



User Guide

Headphone amplifier

HA-L7A

EN

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Please Read First

Advantages of this product

Thank you for purchasing this Yamaha product. The HA-L7A is a standalone Headphone amplifier that lets you listen to the audio from devices that are connected to this unit via digital/analog connection, as well as play back high-definition audio from a computer or tablet that's connected to this unit via USB. Aside from headphones, you can also connect an external amp or active speakers for playing back audio with this amp. This unit also features SOUND FIELD MODE for immersing yourself more fully in your music or other audio contents, played within the sound field of your choice.

This product offers the following advantages.

- **USB DAC functionality for decoding and playing back music data on this product from a computer, tablet or other device with high fidelity**
- **Optical/coaxial digital input jack and analog input jacks for connecting a variety of audio devices**
- **Three types of headphone jacks (4-pin balanced XLR, 4.4 mm (TRRRS), 6.3 mm unbalanced)**
- **PRE/LINE OUT jacks for connecting to an external amp (RCA/XLR)**
- **SOUND FIELD MODE function for playing back audio contents in the sound field of your choice**

About this manual

Three manuals are provided for users of this product, including the Safety Guide, Quick Guide and User Guide. Be sure to read each of these manuals, and keep them together in a safe place for future reference.

Manuals

Safety Guide (included)

Explains the necessary precautions you must take when using this product. Make sure to read these instructions before use.


Quick Guide (included)

Explains about the basic connections and operations required after you purchase this product.

User Guide (this Guide)

Explains about all of this product's functions and features. This also includes information on troubleshooting and firmware updates. This Guide is only available via our website.

The precautions and other matters in this guide are classified as follows.

Indication	Meaning
 CAUTION	This content indicates "risk of injury."
NOTICE	Indicates points that you must observe to prevent product failure, damage or malfunction and data loss, as well as to protect the environment.
NOTE	Indicates notes on instructions, restrictions on functions, and additional information that may be helpful.

NOTE

- The explanations in this Guide are written according to the latest specifications as of the date of publication.
- You can download the latest version of each guide (PDF) from the website shown below.
<https://download.yamaha.com/>

Cautions regarding product handling

Please read the Safety Guide before you use this product. Also, use caution regarding the following.



CAUTION

- To prevent hearing loss, observe the following points.
 - Do not listen at high volumes for an extended period of time.
 - When switching between audio input sources or output destinations, temporarily turn down the volume.
 - Do not make sudden changes in volume.
 - Do not turn this product on while you are wearing headphones.

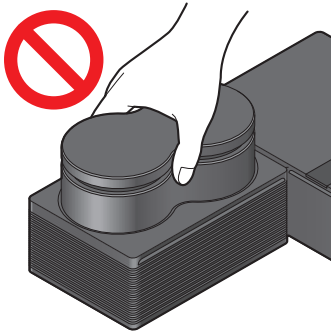
This product features the following functions for controlling the volume, which we encourage you to use.

- “Setting an upper limit for the volume” (p.47)
Lets you set an upper limit for the volume.
- “Setting the default volume” (p.48)
Lets you set the volume used when the power is turned on.



CAUTION

- Do not move around or pick up the product while holding the transformer unit.
 - You might drop the product, injuring yourself or causing a malfunction.
 - Applying excessive force to this part may cause it to break.



Checking the Included Items and Getting the Remote Control Ready

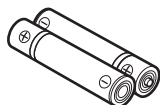
Checking the included items

Check to make sure that the following items are included with this product.

Remote control × 1



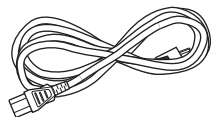
Batteries (AA, R6, UM-3) × 2



Power cord × 1

NOTE

There may be more than one power cord included with this product in certain regions. Use the cord that's appropriate for the power outlet where you will use it.



USB cable (Type-A to Type-B) 1.5 m × 1

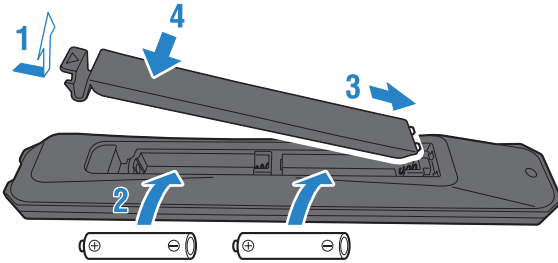


Safety Guide × 1

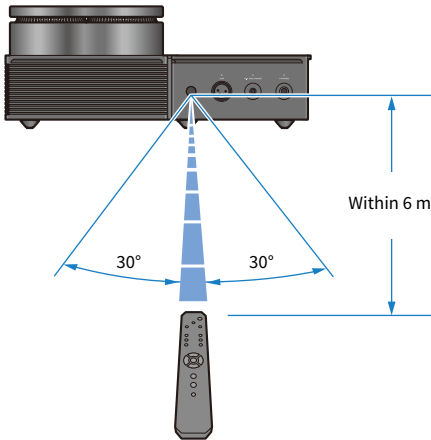
Quick Guide × 1

Getting the remote control ready

Insert the included batteries into the remote control in the correct orientation (+/-).



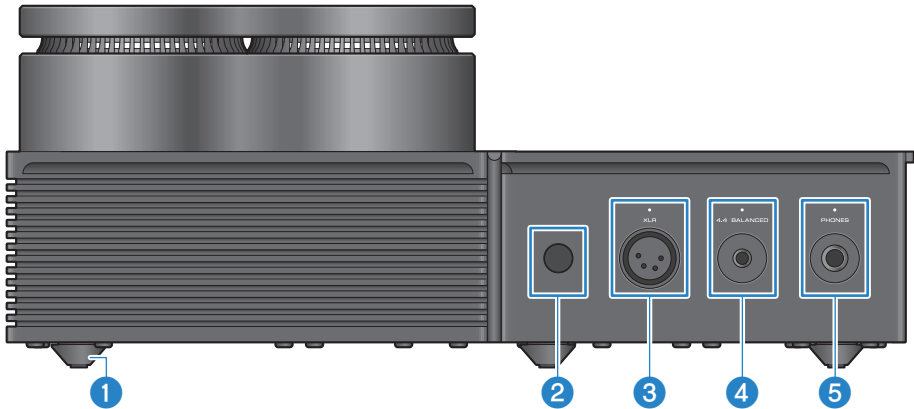
The remote control for this product uses infrared light, and can operate within the range shown in the illustration.



Part names and functions

Front panel

This explains the names and functions of each component on the front panel.



- 1 Feet**

The feet are designed to raise the unit a certain level above the surface, so that it can be set up without wobbling. The legs cannot be removed.
- 2 Remote control signal receiver**

Receives the infrared signals from the remote control (p.9).
- 3 [XLR] connector and indicator**

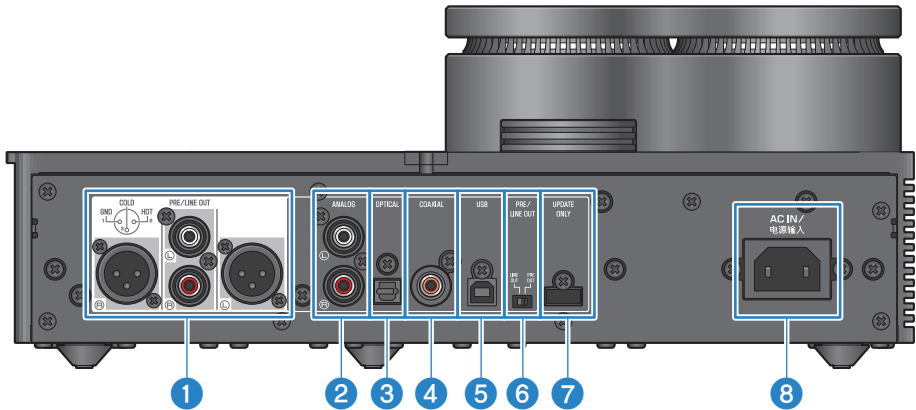
Connect headphones that use an XLR 4-pin plug here (p.23). When this is selected as an audio output destination, the indicator above the connector lights up.
- 4 [4.4 BALANCED] jack and indicator**

Connect headphones that use a five-conductor (TRRRS) 4.4 mm balanced plug here (p.23). When this is selected as an audio output destination, the indicator above the jack lights up.
- 5 [PHONES] jack and indicator**

Connect headphones that use a 6.3 mm (1/4-inch) plug here (p.23). When this is selected as an audio output destination, the indicator above the jack lights up.

Rear panel

This explains the names and functions of each component on the rear panel.



1 [PRE/LINE OUT] headphone output jacks

Connect an external amp (such as a power amp) or an active speaker here to play back audio output from this product (p.25).

Notice regarding the connection of external amplifiers

- To prevent the amplifier from outputting at excessively loud volumes and to prevent noise, observe the following when connecting an external amp or similar equipment.
 - Unplug this product from the AC outlet.
 - Turn off the external amp or similar equipment.
- Be sure to set the 6 [PRE/LINE OUT] switch to match the device that's connected.

2 [ANALOG] input jack

Connect a device that features analog audio output jacks here (p.19).

3 [OPTICAL] input jack

Connect a device that features optical digital audio output jacks here (p.18).

4 [COAXIAL] input jack

Connect a device that features a coaxial digital audio output jack here (p.18).

5 [USB] port (Type-B)

Connect a computer here (p.20).

6 [PRE/LINE OUT] switch

Toggle this switch according to the device connected to the [PRE/LINE OUT] jack (p.25). Set this product's power mode to off (standby) before toggling this switch. The setting is not applied when you toggle the switch while the power is on.

[PRE OUT] (factory default setting)

The signal whose volume has been adjusted on this product is output from the [PRE/LINE OUT] jacks. Make sure to use this setting when you connect audio equipment that does not have volume adjustment features, such as a preamp.

[LINE OUT]

The signal is output at maximum volume from the [PRE/LINE OUT] jacks. Use this setting when you connect audio equipment that has a volume adjustment feature, such as an integrated amplifier.

7 [UPDATE ONLY] jack

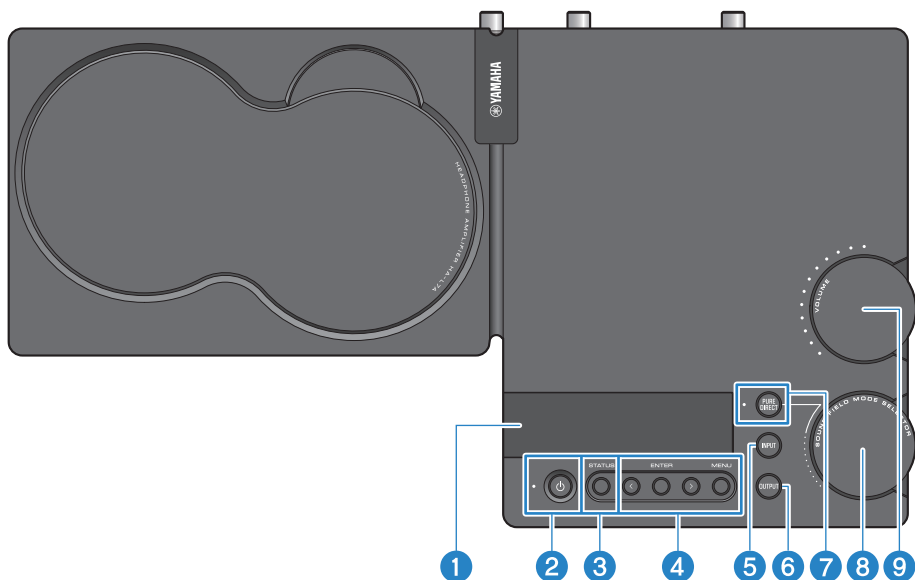
This jack is only used when you want to update the firmware of this product. The USB flash drive must contain the firmware data to update this product (p.60). Do not connect other USB devices to this port or use it for charging.

8 [AC IN] jack

Connect the included AC power cord here (p.28).

Operating panel

This explains the names and functions of each component on the operating panel.



1 Information display

This display shows various information and the menu (p.33).

2 [⏻] Power button and indicator

Turns this product on/off (standby). The indicator lights up when the power is on (p.29).

3 [STATUS] button

Switches between information displays (p.33).

4 Menu operation buttons

< (left), [ENTER], > (right), [MENU]

These are used to operate the menu (p.43).

5 [INPUT] button

Switches between input sources for the audio. The input source switches each time you press the button (p.30).

6 [OUTPUT] button

Switches between the output destinations for the audio. The output destination switches each time you press the button (p.30).

7 [PURE DIRECT] button and indicator

Turns PURE DIRECT on/off. When this is on, the indicator lights up (p.40).

Part names and functions > Operating panel

8 **[SOUND FIELD MODE SELECTOR] knob**

Switches between sound field effects (p.38).

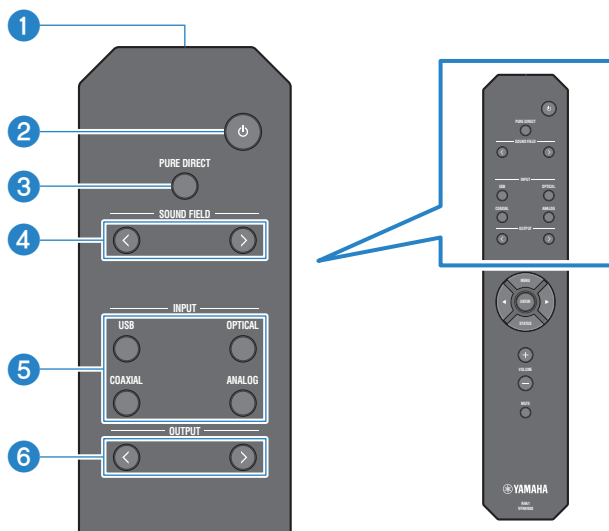
9 **[VOLUME] knob and indicator**

Adjusts the volume (p.32). The knob range indicators light up according to the volume.

Remote control

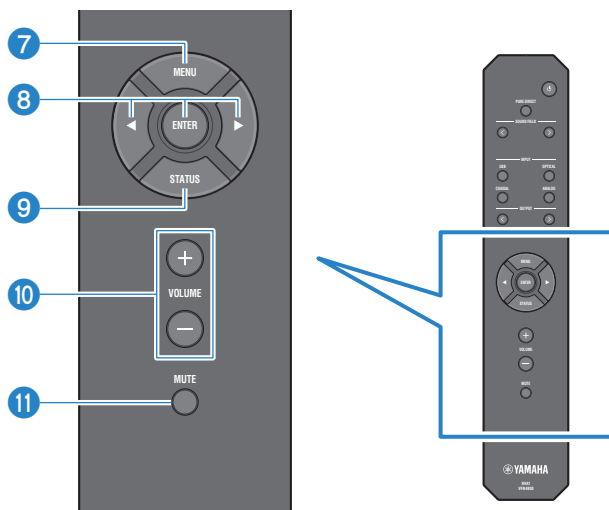
This explains the names and functions of each part of the remote control.

Remote control (top)



- 1 Remote control signal transmitter**
Transmits the signals (infrared) from the remote control (p.9).
- 2 [⏻] Power key**
Turns this product on/off (standby) (p.29).
- 3 [PURE DIRECT] key**
Turns PURE DIRECT on/off (p.40).
- 4 [SOUND FIELD] keys**
Switches between SOUND FIELD MODE (sound field effect) settings (p.38).
- 5 [INPUT] keys**
Selects the input source for the audio (p.30).
- 6 [OUTPUT] keys**
These keys switch between the output destinations for the audio (p.30).

Remote control (bottom)



7 [MENU] keys

Displays the settings menu (p.43).

8 Menu operation keys

Use the ◀ (left), [ENTER], ▶ (right) keys to operate the menu (p.43).

9 [STATUS] key

Press this repeatedly to switch between contents on the information display (p.33).

10 [VOLUME] +/- keys

Adjusts the playback volume of the headphones or external amp (when set to PRE OUT) that are connected to this product (p.32).

11 [MUTE] key

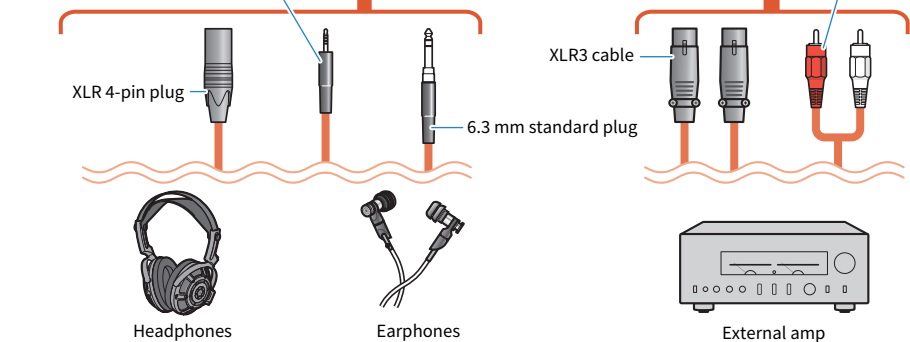
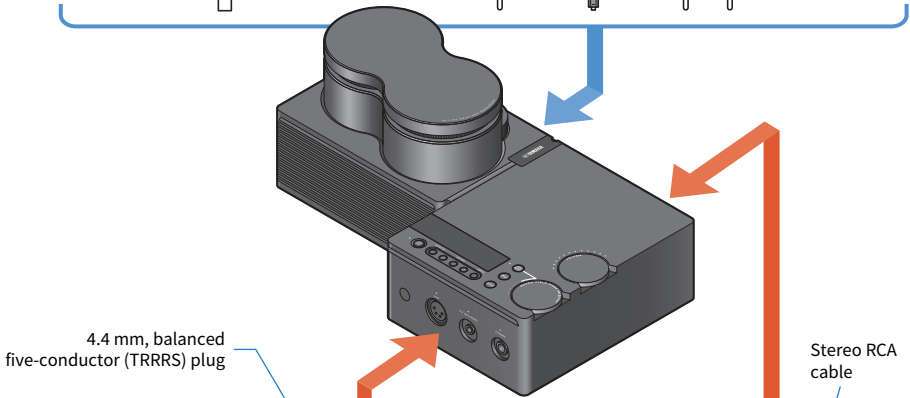
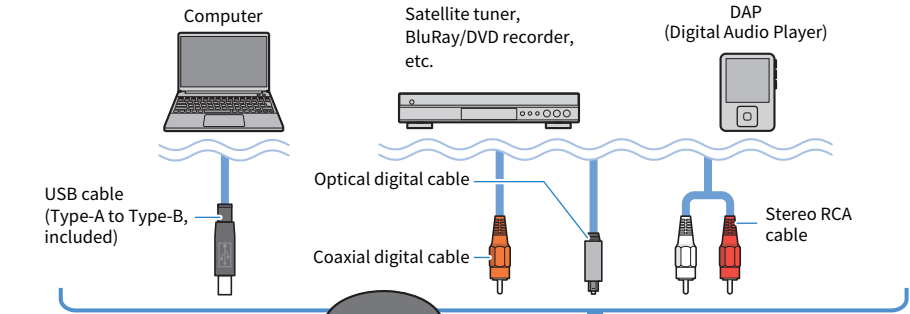
Turns off (mutes) the playback sound of the headphones or external amp (when set to PRE OUT) that's connected to this product. Press this again to hear the audio at the original volume (p.32).

Connections

Sample connection diagram

This is an example of how to connect various devices and cables to this product.

Input devices



Output devices

Connecting to an audio device (digital)

Connect the [OPTICAL] input jack or the [COAXIAL] input jack of this product to the digital audio output jacks of your audio equipment when you want to play back digital audio (PCM, 2 ch.).

Required cables

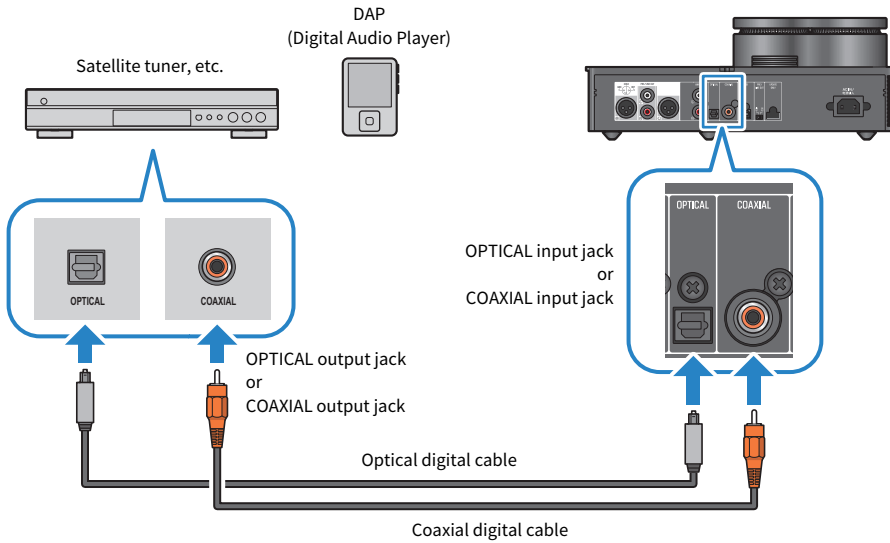
You'll need a commercially available optical digital cable or coaxial digital cable. For a DAP (Digital Audio Player), you may need an adaptor cable.

NOTE

If there is a cap fitted onto the tip of the optical digital cable, remove it before use.

How to connect

Connect as shown in the following illustration. Select a cable type that matches the audio output jack of your audio equipment.



NOTE

This product can play back two-channel PCM digital audio. If there is a setting on your audio device for digital audio output, use the PCM output (2 ch) setting.

Related links

- “Selecting the audio input source and output destination” (p.30)
- “Playing back sound from your audio device” (p.35)
- “Main specifications” (p.65)

Connecting to an audio device (analog)

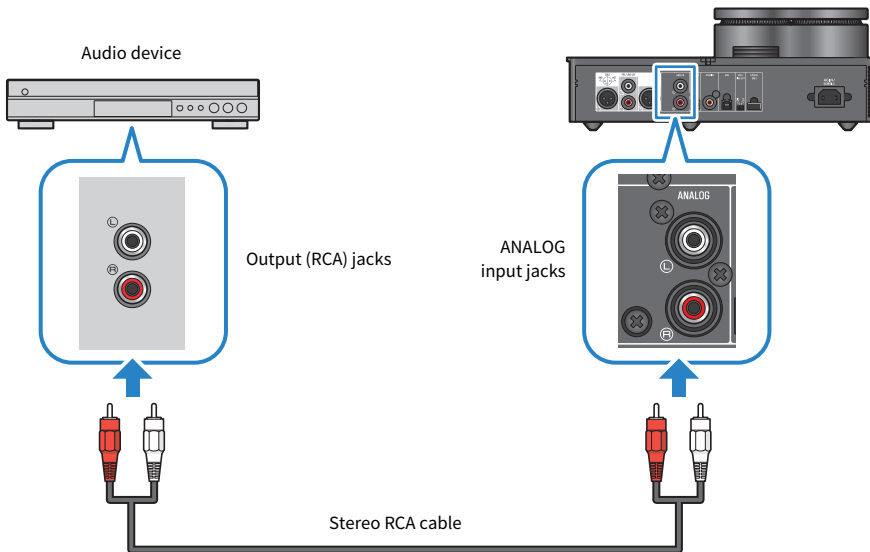
Connect the [ANALOG] input jack of this product to the analog audio output jacks of your audio equipment when you want to play back analog audio.

Required cables

You'll need a commercially available stereo RCA cable.

How to connect

Connect as shown in the following illustration.



Related links

- "Selecting the audio input source and output destination" (p.30)
- "Playing back sound from your audio device" (p.35)

Getting your computer ready and making connections (USB)

Installing the driver on the computer

When this product is connected to a personal computer via USB, the digital-to-analog conversion processing via this product's DAC device lets you enjoy your music data in high-definition sound on your personal computer (USB DAC feature). To use this feature, install the USB driver (computer software) provided by Yamaha, and then connect this product to your computer.

Supported operating systems

The supported operating systems and computers are shown below (current as of August 2023).

- Windows 10/11
- macOS 12/11/10.15/10.14/10.13

About the USB driver (computer software)

If you're using Windows on your computer, you must install the Yamaha Steinberg USB Driver. If you're using macOS, you can use the standard driver for the OS, and there is no need to install a USB driver.

NOTE

- This driver is not 100% guaranteed to operate even if your computer matches the specifications above, due to differences in your computer's configuration, operating environment, OS version upgrades and so on.
- Connect this product to your computer only after installing the driver. If you connect before installing the driver, the software may not operate correctly.

■ Installing the USB driver (Windows only)

Before connecting this product to your computer, follow the steps below to install the USB driver on your computer.

1 Access the following website and search for “Yamaha Steinberg USB Driver”.

Software download Web page:

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

2 Download the latest driver.

3 Extract (decompress) the downloaded file.

4 Install the driver on your computer.

Follow the steps in the installation guide included with the driver you downloaded to install the software.

5 Once installation is complete, quit all open applications.

NOTE

If an older version of this driver exists on your computer, uninstall it before installing the new one.

Related links

[“Connecting to your computer via USB” \(p.22\)](#)

Connecting to your computer via USB

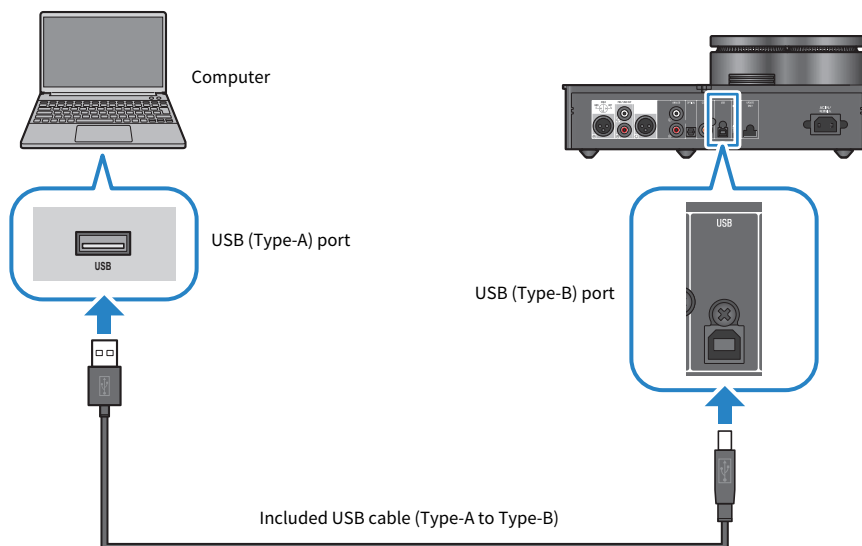
Use the included USB cable to connect this product to your computer.

Required cables

Use the included USB cable (Type-A to Type-B). If you are using a commercially available USB cable, make sure that it is within 3 m long.

How to connect

Connect as shown in the following illustration.



Related links

- "Selecting the audio input source and output destination" (p.30)
- "Playing back music on your computer" (p.36)

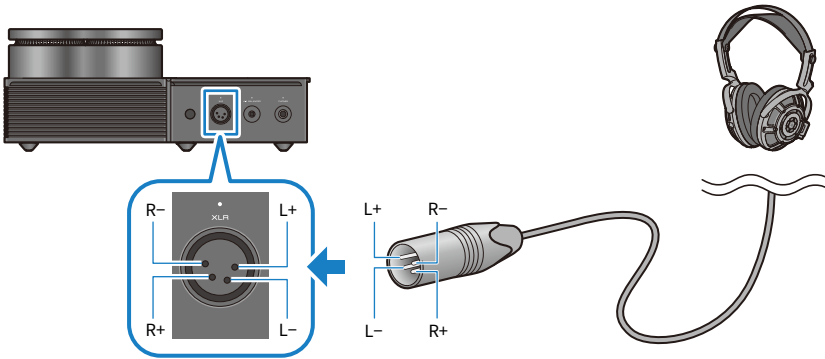
Connecting headphones

This shows how to connect your headphones to this product. Use the input jack or connector that matches the plug shape of your headphone cable.

How to connect

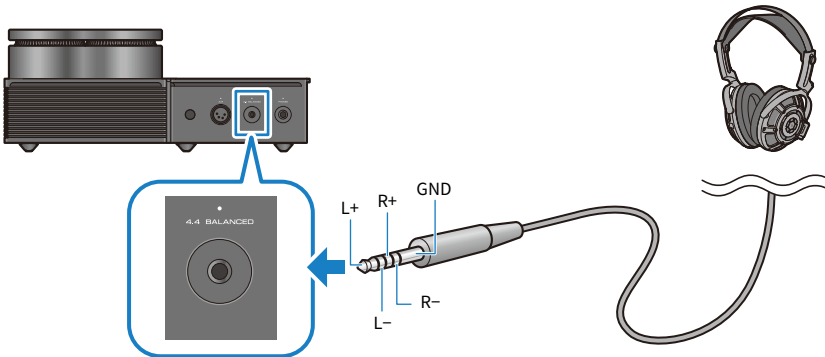
XLR 4-pin plugs

Connect the XLR 4-pin plug to the [XLR] connector on the front panel.



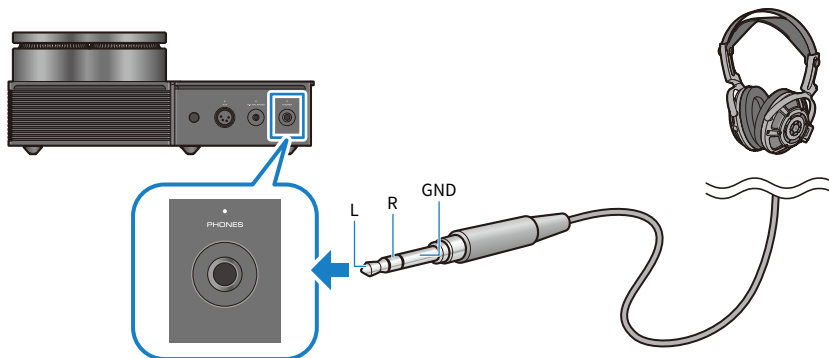
Balanced 4.4 mm five-conductor (TRRRS) plugs

Connect the balanced 4.4 mm five-conductor (TRRRS) plug into the [4.4 BALANCED] jack on the front panel.



6.3 mm (1/4-inch) standard plugs

Connect the 6.3 mm (1/4-inch) standard plug into the [PHONES] jack on the front panel.



Related links

[“Selecting the audio input source and output destination” \(p.30\)](#)

Connecting to an external amp

Connect an external amp (a preamp or power amp), an active speaker or similar equipment to the [PRE/LINE OUT] output connector to output audio from this product.

NOTICE

- When connecting an external amp or similar equipment, make sure that the device's power is off and that this product's AC power cord is not connected to the AC outlet.

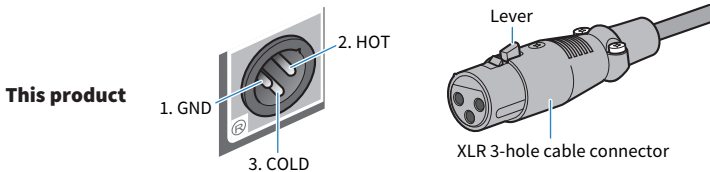
Required cables

You'll need a commercially available three-pin balanced XLR cable or a stereo RCA cable.

About XLR connectors

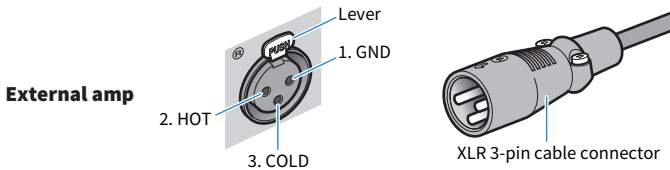
When using an XLR connector, make sure that the pin arrangement (polarity) on the XLR connector of your external amp is compatible with this product.

[PRE/LINE OUT] (XLR) output connector and XLR connector



Insert the XLR connector into the socket until you hear a click. To remove the cable from the socket, pull out the plug while holding down the connector lever.

XLR input connector and XLR connector

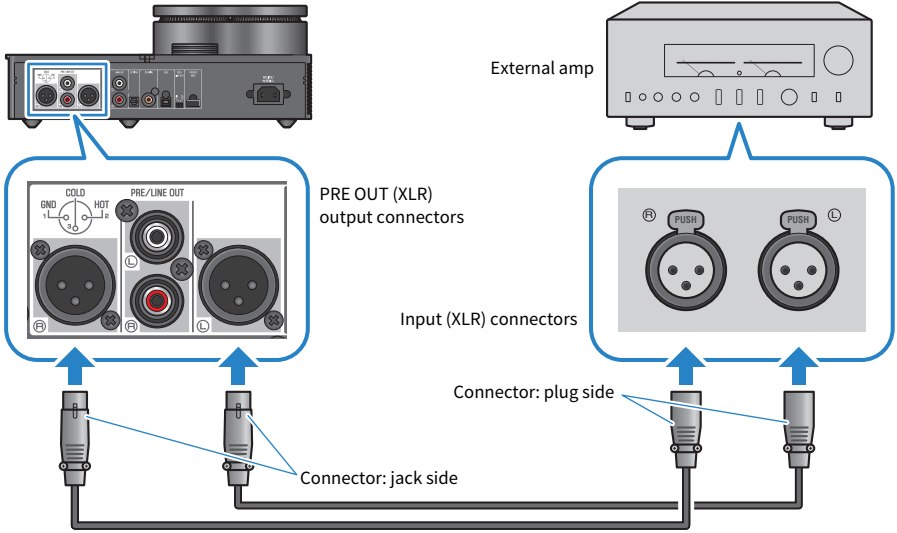


Insert the XLR connector into the socket until you hear a click. To remove the cable from the socket, pull out the plug while pushing the lever on the top of the socket.

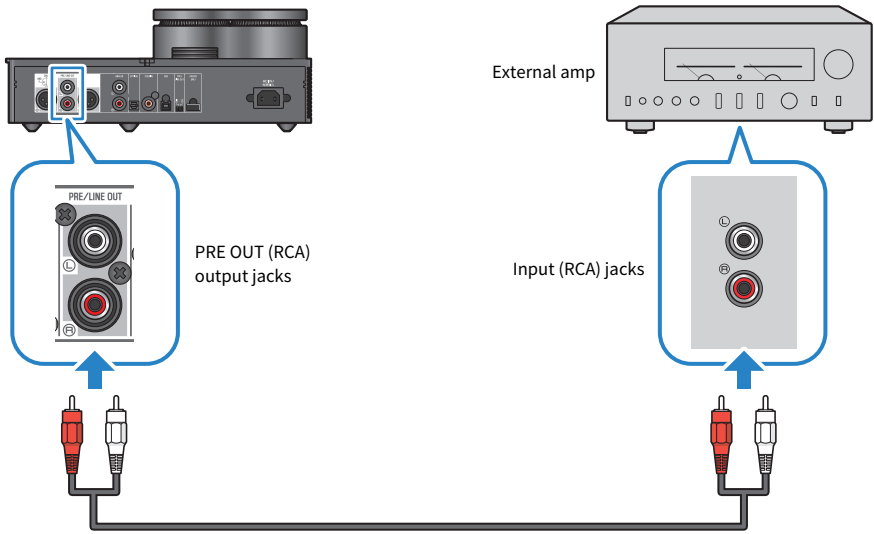
How to connect

Connect as shown in the following illustration.

XLR cables



Stereo RCA cables



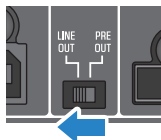
Be sure to set the [PRE/LINE OUT] switch after connecting the cables.

■ Setting the [PRE/LINE OUT] switch

Set the switch according to whether the connected device has a volume adjustment feature. Set this product's power mode to off (standby) before toggling this switch.

For devices that have a volume adjustment feature (preamps, active speakers, etc.)

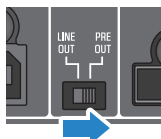
Set the switch to [LINE OUT]. With this setting, the volume is adjusted on the device that's connected to this product.



Use the [PRE OUT] setting if the device does have a volume adjustment feature but the volume can't be adjusted when using the jack or connector in question. (Example: the MAIN IN jack on the Yamaha A-S3200)

For devices that do not have a volume adjustment feature

Set the switch to [PRE OUT]. With this setting, the volume is adjusted on this product.



NOTE

- Do not connect both a XLR cable and a stereo RCA cable to a single amp at the same time. This may cause noise.
- You can only select either the headphone jacks or the [PRE/LINE OUT] output jacks as the output destination. You can't output audio signals to the headphones and to an external amp at the same time.
- The sound field effect of SOUND FIELD MODE (p.38) or PURE DIRECT (p.40) are not applied to the signal that's output from the [PRE/LINE OUT] output jacks.
- Some of the various settings have no effect on the signal that's output from the [PRE/LINE OUT] output jacks. See the explanation of each menu parameter for details (p.41).

Related links

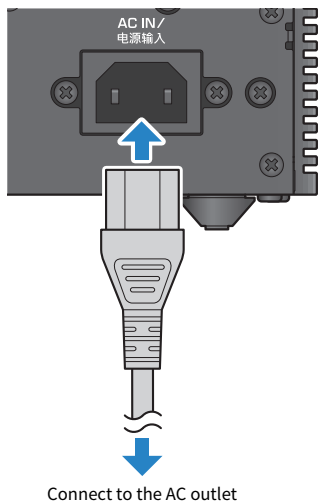
"Selecting the audio input source and output destination" (p.30)

Connecting the AC power cord

Connect the included AC power cord after connecting all other devices.

NOTE

There may be more than one power cord included with this product in certain regions. Use the cord that's appropriate for the power outlet where you will use it.



Related links

[“Turning the power on/off \(standby\)” \(p.29\)](#)

Basic playback operations

Turning the power on/off (standby)

This shows how to turn this product on/off (standby).



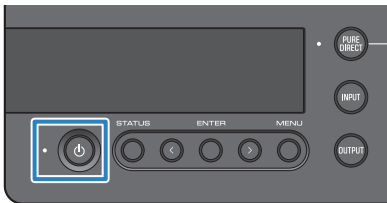
CAUTION

- To avoid hearing loss, turn this product on and then put on your headphones.

How to turn the power on/off (standby)

Press the [⏻] power button on the operating panel to turn the power on or off (standby). You can also do this by pressing the [⏻] power key on the remote control.

The indicator to the left of the power button along with the information display lights up when the power is turned on. The information display goes dark after several seconds.



NOTICE

- Make sure to disconnect the power plug from the AC outlet if you won't be using this product for a long time. This is because a slight electrical current is still flowing while this product is in off (standby) mode.

NOTE

- You can set a fixed volume that's initially used when the power is turned on, by changing the INITIAL VOLUME setting (p.48).
- The auto power standby feature on this product automatically turns off the power when the unit is not operated and nothing is played back for 20 minutes (p.50).

Selecting the audio input source and output destination



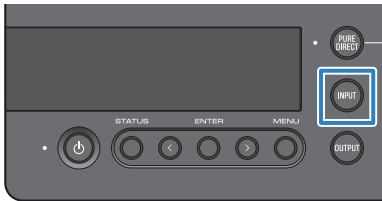
CAUTION

- To avoid hearing loss, turn down the volume when switching between input sources and output destinations.

This shows how to select the input source and output destination for the audio.

1 Press the [INPUT] button on the operating panel to select the audio input source.

The input source switches each time you press the button. You can also use the [INPUT] key on the remote control to directly select each input.

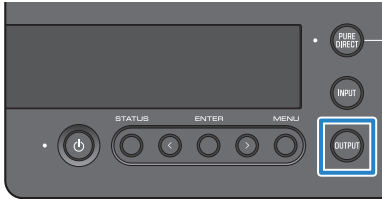


The input sources you can select are shown below.

- USB : use this to hear the audio from your computer connected to the [USB] port
- OPTICAL : use this to hear the audio from an audio device connected to the [OPTICAL] jack
- COAXIAL : use this to hear the audio from an audio device connected to the [COAXIAL] jack
- ANALOG : use this to hear the audio from an audio device connected to the [ANALOG] jacks

2 Press the [OUTPUT] button on the operating panel to select the audio output destination.

The output destination switches each time you press the button. You can also do this by pressing the [OUTPUT] key on the remote control.



The output destinations you can select are shown below.

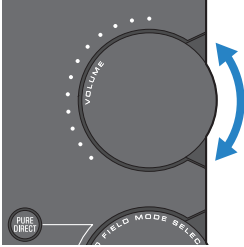
- HP 6.3mm : use this to hear the audio from headphones connected to the [PHONES] jack
- PRE OUT (LINE OUT) : use this to hear the audio from an external amp connected to the [PRE/LINE OUT] jacks
- HP XLR : use this to hear the audio from headphones connected to the [XLR] connector
- HP 4.4mm : use this to hear the audio from headphones connected to the [4.4 BALANCED] connector

Adjusting the volume

This shows how to adjust the playback volume or mute the sound from your headphones or external amp (when using PRE OUT).

How to adjust the volume

Turn the [VOLUME] knob on the operating panel clockwise to increase the volume, and turn the knob counterclockwise to decrease the volume. You can also do this by pressing the [VOLUME] +/- key on the remote control.



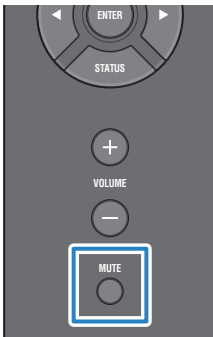
The knob range indicators light up according to the volume.

NOTE

If you've selected LINE OUT as the output destination, you can't adjust the volume from this product. In this case, adjust the volume on your external amp.

How to mute the sound

Press the [MUTE] key on the remote control to temporarily mute the sound. Press this again to hear the audio at the original volume.



NOTE

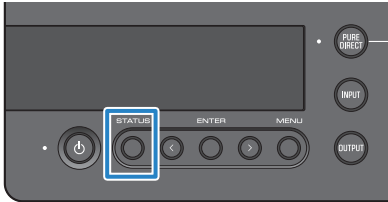
When the sound is muted, you can press the [VOLUME] knob or [VOLUME] +/- keys to cancel the mute status and control the volume.

Switching between information displays

This shows how to switch between information displays to see the current status.

How to switch between displays

Press the [STATUS] button repeatedly on the operating panel to select the desired display. You can also do this by pressing the [STATUS] key on the remote control.



Display types

There are three types of displays.

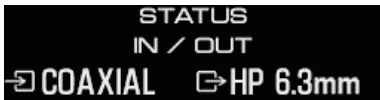
SOUND FIELD MODE display

Displays the name of the current SOUND FIELD MODE (sound field effect).



INPUT/OUTPUT display

Shows the names of the current input and output.



SIGNAL INFO display

Shows the information and volume (dB) for the signal that's playing back.



Basic playback operations > Switching between information displays

NOTE

The display automatically goes dark after about 10 seconds. To display this again, press the [STATUS] button once more.

Listening to sound from your audio device

Playing back sound from your audio device

This shows how to play back sound on this product from your audio device.

The following steps show you how to do this from the operating panel. You can also do this in a similar way with the remote control.

- 1 Turn the power of the connected audio device on.**
- 2 Press the [⏻] power button to turn this product on.**
If you're using an external amp, turn it on.
- 3 Turn the volume of this product all the way down.**
- 4 Press the [INPUT] button repeatedly to select the input source from the audio device.**
- 5 Press the [OUTPUT] button repeatedly to select the audio output destination.**
- 6 Play back sound on your audio device.**

Check whether sound is being output by gradually raising the volume.

NOTE

- If you've selected LINE OUT as the output destination, you can't adjust the volume from this product. In this case, adjust the volume on your external amp.
- This product can play back two-channel PCM digital audio. If there is a setting on your audio device for digital audio output, use the PCM output (2 ch) setting.

Listening to music on your computer (USB DAC feature)

Playing back music on your computer

After installing the driver on your computer, connect this product to your computer and play back the music on your computer.

The following steps show you how to do this from the operating panel. You can also do this in a similar way with the remote control.

- 1 Turn on the computer.**
- 2 Press the [⏻] power button to turn this product on.**
If you're using an external amp, turn it on.
- 3 Turn the volume of this product all the way down.**
- 4 Press the [INPUT] button repeatedly to select "USB".**
- 5 Press the [OUTPUT] button repeatedly to select the audio output destination.**
- 6 Set the audio output destination on your computer to "Yamaha USB DAC".**

For Windows users:

From the Start menu: Settings > System > Sound [Output]

For macOS users:

System Preferences > Sound > [Output] tab

The method to use depends on the OS version.

- 7 Play back music on your computer.**

Check whether sound is being output by gradually raising the volume on this product.

■ About volume adjustment

For better sound quality, set the volume of your computer to maximum, and then gradually increase the volume of this product from minimum to maximum, adjusting the volume to the level you prefer.

NOTE

- Do not unplug the USB cable, set this product to off (standby) or switch inputs during playback. This may cause a malfunction. Also, these operations could make the computer's playback device to change, which could cause the playback sound to output from an unintended device.
- To mute the computer's other sounds while music is playing back, edit the settings on your computer.
- You cannot control the music saved on your computer by using this product or the remote control for this product. Use your computer to control the music that's saved there.
- If you've selected LINE OUT as the output destination, you can't adjust the volume from this product. In this case, adjust the volume on your external amp.

Related links

- "Getting your computer ready and making connections (USB)" (p.20)
- "USB DAC-related issues" (p.57)

Changing the sound quality to match your preferences > Listening using different sound field effects (SOUND FIELD MODE)

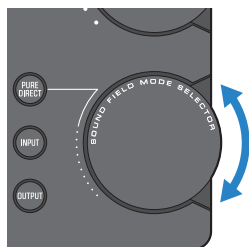
Changing the sound quality to match your preferences

Listening using different sound field effects (SOUND FIELD MODE)

This product includes different sound field effects (SOUND FIELD MODE). Select the desired mode according to the contents you are listening to. The SOUND FIELD MODE adds depth and reverberation to the sound through signal processing (DSP).

Selecting the SOUND FIELD MODE

Use the [SOUND FIELD MODE SELECTOR] knob on the operating panel to select the desired SOUND FIELD MODE. The name of the SOUND FIELD MODE you selected appears in the information display. You can also do this by pressing the [SOUND FIELD] key on the remote control.



SOUND FIELD MODE

STRAIGHT	Plays the sound without applying the sound field effect.
CINEMA	Gives a greater sense of immersion and presence to movies with action scenes, such as action and SF movies. The effect increases the separation between dialogue and sound effects or background music.
DRAMA	Lets you comfortably enjoy animated shows, dramas, variety shows and other content where voice is important. The effect increases the separation between dialogue and sound effects or background music, making the dialogue sound more real and adding a comfortable sense of reverberation.
MUSIC VIDEO	Simulates a comfortable spatial placement of vocals and musical instruments, for enjoying music videos and other content. This creates a pleasant sense of space and sonic placement.
CONCERT HALL	A setting that creates the echoes and space of a live concert in a hall, letting you enjoy the performance as if you were part of the venue. This creates a sense of envelopment, enthusiasm, unity and realism.

Changing the sound quality to match your preferences > Listening using different sound field effects (SOUND FIELD MODE)

OUTDOOR LIVE	Recreates the open-air feeling of an outdoor setting, letting you enjoy the sense of watching a live performance outdoors. This creates a sense of unity, openness and realism, reproducing a unique outdoor space by keeping the reverberations to an appropriate level.
BGM	This setting is suitable for listening to background music where the sound is localized outside the head, letting you relax and listen to music. Uses Yamaha's proprietary high-definition HRTF (Head Related Transfer Function) technology to process the stereo position of the sound outside your head.

Default setting

STRAIGHT

NOTE

- The SOUND FIELD MODE is remembered for each audio input.
- When using PURE DIRECT, the sound plays without the sound field effect, regardless of the setting (p.40).
- The SOUND FIELD MODE is not applied to the signal that's output from the [PRE/LINE OUT] output jacks.

Changing the sound quality to match your preferences > Listening with higher-definition sound quality (PURE DIRECT)

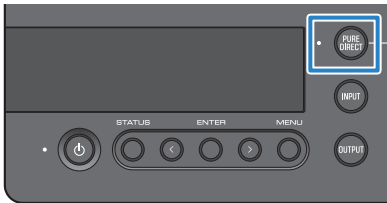
Listening with higher-definition sound quality (PURE DIRECT)

When PURE DIRECT is turned on, the various processing modes and circuits except for the basic functions necessary for playback are stopped. This allows for higher playback definition with less noise.

Using PURE DIRECT

Press the [PURE DIRECT] button on the operating panel to toggle this function on/off.

When PURE DIRECT is on, the indicator to the left of the [PURE DIRECT] button lights up. You can also do this by pressing the [PURE DIRECT] key on the remote control.



NOTE

- When PURE DIRECT is on, the following settings are disabled and cannot be edited.
 - SOUND FIELD MODE settings
 - DAC FILTER settings (for analog input)
 - DAC LOCK RANGE settings (for analog input)
 - LR BALANCE settings
- When you use an operation that can't be changed, "NOT AVAILABLE" appears in the information display.

Settings

Setting menu list

You can configure the detailed functions of this product in the settings menu. The parameters you can configure are shown in the table below.

See “Operating the settings menu” (p.43) for details on how to use this.

[Search tag] #Q01 Settings menu



CAUTION

- When you set the HP GAIN (LINE OUT GAIN) and switch from LO to HI (ATT to 0dB) during playback, this produces a loud volume that may cause hearing loss. Only change this setting after you have turned the volume all the way down.

No.	Parameter	Settings	Description	Page
1	DAC FILTER	FAST LINEAR	Selects the DAC filter.	44
		SLOW LINEAR		
		FAST MINIMUM		
		SLOW MINIMUM		
		APODIZING FAST		
		HYBRID FAST		
		BRICKWALL		
		SHORT LATENCY		
2	DAC LOCK RANGE	LEVEL 1	Adjusts the precision of the DAC.	45
		LEVEL 2		
		LEVEL 3		
3	HP GAIN	HI	Sets the gain for the headphones.	46
		LO		
3	LINE OUT GAIN	0dB	Sets the gain for LINE OUT output (when LINE OUT is selected as the output destination).	
		ATT		
4	VOLUME LIMIT	OFF	Sets an upper limit for the volume.	47
		ON		
5	INITIAL VOLUME	OFF	Sets the default volume used when the power is turned on.	48
		MUTE		
		-70.0dB		
		-60.0dB		
		-50.0dB		
		-40.0dB		
6	LR BALANCE	L+10.0 dB to 0.0 dB to R+10.0 dB (in 0.5 dB steps)	Adjusts the left/right volume balance.	49
7	AUTO POWER STDBY	OFF	Toggles the auto power standby on/off.	50

Settings > Setting menu list

No.	Parameter	Settings	Description	Page
7	AUTO POWER STDBY	ON	Toggles the auto power standby on/off.	50
8	VERSION INFO	SYSTEM : USB DAC :	Shows the firmware version.	51
9	INITIALIZATION	CANCEL EXECUTE	Initializes all settings and restores this product to its factory default state.	52

NOTE

You may not be able to change this setting, or the setting may be disabled in some conditions. See the explanation of each menu parameter for details.

Operating the settings menu

This shows how to use the operating panel to operate the settings menu. You can also do this in a similar way with the remote control.

1 Press the [MENU] button.

This displays the menu parameters. To cancel the operation later, press the [MENU] button.



- ① Menu number/number of menus
- ② Menu parameter
- ③ Setting (value)

2 Use the </> button to select the setting parameter, and press the [ENTER] button.

This displays the setting (value).

3 Use the </> button to select the setting (value), and press the [ENTER] button.

This confirms the setting (value) and returns to the setting parameter display. To operate a different menu, repeat the operations from steps 2 to 3.

4 Press the [MENU] button.

This exits the settings menu operations.

Related links

[“Setting menu list” \(p.41\)](#)

Setting the DAC filter

This shows how to change the type of digital filter used by the DAC (Digital to Analog Converter), for adjusting the sound quality to your preferences.

Setting menu

“DAC FILTER”

Settings

FAST LINEAR	Uses a steep filter to remove noise from outside the desired frequency band. The resulting sound quality tends to be clear.
SLOW LINEAR	Uses a gentle filter to remove noise from outside the desired frequency band. The resulting sound quality tends to be more gradual with a softer attack.
FAST MINIMUM	Removes noise from outside the desired frequency band with a steep filter. This gives a clear tone, and the resulting sound quality tends to have a more powerful low end than FAST LINEAR.
SLOW MINIMUM	Removes noise from outside the desired frequency band with a gentle filter. The resulting sound quality tends to have a sharper attack than SLOW LINEAR, with a powerful low end.
APODIZING FAST	Removes noise from outside the desired frequency band with a filter that has less pre-ringing than FAST LINEAR. The resulting sound quality tends to be clear and transparent.
HYBRID FAST	Removes noise from outside the desired frequency band using a special filter with both linear phase and minimum phase. The resulting sound quality tends to have a sharper attack with a powerful, crisp sound.
BRICKWALL	Removes noise from outside the desired frequency band by using a filter with steeper characteristics than all the others. The resulting sound quality tends to be clear in the high end.
SHORT LATENCY	An original digital filter by Yamaha. Removes noise from outside the desired frequency band with a filter that reduces the amount of pre-ringing, minimizing filter-based latency. The resulting sound quality of this filter tends to have a sharper attack with a rhythmical feel.

Default setting

SHORT LATENCY

NOTE

- This setting is saved separately for each input source.
- These settings are disabled in either of the following conditions:
 - When the input source is ANALOG and the output destination is PRE OUT (LINE OUT).
 - When the input source is ANALOG and PURE DIRECT is on.

DAC LOCK RANGE

This function is used to reduce jitter and improve sound quality. “Jitter” refers to time-based fluctuations in the digital signal. This can be adjusted in one of three levels, according to the input source.

Setting menu

“DAC LOCK RANGE”

Settings

LEVEL 1	At LEVEL 1, the DAC precision is reduced somewhat, but the sound is much less prone to getting
LEVEL 2	interrupted due to changes in the clock. At LEVEL 3, the DAC precision increases, but interruptions
LEVEL 3	in the sound may occur on certain audio devices.

Default setting

LEVEL 2

NOTE

- This setting is saved separately for each input source.
- These settings are disabled in either of the following conditions:
 - When the input source is ANALOG and the output destination is PRE OUT (LINE OUT).
 - When the input source is ANALOG and PURE DIRECT is on.

Setting the gain for the headphones

This shows how to set the gain for the headphones. Use the setting that's appropriate for your headphones. This is the gain setting for LINE OUT that's used when LINE OUT is selected as the output destination.

Setting menu

"HP GAIN"

"LINE OUT GAIN" (when LINE OUT is selected as the output destination)

Settings (HP GAIN)

HI	Gain: high Use this setting with high-impedance headphones.
LO	Gain: low Use this setting with low-impedance headphones.

Default setting

LO

Settings (LINE OUT GAIN)

0dB	The audio signal is output as-is.
ATT	The audio signal is attenuated by passing through an attenuator and then output. Select this when the input level going to an external amp is too loud.

Default setting

0dB



CAUTION

- A confirmation message appears when you change the setting from LO to HI or from ATT to 0dB. Turn the volume down sufficiently and then press the [ENTER] button to confirm. If you change this setting without turning the volume down, the resulting volume may be extremely loud, which could cause hearing loss.

Setting an upper limit for the volume

This shows how to set an upper limit for the volume.

Setting menu

“VOLUME LIMIT”

Settings

OFF	The maximum volume is 0.0 dB.
ON	When HP GAIN is set to HI, the maximum volume is limited to -35.0 dB. When HP GAIN is set to LO, the maximum volume is limited to -20.0 dB.

Default setting

OFF

NOTE

This setting is disabled if you've selected LINE OUT as the output destination.

Related links

“Setting the gain for the headphones” (p.46)

Setting the default volume

Sets the default volume used when this product is turned on.

Setting menu

“INITIAL VOLUME”

Settings

OFF	When the power is turned on, the volume is set to the level used last time the product was set to off (standby).
MUTE	When the power is turned on, the sound is muted.
-70.0dB	
-60.0dB	
-50.0dB	When the power is turned on, the volume is set to the level you set here.
-40.0dB	

Default setting

OFF

NOTE

This setting is disabled if you've selected LINE OUT as the output destination.

Setting the left/right volume balance

This shows how to set the volume balance between the left and right channels.

Setting menu

“LR BALANCE”

Settings

L+10.0 dB to 0.0 dB to R+10.0 dB (can be set in 0.5 dB steps)

Default setting

0.0 dB

NOTE

When PURE DIRECT is on or when PRE OUT (LINE OUT) is selected as the output destination, the audio plays back at 0.0 dB (center) regardless of this setting.

Setting the auto power standby

This setting toggles the auto power standby on/off. When this is turned on, the product enters off (standby) mode if you don't operate or use the unit to play sound for a specified time.

Setting menu

“AUTO POWER STDBY”

Settings

OFF	Turns the auto power standby off.
ON	Turns the auto power standby on. This product automatically enters off (standby mode) when it is not operated and nothing is played back for 20 minutes.

Default setting

ON

NOTE

- The number of seconds before entering off (standby) mode is shown on the information display, starting 30 seconds beforehand.



- To extend the time required before the power turns off (standby), operate the product or play back sound.

Checking the firmware version

This setting shows the firmware version for this product.

Setting menu

“VERSION INFO”

Settings

SYSTEM : Shows the system version.

USB DAC : Shows the USB DAC version.

Default setting

SYSTEM :

Initializing all settings (reset)

Use this setting to initialize (reset) all settings and restore this product to its factory default state.



CAUTION

- To prevent hearing loss, take off your headphones before initializing.

Setting menu

“INITIALIZATION”

Settings

CANCEL	Does not initialize this product.
--------	-----------------------------------

	Initializes this product.
--	---------------------------

EXECUTE	
---------	--

NOTE

A confirmation message appears before the initialization is executed. (Press the [MENU] button to cancel the initialization.) If you press the [ENTER] button once more, this product will restart and initialize.

Default setting

CANCEL

Troubleshooting

What to do in case of trouble

Read this first if you encounter troubles with this product

If this product does not operate normally while you are using it, first check the following points.

- Is the power cord firmly plugged into the AC outlet? Also, is the power cord firmly plugged into the [AC IN] jack of this product?
- Are the devices connected to this product turned on?
- Are the cables between the various devices firmly plugged into their jacks?

Next, check the possible solutions for the issues, according to each symptom.

- “Power-related issues” (p.54)
- “Remote control-related issues” (p.55)
- “Audio-related issues” (p.56)
- “USB DAC-related issues” (p.57)

If the issue still cannot be solved, try reinitializing the settings.

- “Initializing all settings (reset)” (p.52)

Power-related issues

Power will not turn on

- **The AC power cord may not be firmly plugged into the [AC IN] jack.**

Insert the included AC power cord all the way into the [AC IN] jack.

- **The protective circuits of this product activated three times in a row.**

If the indicator to the left of the power button flashes when you try to turn on the power, the power is disabled to protect this product. Please request repairs from a Yamaha repair consulting center.

- **The operations of microcomputer inside this product may be frozen, due to external electrical shock (such as lightning or excessive static electricity) or a reduction in voltage.**

Press the ⏻ (power) button on this product and hold it down for at least 15 seconds to restart the product. If this still does not solve the problem, unplug the power cable from the AC outlet, wait for about one minute and plug it back in again.

The power automatically switches to off (standby) mode

- **The auto power standby function on this product has activated due to no playback or operations for a specified period of time.**

To disable the auto power standby function, set “AUTO POWER STDBY” in the settings menu to “OFF”. See the following information for details.

- “Setting the auto power standby” (p.50)

Remote control-related issues

The remote control isn't working with this product

● **The remote control may be out of operating range.**

Operate the remote control within its operating range. See the following information for details.

- “Getting the remote control ready” (p.9)

● **The batteries on the remote control may be depleted.**

Replace the batteries with new ones.

- “Getting the remote control ready” (p.9)

● **Light or bright illumination may be interfering with the signal photosensor for the remote control on this product.**

Try adjusting the room illumination or the orientation of this product.

Audio-related issues

No sound can be heard

● **A different input may have been selected.**

Select the correct input. See the following information for details.

- “Selecting the audio input source and output destination” (p.30)

● **The input signal may be invalid for playback on this unit.**

Some digital audio formats cannot be played back on this unit. Check whether the signal you’re playing back is supported on this unit. The supported file formats are as follows.

- “Main specifications” (p.65)

● **You are trying to play a multi-channel song (file).**

This product can only play back songs (files) with two-channel audio.

● **The audio may be muted.**

Press the [MUTE] key on your remote control to unmute the audio.

The volume won’t go up

● **The upper limit for the volume may have been set to a low level.**

Adjust the volume in “VOLUME LIMIT”, found in the settings menu. See the following information for details.

- “Setting an upper limit for the volume” (p.47)

● **The headphone gain settings don’t match the signal.**

Adjust the “HP GAIN” setting in the settings menu as appropriate for your headphones. See the following information for details.

- “Setting the gain for the headphones” (p.46)

USB DAC-related issues

My computer doesn't recognize this product

● **The product might be connected to a computer that uses an unsupported OS.**

Connect the product to a computer whose OS is supported for use with this product.

- “Installing the driver on the computer” (p.20)

● **The USB cable may not be correctly connected.**

Correctly insert the USB cable.

The USB DAC function is not operating correctly

● **Your computer might be connected to this product via a USB hub.**

Do not use a USB hub when connecting this product to your computer, but connect directly instead.

● **The product is not working correctly due to incompatible USB versions.**

Try connecting to a different USB port on your computer and see if this solves the problem. For example, try connecting to a USB 2.0 port.

I hear noise and the music keeps getting interrupted when playing music files on my computer.

● **You may have launched a different application on your computer while the music file was playing back.**

Launching a different application on your computer while a music file is playing back may cause the sound to get interrupted or cause noise. Do not launch other applications while playing back music files.

● **The buffer size setting for the dedicated driver (Yamaha Steinberg USB Driver) may be inappropriate (only when using ASIO-compatible software on Windows).**

Follow the steps below to change the “Yamaha Steinberg USB Driver” setting, and see if this solves the problem.

- 1 Open the “Yamaha Steinberg USB Driver” control panel.

Windows Start menu > Yamaha Steinberg USB Driver > Control Panel

- 2 Select the “ASIO” tab and change the “Buffer Size” to a higher setting.

- 3 Relaunch the music software.

If this does not resolve the issue, try changing the “Mode” setting to “Low Latency”, in addition to changing the setting in step 2.

Cannot play music files on the computer (no sound can be heard from this product)

● **The output from your computer or application might be muted or set to zero volume.**

Unmute the audio or raise the volume on your computer or application.

● **You may have changed the settings of the dedicated driver (Yamaha Steinberg USB Driver). Relaunch the music software.**

● **USB disconnects during playback.**

Turn the power of this product off (standby) and then on again. Following this, relaunch the music software on your computer and play the music file.

● **After launching the music software and connecting the computer to this product while powered on, this product switches to the “USB DAC” input.**

Quit the music software that’s running, and try the following steps.

- 1 Turn this product off (standby) and then connect it to your computer.
- 2 Turn this product on.
- 3 Switch the input source to “USB DAC”.
- 4 Relaunch the music software on your computer and play the music file.

● **The dedicated driver (Yamaha Steinberg USB Driver) might not have been installed (Windows only).**

Install the Yamaha Steinberg USB Driver. See the following information for details.

- “Installing the driver on the computer” (p.20)

● **The audio output device for your computer or for the application may not be correctly configured.**

Check the audio output device settings on your computer or application. See the following information for details.

- “Playing back music on your computer” (p.36)

● **The audio signal input may not be recognized by this product.**

Input an audio signal whose format and sampling frequency is supported by this product. See the following information for details.

- “Main specifications” (p.65)

Errors indicated by the information display

For errors that are shown in the information display, see the following table.

Message	Details	What to do
NOT AVAILABLE	<p>You performed an operation that was unavailable.</p> <p>Example:</p> <ul style="list-style-type: none"> Operating the menu while PURE DIRECT is on. Operating a menu for which the settings are unavailable. (When ANALOG is selected as the input source or when PRE OUT or LINE OUT is selected as the output destination, some menu items are unavailable.) 	<ul style="list-style-type: none"> Turn PURE DIRECT off, and then try the menu operation again. Change the input source to something other than ANALOG, or change the output destination to something other than PRE OUT or LINE OUT.
REMOTE ID MISMATCH	<p>You tried to operate this product using a remote control for a different Yamaha device.</p>	<p>Use the remote control that was included with this product.</p>
FILE NOT FOUND	<p>The firmware file cannot be found.</p>	<p>Check whether the firmware file is saved on your USB flash drive.</p> <ul style="list-style-type: none"> “Updating the firmware” (p.60)
INVALID FILE	<p>The firmware file has been corrupted.</p>	<p>Download the firmware file again and save it to your USB flash drive.</p> <ul style="list-style-type: none"> “Updating the firmware” (p.60)
USB OVERLOADED	<p>An error with the USB flash drive connection has been detected.</p>	<p>Use a different USB flash drive.</p>
UPDATE ERROR!	<p>The firmware failed to update.</p>	<p>Try updating the firmware again. See the following information for details.</p> <ul style="list-style-type: none"> “Updating the firmware” (p.60)
VERSION ERROR	<p>The firmware failed to update. (Displayed when the unit is turned on)</p>	<p>Try updating the firmware again. See the following information for details.</p> <ul style="list-style-type: none"> “Updating the firmware” (p.60)

Updating the firmware

Yamaha provides new firmware to add functionality or to rectify malfunctions. You can use a USB flash drive to update the firmware. Visit the Yamaha website to download the firmware.



CAUTION

- To prevent hearing loss, take off your headphones before updating the firmware.

NOTICE

- Do not operate this product or unplug the AC power cord while the firmware is updating. The product may become unusable if you accidentally interrupt the firmware update. If this happens, the unit may need to be repaired.

NOTE

- Use a USB flash drive that meets the following criteria.
 - Supports mass storage
 - Formatted as either FAT16 or FAT32
 - No built-in encryption
 - No data contained on the media (empty)
- Place this product near the AC outlet, as you will need to plug the AC power cord into the outlet while holding down the buttons on the product.

How to update

1 Download the firmware.

For details, see this product's page on the Yamaha website.

2 Extract (decompress) the compressed downloaded file.

3 Save the firmware file "00xxxx-xxxx.bin" to the USB flash drive.

Save the file to the topmost folder (the root folder) of the USB flash drive. Do not change the file name.

4 Unplug the power cord of this product from the AC outlet.

5 Insert the USB flash drive into the [UPDATE ONLY] port on the back of this product.

6 **Plug the AC power cord of this product into the AC outlet while holding down the [ENTER] button on the operating panel.**

The following message appears in the information display.



The display changes according to the progress of the update.



7 **When you see the following message, press the [⏻] power button to turn the power off.**



Unplug the USB flash drive from the port.

The product's firmware is now updated. Wait around five seconds before you turn the power back on again.

Related links

"Errors indicated by the information display" (p.59)

Aftersales service

For service or general inquiries

- For customers within Japan
Please contact the store where you purchased this product, or the Yamaha repair consulting center as listed in the “Safety Guide” included with this product.
- For customers outside of Japan
Please contact your nearest authorized Yamaha dealer or service center.
<https://manual.yamaha.com/av/support/>

Specifications

Licenses

This product uses the following third-party software programs.

- STM32H7 HAL, Startup, Middlewares
- STM32 USB Host, Middlewares
- FatFS
- CMSIS
- NEWLIB

Refer to the following for the copyrights and conditions of use for each software program.

NOTE

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STM32H7 HAL, Startup, Middlewares

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Main specifications

The main specifications of this product are as shown below.

Input jacks/connectors and supported audio formats

- Analog L/R (RCA) × 1
- Digital optical × 1
 - PCM 2-channel: 32 kHz/44.1 kHz/48 kHz/88.2 kHz/96 kHz (16-bit/24-bit)
- Digital coaxial × 1
 - PCM 2-channel: 32 kHz/44.1 kHz/48 kHz/88.2 kHz/96 kHz/176.4 kHz/192 kHz (16-bit/24-bit)
- USB (Type-B) × 1
 - PCM 2-channel: 44.1 kHz/48 kHz/88.2 kHz/96 kHz/176.4 kHz/192 kHz/352.8 kHz/384 kHz (16-bit/24-bit/32-bit)
 - DSD 2-channel: 2.8 MHz (DSD64)/5.6 MHz (DSD128)/11.2 MHz (DSD256) ASIO Native, ASIO Native and DoP-compatible

Output jacks/connectors

- Headphones
 - Standard 6.3 mm (1/4-inch) × 1
 - Balanced 4.4 mm × 1
 - XLR, 4-pin × 1
- PRE OUT/LINE OUT
 - Analog L/R (RCA) × 1
 - Analog XLR, 3-pin × 1

Amplifier

- Type
 - Discrete, floating and balanced
- Impedance
 - 8 to 600 Ω
- Gain switch
 - High: 12 dB, Low: 0 dB

Audio functionality

- PURE DIRECT DSP circuit bypass
- L/R Balance
 - 10.0 dB to +10.0 dB (in steps of 0.5 dB)
- DSP program
 - 7
- DAC LOCK RANGE
 - LEVEL 1/2/3
- DAC Filter
 - FAST LINEAR/SLOW LINEAR/FAST MINIMUM/SLOW MINIMUM/APODIZING FAST/HYBRID FAST/BRICKWALL/SHORT LATENCY
- VOLUME
 - 80.0 dB to 0.0 dB (in steps of 0.5 dB), mute
- INITIAL VOLUME
 - OFF (volume setting when the unit was last turned off)/MUTE/-70 dB/-60 dB/-50 dB/-40 dB
- LIMIT VOLUME
 - 20 dB (when the HP GAIN setting is “LO”), –35 dB (when the HP GAIN setting is “HI”)
- [PRE/LINE OUT] switch
 - Selectable between [PRE OUT] and [LINE OUT]

Sound quality enhancement technology

- ESS Technologies' flagship DAC, the ES9038PRO
- ESS Technologies' ES9842PRO 32-bit high-performance ADC
- High-definition volume IC (MUSEST2323)
- Independent power supply and ground for ADC/DAC
- High-performance toroidal transformers specifically for the main amplifier and preamplifier
- High-definition gold-plated headphone jacks and RCA jacks
- DSP manufactured by TI for sound field processing
- Uses Yamaha's proprietary floating and balanced amp technology

Audio playback modes

- SOUND FIELD MODE
 - STRAIGHT/CINEMA/DRAMA/MUSIC VIDEO/CONCERT HALL/OUTDOOR LIVE/BGM
- PURE DIRECT
 - ON/OFF

User interface

- Languages supported (menu display languages)
 - English

Eco-friendly functions

- AUTO POWER STDBY (auto power standby)
 - OFF/ON (when no signal has been received and no operation has been made for 20 minutes)

Audio components

- Rated HP OUTPUT POWER
 - Balanced 1 kHz, 0.01 %THD, 32 Ω 1000 mW + 1000 mW
 - Unbalanced 1 kHz, 0.01 %THD, 32 Ω 1000 mW + 1000 mW
- Frequency response
HP OUT 4 Hz to 80 KHz, -3 dB
- Total Harmonic Distortion (THD)
Digital IN 1 kHz, 300 mW, 32 Ω \leq 0.003%
- Signal to Noise Ratio (SNR) $>$ 120 dB
- Input Sensitivity
Analog IN
 - HP OUT 1.4 V
 - PRE OUT 0.2 V
 - LINE OUT 2.0 V
- Input Impedance
RCA 50 k Ω
- Maximum Input Signal Voltage
RCA 2.8 V
- Rated PRE OUT level/Output Impedance
Analog IN: 0.2 V Vol: Max
 - RCA 1 V /470 Ω
 - XLR 2 V /440 Ω
- Rated LINE OUT level/Output Impedance
Analog IN: 2 V
 - RCA 2 V /470 Ω
 - XLR 4 V /440 Ω

General

- Voltage
 - [Models for U.S.A. and Canada] AC 120 V, 60 Hz
 - [Model for Australia] AC 230 to 240 V, 50 Hz
 - [Models for U.K., Europe and Russia] AC 230 V, 50 Hz
 - [Model for China] AC 220 V, 50 Hz
 - [Model for Korea] AC 220 V, 60 Hz
 - [Model for Taiwan] AC 110 to 120 V, 60 Hz
 - [Model for Asia] AC 220 to 240 V, 50/60 Hz
- Power consumption
19 W
- Power consumption on standby
0.2 W
- Dimensions (W \times H \times D)
333 \times 133 \times 189 mm (13-1/8" \times 5-1/4" \times 7-1/2") (including the feet and protruding parts)
- Weight
5.3 kg (11.7 lb)

* The explanations in this Guide are written according to the latest specifications as of the date of publication.

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