



Integrated Amplifier

**A-670**

**A-U670**

OWNER'S MANUAL



## CAUTION: READ THIS BEFORE OPERATING YOUR UNIT.

- 1 To assure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.
- 2 Install this sound system in a well ventilated, cool, dry, clean place - away from direct sunlight, heat sources, vibration, dust, moisture, and/or cold. For proper ventilation, allow the following minimum clearances.  
Top: 10 cm (4 in.)\*, Rear: 10 cm (4 in.), Sides: 10 cm (4 in.)  
\*Except CD-NT670/CD-NT670D
- 3 Locate this unit away from other electrical appliances, motors, or transformers to avoid humming sounds.
- 4 Do not expose this unit to sudden temperature changes from cold to hot, and do not locate this unit in an environment with high humidity (i.e. a room with a humidifier) to prevent condensation inside this unit, which may cause an electrical shock, fire, damage to this unit, and/or personal injury.
- 5 Avoid installing this unit where foreign object may fall onto this unit and/or this unit may be exposed to liquid dripping or splashing. On the top of this unit, do not place:
  - Other components, as they may cause damage and/or discoloration on the surface of this unit.
  - Burning objects (i.e. candles), as they may cause fire, damage to this unit, and/or personal injury.
  - Containers with liquid in them, as they may fall and liquid may cause electrical shock to the user and/or damage to this unit.
- 6 Do not cover this unit with a newspaper, tablecloth, curtain, etc. in order not to obstruct heat radiation. If the temperature inside this unit rises, it may cause fire, damage to this unit, and/or personal injury.
- 7 Do not plug in this unit to a wall outlet until all connections are complete.
- 8 Do not operate this unit upside-down. It may overheat, possibly causing damage.
- 9 Do not use force on switches, knobs and/or cords.
- 10 When disconnecting the power cable from the wall outlet, grasp the plug; do not pull the cable.
- 11 Do not clean this unit with chemical solvents; this might damage the finish. Use a clean, dry cloth.
- 12 Only voltage specified on this unit must be used. Using this unit with a higher voltage than specified is dangerous and may cause fire, damage to this unit, and/or personal injury. Yamaha will not be held responsible for any damage resulting from use of this unit with a voltage other than specified.
- 13 To prevent damage by lightning, keep the power cable and outdoor antennas disconnected from a wall outlet or this unit during a lightning storm.
- 14 Do not attempt to modify or fix this unit. Contact qualified Yamaha service personnel when any service is needed. The cabinet should never be opened for any reasons.
- 15 When not planning to use this unit for long periods of time (i.e. vacation), disconnect the AC power plug from the wall outlet.
- 16 Be sure to refer to the “Troubleshooting” section for common operating errors before concluding that this unit is faulty.
- 17 Before moving this unit, press  $\phi$  to set it to standby mode and disconnect the AC power plug from the wall outlet.
- 18 Condensation will form when the surrounding temperature changes suddenly. Disconnect the power cable from the outlet, then leave this unit alone.
- 19 When using this unit for a long time, this unit may become warm. Turn the power off, then leave this unit alone for cooling.
- 20 Install this unit near the AC outlet and where the AC power plug can be reached easily.

- 21 Excessive sound pressure from earphones and headphones can cause hearing loss.

### WARNING

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

This unit is not disconnected from the AC power source as long as it is connected to the wall outlet, even if this unit itself is turned off by  $\phi$ . This state is called the standby mode. In this state, this unit is designed to consume a very small quantity of power.

The user shall not reverse engineer, decompile, alter, translate or disassemble the software used in this unit, whether in part or in whole. For corporate users, employees of the corporation itself as well as its business partners shall observe the contractual bans stipulated within this clause. If the stipulations of this clause and this contract cannot be observed, the user shall immediately discontinue using the software.

### ■ For U.K. customers

If the socket outlets in the home are not suitable for the plug supplied with this appliance, it should be cut off and an appropriate 3 pin plug fitted. For details, refer to the instructions described below.

#### Note

The plug severed from the mains lead must be destroyed, as a plug with bared flexible cord is hazardous if engaged in a live socket outlet.

### ■ Special Instructions for U.K. Model

#### IMPORTANT

THE WIRES IN MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

Blue: NEUTRAL

Brown: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

Making sure that neither core is connected to the earth terminal of the three pin plug.

### Information for Users on Collection and Disposal of Old Equipment



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

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

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

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

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

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

We, Yamaha Music Europe GmbH hereby declare that this unit is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

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## INTRODUCTION

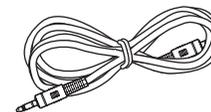
### *What the unit can do*

- ◆ The unit is an integrated amplifier that plays back analog stereo signals with high quality sound. Combined with speakers, the unit can play back music with high audio quality.
- ◆ TREBLE (high-frequency range), BASS (low-frequency range), and BALANCE (right and left balance) can be desirably adjusted with the controls on the front panel.
- ◆ The USB DAC function allows you to play back music stored on a PC (☞page 8).(A-U670 only)
- ◆ Enjoy pure, high fidelity sound by using the PURE DIRECT function (☞page 10).(A-U670 only)
- ◆ Boost bass sounds by connecting a subwoofer (☞page 6).

### *Supplied accessories*

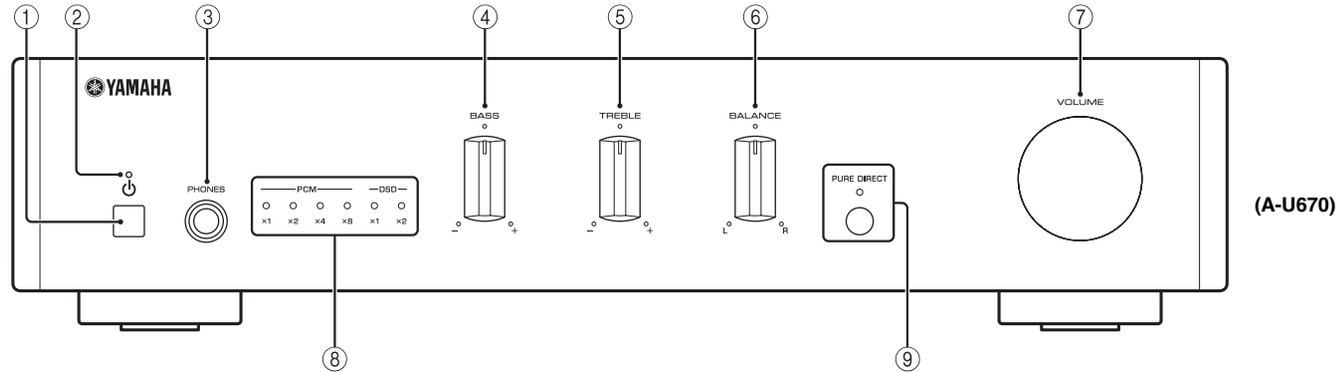
Please check that you received all of the following parts.

**System connection cable**



# NAMES AND FUNCTIONS OF THE PARTS

## Front panel



### ① **⏻ (Power) button**

Turns this unit on, or sets it to standby mode.

#### **Notes**

In standby mode, the unit consumes a small amount of power.

### ② **Power indicator**

Lights up when the unit is turned on.

### ③ **PHONES jack**

Connect your headphones.

#### **Notes**

When headphones are connected, no sound comes from the speakers or subwoofer.

### ④ **BASS control**

Increases or decreases the low frequency response.

Control range: -10 dB to +10 dB

### ⑤ **TREBLE control**

Increases or decreases the high frequency response.

Control range: -10 dB to +10 dB

### ⑥ **BALANCE control**

Adjusts the sound output balance of the left and right speakers to compensate for sound imbalances.

### ⑦ **VOLUME control**

Adjusts the volume.

### ⑧ **USB DAC indicators (A-U670 only)**

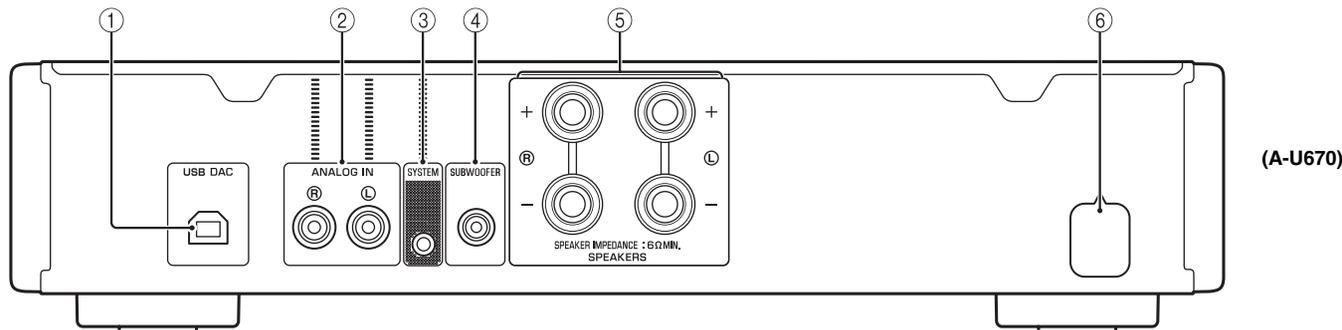
Lights up when audio signals are input to the USB DAC jack of this unit (☞page 9).

### ⑨ **PURE DIRECT button and indicator (A-U670 only)**

Reproduces any input source in the purest sound possible (☞page 10).

The indicator lights up when the PURE DIRECT function is turned on.

## Rear panel



① **USB DAC (Type B) jack (A-U670 only)**

Used to connect a PC (page 5).

② **ANALOG IN jacks**

Used to connect a network CD player (page 5).

③ **SYSTEM jack**

Used to connect a network CD player (page 5).

④ **SUBWOOFER jack**

Used to connect a subwoofer with built-in amplifier (page 5).

⑤ **SPEAKERS terminals**

Used to connect speakers (page 5).

⑥ **Power cable**

# CONNECTIONS

Make sure to connect L (left) to L, R (right) to R, “+” to “+” and “-” to “-.” If the connections are faulty, no sound may be heard from the speakers, and if the polarity of the speaker connections is incorrect, the sound may be unnatural and lack bass. Refer to the owner’s manual for each of your components. Make sure to use RCA type cables, the supplied system connection cable, or a commercially available USB cables (A-U670 only) to connect audio components.

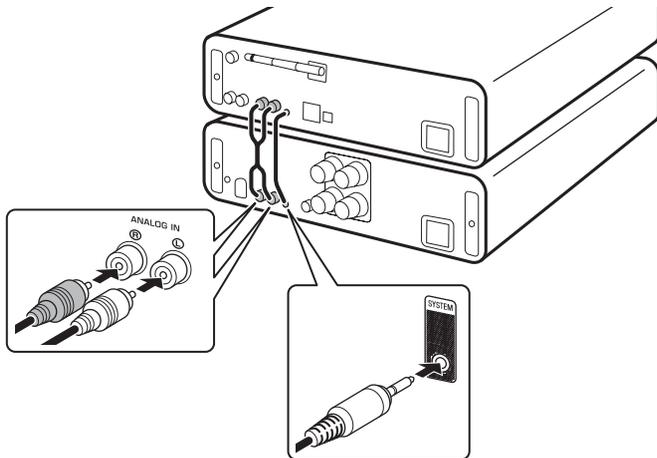
## CAUTION

Do not connect this unit or other components to the main power until all connections between components are complete.

### Connecting a network CD player

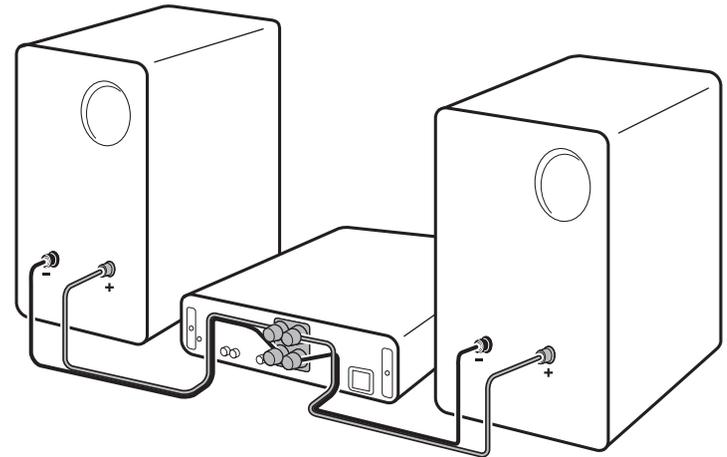
As shown in the figure, connect the ANALOG OUT jacks of the network CD player (CD-NT670/CD-NT670D) to the ANALOG IN jacks of the unit by using the RCA stereo cable supplied with the network CD player, and connect the SYSTEM jacks of the both equipment to each other by using the supplied system connection cable.

When the SYSTEM jacks of the unit and the network CD player are connected to each other, you can use the remote control of the network CD player to operate the unit (page 10).



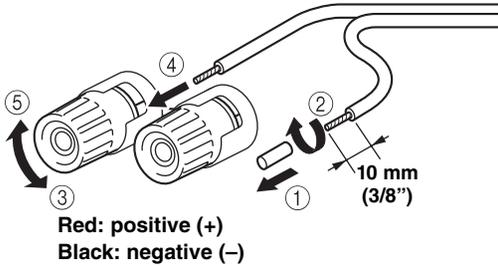
### Connecting speakers

Connect the SPEAKERS terminals of the unit and the terminals of the speakers as shown in the figure.



### ■ Connecting speaker cables

- ① Remove approximately 10 mm (3/8") of insulation from the end of each speaker cable.
- ② Twist the bare wires of the cable firmly together.
- ③ Unscrew the knob.
- ④ Insert one bare wire into the hole in the side of each terminal.
- ⑤ Tighten the knob to secure the wire.

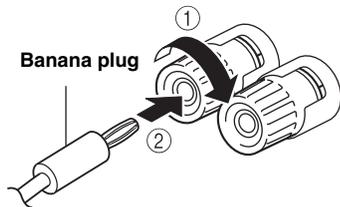


### CAUTION

- Use speakers with the impedance of 6 Ω or higher.
- Do not let bare speaker wires touch each other or any metal part of this unit. This could damage this unit and/or the speakers.

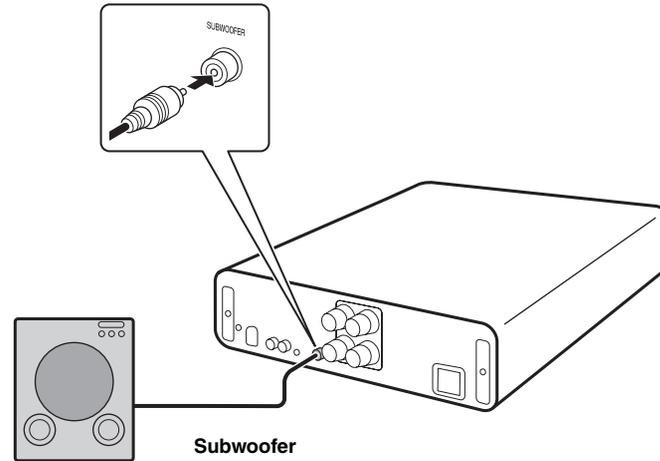
### ■ Using a banana plug (North America, China, Taiwan and Australia models only)

- ① Tighten the knob.
- ② Insert the banana plug into the end of the corresponding terminal.



### Connecting a subwoofer

To use a subwoofer, connect the jack of the subwoofer to the SUBWOOFER jack of the unit as shown in the figure.

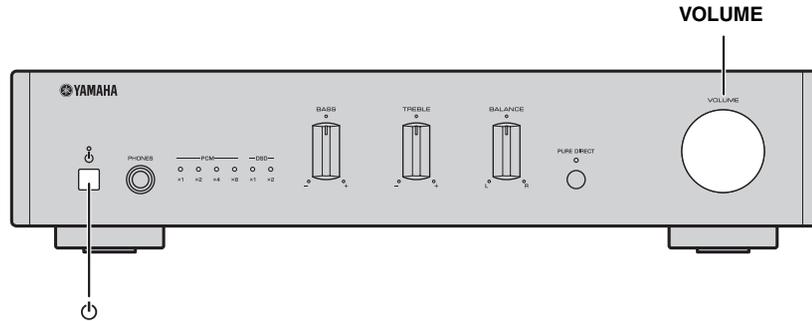


### Connecting to power source

After all the connections are complete, plug in the power cable to the AC outlet.

# PLAYBACK

## Playing a source



### 1 Press the **⏻** (power) button on the front panel to turn on the unit.

You can also turn on the unit by pressing the **⏻** (power) button on the remote control of the connected network CD player if the SYSTEM jacks of the network CD player and of the unit are connected to each other.

The unit is turned on by interlocking with the network CD player (see page 10).

### 2 Select the input source on the network CD player and play the source.

### 3 Rotate the **VOLUME** control on the front panel to adjust the volume.

You can also adjust the volume by pressing VOLUME +/- buttons on the remote control of the connected network CD player if the SYSTEM jacks of the network CD player and of the unit are connected to each other.

### 4 When finished listening, press **⏻** (power) button on the front panel to set the unit to standby mode.

#### Auto power standby function

- The auto power standby function will be activated as follows (default setting).
  - The unit turn off automatically if no operation has been performed for more than 8 hours.

#### Activating/deactivating the auto power standby function

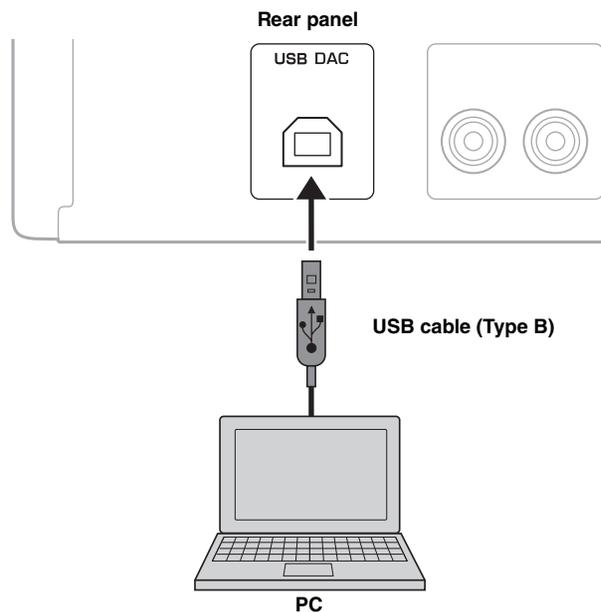
- 1 While pressing and holding **⏻** (power) on the unit, plug in the power cable to the AC outlet.
  - 2 Keep pressing **⏻** (power).
- The auto power standby function switches and the power indicator blink as follows:
    - Auto power standby function is activated: blink twice
    - Auto power standby function is deactivated: blink once

#### Notes

- If the SYSTEM jacks of the network CD player and the unit are connected to each other, and the network CD player is turned on, the unit operates interlocking with auto power standby function of the network CD player.

# PLAYING BACK MUSIC STORED ON A PC (USB DAC FUNCTION) (A-U670 ONLY)

When a PC is connected to the USB DAC jack of the unit, the unit works as a USB DAC and can play back songs stored on the PC.



## ■ Supported operating systems

The USB connection is available for PCs with the following operating systems:

**For Windows:** Windows 7 (32/64bit) / Windows 8 (32/64bit) / Windows 8.1 (32/64bit)

**For Mac:** OS X 10.6.4 or later

### Notes

- Operations with other operating systems are not guaranteed.
- Operations may be disabled even with the above-mentioned operating systems, depending on the configuration or environment of the PC.

## ■ Installing the dedicated driver

Before connecting a PC to this unit, install the dedicated driver on the PC. The dedicated driver is available only for Windows. For Mac, the standard driver of Mac OS is available for setting.

- 1 Access the following URL to download the dedicated “Yamaha HiFi USB Driver,” and unzip and execute the file.**

**Website for downloading the dedicated driver**  
URL: <http://download.yamaha.com/>

- 2 Install the downloaded “Yamaha HiFi USB Driver” to your PC.**  
For details, refer to the Installation Guide supplied with the downloaded driver.

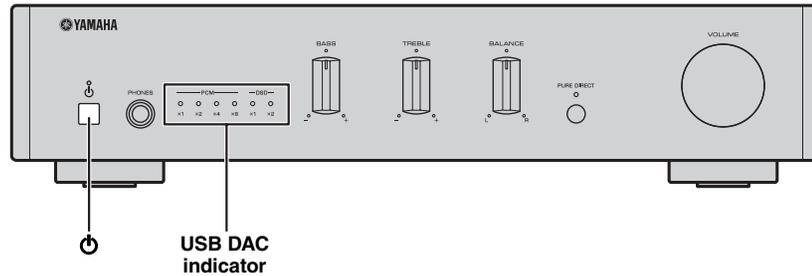
- 3 When installation is complete, quit all running applications.**

### Notes

- Operations may not be executed correctly if the PC is connected to this unit before the driver is installed.
- The “Yamaha HiFi USB Driver” is subject to change without prior notice. For details and the latest information, refer to the download page for the driver.

## ■ Playing back music stored on a PC

Check if the SYSTEM jacks of the network CD player and of the unit are connected to each other. If not connected, operation is unavailable with the network CD player and its remote control.



**1** Connect the PC to the unit with a USB cable.

**2** Turn on the PC.

**3** Press the **⏻** (power) button on the front panel to turn on the unit.

You can also turn on the unit by pressing the **⏻** (power) button on the remote control of the connected network CD player.

The unit is turned on by interlocking with the network CD player (see page 10).

**4** Press the **USB** button on the remote control of the connected network CD player (or rotate the **INPUT** knob of the connected network CD player) to select **[USB DAC]**.

**5** Set the audio output destination of the PC to “Yamaha A-U670/A-U671.”

### With Windows OS:

Control Panel -> Hardware and Sound -> Sound -> [Playback] tab

### With Mac OS:

System Preferences -> Sound -> [Output] tab

The setting may vary, depending on the operating systems. For details, consult the manufacturer of your PC.

**6** Operate the PC to start playback of music files.

When the music signal is input from the PC to the unit, the USB DAC indicator on the front panel lights up in accordance with the sampling frequency of the music being played. Sampling frequencies available for the unit are as follows:

| Indicator |    | Frequency     |
|-----------|----|---------------|
| PCM       | x1 | 44.1/48 kHz   |
|           | x2 | 88.2/96 kHz   |
|           | x4 | 176.4/192 kHz |
|           | x8 | 352.8/384 kHz |
| DSD       | x1 | 2.8224 MHz    |
|           | x2 | 5.6448 MHz    |

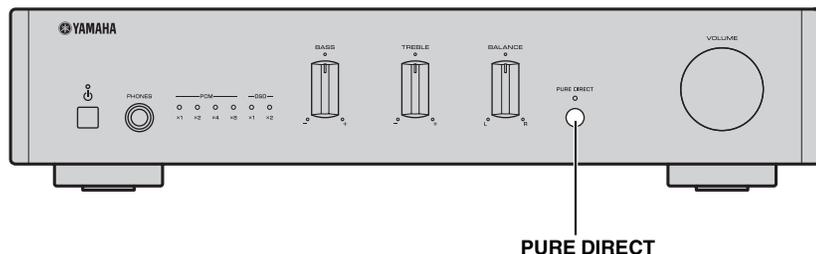
## ■ Adjusting the sound volume

To obtain higher sound quality, set the sound volume at the PC to the maximum, and gradually increase the volume at this unit from the minimum to your desired level.

### Notes

- Do not disconnect the USB cable, turn off the unit, or change the input while playback on a PC connected via the USB cable is in progress. Doing so may cause a malfunction.
- To mute operation sounds of the PC during music playback, change the setting on the PC.
- If music files cannot be played correctly, restart the computer and perform the mentioned procedure again.
- The music files stored on a PC cannot be controlled from this unit. Operate them on the PC.
- When the unit is not connected with a network CD player, or when a network CD player is turned off even if the SYSTEM jacks of the unit and of the network CD player are connected, the input source automatically switches to USB when the unit detects the PC connected to it. When the unit cannot recognize the connection, the input source automatically switches to ANALOG IN.

## ADJUSTING TO THE DESIRED SOUND (A-U670 ONLY)



### ■ Reproducing pure, high fidelity sound (PURE DIRECT)

With the PURE DIRECT function on, the BASS, TREBLE, and BALANCE circuits are bypassed to reduce noises. Therefore, in all input sources, you can enjoy music playback in straight and high quality sound.

Press the PURE DIRECT button on the front panel to switch the PURE DIRECT function on or off.

The PURE DIRECT indicator lights up when this function is turned on.

#### Notes

The BASS, TREBLE, and BALANCE controls do not function while the PURE DIRECT function is turned on.

## INTERLOCKING WITH A NETWORK CD PLAYER

Operation is available with the remote control of the network CD player (CD-NT670/CD-NT670D).

Check if the SYSTEM jacks of the unit and the network CD player are connected to each other.

### *Operating the power with the remote control*

Pressing the  (power) button of the remote control causes the unit to turn on or enter the standby mode by interlocking with the network CD player.



Even if the  (power) button on the unit is pressed, interlocking does not work. The unit and the network CD player are independently turned on or enter the standby mode.

With either the unit or the network CD player on, if you press the  (power) of the remote control, the unit will be turned on or enter the standby mode according to the status of the network CD player.

### *Adjusting the sound volume with the remote control*

You can adjust the sound volume by pressing the VOLUME +/- buttons of the remote control.

### *Operating mute with the remote control*

You can turn on or off mute by pressing the MUTE button on the remote control.

### *Selecting input (A-U670 only)*

You can select USB as the input source of the unit by pressing the USB button of the remote control (or rotate the INPUT knob of the connected network CD player).

# TROUBLESHOOTING

Refer to the chart below if this unit does not function properly. If the problem you are experiencing is not listed below or if the instructions below do not help, turn off this unit, disconnect the power cable, and then contact the nearest authorized Yamaha dealer or service center.

| Problem  | Cause  | Solution   | See page |
|--|--|--|----------|
| <b>This unit fails to turn on.</b>                                     | The power cable is not connected or the plug is not completely inserted.   | Connect the power cable firmly.  | 6        |
|  | The protection circuitry has been activated because of a short circuit, etc.   | Check that the speaker wires are not touching each other and then turn the power of this unit back on.   | 6        |
|  | There is a problem with the internal circuitries of this unit.   | Disconnect the power cable and contact the nearest authorized Yamaha dealer or service center.   | -        |
|  | A speaker with a low impedance is connected.   | Use speaker(s) with proper speaker impedance (6 Ω or higher).  | 6        |
| <b>This unit turns off suddenly and the power indicator turns off.</b> | The speaker wires are touching each other or shorting out against the rear panel.  | Connect the speaker cables properly and turn the power on again. Confirm normal sound output from speakers after the unit is turned on.  | 6        |
|  | The speaker is malfunctioning.   | Replace the speaker set and turn the power on again. Confirm normal sound output from speakers after the unit is turned on.  | -        |
|  | This unit has been exposed to a strong external electric shock (such as lightning or strong static electricity).   | Turn off this unit, disconnect the power cable, plug it back in after 30 seconds, then use the unit normally.  | -        |
|  | There is a problem with the internal circuitries of this unit.   | Disconnect the power cable and contact the nearest authorized Yamaha dealer or service center.   | -        |
| <b>No sound.</b>   | Headphones are connected.<br>(When headphones are connected, no sound comes from the speakers or subwoofer.)   | Disconnect headphones when you use the speakers or subwoofer.  | -        |
|  | Incorrect cable connections.   | Connect the stereo cable for audio units and the speaker wires properly. If the problem persists, the cables may be defective.   | 5        |
|  | Playback has been stopped on the connected component.  | Turn the component on and start playback.  | 7        |
|  | (A-U670 only) The driver is not installed in the PC connected with the unit via USB.   | Before connecting a PC to this unit, install the driver on the PC.   | 8        |
|  | The volume of the unit is set to the minimum.  | Turn up the volume with the VOLUME control so that you can hear sound.   | -        |
| <b>The unit cannot be turned off.</b>                                  | The internal microprocessor is frozen due to an external electronic shock (lightning, excessive static electricity, etc.) or decrease in the power supply voltage. | Press the power button on the front panel of the unit for 10 seconds or more to restart the unit (If the problem persists, unplug the power cable and after about 30 seconds, then plug it back in again). | -        |

| Problem  | Cause  | Solution   | See page |
|--|--|--|----------|
| <b>Only the speaker on one side can be heard.</b>                          | Incorrect cable connections.   | Connect the cables properly. If the problem persists, the cables may be defective.   | 5        |
|  | Incorrect setting for the BALANCE control.   | Set the BALANCE control to the appropriate position.   | 3        |
| <b>There is a lack of bass and no ambience.</b>                            | (When a subwoofer is connected.)<br>The subwoofer is not properly connected.   | Connect the cables properly. If the problem persists, the setting for the subwoofer may be incorrect.                              | 6        |
|  | The + and – wires are connected in reverse at the amplifier or the speakers.   | Connect the speaker wires to the correct + and – phase.  | 6        |
|  | Incorrect setting for the BASS control.  | Set the BASS control to the appropriate position.  | 3        |
| <b>A “humming” sound can be heard.</b>                                     | Incorrect cable connections.   | Connect the audio plugs firmly. If the problem persists, the cables may be defective.  | 5        |
| <b>The sound level is low.</b>   | The volume of the unit is set to a low level.  | Turn up the volume with the VOLUME control so that you can hear sound.   | 7        |
|  | (A-U670 only) The volume of the PC connected with the unit via USB is set to a low level.  | Turn up the volume of the PC.  | -        |
| <b>(A-U670 only) The BASS, TREBLE, and BALANCE controls does not work.</b> | The PURE DIRECT function is turned on.   | Turn off the PURE DIRECT function.   | 10       |
| <b>(A-U670 only) The connected PC does not recognize this unit.</b>        | The operating system of the PC is not supported.   | Use a PC with an operation-guaranteed operating system.  | 8        |
|  | Improper USB cable connection.   | Connect the USB cable properly.  | 8        |
|  | The output of the PC or application is muted.  | Cancel the sound muting of the PC or application.  | -        |
| <b>(A-U670 only) Noisy playback.</b>                                       | Another application is launched on the PC while a music file is being played.<br>(If another application is launched while a music file is being played, sound may be momentarily lost or noise may be generated.) | Do not launch other applications during playback.  | -        |
| <b>(A-U670 only) The sound is interrupted.</b>                             | Another application is launched on the PC while a music file is being played.<br>(If another application is launched while a music file is being played, sound may be momentarily lost or noise may be generated.) | Do not launch other applications during playback.  | -        |
| <b>(A-U670 only) Music files cannot be played.</b>                         | The music data are not properly reproduced, because this unit is connected to the PC or the input of this unit is switched to USB while the music application is running on the PC.                                | Connect this unit to the PC and set the input of the unit to USB in advance. Then launch the music application and start playback. | 8        |
|  | The dedicated “Yamaha HiFi USB Driver” has not been installed correctly.   | Install the “Yamaha HiFi USB Driver” again by following the correct procedure.   | 8        |
|  | The audio output destination of the computer is not set to “Yamaha A-U670/A-U671.”   | Set the audio output destination of the computer to “Yamaha A-U670/A-U671.”  | 9        |

# SPECIFICATIONS

## AUDIO SECTION

### ■ ANALOG IN

- Input jack ..... RCA jack

### ■ USB DAC (A-U670 only)

- Input jack ..... USB (Type B), supported USB2.0
- Supported sampling frequencies ..... 384/352.8/192/176.4/96/88.2/48/44.1 kHz
- PCM word depths ..... 32/24/16 bits
- DSD ..... 2.8224/5.6448 MHz

### ■ SPEAKERS

- Maximum output power (6  $\Omega$ , 1 kHz, 10% THD)  
[A-670] ..... 65 W + 65 W  
[A-U670] ..... 70 W + 70 W
- Frequency response (10 Hz to 40 kHz) ..... 0 $\pm$ 3 dB
- Total harmonic distortion (30 W/6  $\Omega$ , 1 kHz) ..... 0.05% or less

### ■ PHONES

- Output level/Output impedance  
(Input 1 kHz, 230 mV, 32  $\Omega$  terminated)  
..... 500 mV/24  $\Omega$

### ■ SUBWOOFER

- Output level/Output impedance (Input 1 kHz, 230 mV)  
..... 2.0 V/1 k $\Omega$

## GENERAL

- Power supply ..... AC 220 to 240 V, 50/60 Hz
- Power consumption  
[A-670] ..... 28 W  
[A-U670] ..... 30 W
- Standby power consumption  
(with system connection/without system connection) ..... 0.5 W
- Dimensions (W  $\times$  H  $\times$  D)  
..... 314  $\times$  70  $\times$  342 mm (12-3/8"  $\times$  2-3/4"  $\times$  13-1/2")
- Weight ..... 3.3 kg (7.3 lbs.)

Specifications are subject to change without notice.

**Important Notice: Guarantee Information for customers in EEA\* and Switzerland**

For detailed guarantee information about this Yamaha product, and Pan-EEA\* and Switzerland warranty service, please either visit the website address below (Printable file is available at our website) or contact the Yamaha representative office for your country.  
\* EEA: European Economic Area

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

