



English

Deutsch

Français

Español

Italiano

Русский

Português

日本語

I/O RACK

RSio64-D

Owner's Manual

Bedienungsanleitung

Mode d'emploi

Manual de instrucciones

Manuale di istruzioni

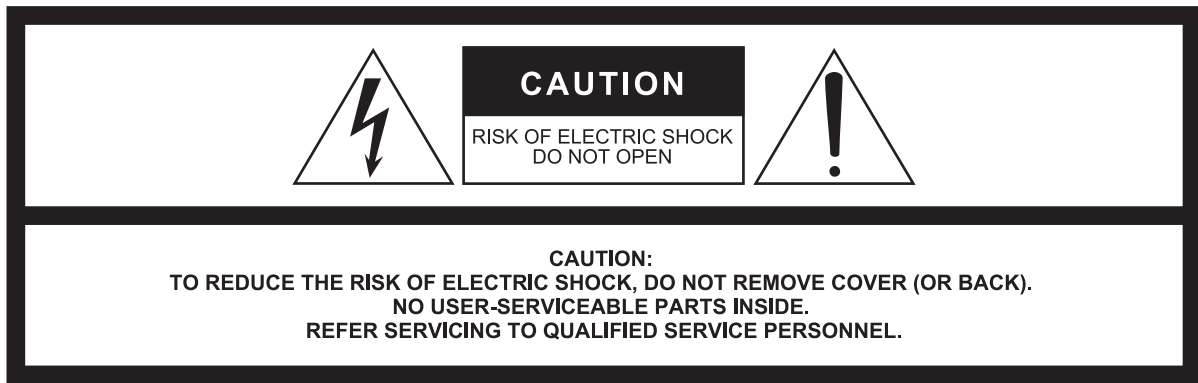
Руководство пользователя

Manual do Proprietário

取扱説明書

EN
DE
FR
ES
IT
RU
PT
JA

AUDIO INTERFACE



The above warning is located on the top of the unit.
L'avertissement ci-dessus est situé sur le dessus de l'unité.

Explanation of Graphical Symbols Explication des symboles



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.

L'éclair avec une flèche à l'intérieur d'un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'une « tension dangereuse » non isolée à l'intérieur de l'appareil, pouvant être suffisamment élevée pour constituer un risque d'électrocution.



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.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'instructions importantes sur l'emploi ou la maintenance (réparation) de l'appareil dans la documentation fournie.

IMPORTANT SAFETY INSTRUCTIONS

- 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 dry cloth.
- 7 Do not block any ventilation openings. Install in accordance with the manufacturer's 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 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13 Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14 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.



WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

(UL60065_03)

PRÉCAUTIONS CONCERNANT LA SÉCURITÉ

- 1 Lire ces instructions.
- 2 Conserver ces instructions.
- 3 Tenir compte de tous les avertissements.
- 4 Suivre toutes les instructions.
- 5 Ne pas utiliser ce produit à proximité d'eau.
- 6 Nettoyer uniquement avec un chiffon propre et sec.
- 7 Ne pas bloquer les orifices de ventilation. Installer l'appareil conformément aux instructions du fabricant.
- 8 Ne pas installer l'appareil à proximité d'une source de chaleur comme un radiateur, une bouche de chaleur, un poêle ou tout autre appareil (y compris un amplificateur) produisant de la chaleur.
- 9 Ne pas modifier le système de sécurité de la fiche polarisée ou de la fiche de terre. Une fiche polarisée dispose de deux broches dont une est plus large que l'autre. Une fiche de terre dispose de deux broches et d'une troisième pour le raccordement à la terre. Cette broche plus large ou cette troisième broche est destinée à assurer la sécurité de l'utilisateur. Si la fiche équipant l'appareil n'est pas compatible avec les prises de courant disponibles, faire remplacer les prises par un électricien.
- 10 Acheminer les cordons d'alimentation de sorte qu'ils ne soient pas piétinés ni coincés, en faisant tout spécialement attention aux fiches, prises de courant et au point de sortie de l'appareil.
- 11 Utiliser exclusivement les fixations et accessoires spécifiés par le fabricant.
- 12 Utiliser exclusivement le chariot, le stand, le trépied, le support ou la table recommandés par le fabricant ou vendus avec cet appareil. Si l'appareil est posé sur un chariot, déplacer le chariot avec précaution pour éviter tout risque de chute et de blessure.
- 13 Débrancher l'appareil en cas d'orage ou lorsqu'il doit rester hors service pendant une période prolongée.
- 14 Confier toute réparation à un personnel qualifié. Faire réparer l'appareil s'il a subi tout dommage, par exemple si la fiche ou le cordon d'alimentation est endommagé, si du liquide a coulé ou des objets sont tombés à l'intérieur de l'appareil, si l'appareil a été exposé à la pluie ou à de l'humidité, si l'appareil ne fonctionne pas normalement ou est tombé.

AVERTISSEMENT

POUR RÉDUIRE LES RISQUES D'INCENDIE OU DE DÉCHARGE ÉLECTRIQUE, N'EXPOSEZ PAS CET APPAREIL À LA PLUIE OU À L'HUMIDITÉ.

(UL60065_03)

FCC INFORMATION (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2. IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance

with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA90620

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA.

(class B)

COMPLIANCE INFORMATION STATEMENT (DECLARATION OF CONFORMITY PROCEDURE)

Responsible Party : Yamaha Corporation of America
Address : 6600 Orangethorpe Ave., Buena Park, Calif. 90620
Telephone : 714-522-9011
Type of Equipment : Audio Interface
Model Name : RSio64-D

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.

See user manual instructions if interference to radio reception is suspected.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA.

(FCC DoC)

IMPORTANT NOTICE FOR THE UNITED KINGDOM

Connecting the Plug and Cord

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 \oplus or colored 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.

(3 wires)

In Finland: Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.

In Norway: Apparatet må tilkoples jordet stikkontakt.

In Sweden: Apparatens skall anslutas till jordat uttag.

(class I hokuo)

이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

(class b korea)

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Included items (please check)

- Owner's manual
- Power cord

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

Please keep this manual in a safe place for future reference.



WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

Power supply/power cord

- Do not place the power cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.
- Only use the voltage specified as correct for the device. The required voltage is printed on the name plate of the device.
- Use only the supplied power cord/plug.
If you intend to use the device in an area other than in the one you purchased, the included power cord may not be compatible. Please check with your Yamaha dealer.
- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.
- When setting up the device, make sure that the AC outlet you are using is easily accessible. If you feel that a malfunction has occurred, immediately turn off the power, unplug the power cord plug from the electrical outlet, and also disconnect the connected power supply from the EXT DC INPUT jack. Even when the power switch is turned off, as long as the power cord is not unplugged from the wall AC outlet, the device will not be disconnected from the power source.
- Be sure to connect to an appropriate outlet with a protective grounding connection. Improper grounding can result in electrical shock, damage to the device(s), or even fire.

Do not open

- This device contains no user-serviceable parts. Do not open the device or attempt to disassemble the internal parts or modify them in any way. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.

Water warning

- Do not expose the device to rain, use it near water or in damp or wet conditions, or place on it any containers (such as vases, bottles or glasses) containing liquids which might spill into any openings. If any liquid such as water seeps into the device, turn off the power immediately and unplug the power cord from the AC outlet. Then have the device inspected by qualified Yamaha service personnel.
- Never insert or remove an electric plug with wet hands.

Fire warning

- Do not put burning items, such as candles, on the unit. A burning item may fall over and cause a fire.

If you notice any abnormality

- When one of the following problems occur, immediately turn off the power switch and disconnect the electric plug from the outlet. Then have the device inspected by Yamaha service personnel.
 - The power cord or plug becomes frayed or damaged.
 - It emits unusual smells or smoke.
 - Some object has been dropped into the device.
 - There is a sudden loss of sound during use of the device.
- If this device should be dropped or damaged, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified Yamaha service personnel.



CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the device or other property. These precautions include, but are not limited to, the following:

Power supply/power cord

- When removing the electric plug from the device or an outlet, always hold the plug itself and not the cord. Pulling by the cord can damage it.
- Remove the electric plug from the outlet when the device is not to be used for extended periods of time, or during electrical storms.

Location

- Do not place the device in an unstable position where it might accidentally fall over.
- Do not block the vents. This device has ventilation holes at the front/sides to prevent the internal temperature from becoming too high. In particular, do not place the device on its side or upside down. Inadequate ventilation can result in overheating, possibly causing damage to the device(s), or even fire.
- When installing the device:
 - Do not cover it with any cloth.
 - Do not install it on a carpet or rug.
 - Make sure the top surface faces up; do not install on its sides or upside down.
 - Do not use the device in a confined, poorly-ventilated location.
 Inadequate ventilation can result in overheating, possibly causing damage to the device(s), or even fire.
- Do not place the device in a location where it may come into contact with corrosive gases or salt air. Doing so may result in malfunction.
- Before moving the device, remove all connected cables.

- When setting up the device, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch also disconnect the unit from the power supply that is connected to the EXT DC INPUT jack. Even when the power switch is turned off, electricity is still flowing to the product at the minimum level. When you are not using the product for a long time, make sure to unplug the power cord from the wall AC outlet.
- If the device is mounted in an EIA standard rack, carefully read the section "Precautions for Rack Mounting" on page 8. Inadequate ventilation can result in overheating, possibly causing damage to the device(s), malfunction, or even fire.

Connections

- Before connecting the device to other devices, turn off the power for all devices. Before turning the power on or off for all devices, set all volume levels to minimum.

Maintenance

- Periodically inspect and clean the air filter of the front panel ventilation opening (page 11). Dust and dirt can seriously degrade the effectiveness of the cooling fan and result in malfunction or fire.
- Remove the power plug from the AC outlet when cleaning the device.

Handling caution

- Do not insert your fingers or hands in any gaps or openings on the device (vents).
- Avoid inserting or dropping foreign objects (paper, plastic, metal, etc.) into any gaps or openings on the device (vents, etc.) If this happens, turn off the power immediately and unplug the power cord from the AC outlet. Then have the device inspected by qualified Yamaha service personnel.
- Do not rest your weight on the device or place heavy objects on it, and avoid use excessive force on the buttons, switches or connectors.

Yamaha cannot be held responsible for damage caused by improper use or modifications to the device, or data that is lost or destroyed.

NOTICE

To avoid the possibility of malfunction/ damage to the product, damage to data, or damage to other property, follow the notices below.

■ Handling and maintenance

- Do not use the device in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Otherwise, the device, TV, or radio may generate noise.
- Do not expose the device to excessive dust or vibration, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day), in order to prevent the possibility of panel disfiguration, unstable operation, or damage to the internal components.
- Do not place vinyl, plastic or rubber objects on the device, since this might discolor the panel.
- When cleaning the device, use a dry and soft cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths.
- Condensation can occur in the device due to rapid, drastic changes in ambient temperature—when the device is moved from one location to another, or air conditioning is turned on or off, for example. Using the device while condensation is present can cause damage. If there is reason to believe that condensation might have occurred, leave the device for several hours without turning on the power until the condensation has completely dried out.
- Always turn the power off when the device is not in use.

Information

■ About this manual

- The illustrations as shown in this manual are for instructional purposes only.
- The company names and product names in this manual are the trademarks or registered trademarks of their respective companies.

The model number, serial number, power requirements, etc., may be found on or near the name plate, which is at the top of the unit. You should note this serial number in the space provided below and retain this manual as a permanent record of your purchase to aid identification in the event of theft.

Model No.

Serial No.

(rear_en_01)

Information for Users on Collection and Disposal of Old Equipment



This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC.

By disposing of these products correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

[For business users in the European Union]

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]

This symbol is only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

(weee_eu_en_01)

European Models

Purchaser/User Information specified in EN55103-1:2009 and EN55103-2:2009.

Inrush Current: 1.0A (on initial switch-on)

1.0A (after a supply interruption of 5s)

Conforms to Environments: E1, E2, E3 and E4

Introduction

Thank you for choosing the Yamaha RSio64-D audio interface.

To take full advantage of the superior functions and performance offered by the RSio64-D, and to enjoy years of trouble-free use, be sure to read this owner's manual carefully before operation.

Features

The RSio64-D is an interface that can be used as a router and format converter between Dante and Mini-YGDAI cards.

This allows Mini-YGDAI cards that support a wide variety of input/output formats and processing to be connected to a Dante network, meeting the needs of various types of systems including broadcast, live, recording, and post-production. In addition, the settings of the RSio64-D can be fully controlled from a CL or QL series console.

- A wide variety of Mini-YGDAI cards can be used, including processing cards as well as input/output cards.
- Each MY slot provides an SRC (Sampling Rate Converter) to allow digital connection between differing word clock routes.
- Seven different widely usable routing patterns are preset, including routing between Mini-YGDAI cards. Matrix patching from R Remote V4 or a CL/QL console.
- EXT DC INPUT supports redundant power supplies.
- Dante redundancy (primary/secondary) is supported.

NOTE

Before you install Mini-YGDAI cards in slots 1–4, you must check the Yamaha website to determine whether the card is compatible with the RSio64-D, and to verify the total number of Yamaha or third-party cards that can be installed in combination with that card.

Yamaha website:

<http://www.yamahaproaudio.com/>

Precautions for Rack Mounting

This unit is rated for operation at ambient temperatures ranging from 0 to 40 degrees Celsius. When mounting the unit with other RSio unit(s) or other device(s) in an EIA standard equipment rack, internal temperatures can exceed the specified upper limit, resulting in impaired performance or failure. When rack mounting the unit, always observe the following requirements to avoid heat buildup:

- When mounting the unit in a rack with devices such as power amplifiers that generate a significant amount of heat, leave more than 1U of space between the RSio and other equipment. Also either leave the open spaces uncovered or install appropriate ventilating panels to minimize the possibility of heat buildup.
- To ensure sufficient airflow, leave the rear of the rack open and position it at least 10 centimeters from walls or other surfaces. If you've installed a fan kit, there may be cases in which closing the rear of the rack will produce a greater cooling effect. Refer to the rack and/or fan unit manual for details.

Firmware Updates

This product enables you to update the unit firmware to improve operations, add functions, and correct possible malfunctions. The following two types of firmware are available for the unit:

- Unit's firmware
- Dante module firmware

Firmware updates are performed from R Remote V4. Details on updating the firmware are available on the following website:

<http://www.yamahaproaudio.com/>

For information on updating the unit, refer to the firmware update guide available on the website.

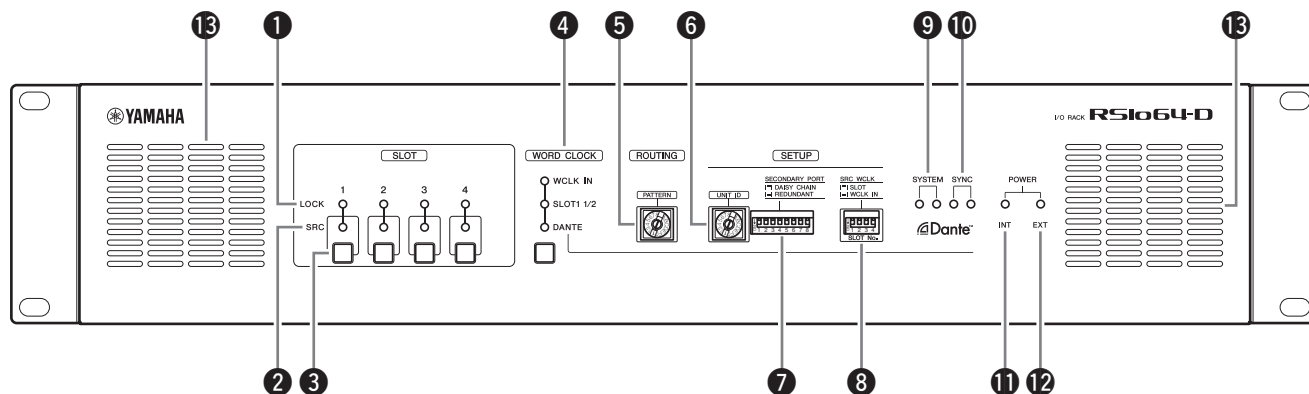
NOTE

It is necessary to update other devices depending on the version of each device in the Dante network. For details, refer to the firmware compatibility available on the Yamaha website.

<http://www.yamahaproaudio.com/>

Controls and Functions

Front Panel



1 SLOT 1–4 [LOCK] indicators

These indicate the word clock status of slots 1–4. The indicator is lit green if operation is normal.

Unlit	No card is installed in the slot, or an unsupported card is installed.
Green (lit) LOCK	This indicates that a clock synchronized with the clock source selected by the WORD CLOCK select key is being input from the card. If an external device is connected to the corresponding slot, input/output is occurring correctly between that device and the RSio64-D. If the sampling frequency is close, this status is shown in some cases even if not synchronized.
Green (flashing) SYNC ERROR	A valid clock is being input from the card, but is not synchronized with the clock source selected by the WORD CLOCK select key. If an external device is connected to the corresponding slot, input/output is not occurring correctly between that device and the RSio64-D. Input/output will occur correctly if SRC is turned ON.
Red (lit) UNLOCK	A valid clock is not being input from the card. If an external device is connected to the corresponding slot, input/output cannot occur correctly between that device and the RSio64-D.
Red (flashing) WRONG WORD CLOCK	The frequency of the clock source selected by the WORD CLOCK select key is outside the range of operating frequencies of the card installed in the slot. Either set the frequency of the clock source to be within the operating range of the card, or turn SRC on. In the case of an analog card, turning SRC on makes the card operate at the RSio64-D's internal frequency of 48 kHz.

NOTE

- If the SLOT1–4 [LOCK] indicators and the SLOT1–4 [SRC] indicators and all WORD CLOCK indicators simultaneously flash red at startup, overcurrent has occurred in a Mini-YGDAI card, or a malfunctioning Mini-YGDAI card is installed. Turn off the power and remove the card that is causing the problem.
- If the SLOT1–4 [LOCK] indicators and the SLOT1–4 [SRC] indicators alternately flash red at startup, the hardware settings of the RSio64-D need to be updated (page 20).
- If the SLOT1–4 [LOCK] indicators sequentially light green in the order of 1–4 at startup, the clocks of the slots are synchronizing. This may take several tens of seconds.

2 SLOT 1–4 [SRC] indicators

These indicate the SRC (Sampling Rate Converter) status of slots 1–4.

Unlit	SRC is off.
Green (lit)	SRC is on, and the clock selected by the SRC WCLK DIP switch is being input correctly.
Red (lit)	SRC is on, but an appropriate clock is not being input. It may be that the clock selected by the SRC WCLK DIP switch is not being input, or is outside the operating range. Either turn SRC off, or change the setting of the DIP switch.

NOTE

The SRC clock sent to a Mini-YGDAI card installed in a slot is selected by the SRC WCLK DIP switch (page 11).

3 SLOT 1–4 [SRC] keys

For each slot, these turn SRC on/off for the slot's input as well as output.

4 WORD CLOCK select key

Selects the word clock source of the RSio64-D.

WORD CLOCK [WCLK IN] indicator
WORD CLOCK [SLOT1 1/2] indicator
WORD CLOCK [DANTE] indicator

These indicate the status of the RSio64-D's word clock source.

WCLK IN	This is lit if the RSio64-D is using the word clock that is being input from the rear panel [WORD CLOCK IN] connector. This flashes if there is no valid word clock input*1.
SLOT1 1/2	This is lit if the channel 1/2 word clock of slot 1 is being used. This flashes if there is no valid word clock input*1. The channel 7/8 word clock is used when using the MY8-AEB*2. If the SRC on the MY8-AE96S is in use, you will be unable to use the input signal as word clock.
DANTE	This is lit if the Dante network's word clock*3 is being used. (If no valid Dante signal is being input, the clock generated by the internal Dante module is used.)

*1 When this is flashing, the unit uses the Dante word clock to operate and perform input/output.

*2 In order to use MY8-AEB, set AE ↔ RSVD switch to the RSVD position.

*3 If you want to change the frequency of the Dante word clock, use Dante Controller.

5 ROUTING [PATTERN] rotary switch

This selects the RSio64-D's internal audio routing pattern from seven preset patterns and one user pattern. Setting the rotary switch to 1–7 selects preset routing patterns 1–7, and setting it to 0 selects the user routing pattern.

Making the setting

You can select the routing pattern even when the power is on. Your selection is applied three seconds after you switch the routing pattern.

NOTE

The routing pattern does not change if you select 8–F.

6 SETUP [UNIT ID] rotary switch

Specifies an ID that identifies this device on the Dante network. If there are multiple Dante-compatible devices from Yamaha that require an ID setting connected to the same network, set a different ID for each device.

Making the setting

Turn off the power before you change the setting of this rotary switch. The setting is applied the next time you turn the power on. If you change the setting while the power is on, the changed setting is not applied until the power is turned off and on again.

7 Device setting DIP switches

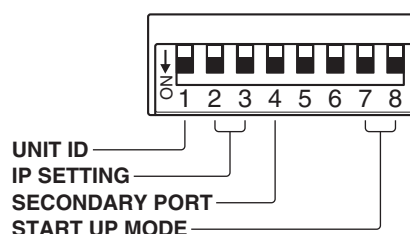
These switches specify startup settings for the device. Details are given below.

Making the setting

Turn off the power before you change these DIP switch settings. The setting is applied the next time you turn the power on. If you change the setting while the power is on, the changed setting is not applied until the power is turned off and on again. (This note does not apply to switch 6.)

The switch illustrations indicate the setting state as follows.

Switch	State
	Switch is in the upward (OFF) position.
	Switch is in the downward (ON) position.



• Switch 1 (UNIT ID)

This switch setting determines whether the [UNIT ID] setting will range from hexadecimal 00 to 0F or from 10 to 1F.

Switch	Setting	Description
	UNIT ID = 00-0F	The UNIT ID setting range is 00 to 0F.
	UNIT ID = 10-1F	The UNIT ID setting range is 10 to 1F.

• Switch 2/Switch 3 (IP SETTING)

These specify the method of setting the IP address used when communicating with an external device such as R Remote V4. When connecting the RSio64-D to a computer for the first time immediately after purchase, set this to something other than STATIC IP (MANUAL). If you want to set this to STATIC IP (MANUAL), first specify the IP address from R Remote V4 and then switch this setting to STATIC IP (MANUAL).

Switch	Setting	Description
	AUTO IP	The Dante network automatically specifies the IP address as 169.254.XX.XX.
	DHCP	The IP address assigned from the DHCP server is used.
	STATIC IP (AUTO)	The IP address is specified as 192.168.0.xx (xx=UNIT ID).
	STATIC IP (MANUAL)	The IP address is specified from an external device such as R Remote V4.

NOTE



- If the network consists only of Dante devices and R Remote V4, we recommend that you set this to AUTO IP.
- If connecting to an existing network, select DHCP as necessary.
- If you want to use zoning to specify the IP address, or if you want to connect to an existing network and fix the IP address, use R Remote V4 to specify the IP address and then set this to STATIC IP (MANUAL).

• **Switch 4 (SECONDARY PORT)**

This switch setting determines whether the rear-panel [SECONDARY] connector will be used for a daisy chain or redundant network.

If this is set to [DAISY CHAIN], you can connect multiple Dante-enabled network devices in a daisy chain without using a network switch.

With the [REDUNDANT] setting, the [PRIMARY] connector will be used for primary connections, and the [SECONDARY] connector will be used for secondary (backup) connections. This provides a redundant connection so that if the unit is unable to transmit signals through the [PRIMARY] connector for some reason (e.g., due to damage or accidental removal of the cable, or a failed network switch), the [SECONDARY] connector will automatically take over communications.

Switch	Settings	Description
 4	DAISY CHAIN	The [SECONDARY] connector is used for a daisy chain connection. A signal at the [PRIMARY] connector will be transmitted to the next device in the chain as is.
 4	REDUNDANT	The [SECONDARY] connector is used for a redundant network. It will function as backup connection, independent of the network to which the [PRIMARY] connector is connected.

• **Switch 5**



Not used. Leave these in the factory-set position (upward).

• **Switch 6**

This switch position specifies the SRC to be used: one on the main unit or one on the MY8-AE96S card. If you are using a card other than MY8-AE96S, the SRC will always be used on the main unit regardless of the switch position.



NOTE

If SRC on the MY8-AE96S card is used, the input and output of the unit's SRC will be disabled, and the main unit's word clock will be used as the card's SRC clock regardless of the switch position.

Switch	Settings	Description
 6	NORMAL	The main unit's SRC is used.
 6	CARD	The card's SRC is used.

• **Switch 7/Switch 8 (START UP MODE)**

These switches specify the start-up mode.

Switch	Settings	Description
 7 8	NORMAL	Start up normally with the settings of the previous start-up.
 7 8	INITIALIZE	Initialize the settings. For details on the settings that are initialized, refer to "Initializing the RSio64-D" (page 20).

8 **SRC WCLK DIP switches**

These select the word clock of each slot's SRC (SLOT/WORD CLOCK IN). DIP switches 1–4 correspond to SLOT 1–4. When a DIP switch is off, the word clock of the corresponding slot is used. When a DIP switch is on, the signal of WORDCLOCK IN is used as the SRC word clock.

NOTE

- The setting of these DIP switches is applied three seconds after they are switched while the power is on.
- If an analog Mini-YGDAI card is installed and the corresponding slot's SRC is turned on, that slot uses the RSio64-D's internal 48 kHz clock.

9 **Dante [SYSTEM] indicators**

These indicate the operating status of the unit. If the green indicator lights steadily and the red indicator turns off, the unit is operating normally. When power to the unit is turned ON, if the green indicator turns off, or if the red indicator lights or flashes, the unit is not functioning properly. In this case, refer to "Messages" (page 22).

10 **Dante [SYNC] indicators**

These indicate the sync status between the Dante network and this unit. If the green indicator lights, the unit is operating as a word clock slave and syncing to the word clock. If the green indicator flashes, the unit is operating as the word clock master. If the unit is powered-on but the green indicator is unlit, a malfunction has occurred. In this case, refer to "Messages" (page 22). Also refer to "Messages" if the orange indicator is lit or flashing.

11 **POWER INT indicator**

Indicates whether the AC IN power supply is powered. If the power switch is off, this indicator is unlit regardless of whether power is supplied to AC IN.

12 **POWER EXT indicator**

Indicates whether the EXT DC INPUT power supply is powered. This is lit if the EXT DC INPUT power supply is powered. This indicator is not affected by the state of the power switch.

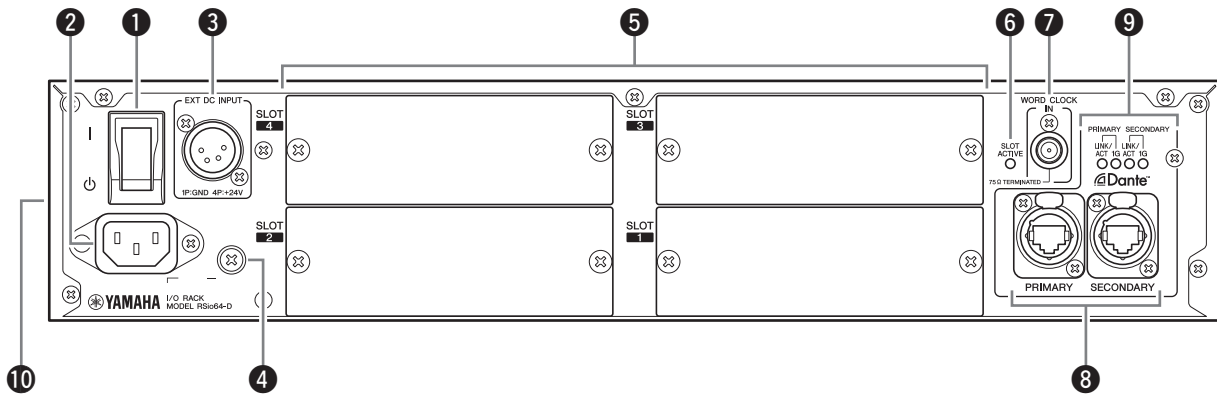
13 **Cooling vents**

To prevent the interior temperature from becoming excessive, two cooling vents are provided on the front panel. Air filters are installed inside the cooling vents to prevent dust from entering the unit through the vents.

• **Cleaning the cooling vents**

After extended use, dust may accumulate on the cooling vents, obstructing the airflow. If dust accumulates, remove it periodically by placing a vacuum cleaner gently over the cooling vents.

Rear Panel



1 [|]/[⏻] (power switch)

Turns the unit's power (supplied from the AC IN connector) on [|]/off [⏻]. If power is supplied from the AC IN connector and this power switch is also on, the front panel POWER INT indicator is lit.

⚠ CAUTION

Even when the power switch is turned off, a small amount of current is flowing through the unit. When you are not using the product for a long time, make sure to unplug the power cord from the AC outlet.

NOTE

Rapidly turning the unit on and off in succession can cause it to malfunction. After turning the unit off, wait for at least 6 seconds before turning it on again.

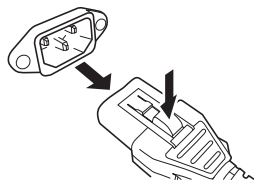
2 AC IN connector

Connect the supplied AC power cord here. First connect the AC power cord to the RSio unit, then insert the power cord plug into an AC power outlet. The supplied AC power cord features a V-lock mechanism via a latch, which prevents the power cord from coming off accidentally. Insert the cable plug all the way until it locks in securely.

⚠ CAUTION

Be sure to turn the power off before connecting or disconnecting the power cord.

Press the latch button on the plug to disconnect the power cord.



3 EXT DC INPUT connector

This is an XLR-4-32 type connector through which an external power supply (+24V) can be provided as a backup for the internal power supply of the RSio64-D.

⚠ CAUTION

Before connecting the external power supply, you must turn off the power of this unit and the power of the external power supply. Malfunctions or electrical shock may occur if you fail to observe this caution.

NOTE

- This power supply cannot be turned on/off by the power switch.
- If an external power supply is connected, the RSio64-D will operate normally when the internal and external power supplies are both on, as well as when only one of them is on.
- If both power supplies are on and one of the power supplies fails during operation, the unit automatically switches to the other power supply. The state of the power supply is shown by the front panel POWER indicator.

4 Grounding screw

Since the included power cord has a three-conductor plug, this unit is appropriately grounded if the AC outlet is grounded. In some cases, you may be able to reduce hum and interference by connecting ground to this screw as well.

5 SLOT 1-4

Mini-YGDAI I/O cards can be installed in these slots. Each of the four slots is equipped with an SRC.

6 SLOT ACTIVE indicator

Indicates whether the slots are powered.

⚠ CAUTION

Do not insert or remove a Mini-YGDAI card if this indicator is lit. Malfunctions or electrical shock may occur if you fail to observe this caution.

7 WORD CLOCK IN connector

This is a BNC connector used to receive word clock signals. The WORD CLOCK IN connector is internally terminated with 75Ω.

**8 Dante [PRIMARY] connector
Dante [SECONDARY] connector**

These etherCON (RJ45) connectors allow connection with Dante devices such as a CL series console using standard Ethernet cables (CAT5e or better recommended).

NOTE

- Use STP (Shielded Twisted Pair) cable to prevent electromagnetic interference. Make sure that the metal parts of the plugs are electrically connected to the STP cable shield by conductive tape or comparable means.
- Connect only Dante-compatible devices or Gigabit Ethernet compatible devices (including computers).
- Cables up to 100 meters* long can be used.
* Maximum usable length varies according to the cable used.

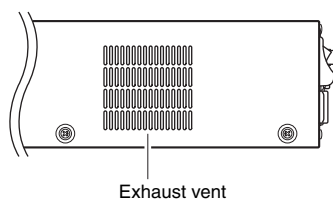
**9 Dante [PRIMARY LINK/ACT] indicator
Dante [PRIMARY 1G] indicator
Dante [SECONDARY LINK/ACT] indicator
Dante [SECONDARY 1G] indicator**

Displays the transmission status with the Dante network.

LINK/ACT	These indicators flash rapidly if the Ethernet cables are connected properly.
1G	These indicators are lit when the Dante network is functioning as Gigabit Ethernet.

10 Exhaust vent

The RSio64-D is equipped with a cooling fan. Air is exhausted through this vent, so take care that it is not blocked by any obstruction.



Connections

Installing a Mini-YGDAI card

Before you install I/O cards in slots 1–4, you must check the Yamaha website to determine whether the card is compatible with the RSio64-D, and to verify the total number of Yamaha or third-party cards that can be installed in combination with that card.

Yamaha website:

<http://www.yamahaproaudio.com/>

To install an optional mini-YGDAI card, proceed as follows.

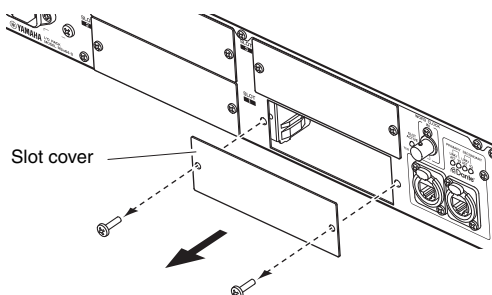
1. Make sure that the power is turned off.

⚠ CAUTION

Before installing a Mini-YGDAI I/O card in this unit, you must turn off the power of this unit and the power of the external power supply. You must also verify that the SLOT ACTIVE indicator is unlit. Malfunctions or electrical shock may occur if you fail to observe this caution.

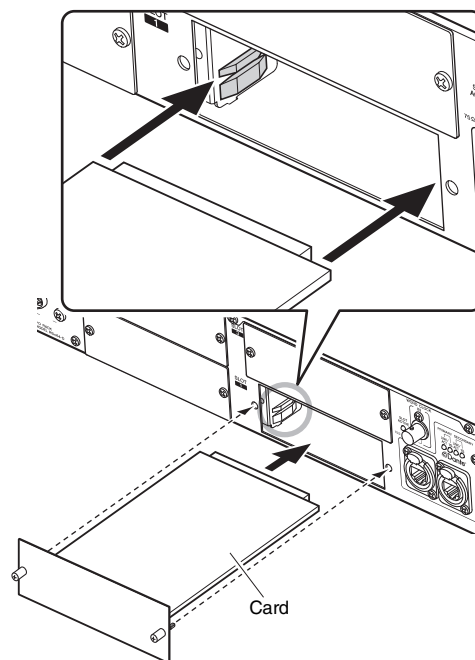
2. Loosen the screws that hold the slot cover in place, and remove the slot cover.

Keep the removed slot cover and screws in a safe place.



3. Align the two edges of the card with the guide rails inside the slot, and insert the card into the slot.

Push the card all the way into the slot until the connector of the card is correctly inserted into the connector inside the slot.



4. Secure the card using the screws that are attached to the card.

If the card is not secured, malfunction or faulty operation may occur.

About Dante

Dante is a network audio protocol developed by Audinate. It is designed to deliver multi-channel audio signals at various sampling and bit rates, as well as device control signals over a Gigabit Ethernet (GbE) network.

Visit the Audinate website for more details on Dante:

<http://www.audinate.com/>

More information on Dante is also posted on the Yamaha Pro Audio website:

<http://www.yamahaproaudio.com/>

Notes Regarding the Use of Network Switches

We recommend a gigabit-compatible network switch that provides functions for controlling and monitoring the network (such as QoS).

Do not use the EEE functionality (*) of network switches on a Dante network.

Although mutual power consumption settings between switches that support the EEE functionality are adjusted automatically, there are some switches for which such mutual settings are not adjusted correctly.

This may cause EEE to be enabled in Dante networks when it is not appropriate, resulting in poor synchronization performance and occasional dropouts.

Therefore we strongly recommend the following.

- If you use managed switches, please disable the EEE functionality. Do not use switches that prevent EEE functionality from being disabled.
- When using unmanaged switches, do not use switches that support EEE functionality. EEE functionality cannot be disabled for such switches.

* EEE (Energy Efficient Ethernet) is a technology that reduces switch power consumption during periods of low network traffic. It is also referred to as Green Ethernet and IEEE802.3az.

About Dante Controller

Dante Controller is a software application that allows configuration and audio routing of Dante networks. Use this application if you plan to connect or set up Dante-enabled devices that do not feature RSio64-D-native support. Please download the Dante Controller application from the website listed below.

Please note that Dante Controller Version 3.2.1 or later supports RSio64-D.

<http://www.yamahaproaudio.com/>

To run Dante Controller, a computer must feature a GbE-compatible Ethernet connector.

Refer to the Dante Controller owner's manual for details on Dante Controller.

Connecting AC Power

1. Turn the unit off.
2. Connect the plug on the AC power cord to the AC IN connector on the rear panel of the unit.
3. Connect the other side of the plug on the AC power cord to a power supply socket.

NOTE

- When removing the AC power cord, perform these steps in reverse.
- Press the latch button on the plug to disconnect the power cord.

⚠ WARNING

- The RSio64-D has been designed assuming it a proper ground connection is used. To prevent electrical shock and damage to devices, use the included AC power cord to create a secure ground connection. If you do not know how to make a proper ground connection, contact your Yamaha dealer.
- Be sure to use only the included power cord with this unit. Use of a different power cord could result in abnormal heat and electrical shock.

⚠ CAUTION

- Be sure to turn the power off before connecting or disconnecting the power cord.
- Even when the power switch is turned off, a small amount of current is flowing through the unit. When you are not using the product for a long time, make sure to unplug the power cord from the power supply outlet.

Power on and off

To prevent loud sounds that might harm your hearing or damage equipment downstream, power on each unit in the order of the signal flow. When turning the power off, reverse this order.

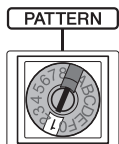
Specifying the audio routing

The RSio64-D provides seven preset patterns of audio routing that connect each slot to the Dante network. There is also one user pattern (page 17) which the user can edit.

Use the front panel ROUTING [PATTERN] rotary switch to select the routing.



Setting the rotary switch to 1–7 selects preset routing patterns 1–7, and setting it to 0 selects the user routing pattern.



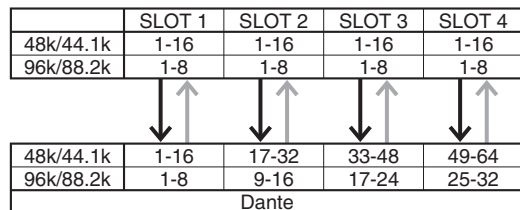
Making the setting

You can select the routing pattern even when the power is on. Your selection is applied three seconds after you switch the routing pattern.

The preset routing patterns are described below.

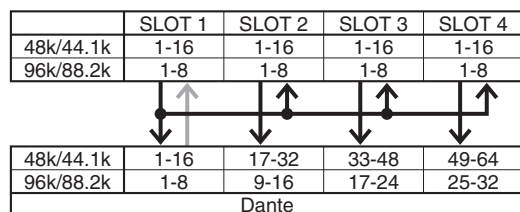
■ PATTERN 1

Dante is connected one-to-one with each slot's input/output.



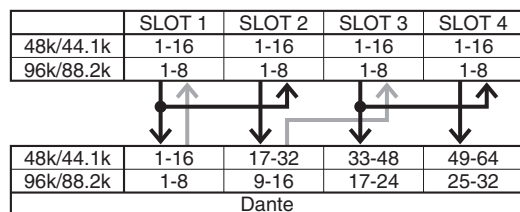
■ PATTERN 2

The inputs of slot 1 are distributed to the outputs of slots 2–4.



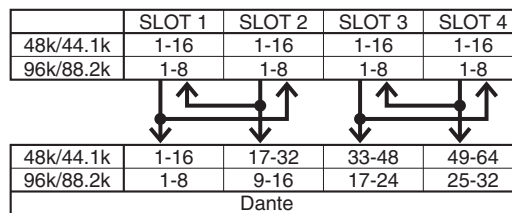
■ PATTERN 3

The inputs of slot 1 are distributed to the outputs of slot 2, and the inputs of slot 3 are distributed to the outputs of slot 4.



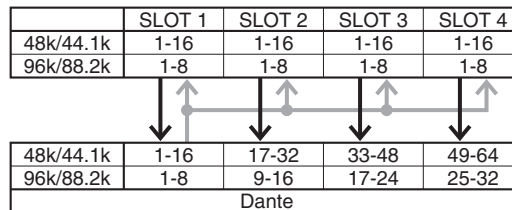
■ PATTERN 4

The inputs and outputs of Slots 1 and 2, and Slots 3 and 4 are interconnected.



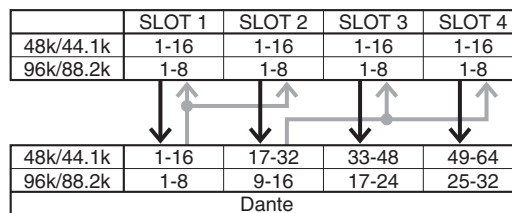
■ PATTERN 5

Dante inputs 1–16* are distributed to the outputs of each slot.



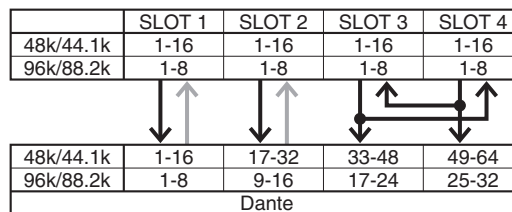
■ PATTERN 6

Dante inputs 1–16* are distributed to the outputs of slots 1 and 2, and Dante inputs 17–32* are distributed to the outputs of slots 3 and 4.



■ PATTERN 7

Dante 1–32* and slots 1–2 are connected one-to-one, and the inputs and outputs of slots 3 and 4 are connected respectively to each other.



*At 48/44.1 kHz

NOTE

- If the inputs/outputs of an installed Mini-YGDAI card cannot be assigned in 16-channel units, such as for a 4-channel or a 8-channel card, audio routing signals from such card are muted by the slot (e.g., if the Mini-YGDAI card is an 8-channel card, channels 9–16 are muted).
- For different sampling frequencies, the channels of the routing pattern are switched automatically, as shown above. However if SRC is on, the number of the slot's channels may change, so there may be cases in which you are unable to use the above patterns as you would like. In such cases, use the user pattern.
For example when the sampling frequency is 88.2/96 kHz, Dante channels 1–8, 9–16, 17–24, and 25–32 are available, but if SRC is on for SLOT 1, and the sampling frequency of that slot is 44.1/48 kHz, then channels 1–16 are available for SLOT 1.

Editing the user pattern

The user pattern lets you freely specify the routing between Dante and the slots.

To edit the user pattern, use R Remote V4 or a CL/QL series console.

For details, refer to the respective manuals.

About R Remote V4

This is an application that lets you view and edit the settings of R series units such as the RSio64-D.

R Remote V4 can be downloaded from the following website.

<http://www.yamahaproaudio.com/>

About the number of input/output channels

The number of audio input/output channels is as follows.

Slots

The slots can provide up to 64 channels (16 channels per slot) of audio signal input/output.

Frequency	Input	Output
44.1 kHz	16 ch	16 ch
48 kHz	16 ch	16 ch
88.2 kHz	8 ch	8 ch
96 kHz	8 ch	8 ch

NOTE

- If an analog Mini-YGDAI card is installed and the corresponding slot's SRC is turned on, that slot uses the RSio64-D's internal 48 kHz clock.
- If this unit's sampling frequency is set to 88 kHz or 96 kHz, and you want to install a Mini-YGDAI card that does not support 88.2 kHz or 96 kHz, you should turn SRC on for that slot. If SRC is off, audio signals will not be output.

Dante

Frequency	Input	Output
44.1 kHz	64 ch	64 ch
48 kHz	64 ch	64 ch
88.2 kHz	32 ch	32 ch
96 kHz	32 ch	32 ch

NOTE

To change the Dante clock frequency, use Dante Controller.

Word Clock

Selecting a word clock source

Use the WORD CLOCK select key on the front panel to select the word clock source.

The unit's clock is synced with the selected word clock source.

WCLK IN	This is lit if the RSio64-D is using the word clock that is being input from the rear panel [WORD CLOCK IN] connector. This flashes if there is no valid word clock input*1.
SLOT1 1/2	This is lit if the channel 1/2 word clock of slot 1 is being used. This flashes if there is no valid word clock input*1. The channel 7/8 word clock is used when using the MY8-AEB*2.
DANTE	This is lit if the Dante network's word clock*3 is being used. (If no valid Dante signal is being input, the clock generated by the internal Dante module is used.)

*1 When this is flashing, the unit uses the Dante word clock to operate and perform input/output.

*2 In order to use MY8-AEB, set AE ↔ RSVD switch to the RSVD position.

*3 If you want to change the frequency of the Dante word clock, use Dante Controller.

About word clock

- If you select “WCLK IN” or “SLOT1 1/2,” the unit is automatically set to Enable Sync To External (synchronize to an external clock). If you select “DANTE,” Enable Sync To External is automatically turned off.

If you select “WCLK IN” or “SLOT1 1/2,” and this unit is a clock slave of the Dante network, the same clock should be input to the clock master device and to this device. You can use Dante Controller to check which device is the current clock master.

- If the word clock signal from the selected word clock source is cut off, the unit switches to the “DANTE” setting (Enable Sync To External automatically turns off), and operates with the clock frequency that is specified by Dante.

SRC (Sampling Rate Converter)

- Even if the Mini-YGDAI card installed in a slot is not synchronized with the Dante network, connection is possible without having to change the respective clocks.
- The output signal from the slot synchronizes with the clock from the slot's input signal or with the clock that is input via WORD CLOCK IN. However, if the card's SRC is enabled, the main unit's SRC will be disabled, and signals in sync with the main unit's clock will be output.

Other functions

Remote control

The same operations performed from the RSio64-D's front panel, such as turning SRC on/off, can be performed from a device that supports remote control.

NOTE

For the latest information about remote control compatible devices, refer to the Yamaha Pro Audio website:
<http://www.yamahaproaudio.com/>

Remote controllable parameters

Parameter	Description
SRC ON/OFF	Turns SRC on or off.
WORD CLOCK	Selects the source used as the master clock.
USER PATTERN	Lets you specify the user routing pattern.
DANTE PATCH*	Lets you change the Dante patch.
ROUTING PATTERN	Displays the pattern number.
SRC SOURCE CLOCK	Shows the source used by the SRC.
POWER INT/EXT	Shows the power supply status.
SYSTEM/SYNC STATUS	Shows the system sync status.
DEVICE LABEL	Shows the UNIT ID/device name (label).

* DANTE PATCH: Specifies which channels of the CL/QL series console are input to which of the RSio64-D's Dante 1–64 channels.

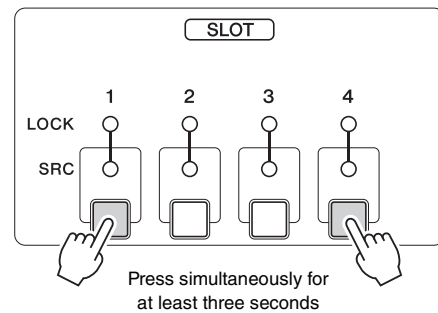
IDENTIFY

From a Yamaha CL/QL series console, from R Remote V4, or from Dante Controller, you can identify a specific RSio64-D unit from among multiple network-connected devices. When you specify the IDENTIFY operation, all front panel indicators on that unit except for the POWER (INT/EXT) indicator will flash for ten seconds.

Panel lock

You can lock the panel to prevent unintended changes and operations.

While the lock is engaged, all controllers on the front panel are inoperable. To engage the lock, press and hold the SLOT 1 and SLOT 4 [SRC] keys for at least 3 seconds. All front panel indicators (except the power indicator) flash, and operation is locked. To disengage the lock, press and hold the SLOT 1 and SLOT 4 [SRC] keys for at least 3 seconds.



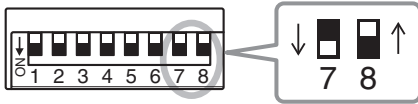
NOTE

- If you turn off the power while panel lock is engaged, panel lock will still be engaged the next time the power is turned on.
- Even if the front panel is locked, you can use remote control to make changes to the settings.

Initializing the RSio64-D

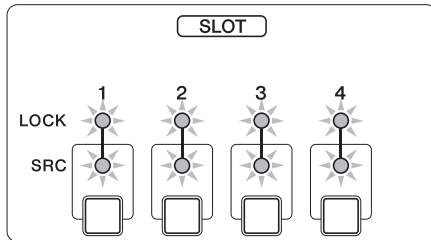
To return (initialize) the internal memory to its factory-set state, for example if you move the unit to a different location, proceed as follows.

1. Turn the unit off.
2. On the front panel, set device setting DIP switch 7 down and switch 8 up (INITIALIZE).



3. Turn the unit on.

Initialization begins. When initialization is completed, the SLOT 1-4 [LOCK] and SLOT 1-4 [SRC] indicators flash green and red alternately.



4. Verify that initialization is completed, and turn the unit off.
5. Set device setting DIP switches 7 and 8 both up (NORMAL).



6. Turn the unit on.

The following parameters are initialized.

Parameter	Initialized setting
SLOT 1-4 SRC	OFF
WORD CLOCK SELECT	DANTE/48 kHz
USER PATTERN	Same routing settings as preset pattern 1
STATIC IP (Manual)	0.0.0.0
Panel Lock	Lock defeated
Dante patches	All off
Dante device label	Y001-Yamaha-RSio64-D-123456 (*1)

(*1) The third and fourth characters of the Dante device label depend on device setting DIP switch 1 and the SETUP [UNIT ID] rotary switch. The lower six digits depend on the lower six digits of the unit's MAC address.

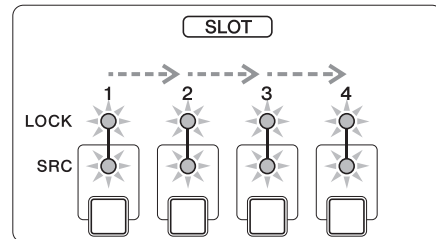
* When shipped from the factory, all of the device setting DIP switches are set to the upward position.

Updating the RSio64-D's hardware settings

If the SLOT 1-4 [LOCK] indicators and the SLOT 1-4 [SRC] indicators are alternately flashing red and the unit does not start up, it may be that the unit's hardware settings were not updated when updating the firmware. In this case, proceed as follows to update the RSio64-D's hardware settings.

1. While holding down the SLOT 3 [SRC] key, turn the power on again.

Updating of the unit's hardware settings begins. During the update, the SLOT 1 [LOCK] indicator and the SLOT 1 [SRC] indicator light simultaneously. To indicate the status during the update process, both the [LOCK] indicator and the [SRC] indicator successively light in the order of SLOT 2 → SLOT 3 → SLOT 4. When the update is completed, the eight indicators flash once and then return to the normal illumination status.



If you are using the card's SRC

If your card features an SRC (MY8-AE96S), you can use the card's SRC instead of the main unit's SRC.

To use the card's SRC, set device setting DIP switch 6 on the front panel to the down position.

When this function is enabled, the [SRC] key on the front panel of the main unit will be used to turn the card's SRC on or off.

- Changes made to device setting DIP switch 6 will become effective in three seconds.
- For a slot that has a card without an SRC inserted, the [SRC] key will turn the unit's SRC on or off regardless of the switch position.

Troubleshooting

The following is an abbreviated list of frequently asked questions in the past. Please check it if you run into similar problems and need help.

Power does not turn on, power indicator does not light

- Connect the power cord properly (page 15).
- Turn the [POWER] switch ON. If the power still will not come on, contact your Yamaha dealer.

SLOT 1–4 [LOCK] indicators and SLOT 1–4 [SRC] indicators alternately flash red, and the unit does not start up

- The unit's hardware settings was not updated after updating the firmware. Alternatively, the unit's hardware settings may be damaged.
While holding down the SLOT 3 [SRC] key, turn the power on again to update the unit's hardware settings (page 20). If the power still will not come on, contact your Yamaha dealer.

Sound is not output

- Connect the cables properly.
- Verify that a signal is being output from the corresponding device.
- If the SLOT 1–4 [LOCK] indicator is flashing red or lit red, re-specify the correct clock.
- Is the patch of the Dante network set up correctly by Dante Controller?
- On the unit to which the RSio64-D is connected, is the word clock set in a way that is compatible with the Dante network?
- Check whether the user pattern setting is correct.
- Check whether the routing pattern selection might be incorrect.

Audio cuts out or distorts.

- Is the slot's input frequency selected correctly?
- If [SLOT] or [WCLK IN] is selected as the word clock source, change it to [DANTE]. Keep in mind that if this remedies the problem, the clocks for the Dante network and the unit will not be synced. In this case, this unit must be acting as the clock master for the Dante network. If this still does not solve the problem, check the SLOT 1–4 [LOCK] indicators and the WORD CLOCK indicators, and take the appropriate action. For details, refer to the Dante Controller User Guide available on the website.
<http://www.yamahaproaudio.com/>

Can't operate the panel

- Could panel lock be activated?

The RSio64-D is not recognized on the Dante network

- Does the Dante [UNIT ID] conflict with another Dante-compatible device made by Yamaha?
- Is the network switch working properly?
The problem may be solved by turning the network switch on again.
- Is the cable defective?
The problem may be solved by replacing the cable.

Device settings and DIP switch settings are not applied

- Turn off the power before changing the setting. If you change the setting while the power is on, the changed setting is not applied until the power is turned off and on again.

What are the computer requirements for updating the firmware?

- For information about updating the unit, refer to the firmware update guide for each product and the following website.
<http://www.yamahaproaudio.com/>

Cannot update

- The problem may be solved by disabling any antivirus software and the firewall of the computer. For other details, refer to the firmware update guide available on the website.
<http://www.yamahaproaudio.com/>

What devices should I update?

- It is necessary to update multiple devices depending on the version of each device. For details, refer to the firmware compatibility available on the website.
<http://www.yamahaproaudio.com/>

How can the Dante input and output signals be patched?

- Use Dante Controller to configure the audio routing (patching) of the Dante network. For details, refer to the Dante Controller User Guide available on the website.
<http://www.yamahaproaudio.com/>

Is it possible to receive the input signal from RSio64-D by a separate mixer?

- It can be configured using the Dante Controller. For details, refer to the Dante Controller User Guide available on the website.
<http://www.yamahaproaudio.com/>
In the case of a Yamaha CL/QL series unit, settings can be made from the I/O DEVICE screen.

I want to change the RSio64-D settings from the mixer

I want to know the devices that can remotely configure the RSio64-D

- For details on RSio64-D remote control, refer to the following website.
<http://www.yamahaproaudio.com/>

What is the latency of the Dante network?

- The latency of the Dante network can be specified using Dante Controller. For details, refer to the manuals for each product.

An internal error message such as "firmware mismatch" is displayed on the device connected to the RSio64-D.

- Make sure that each device has a compatible version. For details, refer to the firmware compatibility information available on the website.
<http://www.yamahaproaudio.com/>

Messages

Errors, warnings, and certain other types of information are displayed via the RSio64-D front panel indicators. Messages are also displayed in the Dante Controller Error Status field.

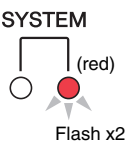
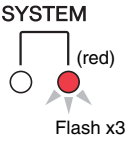
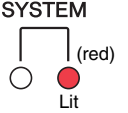
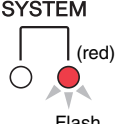
Each indicator lights or flashes as described below:

No call-out	The indicator is off.
Light	The indicator remains lit steadily.
Flash	The indicator continues to flash.
Flash x2	The indicator flashes twice cyclically.
Flash x3	The indicator flashes three times cyclically.

Error Messages

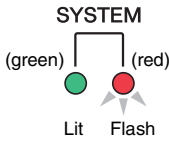
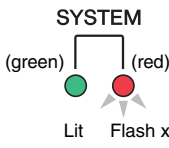
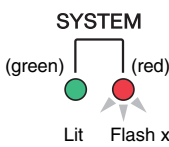
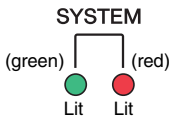
If one of the following errors has occurred, the device will not operate. Until the error is resolved, the green SYSTEM indicator will be turned off, and all indicators for all I/O channels will continue to flash.

In addition, certain errors will cause the red SYSTEM indicator to light or flash.

[SYSTEM] Indicators	Description	Possible Solution
	An internal error has occurred.	The device has failed. Contact your Yamaha dealer for repair.
	Communication cannot occur because the MAC address setting has been corrupted.	
	UNIT ID is not unique.	Set a unique UNIT ID number within the Dante network.
	The device's DIP switches are not set correctly.	Check the DIP switch settings, and set them correctly.

The following errors affect the settings or the hardware. However, the device will still be usable. The green SYSTEM indicator will light, and all indicators for all I/O channels will work normally.

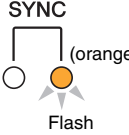
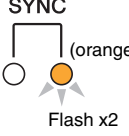
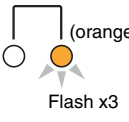
In addition, certain errors will cause the red SYSTEM indicator to light or flash.

[SYSTEM] Indicators	Description	Possible Solution
	The number of Dante transmit flows exceeded the limit.	Reduce the number of flows by, for example, using Dante Controller to change some of the transmit flows to multicast.
	The cooling fan has stopped.	Check that nothing is caught in the fan. If the problem persists, consult your Yamaha dealer.
	The internal memory has been corrupted.	When using the unit in [NORMAL] mode, if the problem persists even after turning the power off and on again, consult your Yamaha dealer.
	You changed the positions of the device setting DIP switches or rotary switch, or changed the Dante settings from Dante Controller. Therefore, the positions of the device setting DIP switches do not match the actual Dante settings.	If the Device Lock setting was enabled from Dante Controller, disable the setting, or check the device setting DIP switch positions, and set them to accommodate the current situation.

Warning Messages

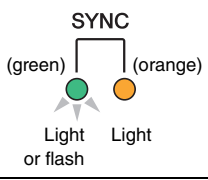
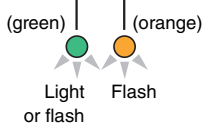
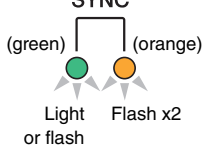
The indicators will light and/or flash as shown until the cause is resolved.

If the green [SYNC] indicator is unlit, the unit's clock is unconfirmed.

[SYNC] Indicators	Description	Possible Solution
	The word clock is not set correctly.	Set the clock master and sampling frequency correctly on the RSio64-D-native device or in Dante Controller.
	Dante Network circuit is broken.	Make sure that the Ethernet cables are not removed or short-circuited.
	Other Dante-compatible devices cannot be found due to an incorrectly-wired Dante Network.	Make sure that the Ethernet cables are connected correctly.

If the green indicator is flashing, the unit is the clock master.

If the green indicator is lit, the unit is the clock slave and the clock is synchronized.

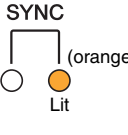
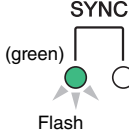
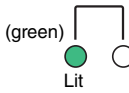
[SYNC] Indicators	Description	Possible Solution
	A non-GbE-compatible device is connected.	When transferring audio via Dante, use device that supports GbE.
	The [SECONDARY] connector has taken over communications during redundant network operation.	Check the circuit connected to the [PRIMARY] connector.
	An abnormality has occurred on the circuit connected to the [SECONDARY] connector during redundant network operation.	Check the circuit connected to the [SECONDARY] connector.

Information Messages

The indicators will remain lit and/or flashing cyclically to report the status.

If the orange [SYNC] indicator is unlit, the unit is operating normally.

If the green [SYNC] indicator is unlit, the unit's clock is unconfirmed.

[SYNC] Indicators	Description	Explanation
	Muted during startup, or in the process of synchronization.	Please wait until started has completed or until the unit has finished synchronization. It may take up to 45 seconds for completion.
	The unit is functioning correctly as the word clock master.	The unit is operating as the word clock master.
	The unit is functioning correctly as the word clock slave.	The unit is operating as the clock slave and the clock is synchronized.

Specifications

General Specifications

Sampling Frequency External Clock	Frequency Range	44.1 kHz +4.1667 %/+0.1 %/-0.1 %/-4.0 %	±200 ppm
		48 kHz +4.1667 %/+0.1 %/-0.1 %/-4.0 %	±200 ppm
		88.2 kHz +4.1667 %/+0.1 %/-0.1 %/-4.0 %	±200 ppm
		96 kHz +4.1667 %/+0.1 %/-0.1 %/-4.0 %	±200 ppm
Signal Delay	SLOT IN (MY8-AE96) to SLOT OUT (MY8-AE96) (@ fs=96 kHz, SRC off, Internal routing)		Less than 0.2 ms
	SLOT IN (MY8-AE96) to Rio3224-D AES OUT (@ fs=48 kHz, through Dante, SRC off) (Dante Receive Latency set to 0.25 ms)		Less than 0.8 ms
	SLOT IN (MY8-AE96) to Rio3224-D AES OUT (@ fs=96 kHz, through Dante, SRC off) (Dante Receive Latency set to 0.25 ms)		Less than 0.5 ms
	SLOT IN (MY8-AE96) to Rio3224-D AES OUT (@ fs=96 kHz, through Dante, SRC on, SLOT fs=48 kHz) (Dante Receive Latency set to 0.25 ms)		Less than 1.1 ms
SRC		SRC Lock Range: 39.7 kHz – 101.7 kHz Sample Rate Ratio Limit: 1:2.6 to 2.6:1	
Dimensions (W x H x D) and Net Weight		480 x 88 x 365 mm, 6.1 kg	
Power Requirements (wattage)		60 W	
Power Requirements (voltage and hertz)		100-240 V 50/60 Hz	
Temperature Range		Operating temperature range: 0 – 40 °C Storage temperature range: -20 – 60 °C	
Included Accessories		Owner's Manual, AC power cord	

Digital I/O Characteristics

Terminal	Format	Data Length	Level	Audio I/O	Connector
Primary/Secondary	Dante	24 bit or 32 bit	1000 BASE-T	64 ch Input/64 ch Output@48 kHz 32 ch Input/32 ch Output@96 kHz	etherCON CAT5e

Control I/O Characteristics

Terminal	Format	Level	Connector
WORD CLOCK IN	—	TTL/75 Ω terminated	BNC

External DC Input Characteristics

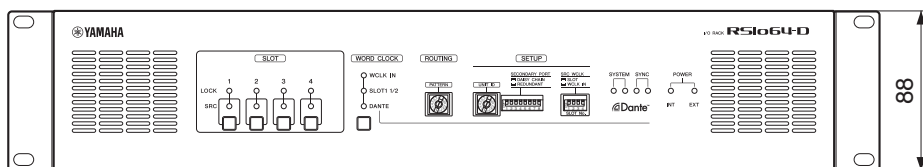
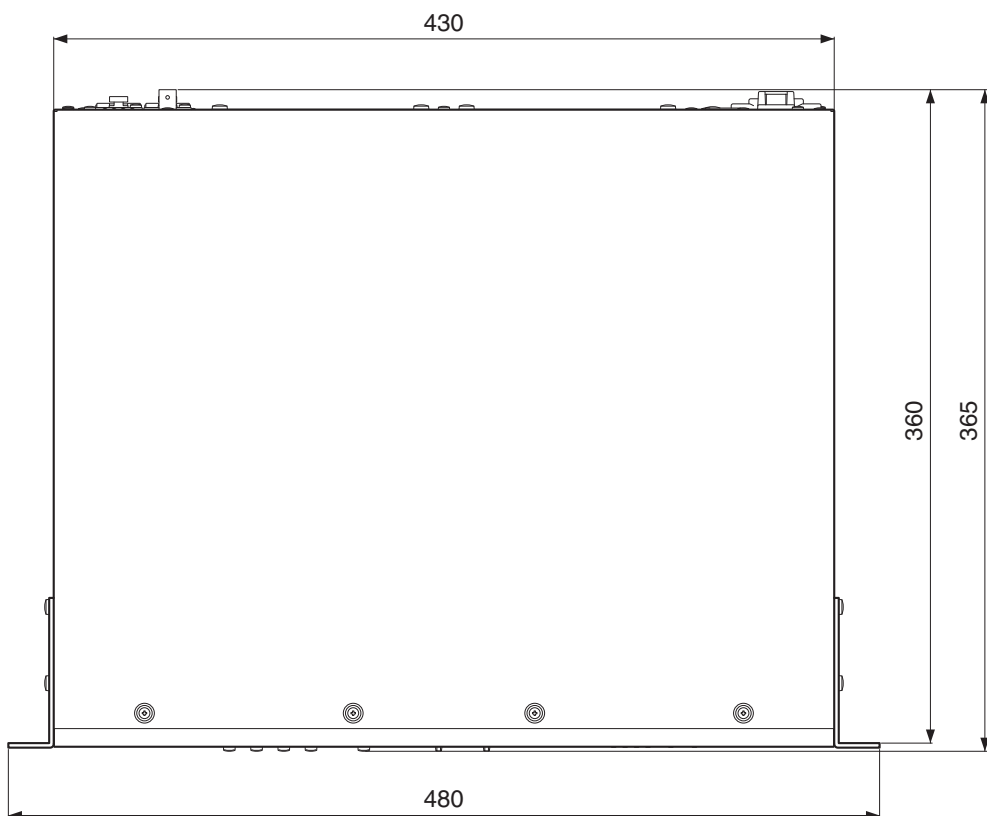
Terminal	Format	Level	Connector
EXT DC INPUT*1	—	—	XLR-4-32 type*2

*1: Power Requirements: +24V±2V, 3A

*2: 1pin=GND, 2pin=NC, 3pin=NC, 4pin=+24V

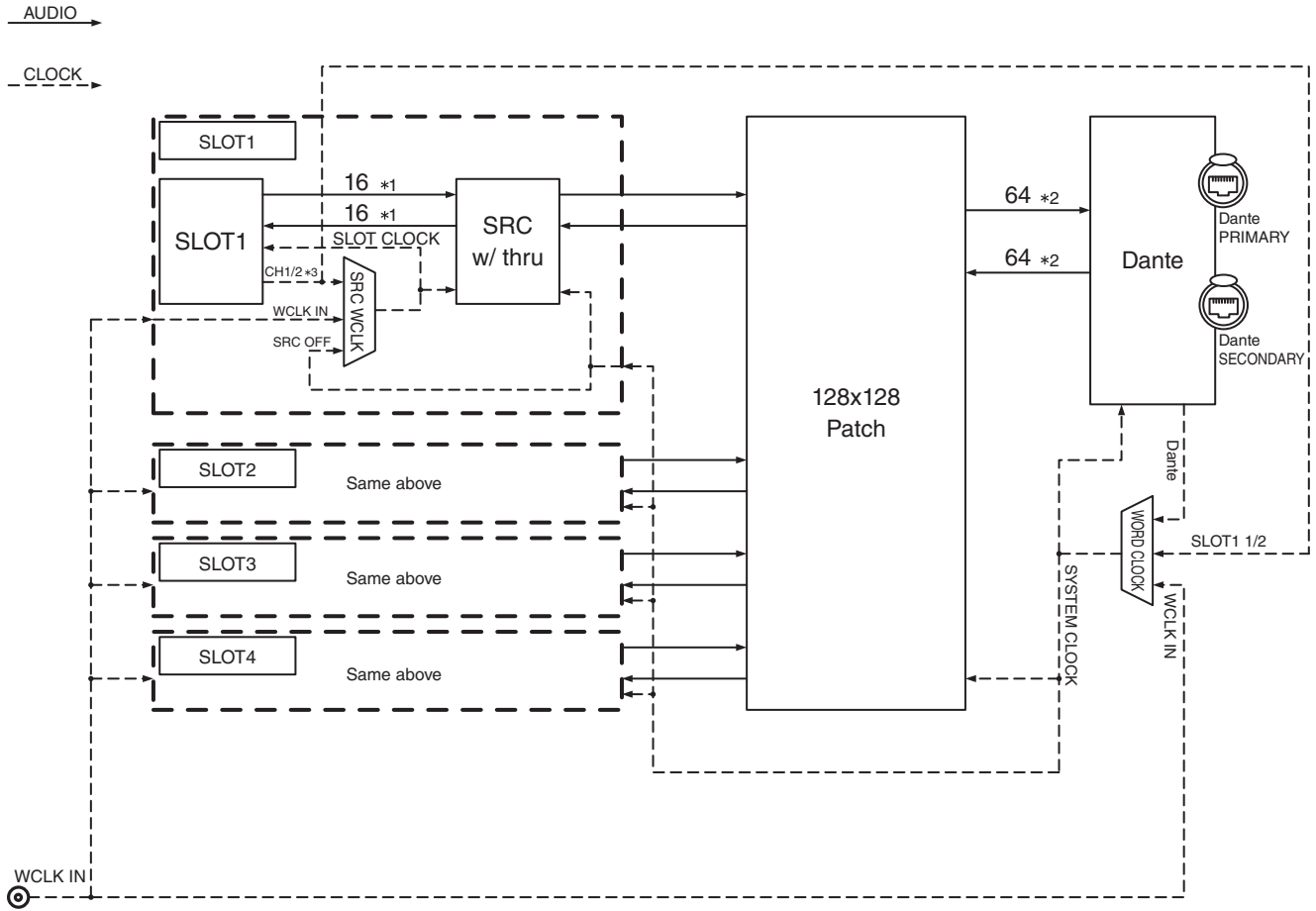
* The contents of this manual apply to the latest specifications as of the publishing date.
To obtain the latest manual, access the Yamaha website then download the manual file.

Dimensions



Unit: mm

Block Diagram



- *1 8 channels when SLOT CLOCK is 96kHz.
- *2 32 channels when SYSTEM CLOCK is 96kHz.
- *3 Channels 7/8 when using the MY8-AEB.

Important Notice: Guarantee Information for customers in European Economic Area (EEA) and Switzerland

<p>Important Notice: Guarantee Information for customers in EEA* and Switzerland</p> <p>For detailed guarantee information about this Yamaha product, and Pan-EEA* and Switzerland warranty service, please either visit the website address below (Printable file is available at our website) or contact the Yamaha representative office for your country. * EEA: European Economic Area</p>	English
<p>Wichtiger Hinweis: Garantie-Information für Kunden in der EWR* und der Schweiz</p> <p>Für nähere Garantie-Information über dieses Produkt von Yamaha, sowie über den Pan-EWR*- und Schweizer Garantieservice, besuchen Sie bitte entweder die folgend angegebene Internetadresse (eine druckfähige Version befindet sich auch auf unserer Webseite), oder wenden Sie sich an den für Ihr Land zuständigen Yamaha-Vertrieb. *EWR: Europäischer Wirtschaftsraum</p>	Deutsch
<p>Remarque importante: informations de garantie pour les clients de l'EEE et la Suisse</p> <p>Pour des informations plus détaillées sur la garantie de ce produit Yamaha et sur le service de garantie applicable dans l'ensemble de l'EEE ainsi qu'en Suisse, consultez notre site Web à l'adresse ci-dessous (le fichier imprimable est disponible sur notre site Web) ou contactez directement Yamaha dans votre pays de résidence. * EEE : Espace Economique Européen</p>	Français
<p>Belangrijke mededeling: Garantie-informatie voor klanten in de EER* en Zwitserland</p> <p>Voor gedetailleerde garantie-informatie over dit Yamaha-product en de garantieservice in heel de EER* en Zwitserland, gaat u naar de onderstaande website (u vindt een afdrukbaar bestand op onze website) of neemt u contact op met de vertegenwoordiging van Yamaha in uw land. * EER: Europese Economische Ruimte</p>	Nederlands
<p>Aviso importante: información sobre la garantía para los clientes del EEE* y Suiza</p> <p>Para una información detallada sobre este producto Yamaha y sobre el soporte de garantía en la zona EEE* y Suiza, visite la dirección web que se incluye más abajo (la versión del archivo para imprimir esta disponible en nuestro sitio web) o póngase en contacto con el representante de Yamaha en su país. * EEE: Espacio Económico Europeo</p>	Español
<p>Avviso importante: informazioni sulla garanzia per i clienti residenti nell'EEA* e in Svizzera</p> <p>Per informazioni dettagliate sulla garanzia relativa a questo prodotto Yamaha e l'assistenza in garanzia nei paesi EEA* e in Svizzera, potete consultare il sito Web all'indirizzo riportato di seguito (è disponibile il file in formato stampabile) oppure contattare l'ufficio di rappresentanza locale della Yamaha. * EEA: Area Economica Europea</p>	Italiano
<p>Aviso importante: informações sobre as garantias para clientes da AEE* e da Suíça</p> <p>Para obter uma informação pormenorizada sobre este produto da Yamaha e sobre o serviço de garantia na AEE* e na Suíça, visite o site a seguir (o arquivo para impressão está disponível no nosso site) ou entre em contato com o escritório de representação da Yamaha no seu país. * AEE: Área Económica Européia</p>	Português
<p>Σημαντική σημείωση: Πληροφορίες εγγύησης για τους πελάτες στον ΕΟΧ* και Ελλάδα</p> <p>Για λεπτομερείς πληροφορίες εγγύησης σχετικά με το παρόν προϊόν της Yamaha και την κάλυψη εγγύησης σε όλες τις χώρες του ΕΟΧ και την Ελλάδα, επισκεφτείτε την παρακάτω ιστοσελίδα (Εκτυπώσιμη μορφή είναι διαθέσιμη στην ιστοσελίδα μας) ή απευθυνθείτε στην αντιπροσωπεία της Yamaha στη χώρα σας. * ΕΟΧ: Ευρωπαϊκός Οικονομικός Χώρος</p>	Ελληνικά
<p>Viktigt: Garantiinformation för kunder i EES-området* och Schweiz</p> <p>För detaljerad information om denna Yamahaprodukt samt garantiservice i hela EES-området* och Schweiz kan du antingen besöka nedanstående webbadress (en utskriftsvänlig fil finns på webbplatsen) eller kontakta Yamahas officiella representant i ditt land. * EES: Europeiska Ekonomiska Samarbetsområdet</p>	Svenska
<p>Viktig merknad: Garantiinformasjon for kunder i EØS* og Sveits</p> <p>Detaljert garantiinformasjon om dette Yamaha-produktet og garantiservice for hele EØS-området* og Sveits kan fås enten ved å besøke nettstedene nedenfor (utskriftsversjon finnes på våre nettsider) eller kontakte Yamahas offisielle representant i landet der du bor. *EØS: Det europeiske økonomiske samarbeidsområdet</p>	Norsk
<p>Vigtig oplysning: Garantioplysninger til kunder i EØO* og Schweiz</p> <p>De kan finde detaljerede garantioplysninger om dette Yamaha-produkt og den fælles garantiserviceordning for EØO* (og Schweiz) ved at besøge det websted, der er angivet nedenfor (der findes en fil, som kan udskrives, på vores websted), eller ved at kontakte Yamahas nationale repræsentationskontor i det land, hvor De bor. * EØO: Det Europæiske Økonomiske Område</p>	Dansk
<p>Tärkeä ilmoitus: Takuutiedot Euroopan talousalueen (ETA)* ja Sveitsin asiakkaille</p> <p>Tämän Yamaha-tuotteen sekä ETA-alueen ja Sveitsin takuuta koskevat yksityiskohtaiset tiedot saatte alla olevasta nettiosoitteesta. (Tulostettava tiedosto saatavissa sivustollamme.) Voitte myös ottaa yhteyttä paikalliseen Yamaha-edustajaan. *ETA: Euroopan talousalue</p>	Suomi
<p>Ważne: Warunki gwarancyjne obowiązujące w EOG* i Szwajcarii</p> <p>Aby dowiedzieć się więcej na temat warunków gwarancyjnych tego produktu firmy Yamaha i serwisu gwarancyjnego w całym EOG* i Szwajcarii, należy odwiedzić wskazaną poniżej stronę internetową (Plik gotowy do wydruku znajduje się na naszej stronie internetowej) lub skontaktować się z przedstawicielstwem firmy Yamaha w swoim kraju. * EOG — Europejski Obszar Gospodarczy</p>	Polski
<p>Důležité oznámení: Záruční informace pro zákazníky v EHS* a ve Švýcarsku</p> <p>Podrobné záruční informace o tomto produktu Yamaha a záručním servisu v celém EHS* a ve Švýcarsku naleznete na níže uvedené webové adrese (soubor k tisku je dostupný na našich webových stránkách) nebo se můžete obrátit na zástupce firmy Yamaha ve své zemi. * EHS: Evropský hospodářský prostor</p>	Česky
<p>Fontos figyelemzetés: Garancia-információk az EGT* területén és Svájcban élő vásárlók számára</p> <p>A jelen Yamaha termékre vonatkozó részletes garancia-információk, valamint az EGT*-re és Svájcra kiterjedő garanciális szolgáltatás tekintetében keresse fel webhelyünket az alábbi címen (a webhelyen nyomtatható fájl is talál), vagy pedig lépjen kapcsolatba az országában működő Yamaha képviselői irodával. * EGT: Európai Gazdasági Térség</p>	Magyar
<p>Oluline märkus: Garantiiteave Euroopa Majanduspiirkonna (EMP)* ja Šveitsi klientidele</p> <p>Täpsema teabe saamiseks selle Yamaha toote garantii ning kogu Euroopa Majanduspiirkonna ja Šveitsi garantiiteeninduse kohta, külastage palun veebisaiti alljärgneval aadressil (meie saidil on saadaval printitav fail) või pöörduge Teie regiooni Yamaha esinduse poole. * EMP: Euroopa Majanduspiirkond</p>	Eesti keel
<p>Svarīgs paziņojums: garantijas informācija klientiem EEZ* un Šveicē</p> <p>Lai saņemtu detalizētu garantijas informāciju par šo Yamaha produktu, kā arī garantijas apkalpošanu EEZ* un Šveicē, lūdzam, apmeklējiet zemāk norādīto tīmekļa vietnes adresi (tīmekļa vietnē ir pieejams drukājams fails) vai sazinieties ar jūsu valsti apkalpojošo Yamaha pārstāvniecību. * EEZ: Eiropas Ekonomikas zona</p>	Latviešu
<p>Dēmesio: informacija dėl garantijos pirkėjams EEE* ir Šveicarijoje</p> <p>Jei reikia išsamios informacijos apie šį „Yamaha“ produktą ir jo techninę priežiūrą visoje EEE* ir Šveicarijoje, apsilankykite mūsų svetainėje toliau nurodytu adresu (svetainėje yra spausdintinas failas) arba kreipkitės į „Yamaha“ atstovybę savo šaliai. *EEE – Europos ekonominė erdvė</p>	Lietuvių kalba
<p>Dôležité upozornenie: Informácie o záruke pre zákazníkov v EHP* a Švajčiarsku</p> <p>Podrobné informácie o záruke týkajúce sa tohto produktu od spoločnosti Yamaha a garančnom servise v EHP* a Švajčiarsku nájdete na webovej stránke uvedenej nižšie (na našej webovej stránke je k dispozícii súbor na tlač) alebo sa obráťte na zástupcu spoločnosti Yamaha vo svojej krajine. * EHP: Európsky hospodársky priestor</p>	Slovenčina
<p>Pomembno obvestilo: Informacije o garanciji za kupce v EGP* in Švici</p> <p>Za podrobnejše informacije o tem Yamahinem izdelku ter garancijskem servisu v celotnem EGP in Švici, obiščite spletno mesto, ki je navedeno spodaj (natisljiva datoteka je na voljo na našem spletnem mestu), ali se obrnite na Yamahinega predstavnika v svoji državi. * EGP: Evropski gospodarski prostor</p>	Slovenščina
<p>Важно съобщение: Информация за гаранцията за клиенти в ЕИП* и Швейцария</p> <p>За подробна информация за гаранцията за този продукт на Yamaha и гаранционното обслужване в паневропейската зона на ЕИП* и Швейцария или посетете посочения по-долу уеб сайт (на нашия уеб сайт има файл за печат), или се свържете с представителния офис на Yamaha във вашата страна. * ЕИП: Европейско икономическо пространство</p>	Български език
<p>Notificare importantă: Informații despre garanție pentru clienții din SEE* și Elveția</p> <p>Pentru informații detaliate privind acest produs Yamaha și serviciul de garanție Pan-SEE* și Elveția, vizitați site-ul la adresa de mai jos (fișierul imprimabil este disponibil pe site-ul nostru) sau contactați biroul reprezentanței Yamaha din țara dumneavoastră. * SEE: Spațiul Economic European</p>	Limba română

<http://europe.yamaha.com/warranty/>

ADDRESS LIST

NORTH AMERICA

CANADA

Yamaha Canada Music Ltd.
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