SG-Rack

STAGE PIANO MODULE

Owner's Manual

AI² Synthesis System

KORG

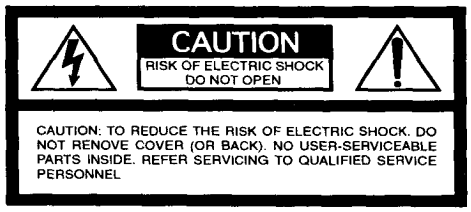
Ⓔ①

IMPORTANT SAFETY INSTRUCTIONS

WARNING — When using electrical products, basic precautions should be followed, including the following:

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

SAVE THESE INSTRUCTIONS



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

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

GROUNDING INSTRUCTIONS

This product must be grounded (earthed). If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with the local codes and ordinances.

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

THE FCC REGULATION WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.
Unauthorized changes or modification to this system can void the user's authority to operate this equipment.

CE mark for European Harmonized Standards

CE mark which is attached to our company's products of AC mains operated apparatus until December31,1996 means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).
And, CE mark which is attached after January 1, 1997 means it conforms to EMC Directive (89/336/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (73/23/EEC).
Also, CE mark which is attached to our company's products of Battery operated apparatus means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

IMPORTANT NOTICE FOR THE UNITED KINGDOM

Warning-THIS APPARATUS MUST BE EARTHED
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- the wire which is coloured green and yellow must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol ⏚, or coloured green or green and yellow.
- the wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
- the wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Back-up Battery

The SG-Rack uses a back-up battery to prevent memory loss when the power is turned off. If the display shows "Battery Lo", the battery should be replaced. Consult the nearest Korg Service Center or dealer.

Data handling

Unforeseen malfunctions can result in the loss of memory contents. Please be sure to save important data on an external data filer (storage device). Korg can accept no responsibility for any loss or damage which you may incur as a result of data loss.

LCD Display

Some pages of the manuals show LCD screens along with an explanation of functions and operations. All sound names, parameter names, and values are merely examples and may not always match the actual display you are working on.

Contents

Introduction

Thank you for purchasing the SG-Rack stage piano Module.

How to use this manual:

- Before you play the SG-Rack, please read the sections of this manual entitled Safety Precautions, To avoid personal harm by fire or electric shock, etc.
- In this owner's manual, text printed in square brackets [ ] indicate items which are printed on the panel of the SG -Rack. Text printed in double quotation marks " " indicates items which appear on the LCD.
- In this manual, the ✍ symbol indicates a warning, and the ☞ symbol indicates a page reference.

Preparing to play

1. Check the included items

Make sure that the following items are included with your SG-Rack.

- AC cable
- Rackmount screws, insulating bushings, insulating washers (four pieces each)

2. Location

Place the SG-Rack on a stable base or rack so that it will be easy to play.

✍ If you place the SG-Rack directly on a table for use, avoid stacking another rack or computer on top of it.

3. Connect the monitor speakers etc.

In order to fully enjoy the sound of the SG-Rack, use two powered monitor speakers (left and right), and connect them to the rear panel [L/MONO] and [R] jacks.

If you have only one powered monitor speaker, connect it to the [L/MONO] jack. In this case, do not connect anything to the [R] jack.

4. MIDI equipment (keyboard, sequencer etc.)

You will need to provide a MIDI device to control the SG-Rack. At this time, you will also need the owner's manual for that device (since you may need to make MIDI-related settings).

●When using headphones

Connect your headphones to the [PHONES] jack located on the left side of the SG-Rack's front panel.

In this case, the output from the rear panel [OUTPUT] jacks will not be cut.

Use the [VOLUME] knob to adjust the volume.

✍ When using headphones, protect your hearing by avoiding prolonged use at high volumes.

Front and rear panel

Front panel

① Volume knob
This adjusts the volume of the signal which is outputted from the [L/MONO], [R] and [PHONES] jacks.

② [PHONES] jack

③ LCD (Liquid Crystal Display)
Program names, Performance names, and various settings and values are displayed here.
The contents of the display will depend on the mode.

④ [+1/YES], [–1/NO] keys
In Program mode and Performance mode, the program or performance will change in increments/decrements of one each time these keys are pressed.
When editing, use these keys to adjust the value of various settings.(☞ p.12).
These switches are also used to answer YES or NO in response to an "OK?" prompt that appears in the LCD.
By pressing both switches simultaneously, you can bring back the original value that was specified when you selected that parameter (the UNDO function).

⑤ [◄], [►] keys
Use these keys to move between two or more parameters that are shown in the LCD, and to move between editing displays (☞ p.12).

⑥ [+PAGE], [-PAGE] keys
Use these to select pages (☞ p.12).

⑦ [PERF] key
Press this key when you wish to play in Performance mode. At this time, the LED above the key will light.

⑧ [PROG] key
Press this key when you wish to play in Program mode. At this time, the LED above the key will light.

⑨ [EDIT] key
Press this key when you wish to edit programs or performances.
Together with the LED of the selected mode, the LED below this key will light.

⑩ [GLOBAL] key
Press this key to enter Global mode and modify various settings. The LED below the key will light.

⑪ [FX ON/OFF] key
This key lets you turn effects 1 and 2 on/off together (☞ p.11).

⑫ MIDI indicator
The LED will light up whenever MIDI data is received.

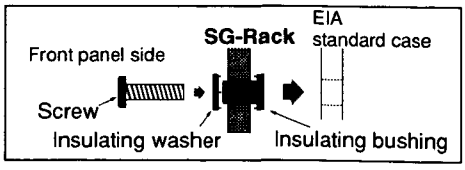
⑬ [A4] key
This key allows you to audition the currently selected program or performance by sounding the A4 pitch.
This can also be used to check MIDI and audio connections. (☞ p.11)

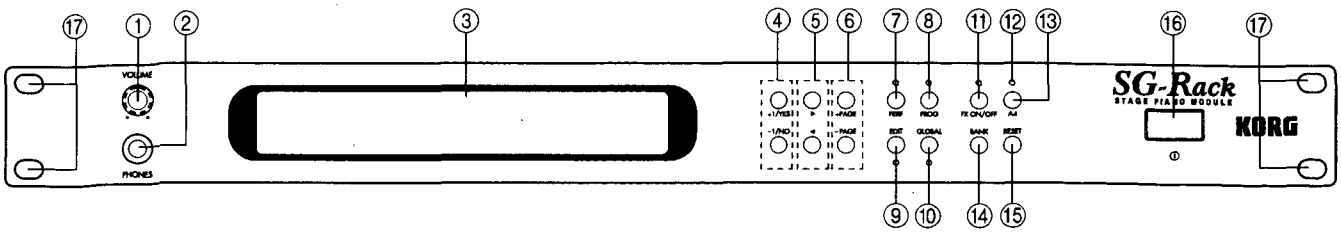
⑭ [BANK] key
Each time you press this switch, the program or performance bank will change in the order of A→B→C→D→A.

⑮ [RESET] key
When this key is pressed, any functions or states that have been set by incoming MIDI messages will be reset.

⑯ Power switch
Press this switch to turn the power on or off.

⑰ Rack-mounting holes
As shown below, use the included screws, insulating washers and insulating bushings to attach the SG-Rack to your EIA standard rack case.





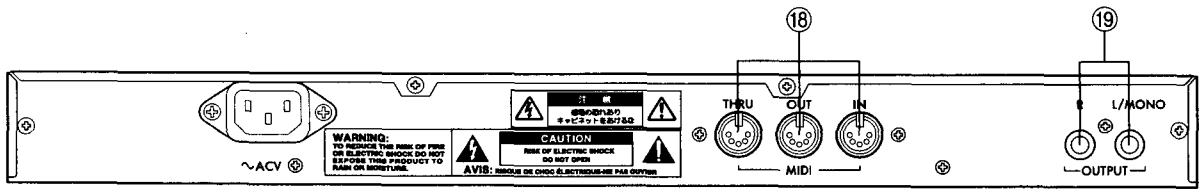
Rear panel

⑱ MIDI connectors

- IN: This connector is used for MIDI reception.
- OUT : This connector transmits data from the SG-Rack.
- THRU: The MIDI data received at MIDI IN is re-transmitted without changes.

⑲ [OUTPUT]

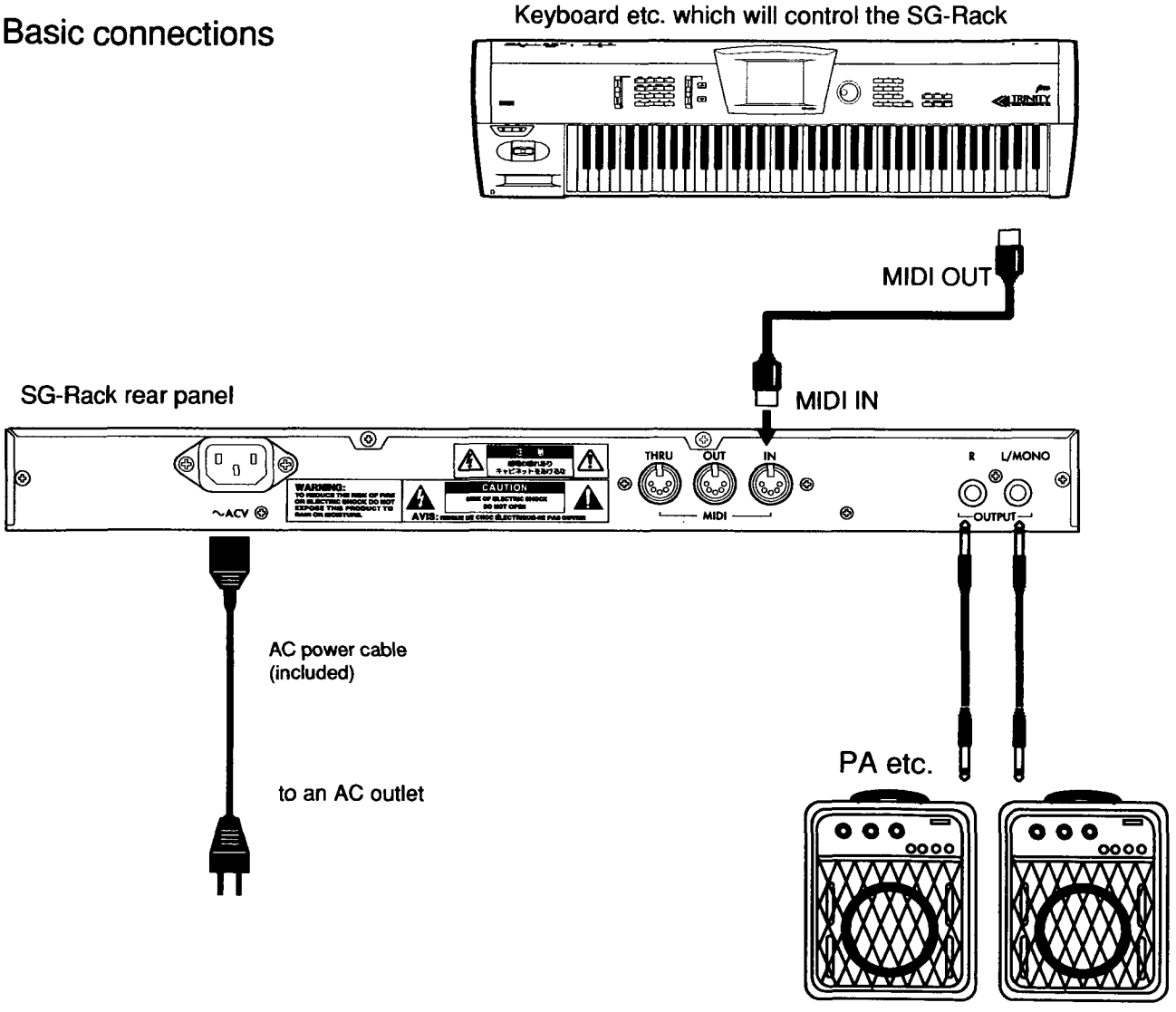
- L/MONO: When stereo connections are used, the left channel signal is outputted from this jack. When listening in monaural, only connect this jack.
- R: When stereo connections are used, the right channel signal is outputted from this jack. When listening in monaural, do not use this jack.



Connections

1) Make sure that the power switch of the SG-Rack is turned off, and also that the power is turned off for all connected equipment (amp, mixer etc.).
   (Also, lower the volume controls of all connected equipment.)
2) Connect the MIDI OUT of the device that will be controlling the SG-Rack (keyboard, sequencer etc.) to the MIDI IN of the SG-Rack.
3) Connect the AC power cable to the inlet socket of the SG-Rack. Connect the other end to an AC outlet. Make sure that the AC outlet is the appropriate voltage for your SG-Rack unit.
4) Turn on the power switch of the SG-Rack.
5) Turn on the power of the connected equipment, and then raise the volumes of the SG-Rack and your other equipment to an appropriate level.

Basic connections



Settings for your MIDI device

Make the following settings on your controller (MIDI keyboard or sequencer) so it will work with the SG-Rack.

For details on how to make connections, refer to the owner's manual for your device.

MIDI channel

Since the Global MIDI channel of the SG-Rack is set to 1 (with the factory settings), set the transmission channel of your MIDI device to 1.

If you wish to set the transmission channel of your MIDI device to other than 1, set the Global MIDI channel of the SG-Rack to match that transmission channel. (☞p.25)

MIDI reception

The SG-Rack receives the following MIDI messages:

- Note on/off (note messages) ... The most basic type of musical messages, which indicate when a key is played or released
- Program change ... Messages used to switch sound programs
- Control change ... Messages which convey controller movements and playing status etc.
- Pitch bend ... Messages which convey pitch bends controlled by a bender (joystick, wheel, lever, etc.)

In addition to these, aftertouch messages and exclusive data is also received.

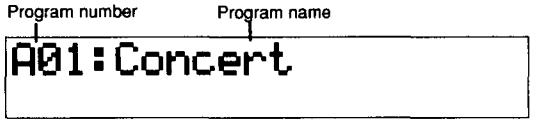
Note data received at MIDI IN may cover the range from C-1~G9 (note numbers 0~127), but for some sounds, notes in the extreme high range may not sound.

Listening to the sounds

The SG-Rack is played in one of two modes: Program mode in which you play one program at a time, and Performance mode in which you can play two programs simultaneously.

1. To enter Program mode, press the [PROG] key. To enter Performance mode, press the [PERF] key. The respective LED will light.
2. To select a program or performance, use the [BANK] key and the [+1/YES] [-1/NO] keys.

When in Program mode



When in Performance mode

Programs and performances are organized into 4 banks: A, B, C and D, each containing 16 programs or performances, for a total of 64 sounds in each mode.

To switch programs or performances from an external MIDI device, transmit a MIDI Program Change message.

The banks into which the SG-Rack's programs and performances are organized have no relation to the MIDI Bank Select message.

* If you hear no sound even if musical data is being transmitted from the connected MIDI device, press the [A4] key on the front panel, and check whether you hear sound.

If you hear no sound, check that the volume of the SG-Rack and your monitor/amp is turned up, and that audio cables are connected correctly.

If you do hear sound, check that MIDI cables are connected correctly, and that MIDI channel settings are correct.

Program Change program numbers	00~15	16~31	32~47	48~63
SG-Rack program/ performance numbers	A1~A16	B1~B16	C1~C16	D1~D16

[FX ON / OFF] key

The effects can be turned on/off instantly.

Each time you press this switch, the effect will alternate between on (LED lit) and off (LED off). Normally you would leave this on.
The effect on/off setting will not be written (saved).
The setting of this switch will not be canceled even if you select another program.

Each setting that you make kere will be remembered even when the power is turned off.

[A4] key

This key is used to audition sounds when no external MIDI device is connected, or to check MIDI and audio connections.

When you press this key, the program or performance will sound just as though it had received a Note On message of note number 69 (A4) at a velocity of 127.

When in Performance mode, this will be affected by the Key Zone and Vel Zone settings.

Modes

The SG-Rack has five modes. Press the appropriate key to select the desired mode.

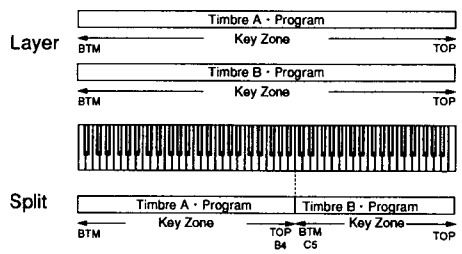
Program mode

Press the [PROG] key to make the LED above the key light.
Use this when you wish to play an individual program. (☞ p.14)

Performance mode

Press the [PERF] key to make the LED above the key light.
Use this key when you wish to play a layer or split using two programs assigned to timbres A and B. (☞ p.14)

- Layer---- Two programs will sound when a single Note On message is received.
- Split----- The program of one of two timbres will sound, de pending on the key range (specified for each timbre) into which the note number of the Note On message falls.



Program edit mode

Press the [PROG] key, select the program that you wish to edit, and then press the [EDIT] key to make the LED below the key light.
Here you can modify the sound of a program, and modify key scale settings and the program name etc. (☞ p.15)

Performance edit mode

Press the [PERF] key, select the performance that you wish to edit, and then press the [EDIT] key to make the LED below the key light.
Here you can make settings for timbres A and B of the performance, and modify the performance name etc. (☞ p.20)

Global mode

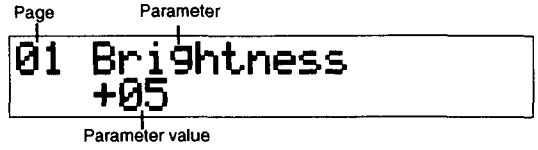
Press the [GLOBAL] key to make the LED below the key blink.
Here you can make settings which are common to all programs and performances (global MIDI channel, memory protect etc.). You can also specify the velocity curve that is shared by all programs (☞p.26).
Press the [GLOBAL] key once again to make the LED go dark, and you will return to the mode from which you entered Global mode.

Editing

1. Use the [+PAGE] [-PAGE] keys to select the desired page.
   As necessary, you can then use the [◄] [►] keys to select the desired parameter.
2. Use the [+1/YES] [-1/NO] keys to modify the value.

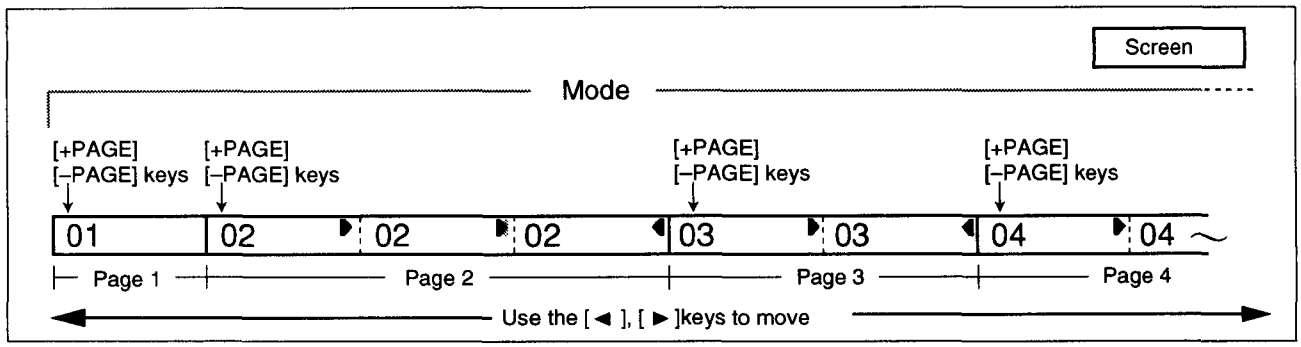
The editing screens

Each of the displays that appear in the LCD are called screens. Related functions and parameters are grouped together, and referred to as pages. The page number is shown in the upper left-hand side of the LCD.



Selecting pages

The display screens in each mode are organized as shown in the following diagram:
Pressing the [+PAGE] [-PAGE] keys will select the first screen in each page.
If there are additional screens located toward the right within a page, the display will show a "▸" symbol. If additional screens are located toward the left, a "◂" symbol will be displayed. Use the [◄] [►] keys to move between screens.
You can also use the [◄] [►] keys to move across page boundaries within a mode.



[+1/YES], [–1/NO] keys

Use these keys to modify the blinking parameter value in increments/decrements of one unit. If you continue holding the key, the value will continue to change.
These switches are also used to reply (YES or NO) to a display which asks you "OK?"
In addition, pressing both keys simultaneously will bring back the value that had been selected before you selected the new parameter (the UNDO function).

Main Functions

When you want to tune the SG-Rack to another instrument

When you wish to play the SG-Rack together with another instrument, or to play along with a CD or tape, use the Global mode page 1 "Master Tune" setting to adjust the tuning (☞ p.26).

Modify the velocity sensitivity

The SG-Rack will respond to your playing dynamics (velocity) to modify the volume or tone of the sound, allowing you to play expressively. The way in which the volume/tone will change in response to velocity can be specified by the Global mode page 4 "Velocity Curve" setting (☞ p.26).

Change the pitch range

You can use the Global mode page 2 "Transpose" setting to shift the pitch in semitone steps (☞ p.26).

Play two programs simultaneously

If you wish to play two programs simultaneously as a layer, or to make two different programs sound in different key ranges or in response to playing dynamics, use Performance Edit mode to assign a program to each timbre, and specify the Key Zone and the Velocity Zone.

Program assignments are made by the Performance Edit mode page 1 "Timbre Select" and page 2 "Program" parameters, and key zone and velocity zone are set by the page 7 "Key Zone" and "Vel Zone" parameters (☞ p.21).

Edit the basic sound of a program

The SG-Rack does allow you to edit the sound of a program. However it is not possible to make drastic changes to the basic character of a sound. For example, you can make the sound of a piano brighter, or make the attack slower, etc.

In Program mode, select the program that you wish to edit. Then use Program Edit mode pages 1~6 to modify the settings of the selected program (☞ p.16).

Modify the effect settings

The SG-Rack provides two series-connected effects (effect 1 and 2), and for each program you can select the type of effect and its depth etc.

In Program mode, select the program that you wish to edit. Then use Program Edit mode pages 7~12 to modify the settings (☞ p.17).

Change the name of a program or performance

In Program mode, select the program that you wish to edit. Then use Program Edit mode page 15 "Rename" to modify the name (☞ p.19).

In Performance mode, select the performance that you wish to edit. Then use Performance Edit mode page 13 "Rename" to modify the name (☞ p.24).

Save the results of your program editing or performance editing

Unless you save (Write) your changes into memory after editing a program or performance, the program or performance will return to its original state when you turn the power off or select another program or performance.

To save a program, use Program Edit mode page 16 "Prog Write" (☞ p.19).

To save a performance, use Performance Edit mode page 14 "Perf Write" (☞ p.24).

For details on other functions, refer to the explanations of each mode in the reference section.

Program mode

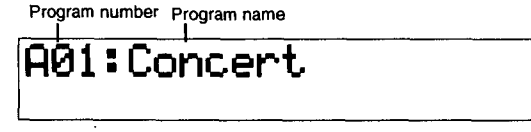
The SG-Rack provides 64 high-quality sounds, referred to as "programs." These programs are arranged so that identically-numbered programs in each bank will contain sounds of the same type.

Selecting a program

1. Press the [PROG] key (LED lit) to enter Program mode.
2. Use the [BANK] key and the [+1/YES] [-1/NO] keys to select a program.

You can use the [FX ON/OFF] key to switch the effect on/off (☞ p.11).

In Program mode, the upper line of the LCD will show the program number and program name. Program-related settings can be made in Program Edit mode and in Global mode.



Performance mode

In Performance mode you can use the two timbres (A and B) of the performance to create layered or split sounds. 64 performances are provided.

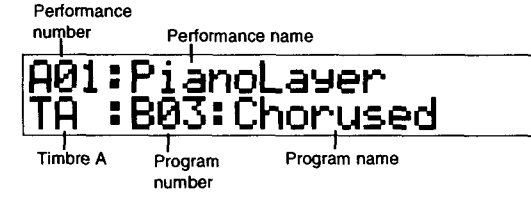
Selecting a performance

1. Press the [PERF] key (LED lit) to enter Performance mode.
2. Use the [BANK] key and the [+1/YES] [-1/NO] keys to select a performance.

Each performance consists of timbres A and B.

The performance will use the effect settings of the program selected for timbre A.
You can specify whether or not the sound of timbre B will be routed to effect 1, but effect 2 will be applied to both timbres (☞ p.29).
You can use the [FX ON/OFF] key to switch the effects on/off (☞ p.11).

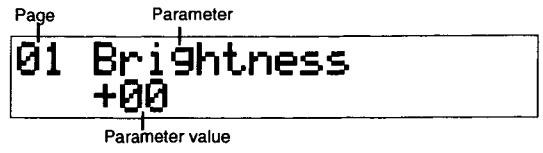
Both timbres A and B will receive messages of the same MIDI channel.
In Performance mode, the upper line of the LCD will indicate the performance number and performance name. The lower line of the LCD will show the program used by timbre A or B. This display can be switched using the [◄] [►] keys.
Performance-related settings can be made in Performance Edit mode and in Global mode.



Program Edit mode

In the Program Edit mode you can modify the sound of a program, change settings for keyboard touch and scale, and modify the program name etc.

How to enter Program Edit mode



1) In Program mode, first select the program that you wish to edit.
2) Press the [EDIT] key.

An LCD screen like the one shown at right will appear.

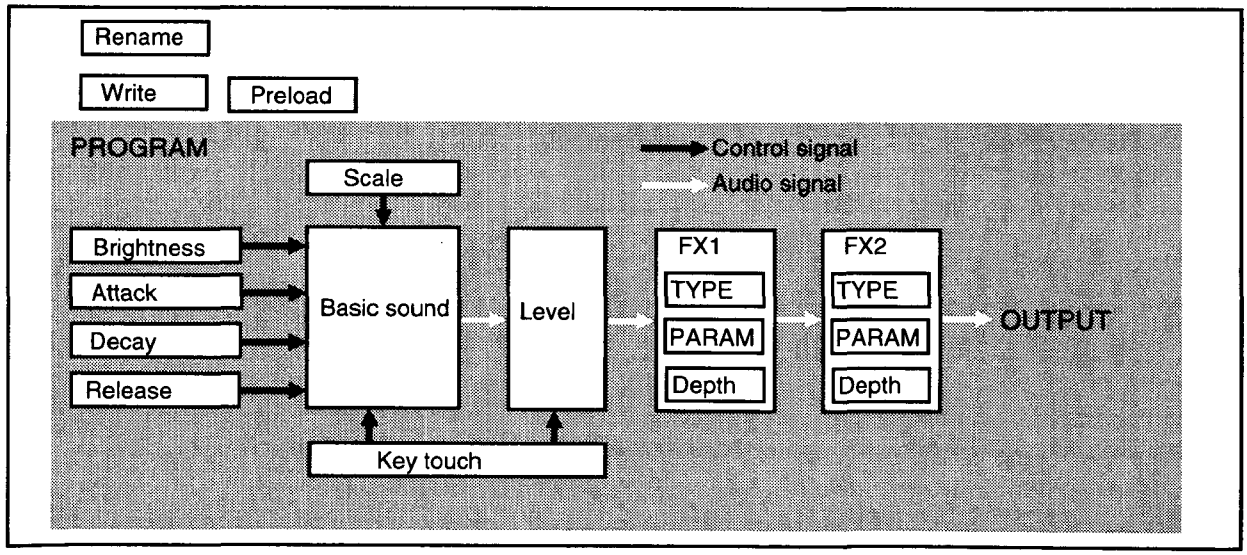
Precautions when editing a program

Program settings that you have finished editing are remembered until you select a different program in Program mode or turn the power off.

If the Global mode page 9. Power On Mode is set to "MEMORIZE," the settings of the edited program will be preserved even if the power is turned off, as long as you do not select a different program.

If you wish to keep an edited program, you must Write it (☞ p.19).

Structure of the Program Edit mode



1. Brightness (Brightness setting)

This parameter adjusts the brightness of the sound. Negative (–) settings will cut the high frequency range, making the tone softer and darker.
Positive (+) settings will make the tone louder and brighter.

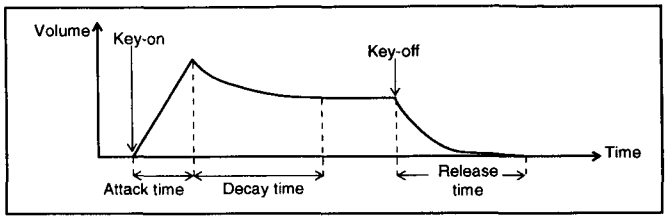
Range of settings –99 to +99
Factory setting +00

2. Level (Level setting)

This parameter adjusts the volume. Positive (+) settings will increase the volume, and negative (–) settings will decrease it.

Range of settings –99 to +99
Factory setting +00

For some sounds, increasing the Level setting may cause the sound to be distorted when chords are played. If this occurs, reduce the level.

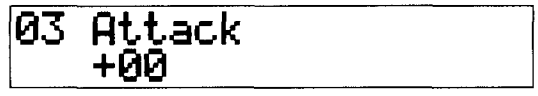


The three following parameters are Envelope Time settings.
Negative (–) settings will shorten the time and positive (+) settings will lengthen the time.

3. Attack (Attack time setting)

Adjusts the time from note-on until the note reaches its maximum volume. Most useful for string sounds etc.

Range of settings –99 to +99
Factory setting +00



4. Decay (Decay time setting)

Adjusts the time over which the volume etc. decays from note-on to note-off. Most useful for piano sounds etc.

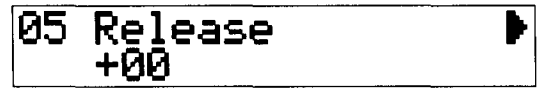
Range of settings –99 to +99
Factory setting +00

5. Release, Damp Mode (Release time /Damp mode setting)

Release

Adjusts the time over which the volume etc. will decay after note-off.

Range of settings –99 to +99
Factory setting +00



Damper mode

Normally this will be set to PIANO for piano or electric piano sounds, and to NORMAL for other sounds.

PIANO — If CC#64 (value other than 0) is received during the release (after note-off has been received and the sound is decaying), the decay will become slower (redamp). By using an intermedi ate value of CC#64 (1~79), that decay time can be adjusted.

NORMAL — Operation will be normal, and redamping will not occur.

High note damp

Normally this will be set to PIANO for piano sounds, and to NORMAL for other sounds.

PIANO Notes in the high range of A6 and above will always sound as if the damper were pressed, regardless of whether the damper message CC#64 is received or not.

NORMAL Notes in the high range of A6 and above will function normally.

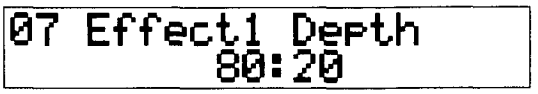
6. Key Touch (Key touch setting)

Adjusts how the velocity of note-on messages will affect the volume and tone. Positive (+) settings will increase the effect that changes in velocity will have on the volume and tone. Negative (-) settings will decrease the effect of velocity, so that volume and tone tend to be consistent, regardless of changes in velocity.

Range of settings –99 to +99
Factory setting +00

7. Effect1 Depth (FX1 effect balance setting)

This parameter sets the balance between the original sound and effect 1. With a setting of FX, only the effect will be heard. However if no effect is selected for FX1, the display will indicate "NO EFFECT."



Range of settings DRY, 99:01 to 01:99, FX

When "Hyper Enhancer" is selected as the FX1 effect type, only "DRY" or "FX" can be selected.

8. Effect2 Depth (FX2 effect balance setting)

This parameter sets the balance between the original sound and effect 2. With a setting of FX, only the effect will be heard. However if no effect is selected for FX2, the display will indicate "NO EFFECT."

* The display when No Effect is selected for FX2

Range of settings DRY, 99:01 to 01:99, FX

9. FX1 TYPE (FX1 effect type selection)

This parameter selects the effect type for FX1.
You can choose one of 12 types: Reverb, Early Reflection, Stereo Delay, Stereo Chorus, Stereo Flanger, Overdrive, Stereo Phaser, Rotary Speaker, Auto Pan, Wah, Flanger-Delay, and Hyper Enhancer. (Refer to **Effects** ☞ p.30)

10. FX1 effect parameter settings

These settings adjust the parameters for the effect that you selected for FX1 TYPE. The type of parameters and the range of each parameter will depend on the selected effect type. (Refer to **Effects**, ☞ p.30)

However if "NO EFFECT" is selected for FX1, no parameters will be displayed.

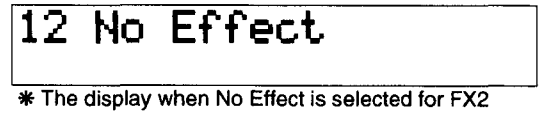
11. FX2 TYPE (FX2 effect type selection)

This parameter selects the effect type for FX2. Eleven different types are available: the same as for FX1 with the exception of Hyper Enhancer. (Refer to **Effects** ☞ p.30)

* The display when No Effect is selected for FX2

12. FX2 effect parameter settings

These settings adjust the parameters for the effect that you selected for FX2. The type of parameters and the range of each parameter will depend on the selected effect type. (Refer to **Effects**, ☞ p.30)



* The display when No Effect is selected for FX2

However if "NO EFFECT" is selected for FX2, no parameters will be displayed.

13. Scale/P. Bend Range (Scale type / Pitch bend range settings)

Scale

This parameter specifies the scale type (temperament) and the scale key (the tonic for the selected scale). You can select from seven different temperaments. The scale key can be set in the range of C to B.

Equal Temp

This is the conventional scale most widely used by keyboard instruments. It allows transposition to occur freely.

Pure Major

This temperament makes the principle triads of the major scale harmonize perfectly. However, triads in other keys will not harmonize, so you will need to set the Scale Key to the key of the song you are playing.

Pure Minor

This temperament makes the principle triads of the minor scale harmonize perfectly. However, triads in other keys will not harmonize, so you will need to set the Scale Key to the key of the song you are playing.

Pythagorean

This is a temperament based on ancient Greek musical theory, and is especially effective for playing melodic lines. Set the Scale Key to specify the desired tonic.

Werkmeister

This is an equal temperament which was developed in the later Baroque period mainly for use on harpsichords. Set the Scale Key to specify the desired tonic.

Kirnberger

This temperament was developed in the 18th century and is used mainly on harpsichords. Set the Scale Key to specify the desired tonic.

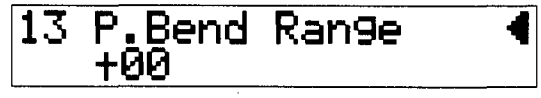
Stretch

Stretched tuning is used on acoustic pianos to allow a more natural sound. It tunes the low range slightly lower than equal temperament, and the high range slightly higher. Scale Key settings do not apply to stretched tuning.

Pitch Bend Range

Specify the maximum range of pitch bending. When MIDI Pitch Bend messages are received, the pitch will change for programs such as bass or strings. This setting specifies the maximum pitch change that will occur, in semitone units over a range of +/-1 octave. Pitch Bend data which exceeds the range specified here will be ignored.

Range of settings –12 to +12



Depending on the program or note number, the pitch may not rise by an entire octave.

14. Preload (Loading the factory data)

This function loads the original factory settings into the currently selected program number.
This will restore parameters 1 to 13 and 15 to their factory settings.

Select a program number, and move the cursor to "OK?" Then press [+1/YES]. The display will ask "Are You Sure OK?" Press the [+1/YES] key, and the factory data will be loaded and an indication of "Completed" will appear.

Range of settings A01 to D16

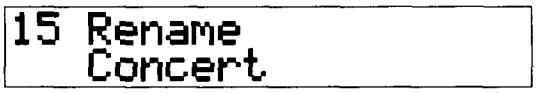
When you are in this display page, the program number that was the basis for the currently selected sound will be displayed.
For example if you edited program A01 and wrote it into A05, and then selected A05 and accessed the Preload page, A01 will be automatically displayed as the loading source. If you then execute the Preload operation, A05 will be restored to the factory setting for A01. However you are free to select a different number, so that the factory settings of the selected number will be reloaded.

If you do not perform the Write operation, the factory settings that were loaded will be lost.

15. Rename (Program name setting)

Here, you can modify the program name. Up to 10 characters can be used.Use [◄] [►] to move between the characters, and use the [+1/YES] [-1/NO] keys to change the character at the selected location.
By simultaneously pressing the [EDIT] key and the [◄] key, you can delete the currently selected character.
By simultaneously pressing the [EDIT] key and the [►] key, you can insert a character (the last-deleted character) into the current location.

Available characters



16. Prog Write (Write a program)

The settings for parameters 1 to 13 and 15 of a program that you edited can be written (stored) into the program number that you specify.

Select a program number, move the cursor to "OK?," and press [+1/YES]. The display will ask "Are You Sure OK?" so press [+1/YES] again. The data will be written, and the display will indicate "Completed."

Range of settings A01 to D16

Before you attempt to write data into memory, remember to set "Prog Mem Protect" to "OFF" on page 6 of the Global mode. (☞ p.27)

When you write data, the program that previously occupied that memory will be erased.

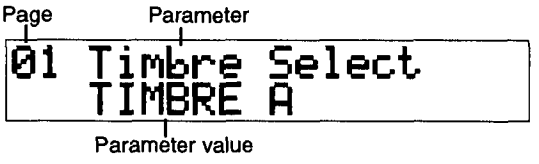
Performance Edit mode

Here you can modify Performance settings such as the timbre settings (program numbers and key zones etc.), various filter settings, and the performance name etc.

How to enter Performance Edit mode

1) In Performance mode, first select the performance that you wish to edit.
2) Press the [EDIT] key.

An LCD like the one to the right will appear:



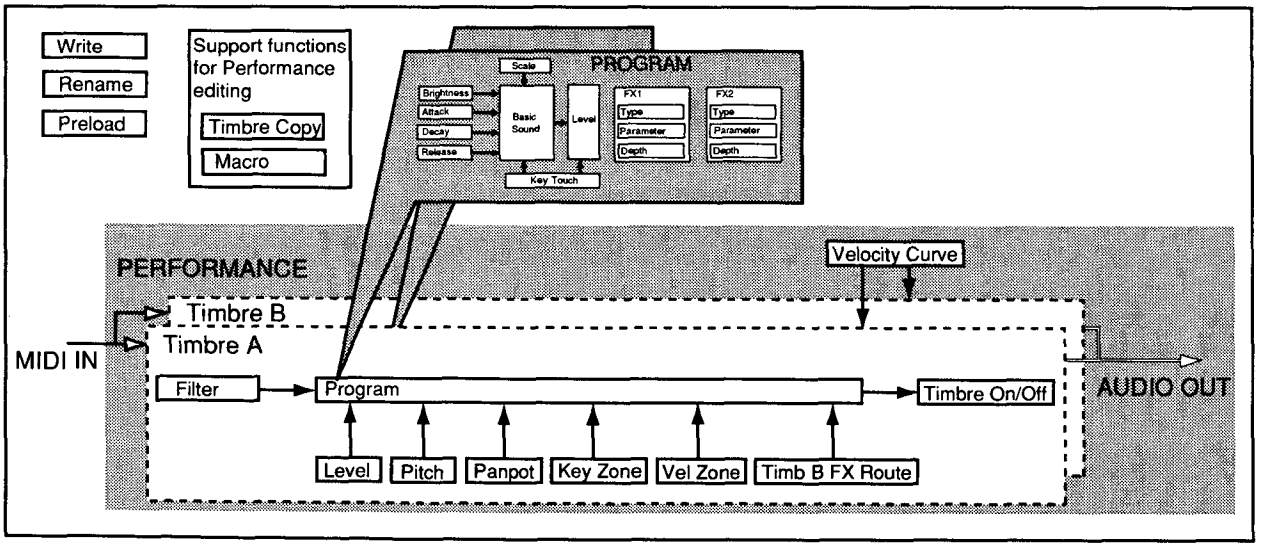
Precautions when editing a Performance

A performance that you have finished editing will be preserved until you select a different performance in Performance mode, or turn off the power.

If the Global mode page 9. Power On Mode is set to "MEMORIZE," the settings of the edited performance will be preserved even if the power is turned off, as long as you do not select a different performance.

If you wish to keep a performance that you edited, you must Write the performance (☞ p.23).
The programs for each timbre of a performance are stored only as program numbers; the actual data for the programs is not contained in the performance data. This means that if you edit a program that is used by a performance, or exchange it with another program, the sound of the performance will also change.

Structure of the Performance Edit mode



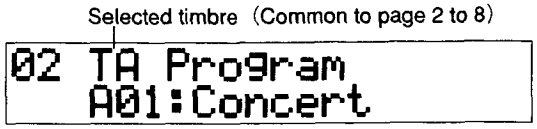
1. Timbre Select (Timbre select)

In pages 2~8, you can set parameters independently for timbres A and B.
In this first page, you can select the timbre that you wish to edit: A or B. In addition, while you are in pages 1~8, you can switch timbres by holding down the [EDIT] key and pressing the [+PAGE] or the [-PAGE] key.

Range of selections TIMBRE A, B

2. Program (Program select)

Selects the program for the internal tone generator.
In this case, the [BANK] key cannot be used.



Range A1 to D16

3. Timb On/Off (Tone generator setting)

Specifies whether the tone generator will sound (ON) or not (OFF).

Range OFF, ON

4. Level (Level setting)

Specifies the output level.

Range 0 to 127

5. Pitch (Pitch setting)

You can adjust the pitch by shifting the note numbers (Trans) and in 1-cent steps (Tune).

Range (Trans) –12 to +12 (–1 octave to +1 octave)
(Tune) –50 to +50 (–50 cents to +50 cents)

6. Panpot (Specify the stereo position)

Specifies the stereo position of the sound. For stereo programs, selecting a value L to R will cause the program to sound in monaural, so be sure to select "PROGRAM" for such programs.

Range L, L1 to L63, CNT, R65 to R126, R, PROGRAM

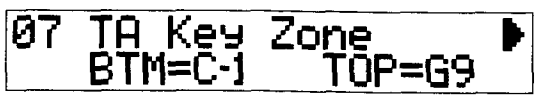
When you select "PROGRAM," the pan settings of the selected program will be used.

7. Key Zone, Vel Zone (Keyboard zone settings)

Here you can specify keyboard zones to create splits and velocity switches.

Split Zone

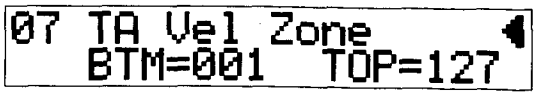
Range Key Zone Bottom C–1 to G9
Key Zone Top C–1 to G9



Notes in the keyboard area between the Bottom note and the Top note will sound.

Velocity Zone

Range Vel Zone Bottom 1 to 127
Vel Zone Top 1 to 127



Notes played with a velocity (playing strength) between the Bottom and Top values will sound.

It is not possible to set the Top value below the Bottom value, nor the Bottom value above the Top value.

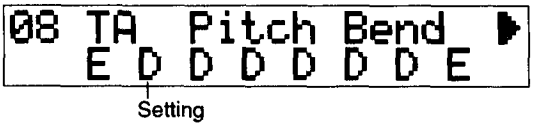
8. MIDI filter, Effect Route settings

Damper/Sostenuto

Specifies whether the damper/sostenuto effects will be applied (ENA) or not (DIS).

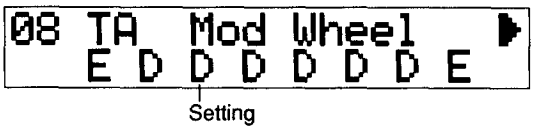
Pitch Bend

Specifies whether pitch bend effects (Pitch Bend) can be applied by MIDI messages "E" (enabled) or not "D" (disabled).



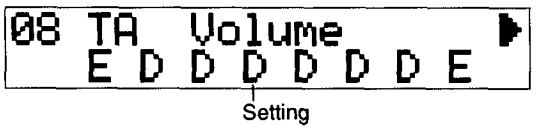
Modulation

Specifies whether modulation (CC#01: Mod Wheel) effects can be applied by MIDI messages "E" (enabled) or not "D" (disabled).



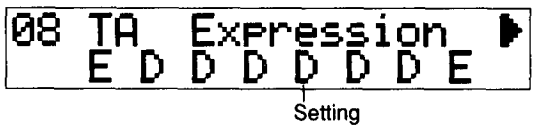
Volume

Specifies whether MIDI volume messages (CC#07: Volume) will be received "E" (enabled) or not "D" (disabled).



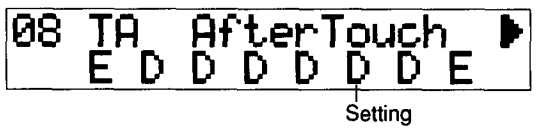
Expression

Specifies whether MIDI expression messages (CC#11: Expression) will be received "E" (enabled) or not "D" (disabled).



Aftertouch

Specifies whether MIDI aftertouch messages (After Touch) will be received "E" (enabled) or not "D" (disabled).

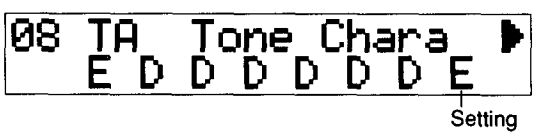


Panpot

Specifies whether MIDI panpot messages (CC#10: Panpot) will be received "E" (enabled) or not "D" (disabled).

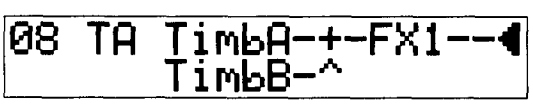
Tone Character

Specifies whether MIDI tone control messages (CC#73: Attack Time, CC#74: Brightness, CC#75 Decay Time) will be received "E" (enabled) or not "D" (disabled).

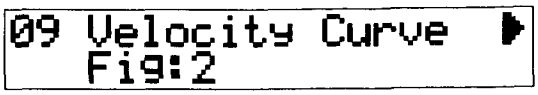


Timbre B Effect Route

Specifies whether the signal from timbre B will pass through effect 1 or not (☞ p.30).



9. Velocity Curve (Velocity curve setting)



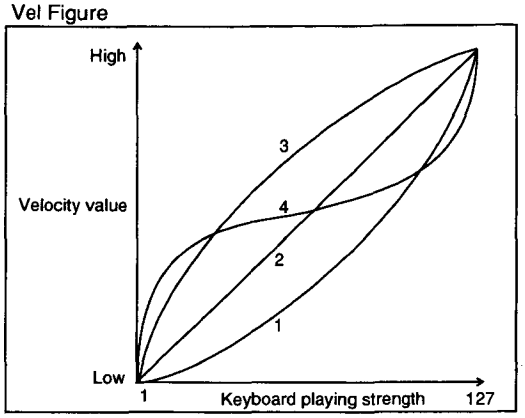
This setting specifies how the velocity (the strength with which the note was played) of a received MIDI Note On message will affect the volume or tone.
The velocity curve is determined by the response you specify for velocity values of 1 ("p") and 127 ("f"), and the curve ("Fig") which connects these values. If you set "f" to 150, even MIDI Note On messages which were not strongly played will be sounded as though they had been played with the maximum force (velocity).

Vel Figure

1: There will be little response to changes in velocity for notes played with normal force.
2: Normal curve
3: There will be significant response to changes in velocity for notes played with normal force.
4: There will little response to changes in velocity for notes played with normal force, and the result will be even.
GLOBAL: The Global setting will apply.

Range of settings 1 to 4, GLOBAL

Vel Figure

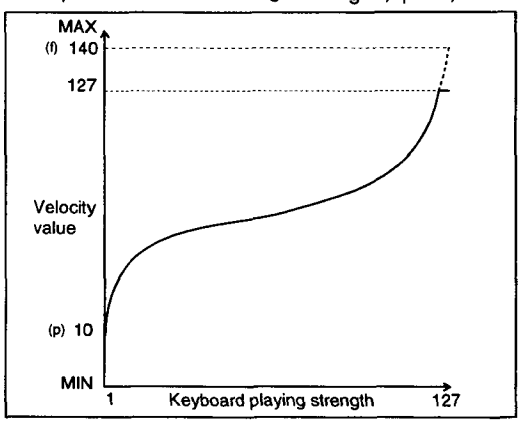


Velocity (p), Velocity (f)

Range of settings (p) 1 to 127, (f) 1 to 150

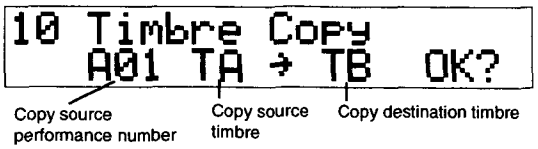
If you have selected GLOBAL for Vel Figure, the Velocity (p) and Velocity (f) values will use the Global settings.

Example of Vel Curve settings Fig=4, p=10, f=140



10. Timbre Copy (Copy timbre settings)

This function copies timbre settings (the settings of pages 2 to 8) to another timbre. Specify the copy source performance and timbre, and the copy destination timbre. Then move the cursor to "OK?" and press the [+1/YES] key. The display will ask "Are You Sure OK?" Press [+1/YES] and the settings will be copied, and the display will indicate "Completed."



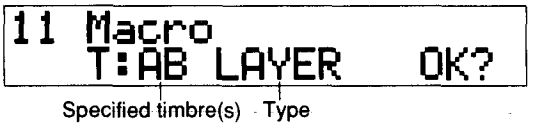
Range	Copy source	Performance	A01 to D16
		Timbre	TA, TB
	Copy destination	Timbre	TA, TB

You are free to select the copy source Performance, but the copy destination will be the Performance that you are currently editing.

When you copy timbre A → B, Timbre B FX will be sent through FX1.
When you copy timbre B → A, the timbre copied to A will pass through FX1 even if timbre B had been set to bypass FX1.

11. Macro (Loading the macro settings)

After selecting the timbre(s) for which you wish to make macro settings, select the macro type. Then move to "OK?" and press the [+1/YES] key. You will be asked "Are You Sure OK?" Press [+1/YES], the specified macro settings will be made, and the display will indicate "Completed."



Range of settings Specified timbre(s) A, B, AB, BA
Macro type LAYER, SPLIT, VEL SW, GM, RESET

Specified timbre(s)

A : Makes macro settings for timbre A. Timbre B will retain its previous settings.
B : Makes macro settings for timbre B. Timbre A will retain its previous settings.
AB : For SPLIT or VEL SW, timbre A will be the lower or low-velocity timbre.
BA : For SPLIT or VEL SW, timbre B will be the lower or low-velocity timbre.

Macro type

LAYER : Sets Key Zone and Vel Zone of the specified timbre(s) to the entire velocity range over the entire keyboard.
SPLIT : Divides the Key Zone settings into C-1~B3 and C4~G9 (when timbres "AB" or "BA" are specified). (If timbre "A" or "B" is specified, this will be the same as LAYER.)
VEL SW : Divides the Vel Zone settings into 1~63 and 64~127 (when timbres "AB" or "BA" are specified). (If timbre "A" or "B" is specified, this will be the same as LAYER.)
GM : Initializes the timbres for GM.
RESET : Initializes the timbres.

List of macro settings

– : The setting before macro execution will be maintained
Divide : Divides the range by the specified number of timbres.

	LAYER	SPLIT	VEL SW	GM	RESET
PROGRAM	–	–	–	A01	A01
Timb On/Off	ON	ON	ON	ON	ON
LEVEL	–	–	–	100	127
Pitch Trans	–	–	–	00	00
Pitch Tune	–	–	–	00	00
Panpot	–	–	–	CNT	CNT
Key Zone BTM	C–1	(Divide) Divide	C–1	C–1	C–1
Key Zone TOM	G9	(Divide) Divide	G9	G9	G9
Vel Zone BTM	1	1	(Divide) Divide	1	1
Vel Zone TOP	127	127	(Divide) Divide	127	127
Damp/Sost	–	–	–	E	E
Pitch Bend	–	–	–	E	E
Mod Wheel	–	–	–	E	E
Volume	–	–	–	E	E
Expression	–	–	–	E	E
AfterTouch	–	–	–	E	E
Panpot	–	–	–	E	E
Tone Chara	–	–	–	E	E
Timb B FX	–	–	–	USE	USE

12. Preload (Loading the factory data)

This function loads the preloaded data (factory settings) into the performance that you are currently using. This will restore the parameters of pages 2~9 and page 13 to their factory settings.
Select the load source performance, move to "OK?" and press the [+1/YES] key. You will be asked "Are You Sure OK?" Press the [+1/YES] key. The data will be loaded and the display will indicate "Completed."

Range of settings A01 to D16

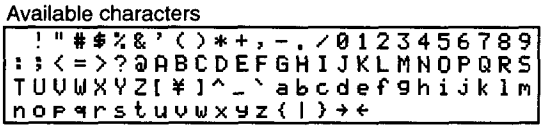
When you enter this page, the currently-used performance number will be selected as the load source.

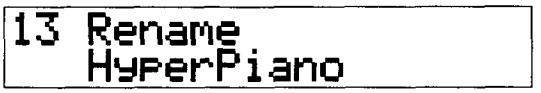
If you select another program or turn off the power before Writing, the factory settings which you loaded will disappear.

13. Rename (Performance name setting)

Here, you can modify the performance name. Up to 10 characters can be used.Use [◄] [►] to move between the characters, and use the [+1/YES] [-1/NO] keys to change the character at the selected location.
By simultaneously pressing the [EDIT] key and the [◄] key, you can delete the currently selected character.
By simultaneously pressing the [EDIT] key and the [►] key, you can insert a character (the last-deleted character) into the current location.

Available characters





14. Perf Write (Writing a performance)

The settings for parameters 2 to 9 and 13 of a performance that you edited can be written (stored) into the performance number (in internal memory) that you specify.
Select a performance number, move the cursor to "OK?," and press [+1/YES] . The display will ask "Are You Sure OK?" so press [+1/YES] again. The data will be written, and the display will indicate "Completed."

Range of settings A01 to D16

Before you attempt to write data into memory, remember to turn "OFF" the Global mode page 6 "Perf Mem Protect" setting. (☞p.27)

When you write data, the performance that previously occupied that memory will be erased.

Global mode

Here, you can make settings (global MIDI channel, memory protect etc.) which are common to all programs and performances. You can also make settings for the velocity curve which is shared by all programs.

To enter Global mode

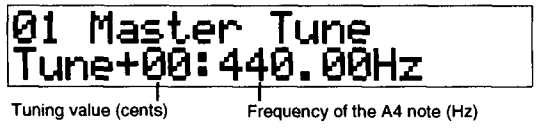
From any mode, press the [GLOBAL] key (the LED will blink).
If you press the [GLOBAL] key again (the LED will go dark), you will return to the previous mode.
From Global mode, you can also press the [PROG] key or the [PERF] key to move directly to Program mode or Performance mode.

The settings you make in Global mode are memorized as soon as you make them. The Write operation is not required.

1. Master Tune

Adjusts the tuning of all programs and performances in 1-cent steps.
The frequency of the A4 note (note number 69) will also be displayed as you adjust the value.
This setting can be modified by the MIDI message RPN Fine Tune.

Range of settings	-50~+50 (-50 cents ~ +50 cents)
Factory setting	+00



2. Transpose (note number shift)

Specifies a shift amount for the note numbers of the note messages received by the SG-Rack.

Range of settings	-12~+12 (-1 octave ~ +1 octave)
Factory setting	+00

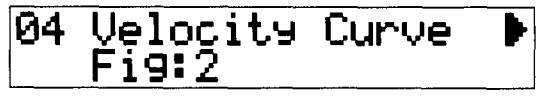
3. Global channel (Global MIDI channel setting)

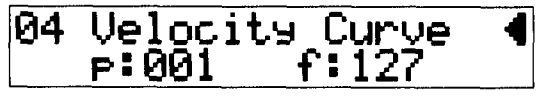
This setting specifies the MIDI channel that will be used to receive musical data in Program mode, and to transmit/receive system exclusive messages.
The Global MIDI channel can be set from 1 to 16, meaning that only the rear panel MIDI OUT A is used.

Range of settings	1 to 16
Factory setting	1

4. Velocity Curve (Velocity curve settings)

This setting specifies how the velocity (the strength with which the note was played) of a received MIDI Note On message will affect the volume or tone.
The velocity curve is determined by the response you specify for velocity values of 1 ("p") and 127 ("f"), and the curve ("Fig") which connects these values. If you set "f" to 150, even MIDI Note On messages which were not strongly played will be sounded as though they had been played with the maximum force (velocity).

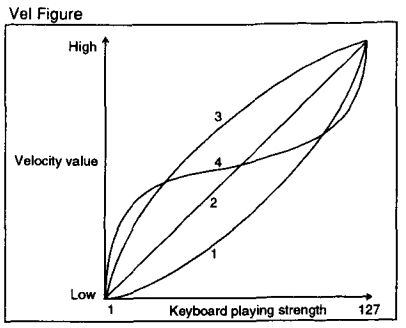




Vel Figure

1: There will be little response to changes in velocity for notes played with normal force.
2: Normal curve
3: There will be significant response to changes in velocity for notes played with normal force.
4: There will little response to changes in velocity for notes played with normal force, and the result will be quite even.

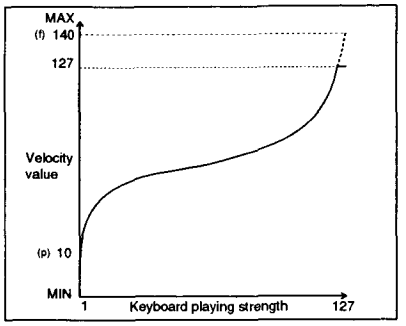
Range of settings 1~4



Velocity (p), Velocity (f)

Range of settings (p) 1~127, (f) 1~150

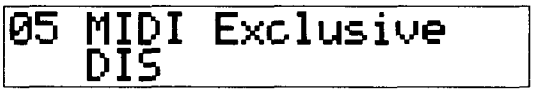
Example of Vel Curve settings Fig=4, p=10, f=140



5. MIDI Exclusive (Exclusive Filter setting)

This setting specifies whether or not MIDI exclusive data will be received. With a setting of DIS, exclusive data will not be received. Universal exclusive data (master volume) will be received regardless of this setting.
Also, system exclusive data will be received regardless of this setting if you are in page 8.MIDI Data Dump.
Normally you will leave this set to DIS(disable), but set it to ENA(enable) when you wish to edit the SG-Rack from an external device such as a computer. While exclusive data is being received, the lower line of the LCD will indicate "now receiving ..."

Range of settings DIS, ENA
Factory setting DIS



6. Prog Mem Protect, Perf Mem Protect (Program/Performance memory protect settings)

Program memory protect

This setting lets you protect Program memory from being accidentally overwritten.
With a setting of "ON," it will not be possible to write data into any program memory of banks A, B, C or D.

Range of settings OFF, ON
Factory setting ON

Performancememory protect

This setting lets you protect Performance memory from being accidentally overwritten.
With a setting of "ON," it will not be possible to write data into any performance memory of banks A, B, C or D.

Range of settings OFF, ON
Factory setting ON

This setting lets you protect Program memory from being accidentally rewritten.
With a setting of "ON," it will not be possible to write data into any program memory of banks A, B, C or D.

7.Preload

This operation loads the preload data (factory settings) into the settings of the specified mode.
"ALL PROG" will load settings for programs A01 to D16, "ALL PERF" will load performance settings for A01 to D16, "GLOBAL "will load settings for parameters 1 to 6 and 9 to 10, and "ALL "will restore Global data, all programs, and all performances to their factory settings.
Before loading "ALL PROG", "ALL PERF" or "ALL data", turn the applicable memory protect setting "OFF." (☞ p.26)
After selecting the type of data to be loaded, move to "OK?" and press the [+/YES] key. A message of "Are You Sure OK?" will appear. Press [+1/YES] once again, and the display will show "Completed," indicating that the Preload operation has been executed.

Range of settings: ALL PROG, ALL PERF, GLOBAL, ALL

8. MIDI Data Dump (Transmit a MIDI Data Dump)

A data dump transmits SG-Rack exclusive data to an external MIDI data dump filer or computer connected to MIDI OUT.

Data transmission procedure

1) Connect the SG-Rack's MIDI OUT to the MIDI IN of an external MIDI device that is able to receive a MIDI data dump.
2) Set the SG-Rack's Global MIDI channel to match the channel of the external MIDI device (another SG-Rack or a personal computer which is running sound editing software etc.). However, if you are transmitting data to a MIDI data filer, most receive on all MIDI channels.
3) After selecting the data that you wish to dump, move to "OK?" and press the [+1/YES] switch to execute the dump. While the dump is in progress, the display will indicate "Processing..." and will show "Completed" when it is finished.

Dump type	Transmitted data	Size	Transmission time
ALL PROG	Settings for all programs A1 to D16	3665 bytes	1 seconds
ALL PERF	Settings for all performances A1 to D16	17854 bytes	6 seconds
GLOBAL	Part of the global data	118 bytes	0.1 seconds
ALL	ALL PROG, ALL PERF, GLOBAL	21637 bytes	7 seconds

While a data dump is in progress, do not touch the SG-Rack.

While you are in this page, system exclusive data can be transmitted and received even if the 5. MIDI Exclusive setting is "DIS."

Range of settings ALL PROG, ALL PERF, GLOBAL, ALL

* When "ALL" is selected, the data will be transmitted in the order of "GLOBAL," "ALL PERF" and "ALL PROG."
* Details of data dump are provided in the **SG-Rack MIDI Implementation**.
* Consult your local Korg distributor for more information on MIDI IMPLEMENTATION.

9. Page Memory, Power On Mode (Page memory/Power On Mode setting)

Page Memory

If this setting is "ON", the page (parameter) that was last-selected in a mode will be selected when you return to that mode from a different mode.

If this is "OFF", the first page of a mode will be selected whenever you enter that mode.

Range of settings	OFF, ON
Factory setting	OFF

Power On Mode

If this setting is set to "RESET", program A01 of Program mode will always be selected when the power is turned on.

If it is set to "MEMORIZE", the state in which the SGproX was when the power was turned off (the mode, program number, performance number) will be recalled when the power is turned on.

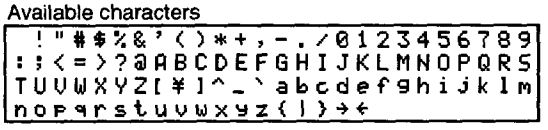
Range of settings	RESET, MEMORIZE
Factory setting	RESET

10. System Name (System name setting)

Here you can modify the system name that will appear when the power is turned on. Up to 10 characters can be used.Use [◀] [▶] to move between the characters, and use the [+1/YES] [-1/NO] keys to change the character at the selected location.

By simultaneously pressing the [EDIT] key and the [◀] key, you can delete the currently selected character. By simultaneously pressing the [EDIT] key and the [▶] key, you can insert a character (the last-deleted character) into the current location.

Available characters

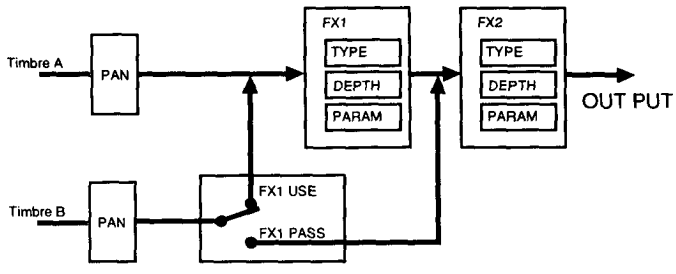


The SG-Rack offers two effect units connected in series: effect 1 (FX1) and effect 2 (FX2).

Effect 1 lets you select one of 12 types of effect, and effect 2 lets you select one of 11 types.
Effect settings can be made independently for each program.

In Performance mode when you wish to use timbres A and B and apply effects to both programs, you will use the effect settings of the timbre A program, and specify whether timbre B will be inputted before or after effect 1 (the Effect Route). The effect route can be specified independently for each performance.

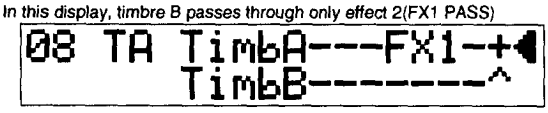
PERFORMANCE MODE



Effect routing display

In this display, timbre B passes through both effects 1 and 2(FX1 USE)

In this display, timbre B passes through only effect 2(FX1 PASS)



Depending on the sound and the effects which you are using, the output may be distorted. If this occurs, adjust the Program Edit mode 2. Level setting, and/or the effect parameters "Effect Depth" and "Trim" etc.

● [FX ON/OFF] key

Effects 1 and 2 can be simultaneously switched on/off from the front panel.
When the effect type is set to "NO EFFECT," the key can still be turned on/off, but there will be no effect when this key is turned on.

In the case of the 3. Stereo Delay, 4. Stereo Chorus and 9. Auto Pan effects, the equalizer (EQ Low, EQ Hi) settings will remain valid even when the effect is turned off.

● Dynamic modulation

For the 8.Rotary Speaker and 10.Wah effects, you can apply modulation to the effect itself. Specific effect " parameters such as modulation speed or cutoff frequency can be controlled while you play, giving you more expressive control.

The modulation source used to control this can be selected from "Damper #64," "Amp EG," "Ctrl #12," "Ctrl #13," "JS(+Y) #01," "JS(-Y) #02" or "After Touch."

0. No Effect

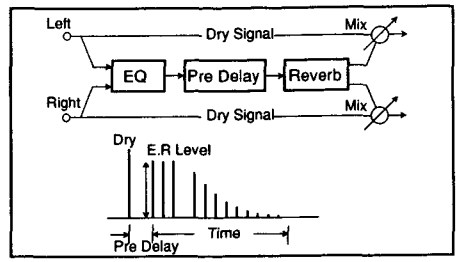
Select this when you do not wish to use an effect.

1. Reverb

This effect simulates the acoustics of a hall, giving the sound a natural acoustic ambiance. This provides the reverberation of a mid-sized hall, and a natural feeling of space.

Parameters

Parameter name		Range
Time	Time over which the reverb will decay	0.2 to 9.9 sec
Hi Damp	Attenuation of the high frequency range	0 to 99%
Pre Dly	Time between direct sound and early reflections	0 to 200 ms
E.R	Level of the early reflections	0 to 99
EQ Lo	Cut/boost amount of the low frequency range	–12 to +12 dB
EQ Hi	Cut/boost amount of the high frequency range	–12 to +12 dB
Effect Depth	Effect balance	DRY to FX



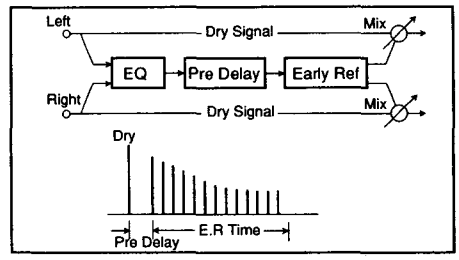
2. Early Reflection

Early reflections determine how the character of the acoustic space are isolated from the reverberation effect.

A wide variety of effects can be produced by adjusting the early reflection time, such as adding thickness to the sound, or adding an echo-like reflection.

Parameters

Parameter name		Range
E.R Time	Length of the early reflections (10 ms steps)	100 to 800 ms
Pre Delay	Time between the direct sound and early reflections	0 to 200 ms
EQ Lo	Cut/boost amount of the low frequency range	–12 to +12 dB
EQ Hi	Cut/boost amount of the high frequency range	–12 to +12 dB
Effect Depth	Effect balance	DRY to FX



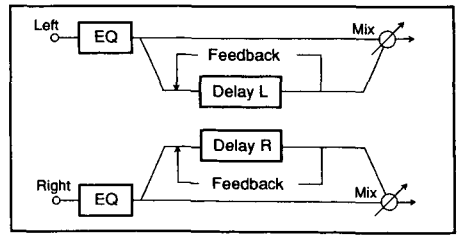
3. Stereo Delay

The stereo delay effect with feedback lets you specify an independent delay time for the left and right channels. High Damp settings allow you to add a natural-sounding decay to the repeated sounds.

The equalizer (EQ Low, EQ High) settings will be valid even when Effect Depth is set to "DRY."

Parameters

Parameter name		Range
Time L	Left channel delay time	0 to 500 ms
Time R	Right channel delay time	0 to 500 ms
FB	Amount of feedback returned to the effect (negative settings invert the phase)	–99 to +99%
Hi Damp	Attenuation of the high frequency range	0 to 99%
EQ Lo	Cut/boost amount of the low frequency range	–12 to +12 dB
EQ Hi	Cut/boost amount of the high frequency range	–12 to +12 dB
Effect Depth	Effect balance	DRY to FX



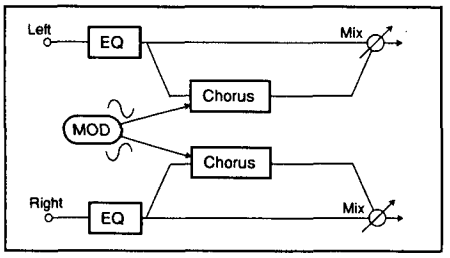
4. Stereo Chorus

This is a stereo effect that combines two chorus blocks.
The right channel is modulated in opposite phase than the left channel.
Stereo Chorus adds a natural spaciousness and depth to any sound, such as piano or strings.

The equalizer (EQ Low, EQ High) settings will be valid even when Effect Depth is set to "DRY."

Parameters

Parameter name		Range
D.Time	Delay time	0 to 200 ms
LFO	Select the modulation waveform	SIN, TRI
Mod	Modulation depth	0 to 99
Mod SP	Modulation speed	0.03 to 30 Hz
EQ Lo	Cut/boost amount of the low frequency range	–12 to +12 dB
EQ Hi	Cut/boost amount of the high frequency range	–12 to +12 dB
Effect Depth	Effect balance	DRY to FX

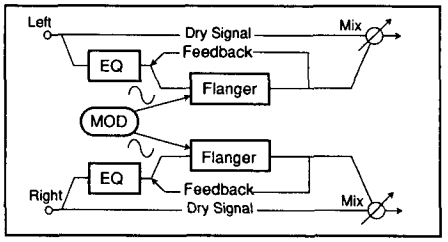


5. Stereo Flanger

Stereo Flanger adds feedback to the chorus effect, and applies the same phase modulation to the left and right channels. When applied to sounds that contain many overtones, the flanger produces a distinctive sense of pitch in addition to the modulation.

Parameters

Parameter name		Range
D.Time	Delay time	0 to 20.0 ms
Res	Amount of the output that will be fed back to the input (negative values invert the phase)	–99 to +99%
Mod	Modulation depth	0 to 99
Mod SP	Modulation speed	1 to 99
EQ Lo	Cut/boost amount of the low frequency range	–12 to +12 dB
EQ Hi	Cut/boost amount of the high frequency range	–12 to +12 dB
Effect Depth	Effect balance	DRY to FX

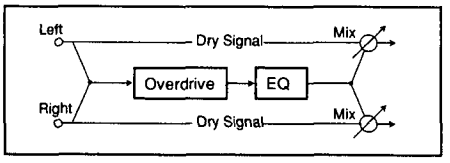


6. Overdrive

This effect applies a smooth overdrive type of distortion.
A wide variety of overdrive tones can be produced by adjusting the center frequency (Hot Spot) of the band-boost filter and the gain (Res).

Parameters

Parameter name		Range
Drive	Amount of overdrive	1 to 111
Res	Filter gain	0 to 99
Hot Spot	Center frequency of the filter	0 to 99
Level	Output level of the effect	0 to 99
EQ Lo	Cut/boost amount of the low frequency range	–12 to +12 dB
EQ Hi	Cut/boost amount of the high frequency range	–12 to +12 dB
Effect Depth	Effect balance	DRY to FX

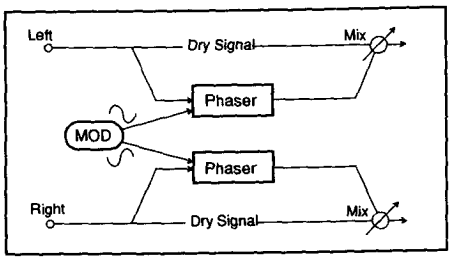


7. Stereo Phaser

While a chorus or flanger creates an effect by modulating the delay time, a phaser modulates the phase of the input signal. This creates a modulation or swelling effect that has a different character than either a chorus or flanger. This is especially effective when applied to electric piano or bass sounds.
The maximum effect will be obtained when Effect Depth is set to 50:50.
Since the left channel and right channel are modulated in opposite phase, a spacious phasing effect is produced.

Parameters

Parameter name		Range
Manual	Center frequency at which the phase shift effect will apply	0 to 99
Mod	Depth of phase shift modulation	0 to 99
Mod SP	Modulation speed	0.03 to 30 Hz
FB	Amount of signal that is fed back into the effect (negative values invert the phase)	-99 to +99%
LFO	Select the modulation waveform	SIN, TRI
Effect Depth	Effect balance	DRY to FX

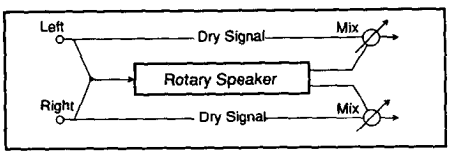


8. Rotary Speaker

This effect simulates the sound of the rotary speakers that are often used with an electric organ.
Independent LFOs are used to simulate the rotation of the rotor and the horn. The controller selected for Src can be used to switch the speed between fast and slow. When this occurs, the speed of rotation will change at the rate specified by Acceleration, regardless of the speed at which the controller was moved.

Parameters

Parameter name		Range
Src	Select the control source	NONEto AfterTouch
Vibrato Depth	Depth of the vibrato effect	0 to 15
Acceleration	Time required to change speeds	0 to 15
SpeedSlow	Speed of slow rotation	1 to 99
SpeedFast	Speed of fast rotation	1 to 99
Effect Depth	Effect balance	DRY to FX



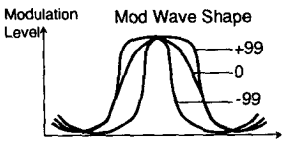
9. Auto Pan

This is a stereo effect that combines two tremolo blocks. Opposite-phase modulation is applied to each tremolo block, causing the sound to be panned cyclically between left and right.

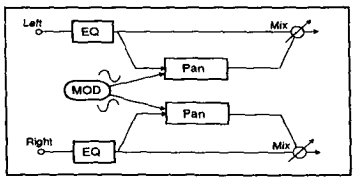
The equalizer (EQ Low, EQ High) settings will be valid even when Effect Depth is set to "DRY."

Parameters

Parameter name		Range
LFO	Select the modulation waveform	SIN, TRI
ModShape	Adjust the modulation waveform	-99 to +99%



Mod	Modulation depth	0 to 99
Mod SP	Modulation speed	0.03 to 30 Hz
EQ Lo	Cut/boost amount of the low frequency range	-12 to +12 dB
EQ Hi	Cut/boost amount of the high frequency range	-12 to +12 dB
Effect Depth	Effect balance	DRY to FX

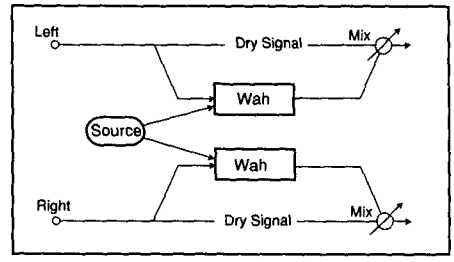


10. Wah

The controller selected for "Src" can be used to control the wah effect. If you specify" Amp EG" as the "Src", an auto-wah (touch-wah) effect will be produced.

Parameters

Parameter name		Range
Src	Select the control source	NONEto AfterTouch
I (Intensity)	Mid-frequency sweep amount	–15 to +15
Freq	Center frequency of the filter	0 to 99
Peak Gain	Peak gain of the filter band	–12 to +12
Peak Width	Filter bandwidth	00 to 99
Effect Depth	Effect balance	DRY to FX

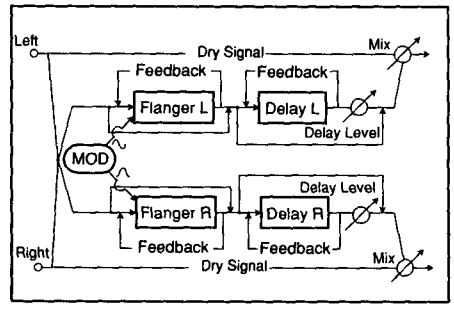


11. Flanger-Delay

This applies a stereo delay to the output of a mono-in/stereo-out flanger which uses LFOs that are 90 degrees out of phase. You can specify the feedback independently for the flanger and for the delay.

Parameters

Parameter name		Range
Fln.DT	Flanger delay time	0 to 50 ms
FB	Amount of feedback to the flanger (negative values invert the phase)	–99 to +99%
Fln.Mod	Modulation depth of the flanger	0 to 99
Mod SP	Modulation speed of the flanger	1 to 99
Dly. DT	Delay time	0 to 450 ms
FB	Amount of feedback to the delay (negative values invert the phase)	–99 to +99%
Delay Level	Delay level	0 to 99
Effect Depth	Effect balance	DRY to FX



12. Hyper Enhancer (available only for FX1)

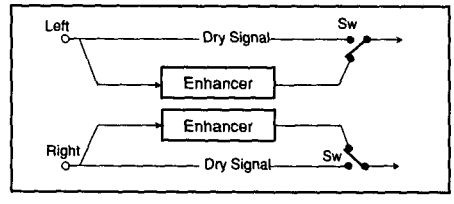
This is a stereo enhancer. Unlike a conventional equalizer, this effect independently adds low frequency and high frequency components as desired, producing a very clear sound with excellent presence.
Since this effect can increase the perceived loudness of the low range and emphasize the attacks, it is especially effective for piano.

When this effect is used, the page 7 FX1 DEPTH value can be set only to "DRY" or "FX."

For some sounds, increasing the "Lo Blend" and "Hi Blend" values may cause the output sound to be destorted. If this occurs, adjust the "Trim" setting.

Parameters

Parameter name		Range
Trim	Input level	0 to 100
Lo Freq	Cutoff frequency of the low range	1 to 70
Lo Blend	Blend (boost) amount of the low range	0 to 100
Hi Freq	Cutoff frequency of the high range	1 to 40
Hi Blend	Blend (boost) amount of the high range	0 to 100
Effect Depth	Effect switch	DRY, FX



About MIDI

* "CC#" is an abbreviation for Control Change number.

1. MIDI channels

In a way similar to channels on a television, MIDI data that is transmitted on a specific channel is received by a device that is set to receive on that channel.

2. Note on/off

When a Note On message [9n, kk, vv] (n: channel, kk: note number, vv: velocity) is received, the program or combination will sound, and will stop sounding when a Note Off message [8n, kk, vv] is received. The note number indicates the pitch, and the note-on velocity indicates the strength of the note. There are very few instruments that transmit or receive Note Off velocity, nor does the SG-Rack receive it. The SG-Rack receives only Note On/Off messages which match its Global MIDI channel.
For your information: Pitches correspond to note numbers as follows; C-1:00, C1:24, C2:36, C3:48, C4:60, C5:72, C6:84, C7:96, G9:127

3. Selecting a program

When a Program Change message [Cn, vv] (vv: program number that specifies one of 128 sounds) is received, the corresponding sound (program) will be selected.

Program Change program numbers	00~15	16~31	32~47	48~63
SG-Rack program/ performance numbers	A1~A16	B1~B16	C1~C16	D1~D16

Program Change messages are received in Program mode and in Performance mode.

4. Damper (Hold) Pedal

CC#64: Hold messages [Bn, 40, vv] (vv: value) will control the damper effect.
The SG-Rack will receive a value of 0 as off, values 1~79 [4FH] as half-damp, and values 80 [50H] or above as on.

5. Pitch Bend

On bass-type programs etc., Pitch Bend messages [En, vv, vv] (vv, vv: lower and upper values which express a total of 16384 levels, with center value at 8192 [vv, vv = 00H, 40H]) can be received to apply a pitch-bend effect.

6. Adjusting the volume

When CC#07:Volume messages [Bn, 07, vv] (vv: value) are received, the volume will change. The volume of the SG-Rack is determined by multiplying the Volume value with the value of CC#11:Expression [Bn, 0B, vv] (vv: value). Thus, if adjusting the Volume value does not make the actual volume rise, or if there is no sound, transmit an Expression message with a value of 127 to the SG-Rack.
The volume can also be adjusted using the universal exclusive message Master Volume (refer to 20. System exclusive messages).

7. Applying vibrato

On string-type sounds etc., CC#01:Modulation 1 messages [Bn, 01, vv] (vv: value) can be received to apply a vibrato effect.

8. Adjusting the stereo position (panpot)

CC#10:Panpot messages [Bn, 0A, vv] (vv: value, where 00 is L, 64 is center, and 127 is R) can be received to change the stereo location of the sound.
However, stereo output programs will change to monaural.
If this message is received while a note is sounding, the currently-sounding note will not change, and the new panpot setting will apply from the next note.

9. Adjusting the depth of effect 1

CC#93:Eff 3 Depth messages [Bn, 5D, vv] (vv: value) can be received to adjust the depth of effect 1.

10. Adjusting the depth of effect 2

CC#91:Eff 1 Depth messages [Bn, 5B, vv] (vv: value) can be received to adjust the depth of effect 2.

11. Effect dynamic modulation

Effects such as Rotary Speaker and Wah can be controlled by incoming MIDI messages which correspond to the selected modulation source.

CC#64: Hold [Bn, 40, vv] (vv: value)	Damper #64
CC#12: FX Control 1 [Bn, 0C, vv] (vv: value)	Ctrl #12
CC#13: FX Control 2 [Bn, 0D, vv] (vv: value)	Ctrl #13
CC#01: Modulation 1 [Bn, 01, vv] (vv: value)	JS(+Y) #01
CC#02: Modulation 2 [Bn, 02, vv] (vv: value)	JS(–Y) #02
After Touch [Destination, vv] (vv: value)	After Touch

12. Adjusting the tone color

When a CC#74:Brightness message [Bn, 4A, vv] (vv: value) is received, the tone color will change. For a 'vv' value of 64 [40H], there will be no change in the tone. For lower values the sound will become darker, and for higher values the sound will become brighter.

13. Adjusting the attack time

When a CC#73:Attack Time message [Bn, 49, vv] (vv: value) is received, the attack time will change. For a value of 64 [40H] there will be no change in the attack time. For lower values the attack will become faster, and for higher values the attack will become slower.

14. Adjusting the decay time

When a CC#75:Decay Time message [Bn, 4B, vv] (vv: value) is received, the decay time will change. For a value of 64 [40H] there will be no change in the decay time. For lower values the decay will become faster, and for higher values the decay will become slower.

15. Editing with RPN messages

RPN (Registered Parameter Number) messages allow settings to be made in the same way for instruments of different manufacturers. In contrast, NRPN (Non-registered Parameter Number) messages and exclusive messages can be used freely by each instrument manufacturer.

To edit using RPN messages, you must first use CC#100:RPN(LSB) [Bn, 64, rr] and CC#101:RPN (MSB) [Bn, 65, mm] messages (rr, mm: parameter number lower and upper bytes) to specify the parameter.

Then, use CC#06:Data Entry (MSB) [Bn, 06, mm] and CC#38:Data Entry (LSB) messages [Bn, 26, vv] ('mm' and 'vv' are the upper and lower bytes, allowing a total of 16384 steps) to specify the value.

You can also use CC#96:Increment [Bn, 60, 00] and CC#97:Decrement [Bn, 61, 00] messages (values fixed at 00) to increase or decrease the value in steps of 1.

The SG-Rack can receive the RPN message described in item 16, below.

16. Tuning

You can use RPN Fine Tune messages to adjust the master tuning of the SG-Rack.

First, select RPN 01. This is done by transmitting [Bn, 64, 01, 65, 00] (control change #100 with a value of 01, and #101 with a value of 00). Then use Data Entry messages to adjust the value. This is done by using [Bn, 06, mm, 26, vv] (control change #06 and #38). A value of 8192 [mm, vv = 40H, 00H] is center (normal pitch). A value of 0 is -100 cents, and a value of 16383 [mm, vv = 7FH, 7FH] is +100 cents.

17. If a note does not stop

If for some reason a note being played by the SG-Rack "sticks" (i.e., continues to sound without stopping), press the [RESET] key located on the front panel, or move to a different mode to stop the note.
Another method of stopping the note is to disconnect the MIDI cable. If the MIDI device connected to the SG-Rack is transmitting a message known as Active Sensing [FE] at regular intervals, the SG-Rack will know from this that an external MIDI device is connected. If no MIDI messages are received for a certain length of time, the SG-Rack will decide that the connection has been broken, and will turn off notes that had been received via MIDI.

18. Turning off all notes of a channel

When a CC#123:All Notes Off message [Bn, 7B, 00] (control change #123, data of 00) is received, all notes currently sounding on that channel will be turned off.
When a CC#120:All Sound Off message [Bn, 78, 00] (control change #120, data of 00) is received, all sound being produced on that channel will stop. While an All Note Off message allow note decays to remain, the All Sound Off message will stop the sound immediately. However, these messages are only for use in emergency situations, and are not for use while you play.

19. Resetting all controllers of a channel

When a CC#121:Reset All Controller message [Bn, 79, 00] (control change #121, data of 00) is received, the values will be reset for all controllers currently being used on that channel.

20. System exclusive messages

Since manufacturers are free to use system exclusive messages in any way they please, these messages are used mainly to transmit and receive sound data or editing data for parameters that are unique to a given model of instrument.
For the SG-Rack, the system exclusive message format is [F0, 42, 3n, 4B, ff, ..., F7] (n: global MIDI channel, ff: function code (type of message)).
However some exclusive messages are defined to have a specific purpose common to all manufacturers. These are called universal system exclusive messages.
The SG-Rack uses three universal system exclusive messages: Inquiry Message Request, Inquiry Message Reply, and Master Volume.

- When an Inquiry Message Request message [F0, 7E, nn, 06, 01, F7] is received, the SG-Rack will respond with an Inquiry Message Reply [F0, 7E, nn, 06, 02, (nine bytes), F7] that means "I am a Korg SG-Rack, system version ..."
- A Master Volume message [F0, 7F, nn, 04, 01, vv, mm, F7] (vv: lower byte of value, mm: upper byte of value; together expressing 16384 steps) can adjust the overall volume.

21. Transmitting/receiving sound data settings etc. (Data Dump)

Global, program and performance settings can be transmitted as MIDI exclusive messages and stored on an external device.
To transmit this data, use the Utility mode MIDI Data Dump page.
This data can also be transmitted in response to an incoming Dump Request message.
When a data dump is received from an external device, the global, program and performance settings will be rewritten.
This data is transmitted and received on the Global MIDI channel.
The contents of this data is described in "SG-Rack MIDI Implementation."
Please contact Korg Information regarding distribution of the MIDI Implementation.
* The SG-Rack and the SGproX are data-dump compatible. (However, the following data of the SGproX will be ignored.)
  - Global "Local," "Aftertouch Filter," "Damper Polarity," Assignable SW Polarity," "Aftertouch Curve" and the various aftertouch controller settings.
  - Settings for timbres 1 to 8 of a performance, and the various assignable controller settings.

Also, if the dynamic modulation source for the effect ("Rotary Speaker" or "Wah") is set to an assignable controller ("AW1" to "AS"), this will be treated as "NONE."

Troubleshooting

Power does not come on when you press the POWER switch!

- Is the power cable correctly connected to the SG-Rack's AC inlet and to an AC outlet?

No sound!

- Are connections to the amp, mixer or headphones correct?
- Is the power of the amp and mixer on, and are their settings correct?
- Is the volume of the SGproX raised?
- Does the MIDI channel of the messages being transmitted by the external device match the Global MIDI channel (set in Global mode) of the SG-Rack? (☞p.26)

Can't control via MIDI!

- Is the MIDI cable connected correctly?
- Is MIDI data being received on the same channel that the transmitting device is transmitting?

Exclusive data is not received!

- Is the Global MIDI channel set correctly? (☞ p.26)
- Is the Global mode exclusive filter set to "ENA"? (☞ p.27)
- Is the memory protect setting "OFF"? (☞ p.27)

Can't write programs or performances!

- Is the memory protect setting "OFF"? (☞ p.27)

Error messages

Error messages	Content of error
Battery Low	The internal battery has run down. Contact a Korg service center or a nearby dealer.
Memory Protected	Protect is "ON" for the program or performance memory into which you attempted to write, etc.
Copy to Self	When copying Timbre data, the specified source and destination were identical.

Specifications

Tone generator method	AI squared synthesis system (full digital processing)
Tone generator	64 voice, 64 oscillator (for a monaural program) 32 voice, 64 oscillator (for a stereo program)
Waveform memory	PCM 24 Mbytes
Number of programs	64
Number of performances	64
Effects	Two digital multi-effect units
Effect types	Effect 1 (12 types), Effect 2 (11 types)
Outputs	L/MONO, R, PHONES (phone jacks)
MIDI connectors	IN, OUT , THRU
Display	20 character × 2 line LCD (backlit)
Power supply	117V
Power consumption	10W
Dimensions	19 (W) × 10.40 (D) × 1.75 (H) inches
Weight	6.17 lbs.
Included items	AC cable, Rackmount parts

Specifications and appearance are subject to change without notice for product improvement.

Program Name List

*Monaural Program

A01	Concert	B01	Bright	C01	Classic	D01	Dynamic
A02	Studio	B02	Rock Piano	C02	Jazz Piano	D02	Ballad
A03	* DancePiano	B03	* Chorused	C03	Mix Piano	D03	StagePiano
A04	Dyna-Stage	B04	Classic EP	C04	* Stage Bell	D04	* Stage Tine
A05	* Wurly EP	B05	* Dyno Bell	C05	* FM EP 2	D05	* FM EP 3
A06	FM EP 1	B06	* Wave EP 1	C06	Motion EP	D06	* Wave EP 2
A07	Piano & EP	B07	PF&Strings	C07	MIDI Grand	D07	Power Keys
A08	* Funkamatic	B08	FM&Analog	C08	EP&Strings	D08	* EP Magic
A09	SGX Organ	B09	* Velo "B"	C09	* Perc Organ	D09	* Full Organ
A10	* R&B Organ	B10	* CX-3 Organ	C10	* Gospel Org	D10	Pipe Organ
A11	* Clav	B11	PhaserClav	C11	Mutronics	D11	Clavitar
A12	Vibraphone	B12	* Bellphonic	C12	Crystaline	D12	BellString
A13	TheStrings	B13	Symphonic	C13	PadStrings	D13	StringsL&R
A14	WhisperVox	B14	Slow Waves	C14	BreathyVox	D14	Voices
A15	SynthFlute	B15	SynthBrass	C15	Synth Air	D15	Synth Horn
A16	* Acoustic	B16	* Fretless	C16	* FingerBass	D16	* Synth Bass

Performance Name List

PERFORMANCE.NAME		PERFORMANCE.NAME		PERFORMANCE.NAME		PERFORMANCE.NAME	
	Timbre A Timbre B		Timbre A Timbre B		Timbre A Timbre B		Timbre A Timbre B
A01	**PianoLayer** B03:Chorused C07:MIDI Grand	B01	**FMEP&Piano** A06:FM EP 1 A01:Concert	C01	**PowerWaves** C06:Motion EP D07:Power Keys	D01	**PF Air Pad** C07:MIDI Grand C15:Synth Air
A02	**PF&Strings** B08:FM&Analog B07:PF&Strings	B02	**PFHornPad** B07:PF&Strings D15:Synth Horn	C02	**PFBrassPad** B07:PF&Strings B15:SynthBrass	D02	**PF&Voices** B07:PF&Strings D14:Voices
A03	**A.Bass/PF** A16:Acoustic A02:Studio	B03	**BS/PF&Pad** B07:PF&Strings B16:Fretless	C03	**BS/PFLayer** A07:Piano & EP B16:Fretless	D03	**P&O-SPLIT** A09:SGX Organ A01:Concert
A04	**EP Layer** A06:FM EP 1 D08:EP Magic	B04	**Ballad EP** A06:FM EP 1 D05:FM EP 3	C04	**Whisper EP** A06:FM EP 1 A14:WhisperVox	D04	**Metalic EP** A06:FM EP 1 B12:Bellphonic
A05	**EP&Strings** B08:FM&Analog A04:Dyna-Stage	B05	**EP&BellPad** B08:FM&Analog B12:Bellphonic	C05	**EPHornPad** B08:FM&Analog D15:Synth Horn	D05	**EP&Analog** B08:FM&Analog A06:FM EP 1
A06	**BS/FM&Pad** B08:FM&Analog C16:FingerBass	B06	**BS/StageEP** B05:Dyno Bell C16:FingerBass	C06	**EP/SynHorn** D15:Synth Horn A04:Dyna-Stage	D06	**BS/EP&Pad** C08:EP&Strings B16:Fretless
A07	**PowerLayer** B02:Rock Piano C07:MIDI Grand	B07	**Piano & EP** A06:FM EP 1 D07:Power Keys	C07	**LayerGrand** C07:MIDI Grand C06:Motion EP	D07	**MondoLayer** B07:PF&Strings C15:Synth Air
A08	**Crystal EP** C12:Crystaline B06:Wave EP 1	B08	**Modern EP** B06:Wave EP 1 B04:Classic EP	C08	**Flange EP** A08:Funkamatic D06:Wave	D08	**Wurly EFX** B14:Slow Waves A05:Wurly EP
A09	**OrganSplit** B10:CX-3 Organ B09:Velo "B"	B09	**BS/Organ** C10:Gospel Org C16:FingerBass	C09	**SynthOrgan** B10:CX-3 Organ D15:Synth Horn	D09	**Full Pipes** D10:Pipe Organ D09:Full Organ
A10	**BrassLayer** C07:MIDI Grand B15:SynthBrass	B10	**PowerBrass** D15:Synth Horn B15:SynthBrass	C10	**Air Horns** A15:SynthFlute D15:Synth Horn	D10	**Air Brass** B15:SynthBrass C15:Synth Air
A11	**FlangeFunk** A08:Funkamatic B11:PhaserClav	B11	**StereoClav** B11:PhaserClav A11:Clav	C11	**Phat Clav** D16:Synth Bass A11:Clav	D11	**BellGuitar** B12:Bellphonic D11:Clavitar
A12	**ABass/Vibe** A12:Vibraphone A16:Acoustic	B12	**BellChimes** B12:Bellphonic C15:Synth Air	C12	**BellString** B12:Bellphonic D12:BellString	D12	**Air Bells** B12:Bellphonic B14:Slow Waves
A13	**SGXStrings** D13:StringsL&R B13:Symphonic	B13	**Symphony** D13:StringsL&R C13:PadStrings	C13	**Divisi** B13:Symphonic D13:StringsL&R	D13	**AirStrings** D13:StringsL&R C15:Synth Air
A14	**Fifth Wave** B14:Slow Waves B14:Slow Waves	B14	**Modern Pad** A14:WhisperVox B14:Slow Waves	C14	**Phaser Pad** B14:Slow Waves C14:BreathyVox	D14	**VoxVoices** D14:Voices C14:BreathyVox
A15	**Ensemble** B13:Symphonic D15:Synth Horn	B15	**Bows&Brass** B13:Symphonic B15:SynthBrass	C15	**StringPizz** B13:Symphonic A16:Acoustic	D15	**Orchestral** B13:Symphonic A15:SynthFlute
A16	**PIANO-SNGL** A01:Concert OFF	B16	**PD/LD-SPLT** B14:Slow Waves D15:Synth Horn	C16	**SFLUTE-LYR** A15:SynthFlute C15:Synth Air	D16	**BASS-OCTAV** D16:Synth Bass D16:Synth Bass

Parameter List

Program Edit Mode

PAGE	PARAMETER	RANGE
1	Brightness	–99 to +99
2	Level	–99 to +99
3	Attack	–99 to +99
4	Decay	–99 to +99
5	Release	–99 to +99
	Damp Mode	PIANO, NORMAL
	Hi	PIANO, NORMAL
6	Key Touch	–99 to +99
7	Effect1 Depth	DRY, 99:01 to 01:99, FX
8	Effect2 Depth	DRY, 99:01 to 01:99, FX
9	FX1 TYPE	00 to 12
10	FX1Parameter	
11	FX2 TYPE	00 to 11
12	FX2 Parameter	
13	Scale(type)	Equal Temp to Stretch (7type)
	Scale(key)	C to B
	P. Bend Range	–12 to +12
14	Preload	A01 to D16
15	Rename	
16	Prog Write	

Performance Edit Mode

PAGE	PARAMETER	RANGE
1	Timbre Select	A, B
2	Program	A01 to D16
3	Timb On/Off	ON, OFF
4	Level	000 to 127
5	Pitch(Trans)	–12 to +12
	Pitch(Tune)	–50 to +50
6	Panpot	L to R, PROGRAM
7	Key Zone	C–1 to G9
	Vel Zone	C–1 to G9
8	Filter(Damp/Sost)	E, D
	Filter(Pitch Bend)	E, D
	Filter(Mod Wheel)	E, D
	Filter(Volume)	E, D
	Filter(Expression)	E, D
	Filter(AfterTouch)	E, D
	Filter(Panpot)	E, D
	Filter(Tone Chara)	E, D
	FX Route	FX1 USE, FX1 PASS
9	Velocity Curve(Fig)	1 to 4, GLOBAL
	Velocity Curve(P)	1 to 127
	Velocity Curve(f)	1 to 150
10	TIMB COPY	
11	Macro	LAYER, SPLIT, VEL SW, GM, RESET
12	Preload	A01 to D16
13	Rename	
14	Perf Write	

Global Mode

PAGE	PARAMETER	RANGE
1	Master Tune	–50 to +50
2	Transpose	–12 to +12
3	Global Channel	1 to 16
4	Velocity Curve(Fig)	1 to 4
	Velocity Curve(P)	1 to 127
	Velocity Curve(f)	1 to 150
5	MIDI Exclusive	DIS, ENA
6	Prog Mem Protect	OFF, ON
	Perf Mem Protect	OFF, ON
7	Preload	ALL PROG, ALL PERF, GLOBAL, ALL
8	MIDI Data Dump	ALL PROG, ALL PERF, GLOBAL, ALL
9	Page Memory	OFF, ON
	Power On Mode	RESET, MEMORIZE
10	System Name	

[64 note stage piano Module]

SG-Rack MIDI Implementation Chart

Function ...		Transmitted	Recognized	Remarks
Basic	Default	1 to 16	1 to 16	Memorized
Channel	Changed	1 to 16	1 to 16	
	Default		3	
Mode	Messages	×	×	
	Altered	* * * * * *		
Note		×	0 to 127	
Number:	True voice	* * * * * *	0 to 127	
Velocity	Note ON	×	O 9n, V=1–127	
	Note OFF	×	×	
After	Key's	×	×	
Touch	Ch's	×	O	
Pitch Bender		×	O *f	
	1	×	O *f	Vibrato, Wah
	6, 38	×	O	Data Entry (MSB, LSB)
	7	×	O *f	Volume
	10	×	O *f	Panpot
Control	11	×	O *f	Expression
	2, 12, 13	×	O	Effect Dynamic Control
Change	64	×	O *f	Damper Pedal
	66	×	O *f	Sostenuto
	73, 74, 75	×	O *f	Attack Time, Brightness, Decay Time
	91, 93	×	O	Effect 2/1 Depth
	92, 94	×	O	Effect 2/1 Switch
	96, 97	×	O	Data increment, decrement
	100, 101	×	O	RPN (LSB, MSB) *1
	120	×	O	All Sound Off
	121	×	O	Reset All Controllers
Program		O 0 to 63	O 0 to 63	
Change	: True #	* * * * * *	0 to 63	
Exclusive		O	O *E	*2
	: Song Position	×	×	
Common	: Song Select	×	×	
	: Tune	×	×	
Real	: Clock	×	×	
Time	: Commands	×	×	
	: Local ON/OFF	×	×	
Other	: All Notes OFF	×	O 123 to 127	
	: Active Sense	O	O	
	: Reset	×	×	

Notes: *E: Transmitted/received when the Global setting Exclusive Filter is ENA.
*f: For a performance, received for timbres whose filter setting is E
*1 LSB, MSB = 01, 00: Fine Tune
*2 In addition to KORG exclusive messages, inquiry messages and master volume are also supported

Mode 1: OMNI ON, POLY Mode 2: OMNI ON, MONO O : Yes
Mode 3: OMNI OFF, POLY Mode 4: OMNI OFF, MONO × : No

* Consult your local Korg distributor for more information on MIDI IMPLEMENTATION.

SG-Rack Owner's Manual

NOTICE

KORG products are manufactured under strict specifications and voltages required by each country. These products are warranted by the KORG distributor only in each country. Any KORG product not sold with a warranty card or carrying a serial number disqualifies the product sold from the manufacturer's/distributor's warranty and liability. This requirement is for your own protection and safety.

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