 30	00aa aaaa	MFX1 Source	(0 - 16) PERFORM, 1 - 16
00 31	00aa aaaa	MFX2 Source	(0 - 16) PERFORM, 1 - 16
00 32	00aa aaaa	MFX3 Source	(0 - 16) PERFORM, 1 - 16
00 33	00aa aaaa	Chorus Source	(0 - 16)

			PERFORM, 1 - 16
00 34	00aa aaaa	Reverb Source	(0 - 16) PERFORM, 1 - 16
00 35	00aa aaaa	MFX2 Control Channel	(0 - 16) 1 - 16, OFF
00 36	00aa aaaa	MFX3 Control Channel	(0 - 16) 1 - 16, OFF
00 37	0000 aaaa	MFX Structure	(0 - 15) 1 - 16
00 00 00 38	Total Size		

❍Performance Common MFX

Offset Address		Description	
00 00	0aaa aaaa	MFX Type	(0 - 78) 0 - 127
00 01	0aaa aaaa	MFX Dry Send Level	(0 - 127)
00 02	0aaa aaaa	MFX Chorus Send Level	(0 - 127)
00 03	0aaa aaaa	MFX Reverb Send Level	(0 - 127)
00 04	0000 00aa	MFX Output Assign	(0 - 3) A, B, ---, ---
00 05	0aaa aaaa	MFX Control 1 Source	(0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4
00 06	0aaa aaaa	MFX Control 1 Sens	(1 - 127) -63 - +63
00 07	0aaa aaaa	MFX Control 2 Source	(0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4
00 08	0aaa aaaa	MFX Control 2 Sens	(1 - 127) -63 - +63
00 09	0aaa aaaa	MFX Control 3 Source	(0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4
00 0A	0aaa aaaa	MFX Control 3 Sens	(1 - 127) -63 - +63
00 0B	0aaa aaaa	MFX Control 4 Source	(0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4
00 0C	0aaa aaaa	MFX Control 4 Sens	(1 - 127) -63 - +63
00 0D	000a aaaa	MFX Control Assign 1	(0 - 16) OFF, 1 - 16
00 0E	000a aaaa	MFX Control Assign 2	(0 - 16) OFF, 1 - 16
00 0F	000a aaaa	MFX Control Assign 3	(0 - 16) OFF, 1 - 16
00 10	000a aaaa	MFX Control Assign 4	(0 - 16) OFF, 1 - 16
# 00 11	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 1	(12768 - 52768) -20000 - +20000
# 00 15	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 2	(12768 - 52768) -20000 - +20000
# 00 19	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 3	(12768 - 52768) -20000 - +20000
# 00 1D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 4	(12768 - 52768) -20000 - +20000
# 00 21	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 5	(12768 - 52768) -20000 - +20000
# 00 25	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 6	(12768 - 52768) -20000 - +20000
# 00 29	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 7	(12768 - 52768) -20000 - +20000
# 00 2D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 8	(12768 - 52768) -20000 - +20000
# 00 31	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 9	(12768 - 52768) -20000 - +20000
# 00 35	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 10	(12768 - 52768) -20000 - +20000
# 00 39	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 11	(12768 - 52768) -20000 - +20000
# 00 3D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 12	(12768 - 52768) -20000 - +20000
# 00 41	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 13	(12768 - 52768) -20000 - +20000
# 00 45	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 14	(12768 - 52768) -20000 - +20000
# 00 49	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 15	(12768 - 52768) -20000 - +20000
# 00 4D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 16	(12768 - 52768) -20000 - +20000
# 00 51	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 17	(12768 - 52768) -20000 - +20000
# 00 55	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 18	(12768 - 52768) -20000 - +20000
# 00 59	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 19	(12768 - 52768) -20000 - +20000
# 00 5D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 20	(12768 - 52768) -20000 - +20000
# 00 61	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 21	(12768 - 52768) -20000 - +20000
# 00 65	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 22	(12768 - 52768) -20000 - +20000
# 00 69	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 23	(12768 - 52768) -20000 - +20000
# 00 6D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 24	(12768 - 52768) -20000 - +20000
# 00 71	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 25	(12768 - 52768) -20000 - +20000
# 00 75	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 26	(12768 - 52768) -20000 - +20000
# 00 79	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 27	(12768 - 52768) -20000 - +20000
# 00 7D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 28	(12768 - 52768) -20000 - +20000
# 01 01	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 29	(12768 - 52768) -20000 - +20000
# 01 05	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 30	(12768 - 52768) -20000 - +20000
# 01 09	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 31	(12768 - 52768) -20000 - +20000
# 01 0D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 32	(12768 - 52768) -20000 - +20000
00 00 01 11	Total Size		

❍Performance Common Chorus

Offset Address		Description	
00 00	0000 aaaa	Chorus Type	(0 - 3)
00 01	0aaa aaaa	Chorus Level	(0 - 127)
00 02	0000 00aa	Chorus Output Assign	(0 - 3) A, B, ---, ---
00 03	0000 00aa	Chorus Output Select	(0 - 2) MAIN, REV, MAIN+REV
# 00 04	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 1	(12768 - 52768) -20000 - +20000
# 00 08	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 2	(12768 - 52768) -20000 - +20000
# 00 0C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 3	(12768 - 52768) -20000 - +20000
# 00 10	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 4	(12768 - 52768) -20000 - +20000
# 00 14	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 5	(12768 - 52768) -20000 - +20000
# 00 18	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 6	(12768 - 52768) -20000 - +20000
# 00 1C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 7	(12768 - 52768) -20000 - +20000
# 00 20	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 8	(12768 - 52768) -20000 - +20000

#	00 24	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 9	(12768 - 52768) -20000 - +20000
#	00 28	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 10	(12768 - 52768) -20000 - +20000
#	00 2C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 11	(12768 - 52768) -20000 - +20000
#	00 30	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 12	(12768 - 52768) -20000 - +20000
#	00 34	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 13	(12768 - 52768) -20000 - +20000
#	00 38	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 14	(12768 - 52768) -20000 - +20000
#	00 3C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 15	(12768 - 52768) -20000 - +20000
#	00 40	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 16	(12768 - 52768) -20000 - +20000
#	00 44	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 17	(12768 - 52768) -20000 - +20000
#	00 48	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 18	(12768 - 52768) -20000 - +20000
#	00 4C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 19	(12768 - 52768) -20000 - +20000
#	00 50	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 20	(12768 - 52768) -20000 - +20000
	00 00 00 54	Total Size		

❍Performance Common Reverb

Offset Address		Description	
	00 00	0000 aaaa	Reverb Type	(0 - 5)
	00 01	0aaa aaaa	Reverb Level	(0 - 127)
	00 02	0000 00aa	Reverb Output Assign	(0 - 3) A, B, ---, ---
#	00 03	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 1	(12768 - 52768) -20000 - +20000
#	00 07	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 2	(12768 - 52768) -20000 - +20000
#	00 0B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 3	(12768 - 52768) -20000 - +20000
#	00 0F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 4	(12768 - 52768) -20000 - +20000
#	00 13	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 5	(12768 - 52768) -20000 - +20000
#	00 17	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 6	(12768 - 52768) -20000 - +20000
#	00 1B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 7	(12768 - 52768) -20000 - +20000
#	00 1F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 8	(12768 - 52768) -20000 - +20000
#	00 23	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 9	(12768 - 52768) -20000 - +20000
#	00 27	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 10	(12768 - 52768) -20000 - +20000
#	00 2B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 11	(12768 - 52768) -20000 - +20000
#	00 2F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 12	(12768 - 52768) -20000 - +20000
#	00 33	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 13	(12768 - 52768) -20000 - +20000
#	00 37	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 14	(12768 - 52768) -20000 - +20000
#	00 3B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 15	(12768 - 52768) -20000 - +20000
#	00 3F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 16	(12768 - 52768) -20000 - +20000
#	00 43	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 17	(12768 - 52768) -20000 - +20000
#	00 47	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 18	(12768 - 52768) -20000 - +20000
#	00 4B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 19	(12768 - 52768) -20000 - +20000
#	00 4F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 20	(12768 - 52768) -20000 - +20000
	00 00 00 53	Total Size		

❍Performance MIDI

Offset Address		Description	
	00 00	0000 000a	Receive Program Change	(0 - 1) OFF, ON
	00 01	0000 000a	Receive Bank Select	(0 - 1) OFF, ON
	00 02	0000 000a	Receive Bender	(0 - 1) OFF, ON
	00 03	0000 000a	Receive Polyphonic Key Pressure	(0 - 1) OFF, ON
	00 04	0000 000a	Receive Channel Pressure	(0 - 1) OFF, ON
	00 05	0000 000a	Receive Modulation	(0 - 1) OFF, ON
	00 06	0000 000a	Receive Volume	(0 - 1) OFF, ON
	00 07	0000 000a	Receive Pan	(0 - 1) OFF, ON
	00 08	0000 000a	Receive Expression	(0 - 1) OFF, ON
	00 09	0000 000a	Receive Hold-1	(0 - 1) OFF, ON
	00 0A	0000 000a	Phase Lock	(0 - 1) OFF, ON
	00 0B	0000 0aaa	Velocity Curve Type	(0 - 4) OFF, 1 - 4
	00 00 00 0C	Total Size		

❍Performance Part

Offset Address		Description	
	00 00	0000 aaaa	Receive Channel	(0 - 15) 1 - 16
	00 01	0000 000a	Receive Switch	(0 - 1) OFF, ON
	00 02	0000 0000	(reserve) <*>	
	00 03	0000 0000	(reserve) <*>	
	00 04	0aaa aaaa	Patch Bank Select MSB (CC# 0)	(0 - 127)
	00 05	0aaa aaaa	Patch Bank Select LSB (CC# 32)	(0 - 127)
	00 06	0aaa aaaa	Patch Program Number (PC)	(0 - 127)
	00 07	0aaa aaaa	Part Level (CC# 7)	(0 - 127)
	00 08	0aaa aaaa	Part Pan (CC# 10)	(0 - 127) L64 - 63R
	00 09	0aaa aaaa	Part Coarse Tune (RPN# 2)	(16 - 112) -48 - +48
	00 0A	0aaa aaaa	Part Fine Tune (RPN# 1)	(14 - 114) -50 - +50
	00 0B	0000 00aa	Part Mono/Poly (MONO ON/POLY ON)	(0 - 2) MONO, POLY, PATCH
	00 0C	0000 00aa	Part Legato Switch (CC# 68)	(0 - 2) OFF, ON, PATCH
	00 0D	000a aaaa	Part Pitch Bend Range (RPN# 0)	(0 - 25) 0 - 24, PATCH
	00 0E	0000 00aa	Part Portamento Switch (CC# 65)	(0 - 2) OFF, ON, PATCH
#	00 0F	0000 aaaa 0000 bbbb	Part Portamento Time (CC# 5)	(0 - 128) 0 - 127, PATCH
	00 11	0aaa aaaa	Part Cutoff Offset (CC# 74)	(0 - 127) -64 - +63
	00 12	0aaa aaaa	Part Resonance Offset (CC# 71)	(0 - 127) -64 - +63
	00 13	0aaa aaaa	Part Attack Time Offset (CC# 73)	(0 - 127) -64 - +63
	00 14	0aaa aaaa	Part Release Time Offset (CC# 72)	(0 - 127) -64 - +63
	00 15	0000 0aaa	Part Octave Shift	(61 - 67) -3 - +3
	00 16	0aaa aaaa	Part Velocity Sens Offset	(1 - 127) -63 - +63
	00 17 : 00 1A	0000 0000	(reserve) <*> : (reserve) <*>	
	00 1B	0000 000a	Mute Switch	(0 - 1) OFF, MUTE
	00 1C	0aaa aaaa	Part Dry Send Level	(0 - 127)
	00 1D	0aaa aaaa	Part Chorus Send Level (CC# 93)	(0 - 127)
	00 1E	0aaa aaaa	Part Reverb Send Level (CC# 91)	(0 - 127)

00 1F	0000 aaaa	Part Output Assign (0 - 13) MFX, A, B, ---, ---, 1, 2, 3, 4, ---, ---, ---, ---, PATCH
00 20	0000 00aa	Part Output MFX Select (0 - 2) MFX1, MFX2, MFX3
00 21	0aaa aaaa	Part Decay Time Offset (CC# 75) (0 - 127) -64 - +63
00 22	0aaa aaaa	Part Vibrato Rate (CC# 76) (0 - 127) -64 - +63
00 23	0aaa aaaa	Part Vibrato Depth (CC# 77) (0 - 127) -64 - +63
00 24	0aaa aaaa	Part Vibrato Delay (CC# 78) (0 - 127) -64 - +63
00 25	0aaa aaaa	Part Scale Tune for C (0 - 127) -64 - +63
00 26	0aaa aaaa	Part Scale Tune for C# (0 - 127) -64 - +63
00 27	0aaa aaaa	Part Scale Tune for D (0 - 127) -64 - +63
00 28	0aaa aaaa	Part Scale Tune for D# (0 - 127) -64 - +63
00 29	0aaa aaaa	Part Scale Tune for E (0 - 127) -64 - +63
00 2A	0aaa aaaa	Part Scale Tune for F (0 - 127) -64 - +63
00 2B	0aaa aaaa	Part Scale Tune for F# (0 - 127) -64 - +63
00 2C	0aaa aaaa	Part Scale Tune for G (0 - 127) -64 - +63
00 2D	0aaa aaaa	Part Scale Tune for G# (0 - 127) -64 - +63
00 2E	0aaa aaaa	Part Scale Tune for A (0 - 127) -64 - +63
00 2F	0aaa aaaa	Part Scale Tune for A# (0 - 127) -64 - +63
00 30	0aaa aaaa	Part Scale Tune for B (0 - 127) -64 - +63
00 00 00 31	Total Size	

❍Performance Zone

Offset Address		Description
00 00	0000 0000	(reserve) <*>
00 01	0000 000a	Zone Switch (0 - 1) OFF, ON
00 02	0000 0000	(reserve) <*>
# 00 03	0000 aaaa 0000 bbbb	External Bank Select MSB (CC# 0) (0 - 128) 0 - 127, NO-SEND
00 05	0aaa aaaa	External Bank Select LSB (CC# 32) (0 - 127)
# 00 06	0000 aaaa 0000 bbbb	External Program Number (PC) (0 - 128) 0 - 127, NO-SEND
# 00 08	0000 aaaa 0000 bbbb	External Level (CC# 7) (0 - 128) 0 - 127, NO-SEND
# 00 0A	0000 aaaa 0000 bbbb	External Pan (CC# 10) (0 - 128) L64 - 63R, NO-SEND
00 0C	0aaa aaaa	Keyboard Range Lower (0 - 127) C-1 - UPPER
00 0D	0aaa aaaa	Keyboard Range Upper (0 - 127) LOWER - G9
00 0E	0000 000a	Control Bender (0 - 1) OFF, ON
00 0F	0000 0000	(reserve) <*>
00 10	0000 000a	Control Modulation (0 - 1) OFF, ON
00 11	0000 000a	Control Hold Pedal (0 - 1) OFF, ON
00 12	0000 000a	Control Pedal (0 - 1) OFF, ON
00 13	0000 0000	(reserve) <*>
00 14	0000 000a	Control D Beam (0 - 1) OFF, ON
00 15 : 00 1A	0000 0000	(reserve) <*>
00 00 00 1B	Total Size	

❍Performance Controller

Offset Address		Description
00 00	0000 0000	(reserve) <*>
00 01	0aaa aaaa	Beam Assign (0 - 104) CC01 - CC31, CC33 - CC95, BEND-UP, BEND-DOWN, START/STOP, TAP-TEMPO, ARP-GRID, ARP-DUR, ARP-MOTIF, ARP-OCT-UP, ARP-OCT-DW, ARP_STEP, AFT
00 02 00 03	0aaa aaaa 0aaa aaaa	Beam Range Lower (0 - 127) Beam Range Upper (0 - 127)
00 04 : 00 0C	0000 0000	(reserve) <*>
00 0D	0000 0000	(reserve) <*>
00 0E	0aaa aaaa	Arp/Ptn Grid (0 - 8) 04_, 08_, 08L, 08H, 08t, 16_, 16L, 16H, 16t
00 0F	0aaa aaaa	Arp/Ptn Duration (0 - 9) 30, 40, 50, 60, 70, 80, 90, 100, 120, FUL
00 10	0000 000a	Arpeggio Switch (0 - 1) OFF, ON
00 11	0aaa aaaa	Arpeggio Bank (0 - 1) USER, PRESET
00 12	0aaa aaaa	Arpeggio Style (0 - 127) 1 - 128
00 13	0aaa aaaa	Arpeggio Motif (0 - 11) UP/L, UP/H, UP/_, dn/L, dn/H, dn/_, Ud/L, Ud/H, Ud/_, rn/L, rn/_, PHRASE
00 14	0000 0aaa	Arpeggio Octave Range (61 - 67) -3 - +3
00 15	0000 000a	Arpeggio Hold (0 - 1) OFF, ON
00 16	0aaa aaaa	Arpeggio Accent Rate (0 - 100)
00 17	0aaa aaaa	Arpeggio Velocity (0 - 127) REAL, 1 - 127
00 18	0000 aaaa	Arpeggio Zone Number (0 - 15) ZONE1 - ZONE16
00 19	0000 000a	Rhythm Pattern Switch (0 - 1) OFF, ON
00 1A	0aaa aaaa	Rhythm Pattern Group Bank (0 - 1) USER, PRESET
00 1B	0aaa aaaa	Rhythm Pattern Group Number (0 - 31) 1 - 32
00 1C	0aaa aaaa	Rhythm Pattern Accent Rate (0 - 100)
00 1D	0aaa aaaa	Rhythm Pattern Velocity (1 - 127)
00 1E	0000 000a	Chord Switch (0 - 1) OFF, ON
00 1F	0aaa aaaa	Chord Group (0 - 1) USER, PRESET
00 20	00aa aaaa	Chord Form (0 - 63)
00 21 : 00 53	0000 0000	(reserve) <*> (reserve) <*>
# 00 54	0000 aaaa 0000 bbbb	Recommended Tempo (20 - 250)
00 56	0000 000a	Rolled Chord (0 - 1) OFF, ON
00 57	0000 00aa	Rolled Chord Type (0 - 2) UP, DOWN, ALTERNATE
00 00 00 58	Total Size	

❍Arpeggio Common

Offset Address		Description
# 00 00	0000 aaaa 0000 bbbb	End Step (1 — 32)
# 00 00	0000 aaaa 0000 bbbb	End Step (1 - 32)
00 02	0aaa aaaa	Arpeggio Name 1 (32 - 127)
00 03	0aaa aaaa	Arpeggio Name 2 (32 - 127)
00 04	0aaa aaaa	Arpeggio Name 3 (32 - 127)
00 05	0aaa aaaa	Arpeggio Name 4 (32 - 127)
00 06	0aaa aaaa	Arpeggio Name 5 (32 - 127)
00 07	0aaa aaaa	Arpeggio Name 6 (32 - 127)
00 08	0aaa aaaa	Arpeggio Name 7 (32 - 127)
00 09	0aaa aaaa	Arpeggio Name 8 (32 - 127)
00 0A	0aaa aaaa	Arpeggio Name 9 (32 - 127)
00 0B	0aaa aaaa	Arpeggio Name 10 (32 - 127)
00 0C	0aaa aaaa	Arpeggio Name 11 (32 - 127)
00 0D	0aaa aaaa	Arpeggio Name 12 (32 - 127)
00 0E	0aaa aaaa	Arpeggio Name 13 (32 - 127)
00 0F	0aaa aaaa	Arpeggio Name 14 (32 - 127)
00 10	0aaa aaaa	Arpeggio Name 15 (32 - 127)
00 11	0aaa aaaa	Arpeggio Name 16 (32 - 127)
00 00 00 12	Total Size	

❍Arpeggio Pattern

Offset Address		Description
# 00 00	0000 aaaa 0000 bbbb	Original Note (0 — 128)
# 00 00	0000 aaaa 0000 bbbb	Original Note (0 - 128)
# 00 02	0000 aaaa 0000 bbbb	Step1 Data (0 - 128)
# 00 04	0000 aaaa 0000 bbbb	Step2 Data (0 - 128)
# 00 06	0000 aaaa 0000 bbbb	Step3 Data (0 - 128)
# 00 08	0000 aaaa 0000 bbbb	Step4 Data (0 - 128)
# 00 0A	0000 aaaa 0000 bbbb	Step5 Data (0 - 128)
# 00 0C	0000 aaaa 0000 bbbb	Step6 Data (0 - 128)
# 00 0E	0000 aaaa 0000 bbbb	Step7 Data (0 - 128)
# 00 10	0000 aaaa 0000 bbbb	Step8 Data (0 - 128)
# 00 12	0000 aaaa 0000 bbbb	Step9 Data (0 - 128)
# 00 14	0000 aaaa 0000 bbbb	Step10 Data (0 - 128)
# 00 16	0000 aaaa 0000 bbbb	Step11 Data (0 - 128)
# 00 18	0000 aaaa 0000 bbbb	Step12 Data (0 - 128)
# 00 1A	0000 aaaa 0000 bbbb	Step13 Data (0 - 128)
# 00 1C	0000 aaaa 0000 bbbb	Step14 Data (0 - 128)
# 00 1E	0000 aaaa 0000 bbbb	Step15 Data (0 - 128)
# 00 20	0000 aaaa 0000 bbbb	Step16 Data (0 - 128)
# 00 22	0000 aaaa 0000 bbbb	Step17 Data (0 - 128)
# 00 24	0000 aaaa	

		0000 bbbb	Step18 Data	(0 - 128)
#	00 26	0000 aaaa		
		0000 bbbb	Step19 Data	(0 - 128)
#	00 28	0000 aaaa		
		0000 bbbb	Step20 Data	(0 - 128)
#	00 2A	0000 aaaa		
		0000 bbbb	Step21 Data	(0 - 128)
#	00 2C	0000 aaaa		
		0000 bbbb	Step22 Data	(0 - 128)
#	00 2E	0000 aaaa		
		0000 bbbb	Step23 Data	(0 - 128)
#	00 30	0000 aaaa		
		0000 bbbb	Step24 Data	(0 - 128)
#	00 32	0000 aaaa		
		0000 bbbb	Step25 Data	(0 - 128)
#	00 34	0000 aaaa		
		0000 bbbb	Step26 Data	(0 - 128)
#	00 36	0000 aaaa		
		0000 bbbb	Step27 Data	(0 - 128)
#	00 38	0000 aaaa		
		0000 bbbb	Step28 Data	(0 - 128)
#	00 3A	0000 aaaa		
		0000 bbbb	Step29 Data	(0 - 128)
#	00 3C	0000 aaaa		
		0000 bbbb	Step30 Data	(0 - 128)
#	00 3E	0000 aaaa		
		0000 bbbb	Step31 Data	(0 - 128)
#	00 40	0000 aaaa		
		0000 bbbb	Step32 Data	(0 - 128)
00 00 00 42		Total Size		

❍Chord Pattern

Offset Address		Description	
00 00	0000 000a	Chord Note1	(0 - 1)
00 01	0000 000a	Chord Note2	OFF, ON (0 - 1)
00 02	0000 000a	Chord Note3	OFF, ON (0 - 1)
00 03	0000 000a	Chord Note4	OFF, ON (0 - 1)
00 04	0000 000a	Chord Note5	OFF, ON (0 - 1)
00 05	0000 000a	Chord Note6	OFF, ON (0 - 1)
00 06	0000 000a	Chord Note7	OFF, ON (0 - 1)
00 07	0000 000a	Chord Note8	OFF, ON (0 - 1)
00 08	0000 000a	Chord Note9	OFF, ON (0 - 1)
00 09	0000 000a	Chord Note10	OFF, ON (0 - 1)
00 0A	0000 000a	Chord Note11	OFF, ON (0 - 1)
00 0B	0000 000a	Chord Note12	OFF, ON (0 - 1)
00 0C	0000 000a	Chord Note13	OFF, ON (0 - 1)
00 0D	0000 000a	Chord Note14	OFF, ON (0 - 1)
00 0E	0000 000a	Chord Note15	OFF, ON (0 - 1)
00 0F	0000 000a	Chord Note16	OFF, ON (0 - 1)
00 10	0000 000a	Chord Note17	OFF, ON (0 - 1)
00 11	0000 000a	Chord Note18	OFF, ON (0 - 1)
00 12	0000 000a	Chord Note19	OFF, ON (0 - 1)
00 13	0000 000a	Chord Note20	OFF, ON (0 - 1)
00 14	0000 000a	Chord Note21	OFF, ON (0 - 1)
00 15	0000 000a	Chord Note22	OFF, ON (0 - 1)
00 16	0000 000a	Chord Note23	OFF, ON (0 - 1)
00 17	0000 000a	Chord Note24	OFF, ON (0 - 1)
00 18	0000 000a	Chord Note25	OFF, ON (0 - 1)
00 19	0000 000a	Chord Note26	OFF, ON (0 - 1)
00 1A	0000 000a	Chord Note27	OFF, ON (0 - 1)
00 1B	0000 000a	Chord Note28	OFF, ON (0 - 1)
00 1C	0000 000a	Chord Note29	OFF, ON (0 - 1)
00 1D	0000 000a	Chord Note30	OFF, ON (0 - 1)
00 1E	0000 000a	Chord Note31	OFF, ON (0 - 1)
00 1F	0000 000a	Chord Note32	OFF, ON (0 - 1)
00 20	0000 000a	Chord Note33	OFF, ON (0 - 1)
00 21	0000 000a	Chord Note34	OFF, ON (0 - 1)
00 22	0000 000a	Chord Note35	OFF, ON (0 - 1)
00 23	0000 000a	Chord Note36	OFF, ON (0 - 1)
00 24	0000 000a	Chord Note37	OFF, ON (0 - 1)
00 25	0000 000a	Chord Note38	OFF, ON (0 - 1)
00 26	0000 000a	Chord Note39	OFF, ON (0 - 1)
00 27	0000 000a	Chord Note40	OFF, ON (0 - 1)
00 28	0000 000a	Chord Note41	OFF, ON (0 - 1)
00 29	0000 000a	Chord Note42	OFF, ON (0 - 1)
00 2A	0000 000a	Chord Note43	OFF, ON (0 - 1)
00 2B	0000 000a	Chord Note44	OFF, ON (0 - 1)
00 2C	0000 000a	Chord Note45	OFF, ON (0 - 1)
00 2D	0000 000a	Chord Note46	OFF, ON (0 - 1)
00 2E	0000 000a	Chord Note47	OFF, ON (0 - 1)
00 2F	0000 000a	Chord Note48	OFF, ON (0 - 1)
00 30	0000 000a	Chord Note49	OFF, ON (0 - 1)
00 31	0000 000a	Chord Note50	OFF, ON (0 - 1)
00 32	0000 000a	Chord Note51	OFF, ON (0 - 1)
00 33	0000 000a	Chord Note52	OFF, ON (0 - 1)
00 34	0000 000a	Chord Note53	OFF, ON (0 - 1)
00 35	0000 000a	Chord Note54	OFF, ON (0 - 1)
00 36	0000 000a	Chord Note55	OFF, ON (0 - 1)
00 37	0000 000a	Chord Note56	OFF, ON (0 - 1)
00 38	0000 000a	Chord Note57	OFF, ON (0 - 1)
00 39	0000 000a	Chord Note58	OFF, ON (0 - 1)
00 3A	0000 000a	Chord Note59	OFF, ON (0 - 1)
00 3B	0000 000a	Chord Note60	OFF, ON (0 - 1)
00 3C	0000 000a	Chord Note61	OFF, ON (0 - 1)
00 3D	0000 000a	Chord Note62	OFF, ON (0 - 1)
00 3E	0000 000a	Chord Note63	OFF, ON (0 - 1)
00 3F	0000 000a	Chord Note64	OFF, ON (0 - 1)
00 40	0000 000a	Chord Note65	OFF, ON (0 - 1)
00 41	0000 000a	Chord Note66	OFF, ON (0 - 1)
00 42	0000 000a	Chord Note67	OFF, ON (0 - 1)
00 43	0000 000a	Chord Note68	OFF, ON (0 - 1)
00 44	0000 000a	Chord Note69	OFF, ON (0 - 1)
00 45	0000 000a	Chord Note70	OFF, ON (0 - 1)
00 46	0000 000a	Chord Note71	OFF, ON (0 - 1)
00 47	0000 000a	Chord Note72	OFF, ON (0 - 1)
00 48	0000 000a	Chord Note73	OFF, ON (0 - 1)
00 49	0000 000a	Chord Note74	OFF, ON (0 - 1)
00 4A	0000 000a	Chord Note75	OFF, ON (0 - 1)
00 4B	0000 000a	Chord Note76	OFF, ON (0 - 1)
00 4C	0000 000a	Chord Note77	OFF, ON (0 - 1)
00 4D	0000 000a	Chord Note78	OFF, ON (0 - 1)
00 4E	0000 000a	Chord Note79	OFF, ON (0 - 1)
00 4F	0000 000a	Chord Note80	OFF, ON (0 - 1)
00 50	0000 000a	Chord Note81	OFF, ON (0 - 1)
00 51	0000 000a	Chord Note82	OFF, ON (0 - 1)
00 52	0000 000a	Chord Note83	OFF, ON (0 - 1)
00 53	0000 000a	Chord Note84	OFF, ON (0 - 1)
00 54	0000 000a	Chord Note85	OFF, ON (0 - 1)
00 55	0000 000a	Chord Note86	OFF, ON (0 - 1)
00 56	0000 000a	Chord Note87	OFF, ON (0 - 1)
00 57	0000 000a	Chord Note88	OFF, ON (0 - 1)
00 58	0000 000a	Chord Note89	OFF, ON (0 - 1)
00 59	0000 000a	Chord Note90	OFF, ON (0 - 1)
00 5A	0000 000a	Chord Note91	OFF, ON (0 - 1)
00 5B	0000 000a	Chord Note92	OFF, ON (0 - 1)
00 5C	0000 000a	Chord Note93	OFF, ON (0 - 1)
00 5D	0000 000a	Chord Note94	OFF, ON (0 - 1)
00 5E	0000 000a	Chord Note95	OFF, ON (0 - 1)
00 5F	0000 000a	Chord Note96	OFF, ON (0 - 1)
00 60	0000 000a	Chord Note97	OFF, ON (0 - 1)
00 61	0000 000a	Chord Note98	OFF, ON (0 - 1)
00 62	0000 000a	Chord Note99	OFF, ON (0 - 1)
00 63	0000 000a	Chord Note100	OFF, ON (0 - 1)
00 64	0000 000a	Chord Note101	OFF, ON (0 - 1)
00 65	0000 000a	Chord Note102	OFF, ON (0 - 1)
00 66	0000 000a	Chord Note103	OFF, ON (0 - 1)
00 67	0000 000a	Chord Note104	OFF, ON (0 - 1)
00 68	0000 000a	Chord Note105	OFF, ON (0 - 1)
00 69	0000 000a	Chord Note106	OFF, ON (0 - 1)
00 6A	0000 000a	Chord Note107	OFF, ON (0 - 1)
00 6B	0000 000a	Chord Note108	OFF, ON (0 - 1)
00 6C	0000 000a	Chord Note109	OFF, ON (0 - 1)
00 6D	0000 000a	Chord Note110	OFF, ON (0 - 1)
00 6E	0000 000a	Chord Note111	OFF, ON (0 - 1)
00 6F	0000 000a	Chord Note112	OFF, ON (0 - 1)
00 70	0000 000a	Chord Note113	OFF, ON (0 - 1)
00 71	0000 000a	Chord Note114	OFF, ON (0 - 1)
00 72	0000 000a	Chord Note115	OFF, ON (0 - 1)
00 73	0000 000a	Chord Note116	OFF, ON (0 - 1)
00 74	0000 000a	Chord Note117	OFF, ON (0 - 1)
00 75	0000 000a	Chord Note118	OFF, ON (0 - 1)

			OFF, ON
	00 76	0000 000a	Chord Note119 (0 - 1)
			OFF, ON
	00 77	0000 000a	Chord Note120 (0 - 1)
			OFF, ON
	00 78	0000 000a	Chord Note121 (0 - 1)
			OFF, ON
	00 79	0000 000a	Chord Note122 (0 - 1)
			OFF, ON
	00 7A	0000 000a	Chord Note123 (0 - 1)
			OFF, ON
	00 7B	0000 000a	Chord Note124 (0 - 1)
			OFF, ON
	00 7C	0000 000a	Chord Note125 (0 - 1)
			OFF, ON
	00 7D	0000 000a	Chord Note126 (0 - 1)
			OFF, ON
	00 7E	0000 000a	Chord Note127 (0 - 1)
			OFF, ON
	00 7F	0000 000a	Chord Note128 (0 - 1)
			OFF, ON
	01 00	0aaa aaaa	Chord Pattern Name 1 (32 - 127)
	01 01	0aaa aaaa	Chord Pattern Name 2 (32 - 127)
	01 02	0aaa aaaa	Chord Pattern Name 3 (32 - 127)
	01 03	0aaa aaaa	Chord Pattern Name 4 (32 - 127)
	01 04	0aaa aaaa	Chord Pattern Name 5 (32 - 127)
	01 05	0aaa aaaa	Chord Pattern Name 6 (32 - 127)
	01 06	0aaa aaaa	Chord Pattern Name 7 (32 - 127)
	01 07	0aaa aaaa	Chord Pattern Name 8 (32 - 127)
	01 08	0aaa aaaa	Chord Pattern Name 9 (32 - 127)
	01 09	0aaa aaaa	Chord Pattern Name 10 (32 - 127)
	01 0A	0aaa aaaa	Chord Pattern Name 11 (32 - 127)
	01 0B	0aaa aaaa	Chord Pattern Name 12 (32 - 127)
	01 0C	0aaa aaaa	Chord Pattern Name 13 (32 - 127)
	01 0D	0aaa aaaa	Chord Pattern Name 14 (32 - 127)
	01 0E	0aaa aaaa	Chord Pattern Name 15 (32 - 127)
	01 0F	0aaa aaaa	Chord Pattern Name 16 (32 - 127)
	00 00 01 10		Total Size

❍Rhythm Group

Offset Address		Description	
	00 00	0aaa aaaa	Rhythm Group Name 1 (32 - 127)
	00 01	0aaa aaaa	Rhythm Group Name 2 (32 - 127)
	00 02	0aaa aaaa	Rhythm Group Name 3 (32 - 127)
	00 03	0aaa aaaa	Rhythm Group Name 4 (32 - 127)
	00 04	0aaa aaaa	Rhythm Group Name 5 (32 - 127)
	00 05	0aaa aaaa	Rhythm Group Name 6 (32 - 127)
	00 06	0aaa aaaa	Rhythm Group Name 7 (32 - 127)
	00 07	0aaa aaaa	Rhythm Group Name 8 (32 - 127)
	00 08	0aaa aaaa	Rhythm Group Name 9 (32 - 127)
	00 09	0aaa aaaa	Rhythm Group Name 10 (32 - 127)
	00 0A	0aaa aaaa	Rhythm Group Name 11 (32 - 127)
	00 0B	0aaa aaaa	Rhythm Group Name 12 (32 - 127)
	00 0C	0aaa aaaa	Rhythm Group Name 13 (32 - 127)
	00 0D	0aaa aaaa	Rhythm Group Name 14 (32 - 127)
	00 0E	0aaa aaaa	Rhythm Group Name 15 (32 - 127)
	00 0F	0aaa aaaa	Rhythm Group Name 16 (32 - 127)
	00 10	0aaa aaaa	Recommended Rhythm Bank Select MSB (0 - 127)
	00 11	0aaa aaaa	Recommended Rhythm Bank Select LSB (0 - 127)
	00 12	0aaa aaaa	Recommended Rhythm Program Number (0 - 127)
	00 13	0000 0000	(reserve) <*>
	00 14	0000 0000	(reserve) <*>
	00 15	0aaa aaaa	Pad 1 Velocity (1 - 127)
	00 16	0000 000a	Pad 1 Rhythm Pattern Group (0 - 1) USER, PRESET
#	00 17	0000 aaaa	
		0000 bbbb	Pad 1 Rhythm Pattern Number (0 - 255)
	00 19	0000 0000	(reserve) <*>
	00 1A	0000 0000	(reserve) <*>
	00 1B	0aaa aaaa	Pad 2 Velocity (1 - 127)
	00 1C	0000 000a	Pad 2 Rhythm Pattern Group (0 - 1) USER, PRESET
#	00 1D	0000 aaaa	
		0000 bbbb	Pad 2 Rhythm Pattern Number (0 - 255)
	00 1F	0000 0000	(reserve) <*>
	00 20	0000 0000	(reserve) <*>
	00 21	0aaa aaaa	Pad 3 Velocity (1 - 127)
	00 22	0000 000a	Pad 3 Rhythm Pattern Group (0 - 1) USER, PRESET
#	00 23	0000 aaaa	
		0000 bbbb	Pad 3 Rhythm Pattern Number (0 - 255)
	00 25	0000 0000	(reserve) <*>
	00 26	0000 0000	(reserve) <*>
	00 27	0aaa aaaa	Pad 4 Velocity (1 - 127)
	00 28	0000 000a	Pad 4 Rhythm Pattern Group (0 - 1) USER, PRESET
#	00 29	0000 aaaa	
		0000 bbbb	Pad 4 Rhythm Pattern Number (0 - 255)
	00 2B	0000 0000	(reserve) <*>
	00 2C	0000 0000	(reserve) <*>
	00 2D	0aaa aaaa	Pad 5 Velocity (1 - 127)
	00 2E	0000 000a	Pad 5 Rhythm Pattern Group (0 - 1) USER, PRESET
#	00 2F	0000 aaaa	
		0000 bbbb	Pad 5 Rhythm Pattern Number (0 - 255)
	00 31	0000 0000	(reserve) <*>
	00 32	0000 0000	(reserve) <*>
	00 33	0aaa aaaa	Pad 6 Velocity (1 - 127)
	00 34	0000 000a	Pad 6 Rhythm Pattern Group (0 - 1) USER, PRESET
#	00 35	0000 aaaa	
		0000 bbbb	Pad 6 Rhythm Pattern Number (0 - 255)
	00 37	0000 0000	(reserve) <*>
	:		
#	00 71	0000 0000	
		0000 0000	(reserve) <*>
	00 00 00 73		Total Size

❍Patch Common

Offset Address		Description	
	00 00	0aaa aaaa	Patch Name 1 (32 - 127) 32 - 127 [ASCII]
	00 01	0aaa aaaa	Patch Name 2 (32 - 127) 32 - 127 [ASCII]
	00 02	0aaa aaaa	Patch Name 3 (32 - 127) 32 - 127 [ASCII]
	00 03	0aaa aaaa	Patch Name 4 (32 - 127) 32 - 127 [ASCII]
	00 04	0aaa aaaa	Patch Name 5 (32 - 127) 32 - 127 [ASCII]
	00 05	0aaa aaaa	Patch Name 6 (32 - 127) 32 - 127 [ASCII]
	00 06	0aaa aaaa	Patch Name 7 (32 - 127) 32 - 127 [ASCII]
	00 07	0aaa aaaa	Patch Name 8 (32 - 127) 32 - 127 [ASCII]
	00 08	0aaa aaaa	Patch Name 9 (32 - 127) 32 - 127 [ASCII]
	00 09	0aaa aaaa	Patch Name 10 (32 - 127) 32 - 127 [ASCII]
	00 0A	0aaa aaaa	Patch Name 11 (32 - 127) 32 - 127 [ASCII]
	00 0B	0aaa aaaa	Patch Name 12 (32 - 127) 32 - 127 [ASCII]
	00 0C	0aaa aaaa	Patch Category (0 - 127)
	00 0D	0000 0000	(reserve) <*>
	00 0E	0aaa aaaa	Patch Level (0 - 127)
	00 0F	0aaa aaaa	Patch Pan (0 - 127) L64 - 63R
	00 10	0000 000a	Patch Priority (0 - 1) LAST, LOUDEST
	00 11	0aaa aaaa	Patch Coarse Tune (16 - 112) -48 - +48
	00 12	0aaa aaaa	Patch Fine Tune (14 - 114) -50 - +50
	00 13	0000 0aaa	Octave Shift (61 - 67) -3 - +3
	00 14	0000 00aa	Stretch Tune Depth (0 - 3) OFF, 1 - 3
	00 15	0aaa aaaa	Analog Feel (0 - 127)
	00 16	0000 000a	Mono/Poly (0 - 1) MONO, POLY
	00 17	0000 000a	Legato Switch (0 - 1) OFF, ON
	00 18	0000 000a	Legato Retrigger (0 - 1) OFF, ON
	00 19	0000 000a	Portamento Switch (0 - 1) OFF, ON
	00 1A	0000 000a	Portamento Mode (0 - 1) NORMAL, LEGATO
	00 1B	0000 000a	Portamento Type (0 - 1) RATE, TIME
	00 1C	0000 000a	Portamento Start (0 - 1) PITCH, NOTE
	00 1D	0aaa aaaa	Portamento Time (0 - 127)
	00 1E	0000 0000	(reserve) <*>
#	00 1F	0000 0000	
		0000 0000	(reserve) <*>
	00 21	0000 0000	(reserve) <*>
	00 22	0aaa aaaa	Cutoff Offset (1 - 127) -63 - +63
	00 23	0aaa aaaa	Resonance Offset (1 - 127) -63 - +63
	00 24	0aaa aaaa	Attack Time Offset (1 - 127) -63 - +63
	00 25	0aaa aaaa	Release Time Offset (1 - 127) -63 - +63
	00 26	0aaa aaaa	Velocity Sens Offset (1 - 127) -63 - +63
	00 27	0000 aaaa	Patch Output Assign (0 - 13) MFX, A, B, ---, ---, 1, 2, 3, 4, ---, ---, ---, ---, TONE
	00 28	0000 000a	TMT Control Switch (0 - 1) OFF, ON
	00 29	00aa aaaa	Pitch Bend Range Up (0 - 48)
	00 2A	00aa aaaa	Pitch Bend Range Down (0 - 48)
	00 2B	0aaa aaaa	Matrix Control 1 Source (0 - 109) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4, VELOCITY, KEYFOLLOW, TEMPO, LFO1, LFO2, PIT-ENV, TVF-ENV, TVA-ENV
	00 2C	00aa aaaa	Matrix Control 1 Destination 1 (0 - 34) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4, TIME
	00 2D	0aaa aaaa	Matrix Control 1 Sens 1 (1 - 127) -63 - +63
	00 2E	00aa aaaa	Matrix Control 1 Destination 2 (0 - 34) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4, TIME
	00 2F	0aaa aaaa	Matrix Control 1 Sens 2 (1 - 127)

			-63 - +63
00 30	00aa aaaa	Matrix Control 1 Destination 3	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 31	0aaa aaaa	Matrix Control 1 Sens 3	(1 - 127)
			-63 - +63
00 32	00aa aaaa	Matrix Control 1 Destination 4	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 33	0aaa aaaa	Matrix Control 1 Sens 4	(1 - 127)
			-63 - +63
00 34	0aaa aaaa	Matrix Control 2 Source	(0 - 109)
			OFF, CC01 - CC31, CC33 - CC95,
			BEND, AFT, SYS1 - SYS4, VELOCITY,
			KEYFOLLOW, TEMPO, LFO1, LFO2,
			PIT-ENV, TVF-ENV, TVA-ENV
00 35	00aa aaaa	Matrix Control 2 Destination 1	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 36	0aaa aaaa	Matrix Control 2 Sens 1	(1 - 127)
			-63 - +63
00 37	00aa aaaa	Matrix Control 2 Destination 2	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 38	0aaa aaaa	Matrix Control 2 Sens 2	(1 - 127)
			-63 - +63
00 39	00aa aaaa	Matrix Control 2 Destination 3	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 3A	0aaa aaaa	Matrix Control 2 Sens 3	(1 - 127)
			-63 - +63
00 3B	00aa aaaa	Matrix Control 2 Destination 4	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 3C	0aaa aaaa	Matrix Control 2 Sens 4	(1 - 127)
			-63 - +63
00 3D	0aaa aaaa	Matrix Control 3 Source	(0 - 109)
			OFF, CC01 - CC31, CC33 - CC95,
			BEND, AFT, SYS1 - SYS4, VELOCITY,
			KEYFOLLOW, TEMPO, LFO1, LFO2,
			PIT-ENV, TVF-ENV, TVA-ENV
00 3E	00aa aaaa	Matrix Control 3 Destination 1	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 3F	0aaa aaaa	Matrix Control 3 Sens 1	(1 - 127)
			-63 - +63
00 40	00aa aaaa	Matrix Control 3 Destination 2	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 41	0aaa aaaa	Matrix Control 3 Sens 2	(1 - 127)
			-63 - +63
00 42	00aa aaaa	Matrix Control 3 Destination 3	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 43	0aaa aaaa	Matrix Control 3 Sens 3	(1 - 127)
			-63 - +63
00 44	00aa aaaa	Matrix Control 3 Destination 4	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 45	0aaa aaaa	Matrix Control 3 Sens 4	(1 - 127)
			-63 - +63
00 46	0aaa aaaa	Matrix Control 4 Source	(0 - 109)
			OFF, CC01 - CC31, CC33 - CC95,
			BEND, AFT, SYS1 - SYS4, VELOCITY,
			KEYFOLLOW, TEMPO, LFO1, LFO2,
			PIT-ENV, TVF-ENV, TVA-ENV
00 47	00aa aaaa	Matrix Control 4 Destination 1	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 48	0aaa aaaa	Matrix Control 4 Sens 1	(1 - 127)
			-63 - +63
00 49	00aa aaaa	Matrix Control 4 Destination 2	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 4A	0aaa aaaa	Matrix Control 4 Sens 2	(1 - 127)
			-63 - +63
00 4B	00aa aaaa	Matrix Control 4 Destination 3	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 4C	0aaa aaaa	Matrix Control 4 Sens 3	(1 - 127)
			-63 - +63
00 4D	00aa aaaa	Matrix Control 4 Destination 4	(0 - 34)
			OFF, PCH, CUT, RES, LEV, PAN,
			DRY, CHO, REV, PIT-LFO1,
			PIT-LFO2, TVF-LFO1, TVF-LFO2,
			TVA-LFO1, TVA-LFO2, PAN-LFO1,
			PAN-LFO2, LFO1-RATE, LFO2-RATE,
			PIT-ATK, PIT-DCY, PIT-REL,
			TVF-ATK, TVF-DCY, TVF-REL,
			TVA-ATK, TVA-DCY, TVA-REL,
			TMT, FXM, MFX1, MFX2, MFX3, MFX4,
			TIME
00 4E	0aaa aaaa	Matrix Control 4 Sens 4	(1 - 127)
			-63 - +63
00 00 00 4F	Total Size		

❍Patch Common MFX

Offset Address		Description	
00 00	0aaa aaaa	MFX Type	(0 - 127)
00 01	0aaa aaaa	MFX Dry Send Level	(0 - 127)
00 02	0aaa aaaa	MFX Chorus Send Level	(0 - 127)
00 03	0aaa aaaa	MFX Reverb Send Level	(0 - 127)
00 04	0000 00aa	MFX Output Assign	(0 - 3)
			A, B, ---, ---
00 05	0aaa aaaa	MFX Control 1 Source	(0 - 101)
			OFF, CC01 - CC31, CC33 - CC95,
			BEND, AFT, SYS1 - SYS4
00 06	0aaa aaaa	MFX Control 1 Sens	(1 - 127)
			-63 - +63
00 07	0aaa aaaa	MFX Control 2 Source	(0 - 101)
			OFF, CC01 - CC31, CC33 - CC95,
			BEND, AFT, SYS1 - SYS4
00 08	0aaa aaaa	MFX Control 2 Sens	(1 - 127)
			-63 - +63
00 09	0aaa aaaa	MFX Control 3 Source	(0 - 101)
			OFF, CC01 - CC31, CC33 - CC95,
			BEND, AFT, SYS1 - SYS4
00 0A	0aaa aaaa	MFX Control 3 Sens	(1 - 127)
			-63 - +63
00 0B	0aaa aaaa	MFX Control 4 Source	(0 - 101)
			OFF, CC01 - CC31, CC33 - CC95,
			BEND, AFT, SYS1 - SYS4
00 0C	0aaa aaaa	MFX Control 4 Sens	(1 - 127)
			-63 - +63
00 0D	000a aaaa	MFX Control Assign 1	(0 - 16)
			OFF, 1 - 16
00 0E	000a aaaa	MFX Control Assign 2	(0 - 16)
			OFF, 1 - 16
00 0F	000a aaaa	MFX Control Assign 3	(0 - 16)
			OFF, 1 - 16
00 10	000a aaaa	MFX Control Assign 4	(0 - 16)
			OFF, 1 - 16
# 00 11	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	MFX Parameter 1	(12768 - 52768)
			-20000 - +20000
# 00 15	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	MFX Parameter 2	(12768 - 52768)
			-20000 - +20000
# 00 19	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	MFX Parameter 3	(12768 - 52768)
			-20000 - +20000
# 00 1D	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	MFX Parameter 4	(12768 - 52768)
			-20000 - +20000
# 00 21	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	MFX Parameter 5	(12768 - 52768)
			-20000 - +20000
# 00 25	0000 aaaa		
	0000 bbbb		
	0000 cccc		

		0000 dddd	MFX Parameter 6	(12768 - 52768) -20000 - +20000
#	00 29	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 7	(12768 - 52768) -20000 - +20000
#	00 2D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 8	(12768 - 52768) -20000 - +20000
#	00 31	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 9	(12768 - 52768) -20000 - +20000
#	00 35	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 10	(12768 - 52768) -20000 - +20000
#	00 39	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 11	(12768 - 52768) -20000 - +20000
#	00 3D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 12	(12768 - 52768) -20000 - +20000
#	00 41	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 13	(12768 - 52768) -20000 - +20000
#	00 45	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 14	(12768 - 52768) -20000 - +20000
#	00 49	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 15	(12768 - 52768) -20000 - +20000
#	00 4D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 16	(12768 - 52768) -20000 - +20000
#	00 51	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 17	(12768 - 52768) -20000 - +20000
#	00 55	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 18	(12768 - 52768) -20000 - +20000
#	00 59	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 19	(12768 - 52768) -20000 - +20000
#	00 5D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 20	(12768 - 52768) -20000 - +20000
#	00 61	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 21	(12768 - 52768) -20000 - +20000
#	00 65	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 22	(12768 - 52768) -20000 - +20000
#	00 69	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 23	(12768 - 52768) -20000 - +20000
#	00 6D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 24	(12768 - 52768) -20000 - +20000
#	00 71	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 25	(12768 - 52768) -20000 - +20000
#	00 75	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 26	(12768 - 52768) -20000 - +20000
#	00 79	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 27	(12768 - 52768) -20000 - +20000
#	00 7D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 28	(12768 - 52768) -20000 - +20000
#	01 01	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 29	(12768 - 52768) -20000 - +20000
#	01 05	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 30	(12768 - 52768) -20000 - +20000
#	01 09	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 31	(12768 - 52768) -20000 - +20000
#	01 0D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 32	(12768 - 52768) -20000 - +20000
00 00 01 11		Total Size		

❍Patch Common Chorus

Offset Address		Description	
	00 00	0000 aaaa	Chorus Type (0 - 3)
	00 01	0aaa aaaa	Chorus Level (0 - 127)
	00 02	0000 00aa	Chorus Output Assign (0 - 3) A, B, ---, ---
	00 03	0000 00aa	Chorus Output Select (0 - 2) MAIN, REV, MAIN+REV
#	00 04	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 1 (12768 - 52768) -20000 - +20000
#	00 08	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 2 (12768 - 52768) -20000 - +20000
#	00 0C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 3 (12768 - 52768) -20000 - +20000
#	00 10	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 4 (12768 - 52768) -20000 - +20000
#	00 14	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 5 (12768 - 52768) -20000 - +20000
#	00 18	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 6 (12768 - 52768) -20000 - +20000
#	00 1C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 7 (12768 - 52768) -20000 - +20000
#	00 20	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 8 (12768 - 52768) -20000 - +20000
#	00 24	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 9 (12768 - 52768) -20000 - +20000
#	00 28	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 10 (12768 - 52768) -20000 - +20000
#	00 2C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 11 (12768 - 52768) -20000 - +20000
#	00 30	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 12 (12768 - 52768) -20000 - +20000
#	00 34	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 13 (12768 - 52768) -20000 - +20000
#	00 38	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 14 (12768 - 52768) -20000 - +20000
#	00 3C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 15 (12768 - 52768) -20000 - +20000
#	00 40	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 16 (12768 - 52768) -20000 - +20000
#	00 44	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 17 (12768 - 52768) -20000 - +20000
#	00 48	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 18 (12768 - 52768) -20000 - +20000
#	00 4C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 19 (12768 - 52768) -20000 - +20000
#	00 50	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 20 (12768 - 52768) -20000 - +20000
00 00 00 54		Total Size	

❍Patch Common Reverb

Offset Address		Description	
	00 00	0000 aaaa	Reverb Type (0 - 5)
	00 01	0aaa aaaa	Reverb Level (0 - 127)
	00 02	0000 00aa	Reverb Output Assign (0 - 3) A, B, ---, ---
#	00 03	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 1 (12768 - 52768) -20000 - +20000
#	00 07	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 2 (12768 - 52768)

			-20000 - +20000
# 00 0B	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 3	(12768 - 52768)
			-20000 - +20000
# 00 0F	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 4	(12768 - 52768)
			-20000 - +20000
# 00 13	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 5	(12768 - 52768)
			-20000 - +20000
# 00 17	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 6	(12768 - 52768)
			-20000 - +20000
# 00 1B	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 7	(12768 - 52768)
			-20000 - +20000
# 00 1F	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 8	(12768 - 52768)
			-20000 - +20000
# 00 23	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 9	(12768 - 52768)
			-20000 - +20000
# 00 27	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 10	(12768 - 52768)
			-20000 - +20000
# 00 2B	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 11	(12768 - 52768)
			-20000 - +20000
# 00 2F	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 12	(12768 - 52768)
			-20000 - +20000
# 00 33	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 13	(12768 - 52768)
			-20000 - +20000
# 00 37	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 14	(12768 - 52768)
			-20000 - +20000
# 00 3B	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 15	(12768 - 52768)
			-20000 - +20000
# 00 3F	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 16	(12768 - 52768)
			-20000 - +20000
# 00 43	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 17	(12768 - 52768)
			-20000 - +20000
# 00 47	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 18	(12768 - 52768)
			-20000 - +20000
# 00 4B	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 19	(12768 - 52768)
			-20000 - +20000
# 00 4F	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Reverb Parameter 20	(12768 - 52768)
			-20000 - +20000
00 00 00 53	Total Size		

❍Patch TMT (Tone Mix Table)

Offset Address		Description	
00 00	0000 aaaa	Structure Type 1 & 2	(0 - 9)
			1 - 10
00 01	0000 00aa	Booster 1 & 2	(0 - 3)
			0, +6, +12, +18 [dB]
00 02	0000 aaaa	Structure Type 3 & 4	(0 - 9)
			1 - 10
00 03	0000 00aa	Booster 3 & 4	(0 - 3)
			0, +6, +12, +18 [dB]
00 04	0000 00aa	TMT Velocity Control	(0 - 3)
			OFF, ON, RANDOM, CYCLE
00 05	0000 000a	TMT1 Tone Switch	(0 - 1)
			OFF, ON
00 06	0aaa aaaa	TMT1 Keyboard Range Lower	(0 - 127)
			C-1 - UPPER
00 07	0aaa aaaa	TMT1 Keyboard Range Upper	(0 - 127)
			LOWER - G9
00 08	0aaa aaaa	TMT1 Keyboard Fade Width Lower	(0 - 127)
00 09	0aaa aaaa	TMT1 Keyboard Fade Width Upper	(0 - 127)
00 0A	0aaa aaaa	TMT1 Velocity Range Lower	(1 - 127)
			1 - UPPER
00 0B	0aaa aaaa	TMT1 Velocity Range Upper	(1 - 127)
			LOWER - 127
00 0C	0aaa aaaa	TMT1 Velocity Fade Width Lower	(0 - 127)
00 0D	0aaa aaaa	TMT1 Velocity Fade Width Upper	(0 - 127)
00 0E	0000 000a	TMT2 Tone Switch	(0 - 1)
			OFF, ON
00 0F	0aaa aaaa	TMT2 Keyboard Range Lower	(0 - 127)
			C-1 - UPPER
00 10	0aaa aaaa	TMT2 Keyboard Range Upper	(0 - 127)
			LOWER - G9
00 11	0aaa aaaa	TMT2 Keyboard Fade Width Lower	(0 - 127)
00 12	0aaa aaaa	TMT2 Keyboard Fade Width Upper	(0 - 127)
00 13	0aaa aaaa	TMT2 Velocity Range Lower	(1 - 127)
			1 - UPPER
00 14	0aaa aaaa	TMT2 Velocity Range Upper	(1 - 127)
			LOWER - 127
00 15	0aaa aaaa	TMT2 Velocity Fade Width Lower	(0 - 127)
00 16	0aaa aaaa	TMT2 Velocity Fade Width Upper	(0 - 127)
00 17	0000 000a	TMT3 Tone Switch	(0 - 1)
			OFF, ON
00 18	0aaa aaaa	TMT3 Keyboard Range Lower	(0 - 127)
			C-1 - UPPER
00 19	0aaa aaaa	TMT3 Keyboard Range Upper	(0 - 127)
			LOWER - G9
00 1A	0aaa aaaa	TMT3 Keyboard Fade Width Lower	(0 - 127)
00 1B	0aaa aaaa	TMT3 Keyboard Fade Width Upper	(0 - 127)
00 1C	0aaa aaaa	TMT3 Velocity Range Lower	(1 - 127)
			1 - UPPER
00 1D	0aaa aaaa	TMT3 Velocity Range Upper	(1 - 127)
			LOWER - 127
00 1E	0aaa aaaa	TMT3 Velocity Fade Width Lower	(0 - 127)
00 1F	0aaa aaaa	TMT3 Velocity Fade Width Upper	(0 - 127)
00 20	0000 000a	TMT4 Tone Switch	(0 - 1)
			OFF, ON
00 21	0aaa aaaa	TMT4 Keyboard Range Lower	(0 - 127)
			C-1 - UPPER
00 22	0aaa aaaa	TMT4 Keyboard Range Upper	(0 - 127)
			LOWER - G9
00 23	0aaa aaaa	TMT4 Keyboard Fade Width Lower	(0 - 127)
00 24	0aaa aaaa	TMT4 Keyboard Fade Width Upper	(0 - 127)
00 25	0aaa aaaa	TMT4 Velocity Range Lower	(1 - 127)
			1 - UPPER
00 26	0aaa aaaa	TMT4 Velocity Range Upper	(1 - 127)
			LOWER - 127
00 27	0aaa aaaa	TMT4 Velocity Fade Width Lower	(0 - 127)
00 28	0aaa aaaa	TMT4 Velocity Fade Width Upper	(0 - 127)
00 00 00 29	Total Size		

❍Patch Tone

Offset Address		Description	
00 00	0aaa aaaa	Tone Level	(0 - 127)
00 01	0aaa aaaa	Tone Coarse Tune	(16 - 112)
			-48 - +48
00 02	0aaa aaaa	Tone Fine Tune	(14 - 114)
			-50 - +50
00 03	000a aaaa	Tone Random Pitch Depth	(0 - 30)
		0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200	
00 04	0aaa aaaa	Tone Pan	(0 - 127)
			L64 - 63R
00 05	000a aaaa	Tone Pan Keyfollow	(54 - 74)
			-100 - +100
00 06	00aa aaaa	Tone Random Pan Depth	(0 - 63)
00 07	0aaa aaaa	Tone Alternate Pan Depth	(1 - 127)
			L63 - 63R
00 08	0000 000a	Tone Env Mode	(0 - 1)
			NO-SUS, SUSTAIN
00 09	0000 00aa	Tone Delay Mode	(0 - 3)
		NORMAL, HOLD, KEY-OFF-NORMAL, KEY-OFF-DECAY	
# 00 0A	0000 aaaa		
	0000 bbbb	Tone Delay Time	(0 - 149)
			0 - 127, MUSICAL-NOTES
00 0C	0aaa aaaa	Tone Dry Send Level	(0 - 127)
00 0D	0aaa aaaa	Tone Chorus Send Level (MFX)	(0 - 127)
00 0E	0aaa aaaa	Tone Reverb Send Level (MFX)	(0 - 127)
00 0F	0aaa aaaa	Tone Chorus Send Level (non MFX)	(0 - 127)
00 10	0aaa aaaa	Tone Reverb Send Level (non MFX)	(0 - 127)
00 11	0000 aaaa	Tone Output Assign	(0 - 12)
			MFX, A, B, ---, ---, 1, 2, 3, 4, ---, ---, ---, ---
00 12	0000 000a	Tone Receive Bender	(0 - 1)
			OFF, ON
00 13	0000 000a	Tone Receive Expression	(0 - 1)
			OFF, ON
00 14	0000 000a	Tone Receive Hold-1	(0 - 1)
			OFF, ON
00 15	0000 000a	Tone Receive Pan Mode	(0 - 1)
			CONTINUOUS, KEY-ON
00 16	0000 000a	Tone Redamper Switch	(0 - 1)
			OFF, ON
00 17	0000 00aa	Tone Control 1 Switch 1	(0 - 2)
			OFF, ON, REVERSE
00 18	0000 00aa	Tone Control 1 Switch 2	(0 - 2)
			OFF, ON, REVERSE
00 19	0000 00aa	Tone Control 1 Switch 3	(0 - 2)
			OFF, ON, REVERSE
00 1A	0000 00aa	Tone Control 1 Switch 4	(0 - 2)
			OFF, ON, REVERSE
00 1B	0000 00aa	Tone Control 2 Switch 1	(0 - 2)
			OFF, ON, REVERSE
00 1C	0000 00aa	Tone Control 2 Switch 2	(0 - 2)
			OFF, ON, REVERSE
00 1D	0000 00aa	Tone Control 2 Switch 3	(0 - 2)
			OFF, ON, REVERSE
00 1E	0000 00aa	Tone Control 2 Switch 4	(0 - 2)
			OFF, ON, REVERSE
00 1F	0000 00aa	Tone Control 3 Switch 1	(0 - 2)
			OFF, ON, REVERSE
00 20	0000 00aa	Tone Control 3 Switch 2	(0 - 2)
			OFF, ON, REVERSE
00 21	0000 00aa	Tone Control 3 Switch 3	(0 - 2)
			OFF, ON, REVERSE
00 22	0000 00aa	Tone Control 3 Switch 4	(0 - 2)
			OFF, ON, REVERSE
00 23	0000 00aa	Tone Control 4 Switch 1	(0 - 2)
			OFF, ON, REVERSE
00 24	0000 00aa	Tone Control 4 Switch 2	(0 - 2)
			OFF, ON, REVERSE
00 25	0000 00aa	Tone Control 4 Switch 3	(0 - 2)
			OFF, ON, REVERSE
00 26	0000 00aa	Tone Control 4 Switch 4	(0 - 2)
			OFF, ON, REVERSE
00 27	0000 00aa	Wave Group Type	(0 - 2)
			INT, SRX, SAMPLE
# 00 28	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Wave Group ID	(0 - 16384)
			OFF, 1 - 16384
# 00 2C	0000 aaaa		
	0000 bbbb		
	0000 cccc		
	0000 dddd	Wave Number L (Mono)	(0 - 16384)
			OFF, 1 - 16384

#	00 30	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Wave Number R (0 - 16384) OFF, 1 - 16384
	00 34	0000 00aa	Wave Gain (0 - 3) -6, 0, +6, +12 [dB]
	00 35	0000 000a	Wave FXM Switch (0 - 1) OFF, ON
	00 36	0000 00aa	Wave FXM Color (0 - 3) 1 - 4
	00 37	000a aaaa	Wave FXM Depth (0 - 16)
	00 38	0000 000a	Wave Tempo Sync (0 - 1) OFF, ON
	00 39	00aa aaaa	Wave Pitch Keyfollow (44 - 84) -200 - +200
	00 3A	000a aaaa	Pitch Env Depth (52 - 76) -12 - +12
	00 3B	0aaa aaaa	Pitch Env Velocity Sens (1 - 127) -63 - +63
	00 3C	0aaa aaaa	Pitch Env Time 1 Velocity Sens (1 - 127) -63 - +63
	00 3D	0aaa aaaa	Pitch Env Time 4 Velocity Sens (1 - 127) -63 - +63
	00 3E	000a aaaa	Pitch Env Time Keyfollow (54 - 74) -100 - +100
	00 3F	0aaa aaaa	Pitch Env Time 1 (0 - 127)
	00 40	0aaa aaaa	Pitch Env Time 2 (0 - 127)
	00 41	0aaa aaaa	Pitch Env Time 3 (0 - 127)
	00 42	0aaa aaaa	Pitch Env Time 4 (0 - 127)
	00 43	0aaa aaaa	Pitch Env Level 0 (1 - 127) -63 - +63
	00 44	0aaa aaaa	Pitch Env Level 1 (1 - 127) -63 - +63
	00 45	0aaa aaaa	Pitch Env Level 2 (1 - 127) -63 - +63
	00 46	0aaa aaaa	Pitch Env Level 3 (1 - 127) -63 - +63
	00 47	0aaa aaaa	Pitch Env Level 4 (1 - 127) -63 - +63
	00 48	0000 0aaa	TVF Filter Type (0 - 6) OFF, LPF, BPF, HPF, PKG, LPF2, LPF3
	00 49	0aaa aaaa	TVF Cutoff Frequency (0 - 127)
	00 4A	00aa aaaa	TVF Cutoff Keyfollow (44 - 84) -200 - +200
	00 4B	0000 0aaa	TVF Cutoff Velocity Curve (0 - 7) FIXED, 1 - 7
	00 4C	0aaa aaaa	TVF Cutoff Velocity Sens (1 - 127) -63 - +63
	00 4D	0aaa aaaa	TVF Resonance (0 - 127)
	00 4E	0aaa aaaa	TVF Resonance Velocity Sens (1 - 127) -63 - +63
	00 4F	0aaa aaaa	TVF Env Depth (1 - 127) -63 - +63
	00 50	0000 0aaa	TVF Env Velocity Curve (0 - 7) FIXED, 1 - 7
	00 51	0aaa aaaa	TVF Env Velocity Sens (1 - 127) -63 - +63
	00 52	0aaa aaaa	TVF Env Time 1 Velocity Sens (1 - 127) -63 - +63
	00 53	0aaa aaaa	TVF Env Time 4 Velocity Sens (1 - 127) -63 - +63
	00 54	000a aaaa	TVF Env Time Keyfollow (54 - 74) -100 - +100
	00 55	0aaa aaaa	TVF Env Time 1 (0 - 127)
	00 56	0aaa aaaa	TVF Env Time 2 (0 - 127)
	00 57	0aaa aaaa	TVF Env Time 3 (0 - 127)
	00 58	0aaa aaaa	TVF Env Time 4 (0 - 127)
	00 59	0aaa aaaa	TVF Env Level 0 (0 - 127)
	00 5A	0aaa aaaa	TVF Env Level 1 (0 - 127)
	00 5B	0aaa aaaa	TVF Env Level 2 (0 - 127)
	00 5C	0aaa aaaa	TVF Env Level 3 (0 - 127)
	00 5D	0aaa aaaa	TVF Env Level 4 (0 - 127)
	00 5E	000a aaaa	Bias Level (54 - 74) -100 - +100
	00 5F	0aaa aaaa	Bias Position (0 - 127) C-1 - G9
	00 60	0000 00aa	Bias Direction (0 - 3) LOWER, UPPER, LOWER&UPPER, ALL
	00 61	0000 0aaa	TVA Level Velocity Curve (0 - 7) FIXED, 1 - 7
	00 62	0aaa aaaa	TVA Level Velocity Sens (1 - 127) -63 - +63
	00 63	0aaa aaaa	TVA Env Time 1 Velocity Sens (1 - 127) -63 - +63
	00 64	0aaa aaaa	TVA Env Time 4 Velocity Sens (1 - 127) -63 - +63
	00 65	000a aaaa	TVA Env Time Keyfollow (54 - 74) -100 - +100
	00 66	0aaa aaaa	TVA Env Time 1 (0 - 127)
	00 67	0aaa aaaa	TVA Env Time 2 (0 - 127)
	00 68	0aaa aaaa	TVA Env Time 3 (0 - 127)
	00 69	0aaa aaaa	TVA Env Time 4 (0 - 127)
	00 6A	0aaa aaaa	TVA Env Level 1 (0 - 127)
	00 6B	0aaa aaaa	TVA Env Level 2 (0 - 127)
	00 6C	0aaa aaaa	TVA Env Level 3 (0 - 127)
	00 6D	0000 aaaa	LFO1 Waveform (0 - 12) SIN, TRI, SAW-UP, SAW-DW, SQR, RND, BEND-UP, BEND-DW, TRP, S&H, CHS, VSIN, STEP
#	00 6E	0000 aaaa 0000 bbbb	LFO1 Rate (0 - 149) 0 - 127, MUSICAL-NOTES
	00 70	0000 0aaa	LFO1 Offset (0 - 4) -100, -50, 0, +50, +100
	00 71	0aaa aaaa	LFO1 Rate Detune (0 - 127)
	00 72	0aaa aaaa	LFO1 Delay Time (0 - 127)
	00 73	000a aaaa	LFO1 Delay Time Keyfollow (54 - 74) -100 - +100
	00 74	0000 00aa	LFO1 Fade Mode (0 - 3) ON-IN, ON-OUT, OFF-IN, OFF-OUT
	00 75	0aaa aaaa	LFO1 Fade Time (0 - 127)
	00 76	0000 000a	LFO1 Key Trigger (0 - 1) OFF, ON
	00 77	0aaa aaaa	LFO1 Pitch Depth (1 - 127) -63 - +63
	00 78	0aaa aaaa	LFO1 TVF Depth (1 - 127) -63 - +63
	00 79	0aaa aaaa	LFO1 TVA Depth (1 - 127) -63 - +63
	00 7A	0aaa aaaa	LFO1 Pan Depth (1 - 127) -63 - +63
	00 7B	0000 aaaa	LFO2 Waveform (0 - 12) SIN, TRI, SAW-UP, SAW-DW, SQR, RND, BEND-UP, BEND-DW, TRP, S&H, CHS, VSIN, STEP
#	00 7C	0000 aaaa 0000 bbbb	LFO2 Rate (0 - 149) 0 - 127, MUSICAL-NOTES
	00 7E	0000 0aaa	LFO2 Offset (0 - 4) -100, -50, 0, +50, +100
	00 7F	0aaa aaaa	LFO2 Rate Detune (0 - 127)
	01 00	0aaa aaaa	LFO2 Delay Time (0 - 127)
	01 01	000a aaaa	LFO2 Delay Time Keyfollow (54 - 74) -100 - +100
	01 02	0000 00aa	LFO2 Fade Mode (0 - 3) ON-IN, ON-OUT, OFF-IN, OFF-OUT
	01 03	0aaa aaaa	LFO2 Fade Time (0 - 127)
	01 04	0000 000a	LFO2 Key Trigger (0 - 1) OFF, ON
	01 05	0aaa aaaa	LFO2 Pitch Depth (1 - 127) -63 - +63
	01 06	0aaa aaaa	LFO2 TVF Depth (1 - 127) -63 - +63
	01 07	0aaa aaaa	LFO2 TVA Depth (1 - 127) -63 - +63
	01 08	0aaa aaaa	LFO2 Pan Depth (1 - 127) -63 - +63
	01 09	0000 aaaa	LFO Step Type (0 - 1)
	01 0A	0aaa aaaa	LFO Step1 (28 - 100) -36 - +36
	01 0B	0aaa aaaa	LFO Step2 (28 - 100) -36 - +36
	01 0C	0aaa aaaa	LFO Step3 (28 - 100) -36 - +36
	01 0D	0aaa aaaa	LFO Step4 (28 - 100) -36 - +36
	01 0E	0aaa aaaa	LFO Step5 (28 - 100) -36 - +36
	01 0F	0aaa aaaa	LFO Step6 (28 - 100) -36 - +36
	01 10	0aaa aaaa	LFO Step7 (28 - 100) -36 - +36
	01 11	0aaa aaaa	LFO Step8 (28 - 100) -36 - +36
	01 12	0aaa aaaa	LFO Step9 (28 - 100) -36 - +36
	01 13	0aaa aaaa	LFO Step10 (28 - 100) -36 - +36
	01 14	0aaa aaaa	LFO Step11 (28 - 100) -36 - +36
	01 15	0aaa aaaa	LFO Step12 (28 - 100) -36 - +36
	01 16	0aaa aaaa	LFO Step13 (28 - 100) -36 - +36
	01 17	0aaa aaaa	LFO Step14 (28 - 100) -36 - +36
	01 18	0aaa aaaa	LFO Step15 (28 - 100) -36 - +36
	01 19	0aaa aaaa	LFO Step16 (28 - 100) -36 - +36
00 00 01 1A			Total Size

❍Rhythm Common

Offset Address		Description	
	00 00	0aaa aaaa	Rhythm Name 1 (32 - 127) 32 - 127 [ASCII]
	00 01	0aaa aaaa	Rhythm Name 2 (32 - 127) 32 - 127 [ASCII]
	00 02	0aaa aaaa	Rhythm Name 3 (32 - 127) 32 - 127 [ASCII]
	00 03	0aaa aaaa	Rhythm Name 4 (32 - 127) 32 - 127 [ASCII]
	00 04	0aaa aaaa	Rhythm Name 5 (32 - 127) 32 - 127 [ASCII]
	00 05	0aaa aaaa	Rhythm Name 6 (32 - 127) 32 - 127 [ASCII]
	00 06	0aaa aaaa	Rhythm Name 7 (32 - 127) 32 - 127 [ASCII]
	00 07	0aaa aaaa	Rhythm Name 8 (32 - 127) 32 - 127 [ASCII]
	00 08	0aaa aaaa	Rhythm Name 9 (32 - 127) 32 - 127 [ASCII]
	00 09	0aaa aaaa	Rhythm Name 10 (32 - 127) 32 - 127 [ASCII]
	00 0A	0aaa aaaa	Rhythm Name 11 (32 - 127) 32 - 127 [ASCII]
	00 0B	0aaa aaaa	Rhythm Name 12 (32 - 127) 32 - 127 [ASCII]
	00 0C	0aaa aaaa	Rhythm Level (0 - 127)
	00 0D	0000 0000	(reserve) <*>
#	00 0E	0000 0000 0000 0000	(reserve) <*>
	00 10	0000 0000	(reserve) <*>
	00 11	0000 aaaa	Rhythm Output Assign (0 - 13) MFX, A, B, ---, ---, ---, 1, 2, 3, 4, ---, ---, ---, ---, TONE
00 00 00 12			Total Size

❍Rhythm Common MFX

Offset Address		Description	
	00 00	0aaa aaaa	MFX Type (0 - 127)
	00 01	0aaa aaaa	MFX Dry Send Level (0 - 127)
	00 02	0aaa aaaa	MFX Chorus Send Level (0 - 127)
	00 03	0aaa aaaa	MFX Reverb Send Level (0 - 127)
	00 04	0000 00aa	MFX Output Assign (0 - 3) A, B, ---, ---
	00 05	0aaa aaaa	MFX Control 1 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4
	00 06	0aaa aaaa	MFX Control 1 Sens (1 - 127) -63 - +63
	00 07	0aaa aaaa	MFX Control 2 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4
	00 08	0aaa aaaa	MFX Control 2 Sens (1 - 127) -63 - +63
	00 09	0aaa aaaa	MFX Control 3 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4
	00 0A	0aaa aaaa	MFX Control 3 Sens (1 - 127) -63 - +63
	00 0B	0aaa aaaa	MFX Control 4 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4
	00 0C	0aaa aaaa	MFX Control 4 Sens (1 - 127) -63 - +63
	00 0D	000a aaaa	MFX Control Assign 1 (0 - 16) OFF, 1 - 16
	00 0E	000a aaaa	MFX Control Assign 2 (0 - 16) OFF, 1 - 16
	00 0F	000a aaaa	MFX Control Assign 3 (0 - 16)

				OFF, 1 - 16
	00 10	000a aaaa	MFX Control Assign 4	(0 - 16) OFF, 1 - 16
#	00 11	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 1	(12768 - 52768) -20000 - +20000
#	00 15	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 2	(12768 - 52768) -20000 - +20000
#	00 19	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 3	(12768 - 52768) -20000 - +20000
#	00 1D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 4	(12768 - 52768) -20000 - +20000
#	00 21	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 5	(12768 - 52768) -20000 - +20000
#	00 25	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 6	(12768 - 52768) -20000 - +20000
#	00 29	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 7	(12768 - 52768) -20000 - +20000
#	00 2D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 8	(12768 - 52768) -20000 - +20000
#	00 31	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 9	(12768 - 52768) -20000 - +20000
#	00 35	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 10	(12768 - 52768) -20000 - +20000
#	00 39	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 11	(12768 - 52768) -20000 - +20000
#	00 3D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 12	(12768 - 52768) -20000 - +20000
#	00 41	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 13	(12768 - 52768) -20000 - +20000
#	00 45	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 14	(12768 - 52768) -20000 - +20000
#	00 49	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 15	(12768 - 52768) -20000 - +20000
#	00 4D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 16	(12768 - 52768) -20000 - +20000
#	00 51	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 17	(12768 - 52768) -20000 - +20000
#	00 55	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 18	(12768 - 52768) -20000 - +20000
#	00 59	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 19	(12768 - 52768) -20000 - +20000
#	00 5D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 20	(12768 - 52768) -20000 - +20000
#	00 61	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 21	(12768 - 52768) -20000 - +20000
#	00 65	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 22	(12768 - 52768) -20000 - +20000
#	00 69	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 23	(12768 - 52768) -20000 - +20000
#	00 6D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 24	(12768 - 52768) -20000 - +20000
#	00 71	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 25	(12768 - 52768) -20000 - +20000
#	00 75	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 26	(12768 - 52768) -20000 - +20000
#	00 79	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 27	(12768 - 52768) -20000 - +20000
#	00 7D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 28	(12768 - 52768) -20000 - +20000
#	01 01	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 29	(12768 - 52768) -20000 - +20000
#	01 05	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 30	(12768 - 52768) -20000 - +20000
#	01 09	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 31	(12768 - 52768) -20000 - +20000
#	01 0D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 32	(12768 - 52768) -20000 - +20000
	00 00 01 11	Total Size		

❍Rhythm Common Chorus

Offset Address		Description	
00 00	0000 aaaa	Chorus Type	(0 - 3)
00 01	0aaa aaaa	Chorus Level	(0 - 127)
00 02	0000 00aa	Chorus Output Assign	(0 - 3) A, B, ---, ---
00 03	0000 00aa	Chorus Output Select	(0 - 2) MAIN, REV, MAIN+REV
# 00 04	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 1	(12768 - 52768) -20000 - +20000
# 00 08	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 2	(12768 - 52768) -20000 - +20000
# 00 0C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 3	(12768 - 52768) -20000 - +20000
# 00 10	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 4	(12768 - 52768) -20000 - +20000
# 00 14	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 5	(12768 - 52768) -20000 - +20000
# 00 18	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 6	(12768 - 52768) -20000 - +20000
# 00 1C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 7	(12768 - 52768) -20000 - +20000
# 00 20	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 8	(12768 - 52768) -20000 - +20000
# 00 24	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 9	(12768 - 52768) -20000 - +20000
# 00 28	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 10	(12768 - 52768) -20000 - +20000
# 00 2C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 11	(12768 - 52768) -20000 - +20000
# 00 30	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 12	(12768 - 52768) -20000 - +20000
# 00 34	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 13	(12768 - 52768) -20000 - +20000
# 00 38	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 14	(12768 - 52768) -20000 - +20000
# 00 3C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 15	(12768 - 52768) -20000 - +20000
# 00 40	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 16	(12768 - 52768) -20000 - +20000
# 00 44	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 17	(12768 - 52768) -20000 - +20000
# 00 48	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 18	(12768 - 52768) -20000 - +20000
# 00 4C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 19	(12768 - 52768) -20000 - +20000

	Offset Address		Description	
#	00 50	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 20	(12768 - 52768) -20000 - +20000
	00 00 00 54	Total Size		

❍Rhythm Common Reverb

	Offset Address		Description	
	00 00	0000 aaaa	Reverb Type	(0 - 5)
	00 01	0aaa aaaa	Reverb Level	(0 - 127)
	00 02	0000 00aa	Reverb Output Assign	(0 - 3) A, B, ---, ---
#	00 03	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 1	(12768 - 52768) -20000 - +20000
#	00 07	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 2	(12768 - 52768) -20000 - +20000
#	00 0B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 3	(12768 - 52768) -20000 - +20000
#	00 0F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 4	(12768 - 52768) -20000 - +20000
#	00 13	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 5	(12768 - 52768) -20000 - +20000
#	00 17	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 6	(12768 - 52768) -20000 - +20000
#	00 1B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 7	(12768 - 52768) -20000 - +20000
#	00 1F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 8	(12768 - 52768) -20000 - +20000
#	00 23	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 9	(12768 - 52768) -20000 - +20000
#	00 27	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 10	(12768 - 52768) -20000 - +20000
#	00 2B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 11	(12768 - 52768) -20000 - +20000
#	00 2F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 12	(12768 - 52768) -20000 - +20000
#	00 33	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 13	(12768 - 52768) -20000 - +20000
#	00 37	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 14	(12768 - 52768) -20000 - +20000
#	00 3B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 15	(12768 - 52768) -20000 - +20000
#	00 3F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 16	(12768 - 52768) -20000 - +20000
#	00 43	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 17	(12768 - 52768) -20000 - +20000
#	00 47	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 18	(12768 - 52768) -20000 - +20000
#	00 4B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 19	(12768 - 52768) -20000 - +20000
#	00 4F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 20	(12768 - 52768) -20000 - +20000
	00 00 00 53	Total Size		

❍Rhythm Tone

	Offset Address		Description	
	00 00	0aaa aaaa	Tone Name 1	(32 - 127) 32 - 127 [ASCII]
	00 01	0aaa aaaa	Tone Name 2	(32 - 127) 32 - 127 [ASCII]
	00 02	0aaa aaaa	Tone Name 3	(32 - 127) 32 - 127 [ASCII]
	00 03	0aaa aaaa	Tone Name 4	(32 - 127) 32 - 127 [ASCII]
	00 04	0aaa aaaa	Tone Name 5	(32 - 127) 32 - 127 [ASCII]
	00 05	0aaa aaaa	Tone Name 6	(32 - 127) 32 - 127 [ASCII]
	00 06	0aaa aaaa	Tone Name 7	(32 - 127) 32 - 127 [ASCII]
	00 07	0aaa aaaa	Tone Name 8	(32 - 127) 32 - 127 [ASCII]
	00 08	0aaa aaaa	Tone Name 9	(32 - 127) 32 - 127 [ASCII]
	00 09	0aaa aaaa	Tone Name 10	(32 - 127) 32 - 127 [ASCII]
	00 0A	0aaa aaaa	Tone Name 11	(32 - 127) 32 - 127 [ASCII]
	00 0B	0aaa aaaa	Tone Name 12	(32 - 127) 32 - 127 [ASCII]
	00 0C	0000 000a	Assign Type	(0 - 1) MULTI, SINGLE
	00 0D	000a aaaa	Mute Group	(0 - 31) OFF, 1 - 31
	00 0E	0aaa aaaa	Tone Level	(0 - 127)
	00 0F	0aaa aaaa	Tone Coarse Tune	(0 - 127) C-1 - G9
	00 10	0aaa aaaa	Tone Fine Tune	(14 - 114) -50 - +50
	00 11	000a aaaa	Tone Random Pitch Depth	(0 - 30) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200
	00 12	0aaa aaaa	Tone Pan	(0 - 127) L64 - 63R
	00 13	00aa aaaa	Tone Random Pan Depth	(0 - 63)
	00 14	0aaa aaaa	Tone Alternate Pan Depth	(1 - 127) L63 - 63R
	00 15	0000 000a	Tone Env Mode	(0 - 1) NO-SUS, SUSTAIN
	00 16	0aaa aaaa	Tone Dry Send Level	(0 - 127)
	00 17	0aaa aaaa	Tone Chorus Send Level	(0 - 127)
	00 18	0aaa aaaa	Tone Reverb Send Level	(0 - 127)
	00 19	0aaa aaaa	Tone Chorus Send Level (non MFX)	(0 - 127)
	00 1A	0aaa aaaa	Tone Reverb Send Level (non MFX)	(0 - 127)
	00 1B	0000 aaaa	Tone Output Assign	(0 - 12) MFX, A, B, ---, ---, ---, 1, 2, 3, 4, ---, ---, ---, ---
	00 1C	00aa aaaa	Tone Pitch Bend Range	(0 - 48)
	00 1D	0000 000a	Tone Receive Expression	(0 - 1) OFF, ON
	00 1E	0000 000a	Tone Receive Hold-1	(0 - 1) OFF, ON
	00 1F	0000 000a	Tone Receive Pan Mode	(0 - 1) CONTINUOUS, KEY-ON
	00 20	0000 00aa	WMT Velocity Control	(0 - 2) OFF, ON, RANDOM
	00 21	0000 000a	WMT1 Wave Switch	(0 - 1) OFF, ON
	00 22	0000 00aa	WMT1 Wave Group Type	(0 - 2) INT, SRX, SAMPLE
#	00 23	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT1 Wave Group ID	(0 - 16384) OFF, 1 - 16384
#	00 27	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT1 Wave Number L (Mono)	(0 - 16384) OFF, 1 - 16384
#	00 2B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT1 Wave Number R	(0 - 16384) OFF, 1 - 16384
	00 2F	0000 00aa	WMT1 Wave Gain	(0 - 3) -6, 0, +6, +12 [dB]
	00 30	0000 000a	WMT1 Wave FXM Switch	(0 - 1) OFF, ON
	00 31	0000 00aa	WMT1 Wave FXM Color	(0 - 3) 1 - 4
	00 32	000a aaaa	WMT1 Wave FXM Depth	(0 - 16)
	00 33	0000 000a	WMT1 Wave Tempo Sync	(0 - 1) OFF, ON
	00 34	0aaa aaaa	WMT1 Wave Coarse Tune	(16 - 112) -48 - +48
	00 35	0aaa aaaa	WMT1 Wave Fine Tune	(14 - 114) -50 - +50
	00 36	0aaa aaaa	WMT1 Wave Pan	(0 - 127) L64 - 63R
	00 37	0000 000a	WMT1 Wave Random Pan Switch	(0 - 1) OFF, ON
	00 38	0000 00aa	WMT1 Wave Alternate Pan Switch	(0 - 2) OFF, ON, REVERSE
	00 39	0aaa aaaa	WMT1 Wave Level	(0 - 127)
	00 3A	0aaa aaaa	WMT1 Velocity Range Lower	(1 - 127) 1 - UPPER
	00 3B	0aaa aaaa	WMT1 Velocity Range Upper	(1 - 127) LOWER - 127
	00 3C	0aaa aaaa	WMT1 Velocity Fade Width Lower	(0 - 127)
	00 3D	0aaa aaaa	WMT1 Velocity Fade Width Upper	(0 - 127)
	00 3E	0000 000a	WMT2 Wave Switch	(0 - 1) OFF, ON
	00 3F	0000 00aa	WMT2 Wave Group Type	(0 - 2) INT, SRX, SAMPLE
#	00 40	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT2 Wave Group ID	(0 - 16384) OFF, 1 - 16384
#	00 44	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT2 Wave Number L (Mono)	(0 - 16384) OFF, 1 - 16384
#	00 48	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT2 Wave Number R	(0 - 16384) OFF, 1 - 16384
	00 4C	0000 00aa	WMT2 Wave Gain	(0 - 3) -6, 0, +6, +12 [dB]
	00 4D	0000 000a	WMT2 Wave FXM Switch	(0 - 1) OFF, ON
	00 4E	0000 00aa	WMT2 Wave FXM Color	(0 - 3) 1 - 4
	00 4F	000a aaaa	WMT2 Wave FXM Depth	(0 - 16)
	00 50	0000 000a	WMT2 Wave Tempo Sync	(0 - 1) OFF, ON
	00 51	0aaa aaaa	WMT2 Wave Coarse Tune	(16 - 112) -48 - +48
	00 52	0aaa aaaa	WMT2 Wave Fine Tune	(14 - 114)

			-50 - +50
	00 53	0aaa aaaa	WMT2 Wave Pan L64 - 63R
	00 54	0000 000a	WMT2 Wave Random Pan Switch OFF, ON
	00 55	0000 00aa	WMT2 Wave Alternate Pan Switch OFF, ON, REVERSE
	00 56	0aaa aaaa	WMT2 Wave Level
	00 57	0aaa aaaa	WMT2 Velocity Range Lower 1 - UPPER
	00 58	0aaa aaaa	WMT2 Velocity Range Upper LOWER - 127
	00 59	0aaa aaaa	WMT2 Velocity Fade Width Lower
	00 5A	0aaa aaaa	WMT2 Velocity Fade Width Upper
	00 5B	0000 000a	WMT3 Wave Switch OFF, ON
	00 5C	0000 00aa	WMT3 Wave Group Type INT, SRX, SAMPLE
#	00 5D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT3 Wave Group ID OFF, 1 - 16384
#	00 61	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT3 Wave Number L (Mono) OFF, 1 - 16384
#	00 65	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT3 Wave Number R OFF, 1 - 16384
	00 69	0000 00aa	WMT3 Wave Gain -6, 0, +6, +12 [dB]
	00 6A	0000 000a	WMT3 Wave FXM Switch OFF, ON
	00 6B	0000 00aa	WMT3 Wave FXM Color 1 - 4
	00 6C	000a aaaa	WMT3 Wave FXM Depth
	00 6D	0000 000a	WMT3 Wave Tempo Sync OFF, ON
	00 6E	0aaa aaaa	WMT3 Wave Coarse Tune -48 - +48
	00 6F	0aaa aaaa	WMT3 Wave Fine Tune -50 - +50
	00 70	0aaa aaaa	WMT3 Wave Pan L64 - 63R
	00 71	0000 000a	WMT3 Wave Random Pan Switch OFF, ON
	00 72	0000 00aa	WMT3 Wave Alternate Pan Switch OFF, ON, REVERSE
	00 73	0aaa aaaa	WMT3 Wave Level
	00 74	0aaa aaaa	WMT3 Velocity Range Lower 1 - UPPER
	00 75	0aaa aaaa	WMT3 Velocity Range Upper LOWER - 127
	00 76	0aaa aaaa	WMT3 Velocity Fade Width Lower
	00 77	0aaa aaaa	WMT3 Velocity Fade Width Upper
	00 78	0000 000a	WMT4 Wave Switch OFF, ON
	00 79	0000 00aa	WMT4 Wave Group Type INT, SRX, SAMPLE
#	00 7A	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT4 Wave Group ID OFF, 1 - 16384
#	00 7E	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT4 Wave Number L (Mono) OFF, 1 - 16384
#	01 02	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT4 Wave Number R OFF, 1 - 16384
	01 06	0000 00aa	WMT4 Wave Gain -6, 0, +6, +12 [dB]
	01 07	0000 000a	WMT4 Wave FXM Switch OFF, ON
	01 08	0000 00aa	WMT4 Wave FXM Color 1 - 4
	01 09	000a aaaa	WMT4 Wave FXM Depth
	01 0A	0000 000a	WMT4 Wave Tempo Sync OFF, ON
	01 0B	0aaa aaaa	WMT4 Wave Coarse Tune -48 - +48
	01 0C	0aaa aaaa	WMT4 Wave Fine Tune -50 - +50
	01 0D	0aaa aaaa	WMT4 Wave Pan L64 - 63R
	01 0E	0000 000a	WMT4 Wave Random Pan Switch OFF, ON
	01 0F	0000 00aa	WMT4 Wave Alternate Pan Switch OFF, ON, REVERSE
	01 10	0aaa aaaa	WMT4 Wave Level
	01 11	0aaa aaaa	WMT4 Velocity Range Lower 1 - UPPER
	01 12	0aaa aaaa	WMT4 Velocity Range Upper LOWER - 127
	01 13	0aaa aaaa	WMT4 Velocity Fade Width Lower
	01 14	0aaa aaaa	WMT4 Velocity Fade Width Upper
	01 15	000a aaaa	Pitch Env Depth -12 - +12
	01 16	0aaa aaaa	Pitch Env Velocity Sens -63 - +63
	01 17	0aaa aaaa	Pitch Env Time 1 Velocity Sens -63 - +63
	01 18	0aaa aaaa	Pitch Env Time 4 Velocity Sens -63 - +63
	01 19	0aaa aaaa	Pitch Env Time 1
	01 1A	0aaa aaaa	Pitch Env Time 2
	01 1B	0aaa aaaa	Pitch Env Time 3
	01 1C	0aaa aaaa	Pitch Env Time 4
	01 1D	0aaa aaaa	Pitch Env Level 0 -63 - +63
	01 1E	0aaa aaaa	Pitch Env Level 1 -63 - +63
	01 1F	0aaa aaaa	Pitch Env Level 2 -63 - +63
	01 20	0aaa aaaa	Pitch Env Level 3 -63 - +63
	01 21	0aaa aaaa	Pitch Env Level 4 -63 - +63
	01 22	0000 0aaa	TVF Filter Type OFF, LPF, BPF, HPF, PKG, LPF2, LPF3
	01 23	0aaa aaaa	TVF Cutoff Frequency
	01 24	0000 0aaa	TVF Cutoff Velocity Curve FIXED, 1 - 7
	01 25	0aaa aaaa	TVF Cutoff Velocity Sens -63 - +63
	01 26	0aaa aaaa	TVF Resonance
	01 27	0aaa aaaa	TVF Resonance Velocity Sens
	01 28	0aaa aaaa	TVF Env Depth -63 - +63
	01 29	0000 0aaa	TVF Env Velocity Curve Type FIXED, 1 - 7
	01 2A	0aaa aaaa	TVF Env Velocity Sens -63 - +63
	01 2B	0aaa aaaa	TVF Env Time 1 Velocity Sens -63 - +63
	01 2C	0aaa aaaa	TVF Env Time 4 Velocity Sens -63 - +63
	01 2D	0aaa aaaa	TVF Env Time 1
	01 2E	0aaa aaaa	TVF Env Time 2
	01 2F	0aaa aaaa	TVF Env Time 3
	01 30	0aaa aaaa	TVF Env Time 4
	01 31	0aaa aaaa	TVF Env Level 0
	01 32	0aaa aaaa	TVF Env Level 1
	01 33	0aaa aaaa	TVF Env Level 2
	01 34	0aaa aaaa	TVF Env Level 3
	01 35	0aaa aaaa	TVF Env Level 4
	01 36	0000 0aaa	TVA Level Velocity Curve FIXED, 1 - 7
	01 37	0aaa aaaa	TVA Level Velocity Sens -63 - +63
	01 38	0aaa aaaa	TVA Env Time 1 Velocity Sens -63 - +63
	01 39	0aaa aaaa	TVA Env Time 4 Velocity Sens -63 - +63
	01 3A	0aaa aaaa	TVA Env Time 1
	01 3B	0aaa aaaa	TVA Env Time 2
	01 3C	0aaa aaaa	TVA Env Time 3
	01 3D	0aaa aaaa	TVA Env Time 4
	01 3E	0aaa aaaa	TVA Env Level 1
	01 3F	0aaa aaaa	TVA Env Level 2
	01 40	0aaa aaaa	TVA Env Level 3
	01 41	0000 000a	One Shot Mode OFF, ON
	01 42	0aaa aaaa	Aftertouch Time Ctrl Sens -63 - +63
00 00 01 43			Total Size

5.2 GS (Model ID = 42H)

❍System Parameter

	Start Address		Description	
#	40 00 00	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Master Tune	(24 – 2024) –100.0 – 100.0 [cent]
	40 00 04	0aaa aaaa	Master Volume	(0 – 127)
	40 00 05	0aaa aaaa	Master Key Shift	(40 – 88) –24 – +24 [semitone]
	40 00 06	0aaa aaaa	Master Pan	(1 – 127) L63 – 63R
	40 00 7F	0aaa aaaa	Mode Set	(0, 127) GS–RESET, GS–EXIT

❍Common Parameter

	Start Address		Description	
	40 01 10	0aaa aaaa	Voice Reserve 1	(0 – 24)
	40 01 11	0aaa aaaa	Voice Reserve 2	(0 – 24)
	40 01 12	0aaa aaaa	Voice Reserve 3	(0 – 24)
	40 01 13	0aaa aaaa	Voice Reserve 4	(0 – 24)
	40 01 14	0aaa aaaa	Voice Reserve 5	(0 – 24)
	40 01 15	0aaa aaaa	Voice Reserve 6	(0 – 24)
	40 01 16	0aaa aaaa	Voice Reserve 7	(0 – 24)
	40 01 17	0aaa aaaa	Voice Reserve 8	(0 – 24)
	40 01 18	0aaa aaaa	Voice Reserve 9	(0 – 24)
	40 01 19	0aaa aaaa	Voice Reserve 10	(0 – 24)
	40 01 1A	0aaa aaaa	Voice Reserve 11	(0 – 24)
	40 01 1B	0aaa aaaa	Voice Reserve 12	(0 – 24)
	40 01 1C	0aaa aaaa	Voice Reserve 13	(0 – 24)
	40 01 1D	0aaa aaaa	Voice Reserve 14	(0 – 24)
	40 01 1E	0aaa aaaa	Voice Reserve 15	(0 – 24)
	40 01 1F	0aaa aaaa	Voice Reserve 16	(0 – 24)
	40 01 30	0aaa aaaa	Reverb Macro	(0 – 7)
	40 01 31	0aaa aaaa	Reverb Character	(0 – 7)
	40 01 32	0aaa aaaa	Reverb Pre–LPF	(0 – 7)
	40 01 33	0aaa aaaa	Reverb Level	(0 – 127)
	40 01 34	0aaa aaaa	Reverb Time	(0 – 127)
	40 01 35	0aaa aaaa	Reverb Delay Feedback	(0 – 127)
	40 01 36	0aaa aaaa	Reverb Send Level to Chorus<*>	(0 – 127)
	40 01 38	0aaa aaaa	Chorus Macro	(0 – 7)
	40 01 39	0aaa aaaa	Chorus Pre–LPF	(0 – 7)
	40 01 3A	0aaa aaaa	Chorus Level	(0 – 127)
	40 01 3B	0aaa aaaa	Chorus Feedback	(0 – 127)
	40 01 3C	0aaa aaaa	Chorus Delay	(0 – 127)
	40 01 3D	0aaa aaaa	Chorus Rate	(0 – 127)
	40 01 3E	0aaa aaaa	Chorus Depth	(0 – 127)
	40 01 3F	0aaa aaaa	Chorus Send Level to Reverb	(0 – 127)

❍Part Parameter

	Start Address		Description	
#	40 1x 00	0aaa aaaa 0aaa aaaa	Tone Number CC#00 Value Tone Number PC Value	(0 – 127) (0 – 127)
	40 1x 02	0aaa aaaa	Rx. Channel	(0 – 16) 1 – 16, OFF
	40 1x 03	0000 000a	Rx. Pitch Bend	(0 – 1) OFF, ON
	40 1x 04	0000 000a	Rx. Channel Pressure	(0 – 1) OFF, ON
	40 1x 05	0000 000a	Rx. Program Change	(0 – 1) OFF, ON
	40 1x 06	0000 000a	Rx. Control Change	(0 – 1) OFF, ON
	40 1x 07	0000 000a	Rx. Poly Pressure	(0 – 1) OFF, ON
	40 1x 08	0000 000a	Rx. Note Message	(0 – 1) OFF, ON
	40 1x 09	0000 000a	Rx. RPN	(0 – 1) OFF, ON
	40 1x 0A	0000 000a	Rx. NRPN	(0 – 1) OFF, ON
	40 1x 0B	0000 000a	Rx. Modulation	(0 – 1) OFF, ON
	40 1x 0C	0000 000a	Rx. Volume	(0 – 1) OFF, ON
	40 1x 0D	0000 000a	Rx. Panpot	(0 – 1) OFF, ON
	40 1x 0E	0000 000a	Rx. Expression	(0 – 1) OFF, ON
	40 1x 0F	0000 000a	Rx. Hold–1	(0 – 1) OFF, ON
	40 1x 10	0000 000a	Rx. Portamento	(0 – 1) OFF, ON
	40 1x 11	0000 000a	Rx. Sostenuto	(0 – 1) OFF, ON
	40 1x 12	0000 000a	Rx. Soft	(0 – 1) OFF, ON
	40 1x 13	0aaa aaaa	Mono / Poly Mode	(0 – 1) MODE, POLY
	40 1x 14	0aaa aaaa	Assign Mode<*>	(0 – 2) SINGLE, LIMITED–MULTI, FULL–MULTI
	40 1x 15	0aaa aaaa	Use for Rhythm Part	(0 – 2) OFF, MAP1, MAP2
	40 1x 16	0aaa aaaa	Pitch Key Shift	(40 – 88) –24 – +24 [semitone]
#	40 1x 17	0000 aaaa 0000 bbbb	Pitch Offset Fine	(8 – 248) –12.0 – +12.0 [Hz]
	40 1x 19	0aaa aaaa	Part Level (CC# 7)	(0 – 127)
	40 1x 1A	0aaa aaaa	Velocity Sens Depth	(0 – 127) –64 – +63
	40 1x 1B	0aaa aaaa	Velocity Sens Offset	(0 – 127) –64 – +63
	40 1x 1C	0aaa aaaa	Part Panpot (CC# 10)	(0 – 127) RANDOM, L63 – 63R
	40 1x 1D	0aaa aaaa	Keyboard Range Low	(0 – 127)
	40 1x 1E	0aaa aaaa	Keyboard Range High	(0 – 127)
	40 1x 1F	0aaa aaaa	CC1 Controller Number	(0 – 95)
	40 1x 20	0aaa aaaa	CC2 Controller Number	(0 – 95)
	40 1x 21	0aaa aaaa	Chorus Send Level (CC# 93)	(0 – 127)
	40 1x 22	0aaa aaaa	Reverb Send Level (CC# 93)	(0 – 127)
	40 1x 23	0000 000a	Rx. Bank Select<*>	(0 – 1) OFF, ON
	40 1x 24	0000 000a	Rx. Bank Select LSB<*>	(0 – 1) OFF, ON
	40 1x 30	0aaa aaaa	Tone Modify 1 (Vibrato Rate)	(0 – 127) –64 – +63
	40 1x 31	0aaa aaaa	Tone Modify 2 (Vibrato Depth)	(0 – 127) –64 – +63
	40 1x 32	0aaa aaaa	Tone Modify 3 (TVF Cutoff Freq.)	(0 – 127) –64 – +63
	40 1x 33	0aaa aaaa	Tone Modify 4 (TVF Resonance)	(0 – 127) –64 – +63
	40 1x 34	0aaa aaaa	Tone Modify 5 (TVF&TVA Env. Attack)	(0 – 127) –64 – +63
	40 1x 35	0aaa aaaa	Tone Modify 6 (TVF&TVA Env. Decay)	(0 – 127) –64 – +63
	40 1x 36	0aaa aaaa	Tone Modify 7 (TVF&TVA ENv. Release)	(0 – 127) –64 – +63
	40 1x 37	0aaa aaaa	Tone Modify 8 (Vibrato Delay)	(0 – 127) –64 – +63
	40 1x 40	0aaa aaaa	Scale Tuning C	(0 – 127) –64 – +63 [cent]
	40 1x 41	0aaa aaaa	Scale Tuning C#	(0 – 127) –64 – +63 [cent]
	40 1x 42	0aaa aaaa	Scale Tuning D	(0 – 127) –64 – +63 [cent]
	40 1x 43	0aaa aaaa	Scale Tuning D#	(0 – 127) –64 – +63 [cent]
	40 1x 44	0aaa aaaa	Scale Tuning E	(0 – 127) –64 – +63 [cent]
	40 1x 45	0aaa aaaa	Scale Tuning F	(0 – 127) –64 – +63 [cent]
	40 1x 46	0aaa aaaa	Scale Tuning F#	(0 – 127) –64 – +63 [cent]
	40 1x 47	0aaa aaaa	Scale Tuning G	(0 – 127) –64 – +63 [cent]
	40 1x 48	0aaa aaaa	Scale Tuning G#	(0 – 127) –64 – +63 [cent]
	40 1x 49	0aaa aaaa	Scale Tuning A	(0 – 127) –64 – +63 [cent]
	40 1x 4A	0aaa aaaa	Scale Tuning A#	(0 – 127) –64 – +63 [cent]
	40 1x 4B	0aaa aaaa	Scale Tuning B	(0 – 127) –64 – +63 [cent]
	40 2x 00	0aaa aaaa	Mod Pitch Control	(40 – 88) –24 – +24 [semitone]
	40 2x 01	0aaa aaaa	Mod TVF Cutoff Control	(0 – 127) –9600 – +9600 [cent]
	40 2x 02	0aaa aaaa	Mod Amplitude Control	(0 – 127) –100.0 – +100.0 [%]
	40 2x 03	0aaa aaaa	Mod LFO1 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
	40 2x 04	0aaa aaaa	Mod LFO1 Pitch Control	(0 – 127) 0 – 600 [cent]
	40 2x 05	0aaa aaaa	Mod LFO1 TVF Depth	(0 – 127) 0 – 2400 [cent]
	40 2x 06	0aaa aaaa	Mod LFO1 TVA Depth	(0 – 127) 0 – 100.0 [%]
	40 2x 07	0aaa aaaa	Mod LFO2 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
	40 2x 08	0aaa aaaa	Mod LFO2 Pitch Control	(0 – 127) 0 – 600 [cent]
	40 2x 09	0aaa aaaa	Mod LFO2 TVF Depth	(0 – 127) 0 – 2400 [cent]
	40 2x 0A	0aaa aaaa	Mod LFO2 TVA Depth	(0 – 127) 0 – 100.0 [%]
	40 2x 10	0aaa aaaa	Bend Pitch Control	(64 – 88) 0 – 24 [semitone]
	40 2x 11	0aaa aaaa	Bend TVF Cutoff Control	(0 – 127) –9600 – +9600 [cent]
	40 2x 12	0aaa aaaa	Bend Amplitude Control	(0 – 127) –100.0 – +100.0 [%]
	40 2x 13	0aaa aaaa	Bend LFO1 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
	40 2x 14	0aaa aaaa	Bend LFO1 Pitch Control	(0 – 127) 0 – 600 [cent]
	40 2x 15	0aaa aaaa	Bend LFO1 TVF Depth	(0 – 127) 0 – 2400 [cent]
	40 2x 16	0aaa aaaa	Bend LFO1 TVA Depth	(0 – 127) 0 – 100.0 [%]
	40 2x 17	0aaa aaaa	Bend LFO2 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
	40 2x 18	0aaa aaaa	Bend LFO2 Pitch Control	(0 – 127) 0 – 600 [cent]
	40 2x 19	0aaa aaaa	Bend LFO2 TVF Depth	(0 – 127) 0 – 2400 [cent]
	40 2x 1A	0aaa aaaa	Bend LFO2 TVA Depth	(0 – 127) 0 – 100.0 [%]
	40 2x 20	0aaa aaaa	CAf Pitch Control	(40 – 88) –24 – +24 [semitone]
	40 2x 21	0aaa aaaa	CAf TVF Cutoff Control	(0 – 127) –9600 – +9600 [cent]
	40 2x 22	0aaa aaaa	CAf Amplitude Control	(0 – 127) –100.0 – +100.0 [%]
	40 2x 23	0aaa aaaa	CAf LFO1 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
	40 2x 24	0aaa aaaa	CAf LFO1 Pitch Control	(0 – 127) 0 – 600 [cent]
	40 2x 25	0aaa aaaa	CAf LFO1 TVF Depth	(0 – 127) 0 – 2400 [cent]
	40 2x 26	0aaa aaaa	CAf LFO1 TVA Depth	(0 – 127) 0 – 100.0 [%]
	40 2x 27	0aaa aaaa	CAf LFO2 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
	40 2x 28	0aaa aaaa	CAf LFO2 Pitch Control	(0 – 127) 0 – 600 [cent]
	40 2x 29	0aaa aaaa	CAf LFO2 TVF Depth	(0 – 127) 0 – 2400 [cent]
	40 2x 2A	0aaa aaaa	CAf LFO2 TVA Depth	(0 – 127) 0 – 100.0 [%]
	40 2x 30	0aaa aaaa	PAf Pitch Control	(40 – 88) –24 – +24 [semitone]
	40 2x 31	0aaa aaaa	PAf TVF Cutoff Control	(0 – 127) –9600 – +9600 [cent]
	40 2x 32	0aaa aaaa	PAf Amplitude Control	(0 – 127) –100.0 – +100.0 [%]
	40 2x 33	0aaa aaaa	PAf LFO1 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
	40 2x 34	0aaa aaaa	PAf LFO1 Pitch Control	(0 – 127) 0 – 600 [cent]
	40 2x 35	0aaa aaaa	PAf LFO1 TVF Depth	(0 – 127) 0 – 2400 [cent]
	40 2x 36	0aaa aaaa	PAf LFO1 TVA Depth	(0 – 127) 0 – 100.0 [%]
	40 2x 37	0aaa aaaa	PAf LFO2 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
	40 2x 38	0aaa aaaa	PAf LFO2 Pitch Control	(0 – 127) 0 – 600 [cent]
	40 2x 39	0aaa aaaa	PAf LFO2 TVF Depth	(0 – 127) 0 – 2400 [cent]
	40 2x 3A	0aaa aaaa	PAf LFO2 TVA Depth	(0 – 127) 0 – 100.0 [%]

40 2x 40	0aaa aaaa	CC1 Pitch Control	(40 – 88) –24 – +24 [semitone]
40 2x 41	0aaa aaaa	CC1 TVF Cutoff Control	(0 – 127) –9600 – +9600 [cent]
40 2x 42	0aaa aaaa	CC1 Amplitude Control	(0 – 127) –100.0 – +100.0 [%]
40 2x 43	0aaa aaaa	CC1 LFO1 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
40 2x 44	0aaa aaaa	CC1 LFO1 Pitch Control	(0 – 127) 0 – 600 [cent]
40 2x 45	0aaa aaaa	CC1 LFO1 TVF Depth	(0 – 127) 0 – 2400 [cent]
40 2x 46	0aaa aaaa	CC1 LFO1 TVA Depth	(0 – 127) 0 – 100.0 [%]
40 2x 47	0aaa aaaa	CC1 LFO2 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
40 2x 48	0aaa aaaa	CC1 LFO2 Pitch Control	(0 – 127) 0 – 600 [cent]
40 2x 49	0aaa aaaa	CC1 LFO2 TVF Depth	(0 – 127) 0 – 2400 [cent]
40 2x 4A	0aaa aaaa	CC1 LFO2 TVA Depth	(0 – 127) 0 – 100.0 [%]
40 2x 50	0aaa aaaa	CC2 Pitch Control	(40 – 88) –24 – +24 [semitone]
40 2x 51	0aaa aaaa	CC2 TVF Cutoff Control	(0 – 127) –9600 – +9600 [cent]
40 2x 52	0aaa aaaa	CC2 Amplitude Control	(0 – 127) –100.0 – +100.0 [%]
40 2x 53	0aaa aaaa	CC2 LFO1 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
40 2x 54	0aaa aaaa	CC2 LFO1 Pitch Control	(0 – 127) 0 – 600 [cent]
40 2x 55	0aaa aaaa	CC2 LFO1 TVF Depth	(0 – 127) 0 – 2400 [cent]
40 2x 56	0aaa aaaa	CC2 LFO1 TVA Depth	(0 – 127) 0 – 100.0 [%]
40 2x 57	0aaa aaaa	CC2 LFO2 Rate Control	(0 – 127) –10.0 – +10.0 [Hz]
40 2x 58	0aaa aaaa	CC2 LFO2 Pitch Control	(0 – 127) 0 – 600 [cent]
40 2x 59	0aaa aaaa	CC2 LFO2 TVF Depth	(0 – 127) 0 – 2400 [cent]
40 2x 5A	0aaa aaaa	CC2 LFO2 TVA Depth	(0 – 127) 0 – 100.0 [%]

x: BLOCK NUMBER (0-F)

```
Part 1 (MIDI ch = 1)  x = 1
Part 2 (MIDI ch = 2)  x = 2
 :                    :   :
Part 9 (MIDI ch = 9)  x = 9
Part10 (MIDI ch = 10) x = 0
Part11 (MIDI ch = 11) x = A
Part12 (MIDI ch = 12) x = B
 :                    :   :
Part16 (MIDI ch = 16) x = F
```

❍Drum Setup Parameter

Start Address		Description	
41 m0 00	0aaa aaaa	Drum Map Name 1	(32 – 127) 32 – 127 [ASCII]
41 m0 01	0aaa aaaa	Drum Map Name 2	(32 – 127) 32 – 127 [ASCII]
41 m0 02	0aaa aaaa	Drum Map Name 3	(32 – 127) 32 – 127 [ASCII]
41 m0 03	0aaa aaaa	Drum Map Name 4	(32 – 127) 32 – 127 [ASCII]
41 m0 04	0aaa aaaa	Drum Map Name 5	(32 – 127) 32 – 127 [ASCII]
41 m0 05	0aaa aaaa	Drum Map Name 6	(32 – 127) 32 – 127 [ASCII]
41 m0 06	0aaa aaaa	Drum Map Name 7	(32 – 127) 32 – 127 [ASCII]
41 m0 07	0aaa aaaa	Drum Map Name 8	(32 – 127) 32 – 127 [ASCII]
41 m0 08	0aaa aaaa	Drum Map Name 9	(32 – 127) 32 – 127 [ASCII]
41 m0 09	0aaa aaaa	Drum Map Name 10	(32 – 127) 32 – 127 [ASCII]
41 m0 0A	0aaa aaaa	Drum Map Name 11	(32 – 127) 32 – 127 [ASCII]
41 m0 0B	0aaa aaaa	Drum Map Name 12	(32 – 127) 32 – 127 [ASCII]
41 m1 rr	0aaa aaaa	Play Note Number	(0 – 127)
41 m2 rr	0aaa aaaa	Level	(0 – 127)
41 m3 rr	0aaa aaaa	Assign Group Number	(0 – 127) NON, 1 – 127
41 m4 rr	0aaa aaaa	Panpot	(0 – 127) RAMDOM, L63 – 63R
41 m5 rr	0aaa aaaa	Reverb Send Level	(0 – 127) 0.0 – 1.0
41 m6 rr	0aaa aaaa	Chorus Send Level	(0 – 127) 0.0 – 1.0
41 m7 rr	0000 000a	Rx. Note Off	(0 – 1) OFF, ON
41 m8 rr	0000 000a	Rx. Note On	(0 – 1) OFF, ON

m: Map number (0 = MAP1, 1 = MAP2)
rr: drum part note number (00H-7FH)

6. Supplementary Material

■Decimal and Hexadecimal Table

(An "H" is appended to the end of numbers in hexadecimal notation.)
In MIDI documentation, data values and addresses/sizes of Exclusive messages, etc. are expressed as hexadecimal values for each 7 bits.
The following table shows how these correspond to decimal numbers.

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

D: decimal
H: hexadecimal

* Decimal values such as MIDI channel, bank select, and program change are listed as one greater than the values given in the above table.
* A 7-bit byte can express data in the range of 128 steps. For data where greater precision is required, we must use two or more bytes. For example, two hexadecimal numbers aa bbH expressing two 7-bit bytes would indicate a value of aa x 128+bb.
* In the case of values which have a +/- sign, 00H = -64, 40H = +/-0, and 7FH = +63, so that the decimal expression would be 64 less than the value given in the above chart. In the case of two types, 00 00H = -8192, 40 00H = +/-0, and 7F 7FH = +8191. For example, if aa bbH were expressed as decimal, this would be aa bbH - 40 00H = aa x 128+bb - 64 x 128.
* Data marked "Use nibbled data" is expressed in hexadecimal in 4-bit units. A value expressed as a 2-byte nibble 0a 0bH has the value of a x 16+b.

<Example1> What is the decimal expression of 5AH?

From the preceding table, 5AH = 90

<Example2> What is the decimal expression of the value 12 34H given as hexadecimal for each 7 bits?

From the preceding table, since 12H = 18 and 34H = 52
18 x 128+52 = 2356

<Example3> What is the decimal expression of the nibbled value 0A 03 09 0D?

From the preceding table, since 0AH = 10, 03H = 3, 09H = 9, 0DH = 13
((10 x 16+3) x 16+9) x 16+13 = 41885

<Example4> What is the nibbled expression of the decimal value 1258?

```
16 ) 1258
16 )   78 ...10
16 )    4 ...14
        0 ... 4
```

Since from the preceding table, 0 = 00H, 4 = 04H, 14 = 0EH, 10 = 0AH, the result is: 00 04 0E 0AH.

■Examples of Actual MIDI Messages

<Example1> 92 3E 5F

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

<Example2> CE 49

CnH is the Program Change status, and n is the MIDI channel number. Since EH = 14 and 49H = 73, this is a Program Change message with MIDI CH = 15, program number 74.

<Example3> EA 00 28

EnH is the Pitch Bend Change status, and n is the MIDI channel number. The 2nd byte (00H = 0) is the LSB and the 3rd byte (28H = 40) is the MSB, but Pitch Bend Value is a signed number in which 40 00H (= 64 x 12+80 = 8192) is 0, so this Pitch Bend Value is
28 00H - 40 00H = 40 x 12+80 - (64 x 12+80) = 5120 - 8192 = -3072

If the Pitch Bend Sensitivity is set to 2 semitones, -8192 (00 00H) will cause the pitch to change -200 cents, so in this case -200 x (-3072) ÷ (-8192) = -75 cents of Pitch Bend is being applied to MIDI channel 11.

<Example4> B3 64 00 65 00 06 0C 26 00 64 7F 65 7F

BnH is the Control Change status, and n is the MIDI channel number. For Control Changes, the 2nd byte is the control number, and the 3rd byte is the value. In a case in which two or more messages consecutive messages have the same status, MIDI has a provision called "running status" which allows the status byte of the second and following messages to be omitted. Thus, the above messages have the following meaning.

B3	64 00	MIDI ch.4, lower byte of RPN parameter number:	00H
(B3)	65 00	(MIDI ch.4) upper byte of RPN parameter number:	00H
(B3)	06 0C	(MIDI ch.4) upper byte of parameter value:	0CH
(B3)	26 00	(MIDI ch.4) lower byte of parameter value:	00H
(B3)	64 7F	(MIDI ch.4) lower byte of RPN parameter number:	7FH
(B3)	65 7F	(MIDI ch.4) upper byte of RPN parameter number:	7FH

In other words, the above messages specify a value of 0C 00H for RPN parameter number 00 00H on MIDI channel 4, and then set the RPN parameter number to 7F 7FH.

RPN parameter number 00 00H is Pitch Bend Sensitivity, and the MSB of the value indicates semitone units, so a value of 0CH = 12 sets the maximum pitch bend range to +/-12 semitones (1 octave). (On GS sound generators the LSB of Pitch Bend Sensitivity is ignored, but the LSB should be transmitted anyway (with a value of 0) so that operation will be correct on any device.)

Once the parameter number has been specified for RPN or NRPN, all Data Entry messages transmitted on that same channel will be valid, so after the desired value has been transmitted, it is a good idea to set the parameter number to 7F 7FH to prevent accidents. This is the reason for the (B3) 64 7F (B3) 65 7F at the end.

It is not desirable for performance data (such as Standard MIDI File data) to contain many events with running status as given in <Example 4>. This is because if playback is halted during the song and then rewound or fast-forwarded, the sequencer may not be able to transmit the correct status, and the sound generator will then misinterpret the data. Take care to give each event its own status.

It is also necessary that the RPN or NRPN parameter number setting and the value setting be done in the proper order. On some sequencers, events occurring in the same (or consecutive) clock may be transmitted in an order different than the order in which they were received. For this reason it is a good idea to slightly skew the time of each event (about 1 tick for TPQN = 96, and about 5 ticks for TPQN = 480).

* TPQN: Ticks Per Quarter Note

■Example of an Exclusive Message and Calculating a Checksum

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

●How to calculate the checksum

(hexadecimal numbers are indicated by "H")
The checksum is a value derived by adding the address, size, and checksum itself and inverting the lower 7 bits.
Here's an example of how the checksum is calculated. We will assume that in the Exclusive message we are transmitting, the address is aabbccddH and the data or size is eeffH.

aa + bb + cc + dd + ee + ff = sum
sum ÷ 128 = quotient ... remainder
128 - remainder = checksum

<Example> Setting CHORUS TYPE of PERFORMANCE COMMON to DELAY (DT1)

According to the **Parameter Address Map** (p. 222), the start address of Temporary Performance is 10 00 00 00H, the offset address of CHORUS at PERFORMANCE COMMON is 04 00H, and the address of CHORUS TYPE is 00 00H. Therefore the address of CHORUS TYPE of PERFORMANCE COMMON is;

```
   10 00 00 00H
      04 00H
+)    00 00H
   10 00 04 00H
```

DELAY has the value of 02H.
So the system exclusive message should be sent is;

F0	41	10	00 00 15	12	10 00 04 00	02	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

(1) Exclusive Status (2) ID (Roland) (3) Device ID (17)
(4) Model ID (JUNO-G) (5) Command ID (DT1) (6) End of Exclusive

Then calculate the checksum.

10H + 00H + 04H + 00H + 02H = 16 + 0 + 4 + 0 + 2 = 22 (sum)
22 (sum) ÷ 128 = 0 (quotient) ... 22 (remainder)
checksum = 128 - 22 (remainder) = 106 = 6AH

This means that F0 41 10 00 00 15 12 10 00 04 00 02 6A F7 is the message should be sent.

■The Scale Tune Feature (address: 40 1x 40)

The scale tune feature allows you to finely adjust the individual pitch of the notes from C through B. Though the settings are made while working with one octave, the fine adjustments will affect all octaves. By making the appropriate Scale Tune settings, you can obtain a complete variety of tuning methods other than equal temperament. As examples, three possible types of scale setting are explained below.

* The scale tune value received by the part 1 is used in Patch mode and Piano mode.

❍Equal Temperament

This method of tuning divides the octave into 12 equal parts. It is currently the most widely used form of tuning, especially in occidental music. On the JUNO-G, the default settings for the Scale Tune feature produce equal temperament.

❍Just Temperament (Tonic of C)

The principal triads resound much more beautifully than with equal temperament, but this benefit can only be obtained in one key. If transposed, the chords tend to become ambiguous. The example given involves settings for a key in which C is the keynote.

❍Arabian Scale

By altering the setting for Scale Tune, you can obtain a variety of other tunings suited for ethnic music. For example, the settings introduced below will set the unit to use the Arabian Scale.

Example Settings

Note name	Equal Temperament	Just Temperament (Key-tone C)	Arabian Scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
Eb	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
Bb	0	+14	-10
B	0	-12	-49

The values in the table are given in cents. Convert these values to hexadecimal, and transmit them as Exclusive data.

For example, to set the tune (C-B) of the Part 1 Arabian Scale, send the following data:

F0 41 10 42 12 40 11 40 3A 6D 3E 34 0D 38 6B 3C 6F 40 36 0F 76 F7

■ASCII Code Table

Patch Name and Performance Name, etc., of MIDI data are described the ASCII code in the table below.

D	H	Char	D	H	Char	D	H	Char
32	20H	SP	64	40H	@	96	60H	`
33	21H	!	65	41H	A	97	61H	a
34	22H	"	66	42H	B	98	62H	b
35	23H	#	67	43H	C	99	63H	c
36	24H	$	68	44H	D	100	64H	d
37	25H	%	69	45H	E	101	65H	e
38	26H	&	70	46H	F	102	66H	f
39	27H	`	71	47H	G	103	67H	g
40	28H	(	72	48H	H	104	68H	h
41	29H	)	73	49H	I	105	69H	i
42	2AH	*	74	4AH	J	106	6AH	j
43	2BH	+	75	4BH	K	107	6BH	k
44	2CH	,	76	4CH	L	108	6CH	l
45	2DH	—	77	4DH	M	109	6DH	m
46	2EH	.	78	4EH	N	110	6EH	n
47	2FH	/	79	4FH	O	111	6FH	o
48	30H	0	80	50H	P	112	70H	p
49	31H	1	81	51H	Q	113	71H	q
50	32H	2	82	52H	R	114	72H	r
51	33H	3	83	53H	S	115	73H	s
52	34H	4	84	54H	T	116	74H	t
53	35H	5	85	55H	U	117	75H	u
54	36H	6	86	56H	V	118	76H	v
55	37H	7	87	57H	W	119	77H	w
56	38H	8	88	58H	X	120	78H	x
57	39H	9	89	59H	Y	121	79H	y
58	3AH	:	90	5AH	Z	122	7AH	z
59	3BH	;	91	5BH	[	123	7BH	{
60	3CH	<	92	5CH	\	124	7CH	|
61	3DH	=	93	5DH	]	125	7DH	}
62	3EH	>	94	5EH	^			
63	3FH	?	95	5FH	_			

D: decimal

H: hexadecimal

* "SP" is space.

Bank Select and Program Change Correspondence Chart

Patch

Group	Number	Bank Select		Program Number
		MSB	LSB	
USER	001–128	87	0	1–128
	129–256	87	1	1–128
CARD	001–128	87	32	1–128
	129–256	87	33	1–128
PR-A	001–128	87	64	1–128
PR-B	001–128	87	65	1–128
PR-C	001–128	87	66	1–128
PR-D	001–128	87	67	1–128
PR-E	001–128	87	68	1–128
PR-F	001–128	87	69	1–128
GM(2)	001–256	121	0–	1–128
EXP (SRX-01)	001–	93	0	1–
(SRX-02)	001–	93	1	1–
:	:	:	:	:

* The EXP group vary depending on the Wave Expansion Board you've installed. For information about an SRX series board, refer to the Owner's Manual that came with it.

Rhythm Set

Group	Number	Bank Select		Program Number
		MSB	LSB	
USER	001–032	86	0	1–32
CARD	001–032	86	32	1–32
PRST	001–036	86	64	1–36
GM(2)	001–009	120	---	1–57
EXP (SRX-01)	001–	92	0	1–
(SRX-02)	001–	92	1	1–
:	:	:	:	:

* The EXP group vary depending on the Wave Expansion Board you've installed. For information about an SRX series board, refer to the Owner's Manual that came with it.

Performance

Group	Number	Bank Select		Program Number
		MSB	LSB	
USER	01–64	85	0	1–64
CARD	01–64	85	32	1–64
PRST	01–64	85	64	1–64

* To switch multitimbres, the external MIDI device's transmit channel needs to be matched up with the Performance Control Channel (SYSTEM/MIDI/GENERAL) of the JUNO-G.

(Sound Generator Section)
Model JUNO-G

MIDI Implementation Chart

Date : Feb. 1, 2006
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	1–16	1–16	
Channel	Changed	1–16	1–16	Memorized
Mode	Default	Mode 3	Mode 3	
	Messages	Mono, Poly	Mode 3, 4 (M = 1)	* 2
	Altered	**********		
Note Number :	True Voice	0–127 **********	0–127 0–127	
Velocity	Note On	O	O	
	Note Off	O	O	
After Touch	Key's	X	O *1	
	Channel's	O	O *1	
Pitch Bend		O	O *1	
Control Change	0, 32	O *1	O *1	Bank select
	1	O	O *1	Modulation
	2	O	O	Breath type *3
	4	O	O	Foot type
	5	O	O	Portamento time
	6, 38	O	O	Data entry
	7	O	O *1	Volume
	8	O	X	Balance
	10	O	O *1	Panpot
	11	O	O *1	Expression
	16	O	X	General purpose controller 1
	17	O	X	General purpose controller 2
	18	O	X	General purpose controller 3
	19	O	X	General purpose controller 4
	64	O	O *1	Hold 1
	65	O	O	Portamento
	66	O	O	Sostenuto
	67	O	O	Soft
	68	O	O	Legato foot switch
	69	O	O	Hold 2
	70	O	X	Sound variation
	71	O	O	Resonance
	72	O	O	Release time
	73	O	O	Attack time
	74	O	O	Cutoff
	75	O	O	Decay time
	76	O	O	Vibrato rate
	77	O	O	Vibrato depth
	78	O	O	Vibrato delay
	80	O	O (Tone 1 Level)	General purpose controller 5
	81	O	O (Tone 2 Level)	General purpose controller 6
	82	O	O (Tone 3 Level)	General purpose controller 7
	83	O	O (Tone 4 Level)	General purpose controller 8
	84	O	O	Portamento control
	91	O	O (Reverb)	General purpose effects 1
	92	O	X	Tremolo
	93	O	O (Chorus)	General purpose effects 3
	94	O	X	Celeste
	95	O	X	Phaser
	1–31, 64–95	O	O	Pedal, Knob, D Beam
	98, 99	X	X	NRPN LSB, MSB
	100, 101	X	O	RPN LSB, MSB
Program Change	: True Number	O *1 **********	O *1 0–127	Program No. 1–128
System Exclusive		O	O *1	
System Common	: Song Position	X	X	
	: Song Select	X	X	
	: Tune Request	X	X	
System Real Time	: Clock	X	X	
	: Commands	X	X	
Aux Messages	: All Sound Off	X	O	
	: Reset All Controllers	O *4	O	
	: Local On/Off	X	X	
	: All Notes Off	O *4	O (123–127)	
	: Active Sensing	O *1	O	
	: System Reset	X	X	
Notes		* 1 O X is selectable. * 3 Received it as ACTIVE EXPRESSION. * 2 Recognized as M=1 even if M≠1. * 4 Transmitted only when V-LINK is ON.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

(Song Recorder (MIDI TRACK) Section) Date : Feb. 1, 2006

Model JUNO-G

MIDI Implementation Chart

Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	All channel	All channel	There is no specific basic channel.
Channel	Changed	X	1–16	
Mode	Default	X	X	
	Messages	X	X	
	Altered	**********		
Note Number :	True Voice	0–127 **********	0–127 0–127	
Velocity	Note On	O	O	
	Note Off	O	O	
After Touch	Key's	O	O *1	
	Channel's	O	O *1	
Pitch Bend		O	O *1	
Control Change	0–119	O	O *1	
Program Change	: True Number	O **********	O *1 0–127	
System Exclusive		O	O *1	
System Common	: Quarter Frames	O *1	O *2	
	: Song Position	O *1	O *1	
	: Song Select	X	X	
	: Tune Request	O	O	
System Real Time	: Clock	O *1	O *1	
	: Commands	O *1	O *1	
Aux Messages	: All Sound Off	O	O	
	: Reset All Controllers	O	O	
	: Local On/Off	X *2	X	
	: All Notes Off	O *3	O (123–127) *3	
	: Active Sensing	O	O	
	: System Reset	X	X	
Notes		*1 O X is selectable. *2 Not stored/transmitted when received, but can be created and transmitted using Microscope. *3 Mode Messages (123–127) are recorded and transmitted, after all currently sounding notes are turned off. The All Note Message itself is not recorded or transmitted. However, it can be created in Microscope and transmitted.		

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

JUNO-G: Synthesizer Keyboard (Conforms to General MIDI 2 System)

Keyboard: 61 keys (with velocity)

Sound Generator Section

Maximum Polyphony
128 voices (shared with audio track section)

Parts: 16 parts

Wave Memory
64 M bytes (16-bit linear equivalent)

Preset Memory

Patches:	768 + 256 (GM2)
Rhythm Sets:	36 + 9 (GM2)
Performances:	64

User Memory

Patches:	256
Rhythm Sets:	32
Performances:	64

Effects

Multi-Effects:	3 systems, 78 types
Chorus:	3 types
Reverb:	5 types
Input Effects:	6 types
Mastering Effects:	3-band compressor

Song Recorder Section

Tracks
MIDI tracks: 16
Audio tracks: 4 stereo tracks
Tempo track: 1
Beat track: 1

Song Length: 9998 measures

Tempo: 5–300

MIDI Track
Resolution: 480 TPQN
Note Capacity: approx. 400,000 notes
Recording Method: Realtime recording, Step recording

Audio Track
Data Format: 16-bit linear
Sample Rate: 44.1 kHz
Recording Time:

- memory not expanded (4 M bytes): approx. mono 47 seconds (stereo 23.5 seconds)
- memory fully expanded (516 M bytes): approx. mono 102 minutes (stereo 51 minutes)

Others

Arpeggiator

Preset:	128
User:	128

Rhythm Pattern

Preset:	256 (32 groups)
User:	256 (32 groups)

Chord Memory

Preset:	64
User:	64

Controllers
D Beam Controller
Pitch Bend/Modulation Lever
Sound Modify Knob x 6

Display
240 x 96 dots graphic LCD (with backlit)

Expansion Slots
SRX expansion board: 1 slot
DIMM: 1 slot (memory expansion for audio recording)

External Storage Device
PC Card: 1 slot (supports SmartMedia and CompactFlash using a PC card adaptor)

Connectors
Headphones Jack
Output Jacks (L (MONO), R): 1/4 inch phone type
Input Jacks (L (MONO)/MIC, R): 1/4 inch phone type
MIDI Connectors (IN, OUT)
Hold Pedal Jack
Control Pedal Jack
USB Connector (supports file transfer and MIDI)

Power Supply
DC 9 V (AC Adaptor)

Current draw
2000 mA

Dimensions
1022.8 (W) x 298.4 (D) x 101.7 (H) mm
40-5/16 (W) x 11-3/4 (D) x 4-1/16 (H) inches

Weight
6.2 kg / 13 lbs 11 oz (excluding AC Adaptor)

Accessories
Owner's Manual
CD-ROM x 2 (Editor/Librarian/USB MIDI driver, SONAR LE)
PC Card Protector
AC Adaptor

Options
Wave Expansion Board: SRX Series
Keyboard Stand: KS-12
Pedal Switch: DP series
Foot Switch: BOSS FS-5U
Expression Pedal: EV-5

* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

Index

Symbols

Numerics

A

B

C

D

E

F

G

H

I

N

O

P

Q

R

S

T

U

V

W

Z

For EU Countries

This product complies with the requirements of European Directive 89/336/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For the USA

DECLARATION OF CONFORMITY
Compliance Information Statement

Model Name :	JUNO-G
Type of Equipment :	Synthesizer Keyboard
Responsible Party :	Roland Corporation U.S.
Address :	5100 S. Eastern Avenue, Los Angeles, CA 90040-2938
Telephone :	(323) 890-3700

This product must be disposed of separately
at your local waste recycling centre.
Do not dispose of in household waste bin.

Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.

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As of December 10, 2005 (ROLAND)