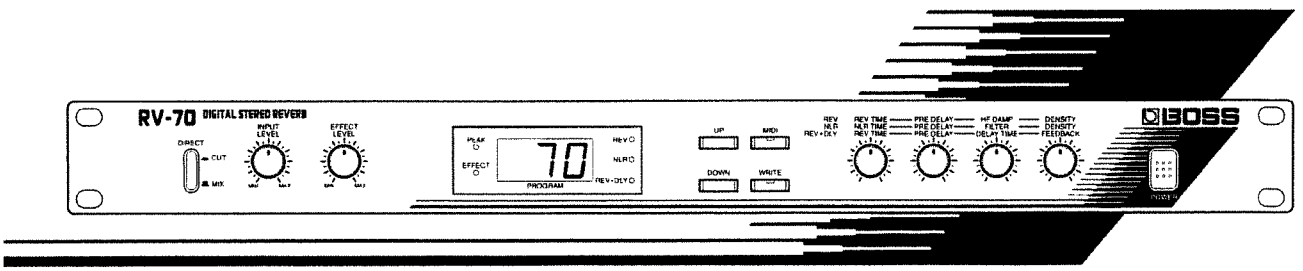
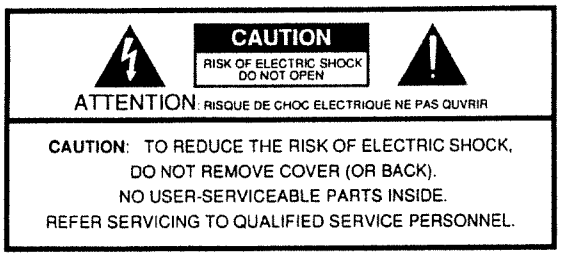
BOSS

RV-70 DIGITAL STEREO REVERB

Owner's Manual





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

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

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS

WARNING - When using electric products, basic precautions should always be followed, including the following:

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

For the USA

This product may be equipped with a polarized line plug (one blade wider than the other) . This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.

For Canada

For Polarized Line Plug

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU' AU FOND.

For the U.K.

WARNING: THE APPARATUS MUST BE EARTHED

INPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.
GREEN-AND-YELLOW: EARTH, BLUE: NEUTRAL, BROWN: LIVE

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

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

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

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

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

Introduction

We'd like to take a moment to thank you for purchasing the BOSS RV-70 Digital Stereo Reverb.
In order to fully realize the potential of the RV-70, and to ensure years of trouble-free operation, please take the time to read this manual thoroughly.

MAIN FEATURES

High-Quality Effects

Advanced digital processing (16-bit, 44.1 kHz sampling) and the AF Method produce effects on par with studio-grade equipment.

The AF (Adaptive Focus) Method :
A BOSS original technique that significantly reduces quantization noise by combining multiple samples to optimally match signal levels through analog-to-digital conversion.

199 Memory Locations

The RV-70 can store up to 199 different effects patches in memory. These memory locations can be accessed directly from the unit's panel or via MIDI.

Simple Operation

The RV-70's controls and panel layout make it very easy to create the effects you want.

Stereo Output

The RV-70's inputs and outputs allow you to take full advantage of stereo input signals.

MCR-8 Control

Connecting a Roland MCR-8 Multi Controller (optional) allows you to access the RV-70's full range of parameters - some of which are not even accessible via the unit's front panel.

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IMPORTANT NOTES

In addition to the items listed under Safety Precautions on page 2, please read and adhere to the following:

[Power Supply]

- When making any connections with other devices, always turn off the power to all equipment first; this will help prevent damage or malfunction.
- Do not use this unit on the same power circuit with any device that will generate line noise, such as a motor or variable lighting system.

[Placement]

- Using the unit near power amplifiers (or other equipment containing large transformers) may induce hum.
- This unit may interfere with radio and television reception. Do not use this unit in the vicinity of such receivers.

[Maintenance]

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

[Memory Backup]

- The unit contains a battery which maintains the contents of memory while the main power is off. The expected life of this battery is 5 years or more. However, to avoid the unexpected loss of memory data, it is strongly recommended that you change the battery every 5 years.
  Please be aware that the actual life of the battery will depend on the physical environment (especially temperature) in which the unit is used. When it is time to change the battery, consult with qualified service personnel.
- When the battery becomes weak, the following message will appear in the display. Please change the battery as soon as possible to avoid the loss of memory data.

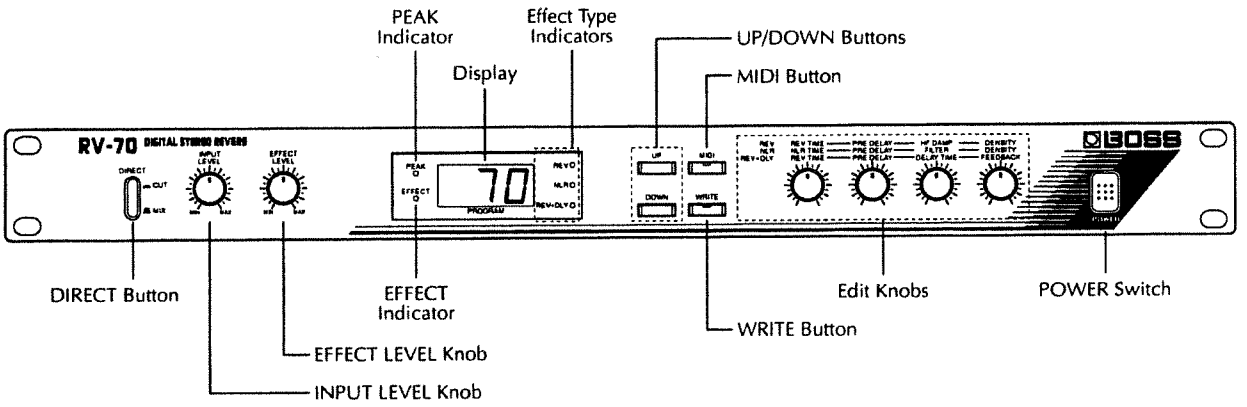
- Please be aware that the contents of memory may at times be lost; when the unit is sent for repairs or when by some chance a malfunction has occurred. Important data should be stored in another MIDI device (eg. a sequencer), or settings written down on paper. During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may be impossible to restore the data.

[Additional Precautions]

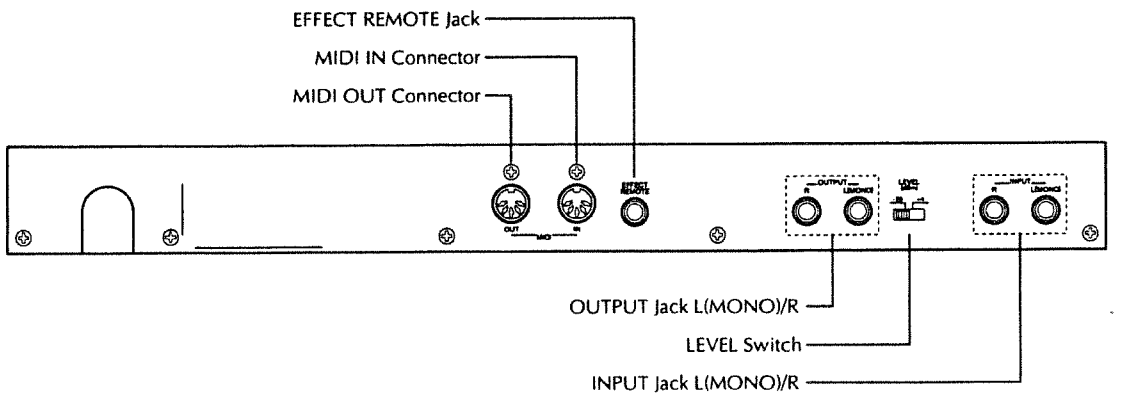
- Protect the unit from strong impact.
- Never strike or apply strong pressure to the display.
- A small amount of heat will radiate from the unit during normal operation.
- Before using the unit in a foreign country, consult with qualified service personnel.

PANEL DESCRIPTIONS

Front Panel



Rear Panel



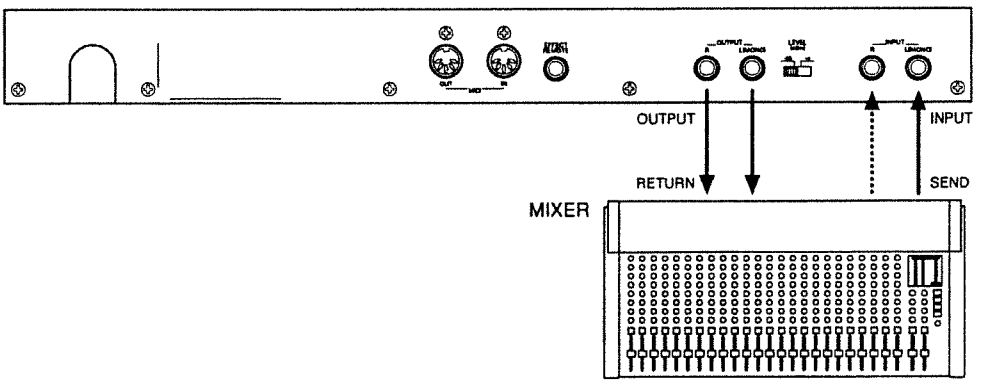
MAKING THE CONNECTION

The type of connection you need depends on what you want to achieve with the RV-70. Read on for details.

** Before making any connections, be sure all the equipment in your system is turned off and that all volume levels are at zero; this will help prevent damage, malfunction or electric shock.*

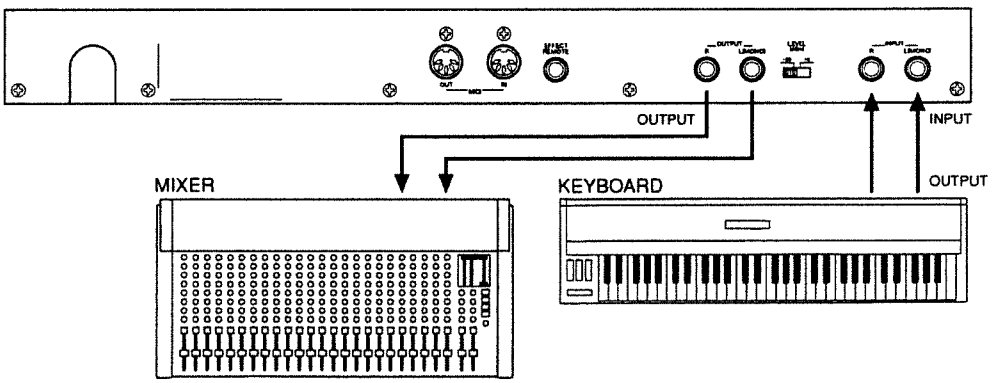
** If you're connecting the RV-70 to a monaural device, use the L (MONO) jack only.*

Mixer Send/Return



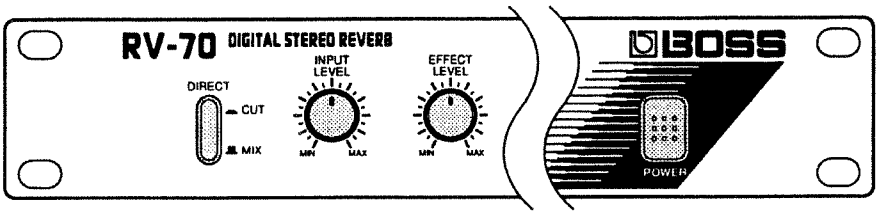
** Set the [LEVEL] switch to match the input/output level of the mixer you are using.*

Connecting a Keyboard



** Normally, the [LEVEL] switch should be set to "-20 dBm."*

POWERUP AND STANDBY



Turning On the Power

After making sure that all external devices are properly connected, press the [**POWER**] switch to turn on the RV-70.
The RV-70 will be ready in a second or two and the display will indicate the selected Program Number (memory location 1 to 199).

** After you've turned on all the other devices in your system, set the volume controls to appropriate levels.*

** The RV-70 contains a special circuitry protection function which will mute the output stage for a second or two after power-up.*

** When you turn on the RV-70 the last Program Number selected will be selected again.*

Outputting Direct Sounds

The [**DIRECT**] button determines which output mode is selected:

CUT: Only effects sounds are output.
MIX: Direct sounds and effects sounds are mixed and output.

Adjusting the Input Level

Use the [**INPUT LEVEL**] knob to adjust the level of the input signal. When set properly, the PEAK indicator will light only during input signal peaks (the loudest moments).

** The PEAK indicator lights 6 dB below the clipping point (the level at which distortion becomes audible).*

Adjusting the Effect Level

Use the [**EFFECT LEVEL**] knob to adjust the output level of effects. Rotating the knob clockwise increases the effect level.

** No effects are output when the knob is rotated completely counterclockwise (to MIN).*

Switching Effects On and Off

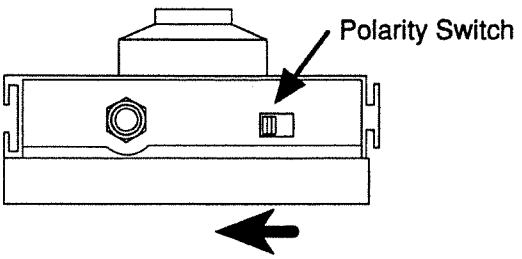
If you have an optional BOSS FS-5L pedal switch connected to the EFFECT REMOTE jack, each press of the pedal will switch the effects (effect output) on and off.

The EFFECT indicator (on the front panel) lights when the effects are turned on.

**** Effects are always on when no pedal switch is connected.***

**** When effects are turned off and the [DIRECT] button is set to "CUT," there is no output from the RV-70.***

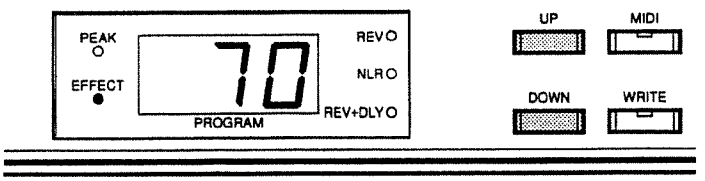
**** When using an FS-5L pedal switch (optional), set the POLARITY switch as shown.***



SELECTING EFFECTS

Use the panel buttons ([**UP**]/[**DOWN**]) to select the Program Number that corresponds to the desired effect. Effects are assigned to Program Numbers ranging from 1 to 199.

** **You can also switch effects (Program Numbers) with an external MIDI device. Check out "Switching Program Numbers" on p. 18 for an explanation on how to do this.***



Use the [**UP**] and [**DOWN**] buttons to select the desired Program Number.

The display shows the Program Number you've selected.

[**UP**]: Increases the Program Number.
[**DOWN**]: Decreases the Program Number.

You can change the Program Number rapidly by holding down the [**UP**] (or [**DOWN**]) button and pressing the [**DOWN**] (or [**UP**]) button.

Effect Structure

The RV-70 contains three main types of effects. The Effect Type LEDs (REV, NLR and REV+DLY) light to show you the particular type of effect you've selected.

REVERB (REV)

Reverb (reverberation) is the effect produced by multiple reflections of sound in an enclosed space. For example, if you clap your hands outdoors, you just hear the clap. But when you clap your hands in a church, for example, there is a lingering 'wash' of sound called the reverberation or reverb. The sound of the reverb depends on the size of the space (room, hall, etc.), and on the shape and material of the reflecting surfaces (such as the walls, floor and ceiling).
All these elements are digitally simulated in the RV-70.

NON-LINEAR (NLR)

These are digitally generated (artificial) reverbs. They can sound very different from naturally occurring types of reverb.

REVERB+DELAY (REV+DLY)

These types of sounds combine reverb with a delayed input signal. This produces sounds with 'echo-like' qualities.

IMPORTANT!
Even when the Effect Type LEDs and Effect knob settings (the four knobs on the right) are the same, the actual sound heard may vary. This is because the structure of the parameters for creating the effect may be changed beforehand. When choosing a specific effect, be sure to check the actual sound of the effect as you select the Program Number.

EDITING EFFECTS SETTINGS

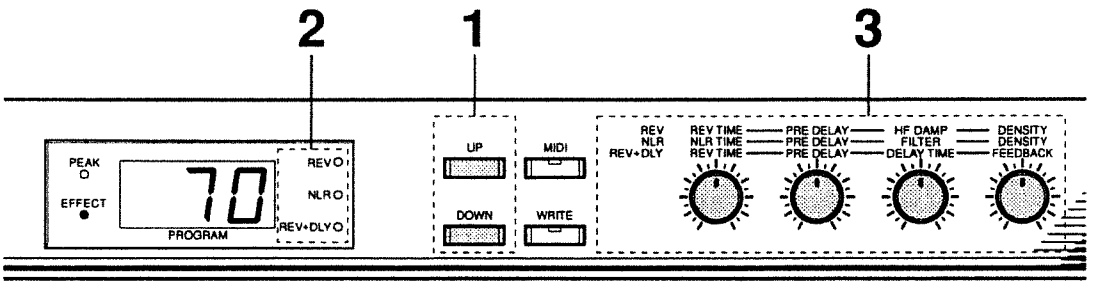
It's easy to alter effects settings (in any way you like) and then store the results at a specific Program Number. This section explains how to make and store these changes.

A Handy Tip for Editing Effects

The effects stored in the RV-70 are grouped into three types, which are shown by the Effect Type LEDs. However, even when the Effect Type LEDs and Effect knob settings are the same, the actual sound produced may be different.

If you want to create a particular effect, one very handy technique is to first select the effect (Program Number) that is closest to the sound you have in mind. Then you can alter (edit) the settings to create exactly what you need.

How to Edit an Effect

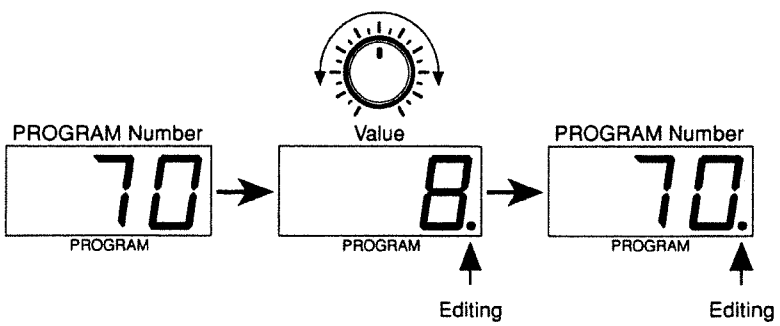


1. Use the [UP] and [DOWN] buttons to choose a Program Number (effect) that sounds similar to the effect you want to create.

2. Check the Effect Type LEDs to determine the effect type used by the Program Number that you've selected.

3. Change the parameter settings by slowly rotating the appropriate Effect knobs.

   A dot (.) lights in the display to show that you are currently in the process of editing. After momentarily displaying the value (0 to 100, for example) that you've selected with the Effect knobs, the display reverts to the Program Number.



The functions of the four Edit knobs vary according to the effect type selected. See "Effect Knob Functions" on p. 14 for a full description.

4. Repeat steps 3 and 4 to create the effect you want.

When you're ready to store the effect you've made, follow the procedure described in "Storing Changes - The Write Operation" on p. 13.

If You're Using the MCR-8...

If you hook up an MCR-8 (optional), you can change and store more parameters than you can using just the Edit knobs. Check out "Changing Effect Settings" on p. 26 for more details.

If You're Using System Exclusive (SysEx) Messages...

The RV-70 can use SysEx messages to switch algorithms or vary parameters that cannot be changed with the Edit knobs. "MIDI Implementation" is a publication (sold separately) that describes MIDI in detail. This document can be obtained at your nearest Roland Service Station.

How to Cancel Changes

If you have not yet carried out the Write operation, you can cancel any editing you have done and return to the original settings. The following procedure describes how to do this.

1. Press the [UP] or [DOWN] button.

The Program Number flashes in the display.

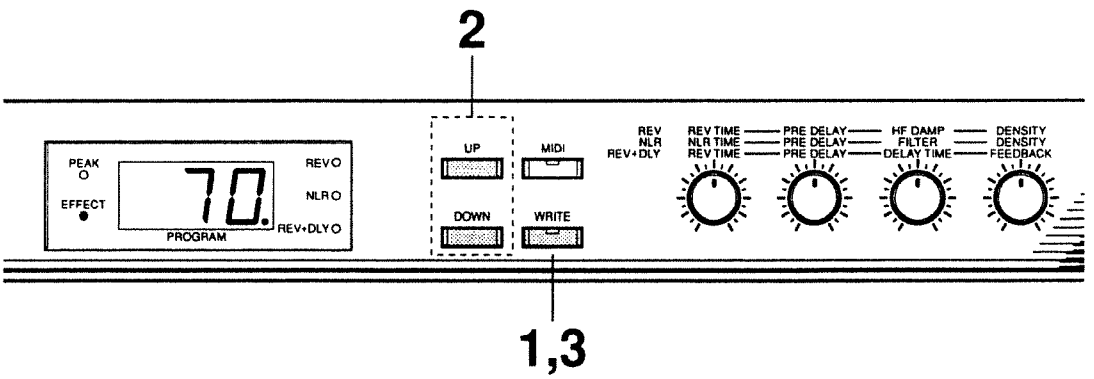
**** If you want to continue making changes, continue rotating the Edit knobs. This returns you to the editing mode.***

2. Press [UP] or [DOWN] again.

The Program Number changes and the RV-70 returns to the standard mode. Once you have returned to this mode, all previous edits will be canceled.

Storing Changes - The Write Operation

If you want to store the new settings that you've made, you need to perform the Write operation.



1. Press the [WRITE] button.

The button indicator starts to flash and the Program Number display appears.

2. Use the [UP] and [DOWN] buttons to select the Program Number where you want to store the new effect.

** If you store the changes in a different Program Number, the contents of the original Program Number remain unchanged.*

** If you want to store the changes in the same Program Number, you don't need to choose another Program Number as the destination. In other words, you can skip step 2 and go right on to step 3.*

** If you want to cancel the Write operation and continue making changes, rotate one of the Effect knobs. The indicator on the [WRITE] button goes out and the editing mode is reselected.*

3. Press the [WRITE] button again.

The changes you've made are stored in the selected Program Number. The new effect is automatically selected and ready for use.

Copying Effect Settings

You can easily copy the settings of one Program Number to another.

** Rotating any of the Effect knobs while copying stops the copying process; the RV-70 reverts to the editing mode.*

1. Use the [UP] and [DOWN] buttons to select the Program Number that is to serve as the source for copying.

2. Press the [WRITE] button.

The button indicator starts to flash, and the Program Number that is the destination for copying appears in the display.

3. Use the [UP] and [DOWN] buttons to select the Program Number to serve as the copy destination.

4. Press the [WRITE] button again.

The settings for the source Program Number are copied to the destination Program Number. After the data has been copied, the RV-70 automatically moves to the destination Program Number.

Effect Knob Functions

The functions of the Effect knobs vary according to the selected effect type:

REVERB

REVERB TIME

This parameter adjusts the length (duration) of the reverb effect. A higher setting results in a longer reverb time.

PRE DELAY

This parameter adjusts the time interval before output of the reverb effect starts. A higher setting results in a longer time interval.

HF DAMP

This parameter adjusts the amount of attenuation for HF damping (damping of the high-frequency sounds in the reverb effect). A higher value results in greater high-frequency damping and therefor a darker sound.

DENSITY

This parameter adjusts the density of the initial reflected sound. A higher setting results in greater density for a thicker sound.

NON-LINEAR

NLR TIME
This parameter adjusts the length (duration) of the reverb effect. A higher setting results in a longer reverb time.

PRE DELAY
This parameter adjusts the time interval before output of the reverb effect starts. A higher setting results in a longer time interval.

FILTER
This parameter adjusts the quality of the reverb effect by varying the amount of input signal that is passed through the bandpass filter (BPF). When set to "0," none of the sound is filtered. A higher value results in more sound being passed through the filter, up to a maximum of "100" (all sound is filtered).

DENSITY
This parameter adjusts the density of the initial reflected sound. A higher setting results in greater density, for a thicker sound.

REVERB+DELAY

REVERB TIME
This parameter adjusts the length (duration) of the reverb effect. A higher setting results in a longer reverb time.

PRE DELAY
This parameter adjusts the time interval before output of the reverb effect starts. A higher setting results in a longer time interval.

DELAY TIME
This parameter adjusts the delay time, which is the interval or time lag before the sound is heard. A higher setting results in a longer delay.

FEEDBACK
This parameter adjusts the amount of feedback for the delayed sound. A higher setting results in more feedback loops for the delayed sound.

USING MIDI

The RV-70 is equipped with MIDI terminals. Using these terminals to receive data from an external MIDI device makes it possible to switch Program Numbers and change effect settings remotely.

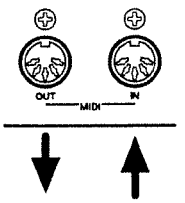
About MIDI

MIDI is the acronym for "Musical Instrument Digital Interface." It is an industy-wide standard that allows for data (such as that representing the music played, or for changes in sounds used) to be exchanged among various instruments and computers. As long as they are MIDI compatible, all devices, regardless of model or manufacturer, can exchange whatever performance data they are both equipped to 'understand.'
MIDI converts every 'performance event' into MIDI data. When received by another instrument, this stream of MIDI data can be used to "play" it, as if that instrument itself were being played.

The Exchange of MIDI Data

About MIDI Connectors

In carrying out the exchange of MIDI data, the three connectors shown below are used. MIDI cables can be routed from these connectors in varying ways depending on the kind of setup you have in mind.

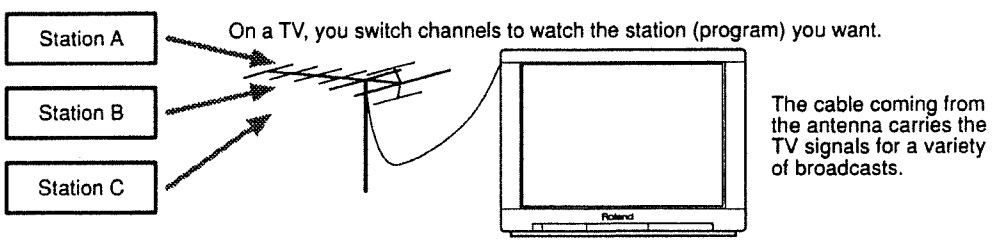


MIDI IN: Receives data from another MIDI device.
MIDI OUT: Transmits data originating in the unit.
MIDI THRU: Sends out an exact copy of the data received at MIDI IN.

**** The RV-70 has MIDI IN and MIDI OUT ports.***

MIDI Channels

In MIDI communications, a single cable simultaneously carries different streams of performance information for a multiple number of MIDI devices. This is possible thanks to the concept of MIDI channels.
MIDI channels are in some ways similar to the channels on a television set. On a TV, a variety of programs broadcast from different stations can be viewed by switching channels. This is because the information on any particular channel is conveyed only when the receiver is set to the same channel that is being used for transmission.



The channels available with MIDI range from 1 through 16. When a musical instrument (the receiver) is set so its channel matches the MIDI channel used by the transmitting device, the MIDI data is successfully 'communicated.'

**** When the Omni Mode is set to ON, MIDI data arriving on any channel will be received, regardless of any MIDI channel settings that exist. If you do not need to have channel-specific MIDI control over anything, the Omni Mode can be set to ON.***

MIDI Messages Recognized by the RV-70

In order to convey the great variety of expression possible with music, the MIDI standard contains a large range of data 'types' (messages). MIDI messages can be divided into two main types: messages that are handled on each channel (Channel messages); and messages that are handled independently of channels (System messages).

CHANNEL MESSAGES

These messages are used to convey the events of a performance. In most circumstances, they alone are sufficient for providing the range of control needed. The specific results obtained by the various MIDI message of this type are determined by the settings on the unit receiving them.

Program Change Messages

These messages are used for conveying information about changes to another sound. Sounds are changed using Program Change Numbers, numbered from 1 through 128.

Control Change Messages

Control Change messages serve in enhancing the expressiveness of a performance. Every available function can be identified by its own Control Number. The functions which are available for control can vary widely depending on the MIDI device being used.

SYSTEM MESSAGES

System messages include Exclusive messages, messages used for synchronizing the performance of multiple units, and other messages employed for diagnostic purposes. The RV-70 supports the use of Exclusive messages.

Exclusive Messages

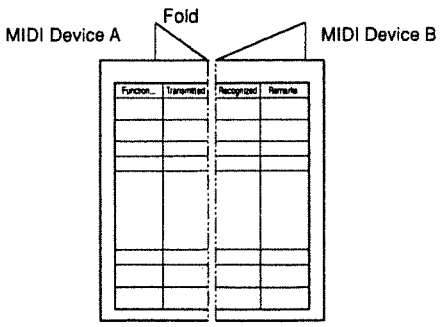
Exclusive messages handle information related to a unit's own unique sounds, or other device-specific information. Generally, such messages can only be exchanged between devices of the same model by the same manufacturer.

Exclusive messages can be employed to save the settings for Effects Programs into a sequencer, or for transferring such data to another RV-70.

MIDI Implementation Chart

MIDI has made it possible for a wide range of musical instruments to communicate with each other, but that doesn't necessarily mean that the many types of data will all be understood. If communication between two connected MIDI devices is to be successful, it must take place using only the types of data that they have in common.

It is for this reason that every owner's manual — for all kinds of MIDI devices — always includes a MIDI Implementation Chart as a quick reference to the types of MIDI messages it is capable of handling. You should compare the MIDI Implementation Charts for any two devices in order to find out which types of data can be exchanged. Since these charts are standardized, you can place them so they overlap. This way you can easily compare the receiving device with the transmitting device.



For detained information on MIDI data of the RV-70, a separate "MIDI Implementation document" is available at any Roland Service Station.

So What Can You Do with MIDI on the RV-70?

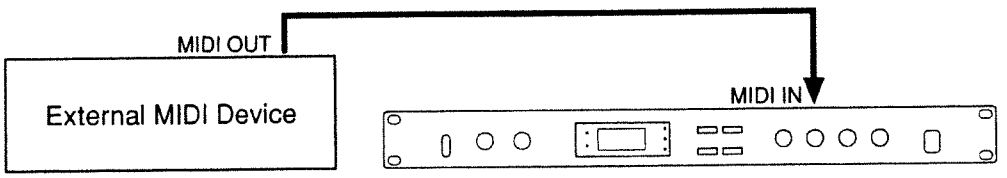
Here's what you can do when the RV-70 is connected to an external MIDI device.

1. Switching Program Numbers

You can use MIDI Program Change messages to switch Program Numbers on the RV-70 by sending tone switching messages from an external MIDI device.

After making the connections shown below, you can select a Program Number on an external MIDI device and simultaneously send out the corresponding Program Change message to the RV-70. The Program Number on the RV-70 changes according to the message received.

* ***When the Omni mode is set to "ON," Program Change messages are received without regard to the MIDI channel selected for the RV-70. When set to "OFF," the RV-70 only receives messages on the selected MIDI channel.***



Performing MIDI Mapping

Performing MIDI mapping makes it possible to switch to Program Numbers higher than 128. For details, see "Setting a Program Change Map" on p. 22.

2. Sending Data

You can use System Exclusive ("SysEx") messages to send the contents of effects stored in the RV-70 to another MIDI device. This makes it possible to configure another RV-70 in the same way as the first, or store effect settings in a sequencer (for example).

Setting the MIDI Send/Receive Channel

Here's how to set the MIDI channel for transmitting MIDI data.

** The "device ID" that is set when handling SysEx messages is the same as the MIDI send/receive channel.*

** The MIDI channel on the RV-70 is set to "1" when shipped from the factory.*

1. Press the [MIDI] button once.

The button indicator will light and the number of the current MIDI send/receive channel appears in the display.

2. Use the [UP] and [DOWN] buttons to select the MIDI send/receive channel.

3. Press the [MIDI] button three times.

The button indicator will go out and the new MIDI send/receive channel has been stored.

Setting the Omni Mode

When the Omni mode is set to "ON," the RV-70 can receive data on any MIDI channel, no matter what the actual MIDI send/receive channel setting may be.

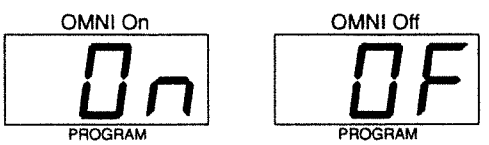
** Even when the Omni mode has been enabled, SysEx messages are received only on the selected MIDI send/receive channel (device ID).*

** The Omni mode is set to "ON" when the RV-70 is shipped from the factory.*

1. Press the [MIDI] button twice.

The button indicator will light and the current Omni mode setting appears in the display.

2. Use the [UP] and [DOWN] buttons to select the Omni mode setting.



Omni On: Data on all MIDI channels is received, regardless of the MIDI channel setting.
Omni Off: Only data on the selected MIDI channel is received.

3. Press the [MIDI] button twice.

The button indicator goes out and the RV-70 returns to the normal play mode.

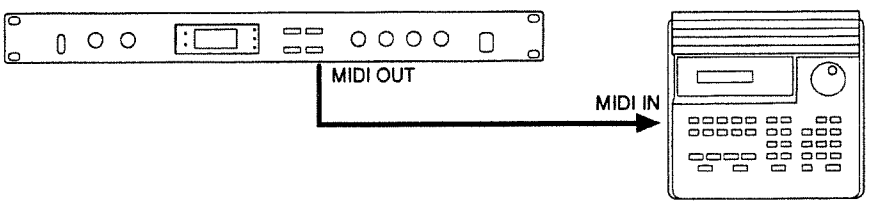
Sending Data (Bulk Dump)

You can send RV-70 data to another RV-70 or to some other external MIDI device. This transmission is carried out on the MIDI channel (device ID) selected as the MIDI send/receive channel.

Making the Connections

Storing Data in a Sequencer

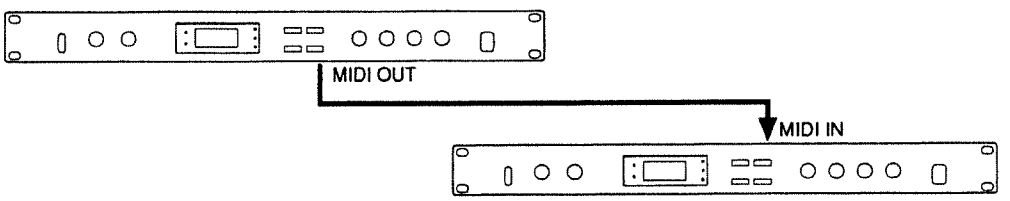
Make the connections as shown below and set up the sequencer for receiving SysEx messages.



**** Refer to the owner's manual for the sequencer for information on how to operate it.***

Copying Data to Another RV-70

Make the connections as shown below and make sure the sending RV-70 and receiving RV-70 are set to the same MIDI channel (device ID).



Transmitting Data

1. While in the standard play mode, press the **[MIDI]** button once.

The button indicator will light and the number of the current MIDI send/receive channel appears in the display.

2. Use the **[UP]** and **[DOWN]** buttons to select the MIDI send/receive channel.

The data will be sent on the MIDI channel (device ID) that you select here.

3. Press the **[WRITE]** button.

The button indicator will start to flash and the following message appears in the display:

4. Press the **[WRITE]** button again.

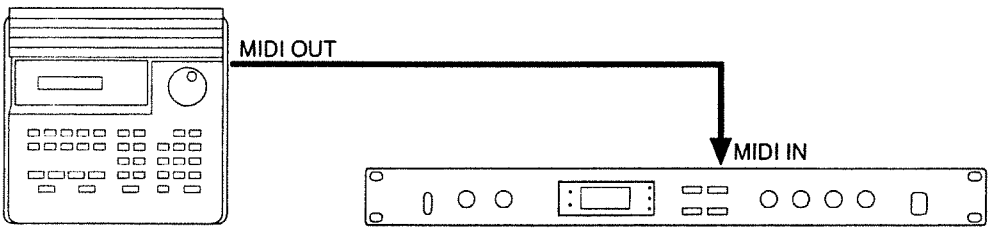
The display starts to flash and data transmission (bulk dump) begins. When the transmission is complete, the RV-70 returns to the standard play mode.

Receiving Data (Bulk Load)

Making the Connections

Sending Data Stored in a Sequencer to the RV-70

Make the connections as shown below. Set the RV-70 to the same MIDI channel (device ID) that was used when the data was stored in the sequencer.



**** Refer to the owner's manual for the sequencer for information on how to operate it.***

Receiving Data

SysEx messages, including bulk load data, can be received at any time. The following message appears when data is being received.

**** All functions of the RV-70 are unavailable while the unit is receiving SysEx messages.***

**** The RV-70 receives only SysEx messages on the matching MIDI channel (device ID).***

SETTING A PROGRAM CHANGE MAP

When the RV-70 received Program Change messages sent from an external MIDI device, the Program Number on the RV-70 changes. You can make settings that determine which Program Number is selected when these messages are received.

1. Switch off the power.

2. While holding down the [UP] and [MIDI] buttons, switch the power back on.
   "PC" appears in the display and the [MIDI] button indicator lights.

3. Use the [UP] and [DOWN] buttons to select the Program Change number to be received.

4. Press the [WRITE] button (the button indicator will light).

5. Use the [UP] and [DOWN] buttons to select the Program Number on the RV-70 that you want to link with the Program Change number you selected in step 3.
   The [WRITE] button indicator starts to flash.

6. Press the [WRITE] button.
   The settings you've made are stored in memory. When complete, the [WRITE] button indicator goes out and the [MIDI] button indicator will light.

7. Repeat steps 3 to 6 to link all the Program Numbers necessary.

When you've finished making the settings, turn the power off and then on again.

RESTORING THE FACTORY DEFAULTS - INITIALIZATION

If you wish, you can return any or all of the stored Program Number settings to their factory defaults, i.e., the settings as they were when the RV-70 was brand new. This process is called "initializing."

1. Switch off the power.

2. While holding down the **[DOWN]** and **[WRITE]** buttons, switch the power back on.

"FL" appears in the display and the **[WRITE]** button indicator lights.

3. Use the **[UP]** and **[DOWN]** buttons to select the Program Number you wish to initialize.

The **[WRITE]** button indicator begins to flash.

1 to 199 : Only the settings for the Program Number shown in the display are initialized.
AL : All Program Numbers are initialized to their factory defaults.

4. Press the **[WRITE]** button.

The selected Program Number is initialized. When the initialization is complete, the **[WRITE]** button indicator lights continuously.

5. If you want to initialize another Program Number, repeat steps 3 and 4.

When you've finishing initializing all the Program Numbers you want, turn the power off and then on again.

BEFORE CALLING FOR SERVICE

If your RV-70 is not functioning properly, or you suspect there is a problem somewhere, check the following items. If you are still unable to correct the problem, contact your Roland retailer or nearest Roland Service Center.

No Sound

* Is all the equipment hooked up correctly? (P. 7)
* Are the connected amps or mixers turned on and levels set properly?
* Is the DIRECT button set properly?
* Is the INPUT LEVEL knob set appropriately? (P. 8)
* Is the EFFECT LEVEL knob set appropriately? (P. 8)
* Are the connection cables in good repair?

Sound Is Distorted (the PEAK Indicator Lights Often)

* Is the INPUT LEVEL knob adjusted properly? (P. 8)
* Is the LEVEL switch (on the rear panel) set to match the connected instrument? (P. 7)
* Is the output level of the connected equipment set too high?

Cannot Obtain Expected Changes in Program Numbers

* First make sure the MIDI channels on your units match.
  If changes to unintended Program Numbers occur, recheck the settings for the Program Change Map. (p. 22)

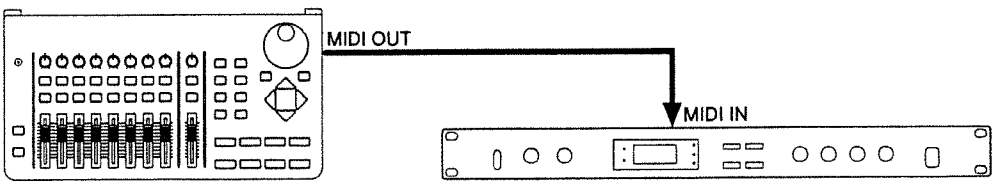
USING A MCR-8 TO OPERATE THE RV-70

The Roland MCR-8 Multi Controller (optional) can be used to control the RV-70. With it you can change some parameter settings that cannot be accessed by RV-70 panel operations. Here's how to connect and use the MCR-8.

At the end of this manual is a panel diagram that shows the relationships between MCR-8 controls and parameters. Please refer to this figure while operating the MCR-8.

Connecting the MCR-8

This figure illustrates how to connect the MCR-8 to the RV-70.



Initial Settings

Before controlling the RV-70 with an MCR-8, you first need to make some initial settings.

Initial Settings for the RV-70

MIDI Channel

Set the RV-70 and the MCR-8 to the same MIDI channel. When you turn on the power, the MIDI channel for the MCR-8 is set to "16," so set the MIDI channel for the RV-70 to "16" as well. See "Setting the MIDI Send/Receive Channel" on p. 19 for a description of this procedure.

**** The MIDI channel for the MCR-8 can be changed during power up. If you've changed the MIDI channel on the MCR-8, make sure that the RV-70 is set to the same MIDI channel.***

MCR-8 Receive Switch

When the RV-70 is connected to the MCR-8, you must turn on the MCR-8 Receive switch.

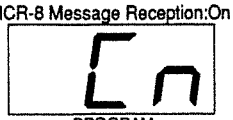
**** When shipped, the MCR-8 Receive switch is set to "off."***

1. While in the standard play mode, press the **[MIDI]** button three times.

The button indicator will light and the display shows the current settings for the MCR-8 Receive switch.

2. Use the **[UP]** and **[DOWN]** buttons to make the settings for the MCR-8 Receive switch.

MCR-8 Message Reception:On



MCR-8 Message Reception:Off

3. Press the **[MIDI]** button.

The button's indicator goes out and the RV-70 returns to the standard play mode.

Initial Settings for the MCR-8

Mode Switch

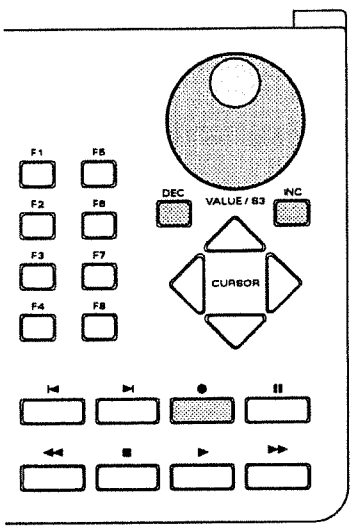
When using the MCR-8 to operate the RV-70, set the Mode switch on the MCR-8 to "Mode 4."

Computer Switch

When using the MCR-8 to operate the RV-70, set the COMPUTER switch on the MCR-8 to "MIDI."

Operating the RV-70 with the MCR-8

This figure illustrates how to operate the MCR-8.



Switching Program Numbers

You can use the [**UP (INC)**] and [**DOWN (DEC)**] buttons on the MCR-8 to switch Program Numbers. This works just like the [**UP**] and [**DOWN**] buttons on the RV-70.
You can also change the Program Number by rotating the dial on the MCR-8. The Program Number changes when you call up the desired Program Number and push the dial.

**** You can change the Program Number rapidly by holding down the [UP (INC)] (or [DOWN (DEC)]) button and pressing the [DOWN (DEC)] (or [UP (INC)]) button.***

Changing Effect Settings

In addition to the parameters that you can work with using the Edit knobs on the RV-70, the MCR-8 lets you control parameters that cannot be accessed from the front panel.
The method of operation is just like that when using the RV-70 alone.

**** For a full description, check out "Functions of Parameters Accessed with the MCR-8" on p. 27.***

Canceling Changes

You can't use the [**UP (INC)**] and [**DOWN (DEC)**] buttons on the MCR-8 to cancel changes. These buttons work just like the [**UP**] and [**DOWN**] buttons on the RV-70.

Storing Changes - The Write Operation

You can use the [**WRITE (REC)**] button on the MCR-8 to store changes you have made, just as with the [**WRITE**] button on the RV-70.

Copying Effect Settings

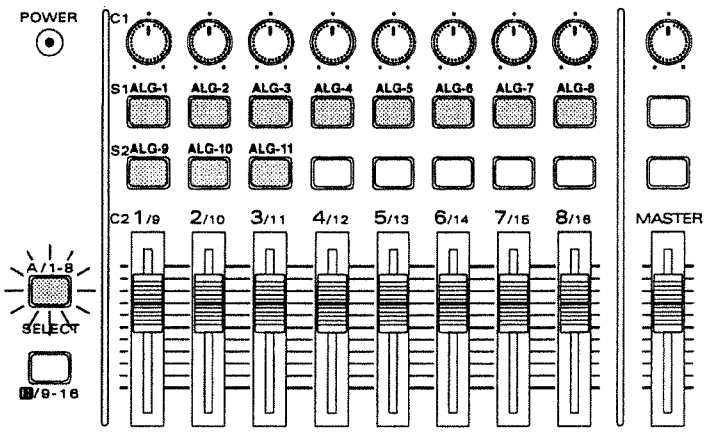
You can use the MCR-8 to copy Program Number settings by following the same procedure as for the RV-70 alone.

Functions of Parameters Accessed with the MCR-8

<Parameters Shared by All Effect Types>

ALGORITHM

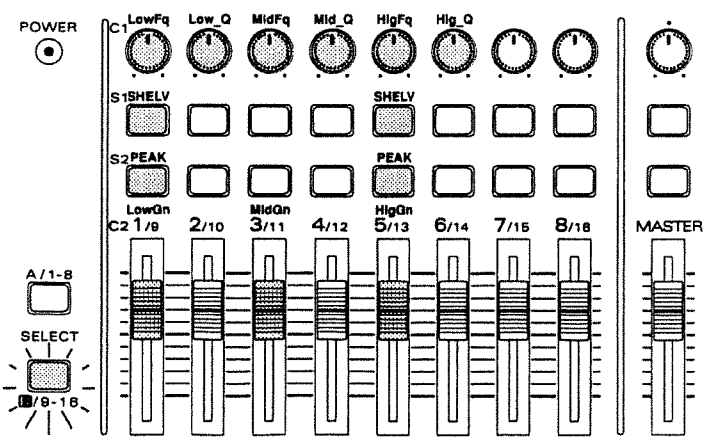
You can use some of S1 and S2 to select the ALGORITHM. The ALGORITHM parameters are allocated as follows for each of the effect types.



ALG-1/S1-1:	<REVERB>	ROOM1
ALG-2/S1-2:	<REVERB>	ROOM2
ALG-3/S1-3:	<REVERB>	ROOM3
ALG-4/S1-4:	<REVERB>	HALL1
ALG-5/S1-5:	<REVERB>	HALL2
ALG-6/S1-6:	<REVERB>	GARAGE
ALG-7/S1-7:	<NON-LINEAR>	NON-LINEAR
ALG-8/S1-8:	<REVERB+DELAY>	ROOM-SERIES
ALG-9/S2-1:	<REVERB+DELAY>	HALL-SERIES
ALG-10/S2-2:	<REVERB+DELAY>	ROOM-PARALLEL
ALG-11/S2-3:	<REVERB+DELAY>	HALL-PARALLEL

EQUALIZER

This is a three-band, parametric equalizer. In the low and high ranges, you can also switch between 'peaking' and 'shelving' types of EQ.



LowFq /C1-9 **[Low EQ Frequency]**
This parameter adjusts the central frequency when adjusting the sound in the low range.

LowGn /C2-9 **[Low EQ Gain]**
This parameter adjusts the gain (amount of boost and cut) for the low range.

Low_Q /C1-10 **[Low EQ Q]**
This parameter adjusts the range for the central frequency set with "Low EQ Frequency" that is applied by the equalizer. The higher the setting, the narrower the range.

SHELV /S1-9 **[SHELVING]**
PEAK /S2-9 **[PEAKING]**
This parameter switches between low equalizer shelving and peaking.
**** When "SHELVING" is selected here, "Low EQ Q" has no effect.***

MidFq /C1-11 **[Mid EQ Frequency]**
This parameter adjusts the central frequency when adjusting the sound in the middle range.

MidGn /C2-11 **[Mid EQ Gain]**
This parameter adjusts the gain (amount of boost/cut) for the middle range.

Mid_Q /C1-12 **[Mid EQ Q]**
This parameter adjusts the range for the central frequency set with "Mid EQ Frequency" that is applied by the equalizer. The higher the setting, the narrower the range.

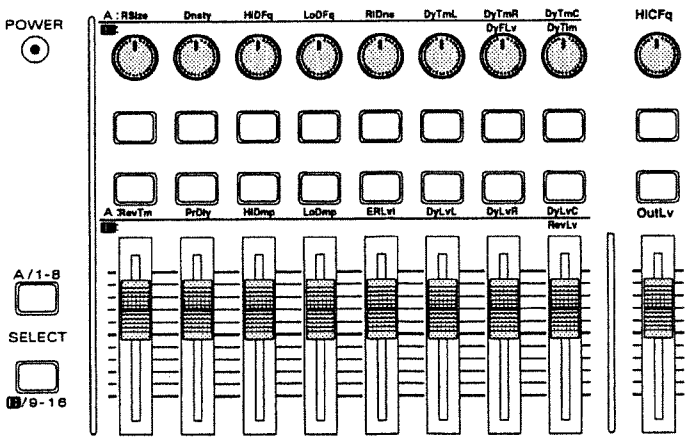
HigFq /C1-13 **[High EQ Frequency]**
This parameter adjusts the central frequency when adjusting the sound in the high range.

HigGn /C2-13 **[High EQ Gain]**
This parameter adjusts the gain (amount of boost and cut) for the high range.

Hig_Q /C1-14 **[High EQ Q]**
This parameter adjusts the range for the central frequency set with "High EQ Frequency" that is applied by the equalizer. The higher the setting, the narrower the range.

SHELV /S1-13 **[SHELVING]**
PEAK /S2-13 **[PEAKING]**
This parameter switches between high equalizer shelving and peaking.
**** When "SHELVING" is selected here, "High EQ Q" has no effect.***

<REVERB> <REVERB+DELAY>



RSize /C1-1 **[Room Size]**
This parameter adjusts the size of the simulated room.

RevTm /C2-1 **[Reverb Time]**
This parameter adjusts the duration of the reverberations.

Dnsty /C1-2 **[Density]**
This parameter adjusts the density of the reverb effect. A higher setting results in greater density, for a thicker sound.

PrDly /C2-2 **[Pre Delay]**
This parameter adjusts the delay time of the reverberations in relation to the direct sound.

HiDFq /C1-3 **[HF Damp <Frequency>]**
This parameter adjusts the base frequency for HF damping (high-range damping of the reverb effect). Frequencies above the base frequency are attenuated.

HiDmp /C2-3 **[HF Damp <Gain>]**
This parameter adjusts the amount of attenuation for HF damping. When set to "0," there is no HF damping.

LoDFq /C1-4 **[LF Damp <Frequency>]**
This parameter adjusts the base frequency for LF damping (low-range damping of the reverb effect). Frequencies below the base frequency are damped.

LoDmp /C2-4 **[LF Damp <Gain>]**
This parameter adjusts the amount of attenuation for LF damping. When set to "0," there is no LF damping.

RlDns /C1-5 **[Release Density]**
This parameter adjusts the ratio at which the density of the reverb effect increases over time. A higher value produces greater density.

ERLvl /C2-5 **[Early Reflection Level]**
This parameter adjusts the volume of the initial reflected sound.

RevLv /C2-16 **[Reverb Level]**
This parameter adjusts the volume of the reverb.

DyTmL /C1-6 **[Delay Time Left]**
DyLvL /C2-6 **[Delay Level Left]**
DyTmR /C1-7 **[Delay Time Right]**
DyLvR /C2-7 **[Delay Level Right]**
DyTmC /C1-8 **[Delay Time Center]**
DyLvC /C2-8 **[Delay Level Center]**
These parameters adjust the respective delay times and volume levels for output to the left, right, and center of the stereo spectrum.

DyFLv /C1-15 **[Delay Feedback Level]**
This parameter adjusts the amount of feedback for the delayed sound. A higher setting results in more feedback loops for the delayed sound.

DyTim /C1-16 **[Delay Time Scale]**
This parameter controls the overall delay time output to the left, right, and center of the stereo spectrum.

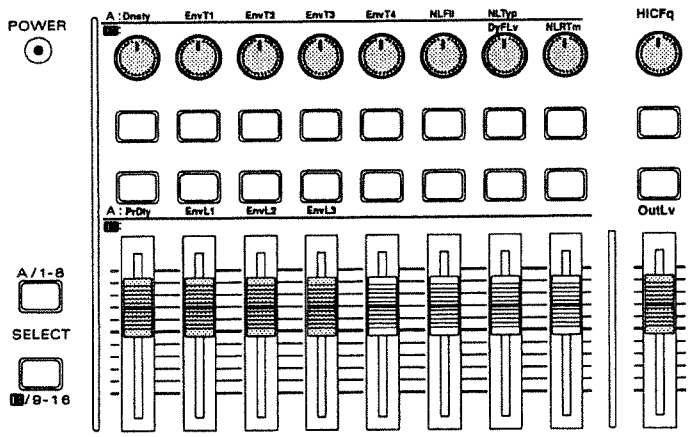
**** The following parameters can be used only when the effect type is "REVERB+DELAY."***

RevLv [Reverb Level]
DyTmL [Delay Time Left]
DyLvL [Delay Level Left]
DyTmR [Delay Time Right]
DyLvR [Delay Level Right]
DyTmC [Delay Time Center]
DyLvC [Delay Level Center]
DyFLv [Delay Feedback Level]
DyTim [Delay Time Scale]

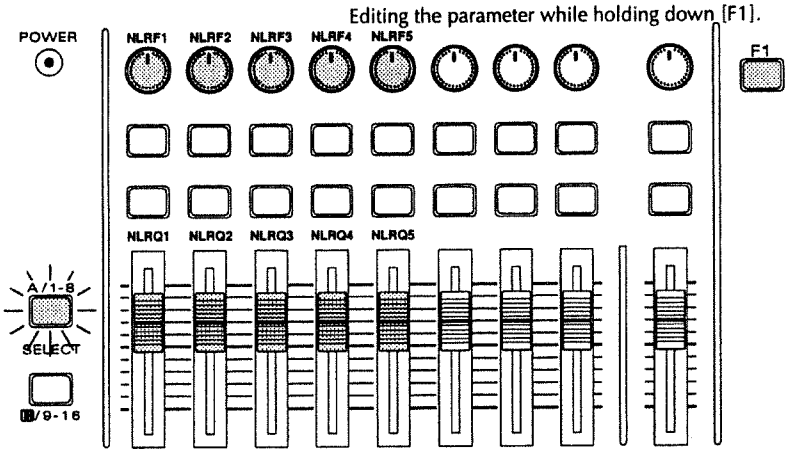
HiCFq /C1-MASTER **[High Cut Filter Frequency]**
This parameter adjusts the frequency at which the high-cut filter (which cuts off high frequencies) begins to work.

OutLv /C2-MASTER **[Output Level]**
This parameter adjusts the overall output level for the effect.

<NLR>



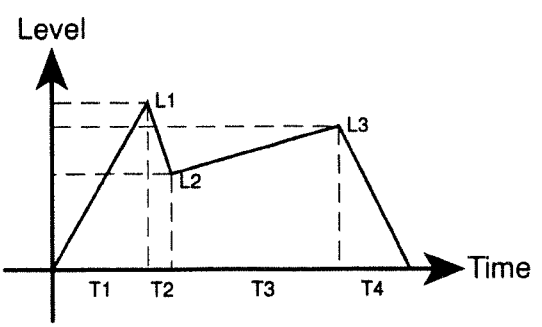
Editing the parameter while holding down [F1].



Dnsty /C1-1 **[Density]**
This parameter adjusts the density of the reverb effect. A higher setting results in greater density, for a thicker sound.

PrDly /C2-1 **[Pre Delay]**
This parameter adjusts the interval of delay before the reverb sound is output.

EnvT1 /C1-2 **[Envelope Time1]**
EnvL1 /C2-2 **[Envelope Level1]**
EnvT2 /C1-3 **[Envelope Time2]**
EnvL2 /C2-3 **[Envelope Level2]**
EnvT3 /C1-4 **[Envelope Time3]**
EnvL3 /C2-4 **[Envelope Level3]**
EnvT4 /C1-5 **[Envelope Time4]**
These parameters adjust the output levels at the respective points in time, as well as the time intervals before these points are reached.



NLFil /C1-6 **[Non-linear Filter]**
This parameter adjusts the quality of the reverb effect by varying the amount of input signal that is passed through the bandpass filter (BPF). When set to "0," none of the sound is filtered. A higher value results in more sound being passed through the filter, up to a maximum of "100" (all sound is filtered).

NLTyp /C1-7 **[Non-linear Type]**
This parameter sets the panning (stereo location) for the reverb.
0: The reverb pans from the left channel to the right channel.
1: No panning.
2: The reverb pans from the right channel to the left channel.

DyFLv /C1-15 **[Delay Feedback Level]**
This parameter adjusts the amount of feedback for the delayed sound. A higher setting results in more feedback loops for the delayed sound.

NLRTm /C1-16 **[Non-linear Time]**
This parameter adjusts the length (duration) of the reverb effect.

HiCFq /C1-MASTER **[High Cut Filter Frequency]**
This parameter adjusts the frequency at which the high-cut filter (which cuts off high frequencies) begins to take effect.

OutLv /C2-MASTER **[Output Level]**
This parameter adjusts the output level for the effect.

NLRF1 /[F1]+C1-1 **[Non-linear Filter 1]**
NLRF2 /[F1]+C1-2 **[Non-linear Filter 2]**
NLRF3 /[F1]+C1-3 **[Non-linear Filter 3]**
NLRF4 /[F1]+C1-4 **[Non-linear Filter 4]**
NLRF5 /[F1]+C1-5 **[Non-linear Filter 5]**
NLRQ1 /[F1]+C2-1 **[Non-linear Filter Q1]**
NLRQ2 /[F1]+C2-2 **[Non-linear Filter Q2]**
NLRQ3 /[F1]+C2-3 **[Non-linear Filter Q3]**
NLRQ4 /[F1]+C2-4 **[Non-linear Filter Q4]**
NLRQ5 /[F1]+C2-5 **[Non-linear Filter Q5]**
These parameters divide the time over which the reverb is output into five sections, and adjust how the bandpass filter (BPF) is applied to each time slice. Filters 1 to 5 adjust the central frequency for the BPF. Q1 to Q5 adjust the range over which the BPF is applied, centering on the respective frequencies set with Filters 1 to 5. The higher the value, the narrower the range.

DIGITAL STEREO REVERB
MODEL RV-70

MIDI Implementation Chart

Date : Jun.16 1994
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	1 - 16	1 - 16	Memorized
Channel	Changed	1 - 16	1 - 16	
Mode	Default	x	OMNI ON/OFF	Memorized
	Messages	x	x	
	Altered	**********	x	
Note		x	x	
Number	True Voice	**********	x	
Velocity	Note ON	x	x	
	Note OFF	x	x	
After	Key's	x	x	
Touch	Ch's	x	x	
Pitch Bend		x	x	
Control Change	0 - 7	x	o *1	
	10	x	o *1	
	21	x	o *1	
	23 - 25	x	o *1	
	30	x	o *1	
	32	x	o *1	
	36	x	o *1	
	40 - 43	x	o *1	
	48 - 82	x	o *1	
	88	x	o *1	
	92	x	o *1	
	96	x	o *1	
Prog		x	o	
Change	True #	**********	0 - 127	Program Number 1 - 128
System Exclusive		o	o	
System	Song Pos	x	x	
Common	Song Sel	x	x	
	True	x	x	
System	Clock	x	x	
Real Time	Commands	x	x	
	Local ON/OFF	x	x	
AUX	All Notes OFF	x	x	
Messages	Active Sense	x	x	
	Reset	x	x	
Notes		*1: Reception possible if MCR-8 receive switch is turned on, either through Exclusive data or manually. (Used to alter parameter values in the RV-70 — not defined by MIDI specs.)		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

o : Yes
x : No

SPECIFICATIONS

RV-70 : Digital Stereo Reverb

Signal Processing
AD Conversion : 16 bit linear 128 times oversampling
ΔΣ modulation Adaptive Focus Method
DA Conversion : 16 bit linear 8 times oversampling

Sampling Frequency
44.1 kHz

Program Memories
199 (User Area)

Nominal Input Level
+4 / -20 dBm (selectable with LEVEL Switch)

Input Impedance
470 kΩ (LEVEL Switch : -20 dBm)
470 kΩ (LEVEL Switch : +4 dBm)

Nominal Output Level
+4 / -20 dBm (same as Nominal Input level)

Output Impedance
2.6 kΩ (LEVEL Switch : -20 dBm)
2.6 kΩ (LEVEL Switch : +4 dBm)

Recommended Load Impedance
26 kΩ or greater

Dynamic Range
120 dB or greater (direct)
90 dB or greater (effect)

Controls
DIRECT Button
INPUT LEVEL Knob
EFFECT LEVEL Knob
UP/DOWN Buttons
MIDI Button
WRITE Button
Edit Knobs x4
POWER Switch
LEVEL Switch

Display
7 segments, 2 characters (LED)

Indicators
PEAK Indicator
EFFECT Indicator
Effect Type Indicators x3

Connectors
INPUT Jacks L(MONO),R
OUTPUT Jacks L(MONO),R
EFFECT REMOTE Jack
MIDI Connectors (IN,OUT)

Power Supply
AC 117 V, AC 230 V or AC 240 V

Power Consumption
6.5 W (AC 117 V, AC 230 V, AC 240 V)

Dimensions
482 (W) x 165 (D) x 44 (H) mm
19 (W) x 6-1/2 (D) x 1-3/4 (H) inches
(EIA-1U rack mount type)

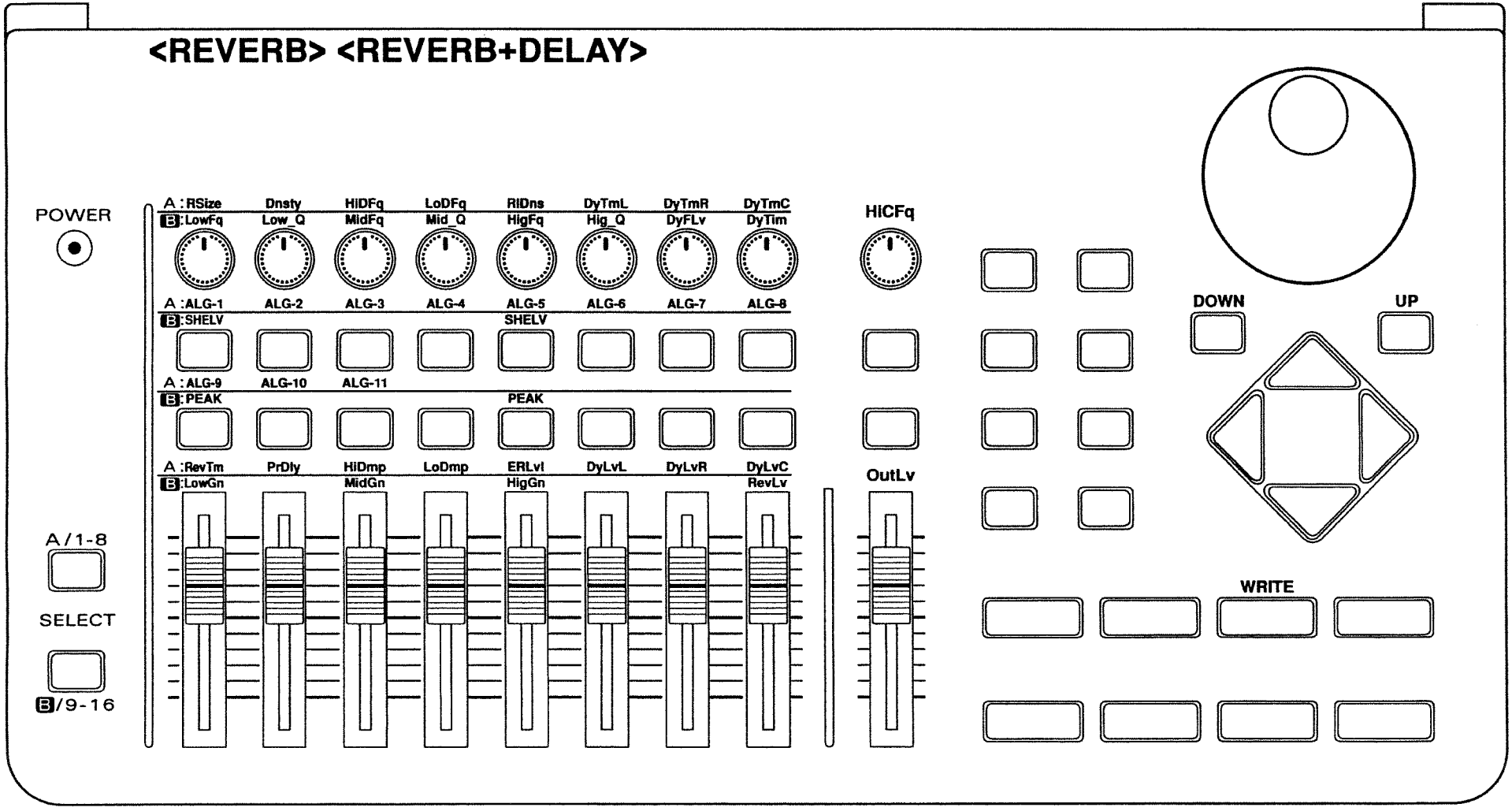
Weight
2.2 kg / 4 lbs 14oz

Accessory
Owner's Manual

0 dBm = 0.775 Vrms

In the interest of product development, the specifications and/or appearance of this unit are subject to change without prior notice.

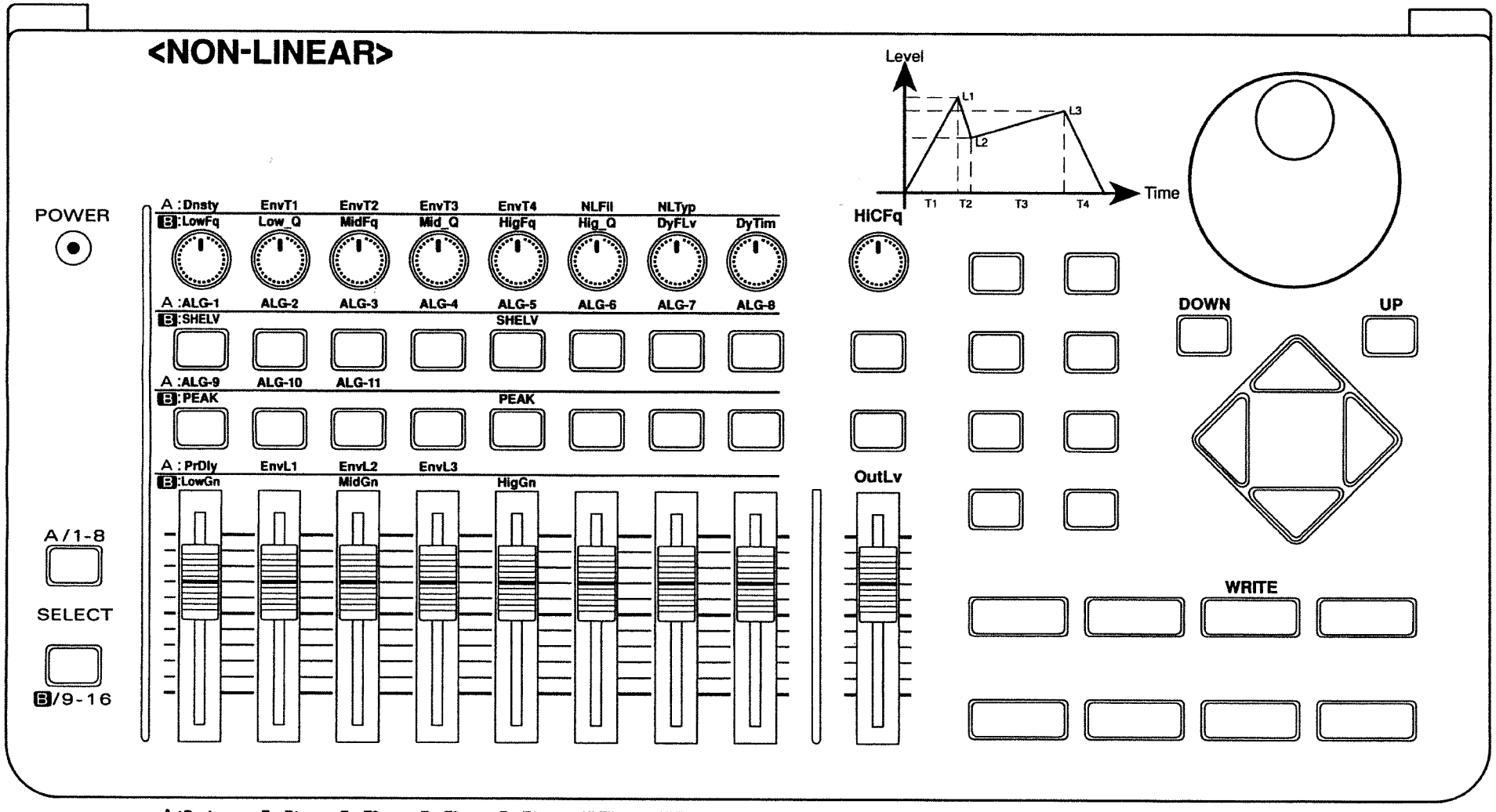
<REVERB> <REVERB+DELAY>



A :RSize	Dnsty	HiDFq	LoDFq	RlDns	DyTmL	DyTmR	DyTmC
B:LowFq	Low_Q	MidFq	Mid_Q	HigFq	Hig_Q	DyFLv	DyTim
A :ALG-1	ALG-2	ALG-3	ALG-4	ALG-5	ALG-6	ALG-7	ALG-8
B:SHELV				SHELV			
A :ALG-9	ALG-10	ALG-11					
B:PEAK				PEAK			
A :RevTm	PrDly	HiDmp	LoDmp	ERLvl	DyLvL	DyLvR	DyLvC
B:LowGn		MidGn		HigGn			RevLv

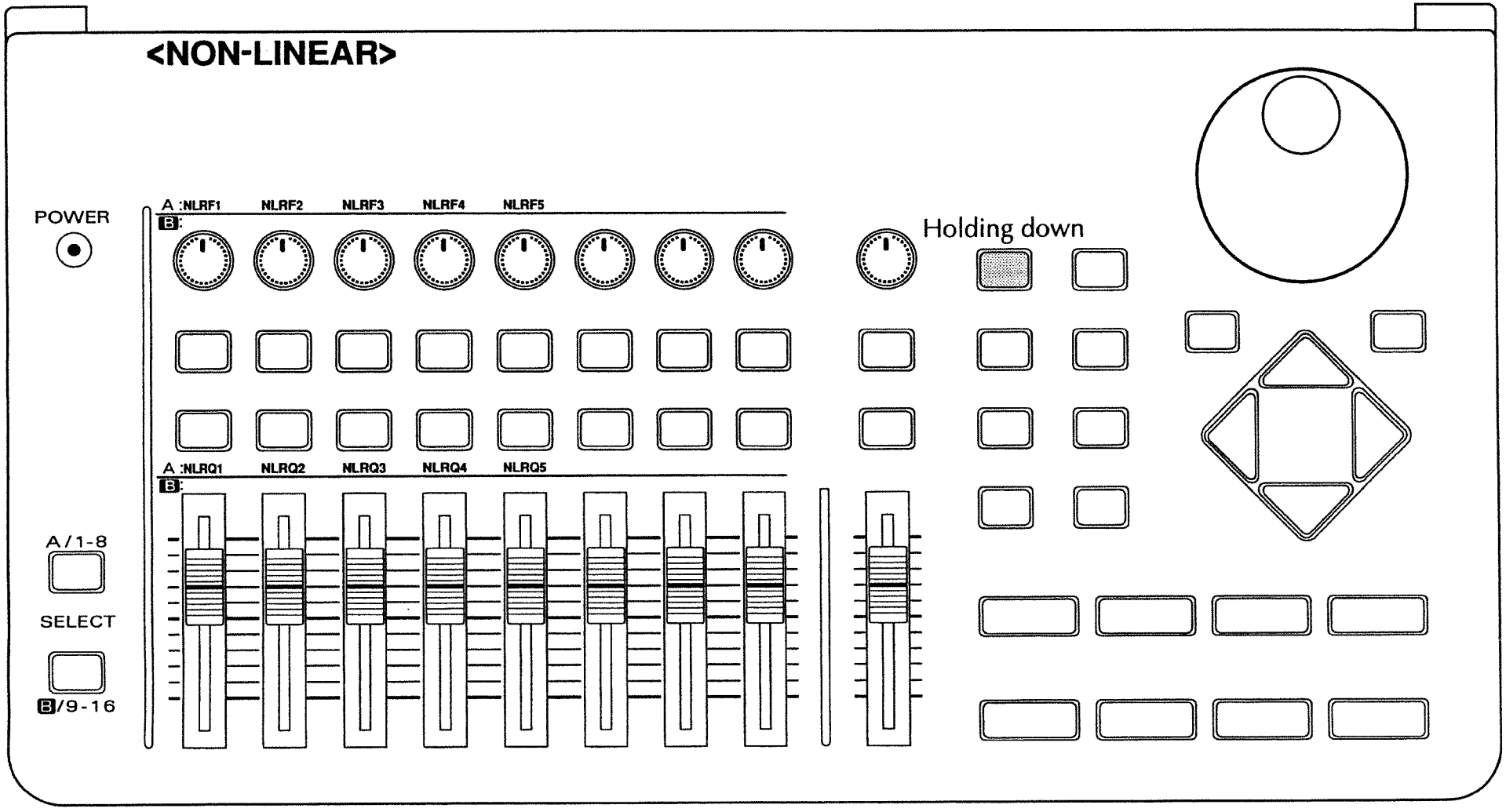
HICFq

OutLv



A :Dnsty EnvT1 EnvT2 EnvT3 EnvT4 NLFil NLTyp
B:LowFq Low_Q MidFq Mid_Q HigFq Hig_Q DyFLv DyTim
HiCFq
A :ALG-1 ALG-2 ALG-3 ALG-4 ALG-5 ALG-6 ALG-7 ALG-8
B:SHELV SHELV
A :ALG-9 ALG-10 ALG-11
B:PEAK PEAK
A : PrDly EnvL1 EnvL2 EnvL3
B:LowGn MidGn HigGn
OutLv

<NON-LINEAR>



A :NLRF1 NLRF2 NLRF3 NLRF4 NLRF5
B:

A :NLRQ1 NLRQ2 NLRQ3 NLRQ4 NLRQ5
B:

MEMO

Information

When you need repair service, call your local Roland Service Station or the authorized Roland distributor in your country as shown below.

U. S. A.
Roland Corporation US
7200 Dominion Circle
Los Angeles, CA. 90040-3696, U. S. A.
TEL: (213) 685-5141

CANADA
Roland Canada Music Ltd.
(Head Office)
5480 Parkwood Way
Richmond B. C., V6V 2M4
CANADA
TEL: (604) 270-6626

Roland Canada Music Ltd.
(Montreal Office)
9425 Transcanadienne
Service Rd. N., St Laurent,
Quebec H4S 1V3, CANADA
TEL: (514) 335-2009

Roland Canada Music Ltd.
(Toronto Office)
346 Watline Avenue,
Mississauga, Ontario L4Z 1X2, CANADA
TEL: (416) 890-6488

AUSTRALIA
Roland Corporation Australia Pty. Ltd.
38 Campbell Avenue
Dee Why West. NSW 2099
AUSTRALIA
TEL: (02) 982-8266

NEW ZEALAND
Roland Corporation (NZ) Ltd.
97 Mt. Eden Road, Mt. Eden,
Auckland 3, NEW ZEALAND
TEL: (09) 3098-715

UNITED KINGDOM
Roland (U.K.) Ltd.
Rye Close Ancells Business
Park Fleet, Hampshire GU13 8UY, UNITED KINGDOM
TEL: 0252-816181

Roland (U.K.) Ltd., Swansea Office
Atlantic Close, Swansea
Enterprise Park, Swansea,
West Glamorgan SA79FJ,
UNITED KINGDOM
TEL: (0792) 700-139

IRELAND
The Dublin Service Centre Audio Maintenance Limited
11 Brunswick Place Dublin 2
Republic of Ireland
TEL: 010 353 1677322

ITALY
Roland Italy S. p. A.
Viale delle Industrie 8 20020
ARESE MILANO ITALY
TEL: 02-93581311

SPAIN
Roland Electronics de España, S. A.
Calle Bolivia 239 08020
Barcelona, SPAIN
TEL: 93-308-1000

GERMANY
Roland Elektronische Musikinstrumente Handelsgesellschaft mbH.
Oststrasse 96, 22844
Norderstedt, GERMANY
TEL: 040/52 60 090

FRANCE
Guillard Musiques Roland
ZAC de Rosarge Les Echets 01700
MIRIBEL FRANCE
TEL: (7) 226-50 60

Guillard Musiques Roland (Paris Office)
1923 rue Léon Geoffroy
94400 VITRY-SUR-SEINE
FRANCE
TEL: (1) 4680 86 62

BELGIUM/HOLLAND/ LUXEMBOURG
Roland Benelux N. V.
Houtstraat 1 B-2260 Oevel-Westerlo BELGIUM
TEL: (0032) 14-575811

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Roland Scandinavia A/S
Langebrogade 6 Box 1937
DK-1023 Copenhagen K.
DENMARK
TEL: 31-95 31 11

SWEDEN
Roland Scandinavia A/S
Danvik Center 28 A, 2 tr.
S-131 30 Nacka SWEDEN
TEL: 08-702 00 20

NORWAY
Roland Scandinavia Avd. Kontor Norge
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Lilleaker N-0216 Oslo 2
NORWAY
TEL: 22-73 00 74

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Länsituulentie POB 169,
SF-02101 Espoo FINLAND
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Gerberstrasse 5, CH-4410
Liestal, SWITZERLAND
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E. Dematte &Co.
Neu-Rum Siemens-Strasse 4
A-6040 Innsbruck P.O.Box 83
AUSTRIA
TEL: (0512) 26 44 260

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V. Dimitriadis & Co. Ltd.
20, Alexandras Avn., GR
10682 Athens, GREECE
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Rua de Santa Catarina 131
4000 Porto, PORTUGAL
TEL: 02-38 44 56

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Warehouse Area 'DEPO'
Torokbalint, Budapest
HUNGARY
TEL: (1) 1868905

ISRAEL
D.J.A. International Ltd.
11 Bar Gyiora St., Tel Aviv
ISRAEL
TEL: 972-3-525-3834

CYPRUS
Radex Sound Equipment Ltd.
17 Diagorou St., P.O.Box 2046, Nicosia CYPRUS
TEL: 453426, 466423

U.A.E
Zak Electronics & Musical Instruments Co.
P.O. Box 8050
DUBAI, U.A.E
TEL: 9714-360715

KUWAIT
Easa Husain Al-Yousifi
P.O. Box 126 Safat 13002
KUWAIT
TEL: 965-5719499

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A. Chahine & Fils
P.O. Box 16-5857
Beirut, LEBANON
TEL: 335799

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Barkat Sanayi ve Ticaret
Siraselviler Cad. 86/6 Taksim
Istanbul, TURKEY
TEL: 212-2499324

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Al Fanny Trading Office
9, Ebn Hagar Al Askalany Street, Ard El Golf,
Heliopolis, Cairo, 11341
EGYPT
TEL: 2917803-665918

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Badie Studio & Stores
P.O.Box 62,
DOHA Qatar
TEL: 974 423554

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Moon Stores
Bad Al Bahrain Road,
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TEL: (0973) 211 005

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Roland Brasil Ltda.
R. Coronel Oaviano da Silveira 203 05522-010
Sao Paulo BRAZIL
TEL: (011) 843-9377

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Casa Veerkamp, s.a. de c.v.
Mesones No. 21 Col. Centro
MEXICO D.F. 06080
TEL: (5) 709-3716

La Casa Wagner de Guadalajara s.a. de c.v.
Av. Corona No. 202 S.J.
C.P.44100 Guadalajara,
Jalisco MEXICO
TEL: (36) 13-1414

VENEZUELA
Musicland Digital C.A.
Av. Francisco De Miranda,
Centro Parque de Cristal,
Nivel C2 Local 20 Caracas
VENEZUELA
TEL: (2)285-9218

PANAMA
Productos Superiores, S.A.
Apartado 655 - Panama 1
REP. DE PANAMA
TEL: 26-3322

ARGENTINA
Instrumentos Musicales S.A.
Florida 638
(1005) Buenos Aires
ARGENTINA
TEL: (1)394-4029

HONG KONG
Tom Lee Music Co., Ltd. Service Division
22-32 Pun Shan Street, Tsuen Wan, New Territories,
HONG KONG
TEL: 415-0911

KOREA
Cosmos Corporation Service Station
261 2nd Floor Nak-Won Arcade Jong-Ro ku, Seoul,
KOREA
TEL: (02) 742 8844

SINGAPORE
Swee Lee Company
BLOCK 231,
Bain Street #03-23
Bras Basah Complex,
Singapore 0718
TEL: 3367886

PHILIPPINES
G.A. Yupangco & Co. Inc.
339 Gil J. Puyat Avenue
Makati, Metro Manila 1200,
PHILIPPINES
TEL: 02 (817) 0013

THAILAND
Theera Music Co., Ltd.
330 Verng Nakorn Kasem,
Soi 2, Bangkok 10100,
THAILAND
TEL: 2248821

MALAYSIA
Bentley Music SDN BHD
No.142, Jalan Bukit Bintang
55100 Kuala Lumpur,
MALAYSIA
TEL: (03) 2443333

INDONESIA
PT CITRARAMA BELANTIKA
Kompleks Perkantoran Duta Merlin Blok E No.6—7
Jl. Gajah Mada No.3—5,
Jakarta 10130,
INDONESIA
TEL: (021) 3850073

TAIWAN
Siruba Enterprise (Taiwan) Co., LTD.
Room. 5, 9fl. No. 112 Chung Shan N.Road Sec.2 Taipei,
TAIWAN, R.O.C.
TEL: (02) 571-5860

SOUTH AFRICA
That Other Music Shop (PTY) Ltd.
11 Melle Street (Cnr Melle and Juta Street)
Braamfontein 2001
Republic of South Africa
TEL: 27 11 403-4105

Paul Bothner (PTY) Ltd.
17 Werdmuller Centre
Claremont 7700
Republic of South Africa
TEL: 021-64-4030

As of April. 14. 1994

RV-70 Preset Name Table

BOSS

No.	Preset Name	Algorithm
101	STUDIO #2	<REVERB>ROOM2
102	STUDIO #3	<REVERB>HALL1
103	GUITAR HOUSE #1	<REVERB>ROOM1
104	GUITAR HOUSE #2	<REVERB>ROOM1
105	BRIGHT BOOTH	<REV+DLY>ROOM-PARALLEL
106	CHURCH	<REVERB>HALL1
107	SMALL CHURCH	<REVERB>HALL1
108	MEDIUM CHURCH	<REVERB>HALL1
109	BIG CHURCH	<REVERB>HALL1
110	HARD WALL CHURCH	<REVERB>HALL1
111	CATHEDRAL #1	<REVERB>HALL1
112	CATHEDRAL #2	<REVERB>HALL2
113	HUGE CATHEDRAL	<REVERB>ROOM1
114	WARM CORRIDOR	<REVERB>GARAGE
115	DRUM	<REVERB>ROOM1
116	DEBBIE DRUMS	<REVERB>HALL2
117	CRIES DRUMS	<REVERB>HALL2
118	DENSE DRUM	<REVERB>ROOM3
119	TECHNO DRUM	<REVERB>ROOM1
120	ROCK KICK #1	<REVERB>ROOM1
121	ROCK KICK #2	<REVERB>ROOM1
122	KICK GATE #1	< N L R >NON-LINEAR
123	SNARE	<REVERB>ROOM1
124	ROCK SNARE	<REVERB>ROOM1
125	TECHNO SNARE	<REVERB>ROOM1
126	BIG SNARE #1	<REVERB>ROOM1
127	BIG SNARE #2	<REVERB>ROOM1
128	BIG SNARE #3	<REVERB>ROOM1
129	CRACK SNARE	<REVERB>ROOM1
130	SWEET SNARE	<REVERB>ROOM1
131	CHOIR NON-LINEAR	< N L R >NON-LINEAR
132	BRIGHT BRASS	<REVERB>GARAGE
133	METAL HORN	< N L R >NON-LINEAR
134	SLOW BALLADE GUITAR	<REV+DLY>ROOM-SERIES
135	RICH REVERB	<REVERB>HALL1
136	LIGHT WEIGHT REVERB	<REVERB>ROOM3
137	DARK SPACE	<REVERB>HALL2
138	LONG HIGH TAIL REVERB	<REVERB>ROOM3
139	HIGH CUT REVERB	<REVERB>ROOM2
140	FOLLOW ME	<REVERB>ROOM2
141	PANNING DELAY REVERB	<REVERB>GARAGE
142	DOUBLING NON-LINEAR	< N L R >NON-LINEAR
143	BASIC DELAY REVERB	<REV+DLY>ROOM-SERIES
144	STEREO DELAY REVERB	<REV+DLY>ROOM-SERIES
145	PING PONG	<REV+DLY>ROOM-SERIES
146	TRIPLET DELAY	<REV+DLY>HALL-PARALLEL
147	WARM DELAY REV	<REV+DLY>ROOM-SERIES
148	LUSH DELAY	<REV+DLY>HALL-SERIES
149	SLAPVERB	<REV+DLY>ROOM-PARALLEL
150	SPARKLING	<REV+DLY>ROOM-SERIES
151	REPEAT REVERB	<REV+DLY>ROOM-SERIES
152	REBOUND	<REV+DLY>HALL-PARALLEL
153	HOOFBEAT	<REV+DLY>HALL-PARALLEL
154	EVH RIFFS	<REV+DLY>ROOM-SERIES
155	WHOLE LOTTA REV	<REV+DLY>ROOM-SERIES
156	POPPING REVERB	<REV+DLY>HALL-SERIES
157	DELAY -> REVERB	<REV+DLY>HALL-SERIES
158	ECHOPREX	<REV+DLY>HALL-SERIES
159	LEFT DOOR REFLECTION	<REV+DLY>ROOM-SERIES
160	BOUNCE DELAY	<REV+DLY>ROOM-PARALLEL
161	LONG DENSE ER	<REV+DLY>HALL-SERIES
162	SPRING	<REV+DLY>HALL-SERIES
163	CAVE	<REV+DLY>ROOM-PARALLEL
164	DEEP CAVE	<REVERB>ROOM3
165	BOOMY CAVE	<REVERB>HALL1
166	LONG CAVE	<REVERB>ROOM1
167	CAN	<REVERB>GARAGE
168	WASHBOWL	<REVERB>ROOM2
169	LOBBY	<REVERB>ROOM2
170	THEATER #1	<REVERB>ROOM3
171	THEATER #2	<REVERB>ROOM3
172	STADIUM #1	<REVERB>HALL2
173	STADIUM #2	<REVERB>HALL1
174	STADIUM ANNOUNCE	<REV+DLY>ROOM-PARALLEL
175	CANNON	<REV+DLY>HALL-PARALLEL
176	FALLIN' ECHO	<REV+DLY>HALL-SERIES
177	FOREVER	<REV+DLY>HALL-PARALLEL
178	IT'S DELAY	<REV+DLY>HALL-SERIES
179	ANALOG DELAY	<REV+DLY>HALL-SERIES
180	KARAOKE #1	<REV+DLY>HALL-SERIES
181	KARAOKE #2	<REV+DLY>ROOM-SERIES
182	SIMPLE NON-LINEAR	< N L R >NON-LINEAR
183	GO RIGHT NON-LINEAR	< N L R >NON-LINEAR
184	GO LEFT NON-LINEAR	< N L R >NON-LINEAR
185	SLOW ATTACK NON-LINEAR	< N L R >NON-LINEAR
186	NON ATTACK NON-LINEAR	< N L R >NON-LINEAR
187	DENSE NON-LINEAR	< N L R >NON-LINEAR
188	SUBMARINE	< N L R >NON-LINEAR
189	G NOTE FILTER	< N L R >NON-LINEAR
190	DEEP BREATHING	< N L R >NON-LINEAR
191	SPIRAL	< N L R >NON-LINEAR
192	TWIN PEAKS	< N L R >NON-LINEAR
193	FORGET	< N L R >NON-LINEAR
194	MASHED DELAY	< N L R >NON-LINEAR
195	PING	< N L R >NON-LINEAR
196	FLAM NON-LINEAR	< N L R >NON-LINEAR
197	DOPPLER	< N L R >NON-LINEAR
198	DO UP	< N L R >NON-LINEAR
199	HH -> CRASH	< N L R >NON-LINEAR

Printed in Japan

RV-70 Preset Name Table

BOSS

No.	Preset Name	Algorithm
1	140 PLATE	<REVERB>ROOM2
2	AIR PLATE	<REVERB>ROOM2
3	VOCAL PLATE	<REVERB>ROOM1
4	BRIGHT PLATE	<REVERB>ROOM1
5	SHORT PLATE	<REVERB>ROOM1
6	WARM PLATE	<REVERB>ROOM2
7	RICH PLATE	<REVERB>ROOM1
8	DARK DENSE PLATE	<REVERB>ROOM2
9	STRINGS PLATE	<REVERB>ROOM2
10	BRASS PLATE	<REVERB>ROOM1
11	SOFT AMBIENCE	<REVERB>ROOM1
12	REFLECT AMBIENCE	<REVERB>ROOM1
13	DRUM AMBIENCE	<REVERB>ROOM3
14	SHORT AMBIENCE	<REVERB>HALL2
15	NARROW AMBIENCE	<REVERB>HALL1
16	ROOM AMBIENCE	<REVERB>ROOM1
17	MID AMBIENCE	< N L R >NON-LINEAR
18	NICE SIZZLE ROOM	<REVERB>ROOM1
19	CLEAR ROOM	<REVERB>ROOM1
20	LOCKER ROOM	<REVERB>ROOM1
21	DARK ROOM	<REVERB>ROOM2
22	MEDIUM ROOM	<REVERB>ROOM1
23	MEDIUM BRIGHT ROOM	<REVERB>ROOM1
24	SIZZLE ROOM #1	<REVERB>ROOM1
25	SIZZLE ROOM #2	<REVERB>ROOM1
26	LITTLE ROOM #1	<REVERB>ROOM1
27	LITTLE ROOM #2	<REVERB>ROOM1
28	ORCHESTRA ROOM	<REVERB>ROOM1
29	SHORT ROOM	<REVERB>ROOM1
30	CLOSET ROOM	<REVERB>ROOM1
31	TILED ROOM	<REVERB>ROOM1
32	MEDIUM REFLECT ROOM	<REVERB>ROOM2
33	SMALL REFLECT ROOM	<REVERB>ROOM2
34	LARGE REFLECT ROOM	<REVERB>ROOM2
35	VOCAL ROOM	<REVERB>ROOM1
36	BRASS ROOM	<REVERB>GARAGE
37	DRUM ROOM	<REVERB>ROOM1
38	WOOD ROOM	<REVERB>HALL1
39	KITCHEN ROOM	<REVERB>ROOM2
40	DENSE ROOM	<REVERB>ROOM3
41	WARM ROOM #1	<REVERB>ROOM3
42	WARM ROOM #2	<REVERB>ROOM2
43	SMALL ROOM #1	<REVERB>ROOM2
44	SMALL ROOM #2	<REVERB>ROOM3
45	SHORT SMALL ROOM	<REVERB>GARAGE
46	DISTANCE ROOM	<REVERB>ROOM3
47	GOODBY ROOM	<REVERB>ROOM2
48	BATHROOM	<REVERB>GARAGE
49	SMALL BATHROOM	<REVERB>GARAGE
50	BIG BATHROOM	<REVERB>GARAGE
51	CONFERENCE ROOM	<REVERB>ROOM1
52	BALLROOM	<REVERB>HALL1
53	POWER ROOM	<REVERB>ROOM3
54	ROOM WITH DELAY	<REV+DLY>ROOM-PARALLEL
55	CONCERT HALL #1	<REVERB>HALL1
56	CONCERT HALL #2	<REVERB>ROOM1
57	SIMPLE SMALL HALL	<REVERB>HALL1
58	SMALL HALL	<REVERB>ROOM1
59	SHORT HALL	<REVERB>ROOM1
60	MEDIUM HALL #1	<REVERB>HALL2
61	MEDIUM HALL #2	<REVERB>HALL1
62	LARGE HALL	<REVERB>HALL1
63	LONG HALL	<REVERB>HALL2
64	WIDE HALL	<REVERB>ROOM2
65	DEEP HALL	<REVERB>HALL2
66	GOTHIC HALL	<REVERB>HALL2
67	DRUM HALL	<REVERB>HALL2
68	STRINGS HALL #1	<REVERB>HALL2
69	STRINGS HALL #2	<REVERB>ROOM1
70	GUITAR HALL	<REVERB>GARAGE
71	PIANO HALL	<REVERB>ROOM1
72	LONG TAIL HALL	<REVERB>ROOM1
73	COARSE HALL	<REVERB>GARAGE
74	REFLECTIVE HALL	<REVERB>HALL2
75	LIGHT HALL	<REVERB>HALL2
76	WARM MID HALL	<REVERB>HALL1
77	BRIGHT MID HALL	<REVERB>HALL1
78	BRIGHT LARGE HALL	<REVERB>HALL1
79	OCEAN HALL	<REVERB>HALL1
80	WARM HALL	<REVERB>GARAGE
81	RICH HALL	<REVERB>HALL1
82	HALL WITH DELAY	<REV+DLY>HALL-PARALLEL
83	LARGE CHAMBER	<REVERB>HALL2
84	SMALL CHAMBER	<REVERB>HALL2
85	JAZZ CHAMBER	<REVERB>ROOM1
86	BIG CHAMBER	<REVERB>HALL2
87	CLASSICAL #1	<REVERB>ROOM1
88	CLASSICAL #2	<REVERB>ROOM1
89	GARAGE	<REVERB>GARAGE
90	LARGE GARAGE	<REVERB>GARAGE
91	WAREHOUSE	<REVERB>GARAGE
92	BOOMY WAREHOUSE	<REVERB>GARAGE
93	MEDIUM GYM	<REVERB>ROOM1
94	SMALL GYM	<REVERB>ROOM3
95	BIG GYM	<REVERB>ROOM1
96	MUSIC CLUB	<REVERB>HALL2
97	LIVE HOUSE	<REVERB>ROOM3
98	NIGHT CLUB	<REVERB>HALL2
99	DISCO	<REVERB>ROOM3
100	STUDIO #1	<REVERB>HALL1

Printed in Japan

For Nordic Countries

Apparatus containing Lithium batteries

ADVARSEL!
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VARNING!
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!
Lithiumbatteri - Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VAROITUS!
Paristo voi räjahtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For Germany

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

DIGITAL STEREO REVERB RV-70

(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der BMPT-A AmtsblVfg 243/1991 funk-entstört ist. Der vorschriftsmäßige Betrieb mancher Geräte (z. B. Meßsender) kann allerdings gewissen Einschränkungen unterliegen. Beachten Sie deshalb die Hinweise in der Bedienungsanleitung.

Dem Zentralamt für Zulassungen im Fernmeldewesen wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf die Einhaltung der Bestimmungen eingeräumt.

Roland Corporation
4-16 Dojimahama 1-Chome Kita-ku Osaka 530 Japan

(Name und Anschrift des Herstellers/Importeurs)

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

CLASS B **NOTICE**
This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASS B **AVIS**
Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Réglement des signaux parasites par le ministère canadien des Communications.

Roland®

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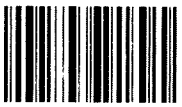
UPC 70349834



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RV-70

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