

Roland

REAC

S-4000M REAC MERGE UNIT

Owner's Manual



Before using this unit, carefully read the sections entitled: "IMPORTANT SAFETY INSTRUCTIONS" (p. 2), "USING THE UNIT SAFELY" (p. 3), and "IMPORTANT NOTES" (p. 5). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference..



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WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

 CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	



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 these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

For the U.K.

WARNING: THIS APPARATUS MUST BE EARTHED

IMPORTANT: 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.

For the USA



DECLARATION OF CONFORMITY Compliance Information Statement

Model Name : S-4000M
Type of Equipment : REAC MERGE UNIT
Responsible Party : Roland Systems Group U.S.
Address : 801 West Orchard Drive, Suite 3, Bellingham, WA 98226
Telephone : (360)594-4282




USING THE UNIT SAFELY

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

About ⚠ WARNING and ⚠ CAUTION Notices







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

About the Symbols







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

ALWAYS OBSERVE THE FOLLOWING


⚠ WARNING


- Connect mains plug of this model to a mains socket outlet with a protective earthing connection. 
- Do not open or perform any internal modifications on the unit. 
- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 
- Never install the unit in any of the following locations. 
 - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are 
 - Damp (e.g., baths, washrooms, on wet floors); or are
 - Exposed to steam or smoke; or are
 - Subject to salt exposure; or are
 - Humid; or are
 - Exposed to rain; or are
 - Dusty or sandy; or are
 - Subject to high levels of vibration and shakiness.
- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces. 


⚠ WARNING


- The unit should be connected to a power supply only of the type described in the operating instructions, or as marked on the rear side panel. 
- Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device. 
- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards! 
- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.  
- Immediately turn the power off, remove the power cord from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when: 
 - The power-supply cord or the plug has been damaged; or
 - If smoke or unusual odor occurs
 - Objects have fallen into, or liquid has been spilled onto the unit; or
 - The unit has been exposed to rain (or otherwise has become wet); or
 - The unit does not appear to operate normally or exhibits a marked change in performance.


⚠ WARNING

- When using this device in an environment where children are present, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit. 


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


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


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


- Do not put anything that contains water (e.g., flower vases) on this unit. Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the unit. Swiftly wipe away any liquid that spills on the unit using a dry, soft cloth. 


⚠ CAUTION


- The unit should be located so that its location or position does not interfere with its proper ventilation. 


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


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


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


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

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

- Before moving the unit, disconnect the power plug from the outlet, and pull out all cords from external devices. 

- Before cleaning the unit, turn off the power and unplug the power cord from the outlet. Refer to **Power Supply** (p. 12). 

- Whenever you suspect the possibility of lightning in your area, pull the plug on the power cord out of the outlet. 

- Keep small parts such as the following out of reach of children so that they cannot be accidentally swallowed. 
 - Removed parts :
Grounding terminal screw, Cord hook,
Fastening screws for cord hook
 - Included items :
REAC connector cover, Ferrite core, Rubber feet,
Fastening screws.

IMPORTANT NOTES

Power Supply

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.
- Although the LEDs are switched off when the POWER switch is switched off, this does not mean that the unit has been completely disconnected from the source of power. If you need to turn off the power completely, first turn off the POWER switch, then unplug the power cord from the power outlet. For this reason, the outlet into which you choose to connect the power cord's plug should be one that is within easy reach and readily accessible.

Placement

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

Maintenance

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

Additional Precautions

- Use a reasonable amount of care when using the unit's switch and when using jacks and ports. Rough handling can lead to malfunctions.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- A small amount of heat will radiate from the unit during normal operation.
- To avoid disturbing your neighbors, try to keep the system's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

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Check the included items

The following items are included. Please make sure that all items are present. If anything is missing, please contact your dealer.

S-4000M itself



Rubber foot (four)



*Attach the included rubber feet as needed. Refer "Dimensions"(p. 23) for locations to attach.

Power cord



Ferrite core (five)



Fastening screws (four)



REAC connector cover (five)



Owner's Manual (this document)



What's REAC?

REAC (Roland Ethernet Audio Communication) is a proprietary audio-signal transmission protocol from Roland that is based on Ethernet technology. It provides up to 40 channels of 24-bit, 96-kHz transmission of uncompressed audio signals. REAC devices are connected using Cat 5e (Enhanced Category 5) Ethernet cable. The S-4000M is designed to be a merge unit for REAC devices. You can use it to manage connected REAC slave devices, making the S-4000M and all the connected REAC devices function as a single REAC slave device.

What's REAC EMBEDDED POWER?

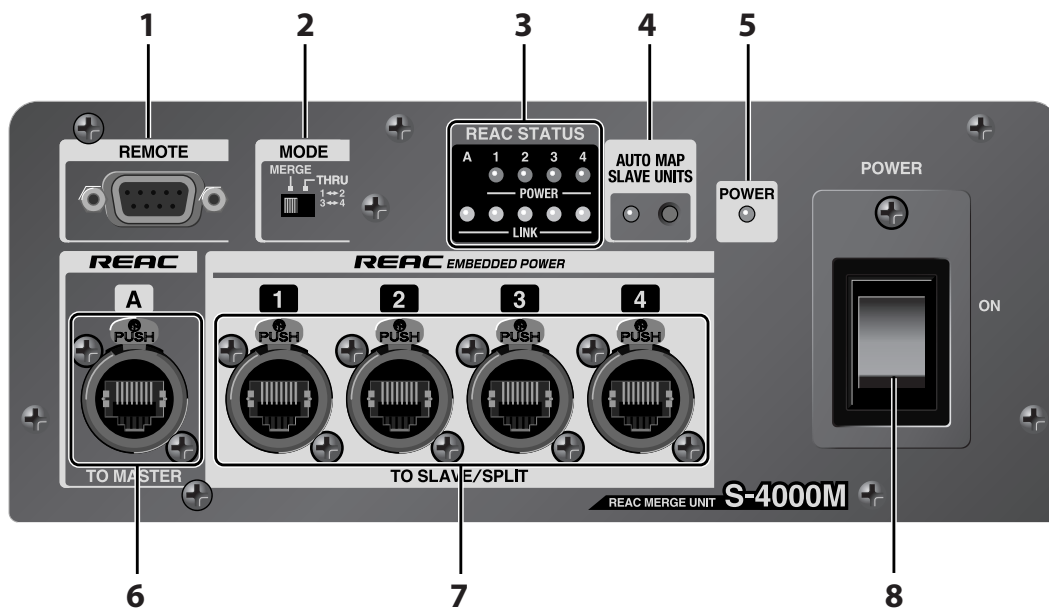
This is technology that supplies connected equipment with power while simultaneously transmitting REAC signals over the same cable. This means the equipment receiving power does not need to be connected to a power cable or a battery.

MMP (Moore Microprocessor Portfolio) refers to a patent portfolio concerned with microprocessor architecture that was developed by Technology Properties Limited (TPL). Roland has licensed this technology from the TPL Group.

* Neutrik and EtherCon are registered trademarks of Neutrik, Inc.

* All product names mentioned in this document are trademarks or registered trademarks of their respective owners.

Part Names and Functions



1. REMOTE Connector

This is a D-Sub 9-pin type (RS-232C) connector. You can connect a dedicated remote controller (the S-4000R) or a computer installed with dedicated remote control software (S-4000 RCS). You can remotely control the input channel parameters of the REAC slave devices connected to S-4000M. Refer to "About Remote Controller" (p. 21).

2. MODE Switch

This sets the operation mode for the S-4000M. The following two modes are available.

- **MERGE**
S-4000M manages connected REAC slave devices as one REAC slave device and provides them with REAC EMBEDDED POWER.
- **THRU**
S-4000M links two sets of REAC master/slave devices together and provides them with REAC EMBEDDED POWER.

For information on how to set the mode, refer to "Setting the Operation Mode" (p. 10, p. 11).

3. REAC STATUS Indicators

These indicate the connection status of REAC devices and the power supply status (REAC EMBEDDED POWER). The states are displayed as follows.

- **POWER**
These light up when supplying power to powered devices of REAC EMBEDDED POWER.
- **LINK**
These flash when communication with connected REAC devices is established and light up steadily during standby.

4. AUTO MAP SLAVE UNITS Button/Indicator

Pressing this button resets the system, optimizing the arrangement of input channels for the REAC slave devices connected to REAC ports 1 through 4. For more information, refer to "Resetting the System" (p. 20).

5. POWER Indicator

This lights when the S-4000M is powered up.

6. REAC Port A

You can connect an V-Mixer or other REAC master device. For information on making the connection, refer to "Connecting an V-Mixer to REAC Port A" (p. 16).

* This port does not supply REAC EMBEDDED POWER.

7. REAC Ports 1-4

You can connect Digital Snake or other REAC slave or split devices here. For information on how to make the connections, refer to "Connecting Peripheral Devices" (p. 15).

* These ports support REAC EMBEDDED POWER. Power can be supplied to powered devices of REAC EMBEDDED POWER, e.g. S-0808 units, over the REAC cables.

8. POWER Switch

This switches the power on and off.

Installation and Connections

Intake Port and Exhaust Port

Never block the intake port or exhaust port on the side or rear panel. Doing so may cause the temperature of the unit's interior to rise, resulting in malfunction caused by heat. Install the unit so that at least 2 centimeters of space is left in front of the intake and exhaust ports.



Cables for REAC Connections

With Digital Snake and V-Mixing Systems, digital transmission of audio signals is performed using REAC (Roland Ethernet Audio Communication). Compared to analog transmission, this system is extremely resistant to noise pollution, but in very rare instances, noise can occur. Selection of the wrong cable and incorrect cable handling are especially likely to cause noise. Observe the following points when using cables.

- Ensure that the cables used for connections conform to the Cat 5e (Enhanced Category 5) standard.
- Do not use (single) cable longer than 100 meters.
- Do not use cables with cut or torn on coverings.
- Do not step on cables or subject them to undue stress.
- Do not wind cables too tightly or bend them double.

MEMO

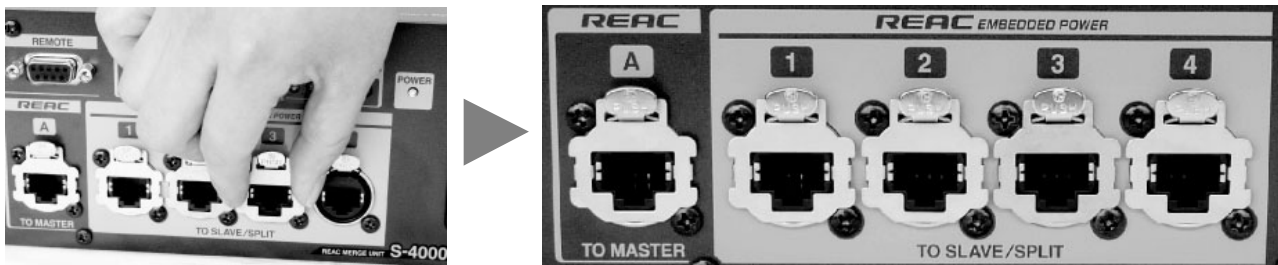
To maintain transmission quality, use of the following optional REAC cables is recommended.

- 100-meter cables : SC-W100S (cable only) or W100S-R (with reel)
- 20-meter cables : SC-W20F

About REAC Connector Covers

When using a commercially available Ethernet cable to connect REAC devices, fit the included REAC connector covers onto the REAC ports. Electromagnetic noise might be a problem if these are left unattached.

- * Attaching an REAC connector cover is not necessary when you're using an optional REAC cables (described above).
- * When using a commercially available Ethernet cable, be sure to use a cable that conforms to the Cat 5e (Enhanced Category 5) standard.



Fastening the Bottom Chassis

Use the included four screws when you fasten S-4000M to holder or elsewhere. Refer to "Dimensions" (p. 23) for locations of screw holes on bottom chassis.

Setting the Operation Mode

You can set the operation mode of the S-4000M in the following two ways.

MERGE

The S-4000M manages connected REAC slave devices as one. As a result, the S-4000M and all the connected REAC slave devices function as single REAC slave device.

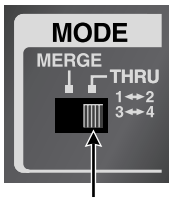
THRU

This makes the S-4000M act as power source for devices that support REAC EMBEDDED POWER, e.g. the S-0808 Digital Snake system. It supplies power for up to two master/slave S-0808 systems.

* Be sure to make the setting for the operation mode only while the power is off. Changing the mode setting while the power is on does not alter the operation mode. The mode changes the next time the power is switched on.

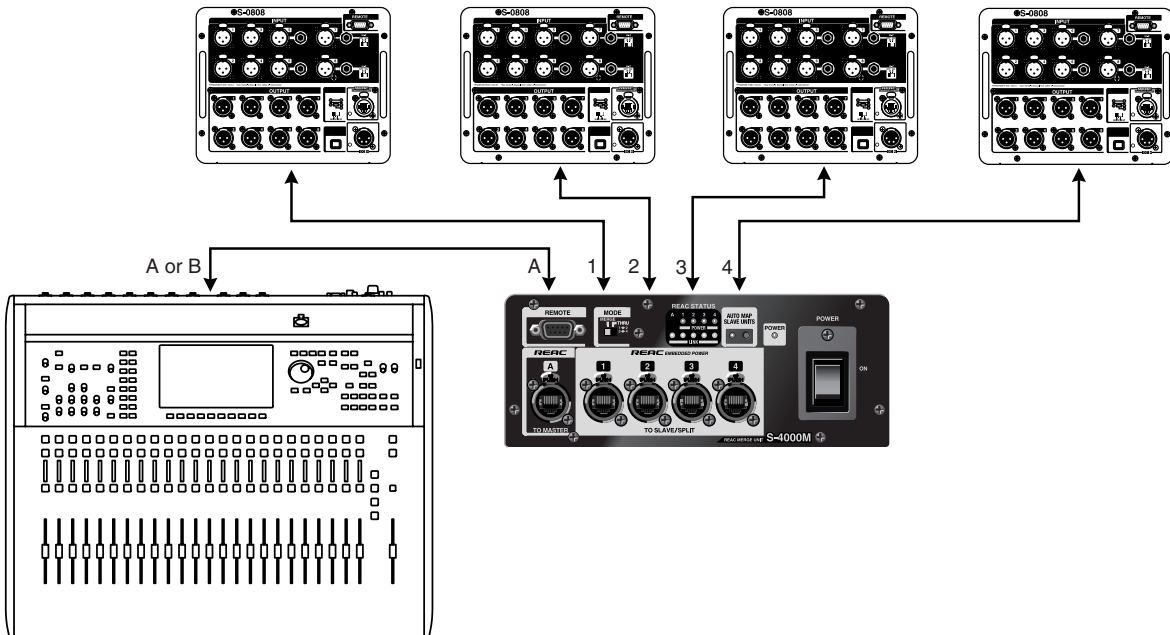
Merge REAC Slave Devices Together (MERGE)

Make sure the S-4000M is powered off and set the [MODE] switch to [MERGE].



Setting the S-4000M to this mode merges the signals from REAC slave devices connected to REAC ports 1 through 4 and outputs them to a REAC master device connected to REAC port A. All the REAC slave devices are recognized by the REAC master as a single REAC slave device. The S-4000M functions as a power source of REAC EMBEDDED POWER for devices connected to REAC ports 1 through 4.

* In the figure shown below, A and B and 1 through 4 refer to names and numbers of the REAC ports.



MEMO

When set to this mode, the S-4000M also operates as a REAC splitter. Signals from the REAC master device are output to REAC slave devices or REAC split devices connected to REAC ports 1 through 4.

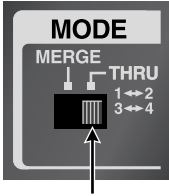
NOTE

When the S-4000M is set to this mode, be sure to connect the REAC master device to REAC port A. Connect REAC slave devices or REAC split devices to REAC ports 1 through 4.

* For more information about the REAC mode settings (Master, Slave, or Split), refer to the owner's manuals for the respective REAC devices.

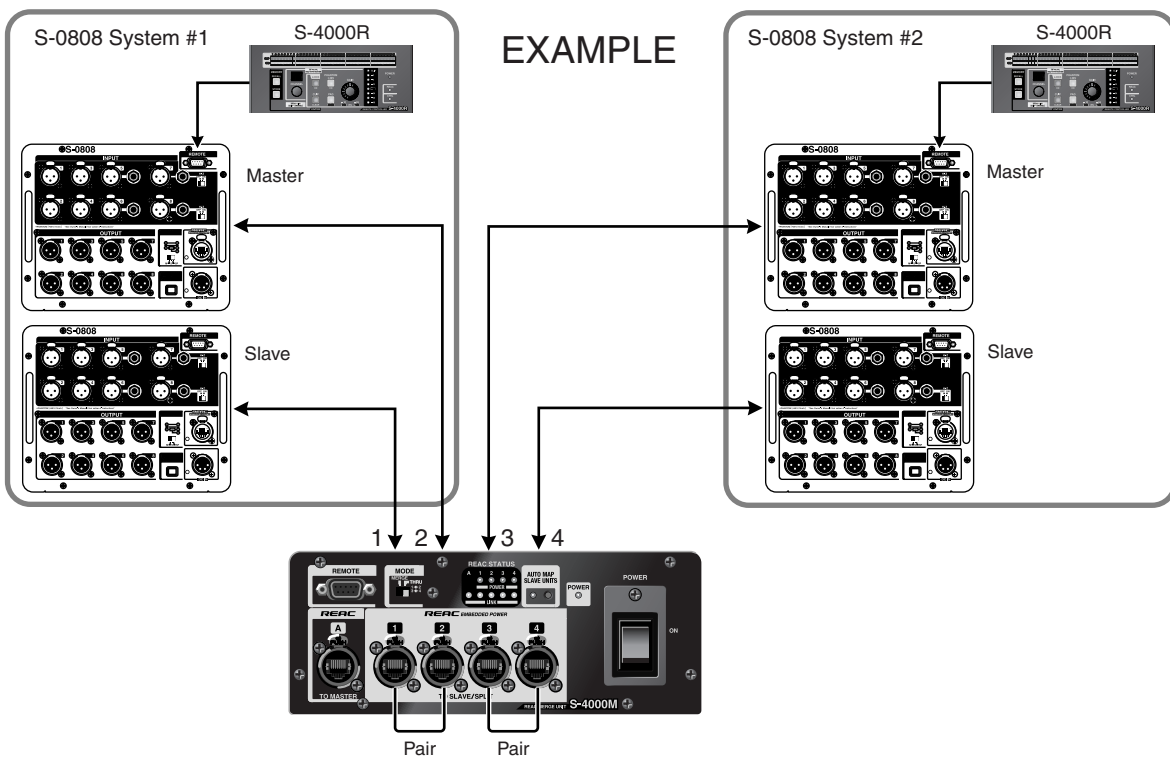
Use as Power-supply Unit for S-0808 (THRU)

Make sure the S-4000M is powered off and set the [MODE] switch to [THRU].



Setting the S-4000M to this mode internally connects REAC port 1/2 and 3/4. So this configures two S-0808 systems and makes the S-4000M function as a power source of REAC EMBEDDED POWER.

- * No REAC communication can be performed between the two systems.
- * In the figure shown below, 1 through 4 refer to the REAC port numbers.



NOTE
When the S-4000M is set to this mode, the REAC port A is inactive.

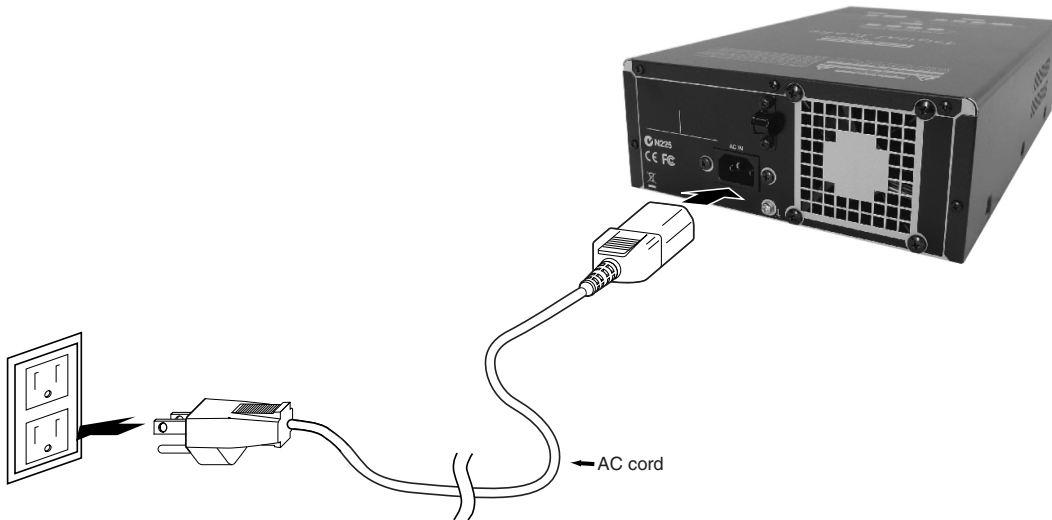
NOTE
When the S-4000M is set to this mode, the REMOTE connector is inactive. To control preamps, connect one of followings to REMOTE connectors of each S-0808 system (choose Master or Slave) .

- S-4000R remote controller (as above)
- Computer running dedicated remote control software (S-4000 RCS)

NOTE
When the S-4000M is set to this mode, do not connect another S-4000M unit to REAC port A or any of the REAC ports from 1 to 4 on the first S-4000M.

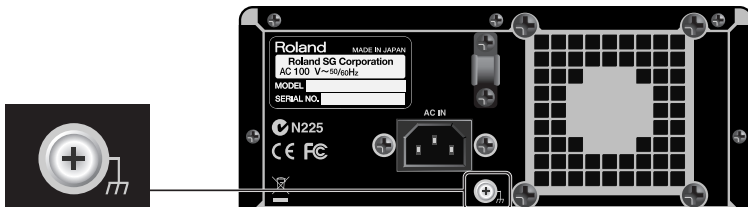
Power Supply

Connect the included power cord to AC INPUT connector on rear panel. Be sure to use the included power cord for AC connection.



About Ground Terminal

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



Unsuitable places for connection

Never attempt to use the following sources for an external ground connection.

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

About Cord Hook

Secure the power cord in place using the cord hook as shown below. This can help prevent power loss due to the plug being pulled out if the power cord is accidentally yanked.

1. Detach the cord hook.

Remove the two retainer screws and detach the cord hook.

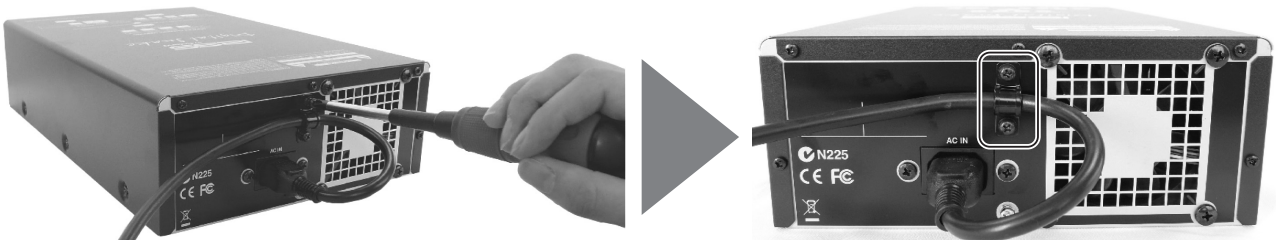


2. Connect the power cord to the AC INPUT connector.



3. Secure the power cord in place with the cord hook.

Clamp the cord hook onto the power cord and secure it in place using the two screws you removed in step 1.



Turning the Power On and Off

Turning the Power On

Once you have made the correct connections, be sure to turn on the power in the sequence shown below. If the power is turned on in the wrong sequence, there can be danger of malfunction, or even blown speakers.

* Once the connections have been completed (p. 12), turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

1. Connect the peripheral devices.

Connect the REAC devices. Before making the connections, switch off the power to all REAC devices, including the S-4000M.

2. Turn on the power to the S-4000M.

Set the [POWER] switch on the unit's front panel to ON to switch on the power to the S-4000M.

3. Turn on the power to the peripheral devices.

Turn on the power to the REAC devices connected to the S-4000M.

* Devices powered by REAC EMBEDDED POWER may have no power switch. On these devices, the power comes on automatically when the power to the S-4000M is switched on.

Turning the Power Off

1. Turn off the power to the peripheral devices.

Turn off the power to the REAC devices connected to the S-4000M.

2. Turn off the power to the S-4000M.

Set the [POWER] switch on the unit's front panel to OFF to switch off the power to the S-4000M.

* If any powered devices of REAC EMBEDDED POWER are being powered over REAC cables, switching off the power to the S-4000M automatically turns off the power to these devices as well.

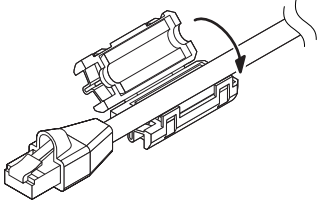
* If you need to turn off the power completely, first turn off the POWER switch, then unplug the power cord from the power outlet.

* After powering down all devices, detach the REAC cable.

Connecting Peripheral Devices

Before Making REAC Connections

The S-4000M comes with five ferrite cores. Attach these to all REAC cables you connect to the S-4000M. Clamp the ferrite core onto the cable at a location near the plug at the end of the cable, pressing down on the ferrite core until it clicks closed.



- * When attaching a ferrite core, be careful to avoid pinching your fingers.
- * When connecting a REAC device, use a cable that has a ferrite core attached to it.
- * To prevent malfunction and/or damages to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

Connecting S-0808 Units to REAC Ports 1 - 4

Set the mode of the S-4000M to [MERGE] and connect the S-0808 units to REAC ports 1 through 4. The S-4000M configures all REAC slave devices connected to REAC ports 1 through 4, so a REAC master device such as the V-Mixer sees the system as a single REAC slave device.

NOTE

On the S-0808 units connected to REAC ports 1 through 4, set the REAC mode to "Slave." For information about mode settings and operation in the respective modes, refer to the owner's manual for the S-0808.

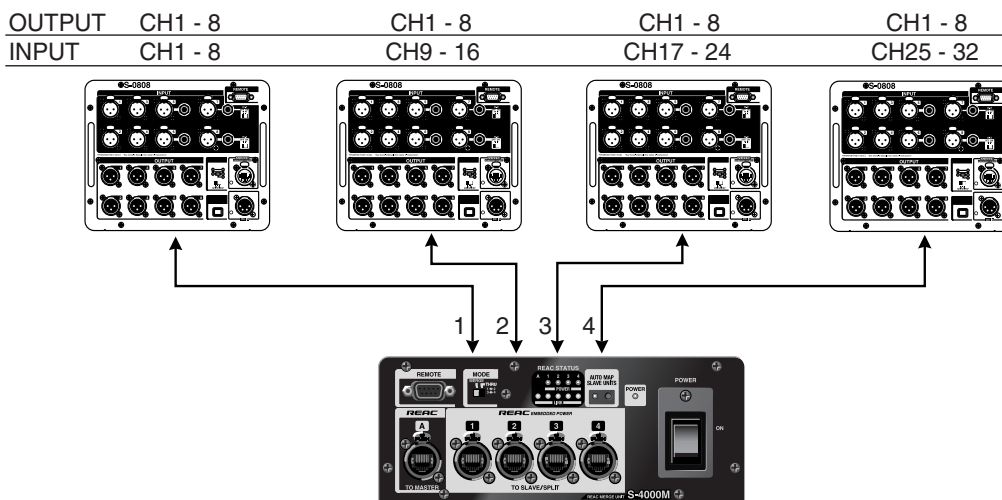
NOTE

When connecting three or fewer devices, make the connections in sequence, starting from the lowest numbered REAC ports.

MEMO

When communication is established between the S-4000M and the REAC master device connected to REAC port A, communication with the S-0808 units connected to REAC ports 1 through 4 starts. When the S-0808 units connected to the S-4000M are detected and REAC communication is established, the [LINK] indicators 1 through 4 of REAC STATUS flash. If these do not flash, try detaching and reconnecting the cables and switching the power on and off.

When connections to REAC ports 1 through 4 are made, the input and output channel numbers of the respective S-0808 units detected by the REAC master device are as shown below.



MEMO

When S-0808 units are connected, the S-4000M also functions as their power-supply unit. This eliminates the need to connect external batteries to the S-0808 units. When power supply to the S-0808 units starts, the [POWER] indicator of REAC STATUS lights up.

MEMO

If the mapping of the input and output channels is different from the arrangement shown above, use the [AUTO MAP SLAVE UNITS] button to redo the settings for the system. For information about how to make the settings, refer to "Resetting the System" (p. 20).

Connecting an V-Mixer to REAC Port A

Connect an M-400 or other V-Mixer.

* Depending on the version of the V-Mixer, the digital snake device connected to the S-4000M might be recognized as an S-4000S (configured with modules for 40 inputs).

MEMO

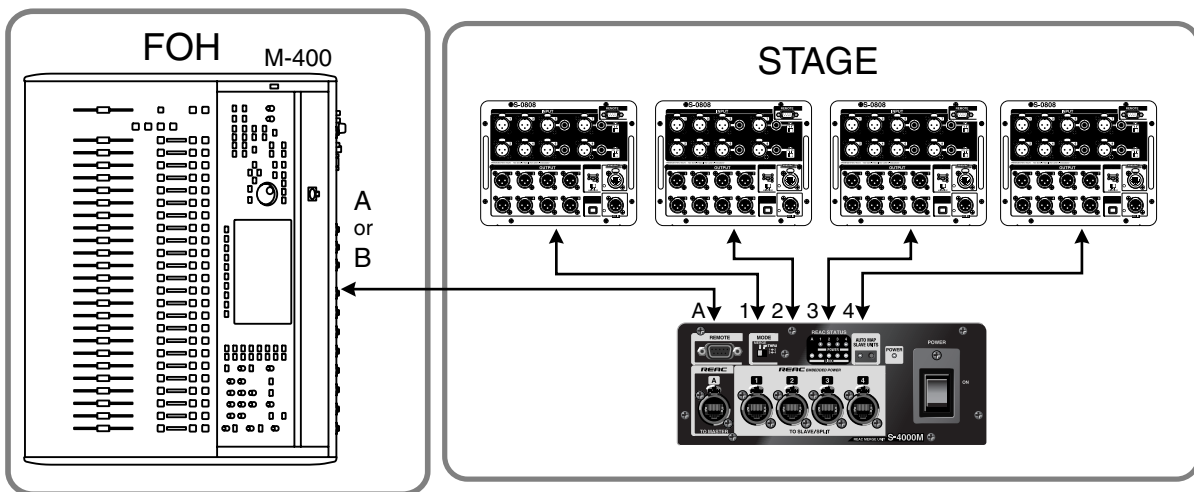
When the S-4000M detects the connected V-Mixer and REAC communication starts, the [A] of [LINK] indicators in REAC STATUS flashes. If this does not flash, try detaching and reconnecting the cables and switching the power on and off.

Connecting the S-4000M and V-Mixer Directly

Connecting in the MERGE Mode

When the connection is made in the MERGE mode, multiple digital snake devices connected to the S-4000M are seen by the V-Mixer as a single digital snake device. In this case, the S-0808 units are powered by the S-4000M, so no external batteries are required.

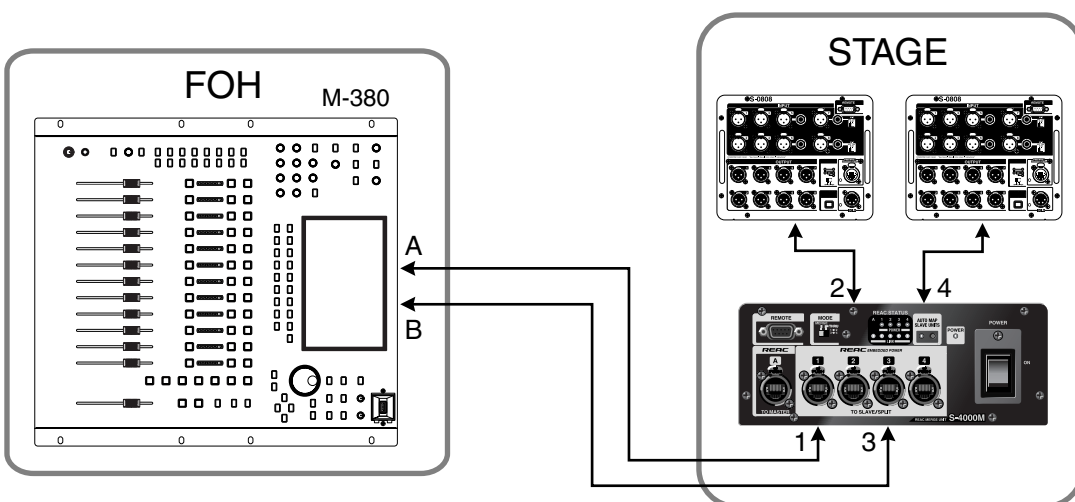
* In the figure shown below, A and B and 1 through 4 refer to names and numbers of the REAC ports.



Connecting in the THRU Mode

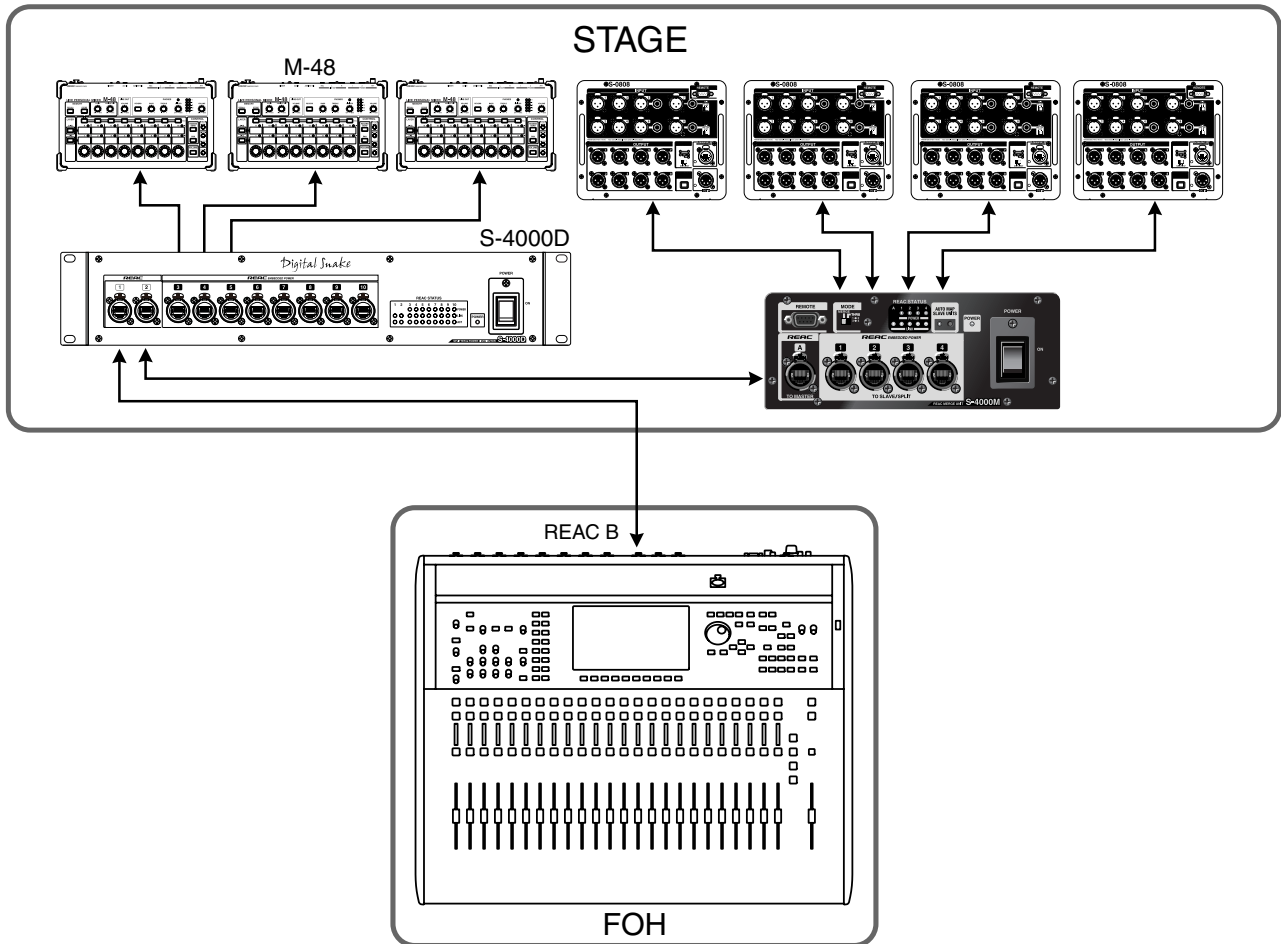
As shown in the figure below, you can connect the S-0808 units and V-Mixer via the S-4000M when it is set to the THRU mode. In this case, the S-0808 units are powered by the S-4000M, so no external batteries are required.

* In the figure shown below, A and B and 1 through 4 refer to names and numbers of the REAC ports.



Connecting a V-Mixer Via the S-4000D

When setting up a system that includes the M-48 live personal mixer, you can connect the S-4000M and the V-Mixer via the S-4000D. Connect the M-48 units to the S-4000D.



MEMO

When the connection shown here is made, the S-0808 units are powered by the S-4000M.

Connecting an Analog Mixer

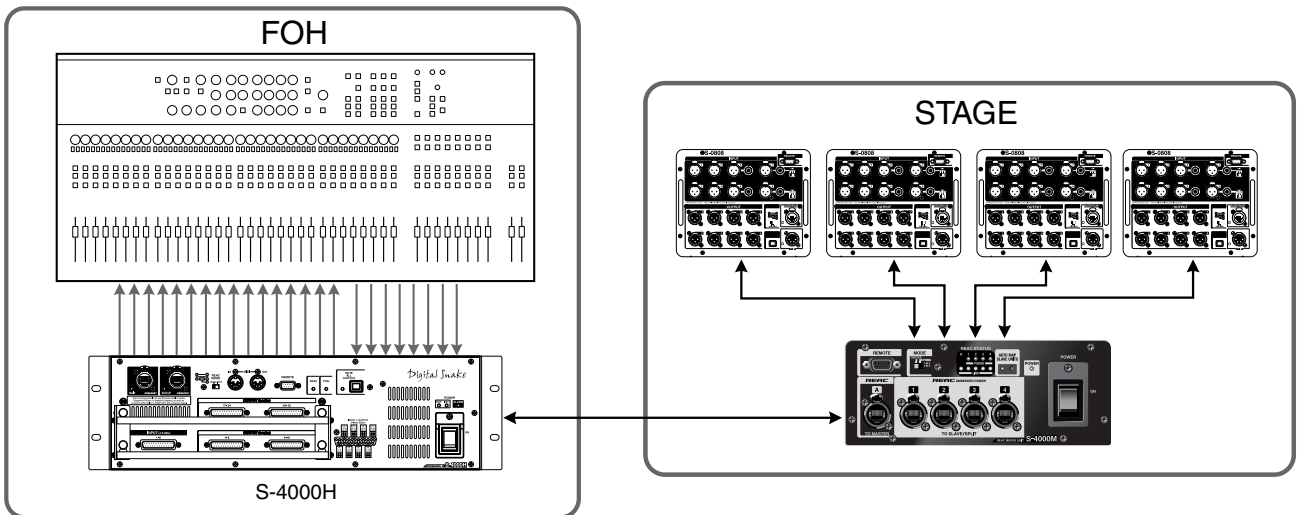
When connecting an analog mixer, you can connect an S-4000H or S-4000S-0832 to REAC port A on the S-4000M. Connect the analog input and output of the S-4000H or S-4000S-0832 to the mixer.

MEMO

Set REAC mode of the S-4000H or S-4000S connected at REAC port A to “Master.” For information about mode settings and operation in the various modes, refer to the owner’s manuals for the respective models.

MEMO

When the S-4000M detects the connected S-4000H or S-4000S and REAC communication starts, the[A] of [LINK] indicator in REAC STATUS flashes. If this does not flash, try detaching and reconnecting the cables and switching the power on and off.



This example lets you configure a 32-in/8-out system. The number of input channels varies (from 8 to 32 channels) according to the type and number of digital snake devices connected to REAC ports 1 through 4 on the S-4000M.

The number of output channels remains unchanged at 8.

Connecting Other Digital Snake Devices

Connecting digital snake devices other than the S-0808 and resetting the system (p. 20) makes the REAC master device detect the input and output channel numbers as shown below.

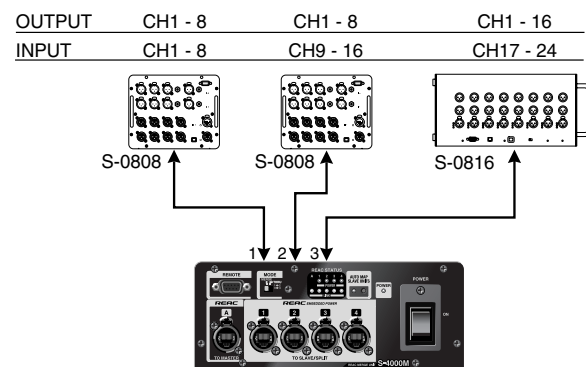
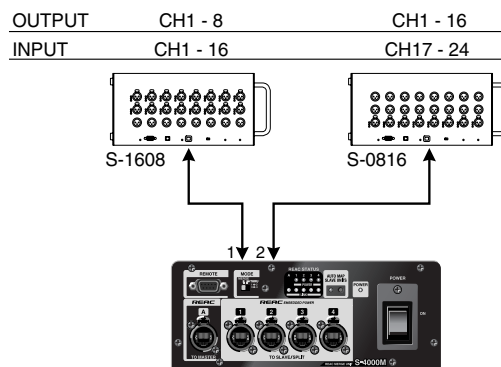
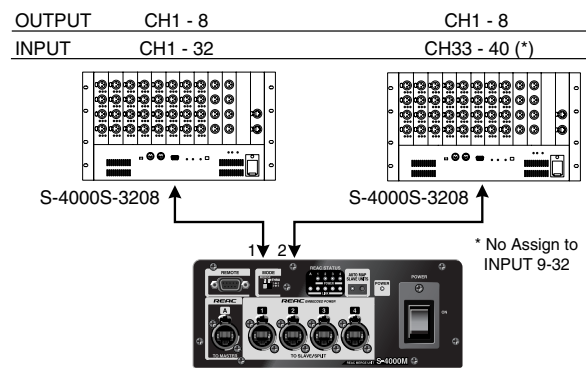
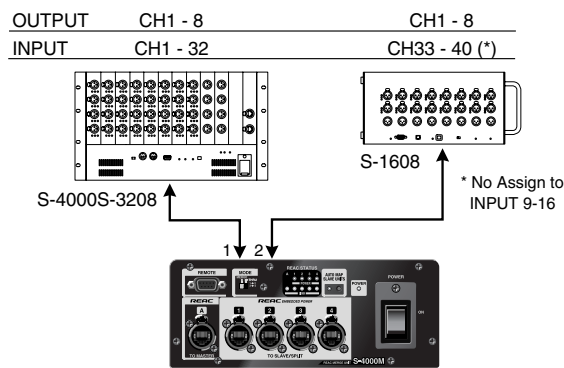
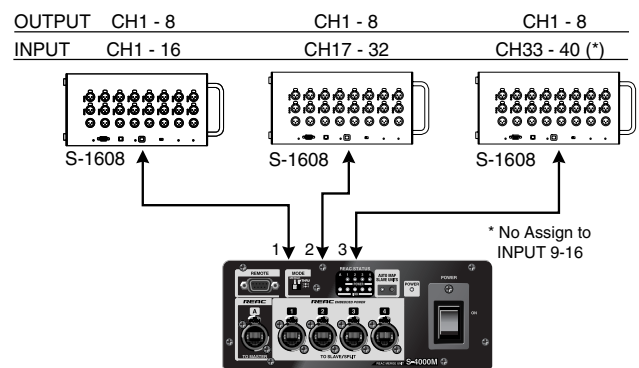
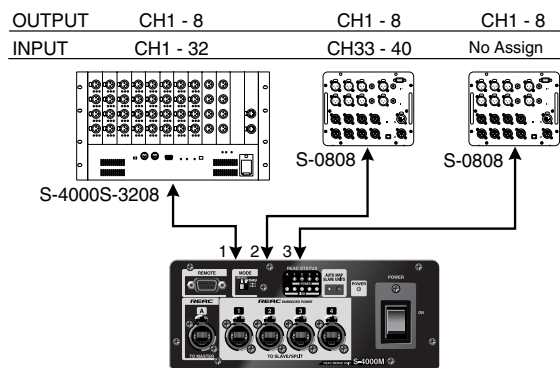
NOTE

The maximum number of channels assigned varies according to the input and output configuration of the connected REAC master device.

NOTE

If the initially connected device is replaced with a different device, the channel-number mapping may not be detected correctly. When a device has been replaced, the system must be reset to match the newly connected device.(p. 20)

* In the figures shown below, 1 through 4 refer to the REAC port numbers.



Resetting the System

When the mode of the S-4000M is set to [MERGE], the mapping of the input and output channels detected by the REAC master device varies according to the type of devices connected to REAC ports 1 through 4. When a device connected to one of the REAC ports 1 through 4 is replaced by a different device, the system must be reset to match the newly connected device.

* This operation is not necessary when a digital snake device has been replaced by a device of the same type. Carry out this procedure only when a device has been replaced by another of a different type.

1. Connect the digital snake devices.

Connect the digital snake devices to REAC port A or REAC ports 1 through 4 on the S-4000M.

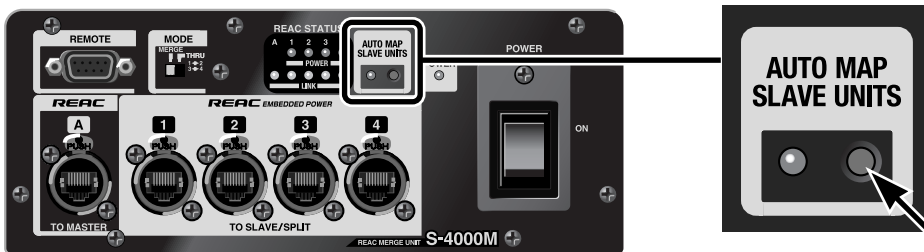
2. Check the communication with the S-4000M.

Check to make sure that all new connected digital snake devices are communicating correctly with the S-4000M. Make sure that REAC STATUS [LINK] indicators 1 through 4 are all flashing.

3. Reset the system.

Hold down the [AUTO MAP SLAVE UNITS] button for several seconds. A system reset is executed, and the input and output channels are automatically assigned to match the newly connected digital snake devices.

* The button is slightly recessed from the surface of the panel. Use a screwdriver or other narrow-tipped implement to press the button.



NOTE

The [AUTO MAP SLAVE UNITS] indicator flashes while the system reset is in progress. All output is muted at this time, but in rare instances some noise may be heard. To be safe, before executing the system reset, turn down the output on all connected amps and speakers.

MEMO

You can restore the unit to its factory-default state by performing a system reset while nothing is connected to any of the REAC ports. The factory-default settings are the state described in "Connecting S-0808 Units to REAC Ports 1 - 4" (p. 15).

About the Remote Controller

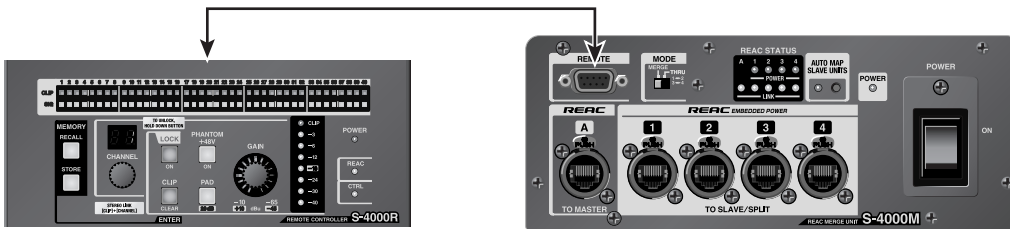
Connecting a Dedicated Remote Controller

You can connect a dedicated digital-snake remote controller (S-4000R) to the REMOTE connector.

You can use this to adjust preamp gain and switch phantom power on and off for digital snake devices connected to the S-4000M. The S-4000R supports control of up to 40 channels.

NOTE

When the S-4000M is set to THRU mode, the REMOTE connector is inactive.



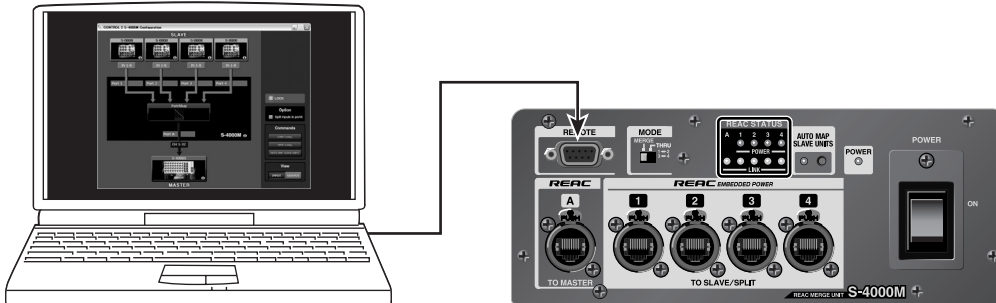
For information on the settings you can control remotely using the S-4000R, refer to the owner's manuals for the respective digital snake devices.

Connecting a Computer

Installing dedicated remote control software on a computer and connecting it to the REMOTE connector lets you perform remote control from the computer. As with the S-4000R, you can use this to adjust preamp gain and switch phantom power on and off for digital snake devices connected to the S-4000M.

NOTE

When the S-4000M is set to THRU mode, the REMOTE connector is inactive.



You can download the dedicated remote control software (S-4000 RCS) and the user guide from the following Roland website.
<http://www.rolandsystemsgroup.net/>

* Refer to the User Guide of S-4000 RCS for details of system requirements and operations.

Appendices

Main Specifications

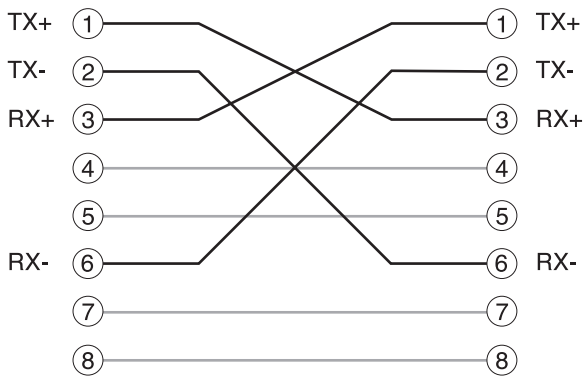
Connectors	REAC (RJ-45 EtherCon type) x 1 REAC EMBEDDED POWER (RJ-45 EtherCon type) x 4 REMOTE (RS-232C, DB-9 type) x 1	Switches	POWER x 1 MODE x 1 AUTO MAP SLAVE UNITS x 1
Indicators	REAC EMBEDDED POWER : Red x 4 REAC LINK : Green x 5 POWER : Blue x 1 AUTO MAP SLAVE UNITS : Red x 1	Dimensions	218.0(W) x 356.3(H) x 86.5(D) mm 8-5/8(W) x 14-1/16(H) x 3-7/16(D) inches
		Weight	3.0 kg / 6 lbs 10 oz
Power Supply	AC 115V, 117V, 220V, 230V, 240V (50/60Hz)	Operation Temperature	0 to +40 degrees Celsius +32 to +104 degrees Fahrenheit
Power Consumption	1.6 A : AC 115V, 117V 0.9 A : AC 220V, 230V, 240V (at max output of REAC EMBEDDED POWER)	Accessories	Power Cord, REAC Connector Cover x 5, Rubber Foot x 4, Fastening Screw x 4, Owner's Manual

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

Connector Information

Cat5e Ethernet Cables

Crossover Wiring

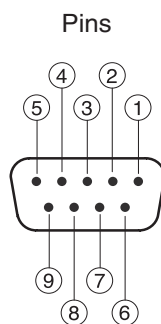


Straight Wiring

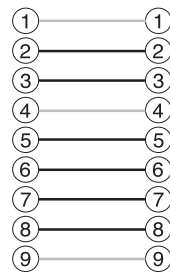


REMOTE Connector

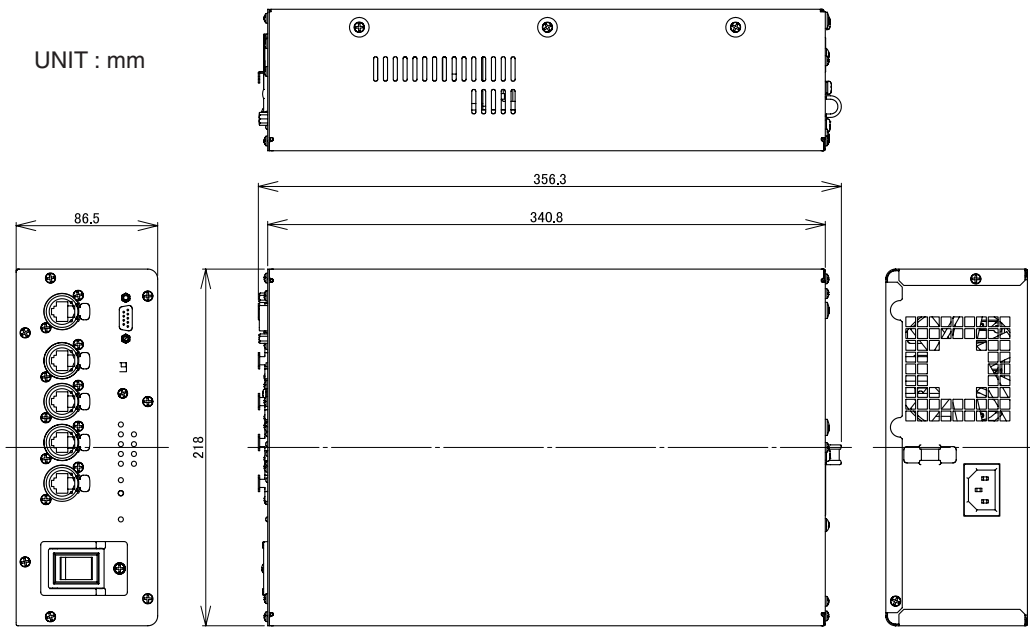
Pin No.	Signal Name
1	NC
2	TxD(Data Out)
3	RxD(Data In)
4	NC
5	GND
6	+5V
7	Short to Pin 8
8	Short to Pin 7
9	NC



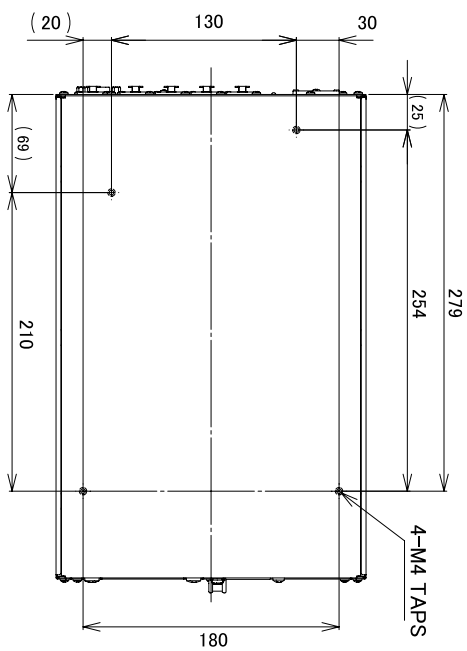
Included RS-232C cable



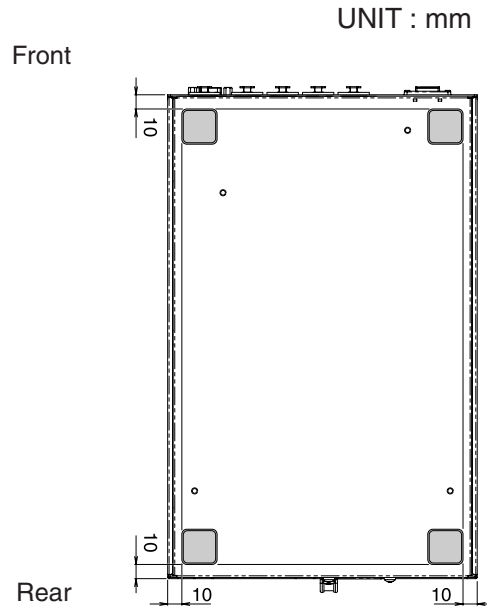
Dimensions



Screw holes : Bottom Chassis



Fastening Screws



Front

Rear

Rubber Foot

Memo

Memo



This product complies with the requirements of EMC 2004/108/EC and LVD 2006/95/EC.

For EU Countries

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

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

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

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

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For C.A. US (Proposition 65)

WARNING

This product contains chemicals known to cause cancer, birth defects and other reproductive harm, including lead.

For China

有关产品中所含有害物质的说明

本资料就本公司产品中所含的特定有害物质及其安全性予以说明。

本资料适用于 2007 年 3 月 1 日以后本公司所制造的产品。

环保使用期限



此标志适用于在中国国内销售的电子信息产品，表示环保使用期限的年数。所谓环保使用期限是指在自制造日起的规定的期限内，产品中所含的有害物质不致引起环境污染，不会对人身、财产造成严重的不良影响。环保使用期限仅在遵照产品使用说明书，正确使用产品的条件下才有效。不当的使用，将会导致有害物质泄漏的危险。

产品中有毒有害物质或元素的名称及含量

部件名称	有毒有害物质或元素					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
外壳(壳体)	×	○	○	○	○	○
电子部件(印刷电路板等)	×	○	×	○	○	○
附件(电源线、交流适配器等)	×	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。

×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。

因根据现有的技术水平，还没有什么物质能够代替它。

For EU Countries



- UK** This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.
- DE** Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit dem Hausmüll entsorgt werden.
- FR** Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.
- IT** Questo simbolo indica che nei paesi della Comunità europea questo prodotto deve essere smaltito separatamente dai normali rifiuti domestici, secondo la legislazione in vigore in ciascun paese. I prodotti che riportano questo simbolo non devono essere smaltiti insieme ai rifiuti domestici.
Ai sensi dell'art. 13 del D.Lgs. 25 luglio 2005 n. 151.
- ES** Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como esté regulado en cada zona. Los productos con este símbolo no se deben depositar con los residuos domésticos.
- PT** Este símbolo indica que nos países da UE, a recolha deste produto deverá ser feita separadamente do lixo doméstico, de acordo com os regulamentos de cada região. Os produtos que apresentem este símbolo não deverão ser eliminados juntamente com o lixo doméstico.
- NL** Dit symbool geeft aan dat in landen van de EU dit product gescheiden van huishoudelijk afval moet worden aangeboden, zoals bepaald per gemeente of regio. Producten die van dit symbool zijn voorzien, mogen niet samen met huishoudelijk afval worden verwijderd.
- DK** Dette symbol angiver, at i EU-lande skal dette produkt opsamles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.
- NO** Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall.
- SE** Symbolen anger att i EU-länder måste den här produkten kasseras separat från hushållsavfall, i enlighet med varje regions bestämmelser. Produkter med den här symbolen får inte kasseras tillsammans med hushållsavfall.
- FI** Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tällä merkinnällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana.
- HU** Ez a szimbólum azt jelenti, hogy az Európai Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbóllal ellátott termékeket nem szabad a háztartási hulladék közé dobni.
- PL** Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produktu nie należy wyrzucać z odpadami domowymi. Produktów opatrzonych tym symbolem nie można utylizować razem z odpadami domowymi.
- CZ** Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácím odpadem.
- SK** Tento symbol vyjadruje, že v krajinách EÚ sa musí zber tohto produktu vykonávať oddelene od domového odpadu, podľa nariadení platných v konkrétnej krajine. Produkty s týmto symbolom sa nesmú vyhazovať spolu s domovým odpadom.
- EE** See sümbol näitab, et EL-i maades tuleb see toode olemprügist eraldi koguda, nii nagu on igas piirkonnas määratletud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olmeprügiga.
- LT** Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekviename regione. Šiuo simboliu paženklinėti produktai neturi būti išmetami kartu su buitiniems atliekomis.
- LV** Šis simbols norāda, ka ES valstīs šo produktu jāievāc atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produktus ar šo simbolu nedrīkst izmest kopā ar mājsaimniecības atkritumiem.
- SI** Ta simbol označuje, da je treba proizvod v državah EU zbirati ločeno od gospodinjskih odpadkov, tako kot je določeno v vsaki regiji. Proizvoda s tem znakom ni dovoljeno odlagati skupaj z gospodinjskimi odpadki.
- GR** Το σύμβολο αυτό υποδηλώνει ότι στις χώρες της Ε.Ε. το συγκεκριμένο προϊόν πρέπει να συλλέγεται χωριστά από τα υπόλοιπα οικιακά απορρίμματα, σύμφωνα με όσα προβλέπονται σε κάθε περιοχή. Τα προϊόντα που φέρουν το συγκεκριμένο σύμβολο δεν πρέπει να απορρίπτονται μαζί με τα οικιακά απορρίμματα.



* 5 1 0 0 0 1 2 6 2 5 - 0 3 *