



DCU5D

DIGITAL CABLING UNIT

Owner's Manual

Bedienungsanleitung

Mode d'emploi

Manual de instrucciones

Manuale di istruzioni

Gebruikershandleiding

使用说明书

取扱説明書



English

Deutsch

Français

Español

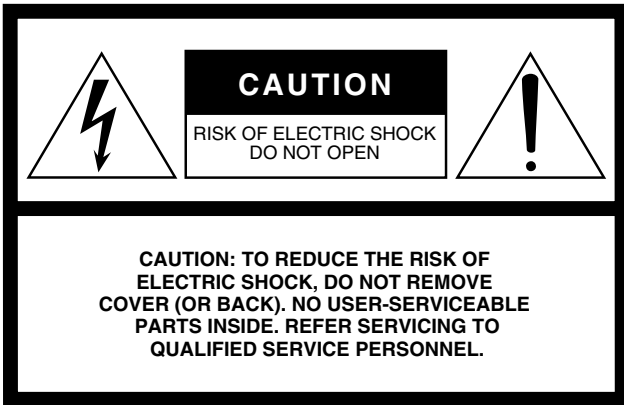
Italiano

Nederlands

中文

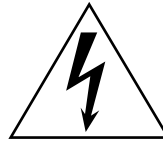
日本語

EN
DE
FR
ES
IT
NL
ZH
JA



The above warning is located on the top of the unit.

Explanation of Graphical Symbols



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.

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.

(98-6500)

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)

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  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.

• This applies only to products distributed by Yamaha-Kemble Music (U.K.) Ltd. (3 wires)

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

- 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 included power cord .
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.
- 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.
- Be sure to connect to an appropriate outlet with a protective grounding connection. Improper grounding can result in electrical shock.

Do not open

- Do not open the device or attempt to disassemble the internal parts or modify them in any way. The device contains no user-serviceable parts. 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 containers on it containing liquids which might spill into any openings.
- Never insert or remove an electric plug with wet hands.

If you notice any abnormality

- If the power cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the device, or if any unusual smells or smoke should appear to be caused by it, immediately disconnect the electric plug from the outlet, and have the device inspected by qualified Yamaha service personnel.
- If this device should be dropped or damaged, immediately 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

- Remove the electric plug from the outlet when the device is not to be used for extended periods of time, or during electrical storms.
- 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.

Location

- Before moving the device, remove all connected cables.
- This device does not have a power switch. When setting up the device, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately disconnect the plug from the outlet. When you are not using the product for a long time, make sure to unplug the power cord from the wall AC outlet.
- Normally, multiple units of this model can be rack-mounted next to each other, but if they are to be rack-mounted with other devices that dissipate large amounts of heat, you must take measures such as allowing space between these units and the heat-producing devices. These units may not perform to their fullest potential if the average temperature inside the rack exceeds 40 degrees C (when the external air temperature exceeds 30 degrees C). In order to prevent excessive temperatures inside the rack, a fan kit with a capacity of 1.6 m³/minute or more and static pressure of 5 mm H₂O or more should be installed in the top row of the rack.

- Do not expose the device to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.
- Do not place the device in an unstable position where it might accidentally fall over.
- Do not use the device in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Doing so may result in noise, both in the device itself and in the TV or radio next to it.

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.

Handling caution

- Do not insert your fingers or hands in any gaps or openings on the device.
- Avoid inserting or dropping foreign objects (paper, plastic, metal, etc.) into any gaps or openings on the device. If this happens, immediately 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.

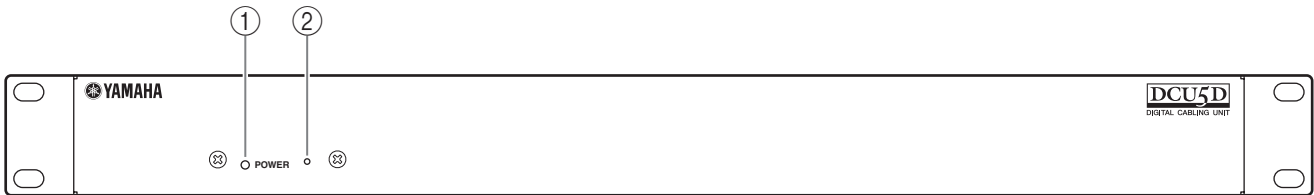
Yamaha cannot be held responsible for damage caused by improper use or modifications to the device, or data that is lost or destroyed.

The performance of components with moving contacts, such as switches, volume controls, and connectors, deteriorates over time. Consult qualified Yamaha service personnel about replacing defective components.

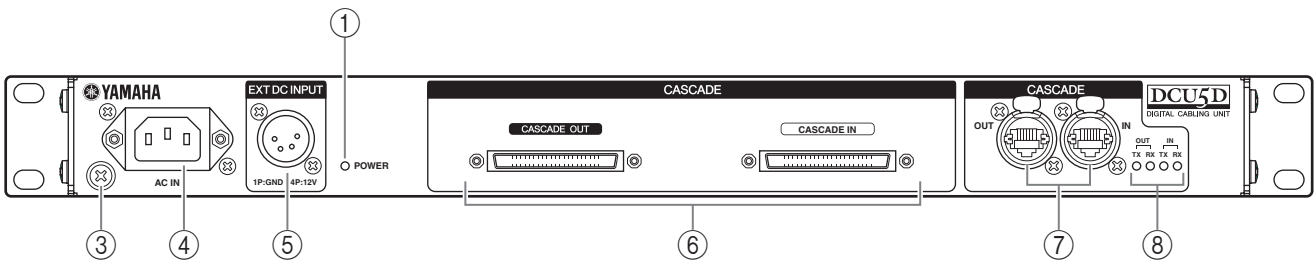
- The illustrations as shown in this Owner's Manual are for instructional purposes only, and may appear somewhat different from those on your instrument.
- Ethernet is a trademark of Xerox Corporation.
- EtherSound is a registered trademark of Digigram S.A.
- The company names and product names in this Owner's Manual are the trademarks or registered trademarks of their respective companies.

Part Names and Functions

Front Panel



Rear Panel



① [POWER] Indicator

This indicator lights up when power is supplied to the DCU5D.

NOTE:

This device does not have a power switch.

② Mode switch

Use this mode switch to update the firmware in the future. Do not press this switch if not necessary.

③ Ground screw

To ensure safe operation, be sure to ground the DCU5D securely. The included power cord has a three-prong plug that will ground the unit when plugged into an appropriately grounded three-prong type AC mains outlet. If the AC outlet is not grounded, be sure to ground the unit by using this ground screw.

④ [AC IN] connector

Connect the included power cord here. First, connect the power cord to the DCU5D, then insert the power cord plug into an AC outlet.



*Be sure to use the included power cord.
Use of other cords may result in malfunction,
overheating, or fire.*

⑤ [EXT DC INPUT] connector

This is an XLR-4-32-type connector for supplying external power (+12V) to back up the DCU5D internal power supply. For details, refer to page 22.

⑥ [CASCADE IN][CASCADE OUT] connectors

These are D-sub half-pitch 68-pin connectors that connect the CASCADE connectors of the PM5D via a dedicated cascade cable.

NOTE:

The DCU5D is a cabling unit exclusively for the PM5D and the DSP5D. A Yamaha DME64N can be connected only via the PM5D and the DSP5D.

⑦ [CASCADE IN][CASCADE OUT] connectors

These are RJ-45 connectors that connect the DSP5D via an Ethernet CAT5 cable. See page 21 for system examples, or refer to the PM5D Owner's Manual for details.

NOTE:

- Use a CAT5 STP (Shielded Twisted Pair) cable to prevent electromagnetic interference.
- These connectors use EtherSound technology, but can not be connected to other EtherSound devices. They are used exclusively for cascade connection of the PM5D and the DSP5D. For more details on the length of available cables, refer to the following website.
<http://www.ethersound.com/technology/compatibility.php>

⑧ IN/OUT[TX][RX] indicators

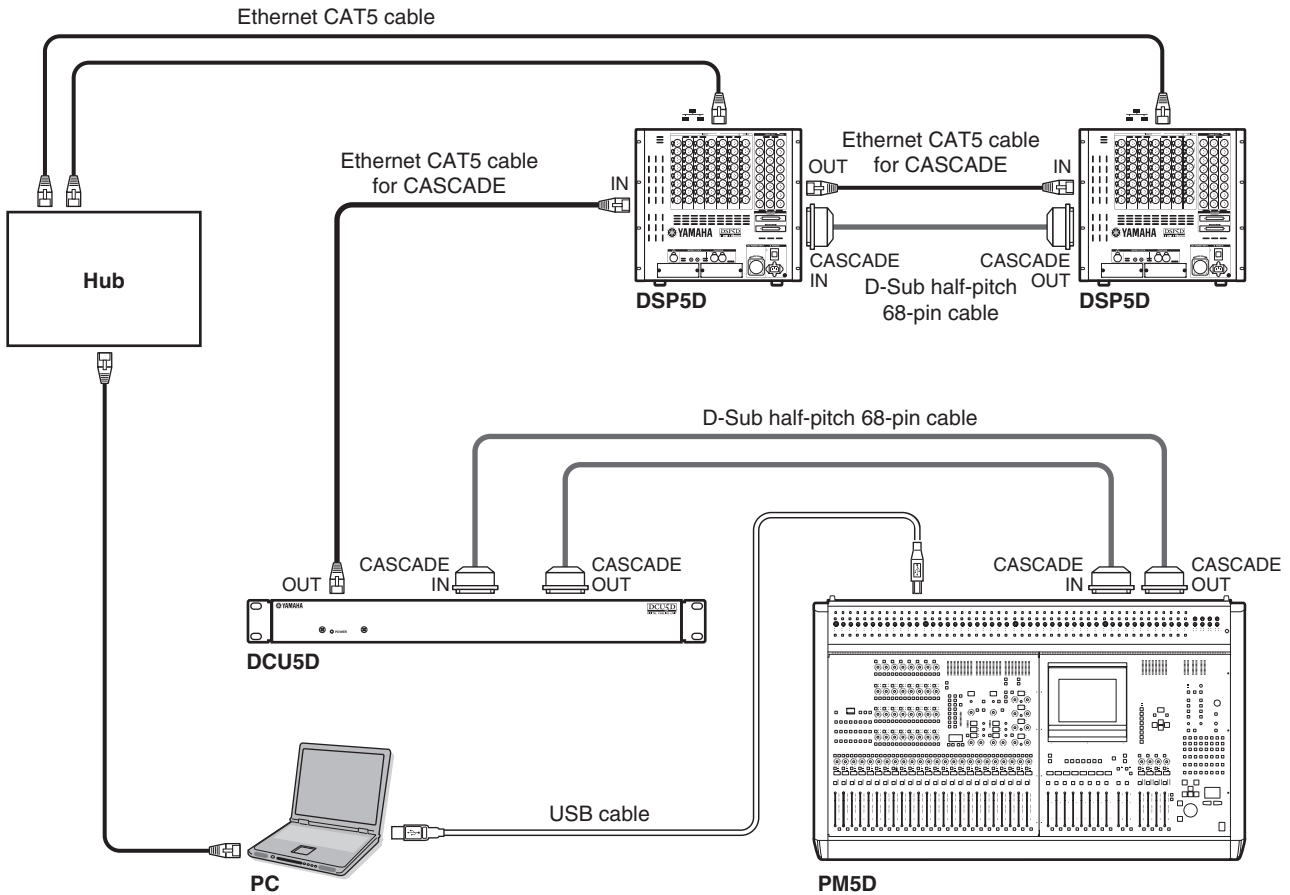
Each indicator blinks when [CASCADE IN] [CASCADE OUT] connectors described in item ⑦ transmit (TX) / receive (RX) signals.

Accessories

- Owner's Manual
- AC power cord

System Example

In this system a DCU5D unit is used to extend the distance between a PM5D unit and a DSP5D unit using an Ethernet CAT5 cable.



Appendix

General Specifications

Sampling Frequency	Normal Rate : 42.9975-49.200 kHz Double Rate : 85.995-98.400 kHz
Power Requirements	12 W
Dimensions	480 x 150 x 44 mm (W x D x H)
Net Weight	2.3 kg
Temperature Range	Operation free-air : +10°C to +35°C Storage : -20°C to +60°C
AC Power Cord Length	250 cm
Accessories	Owner's Manual, AC power cord

I/O Characteristics

Terminal		Level	Connector
CASCADE	IN	RS422	D-Sub Half Pitch Connector 68P(Female)
	OUT		
CASCADE	IN	100Base-TX	RJ-45* ¹
	OUT		
EXT DC INPUT* ²		DC	XLR-4-32 type* ³

- *1. • Use a RJ-45 connector compliant with Neutrik EtherCon®.
 • Use a CAT5 STP (Shielded Twisted Pair) cable compliant with EtherSound.
 • Use electrically conductive tape to securely connect the metal part of the connector with the shielded part of the cable in order to prevent electromagnetic interference.

*2. max.:+15V, min.:+11.4V, 1.5A

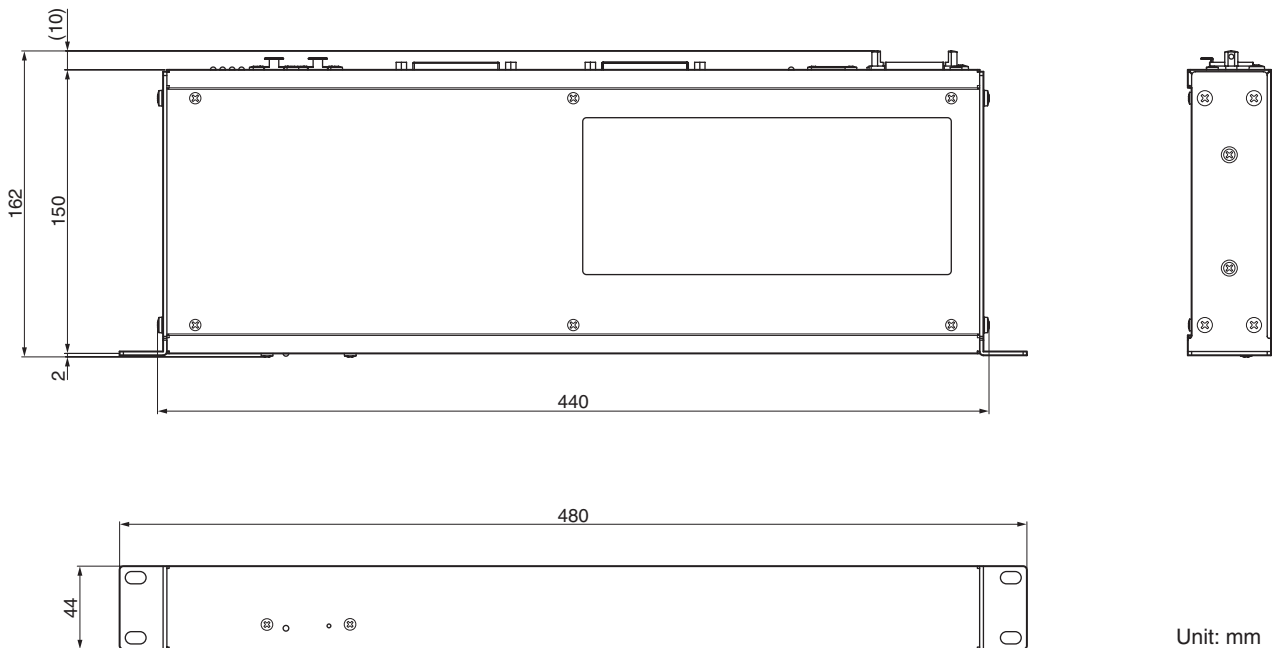
*3. 4pin=12V, 1pin = GND

Connector Pin Assignment

EXT DC INPUT

Pin No.	Signal Name
1	GND
2	N.C
3	N.C
4	+12V

Dimensions



* Specifications and descriptions in this owner's manual are for information purposes only. Yamaha Corp. reserves the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your Yamaha dealer.

European models

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

Inrush Current: 13A

Conforms to Environments: E1, E2, E3 and E4

NORTH AMERICA

CANADA

Yamaha Canada Music Ltd.
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U.S.A.
Tel: 714-522-9011

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Yamaha de México S.A. de C.V.
Calz. Javier Rojo Gómez #1149,
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Subroto Kav. 4, Jakarta 12930, Indonesia
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