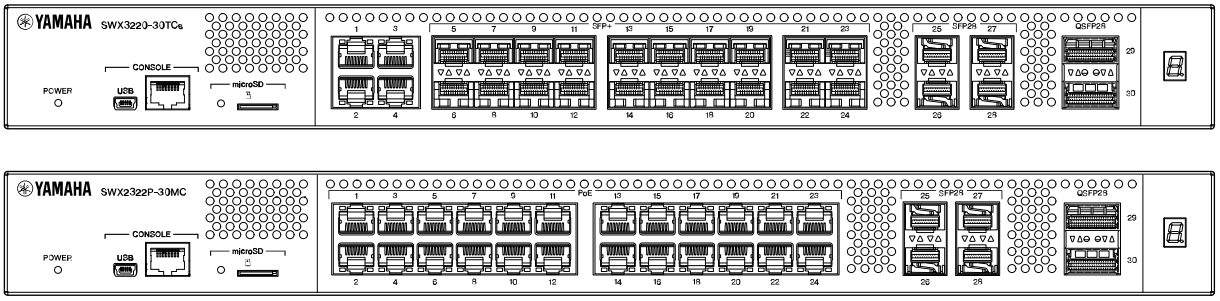
L3 Switch
SWX3220-30TCs
L2 Switch
SWX2322P-30MC

User Guide



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1. Introduction

1.1. Product Features

- **“SWX3220-30TCs”**
  This 30-port standard L3 switch inherits the functions of the “SWX3220 series”. It supports high-speed, large-capacity communications. It also offers scalability with 100-Gbps stacking support, and high fault tolerance with redundant power supplies and hot-swapping support. You can use this product as a core switch or distribution switch that supports the infrastructure network.
  This product supports various ProAV profiles, and you can easily switch the settings using the DIP switches on the back of the product. It also supports IEEE 1588 PTPv2 BC (Boundary Clock). This switch can be used for IP-based video and audio transmission in broadcasting stations and live streaming facilities where high-precision media synchronization is required.

- **“SWX2322P-30MC”**
  This 30-port intelligent L2 switch inherits the functions of the “SWX2320 series”. It supports high-speed, large-capacity communications. You can use this product as a floor switch that handles the access layer of the infrastructure network.
  This product supports various ProAV profiles, and you can easily switch the settings using the DIP switches on the back of the product. It also supports IEEE 1588 PTPv2 TC (Transparent Clock). This switch can be used for IP-based video and audio transmission in audio systems at amusement facilities and event venues.
  This switch supports PoE++ (IEEE 802.3bt) power supply. This switch can supply stable power to wireless LAN access points and network cameras in the infrastructure network, and to video and audio encoder/decoder devices in the professional audio work scene, eliminating the need for individual power wiring for each device and allowing for more flexible installation of the devices.

1.2. Included items

Verify that the following included items are present.

- Read Me First: 1
- Power cord: 1
- [SWX2322P-30MC]
  Power cord clamp (only for the included power cord): 1
  Use this when plugging in the power cord. For details on installation, refer to “Connecting the power cord”.
- [SWX3220-30TCs]
  Power cord retainer (only for the included power cord): 1
  This part is already attached to the release handle at the factory. Use this when plugging in the power cord. For details on installation of the power cord, refer to “Connecting the power cord”.
- Rubber foot: 4
  These parts are required for placing the unit on a level surface. For details on installation, refer to “Placing the unit on a level surface”.
- 19-inch rack mount hardware: 2
  These parts are required for installing this product in a 19-inch rack (1U size). For details on installation, refer to “Installing in a 19-inch rack”.
- Rack mount hardware installation screws (flat-headed, diameter: 3.0 mm, length: 8.0 mm): 8
  These parts are required for installing this product in a 19-inch rack (1U size). For details on installation, refer to “Installing in a 19-inch rack”.

- Dust cover (for SFP28 slots and SFP+ slots)
  - [SWX3220-30TCs]: 24 pieces
  - [SWX2322P-30MC]: 4 pieces
    These parts are already attached to the SFP28 slots and SFP+ slots (only for the SWX3220-30TCs) at the factory. Leave these dust covers on all ports to which cables will not be connected, to protect the unit from dust getting inside.
- Dust cover (for QSFP28 slots): 2
  These parts are already attached to the QSFP28 slots at the factory. Leave these dust covers on all ports to which cables will not be connected, to protect the unit from dust getting inside.
- [SWX3220-30TCs] Power supply unit: 1
  This unit is already installed in the power supply unit slot at the factory. For details on replacement, refer to "Adding and replacing a power supply unit [SWX3220-30TCs]".
- [SWX3220-30TCs] Slot cover: 1
  This part is already attached to the power supply unit slot at the factory. For slots without a power supply unit, leave the slot cover attached.

1.3. Optional accessories

- SFP module: YSFP-G-SXA, YSFP-G-LXA, SFP-SWRG-SX, SFP-SWRG-LX
  Standards supported: 1000BASE-SX, 1000BASE-LX
  These modules are required for connecting optical fiber cables.
  Install them to the SFP+ slots. For details on installation, refer to "Installing an SFP module".
- SFP module: YSFP-10G-SR, YSFP-10G-LR, SFP-SWRT-SR, SFP-SWRT-LR
  Standards supported: 10GBASE-SR, 10GBASE-LR
  These modules are required for connecting optical fiber cables.
  Install them to the SFP+ slots. For details on installation, refer to "Installing an SFP module".
- SFP module: YSFP-25G-SR, YSFP-25G-LR
  Standards supported: 25GBASE-SR, 25GBASE-LR
  These modules are required for connecting optical fiber cables.
  Install them to the SFP28 ports. For details on installation, refer to "Installing an SFP module".
- Direct attach cable: YDAC-10G-3M, YDAC-10G-1M, DAC-SWRT-3M, DAC-SWRT-1M
  By directly connecting between SFP+ ports on Yamaha products, you can create a 10-Gigabit Ethernet environment at low cost.
  For details on attaching the cable, refer to "Installing a direct attach cable".
- Active optical cable: YAOC-25G-1M
  By directly connecting between SFP28 slots on Yamaha products, you can perform 25-Gbps communication.
  For details on attaching the cable, refer to "Installing an active optical cable".
- Active optical cable: YAOC-100G-1M
  By directly connecting between QSFP28 slots on Yamaha products, you can perform 100-Gbps communication.
  This cable is also used as a connection cable when the stack function is used.
  For details on the stack function, refer to "Making stack connections". For details on attaching the cable, refer to "Installing an active optical cable".
- RJ-45 console cable: YRC-RJ45C
  This cable is required for making a serial connection between the RJ-45 CONSOLE port and a terminal connector (D-sub 9-pin port) on a computer or other device.

- Power supply unit: YPSU-550W-AC
  Install this unit to add redundancy to the power supply of the SWX3220-30TCs.
  For details on installation, refer to “Adding and replacing a power supply unit [SWX3220-30TCs]”.

For details on optional accessories, refer to the websites listed below.

Yamaha Pro Audio Global Website
https://www.yamahaproaudio.com/

1.4. Website information

Optional accessories, Read Me First, user guide, command reference, and technical references are available on the following website:

Yamaha Pro Audio Global Website
https://www.yamahaproaudio.com/

1.5. Manual information

The following manuals are provided to match various usage scenarios for this product. Refer to the appropriate manual according to your needs.

- Read Me First (Paper)
  This document contains precautions for using this product. Read this document before using the product.
- User Guide (This guide)
  This document contains how to install, connect, and configure this product.
- Command reference (available on the Yamaha website)
  This document contains the command formats and usage examples for configuring this product.
- Technical reference (available on the Yamaha website)
  This document contains detailed information about the functions of this product.
- Help contents for the “Web settings screens”
  These contents give you detailed explanations of each setting item.

1.6. Conventions used in this guide

- Copying or reproduction of this guide in whole or in part is expressly forbidden without the written consent of the manufacturer.
- The explanations in this guide are based on current product specifications as of the date of publication. The latest version of this document can be downloaded from the Yamaha website.
- All illustrations and screens included in this guide are for the purpose of explanation.
- Company names and product names in this guide are abbreviated as follows.
  - Yamaha switches SWX3220-30TCs and SWX2322P-30MC: This product
  - 100BASE-TX, 1000BASE-T, 2.5GBASE-T, 5GBASE-T, and 10GBASE-T cables: LAN cable
- Other company names and product names in this document are the registered trademarks or trademarks of their respective corporate owners.
  - Microsoft and Windows are registered trademarks of Microsoft Corporation in the USA and other countries.
  - Dante™ is a registered trademark of Audinate Pty Ltd.
  - NDI® is a registered trademark of Vizrt NDI AB.
  - SDVoE™ and the SDVoE logo are trademarks of the SDVoE Alliance.
  - ADECIA is a registered trademark of Yamaha Corporation.

- The symbols listed in this guide and their contents are as follows.

Warning
Refers to a situation that poses the risk of death or serious injury to the user.

Caution
Refers to a situation that poses the risk of injury to the user.

Caution
Refers to information that the user must comply with to avoid product malfunction, damage, faulty operations or loss of data.

Important
Refers to information that the user must know to properly operate and use this product.

Note
Refers to information regarding the operation and use of this product. Read this for your reference.

- Certain models in this guide are referred to as follows.

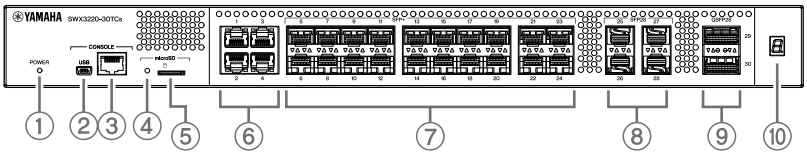
Notation	Content
[SWX3220-30TCs]	Indicates information related only to the SWX3220-30TCs.
[SWX2322P-30MC]	Indicates information related only to the SWX2322P-30MC.

- For the console display, the display with the SWX3220-30TCs is used as an example, except where noted.

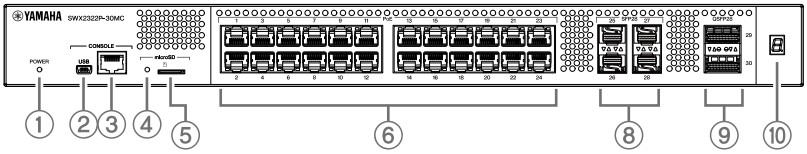
2. Controls and connectors

2.1. Front panel

【SWX3220-30TCs】



【SWX2322P-30MC】



① POWER indicator

Lights when power is supplied to the unit.

POWER indicator	Status
Unlit	Power OFF
Flashing (green)	Power ON, starting up
Lit (green)	Power ON, normal
Lit (orange)	Power ON, error occurred

Caution

When one of the following errors is detected, the POWER indicator lights up orange.

Check the detected error and handle as appropriate.

Use the “`show environment`” command to check the temperature and fan status.
For details on the commands, refer to “Command reference” (available on the Yamaha website).

- Fan stopped
  The fan that blows hot air out of the unit has stopped. Stop using this product immediately and contact the dealer where you purchased this product to have the unit inspected and/or repaired.
- Internal temperature error
  The internal temperature of the unit is abnormal. Review the environment in which this unit is installed, and correctly install this unit so that the internal temperature is at an appropriate level.
- Corrupted configuration storage area
  Configuration information cannot be correctly read at startup. Contact the dealer where you purchased this product to have the unit inspected and/or repaired.

② mini-USB CONSOLE port

This is a mini-USB port used when making settings. Use a USB cable to connect it to the USB port of your computer. Use a USB cable equipped with a USB Type A connector and a USB mini-B (5-pin) connector.

Important

- Use a cable that supports data transfer. Charge-only cables cannot be used.

③ RJ-45 CONSOLE port

This is an RJ-45 port used when making settings. Use an RJ-45/DB-9 console cable to connect it to the RS-232C connector (COM port) of your computer.

④ microSD indicator

Indicates the connection and usage status of the microSD card.

microSD indicator	Status
Unlit	A microSD card is not inserted in the slot.
Flashing (green)	A microSD card is being accessed.
Lit (green)	A microSD card is inserted.

Caution

- Do not remove the microSD card if this indicator is flashing green.
  If you do, your data may become corrupt.

⑤ microSD slot

Insert a microSD card into this slot.

⑥ LAN ports

These ports support 100BASE-TX/1000BASE-T/2.5GBASE-T/5GBASE-T/10GBASE-T communications. The LAN ports of the SWX2322P-30MC supports PoE power supply (IEEE 802.bt). The ports are compatible with IEEE 802.3az Energy Efficient Ethernet (EEE) for low-power ethernet communications (low power consumption mode). For details on the low power consumption mode settings, refer to “Command reference” (available on the Yamaha website).

⑦ SFP+ ports [SWX3220-30TCs]

These ports support 1000BASE-SX/1000BASE-LX/10GBASE-SR/10GBASE-LR communications.

Install a SFP module or attach a direct attach cable (sold separately) to these ports.

For details on compatible products, refer to “Optional accessories”.

For details on installation, refer to “Installing an SFP module”.
For details on attaching a direct attach cable, refer to “Installing a direct attach cable”.

⑧ SFP28 slot

These slots support 1000BASE-SX/1000BASE-LX/10GBASE-SR/10GBASE-LR/25GBASE-SR/25GBASE-LR communications.
Install a SFP module, or attach a direct attach cable or active optical cable (sold separately) to these slots.

For details on compatible products, refer to “Optional accessories”.

For details on installation, refer to “Installing an SFP module”.

For details on attaching a direct attach cable, refer to “Installing a direct attach cable”.
For details on attaching an active optical cable, refer to “Installing an active optical cable”.

⑨ QSFP28 slot

These slots support 100GBASE-SR4/100GBASE-LR4 communications.
Attach the active optical cable YAOC-100G-1M (sold separately) to these slots. For details on attaching the cable, refer to “Installing an active optical cable”.
These slots are also used for making stack connections. For details on stack connections, refer to “Making stack connections”.

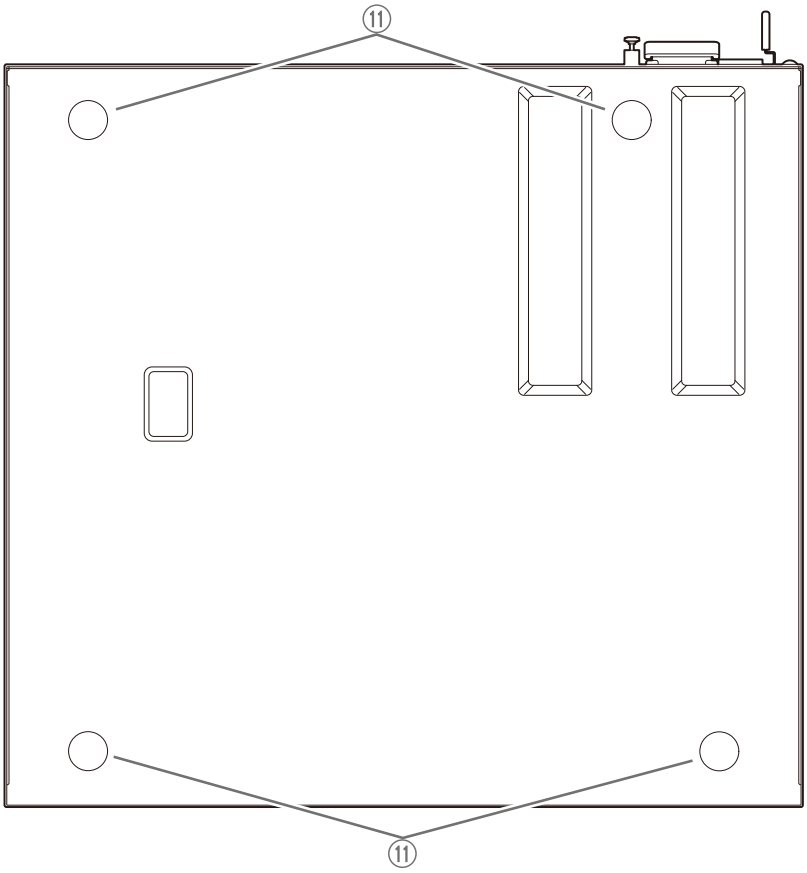
⑩ Stack ID display indicator

This indicates the stack ID when stack connection is used.

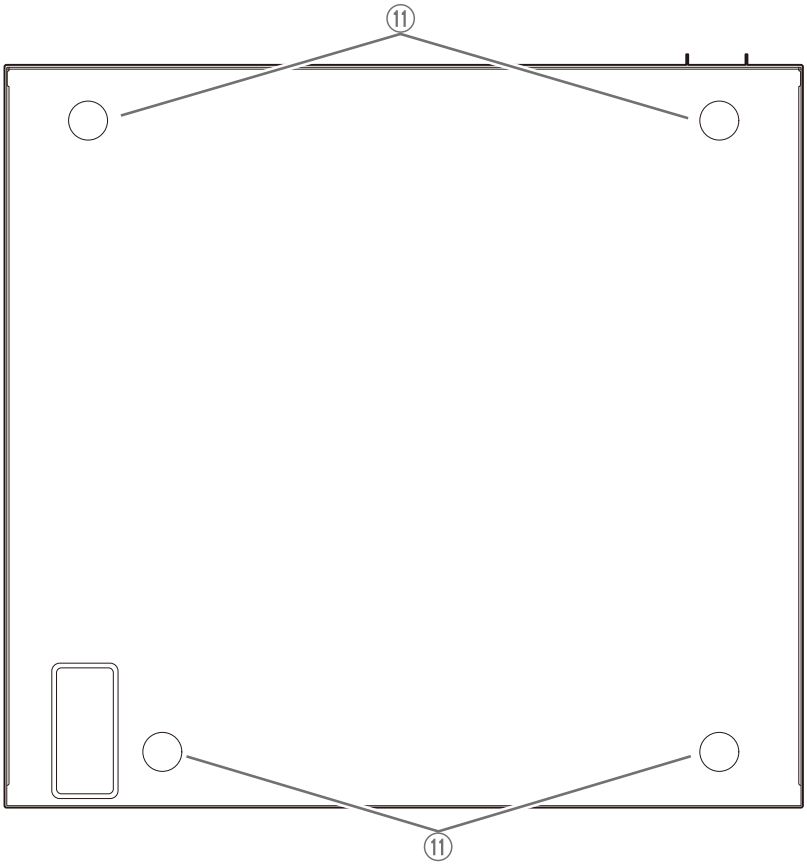
When not using a stack connection, “1” is shown.
If the stack architecture has failed, “E” is shown.

2.2. Bottom panel

【SWX3220-30TCs】



【SWX2322P-30MC】

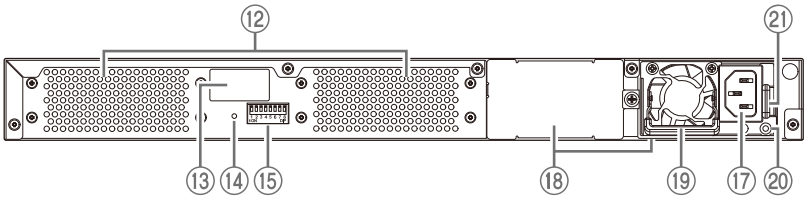


⑪ Rubber foot attachment guides

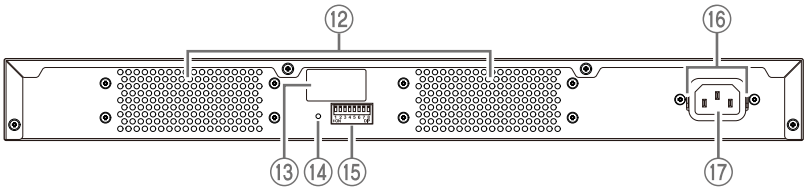
These are the locations where the rubber feet are to be attached when placing the unit on a level surface. For details on installation, refer to “Placing the unit on a level surface” in “Installation”.

2.3. Rear panel

【SWX3220-30TCs】



【SWX2322P-30MC】



⑫ Cooling vents

The built-in fan forces out the hot air generated inside the unit.

Warning

- Do not block the cooling vents or place objects near them. Doing so could cause fire or malfunctions.

⑬ Serial number, Device ID

The same information is also indicated on the product label on the top of the product.

⑭ Initialize button

This button initialize the settings of the unit. For initialization procedures, refer to “Restoring to the factory-set defaults using the initialize button on the product’s main unit”.

⑮ DIP switch

Select the preset settings (ProAV profile) optimized for various AV over IP networks, which will be called when this unit is started up from the initial state. For details, refer to “Selecting default settings”.

⑯ Power cord clamp attachment holes [SWX2322P-30MC]

The included power cord clamp (C-shaped) can be attached here. For details on installation, refer to “Connecting the power cord” in “Connections”.

⑰ Power supply inlet (three-prong connector, C14 type)

Insert the included power supply cord here.

⑱ Power supply unit slots (SLOT1, SLOT2) [SWX3220-30TCs]

These slots are used for installing a dedicated power supply unit. Up to two power supply units can be installed. When the product is shipped from the factory, a power supply unit is installed in SLOT1 and a slot cover is attached to SLOT2.
For details on installing a power supply unit, refer to “Adding and replacing a power supply unit [SWX3220-30TCs]” in “Connections”.

⑲ Release handle [SWX3220-30TCs]

Use this handle when installing or removing a power supply unit. Also, use the power cord retainer attached to the handle to secure the power cord in place.

⑳ Power supply unit indicator [SWX3220-30TCs]

Indicates the status of the power supply units.

Power supply unit indicator	Status
Unlit	The unit is not receiving power.
Lit (green)	The power supply unit is operating normally.
Flashing (green)	The power supply unit is not correctly recognized.
Flashing (orange)	The power supply is experiencing a minor problem but is still providing power.
Lit (orange)	The corresponding power supply unit is not receiving power. Or, the power supply has stopped due to an abnormality in the power supply unit.

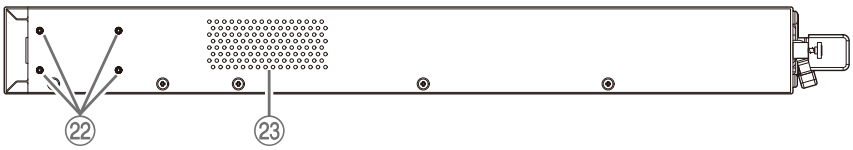
The status of the power supply unit can be checked using the "`show power-supply`" command. For details on the commands, refer to "Command reference" (available on the Yamaha website).

㉑ Release latch [SWX3220-30TCs]

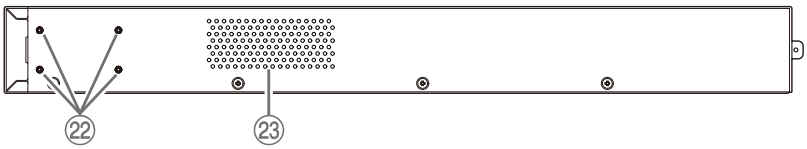
Use this latch to remove the power supply unit.

2.4. Side panel

【SWX3220-30TCs】



【SWX2322P-30MC】



㉒ Rack mount accessory attachment holes

These are used when installing this product in a 19-inch rack (1U). For details on installation, refer to “Installing in a 19-inch rack” in “Installation”.

㉓ Cooling vents

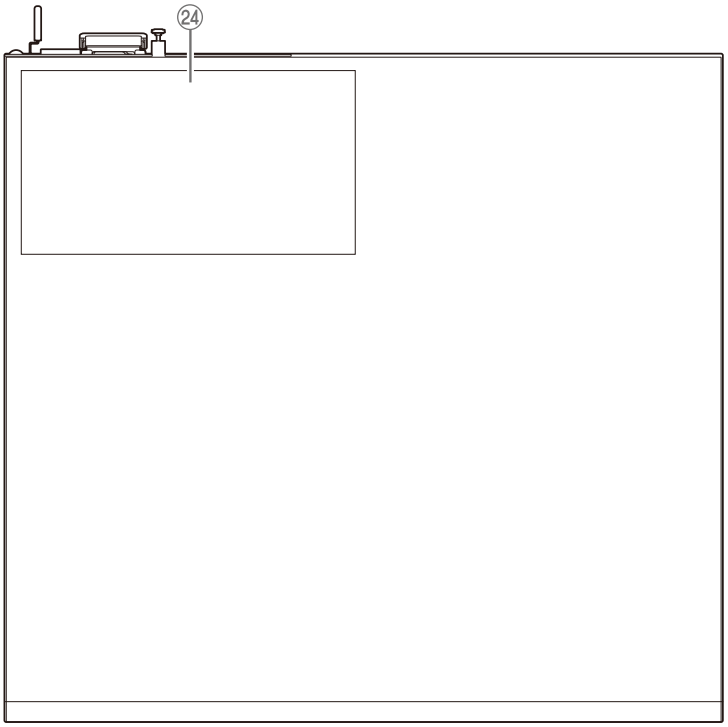
The built-in fan draws in outside air to cool the unit.

Warning

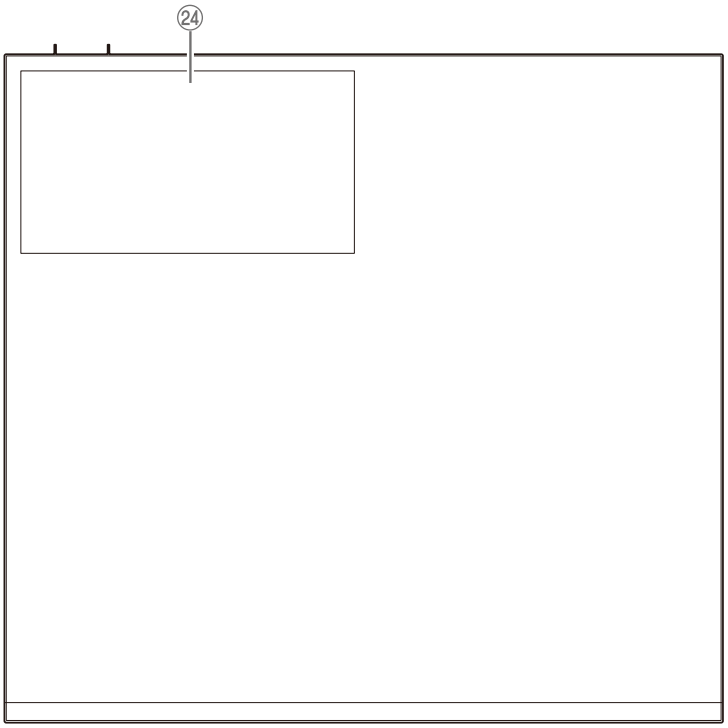
- Do not block the cooling vents or place objects near them. Doing so could cause fire or malfunctions.

2.5. Top

【SWX3220-30TCs】



【SWX2322P-30MC】



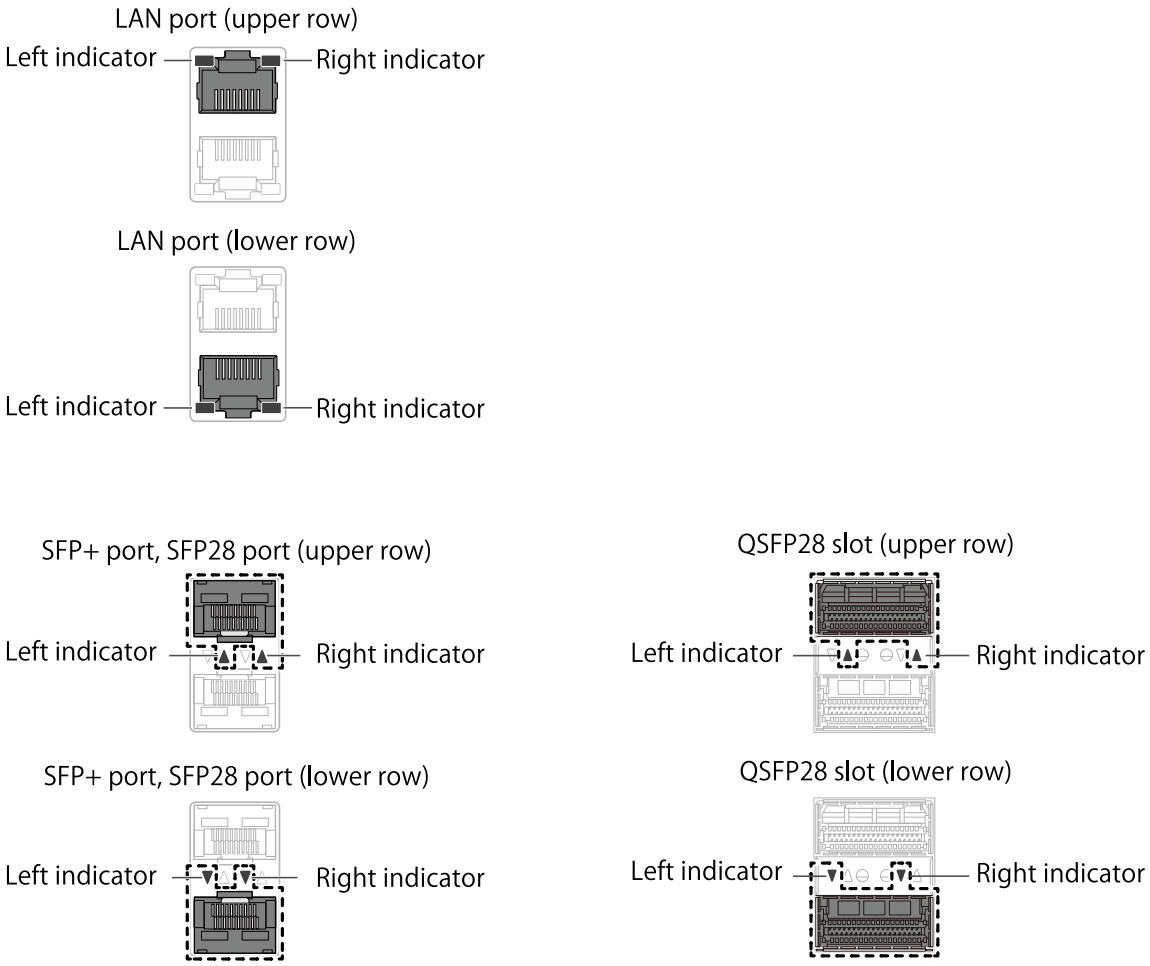
㉔ Product label

This label lists the model name, serial number, MAC address, Device ID, etc. of this product.

Note
The size and content of the product label vary depending on the model.

2.6. Port indicators

Each port has an indicator that shows its status.



Each indicator operates according to the following modes:

In normal state

You can choose the operation the following display modes: The display mode can be set with the "`led-mode default`" command. For instructions on how to switch the modes, refer to "Switching the port indicator display mode".
You can check the current display mode with the "`show led-mode`" command. For details, refer to "Command reference" (available on the Yamaha website).

Display mode	Description
LINK/ACT mode	Shows the link status and connection speed of the LAN ports or SFP+ ports.
PoE mode [SWX2322P-30MC]	Shows the power supply status of the LAN port.
OFF mode	Turns off the port indicator.

When an abnormality occurs

If an abnormality occurs, the normal display will switch to STATUS mode.

2.6.1. Normal display

LINK/ACT mode

Shows the link status and connection speed of the LAN ports or SFP+ ports.

LAN port

Left indicator	Link status
Unlit	The link is lost (unavailable).
Lit (green)	The link is established (available).
Flashing (green)	Data is being transferred.

Right indicator	Connection speed
Unlit	Not connected or connected by 100BASE-TX.
Lit (orange)	Connected by 1000BASE-T.
Lit (green)	Connected by 2.5GBASE-T, 5GBASE-T, or 10GBASE-T.

SFP+ port

Left indicator	Link status
Unlit	The link is lost (unavailable).
Lit (green)	The link is established (available).
Flashing (green)	Data is being transferred.

Right indicator	Connection speed
Unlit	Not connected.
Lit (orange)	Connected by 1000BASE-SX or 1000BASE-LX.
Lit (green)	Connected by 10GBASE-SR or 10GBASE-LR.

SFP28 port

Left indicator	Link status
Unlit	The link is lost (unavailable).
Lit (green)	The link is established (available).
Flashing (green)	Data is being transferred.

Right indicator	Connection speed
Unlit	Not connected.
Lit (orange)	Connected by 1000BASE-SX, 1000BASE-LX, 10GBASE-SR, or 10GBASE-LR.
Lit (green)	Connected by 25GBASE-SR or 25GBASE-LR.

QSFP28 port

Left indicator	Link status
Unlit	The link is lost (unavailable).
Lit (green)	The link is established (available).
Flashing (green)	Data is being transferred.

Right indicator	Connection speed
Unlit	Not connected.
Lit (green)	Connected by 100GBASE-SR4 or 100GBASE-LR4.

PoE mode [SWX2322P-30MC]

Shows the power supply status of the LAN port.

Left indicator	Power supply status
Unlit	No power is being supplied.
Lit (green)	Power is being supplied.

OFF mode

The indicators on the LAN ports, SFP+ ports, SFP28 ports, QSFP28 ports, and Stack ID display indicator go dark.

2.6.2. Display when an abnormality occurs (STATUS mode)

When one of the following errors is detected, the unit switches to STATUS mode (mandatory) to show the error status.

- Loop detection
- SFP light reception level error detection
- Detection of PoE power supply stoppage or powered device error [SWX2322P-30MC]

Once all errors are resolved, the display mode will automatically return to the one set by the "`led-mode default`" command.

LAN port

Left indicator	Right indicator	Status
Unlit	Unlit	Operating normally.
Flashing (orange)	Unlit	A loop was detected, blocking or shutting down the port.
Lit (orange)	Unlit	[SWX2322P-30MC] Since there is an abnormality in the powered device, no power is being supplied.
Unlit	Flashing (orange)	[SWX2322P-30MC] Power supply to this port has been stopped because the total power supply limit of this product has been exceeded. The total power supply exceeds the guard band, so the number of power supply terminals cannot be increased. For the total power supply capacity of this product, refer to the maximum power supply capacity in "Hardware specifications" in the "Read Me First" included with this product. For details on guard band operation, refer to "Technical reference" for this product (available on the Yamaha website).
Unlit	Lit (orange)	[SWX2322P-30MC] Power supply has been stopped because the output power of the port has exceeded the maximum power supply per port. The maximum power supply per port varies depending on the power consumption class of the powered device connected.

SFP+ port

Left indicator	Status
Unlit	Operating normally.
Flashing (orange)	A loop was detected, blocking or shutting down the port. Or, an SFP light reception level error was detected.

For details, refer to "Technical reference" for this product (available on the Yamaha website).

Note

- You can check the cause of the error using the "`show error port-led`" command. You can also check the port status using the "`show interface`" command. For details on the commands, refer to "Command reference" (available on the Yamaha website).
- When all errors have been resolved, the unit automatically switches to the LED mode at startup.

2.6.3. Switching the port indicator display mode

Use the “`led-mode default`” command to switch the display mode setting (LINK/ACT mode, PoE mode, or OFF mode).

Note

- This section explains what happens when switching from LINK/ACT mode to OFF mode. This assumes that you have logged in using the steps in “Logging in from a computer connected to the CONSOLE port” or “Logging in to this unit using a Telnet client”.

1. Type “`enable`” and press the [Enter] key.
   You are now in privileged EXEC mode.

```
SWX3220>enable
SWX3220#
```

2. Type “`configure terminal`” and press the [Enter] key.
   The unit switches from command input mode to global configuration mode.

```
SWX3220#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
SWX3220(config)#
```

3. Type “`led-mode default off`” and press the [Enter] key.
   The unit switches to OFF mode.

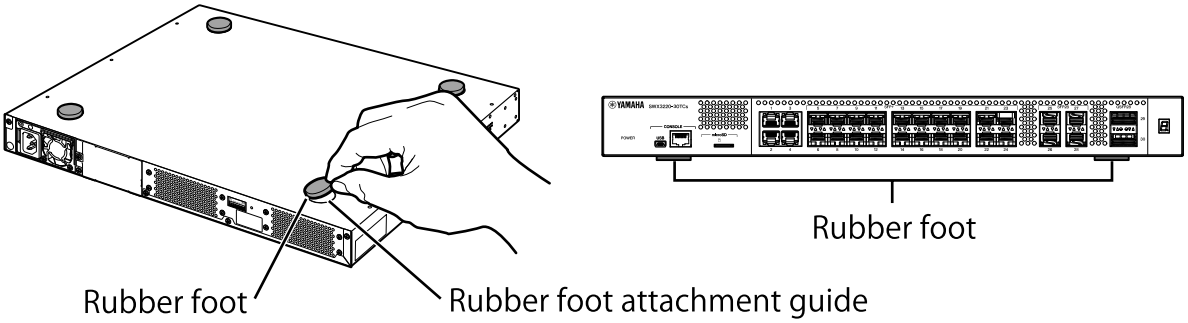
```
SWX3220(config)#led-mode default off
SWX3220(config)#exit
SWX3220#
```

The settings are now completed.

3. Installation

3.1. Placing the unit on a level surface

Attach the included rubber feet on the rubber foot attachment guides as shown in the illustration, and press on them firmly so that they do not peel off. Afterwards, place the unit on a level surface, such as on top of a desk.

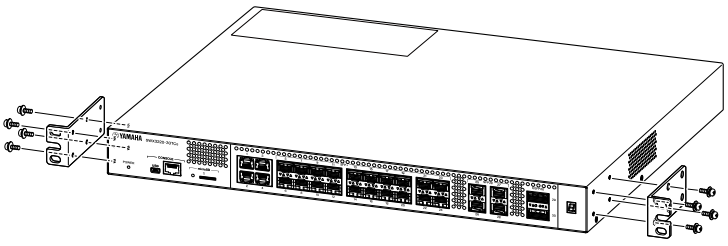


Caution

- Make sure to attach the rubber feet when the unit is placed on a level surface. Failure to do so could cause fire or burns.

3.2. Installing in a 19-inch rack

This unit fits in a 19-inch rack mount (1U size). When installing the unit in a 19-inch rack, attach the included rack mount hardware (2 pcs.) using the included screws (8 pcs., small flathead, diameter: 3.0 mm, length: 8.0 mm) to secure it in place. Use a screwdriver to firmly tighten the screws.



Warning

- When installing or removing this unit, you must disconnect the unit's power plug from the power outlet. Failing to do so could cause electrical shock or malfunctions.
- Make sure to use the included 19-inch rack mount hardware and screws. If the unit falls, you may be injured or the unit may become damaged. This could also cause electric shock or malfunctions.
- Do not block the fan's cooling vents on the front, side, and back of this unit. Doing so could cause fire or malfunctions.

Caution

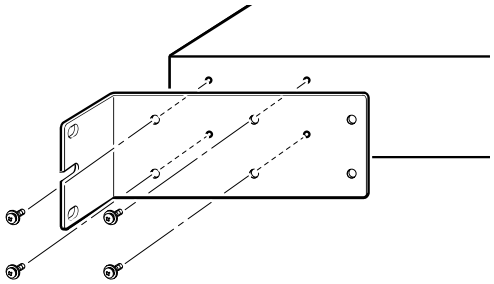
- If the rack cabinet has a door, install this product using "Method B" below to ensure that the door does not interfere with communication cables or the power cord connected to the main unit.

Important

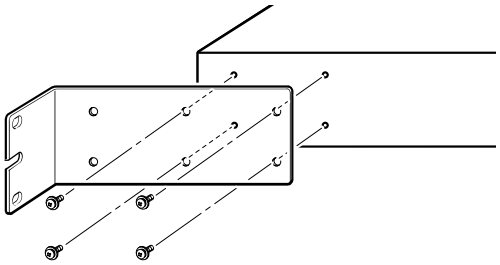
- Screws for fastening this unit to the 19-inch rack are not included.

The 19-inch rack mount hardware can be attached to this unit using either of the following two methods.

Method A: Attach the 19-inch rack mount hardware so that its rack screw surface is flush with the front panel of this unit.
This method is the usual installation method.



Method B: Install the unit 4 cm deeper than method A.
If the 19-inch rack has a door, install this unit in a recessed position so that LAN cables inserted into the front panel of the unit do not touch the door of the rack.

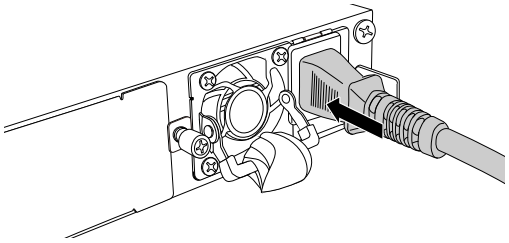


4. Connections

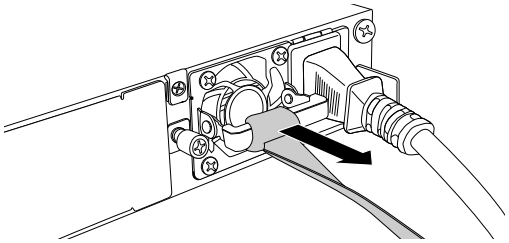
4.1. Connecting the power cord

4.1.1. Connecting the power cord [SWX3220-30TCs]

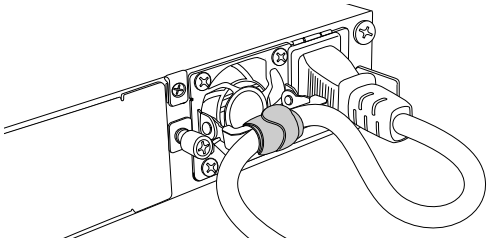
1. Connect the included power cord to the power supply inlet.



2. Pull out the power cord retainer attached to the release handle.



3. Wrap the power cord retainer around the power cord and secure it in place as illustrated below.
   Wrap the power cord retainer around the power cord and release handle several times.



4. Connect the power cord to an electrical outlet.
   The POWER indicator lights up green.

Caution

If the POWER indicator is lit orange, one of the following errors has occurred. Check the error situation and deal with it appropriately.

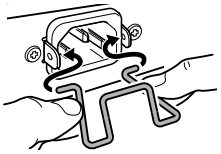
- Fan stopped
  Stop using this product immediately and contact the dealer where you purchased this product to have the unit inspected and/or repaired.
- Internal temperature error
  Review the environment in which this unit is installed, and correctly install this unit so that the internal temperature is at an appropriate level.
- Corrupted configuration storage area
  Configuration information cannot be correctly read at startup. Contact the dealer where you purchased this product to have the unit inspected and/or repaired.

Important

- This unit does not have a power switch. The power turns on when you insert the plug of the power cord connected to this unit into a power outlet.

4.1.2. Connecting the power cord [SWX2322P-30MC]

1. Attach the included power cord clamp.
   To prevent accidental disconnection of the power cord, insert the included power cord clamp into the power cord clamp holes to secure the power cord.

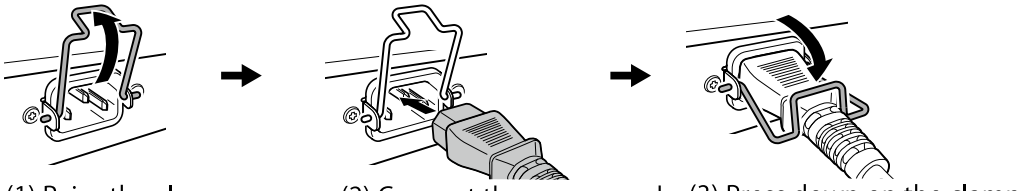


Insert the clamp into the holes of the unit from the inside.

Caution

- The included power cord clamp is only for the included power supply cord.
- If you use the clamp for other power cords aside from that which was included, the cord might be damaged or might not be properly secured.

2. Connect the included power cord to the power supply inlet, and secure it with the clamp.



(1) Raise the clamp. (2) Connect the power cord. (3) Press down on the clamp to secure the power cord.

3. Connect the power cord to an electrical outlet.
   The POWER indicator lights up green.

Caution

If the POWER indicator is lit orange, one of the following errors has occurred. Check the error situation and deal with it appropriately.

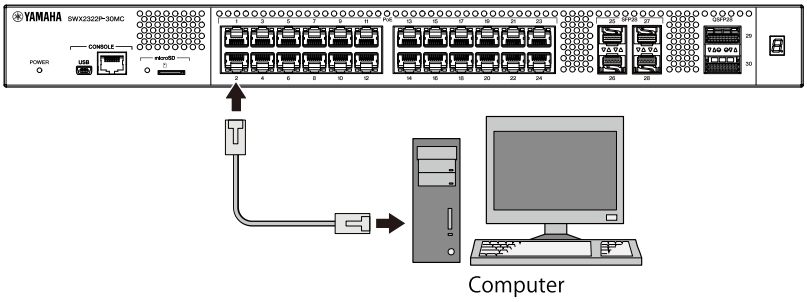
- Fan stopped
  Stop using this product immediately and contact the dealer where you purchased this product to have the unit inspected and/or repaired.
- Internal temperature error
  Review the environment in which this unit is installed, and correctly install this unit so that the internal temperature is at an appropriate level.
- Corrupted configuration storage area
  Configuration information cannot be correctly read at startup. Contact the dealer where you purchased this product to have the unit inspected and/or repaired.

Important

- This unit does not have a power switch. The power turns on when you insert the plug of the power cord connected to this unit into a power outlet.

4.2. Connecting to a network device or computer

Using LAN cables, connect the LAN port of the network device or computer to the LAN ports of this unit.



When using fiber optic cables to make connections, install an appropriate SFP module in the SFP+ port. For details on installation, refer to “Installing an SFP module”.

Referring to the following table, use cables that are compatible with the port’s link speed.

Link speed	Cables to use	Maximum transmission distance (*)
100BASE-TX/1000BASE-T	Enhanced category 5 or higher	100 m
2.5GBASE-T	Enhanced category 5 or higher	100 m
5GBASE-T	Enhanced category 5 or higher	100 m
10GBASE-T	Category 6	55 m
	Category 6A	100 m

* The maximum transmission distance is a theoretical value. The maximum transmission distance may be shorter depending on the surrounding noise conditions.

Caution

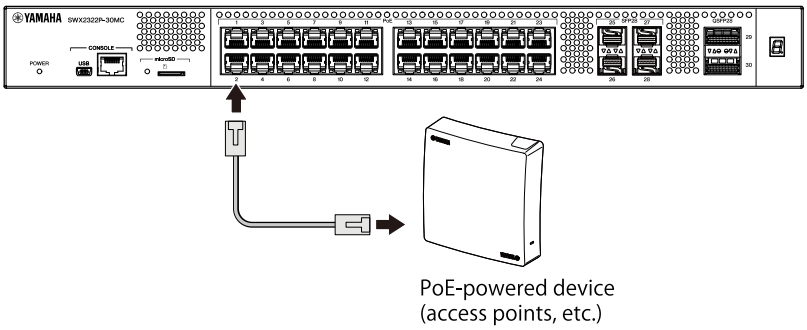
- To ensure security when connecting this unit to the Internet, connect via a router or similar device. Also, make sure that an appropriate password is set on that device. Do not connect this unit directly to the line (including a public LAN) from your telecommunications provider (such as a mobile or landline-based communications company, Internet provider or the likes).
- The LAN ports and the RJ-45 CONSOLE port all use the same 8-pin connector. Improper connections may cause hardware damage or malfunction. Use care when making connections.

Note

- When the initial LED display mode is set to “LINK/ACT” mode, you will be able to check the connection status between the network device and your computer. For details on switching between modes or on the connection status, refer to “Switching the port indicator display mode” and “Port indicators”.

4.3. Connecting a PoE-powered device [SWX2322P-30MC]

Using a LAN cable that is being powered by PoE, connect the LAN port of the PoE-powered device to the LAN port of this unit.



Warning

- Do not use a LAN cable that does not support PoE to connect this product to a PoE-powered device.
  Connecting a non-compliant cable or a flat or slim cable may cause a fire or malfunction.
- Do not bundle a large number of LAN cables while they are being powered by PoE.
  The temperature of the bundled parts will rise, which may cause fire, malfunction, or failure.
  Limit the number of cables bundled together to avoid exceeding the temperature rating of the cables.

Note

- By switching the port indicator display to PoE mode, you can check the power supply status of the PoE-powered device. For details, refer to “Port indicators”.

4.4. Installing an SFP module

You can install an SFP module (sold separately) to the SFP+ slot or SFP28 slot of this product.

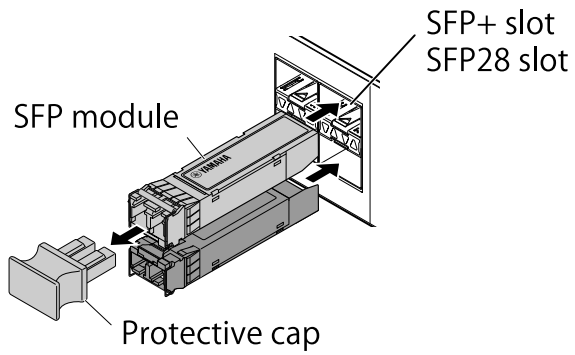
Caution

- Attach the dust covers onto the ports that are not in use. Failing to do so could allow foreign objects to enter, causing malfunctions. When you take the dust covers off, keep them in a safe place to avoid misplacing them.

Note

- For details on compatible SFP modules, refer to the corresponding item in "Optional accessories".
- If you are using a 25GBASE-SR or 25GBASE-LR compatible SFP module for 25-Gbps communication, insert it into the SFP28 slot.
- When installing the module, also refer to the instruction manual supplied with each module.

1. Remove the dust cover attached on the slot of this unit, and insert the SFP module.



Note

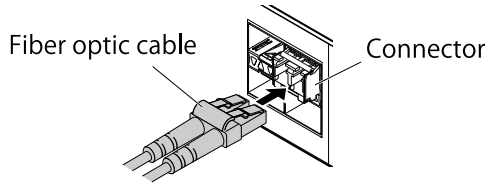
- Since this unit supports hot-swapping, an SFP module can be installed without turning the power off.

2. Remove the protective cap from the SFP module.
   The protective cap is used to protect the connector of the SFP module. When you take the protective caps off, keep them in a safe place to avoid misplacing them. Also, be sure to attach protective caps to any SFP modules that are not connected to cables.

Caution

- Do not look into the optical emitter (connector section) when installing an SFP module. The separately-sold SFP modules are class 1 laser devices. They may emit laser beams invisible to the eye. If a laser beam enters your eye, your eyesight might be damaged.

3. Connect a fiber optic cable that is suitable for each module to the connector of the SFP module.



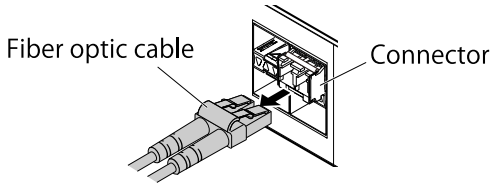
4.5. Removing an SFP module

Follow the steps below to remove the SFP module from this product.

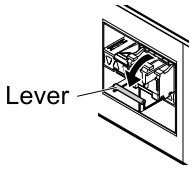
Note

- When removing the SFP module, also refer to the instruction manual supplied with the module.

1. Detach the fiber optic cable.



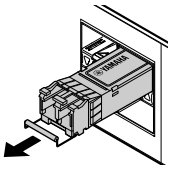
2. Pull out the lever on the SFP module.
   If the SFP module is connected to the upper row of ports, lower the SFP module's lever. If it is connected to the lower row of ports, raise the lever.



Caution

- Do not look into the optical emitter (connector section) when installing an SFP module. The separately-sold SFP modules are class 1 laser devices. These devices may emit laser beams invisible to the eye. If a laser beam enters your eye, your eyesight might be damaged.

3. Grasp the lever and pull out the SFP module.



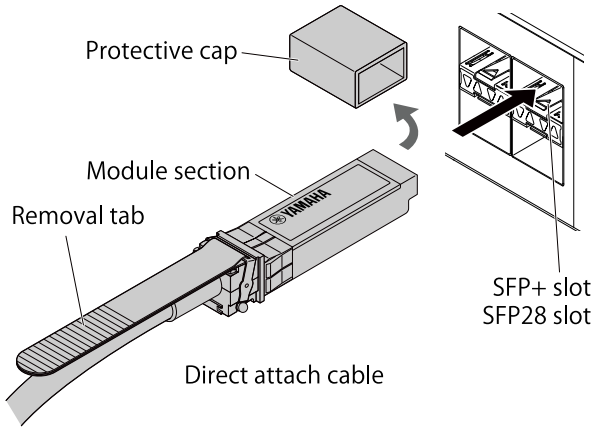
Note

- Since this unit supports hot-swapping, an SFP module can be removed without turning the power off.

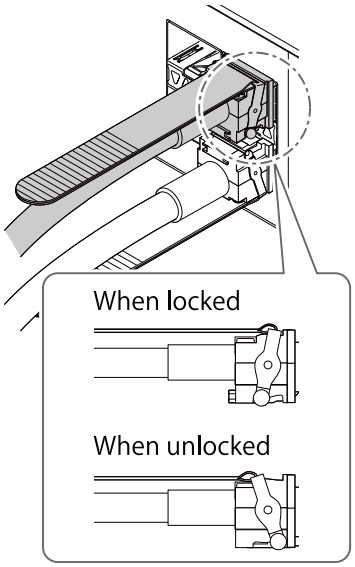
4.6. Installing a direct attach cable

You can attach a direct attach cable to the SFP+ slot or SFP28 slot of this product.

1. Remove the dust cover attached to the slot, and remove the protective cap on the module section of the direct attach cable.



2. Grasp the module section of the direct attach cable, and insert it firmly into the SFP+ slot or SFP28 slot of this unit.



Caution

- When making a stack connection using a direct attach cable, make sure that the grounding for the connected devices is at the same potential.
  Connecting two devices with different grounding potentials may cause malfunctions or device failure.
- Attach the dust covers onto the slots that are not in use. Failing to do so could allow foreign objects to enter, causing malfunctions. When you take the dust covers off, keep them in a safe place to avoid misplacing them.

Note

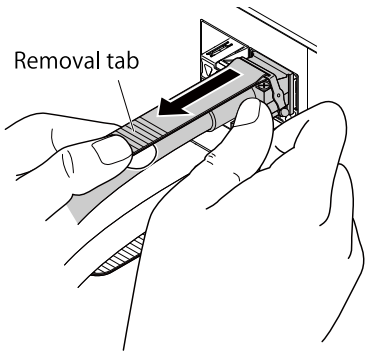
- Since this product supports hot-swapping, a direct attach cable can be attached without turning the power off.

- When attaching the direct attach cable, also refer to the instruction manual supplied with each cable.

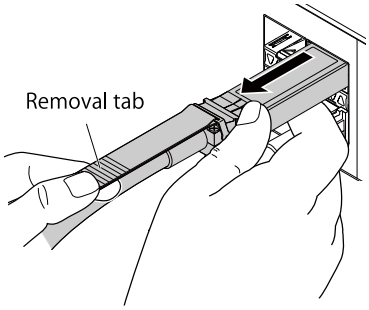
4.7. Removing a direct attach cable

Remove the direct attach cable attached to the SFP+ slot or SFP28 slot of this product.

1. While using one hand to push the module section of the direct attach cable inward, use the other hand to pull the removal tab toward yourself, disengaging the lock.



2. When the lock disengages, continue pulling the removal tab and slowly pull out the module section.



Caution

- Pulling out the direct attach cable may sometimes be difficult. Refer to the steps above to properly disconnect it. Straining or forcibly pulling out the cable may damage this product or the direct attach cable.

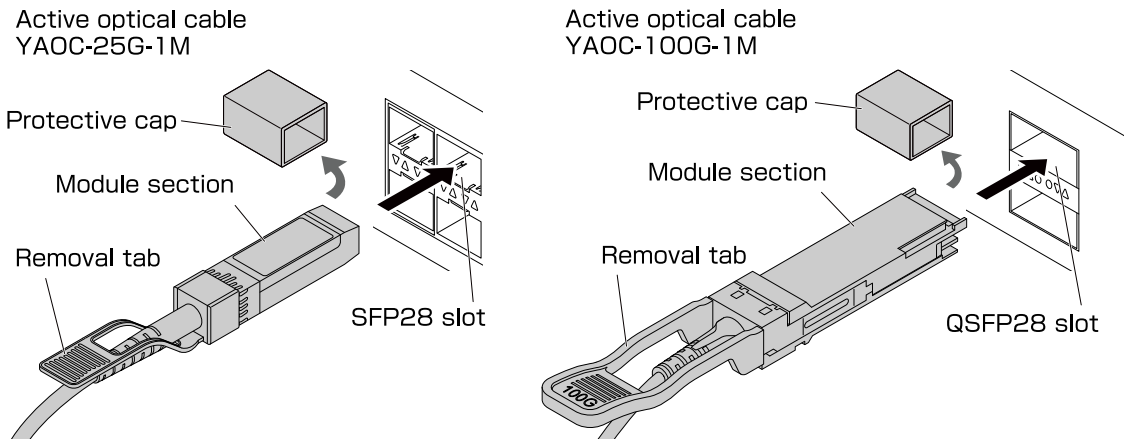
Note

- Since this product supports hot-swapping, a direct attach cable can be removed without turning the power off.
- When removing the direct attach cable, also refer to the instruction manual supplied with each cable.

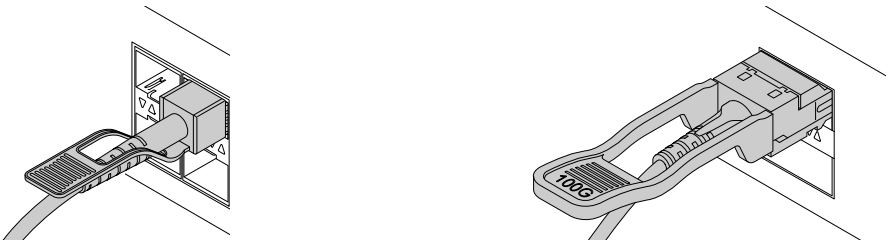
4.8. Installing an active optical cable

You can attach the YAOC-25G-1M active optical cable (sold separately) to the SFP28 slot of this product. Additionally, you can attach the YAOC-100G-1M active optical cable (sold separately) to the QSFP28 slot.

1. Remove the dust cover attached to the slot, and remove the protective cap on the module section of the active optical cable.



2. Hold the module section of the active optical cable, and firmly insert the cable into the slot.



Caution

- Attach the dust covers onto the slots that are not in use. Failing to do so could allow foreign objects to enter, causing malfunctions. When you take the dust covers off, keep them in a safe place to avoid misplacing them.

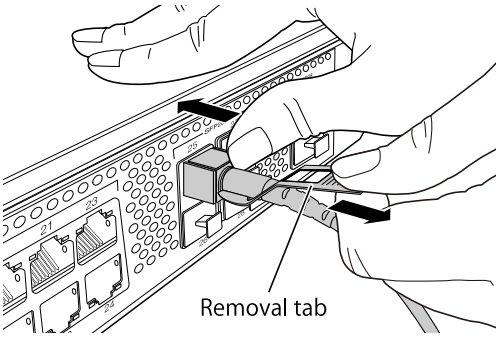
Note

- Since this product supports hot-swapping, an active optical cable can be attached without turning the power off.
- When attaching the active optical cable, also refer to the instruction manual supplied with each cable.

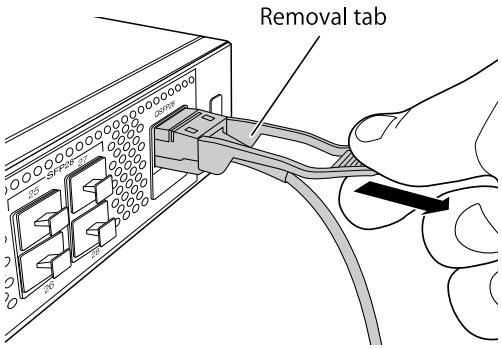
4.9. Removing an active optical cable

Remove the active optical cable attached to the slot of this product.
For the YAOC-25G-1M, while using one hand to push the module section inward, use the other hand to pull the removal tab toward yourself, disengaging the lock. When the lock disengages, continue pulling the removal tab and slowly pull out the module section.
For the YAOC-100G-1M, continue pulling the removal tab and slowly pull out the module section.

YAOC-25G-1M



YAOC-100G-1M



Caution

- Pulling out the active optical cable (sold separately) may sometimes be difficult. Refer to the steps above to properly disconnect it. Straining or forcibly pulling out the cable may damage this product or the active optical cable.

Note

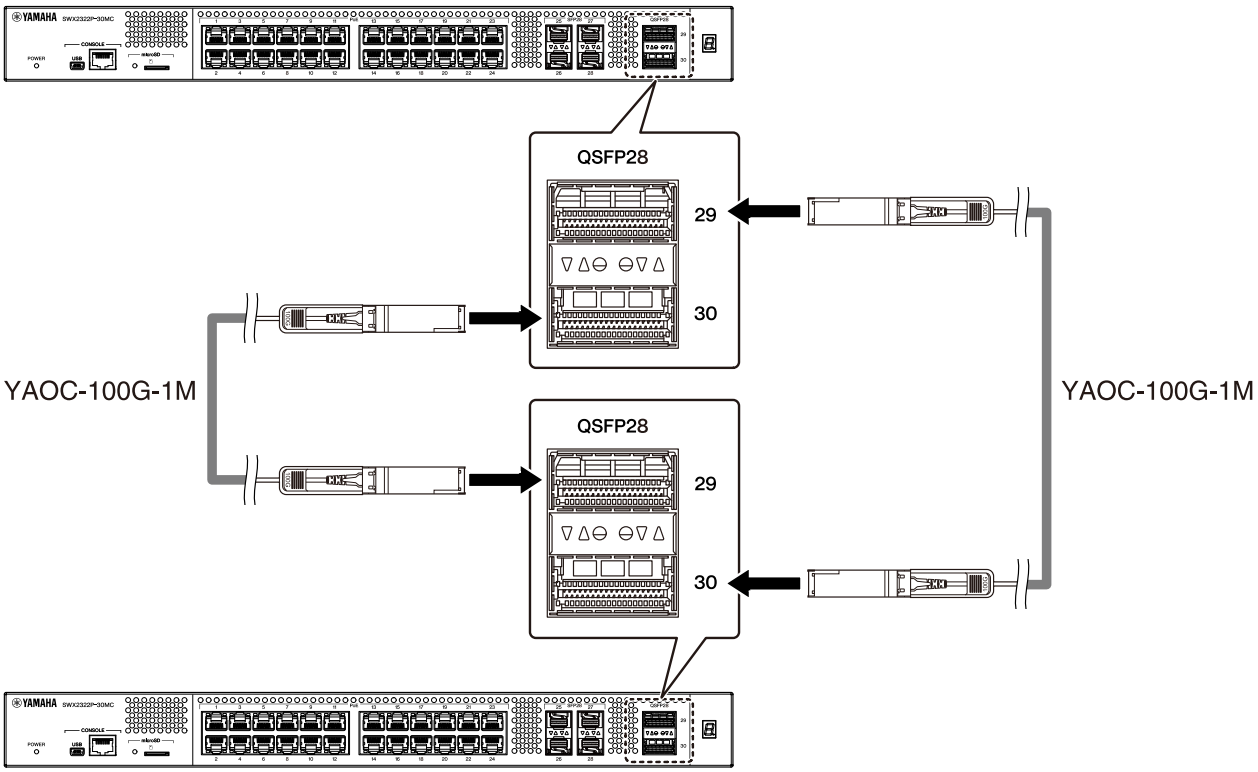
- Since this product supports hot-swapping, an active optical cable can be removed without turning the power off.
- When removing the active optical cable, also refer to the instruction manual supplied with each cable.

4.10. Making stack connections

The stack function allows two switches to be connected together and logically function as a single switch. You can expand the number of ports by stacking two switches. Fault tolerance can also be improved.

Important
This product only supports the stack connections of two switches in the same model.

To stack two switches, connect their QSFP28 slots using two YAOC-100G-1M active optical cables (sold separately).



For instructions on attaching and removing an active optical cable, refer to “Installing an active optical cable” and “Removing an active optical cable”.

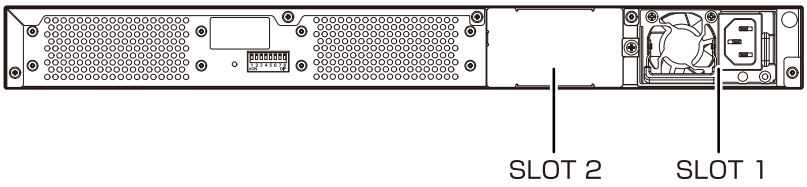
For the settings required for stack connections, refer to “Technical reference” for this product (available on the Yamaha website).

Note

- For details on how to handle an active optical cable, refer to the instruction manual supplied with the cable.

4.11. Adding and replacing a power supply unit [SWX3220-30TCs]

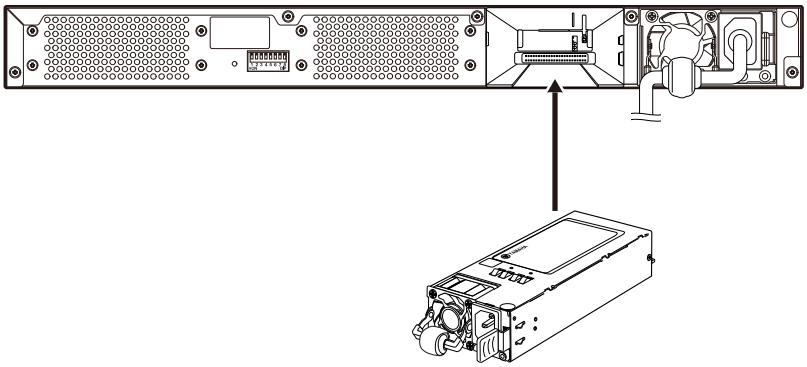
There are two power supply unit slots on the back of this product. Up to two power supply units can be installed.



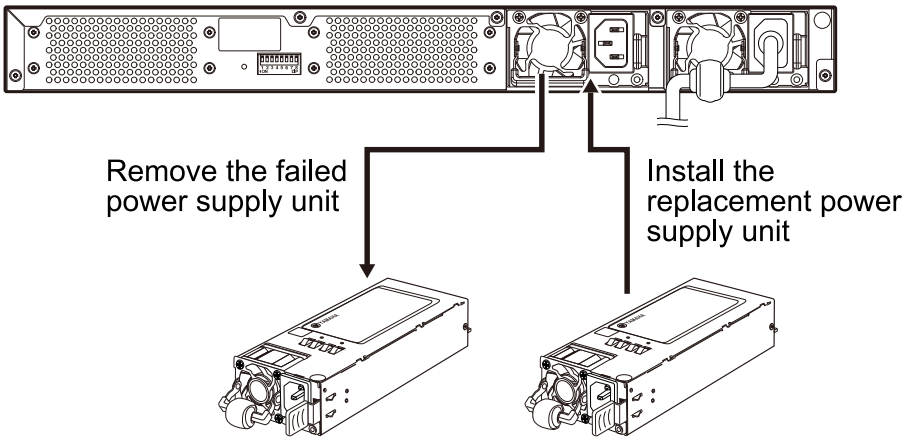
Shipment condition

SLOT 1: Power supply unit installed
SLOT 2: Empty (Slot cover installed)

This product is shipped from the factory with one power supply unit installed. Additionally, this product can receive power from two power systems by installing another YPSU-550W-AC power supply unit (sold separately) to the power supply unit slot on the back of this product. This capability reduces the risk of service interruption in the event of a failure.



This product also supports hot-swapping of power supply units. If one of the power supply units fails, you can replace it while the product continues to operate.



Note

The operating status of the power supply units can be checked using the “`show power-supply`” command. You can also get an overview using the “`show environment`” command. For details, refer to the command reference (Yamaha website).

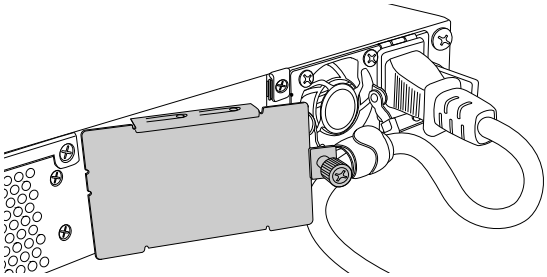
4.11.1. Installing a power supply unit

Follow the steps below to install a power supply unit.

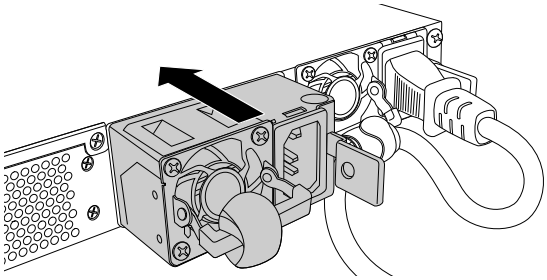
Warning

- Do not install the power supply unit with the power cord connected to the unit.
  This product supports hot-swapping of power supply units, so you can install a power supply unit while this product is running. When installing the power supply unit, install it with the power cord disconnected, then connect the power cord.
  If a power supply unit is connected to this product while the unit is receiving power, an electric shock, fire, or damage to the product or the power supply unit may occur.
- Do not install any power supply unit other than the specified one.
  This product only supports the separately-sold YPSU-550W-AC (as of January 2026).
  If a power supply unit other than the specified one is installed, an electric shock, fire, or damage to the product or the power supply unit may occur.

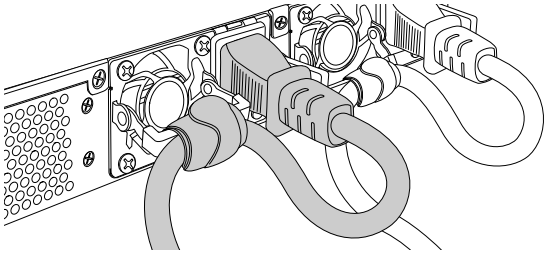
1. Loosen the screws on the slot cover and remove the cover.
   Keep the slot cover in a safe place so that it is not lost.



2. Insert the power supply unit you are installing all the way in.
   When this product is running, if the power supply unit indicator on the newly-installed power supply unit lights up orange, the power supply unit is correctly installed.



3. Connect the power cord supplied with the power supply unit to the power supply inlet of the unit.
   To secure the power cord, use the power cord retainer attached to the release handle.



4. Connect the power cord to an electrical outlet.
   The power supply unit indicator lights up green.

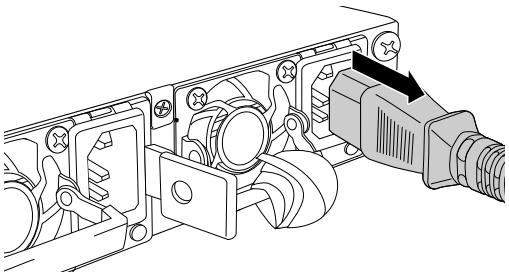
4.11.2. Removing a power supply unit

Follow the steps below to remove a power supply unit.

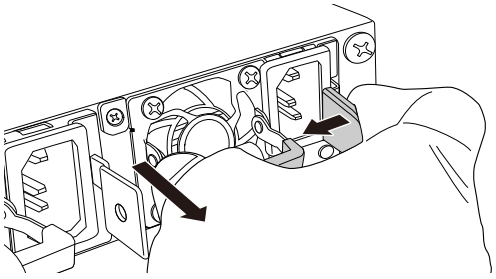
Warning

Do not remove the power supply unit with the power cord connected to the unit.
This product supports hot-swapping of power supply units, so you can remove a power supply unit while this product is running. For the power supply unit to be removed, first unplug the power cord and then remove the unit from the power supply unit slot.
If a power supply unit is removed from this product while the unit is receiving power, an electric shock, fire, or damage to the product or the power supply unit may occur.

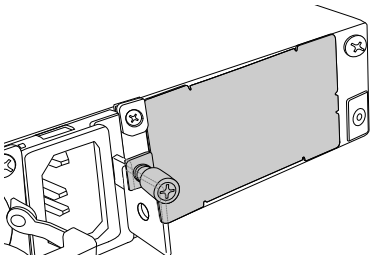
1. Unplug the power plug of the power supply unit to be removed from the power outlet.
   When this product is running with the other power supply unit, the power supply unit indicator on the power supply unit to be removed lights up orange.
2. Remove the power cord retainer that secures the power cord, and then remove the power cord from the power supply inlet.



3. While pressing the release latch as illustrated in the figure below, grasp the release handle and pull out the power supply unit.



4. If you are not installing an additional power supply unit, attach the slot cover.
   Dust or foreign objects entering the power supply unit slot may cause a malfunction of this product.



Note
The attaching orientation of the slot cover for SLOT1 is opposite of the orientation for SLOT2. Also, two slot covers cannot be attached at the same time.

5. Settings

The settings for this product can be made in the following ways.

- Making settings from the command line using the CONSOLE port
- Making settings from the command line using Telnet
- Making settings from the command line using SSH
- Making settings using the Web GUI
- Selecting default settings
- Restoring this unit's settings to their factory-set defaults

You can log in to this unit either as a standard user or as an administrative user. This section explains how to log in as an administrative user.

Note

When the settings of this unit are set to their factory defaults, you can log in as the following user:
Initial administrator user: `admin`
Initial password: `admin`
After logging in, you must change the password to something other than "`admin`".

For details on the commands to be used in this product, refer to "Command reference" (available on the Yamaha website).

5.1. Making settings from the command line using the CONSOLE port

Connect a computer to the CONSOLE port and configure the product settings using terminal software.

5.1.1. Preparing the cables

Using a USB cable or RJ-45/DB-9 console cable, connect the CONSOLE port of this product to the USB port or RS-232C terminal (COM port) of the computer.
For the USB cable connected to the mini-USB CONSOLE port, use a USB cable that is equipped with a USB Type A connector and a mini-USB Type B (5-pin) connector, which supports data communication. Charge-only cables cannot be used.

5.1.2. Installing the USB serial driver

To use the mini-USB CONSOLE port, the USB serial driver must first be installed to the computer.
For details on installing the USB serial driver, refer to the “Yamaha Network Device USB Serial Driver Installation Guide”.
The Yamaha Network Device USB Serial Driver Installation Guide and the installer can be downloaded from the Yamaha website shown below.
Utility download: https://network.yamaha.com/support/download/utility/

5.1.3. Getting the computer ready

You will need terminal software that controls the serial (COM) port of the computer. Set the parameters of the terminal software as follows.

Parameter	Value
Data transmission speed	9600 bit/s
Character bit length	8
Parity check	None
Number of stop bits	1
Flow control	Xon/Xoff

If the computer is connected to both the RJ-45 CONSOLE port and the mini-USB CONSOLE port, only terminal software that uses the mini-USB CONSOLE port can be used to make settings. The messages that are output from this unit are output to both CONSOLE ports.

5.1.4. Logging in from a computer connected to the CONSOLE port

1. Connect this unit to a computer.
   Connect the computer to the CONSOLE port of this unit using a USB cable or an RJ-45/DB-9 console cable.

Caution

- The LAN ports and the RJ-45 CONSOLE port all use the same 8-pin connector. Improper connections may cause hardware malfunction. Use care when making connections.
- If you use the mini-USB CONSOLE port, do not use a USB hub.
  If multiple Yamaha routers or switches are connected to one computer, the COM port numbers assigned to individual devices may change without notice, which may result in unintended changes to device settings. Before operating a device, make sure that you are operating the target device.

2. Check the power supply of this unit.
   If this unit is not powered on, turn on the power as described in "Connecting the power cord". When this unit powers-on and the command line is usable, a startup message appears in the console screen of the computer.
   If the power is already on, a startup message does not appear.

   For the SWX3220-30TCs

```
SWX3220-30TCs Rev.4.04.01 (Thu Jul 17 12:16:24 2025)
Copyright (c) 2018-2025 Yamaha Corporation. All Rights Reserved.
```

3. Press the [Enter] key.
   The system waits for a user name to be entered.
4. Type your user name and press the [Enter] key.
   When the settings of this unit are set to their factory defaults, enter the initial administrator user name "admin".

```
Username: admin
```

   The system waits for a password to be entered.

5. Type the password for the user you entered in step 4 and press the [Enter] key.
   When the settings of this unit are set to their factory defaults, enter the initial administrator user password "admin".

```
Password:
```

Important

- The password you enter will not be displayed on the console screen. (This behavior also applies to the following steps.)
- If you enter an incorrect password three times in a row, you will be unable to log in to this unit for one minute. In this case, wait at least one minute and then start again from step 4.

Before changing the initial password of the initial administrator user

If password authentication is successful, the system waits for a new password to be entered. Proceed to step 6 to change the password.

```
SWX3220-30TCs Rev.4.04.01 (Thu Jul 17 12:16:24 2025)
Copyright (c) 2018-2025 Yamaha Corporation. All Rights Reserved.

Please change the default password for admin.
New Password:
```

After changing the initial password of the initial administrator user

If password authentication is successful, the command prompt appears and you can enter commands. The login procedure is completed here. (No further steps are required.)

```
SWX3220>
```

6. Type the new password and press the [Enter] key.

```
New Password:
```

The system waits for the new password to be re-entered.

7. Type the same password as in step 6 again and press the [Enter] key.

```
New Password(Confirm):
```

If password change is successful, the command prompt appears and you can enter commands.

```
Saving ...
Succeeded to write configuration

SWX3220>
```

Note

- For details on the commands, refer to “Command reference” (available on the Yamaha website).

5.2. Making settings from the command line using Telnet

This section explains how to log in to this unit using a Telnet client from a host on your LAN.

5.2.1. Logging in to this unit using a Telnet client

Use a Telnet client such as a computer to log into this unit and connect to the built-in Telnet server.
Here we explain how to use the Telnet client in Windows to connect to the built-in Telnet server on this product.

Note

- Telnet functionality is disabled on Windows by default. To use Telnet, you will need to enable the Telnet client.

1. Connect this unit to the computer with a LAN cable.
2. Check the power supply of this unit.
   If this unit is not powered on, turn on the power as described in "Connecting the power cord". Once the power is on, go to step 3.
3. Launch the Windows command prompt.
4. Use the "`telnet`" command to input the IP address of this product, and press the [Enter] key.
   When the settings of this unit are still set to their factory defaults, input "`192.168.100.240`" after the "`telnet`" command.

   ```
   telnet 192.168.100.240
   ```

   The system waits for a user name to be entered.
5. Type your user name and press the [Enter] key.
   When the settings of this unit are set to their factory defaults, enter the initial administrator user name "`admin`".

   ```
   Username: admin
   ```

   The system waits for a password to be entered.
6. Type the password for the user you entered in step 5 and press the [Enter] key.
   When the settings of this unit are set to their factory defaults, enter the initial administrator user password "`admin`".

   ```
   Password:
   ```

Important

- The password you enter will not be displayed on the console screen. (This behavior also applies to the following steps.)
- If you enter an incorrect password three times in a row, you will be unable to log in to this unit for one minute. In this case, wait at least one minute and then start again from step 5.

Before changing the initial password of the initial administrator user

If password authentication is successful, the system waits for a new password to be entered. Proceed to step 7 to change the password.

```
SWX3220-30TCs Rev.4.04.01 (Thu Jul 17 12:16:24 2025)
Copyright (c) 2018-2025 Yamaha Corporation. All Rights Reserved.

Please change the default password for admin.
New Password:
```

After changing the initial password of the initial administrator user

If password authentication is successful, the command prompt appears and you can enter commands. The login procedure is completed here. (No further steps are required.)

```
SWX3220>
```

7. Type the new password and press the [Enter] key.

```
New Password:
```

The system waits for the new password to be re-entered.

8. Type the same password as in step 7 again and press the [Enter] key.

```
New Password(Confirm):
```

If password change is successful, the command prompt appears and you can enter commands.

```
Saving ...
Succeeded to write configuration

SWX3220>
```

Note

- For details on the commands, refer to “Command reference” (available on the Yamaha website).

5.3. Making settings from the command line using SSH

This section explains what you need to prepare for logging in to this unit from a host on your LAN using an SSH client.
For the login methods, refer to the owner's manual of the SSH client you are using.

Caution

Please be aware that the following functions are not supported on the SSH server functionality of this product.

- SSH protocol version 1
- User authentication methods aside from passwords
  (host base authentication, public key authentication, challenge-response authentication, GSSAPI authentication)
- Port forwarding (X11/TCP forwarding)
- Gateway ports (port relaying)
- Permitting the use of empty passwords

5.3.1. Settings for using SSH server functionality

The SSH server functionality on this product is disabled when shipped from the factory by default.
To log in and use the SSH client on this product, you must first login using a different method and then configure the following settings.

- Enable SSH server functionality on this product.
- Register a user to access the SSH server.

Note

- The explanations in this section assume that you have logged in using the steps in "Making settings from the command line using the CONSOLE port".

1. Type "`enable`" and press the [Enter] key.
   You are now in privileged EXEC mode.

```
SWX3220>enable
SWX3220#
```

2. Use the "`ssh-server host key generate`" command to generate a host key for the SSH server.

```
SWX3220#ssh-server host key generate
SWX3220#
```

Note

- The "`ssh-server host key generate`" command generates a pair of keys, a DSA/RSA public key and a private key. Note that it may take a minute to process the command, depending on the model.

3. Type “configure terminal” and press the [Enter] key.
The unit switches from command input mode to global configuration mode.

```
SWX3220#configure terminal
Enter configuration commands, one per line.End with CNTL/Z.
SWX3220(config)#
```

4. Use the “ssh-server enable” command to enable the SSH server functionality.

```
SWX3220(config)#ssh-server enable
SWX3220(config)#
```

5. Register a user with password using the “username” command.

Important

- To use SSH for login, a username and a password are required. Be sure to register a user with a password in advance.

Example: User name: yamaha; password: 1a2b3c4d

```
SWX3220(config)#username yamaha password 1a2b3c4d
SWX3220(config)#
```

6. Type “exit” and press the [Enter] key.
The unit returns to privileged EXEC mode.

```
SWX3220(config)#exit
SWX3220#
```

7. Save the settings as necessary.

```
SWX3220#write
Succeeded to write configuration
SWX3220#
```

Note

- For details on the commands, refer to “Command reference” (available on the Yamaha website).
- For the SSH client settings and operations, refer to the owner’s manual of the SSH client you are using.

5.4. Making settings using the Web GUI

This section explains how to log in to this unit using the Web GUI.

For details on compatible web browsers, refer to the website listed below.
https://yamahaproaudio.com/

5.4.1. Logging in to this unit using a web browser

1. Connect this unit to the computer with a LAN cable.
2. Check the power supply of this unit.

If this unit is not powered on, turn on the power as described in “Connecting the power cord”. Once the power is on, go to step 3.

1. Launch the web browser and access “http://(IP address of this product)/”.
   When access is successful, a login screen appears where you can enter a user name and password.

   Important

   - The IP address of this product is set to “192.168.100.240/24” by default when shipped from the factory.
   - If this unit is not connected to a network, change the IP address of the computer to use for settings to the “192.168.100.0/24” segment.
     Refer to the help documentation of your computer for how to change the computer’s IP address.

2. Enter the user name and password, and click the “Login” button.
   When the settings of this unit are set to their factory defaults, enter the initial administrator user name “admin” and its password “admin”.
   After successful login from the factory default state, a language selection screen is shown.

   Important

   - If you enter an incorrect user name or password three times in a row, you will be unable to log in to this unit for one minute. In this case, wait at least one minute and then retry step 4.

3. Select the language to use.
   After successful login from the factory default state, a password change screen is shown.

   Note

   - You can change the language after login from the Web GUI.

4. Enter your new password in the two fields and click the “Save” button.
   If the password change is successful, the Web GUI home page is shown.

5.5. Selecting default settings

Using the DIP switches on the back of this product, you can select the initial settings to be used when starting up this product in its initial state. When using this product as a switch for professional video and audio systems, you can start it with settings suitable for systems such as Dante and ADECIA.

Important
The settings mentioned here are only applied when this product is started in the factory default or initialized state.

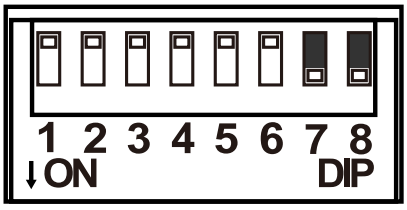
- Before changing the DIP switch settings, turn off this product. If you change the DIP switch settings while the power is on, the settings will not be applied.
- If the settings of this product have already been changed using the command line or Web GUI, you will need to initialize the product. After initializing the product, turn off the power and set the DIP switches. Alternatively, turn off the power, change the DIP switch settings, and then turn on the power while pressing and holding the initialize button on the back of the unit.
- For initialization of this product, refer to "Restoring this unit's settings to their factory-set defaults".

5.5.1. Setting each switch

Note
In this guide, the status of each switch is illustrated as in the diagram below.

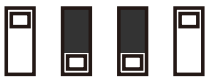
Switch	Status
	On: The switch is positioned down.
	Off: The switch is positioned up.

The factory settings are as follows:



Switches 1 to 4: Default presets

Set the preset to be applied first after this product is initialized. For details on each preset, refer to “Technical reference” for this product (available on the Yamaha website).

Preset	DIP switch	Settings
1		`Normal`: Basic settings (Factory default state)
2		`Dante type A`: Dante optimal settings (Type A)
3		`Dante type B`: Dante optimal settings (Type B)
4		`Dante type C`: Dante optimal settings (Type C)
5		`ADECIA`: ADECIA integration settings
6		`NDI`: NDI optimal settings
7		`SDVoE`: SDVoE optimal settings

Switch 7: L2MS function

Select whether to enable the L2MS (Layer 2 Management System) function. The setting is only valid if any of presets 2 to 7 is set using switches 1 to 4.

DIP switch	Settings
	The L2MS function enabled (Factory-set default)
	The L2MS function disabled. The “`l2ms enable`” command will be set to “`disable`”.

Switch 8: Turning on/off the port indicator

Select whether to turn on or off the port indicator.

DIP switch	Settings
8	The port indicator lights up. (Factory-set default)
8	The port indicator is unlit. The “`led-mode default`” command is set to “`off`”.

Note

- The status of the DIP switches can also be checked using the “`show dipsw`” command.
- Switches 5 and 6 have no effect on the preset settings, whether they are on or off.

5.6. Restoring this unit's settings to their factory-set defaults

This explains how to restore this unit's settings to their factory-set defaults.

- Restoring to the factory-set defaults using the initialize button on the product's main unit
- Using the "cold start" command to restore the factory settings
- Entering the [I] (uppercase I) key during startup to restore the factory settings
- Restoring this unit's settings to their factory-set defaults from the Web GUI

When initializing this product, all the settings will be reset to their factory-set defaults. The SYSLOG will also be cleared.

Caution

When restoring the factory settings, note the following points.

- All communication is halted immediately after execution.
- The IP address of this unit will be initialized to the factory default setting (192.168.100.240).
- You cannot restore the current contents of the settings after you have restored them to their factory defaults. If necessary, use external memory to save the settings before you proceed with initialization. For details on how to export settings to external memory, refer to "Technical reference" for this product (available on the Yamaha website).

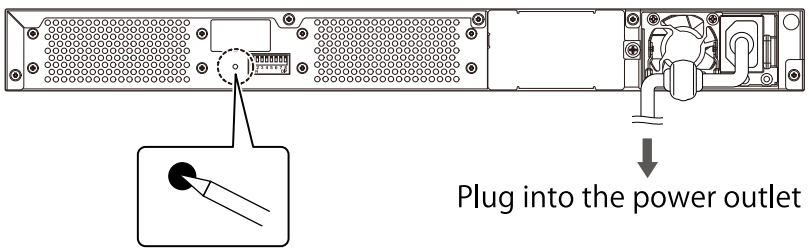
Note

- For instructions on logging in after the factory defaults are restored, refer to "Settings".

5.6.1. Restoring to the factory-set defaults using the initialize button on the product's main unit

This product can be restored to its factory settings by starting it while pressing and holding the initialize button.

1. Unplug the power cord of this product from the power outlet.
   If two power supply units are installed, unplug both the power cords.
2. Using a pointed object such as a pen to press and hold the initialize button, plug the power cord into the power outlet.
   This product will start up, executing initialization. During initialization, all port indicators will light up orange. When the port indicators return to their normal display, initialization is completed.



5.6.2. Using the "`cold start`" command to restore the factory settings

You can return the unit to its factory settings from the command line via the CONSOLE port, Telnet or an SSH client.

Caution

- Communications will be halted when logging in via Telnet or an SSH client.

Note

- The explanation here assumes that you have logged in using the steps in "Logging in from a computer connected to the CONSOLE port" or "Logging in to this unit using a Telnet client".

1. Type "`enable`" and press the [Enter] key.
   The unit switches to privileged EXEC mode.

```
SWX3220>enable
SWX3220#
```

2. Enter the "`cold start`" command, and press the [Enter] key.
   You will be asked to enter the administrative password.

```
SWX3220#cold start
Password:
```

3. Enter the administrator password and press the [Enter] key.
   The settings saved in this unit are returned to their factory-set state, SYSLOG is deleted and then the unit reboots.

5.6.3. Entering the [I] (uppercase I) key during startup to restore the factory settings

The unit can be restored to its factory settings by entering an uppercase "I" when the unit is starting up. Here we explain how to reboot the unit using the "reload" command. The procedure is also the same when rebooting by pulling out the power cord and plugging it back in again.

Note

- This explanation assumes that you have logged in using the steps in "Logging in from a computer connected to the CONSOLE port".

1. Type "enable" and press the [Enter] key.
   You are now in privileged EXEC mode.

```
SWX3220>enable
SWX3220#
```

2. Enter the "reload" command, and press the [y] key.
   The unit will reboot.

```
SWX3220#reload
reboot system? (y/n): y
```

Note

- Type the uppercase "I" in the following steps: Before the "BootROM Ver." appears on the console screen, you can press the [Caps Lock] key or hold down the [Shift] key so that you will be ready to enter.

3. After reboot, enter an uppercase "I" within one second after the "BootROM Ver." (see below) appears on the console screen.

```
SWX3220 BootROM Ver.1.00
```

4. When you see a screen asking whether to execute initialization, press the [y] key to execute.

```
Initialize or not ?(y/n)
```

   Initialization is executed.

```
Ready to Initialize
.............
```

5.6.4. Restoring this unit's settings to their factory-set defaults from the Web GUI

This unit can be restored to its factory-set state by making settings from the Web GUI.

Note

- This explanation assumes that you have logged in using the steps in "Logging in to this unit using a Web browser".

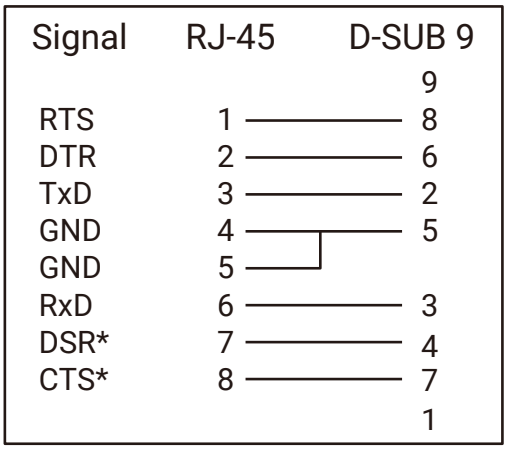
1. Select the "Administration" tab – "Maintenance" – "Restart or Initialize", in that order.
   The "Restart or Initialize" screen appears.
2. In the "Initialize" section, click the "Proceed" button.
   The "Initialize" screen appears.
3. Enter the administrative password, and click the "Confirm" button.
   The "Confirm execution" screen appears.
4. Verify the contents, and click the "Execute" button.
   The unit is returned to its factory-set state. Also, the "Initialization" dialog box appears, and the unit reboots.
5. After this unit finishes rebooting, access the Web GUI again.

During reboot, the computer on which the Web GUI is open will be unable to communicate with the unit (the status indication of the computer's network adapter will be "Network cable is not connected"). Communication will be restored when the reboot is completed. The IP address of this unit will be restored to the factory default setting (192.168.100.240) after rebooting. Once Web GUI is redisplayed, access "192.168.100.240".

6. Appendix

6.1. RJ-45/DB-9 console cable pin configuration

Console (RS-232C)



* These signals are not used in this product.

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