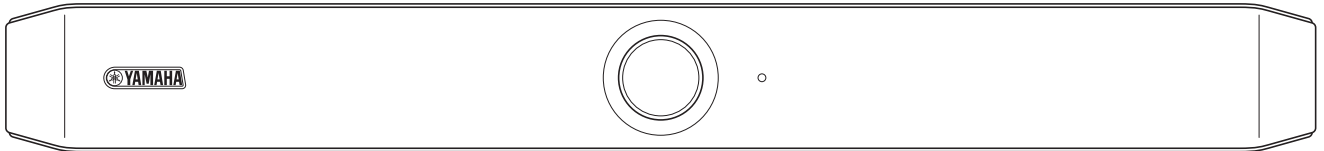




VIDEO CONFERENCE SYSTEM

CS-800



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Introduction

Thank you for purchasing the Yamaha CS-800. This product is a video conferencing system for holding remote conferences in huddle spaces and meeting rooms. It can be used as an audio/video device in combination with your unified communications setup. For comfortable remote collaboration, this device is equipped with a high-quality camera, microphone and speaker.

About this manual

This manual uses the following signal words for important information.

 WARNING	This content indicates “risk of serious injury or death.”
 CAUTION	This content indicates “risk of injury.”
NOTICE	Indicates content that you must observe in order to prevent the product from malfunctioning, being damaged, or operating incorrectly, and to avoid data loss.
IMPORTANT	Indicates content that you must know in order to operate and use the product correctly.
NOTE	Indicates information that is related to operation and use. Read this for your reference.

- The illustrations as shown in this manual are for instructional purposes only.
- The company names and product names in this manual are the trademarks or registered trademarks of their respective companies.
- Yamaha continuously makes improvements and updates to the software included in this product. You can download the latest software from the Yamaha website.
- The contents of this manual apply to the latest specifications as of the publishing date. To obtain the latest manual, access the Yamaha website then download the manual file.

Features/functions

● Yamaha's own high-quality audio processing

This device features audio processing functions required for video conferencing, including adaptive echo canceller (AEC), noise reduction (NR) and automatic gain control (AGC). Camera framing area settings and beamforming microphones focus on the speaker's voice and suppress ambient sounds.

● "SoundCap Eye™" achieves more comfortable remote communication

"SoundCap Eye" is a function that allows for comfortable remote communication, even in noisy environments. By using the camera to automatically identify the surrounding conditions and conference participants, more optimal sound pickup and output can be achieved.



- **Face focus beamforming:**

This technology picks up only the voice of the participant whose face is detected by the camera.

- **Self-silence:**

This technology automatically mutes the microphone when there is no human voice in the captured sound. This prevents unwanted noise from reaching the remote party.

- **Self-volume balancer:**

This feature constantly adjusts the speaker volume to an appropriate volume depending on the surrounding noise.

● Smart framing

With this function, the camera follows the subject according to the mode. The angle of view and zoom are automatically adjusted onto the face detected by the camera. (Smart framing → Page 11)

- **Group:** Mode that frames all conference participants

- **Speaker tracking:** Mode that frames the person who is speaking

- **Individual:** Mode that frames the designated person

● Easy connections via USB

This device and the computer can be connected with one USB cable. This makes it easy to set up and prepare for meetings. (Sample setup → Page 13)

● Automatically turning on/off the device

When the camera built into this device detects a person, the device automatically switches on from standby. (Auto wakeup)

● Easy setup using the remote control and a display

You can display the menu on a TV and specify device settings by using the remote control. (On-screen display menu → Page 27)

With the application software on the computer, more detailed settings can be specified. (Yamaha CS Manager → Page 28)

Included items

- CS-800 (device)
- Read This First
- Safety Guide
- Quick Guide
- USB 2.0 cable (Type C-A, 5 m)
- HDMI cable (2 m)
- Remote control
- Lens cap
- Terminal cover
- Coin battery (CR2032) × 2
- AC adaptor with power cord (CW2002100)
- Table stand
- Wall mounting bracket (mounting accessory)
- Screws
 - Terminal cover screw (2.5 mm × 8 mm) × 2
 - Hexagonal screw (M3 × 8 mm) for table stand × 2
 - Device fixing screw (M3 × 8 mm) for wall mounting bracket × 1
- Hexagonal wrench

Separately sold items

- Monitor mounting bracket (mounting accessory) BRK-TV1
This is required for installing the device onto the VESA mount of a TV.
- USB cables: CBL-L10AC (10 meters), CBL-L25AC (25 meters)
These are fiber optic USB cables. They are used when the device and computer are far apart. These support USB 3.2 Gen2 (Super Speed Plus) and can communicate at high speeds up to 10 Gbps.

NOTE

The VESA standards are international standards that define the spacing between screw holes used when attaching video equipment, such as TVs, to wall mounts and TV stands.

Available manuals

The manuals for this product can be downloaded in the PDF format from the following website.

▼ **Yamaha website**

U.S.A. and Canada:

<https://uc.yamaha.com/support/>

Other Countries:

<https://download.yamaha.com/>

- | | | |
|-------------------------------------|---|---|
| <input type="checkbox"/> | Read This First (included) | This describes what to do first after purchasing the product. |
| <input type="checkbox"/> | CS-800 Safety Guide (included) | This contains the precautions for using this product safely. |
| <input type="checkbox"/> | CS-800 Quick Guide (included) | This provides mainly basic information for using this product, such as part names, installation procedures and setup operations, as well as details on where to obtain other related information. |
| <input checked="" type="checkbox"/> | CS-800 User Guide (this manual) | This provides detailed information on all of the features, including those covered in the Quick Guide. |
| <input type="checkbox"/> | On-Screen Display Menu Operation Guide | This explains how to use the on-screen display menu (shown on a TV screen) to configure this device. |
| <input type="checkbox"/> | Yamaha CS Manager Operation Guide | This explains how to use the Yamaha CS Manager utility software on your computer to configure and operate this device. |
| <input type="checkbox"/> | CS Remote Configurator Operation Guide | This explains how to use the CS Remote Configurator utility software to batch-configure multiple devices on the network. |

Available utility software

This utility software can be used to set up the device according to its use and environment. The software can be downloaded from the following website.

▼ **Yamaha website**

U.S.A. and Canada:

<https://uc.yamaha.com/support/>

Other Countries:

<https://download.yamaha.com/>

- | | | |
|-------------------------------------|-------------------------------|--|
| <input checked="" type="checkbox"/> | Yamaha CS Manager | This is software that allows you to configure and operate the device from your computer. |
| <input checked="" type="checkbox"/> | CS Remote Configurator | This is software that batch-configures multiple CS-800 and CS-500 devices connected via a network. |

Related links

Using software to configure and manage devices (Page 28)

Updating the device firmware

This product is designed to allow the firmware of the device to be updated in order to improve operability, add functions and fix problems. We recommend updating the device firmware to the latest version.

For one device:

Use Yamaha CS Manager to update the device.

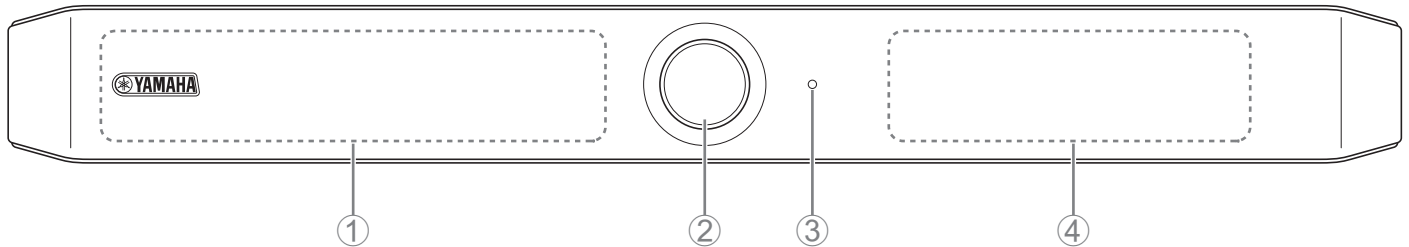
For multiple devices:

Use CS Remote Configurator to batch-update multiple CS-800 devices connected to a network.

For details on the updating procedure, refer to the Yamaha CS Manager Operation Guide or the CS Remote Configurator Operation Guide.

Controls and connectors

Front panel



① Microphone

The audio captured by this microphone is delivered to the remote party of the connection.

② Camera

The video captured by this camera is delivered to the remote party of the connection.

③ Status indicator

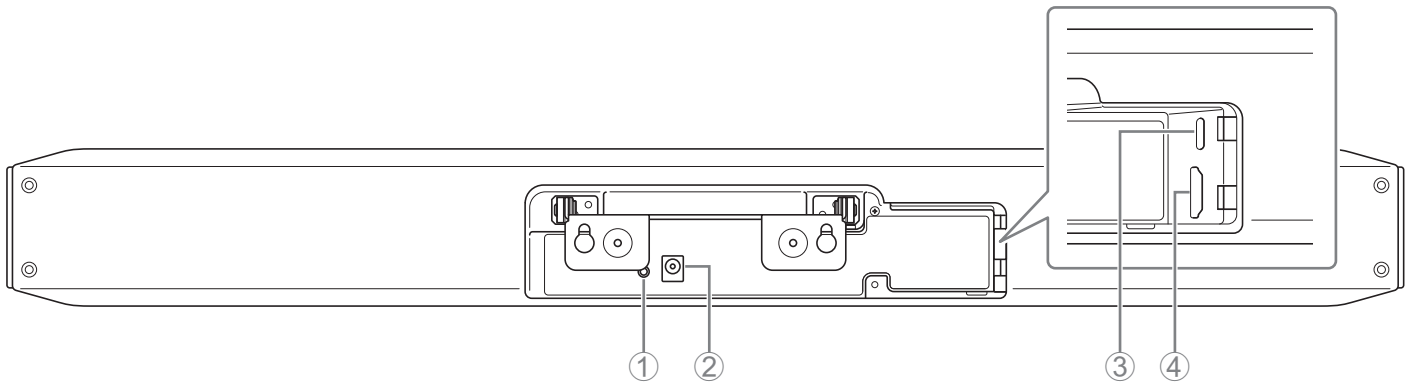
Indicates the status of the device. The lower the item in the following list, the higher the priority for indication.

Indicator state		Device status
White (lit)		Standby
Light blue (lit)		Camera operating
Green (lit)		During a call
Red (lit)		Microphone muted
White (flashing)	0.361 time/sec	Starting
Unlit		Turned off; power-saving standby
White (flashing)	0.3 time/sec	Monitoring off
Orange (flashing)	1 time/sec	Factory reset; activation of HDMI connection/DisplayLink function/Bluetooth
Blue (flashing)	1 time/sec	Pairing with the remote control or smart device
Blue (lit)	3 seconds	Completion notification of remote control pairing
Green (flashing)	2 times/sec	Receiving a call
Red (flashing)	2.5 times/sec	Hardware error
Orange (flashing)	2 times/sec	Receiving firmware data
Orange (flashing)	10 times/sec	Updating firmware
Orange<-->Red (flashing alternately)		Firmware update failed

④ Speaker

Outputs the audio from the remote party.

Rear panel



① [FUNCTION] button

Can be used to pair the device with the remote control or to return the device to its factory default settings (factory reset).

② [DC-IN] jack

Connect the AC adaptor here. After connecting the AC adaptor to the [DC-IN] jack on the rear panel, insert the power plug into an electrical outlet.

Connecting the AC adaptor automatically turns on the device.

③ [USB] port (Type C)

This port is for connecting the device to a computer. This enables displaying the computer screen on the TV and configuring the device. Use the included USB 2.0 cable (Type C-A) for this connection. For details on connecting this device, refer to “Connecting devices (sample setups)” (page 13).

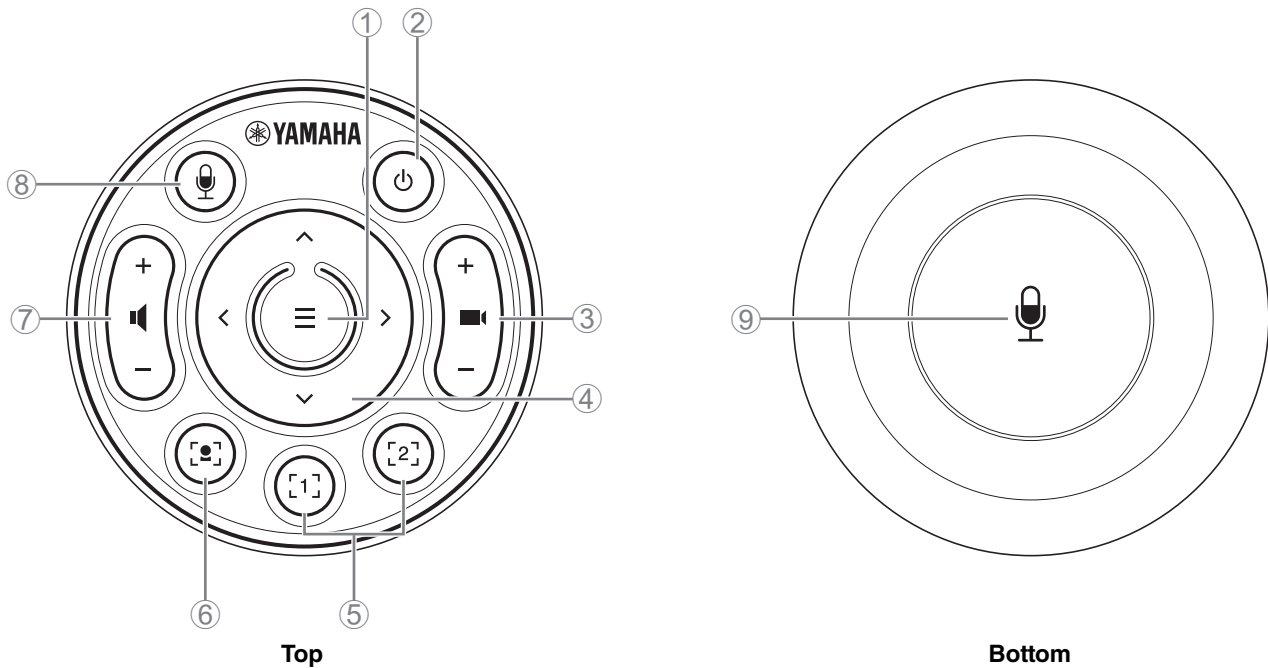
④ [HDMI] port

This port is for connecting the device to a TV. This allows the TV to display the screen of the computer connected to the [USB] port and the device’s on-screen display.

Related links

- [Returning to factory default settings \(factory reset\) \(Page 29\)](#)
- [Connecting devices \(sample setups\) \(Page 13\)](#)

Remote control



① Menu button

Can be used to display the on-screen display menu on the TV or pair the device with the remote control.

② Power button

Used to turn the CS-800 on/standby.

③ Camera zoom button

Used to enlarge/reduce (zoom in/out) the video being captured by the camera.

④ Pan/tilt button

Used to adjust the camera angle horizontally/vertically. It can also be used for smart framing operations or moving the cursor in the on-screen display menu displayed on the TV.

⑤ Camera presetⁱ 1 & 2 buttons

Two sets of PTZ (pan, tilt and zoom) settings can be saved and recalled. Long-press (for 2 seconds) this button to save the settings adjusted with buttons ③ and ④. To recall, simply press the button.

⑥ Smart framing button

Used to turn on/off smart framingⁱⁱ.

⑦ Speaker volume buttons

Used to turn up/down the volume of the speakers.

⑧ ⑨ Microphone mute button

Used to turn on/off the microphone.

i Camera preset

PTZ (pan, tilt and zoom) camera presets can be saved for this device.

To save/change the PTZ settings, use the remote control, on-screen display menu or Yamaha CS Manager.

Specifying settings using the remote control

Refer to Page 10.

Specifying settings using the on-screen display menu or Yamaha CS Manager

Refer to the corresponding Operation Guide.

ii Smart framing

Depending on the mode, the angle of view is automatically adjusted and the selected subject framed.


[Group]: Mode where all persons in the group are framed

[Speaker tracking]: Mode where the person who is speaking is framed

[Individual]: Mode where a specific person is framed

*The target area for framing can be specified with the meeting area settings.


Specifying settings using the remote control

① Use the  (smart framing) button on the remote control to turn on smart framing.

② Use the tilt (up/down) buttons to change the smart framing mode.

The currently selected framing mode appears in the notification badge on the screen.

-With the [Individual] mode, use the pan (left/right) buttons to select the person to be focused on.

-With the [Group] mode, the  (camera zoom) button is deactivated.

Specifying settings using the on-screen display menu or Yamaha CS Manager

Refer to the corresponding Operation Guide.

Camera preset/smart framing operability table

Operation	Remote control	On-screen display menu	Yamaha CS Manager
Specifying meeting area settings	—	✓	✓
Turning on/off smart framing	✓	—	✓
Selecting smart framing mode	✓	✓	✓
Saving/recalling camera presets	2 sets	2 sets	5 sets*

* [PTZ preset 1] and [PTZ preset 2] can be saved and recalled as camera presets 1 and 2 by using the remote control and on-screen display menu.

Procedures preparing for use

Procedure from connection to installation

Installers of this device should read this.

Before starting work, determine the installation method and connection method for this device.

- 1. Connecting the power supply and turning on the device. (Page 15)**
- 2. Inserting the batteries into the remote control. (Page 16)**
- 3. Pairing the device and remote control. (Page 17)**
- 4. Connecting the device.**
 - > When using a personal computer brought in, or using the On-Screen display menu. (Page 13)
 - > When using a meeting room computer. (Page 14)
- 5. Making necessary initial settings. (Page 18 to 20)**
- 6. The computer screen will be displayed on the TV.**

If the computer screen does not appear on the TV, confirm the operations on page 19 again.
- 7. Installing the device.**
 - When placing on a table. (Page 21)
 - When mounting on a wall. (Page 22)
 - When installing on a TV. (Page 24)

Procedure for holding a meeting

Users of this device should read this.

Before the first time a computer connected to this device is used to hold a meeting, follow the steps below to check that the computer screen is displayed on the TV and the audio is output.

* When this device is connected to a meeting room PC (Page 14), steps **3** to **4** are not necessary.

- 1. Turning on the computer.**
- 2. Turning on this device with the remote control (or automatically starting it with auto wakeup).**
- 3. The stand-by screen appears on the TV.**
- 4. Connecting the computer to this device with a USB cable.**
- 5. The computer screen will be displayed on the TV.**
 - > If the screen of a computer that was brought in does not appear on the TV. (Page 19)
- 6. Holding a meeting by using the video conferencing software.**
 - > If sound is not output, select this device on the computer. (Page 19)

Specifying device settings

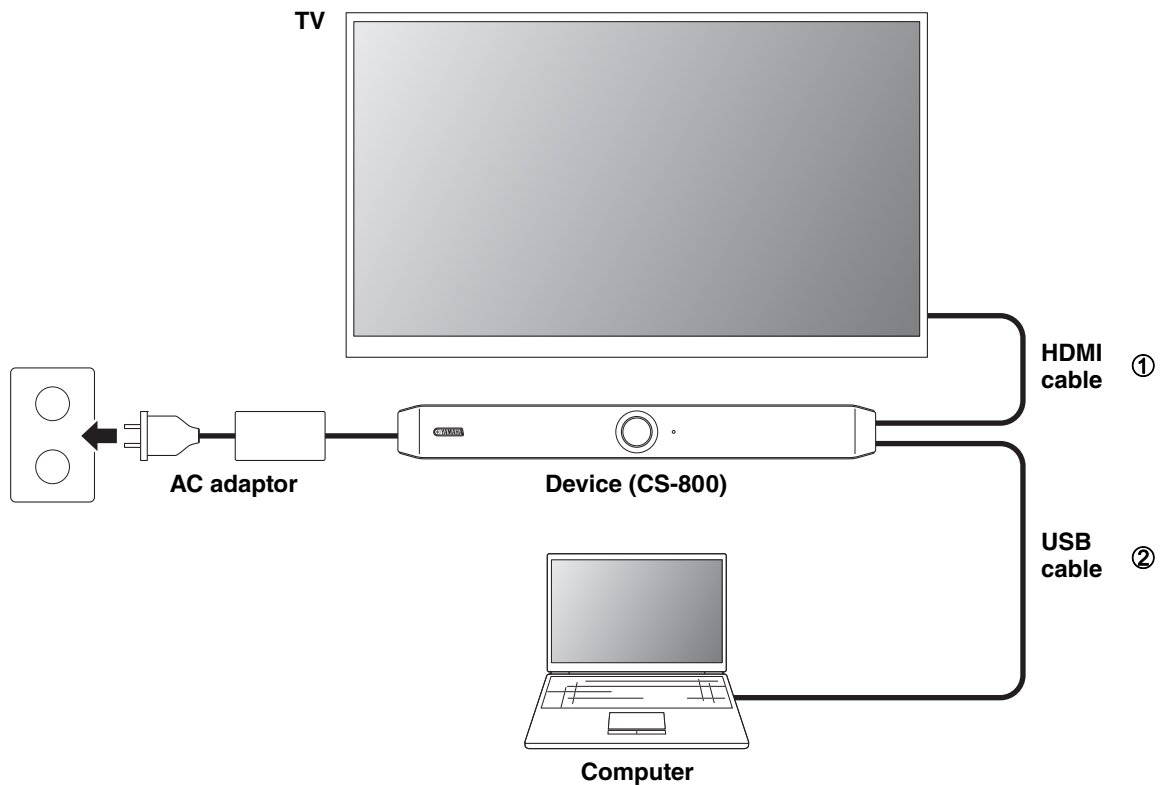
- **On-screen display menu:** (For all users) Specify device settings on a TV by using the remote control. (Page 27)
- **Yamaha CS Manager:** (For installers/administrators) Specify detailed settings for the device by using the application software. (Page 28)
- **CS Remote Configurator:** (For installers/administrators) Batch-configure multiple devices (connected to a network) by using the application software. (Page 28)

Setup and connections

Connecting devices (sample setups)

■ When bringing your own PC

When bringing your own computer to the videoconferencing location, make connections as shown in the example below.



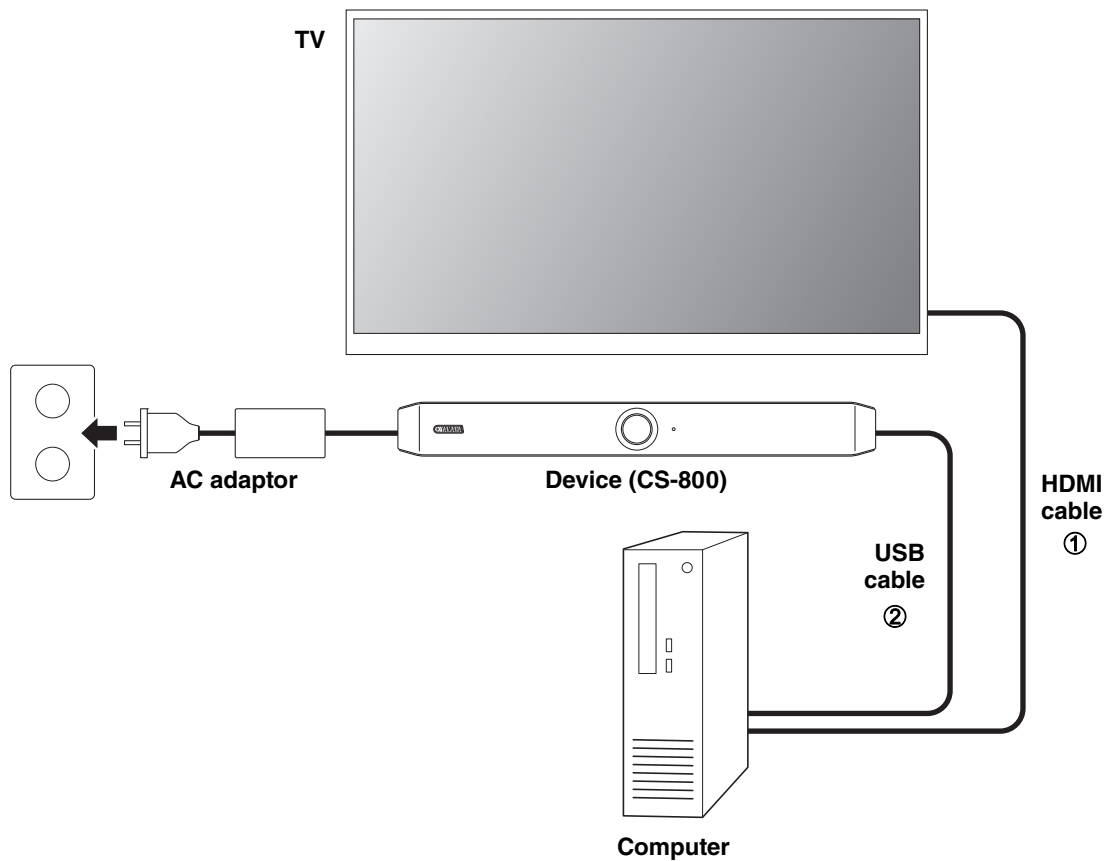
- ① Connect one end of the included HDMI cable to the [HDMI] port on the device, and connect the other end to the TV.
- ② Connect one end of the included USB cable to the [USB] port on the device, and connect the other end to the computer.

NOTE

- Be sure to first follow the procedure in “Specifying the necessary settings for using a computer you brought in or a smart device” (page 18).
- In order to display the computer screen on a TV, it may be necessary to install the DisplayLink® driver. For details, refer to “Installing the DisplayLink® driver onto your computer” (page 19).

■ When using the meeting room PC

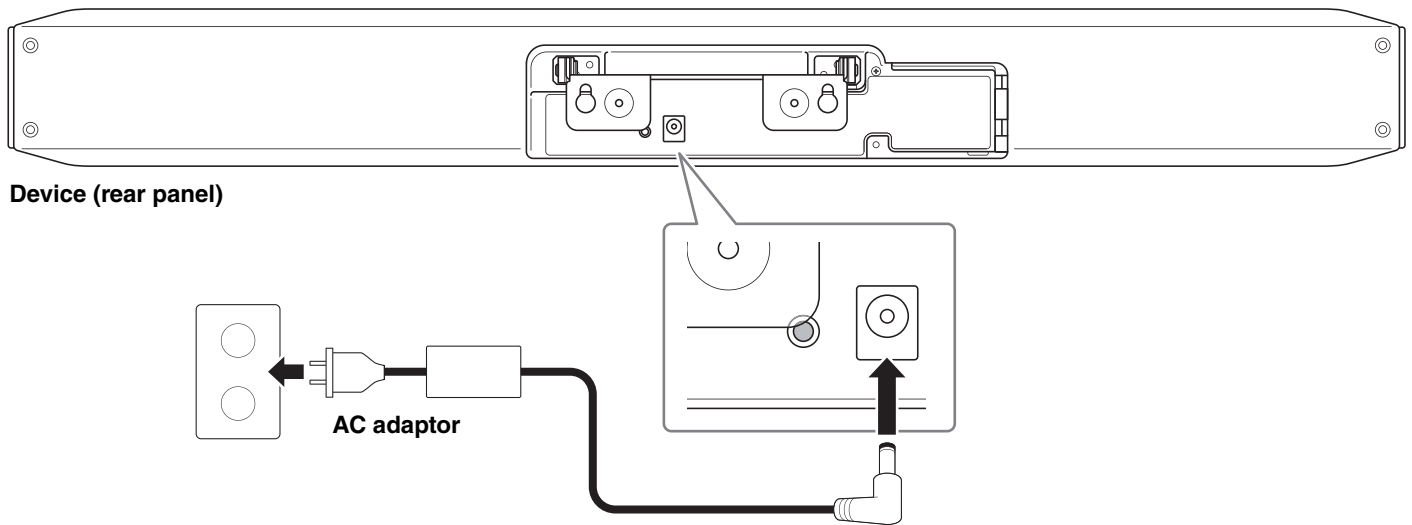
When the videoconferencing location is equipped with a dedicated computer or tablet, make connections as shown in the example below.



- ① Connect one end of the included HDMI cable to the computer, and connect the other end to the TV.
- ② Connect one end of the included USB cable to the [USB] port on the device, and connect the other end to the computer.

Connecting the power supply

Connect one end of the included AC adaptor to the [DC-IN] jack on the device, and connect the other end to an electrical outlet.



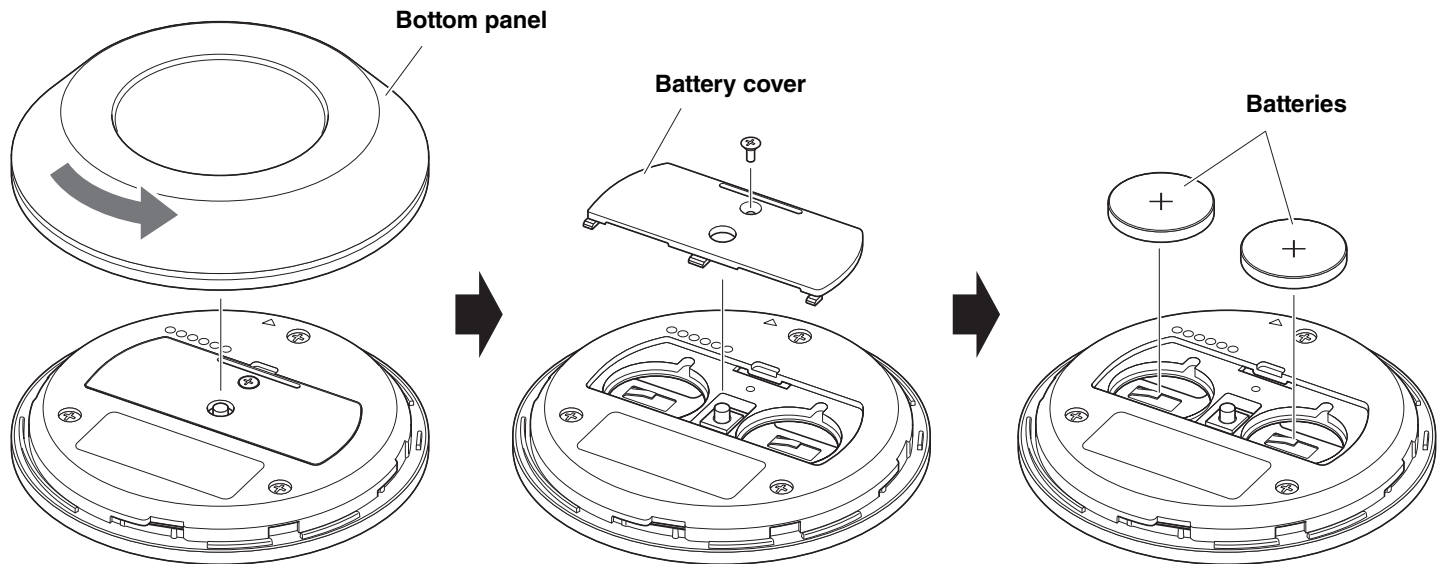
Connecting the AC adaptor automatically turns on the device.

NOTE

After the power supply has been connected, the device can be turned on or set to standby with the power button on the remote control.

Inserting/replacing the remote control batteries

Remove the bottom panel and battery cover from the remote control, and then insert the included batteries (CR2032 × 2) correctly according to the polarity markings. To replace the batteries, remove all old ones and install new ones (sold separately). Do not mix old and new batteries.



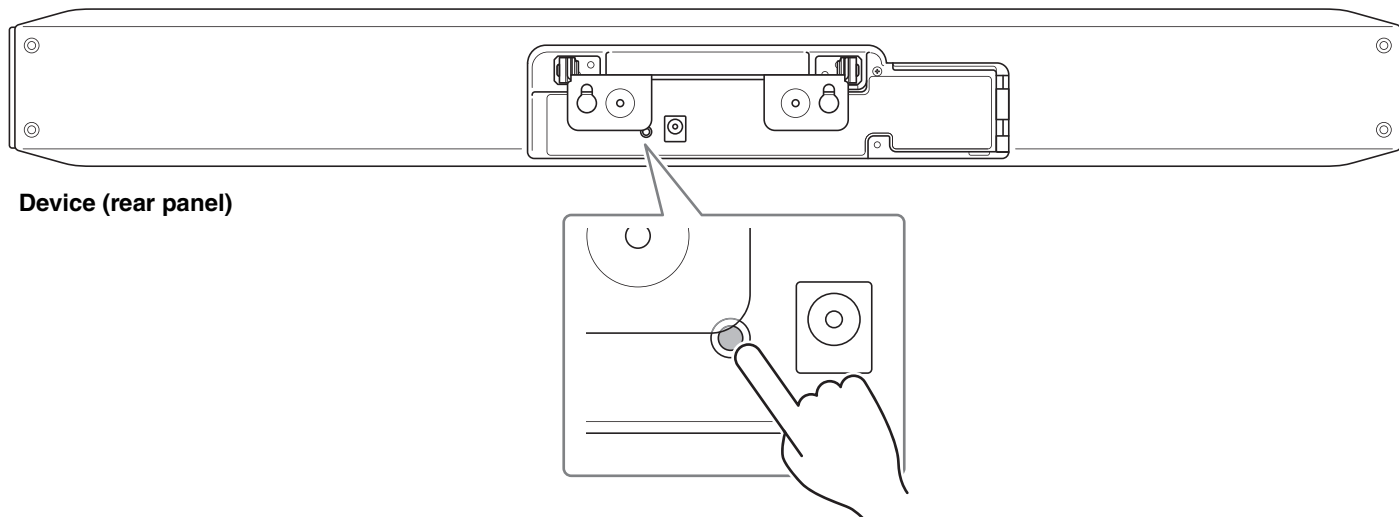
IMPORTANT

- When replacing the batteries, be sure to use the specified type (CR-2032).
- Dispose of used batteries according to the local regulations.

Pairing the device and remote control

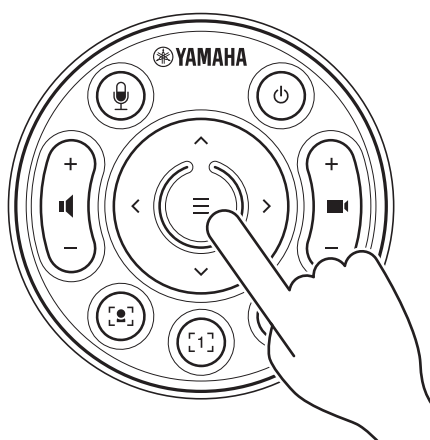
In order to operate the device with the remote control, follow the procedure below to pair them.

1. Long-press the [FUNCTION] button (on the rear panel of the device) for at least 2 seconds.



The status indicator on the front panel of the device flashes in blue.

2. Long-press the menu button on the remote control for at least 2 seconds.



Pairing is finished after the status indicator on the front panel of the device lights up in blue for 3 seconds.

NOTE

Long-pressing the [FUNCTION] button on the rear panel of the device will unpair the paired remote control. To pair the remote control again, follow the pairing procedure above.

Related links

- Remote control (Page 10)
- Specifying the necessary settings for using a computer you brought in or a smart device (Page 18)
- Configuring the device from a TV screen (on-screen display menu) (Page 27)

Specifying the necessary settings for using a computer you brought in or a smart device

Activation of the HDMI connection/DisplayLink function/Bluetooth is necessary in order to use your own computer/smart device.

NOTE

Before performing the following operation, follow the procedure in “Pairing the device and remote control” (page 17).

- 1. Long-press the menu button and camera preset 2 button on the remote control for at least 3 seconds.**



Configuration is finished after the status indicator on the front panel of the device flashes in orange five times at a 0.5-second interval.

Installing the DisplayLink[®] driver onto your computer

In order to display the computer screen on a TV, it may be necessary to install the DisplayLink driver (DisplayLink Manager on a Mac). If the computer screen is not displayed on the TV, even after checking the following, install the DisplayLink driver.

- The device and TV are connected with an HDMI cable.
- The TV input is correctly set.
- The display settings of the computer are set to “duplicate” or “extend” the display.
- The operation described in “Specifying the necessary settings for using a computer you brought in or a smart device” (Page 18) has been performed.
- DisplayLink has been activated. (Page 18)

Download the latest DisplayLink driver from the following website.

(The following website is not operated by Yamaha Corporation.)

▼ DisplayLink driver download page

<https://displaylink.com/downloads>

Selecting the device on the computer

On your computer, select “Yamaha CS-800” as both the default audio playback device and recording device. Also, in the video conferencing software, select CS-800 as both the video device and audio device.

1. Select “Yamaha CS-800” as both the default playback device and recording device.

[For Windows]

- ① Right-click the speaker icon on the taskbar, and then select “Open Sound settings”
- ② Select “Sound Control Panel” under “Related Settings”
- ③ From the list of devices on the [Playback] tab, select “Yamaha CS-800”, and then right-click it.
- ④ Select “Set as Default Device”
- ⑤ From the list of devices on the [Recording] tab, select “Yamaha CS-800”, and then right-click it.
- ⑥ Select “Set as Default Device”

[For macOS]

- ① Select the Apple menu in the menu bar.
- ② Select “Sound” in “System Preferences”
- ③ Select [Sound].
- ④ Select “Yamaha CS-800” on the [Output] tab.
- ⑤ Select “Yamaha CS-800” on the [Input] tab.

2. In the video conferencing software, select CS-800 as both the video device and audio device.

Perform the appropriate operation in the video conferencing software to select CS-800 as both the video device and audio device.

Using smart devices in meetings

By connecting a smart device (mobile phone or tablet) to this device via Bluetooth, you can hold a remote conference with someone on their smart device. (Audio only)

■ What can be done with a Bluetooth connection

Holding a conference call

During an in-house meeting, you can use the CS-800 to hold a conference call with a remote person (on their smart device). From the smart device connected to this device via Bluetooth, call the smart device of the person to be included in the conference call.

Allowing someone on their smart device to remotely join a video conference

While a video conference is being held through the CS-800, a remote person can be invited through their smart device to participate in the conference by audio only. The remote person can speak with all participants of the video conference, including off-site participants.

From the smart device connected to this device via Bluetooth, call the smart device of the person to join the conference.

■ Making a Bluetooth connection

1. When connecting for the first time: Pairing

When connecting a Bluetooth-enabled smart device to this device for the first time, the devices must be paired.

① Preparation: Activate Bluetooth on this device and the smart device.

- Activate Bluetooth on the CS-800. (“Specifying the necessary settings for using a computer you brought in or a smart device” on page 18)
- Turn on Bluetooth on the smart device.

② Pairing: Pair using any of the following methods.

- With the remote control, use the on-screen display menu to pair.
- Use Yamaha CS Manager on the computer to pair.

* For details on using the on-screen display menu or Yamaha CS Manager, refer to the corresponding Operation Guide.

2. When connecting for the second and subsequent times: Making a Bluetooth connection

A paired smart device can be connected by using the on-screen display menu or the smart device.

NOTE

- The camera (video) of the CS-800 cannot be used in meetings.
- A computer connected via USB and a smart device connected via Bluetooth can be connected at the same time.
- Multiple smart devices cannot be used in a call at the same time.
- If Yamaha CS Manager is used to delete pairing information, or if Yamaha CS Manager is set to delete pairing information when a connection is cut, perform pairing again.
- The Bluetooth connection can be cut by using any of the following methods.
 - Disconnect by using the smart device.
 - Disconnect by using the on-screen display menu or Yamaha CS Manager.
 - Move the connected smart device out of the range of the Bluetooth signal.

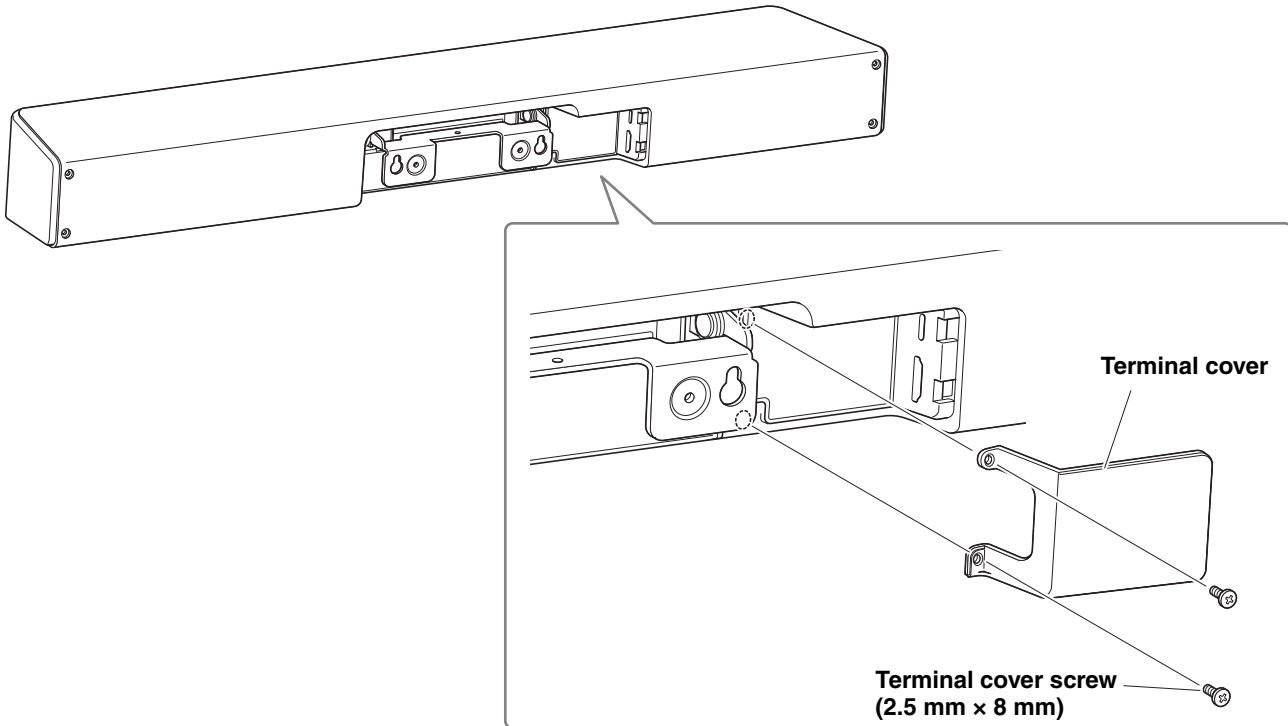
Related links

- Specifying the necessary settings for using a computer you brought in or a smart device (Page 18)
- Configuring the device from a TV screen (on-screen display menu) (Page 27)

Installing the terminal cover

After connecting the cables to the rear panel of the device, install the terminal cover. This prevents the cables from becoming disconnected and protects the ports/jack from dust.

Attach the terminal cover to the device by using the two included terminal cover screws (2.5 mm × 8 mm).

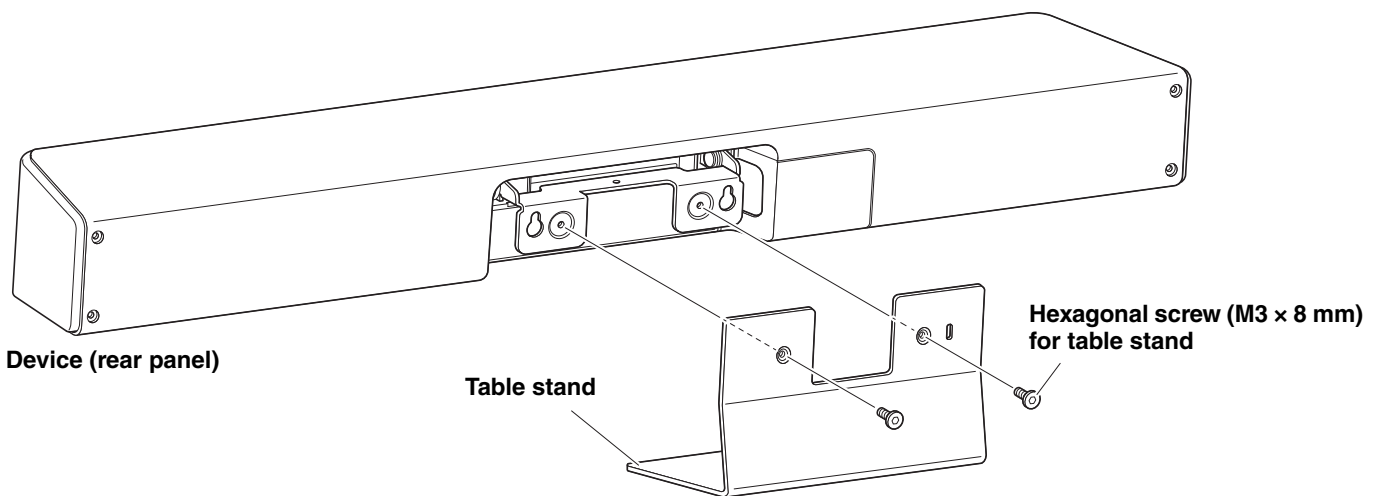


* For illustrative purposes, the cable is not shown.

Installing the table stand

When using this device placed on a table, attach the included table stand to the device.

With the hexagonal wrench, use the included hexagonal screws (M3 × 8 mm) to attach the table stand to the device.



* For illustrative purposes, the cable is not shown.

Installing the wall mounting bracket



WARNING

- Be sure to have the mounting bracket installed by the dealer where you purchased the product or a professional contractor.
- After installation, make sure that the CS-800 is firmly secured. Also, regularly check that there is no possibility of the device falling or tipping over. We cannot be held responsible for accidents caused by incorrect installation.
- After installation, do not lean against the CS-800 or apply a strong force to it from above. If the device falls, injuries or damage may result.

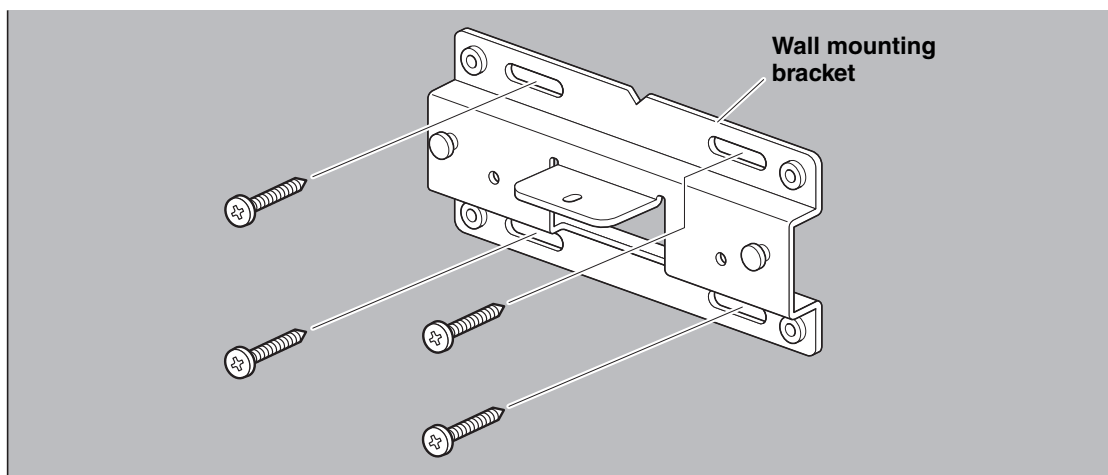
■ Installing on a wall

When mounting this device on a wall, use the included wall mounting bracket.

Items to prepare

- ① **Wall mounting bracket (included)**
 - Wall mounting bracket
 - Device fixing screw (M3 × 8 mm) for wall mounting bracket
- ② **Wall-mounting screws (user provided)**
- ③ **Screwdriver (user provided)**

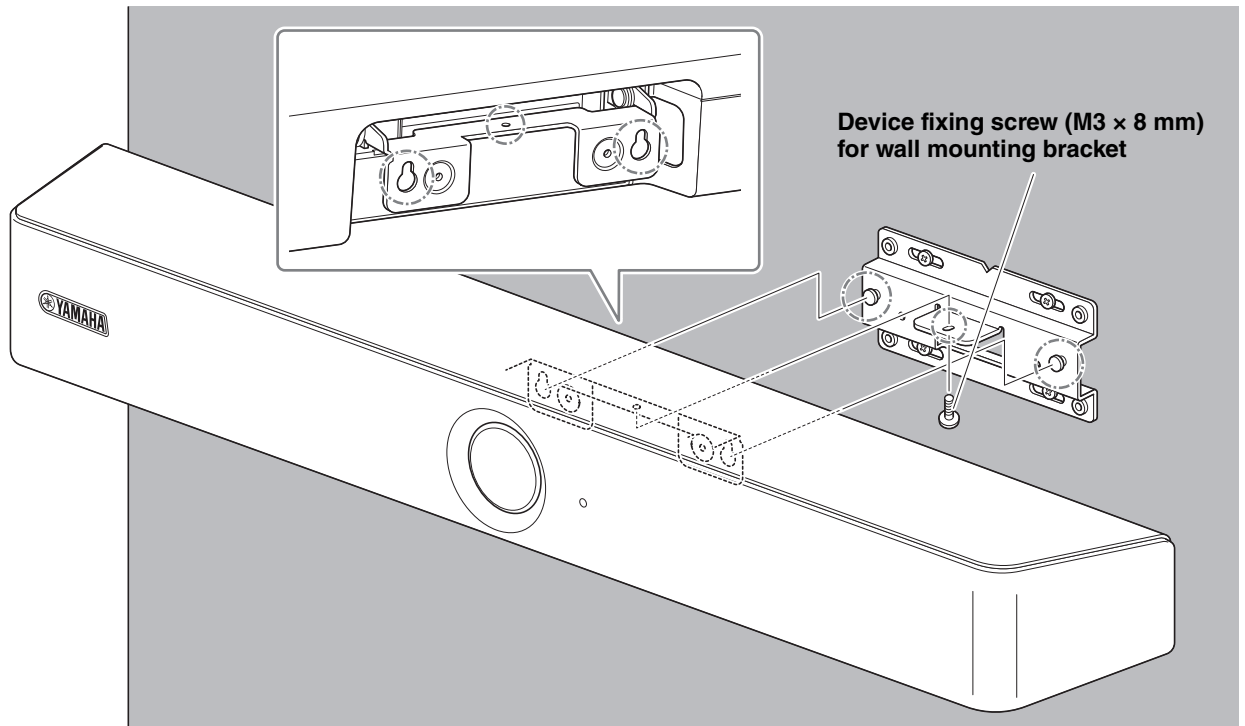
1. Attach the wall mounting bracket to the wall.



IMPORTANT

- Screws for attaching the wall mounting bracket to the wall are not included. Prepare screws that are strong enough.
- For details on screws and the installation, be sure to contact the dealer where you purchased the product or a professional contractor.

2. Hang the device on the bracket installed in step 1.



3. From the underside of the wall mounting bracket, secure the device by using the included device fixing screw (M3 x 8 mm) for wall mounting bracket.

■ Installing onto a TV

The device can be attached to a TV by using monitor mounting bracket (VESA) BRK-TV1 (sold separately). When mounting the device below a TV on the TV stand, prepare the following.

Items to prepare

① Wall mounting bracket (including item)

- Wall mounting bracket
- Device fixing screw (M3 × 8 mm) for wall mounting bracket × 1

② Monitor mounting bracket (separately sold item) BRK-TV1 * Compatible TV sizes: 48 to 70 inches

- Monitor mounting brackets (for mounting onto wall mounting bracket, horizontal, and vertical)
- Spacer × 4
- Screw (M4 × 10 mm with washer) for bracket assembly × 12
- Screws for mounting TV (M6 × 12 mm) × 4 and (M6 × 30 mm) × 4
- Spring washer and flat washer for screws (M6) for mounting TV × 4 each
- Screws for mounting TV (M8 × 15 mm) × 4 and (M8 × 35 mm) × 4
- Spring washer and flat washer for screws (M8) for mounting TV × 4 each

* Use only four of the above-listed screws for mounting TV.

③ TV stand (user provided)

④ Screwdriver (user provided)

IMPORTANT

- For details on assembling the TV stand and mounting the TV to it, follow the instructions in the manual for the TV stand.
- The TV should be mounted to the TV stand by two or more people.

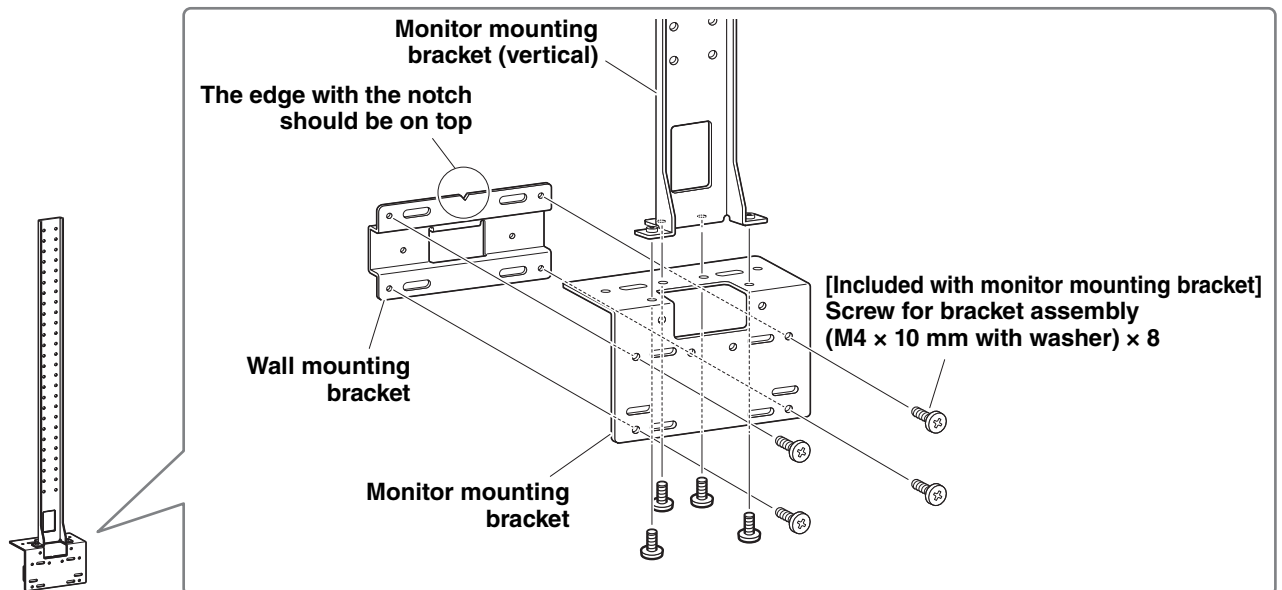


WARNING

- Be sure to have the mounting bracket installed by the dealer where you purchased the product or a professional contractor.
- After installation, make sure that the CS-800 is firmly secured. Also, regularly check that there is no possibility of the device falling or tipping over. We cannot be held responsible for accidents caused by incorrect installation.
- After installation, do not lean against the CS-800 or apply a strong force to it from above. If the device falls, injuries or damage may result.

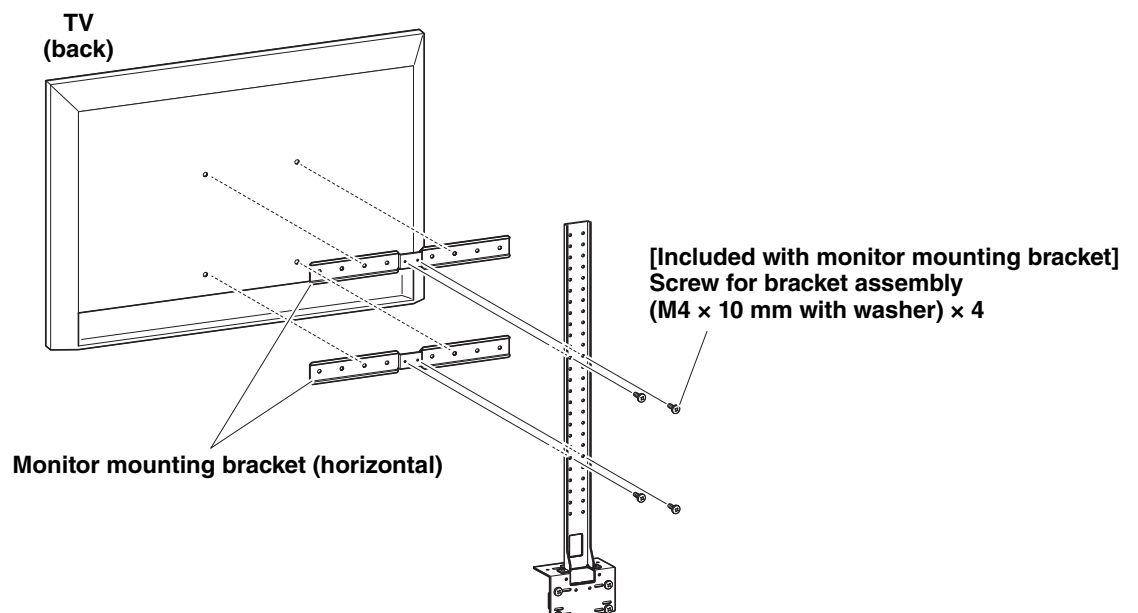
The following is an example of an installation that uses the screw holes in the TV and a TV stand.

- 1. Attach the monitor mounting bracket (vertical), monitor mounting bracket (for mounting onto wall mounting bracket) and the wall mounting bracket using the screws included with them.**



- 2. Using the included screws, attach the monitor mounting brackets (horizontal) and the brackets assembled in step 1.**

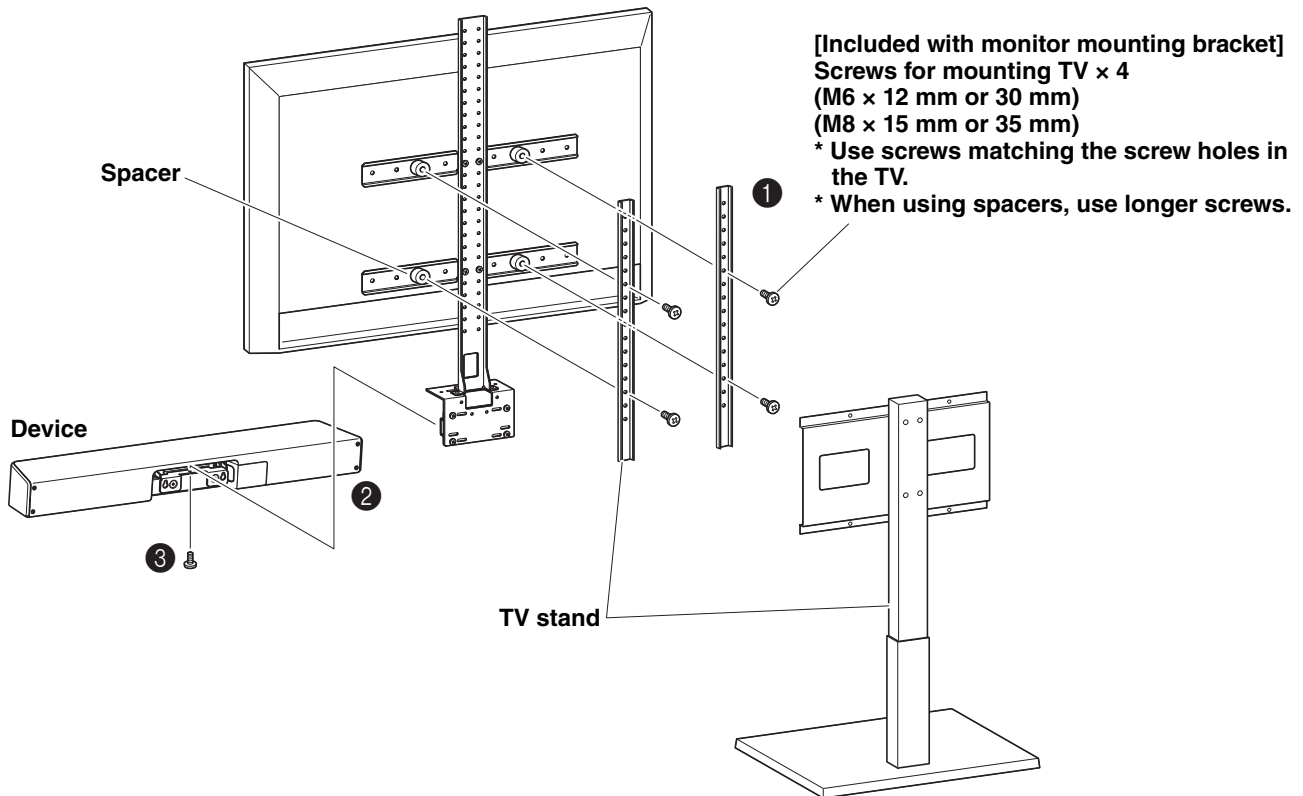
Align the monitor mounting brackets (horizontal) with the screw holes in the TV to determine the mounting position. After determining the mounting position, mount the brackets from step 1 at the appropriate height.



IMPORTANT At this point, do not install the TV yet.

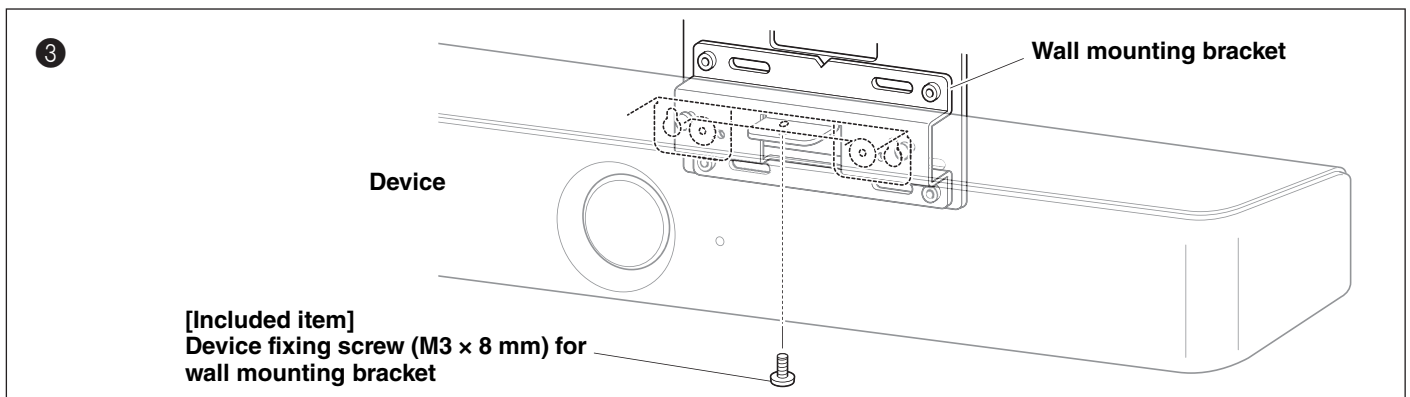
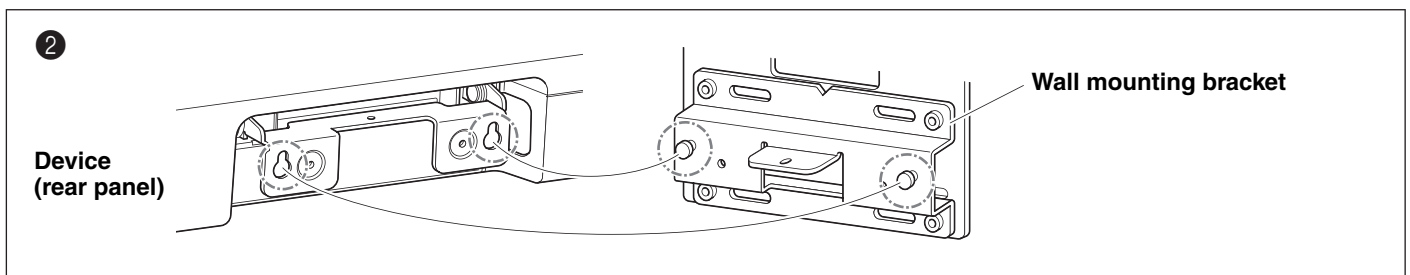
3. Attach the brackets assembled in step 2 to the TV stand, TV and device.

- ① Attach the brackets from step 2 to the TV stand.
- ② Hang the device on the wall mounting bracket installed in step ①.
- ③ From the underside of the device, secure it to the brackets from step ② by using the screw included with the device.



IMPORTANT

- Depending on the configuration of the TV stand, also tightly secure the spacers included with monitor mounting bracket BRK-TV1.
- For details on assembling the TV stand and mounting the TV to it, follow the instructions in the manual for the TV stand.



Configuring the device from a TV screen (on-screen display menu)

The on-screen display menu is a feature that displays the device's settings menu on a TV screen. It can be operated with the remote control.

NOTE

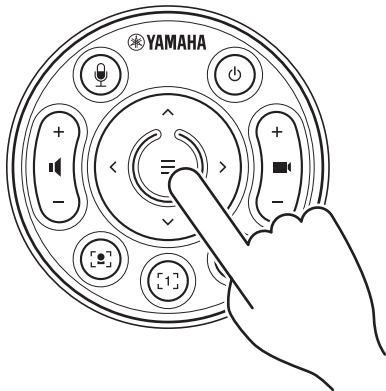
- This function cannot be used with a meeting room PC (Page 14).
- In order to use this function, first follow the procedure in "Pairing the device and remote control" (page 17).
- In order to use this function, first follow the procedure in "Specifying the necessary settings for using a computer you brought in or a smart device" (page 18).

What can be done with the on-screen display menu

- ✓ Meeting area settings
- ✓ Smart framing settings
- ✓ Camera preset settings
- ✓ Microphone settings
- ✓ Speaker settings
- ✓ Bluetooth settings

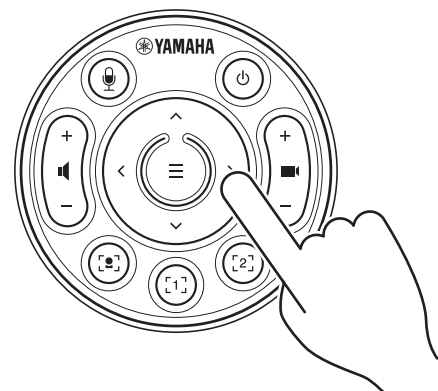
Displaying the device's settings menu

1. Press the menu button on the remote control.



The on-screen display menu appears on the TV.

2. Navigate with the pan/tilt button on the remote control.



Use the pan/tilt button (arrow button) to move the cursor up/down/left/right.

For details, refer to the On-Screen Display Menu Operation Guide.

Using software to configure and manage devices

Using Yamaha CS Manager to specify detailed settings

Yamaha CS Manager is application software for specifying detailed settings for the device. Connect a computer (installed with Yamaha CS Manager) to the device by using a USB cable.

What can be done with Yamaha CS Manager

- ✓ Admin settings
- ✓ Audio settings
- ✓ Bluetooth settings
- ✓ Camera settings
- ✓ Smart framing settings
- ✓ Display settings
- ✓ Network settings (Wi-Fi connection)
- ✓ Time settings
- ✓ Updating the firmware
- ✓ Exporting/importing configuration files
- ✓ Restoring factory default settings/restarting the device
- ✓ Downloading log information

For details, refer to the **Yamaha CS Manager Operation Guide**.

Using CS Remote Configurator to batch-configure devices

CS Remote Configurator is application software that batch-configures multiple devices connected via a network. Connect the computer and devices via a wireless LAN access point. All devices to be batch-configured must be connected via Wi-Fi by using Yamaha CS Manager.

What can be done with CS Remote Configurator

- ✓ Batch-updating firmware
- ✓ Batch-importing CS-800 and CS-500 configuration files (batch device configuration)
- ✓ Batch-changing standby images

For details, refer to the **CS Remote Configurator Operation Guide**.

	Yamaha CS Manager	CS Remote Configurator
Connection method	USB	Wi-Fi
Wi-Fi connection settings	✓	—
Updating the firmware	✓	✓ (batch)
Changing the standby image	✓	✓ (batch)
Exporting the configuration file	✓	—
Importing the configuration file	✓	✓ (batch) *

*The configuration files exported with Yamaha CS Manager can be batch-imported.

Returning to factory default settings (factory reset)

This device can be returned to its factory default (initial settings) using either of the following methods.

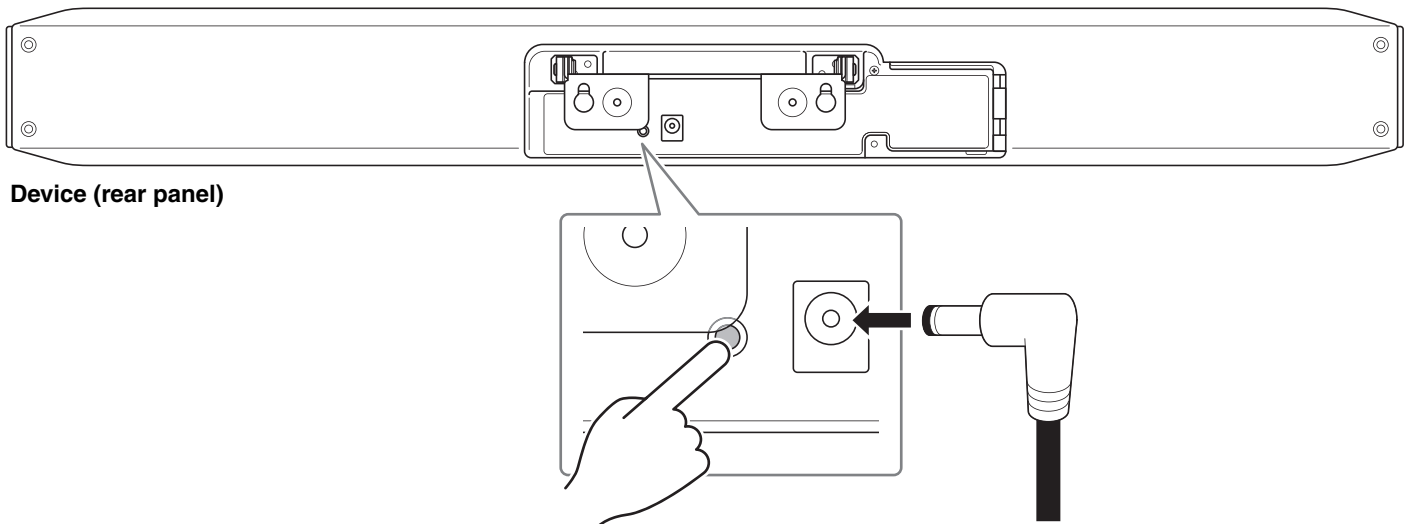
- Initializing by using the device
- Initializing by using Yamaha CS Manager

NOTE

The log information will be erased when the device is returned to its factory default settings (factory reset). We recommend downloading the log information before performing a factory reset due to a problem.

Initializing by using the device

- 1. Start the device by connecting the power cable while holding down the [FUNCTION] button on the rear panel of the device.**



Connecting the power cable automatically turns on the device.

- 2. After connecting the power cable, keep the [FUNCTION] button pressed for at least 5 seconds.**

The status indicator on the front panel of the device flashes in orange five times at a 0.5-second interval. Initialization is finished when the status indicator lights up in white.

Initializing by using Yamaha CS Manager

Initialize from the [Configuration] screen in the [Tools] menu of Yamaha CS Manager.

Appendix

List of settings and operations


Function/operation	Remote control	On-screen display menu	Yamaha CS Manager	CS Remote Configurator
Admin settings	—	—	✓	—
Speaker settings	—	✓ *1	✓	—
Microphone settings	—	✓ *1	✓	—
Bluetooth pairing/connection	—	✓	✓	—
Detailed Bluetooth settings	—	—	✓	—
Camera settings	—	—	✓	—
Saving/recalling camera presets	2 sets	2 sets	5 sets *2	—
Meeting area settings	—	✓	✓	—
Turning on/off smart framing	✓	—	✓	—
Selecting smart framing mode	✓	✓	✓	—
Display settings	—	—	✓	—
Changing the stand-by screen image	—	—	✓	✓ (batch)
Network settings (Wi-Fi connection)	—	—	✓	—
Time settings	—	—	✓	—
Updating the firmware	—	—	✓	✓ (batch)
Exporting the configuration file	—	—	✓	—
Importing the configuration file	—	—	✓	✓ (batch)
Restoring factory default settings/restarting the device	—	—	✓	—
Downloading log information	—	—	✓	—

*1 More detailed speaker settings and microphone settings can be set by using Yamaha CS Manager.

*2 [PTZ preset 1] and [PTZ preset 2] can be saved and recalled as camera presets 1 and 2 by using the remote control and on-screen display menu.

Main specifications

General specifications

Product type	Video Conference System	
Dimensions	620 mm (W) × 90 mm (D) × 70 mm (H)	
Weight	1.7 kg	
Power supply	100 – 240 V AC (50/60 Hz) 	
Maximum power consumption	42 W	
Safety	CB/G, UL, CE, RCM, KC, CCC, BSMI, BIS	
EMC	FCC, IC, CE, RCM, KC, CCC, BSMI	
Radio interference standard	FCC, IC, CE, RCM, KC, SRRC, NCC, ANATEL	
Operating environment	Temperature	0 °C – 40 °C
	Humidity	20% – 85% (non-condensing)
Humidity	Temperature	–20 °C – 60 °C
	Humidity	20% – 85% (non-condensing)
Indicators	Status indicator	
Included items	AC adaptor, AC cable, remote control, USB 2.0 cable (Type C-A, 5 m), HDMI cable (2 m), Wall mounting bracket, Table stand, Lens cap, Read This First, Quick Guide, Safety Guide, Coin battery (CR2032) × 2, terminal cover, Mounting screws, Hexagonal wrench	
Separately sold items	Mounting accessory BRK-TV1 USB 3.2 Gen 2 cable (Type C-A, 10 m) CBL-L10AC USB 3.2 Gen 2 cable (Type C-A, 25 m) CBL-L25AC	
Supported operating systems	Windows 11, Windows 10, macOS 12, macOS 11, macOS 10.15, Chrome OS	

Connectivity

USB Type-C	USB 2.0/3.2 Gen 1, UAC 2.0, UVC 1.1, DisplayLink	
HDMI	Version 1.4 Resolution: 720 × 480, 1280 × 720, 1366 × 768, 1920 × 1080 Frame rate: 30 fps HDCP: Version 1.3 HDMI-CEC: Power control, Input selection	
Bluetooth	Common	Version 5.0 Supported profiles: HFP(1.7), A2DP, AVRCP, BLE Supported codec: CVSD, SBC, mSBC Wireless output: Class 1 Maximum communication distance: 10 m (32.8 ft) (no obstacles) Radio frequency (operational frequency): 2,402 to 2,480 MHz
	U.K./EU	Maximum output power (EIRP): 7.6 dBm (5.8 mW)
	USA/Canada	Maximum output power: 7.23 dBm (5.3 mW)
	Korea	Maximum output power: 0.003 W

Wi-Fi network	Common	Wireless LAN standards: IEEE 802.11b/g/n Radio frequency band: 2.4 GHz Available security method: OPEN, WEP, WPA/WPA2-PSK, WPA3-SAE
	U.K./EU	Radio frequency (operational frequency): 2,412 to 2,472 MHz Maximum output power (EIRP): 19.7 dBm (93.3 mW)
	USA/Canada	Radio frequency (operational frequency): 2,412 to 2,462 MHz Maximum output power: 14.01 dBm (25.2 mW)
	Korea	Radio frequency (operational frequency): 2,412 to 2,472 MHz Maximum output power: 0.01 W/MHz

Audio

Speaker	Full-range speaker × 1
Speaker Loudness	90 dBSPL (1 m)
Speaker frequency response	100 Hz – 20 kHz
Microphone	Hexa-microphone (MEMS × 6)
Microphone coverage	120° audio pickup Max distance: 6.0 m (19.6 ft, Face focus beamforming off) / 3.0m (9.8 ft, Face focus beamforming on)
Microphone frequency response	100 Hz – 16 kHz
Audio signal processing	Adaptive echo canceller, Noise reduction, Automatic tracking, Automatic gain control, Automatic room EQ, Dereverberation, SoundCap Eye (Face focus beamforming, Self-silence, Self-volume balancer)

Camera/video

Sensor	CMOS 8M pixels (4K)
Diagonal angle of view	120°
Focal distance	0.5 m (1.6 ft) – ∞
Frame rate	6 fps, 7.5 fps, 10 fps, 15 fps, 30 fps
Supported video resolutions	3840 × 2160, 2560 × 1440, 1920 × 1080, 1280 × 720, 640 × 360
Supported video codecs	YUY2, MJPEG, NV12
Frame control	Smart framing (Group, Individual, Speaker tracking) or manual pan-tilt-zoom (PTZ), Configurable preset × 2 Maximum zoom ratio: 5.0× People detection max distance: 4.5 m
Video signal processing	Automatic white balance, Automatic exposure control, Noise reduction

User interface

Function button	Factory default settings, Remote control pairing
Remote control	Power supply, Microphone mute × 2, Speaker volume, Camera ePTZ, Smart framing ON/OFF, Camera preset × 2, On-screen display menu control
On-screen display menu	Meeting area, Smart framing mode, Camera preset, Microphone, Speaker, Bluetooth
People presence detection	Auto wakeup
Yamaha CS Manager	Supported OS: Windows 11, Windows10 (64-bit), macOS 12, macOS 11, macOS 10.15 Functions: Device status monitor, Security setting, Power setting, Audio setting, Camera setting, Smart framing setting, Bluetooth setting, HDMI screen setting, Network (Wi-Fi) setting, NTP setting, Firmware upgrading, Factory default setting, Exporting/importing configuration files, Logs retrieving
CS Remote Configurator	Supported OS: Windows 11, Windows10 (64-bit) Batch-updating firmware, importing configuration files, batch-changing standby images

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