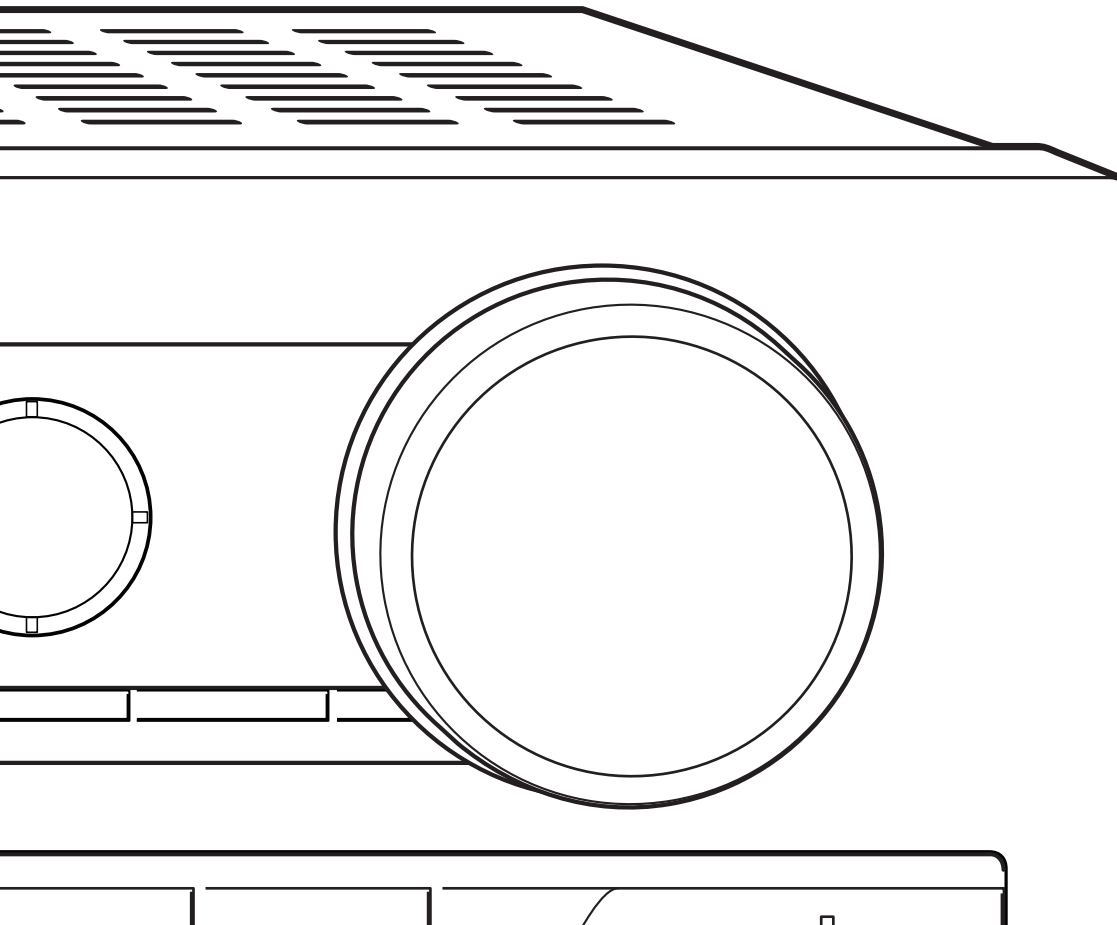


ONKYO

HT-R593

AV RECEIVER

Basic Manual



Advanced Manual found here



<http://www.onkyo.com/manual/htr593/adv/en.html>

En

Before Start

About the Basic Manual

The Basic Manual leads you through the fundamental steps to enjoy the AV Receiver from connections to TV, speaker system and playback devices, to necessary functions for playback. As well as that, Basic Manual informs you with the instructions on frequently used functions. Besides, there is another part of the manual called Advanced Manual to inform you with more detailed information, which we have decided to publish on the web from the ecological point of view.

Advanced Manual






Advanced Manual is always updated with the latest information and its user friendly interface, which does not matter whether you access from PC or Smartphone, helps you to understand more deeply about the AV Receiver. Advanced Manual is consisted of the following chapters.

- Details on AM/FM playback
- Playing Music Files on a USB Storage Device
- Listening to Internet Radio
- Playing Music with DLNA
- Playing Music Files in a Shared Folder
- Operating Music Files with the Remote Controller
- Using the Listening Modes
- Advanced Settings
- Operating Other Components with the Remote Controller
- Connecting/Operating Onkyo product with RI jack.
- Updating the Firmware
- Details on Troubleshooting
- Reference Information

Features

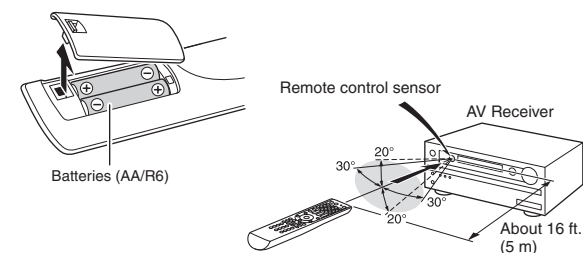
- Equipped with 5 channel amplifier
- Equipped with 4K 60 Hz Passthrough-compatible HDMI IN/OUT jacks
- Supports the HDMI Through function which allows transmission from playback devices to the TV in standby state
- Supports ARC (Audio Return Channel)
- Supports USB storage playback
- Supports variety of network functions such as Internet Radio, DLNA, etc.
- Supports Wi-Fi and Bluetooth
- A/V Sync Function to correct deviation of audio and video
- Multi-zone function which allows you to play a different source in another room from the main room
- T-D (Theater-Dimensional) listening mode which allows you to enjoy the virtual surround sound field
- 192 kHz/24 bit D/A converter
- Automatic speaker setup available using supplied calibrated microphone (AccuEQ Room Calibration)
- 32 bit DSP (Digital Signal Processor) with excellent calculation performance
- Supports playback of MP3, WMA, WMA Lossless, FLAC, WAV, Ogg Vorbis, Apple Lossless, DSD, Dolby TrueHD via network and USB storage device

Supplied Accessories

-  Indoor FM antenna --- (1)
-  AM loop antenna --- (1)
-  Color labels for speaker cable (Not supplied with the Home Theater System.)--- (1)
-  Remote controller (RC-879M) --- (1)
Batteries (AA/R6) --- (2)
-  Speaker setup microphone --- (1)

* The number in parenthesis indicates the quantity. On packaging, the letter at the end of the product name indicates the color.

How to use the remote controller

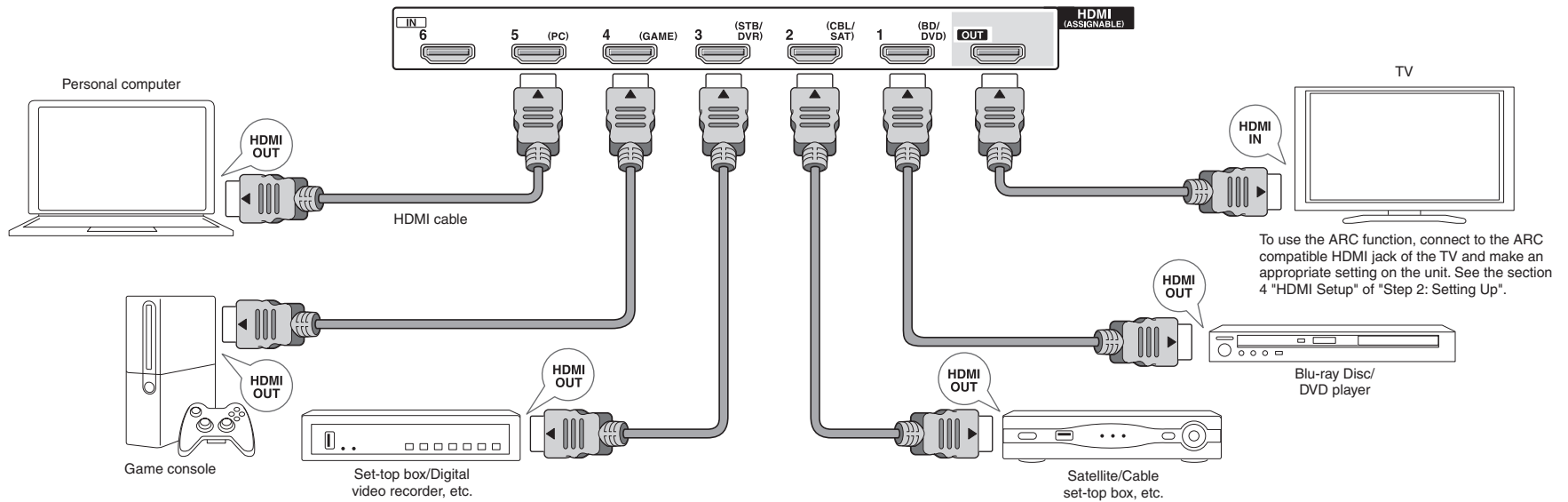


- * If you do not use the remote controller for a long time, remove the batteries to prevent leakage.
- * Note that keeping consumed batteries inside may cause corrosion resulting in damage of the remote controller.



Advanced Manual found here
<http://www.onkyo.com/manual/htr593/adv/en.html>

Step 1: Connections



1 Connecting the TV and players

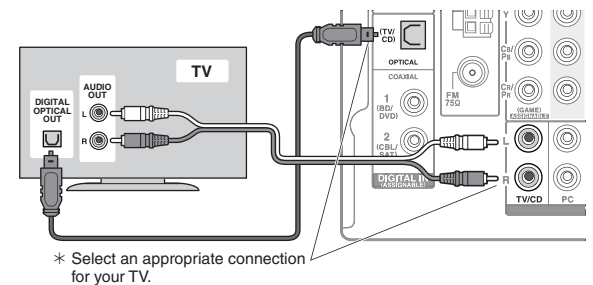
Important: The power cord must be connected only after all other connections are completed.

HDMI cable connection

The unit has many HDMI jacks on its rear panel and each of them corresponds to an input selector button of the same name on the front panel. For example, a Blu-ray Disc player will be connected to the IN 1 jack and the BD/DVD button on the front panel will be used to listen to the playback sound (if the player is CEC compliant, input will be switched automatically). If you add another Blu-ray Disc player, you can use any other jack than IN 1. It is possible to change assignment of the input jacks and input selector buttons. For how to make settings, see the Advanced Manual.

To connect the TV and the unit, connect the HDMI OUT jack of the unit and the HDMI input jack of the TV with an HDMI cable. With this connection, it becomes possible to display the setting screen of the unit on the TV or transmit video/audio signals from the player to the TV. If your TV supports ARC (Audio Return Channel), it is possible to play the TV sound with the AV receiver's speakers with this connection only. If your TV does not support ARC, you need, in addition to the HDMI OUT jack connection, a digital optical cable connection between the digital audio out optical jack of the TV and the DIGITAL IN OPTICAL jack of the unit or an analog audio cable connection between the audio output jack of the TV and the TV/CD analog audio input jack of the unit.

● Connection with a TV not supporting ARC



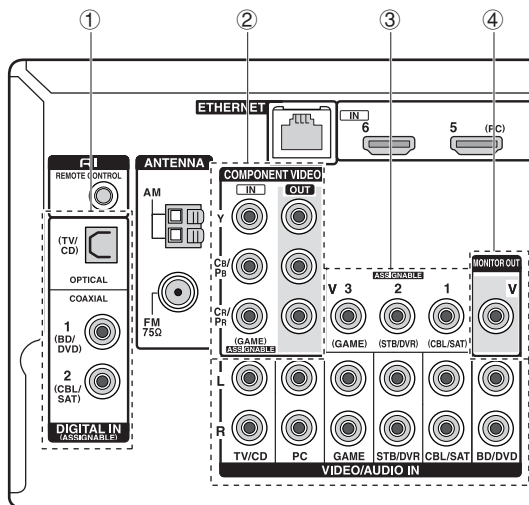
The unit supports the HDMI Through function that allows transmission from players to the TV even if the unit is in standby. You have to modify the settings to enable the input selection link with CEC compliant device, connection with

ARC compatible TV, and HDMI Through function. See the section 4 "HDMI Setup" of "Step 2: Setting Up".

- To play 4K or 1080p video, use the high speed HDMI cable.

Connecting Components without HDMI

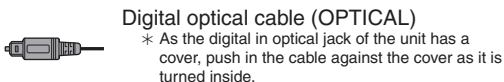
If your AV component does not have HDMI jack, use an available jack of your component for cable connection with this unit. Just as the HDMI jacks, other jacks on this unit have a preassigned input selector button on the front panel. See the name of the input selector button shown with the jack when connecting the device.



If the connected turntable does not have built-in audio equalizer, you need to install an external audio equalizer between the unit and the turntable. Contact the manufacturer for more information.

■ Audio signal connection

- ① **Digital connection:** Use a digital optical cable (OPTICAL) or digital coaxial cable (COAXIAL) for connection with a player.

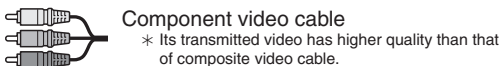


- ② **Analog connection:** Use an analog audio (RCA) cable for connection with a player. To enjoy multi-zone playback of audio of a CD player or such other player without HDMI output jack, you need to use the analog audio (RCA) cable to connect the corresponding jacks of the player and this unit. For details on the multi-zone function, see the section 6 "Using the multi-zone function" of "Step 3: Playing Back".



■ Video signal connection

- ③ Use a component video cable to connect a TV with component video input jacks and a player with component video output jacks.
 - When a component video cable is used for connecting the unit and the player, the unit and TV must also be connected with a component video cable.

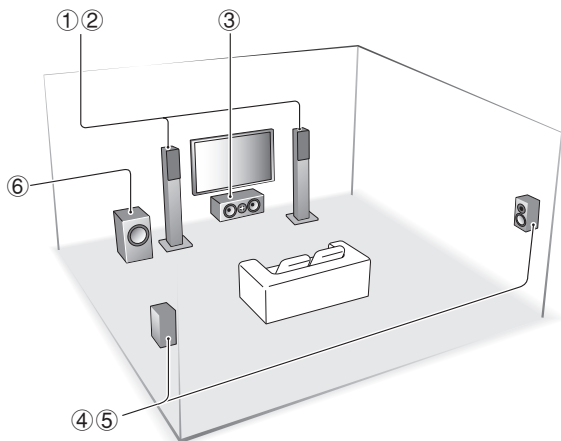


- ④ Use a composite video cable to connect a TV with composite video input jack or a player with composite video output jack.



2 Connecting speakers

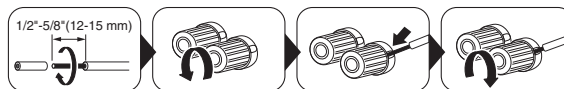
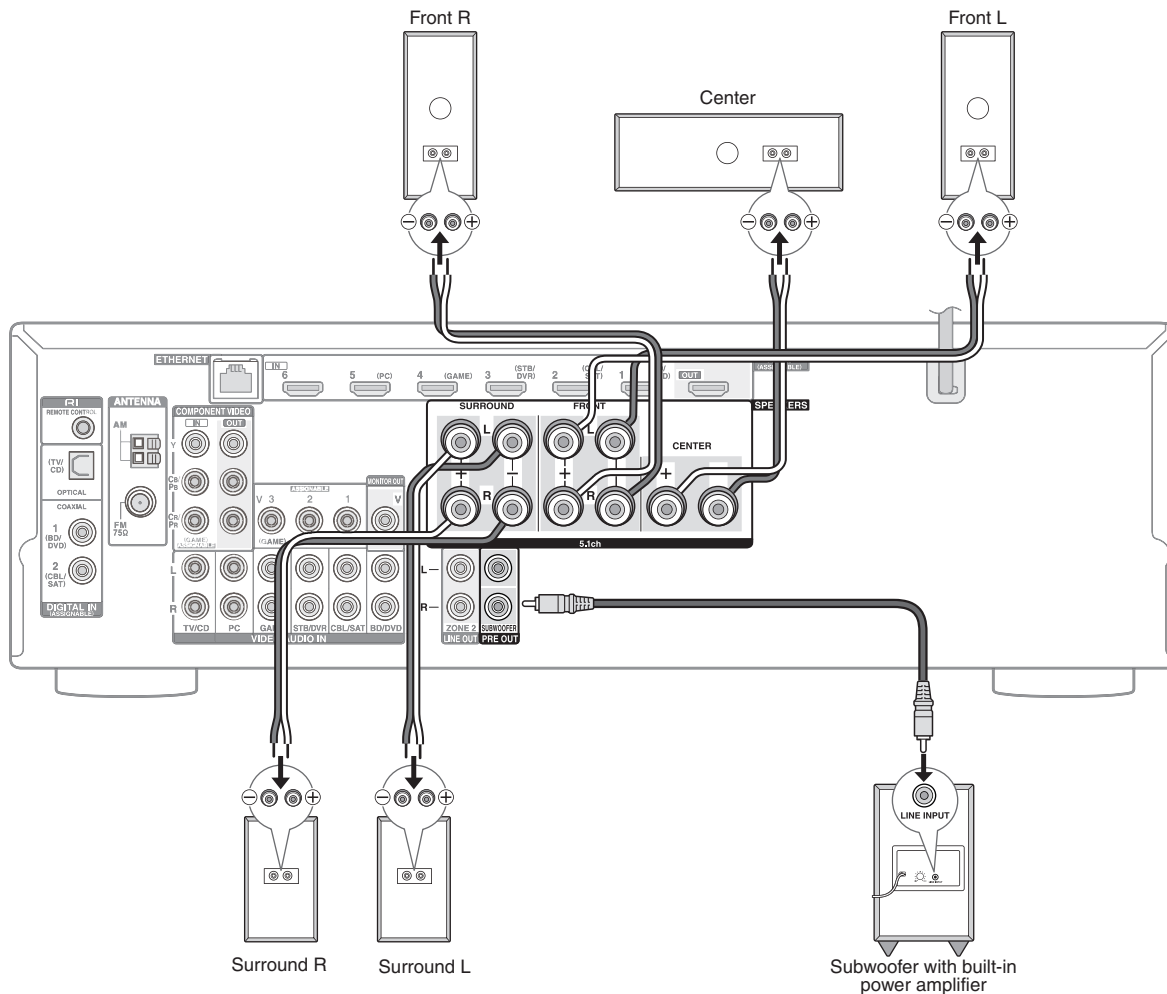
Important: The power cord must be connected only after all other connections are completed.



- ① ② Front speakers
- ③ Center speaker
- ④ ⑤ Surround speakers
- ⑥ Subwoofer

- The position and size of the speakers is an image.
- Up to two subwoofers can be connected.
- To use the multi-zone function, refer to the section 6 "Using the multi-zone function" of "Step 3: Playing Back".

It is ideal to install the front speakers and center speaker at the height not too far from that of the screen. As for the surround speakers, it is recommended to install at the position slightly backward of the listening position and higher than the listener's ears, since it is preferable to obtain a diffused sound rather than a direct sound. As a bass sound reproduced by subwoofer is less directional, it is possible to place it at any position. Consider the best installation position where a bass sound can be clearly heard by listening to actual playback.



Important: Connect speakers with 6 Ω to 16 Ω impedance. Using a speaker with less impedance than the supported value may result in failure.

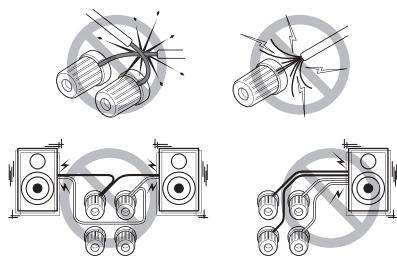
Cut and remove the plastic coating from the end of the speaker cable, twist the core and connect it to the terminal. Make correct connection between the unit's jacks and speaker's jacks (+ to + and - to -) for each channel. If connection is wrong, a bass sound may become poor due to reverse phase.

* The positive (+) speaker terminals of Home Theater System are color coded for identification purpose. Connect the colored cable to the positive (+) speaker terminal in the same color as the cable.

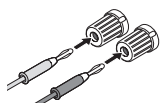
Connect LINE INPUT jack on the subwoofer and PRE OUT SUBWOOFER jack on this unit as described in the figure.

* Up to two subwoofers can be connected. If the subwoofer has a cut-off filter selection switch, set to DIRECT. If the subwoofer does not have a cut-off filter selection switch but has a cut-off frequency adjusting dial, turn it to the maximum frequency. If your subwoofer does not have built-in power amplifier, you can connect a power amplifier between the unit and the subwoofer.

- The speaker setting is 5.1 ch at the time of purchase. You can change it manually or by using automatic speaker setting.
- Short-circuiting the + cable and - cable or contacting the cable core to the rear panel of the unit may cause failure. Also do not connect two or more cables to one speaker jack or one speaker to several jacks.



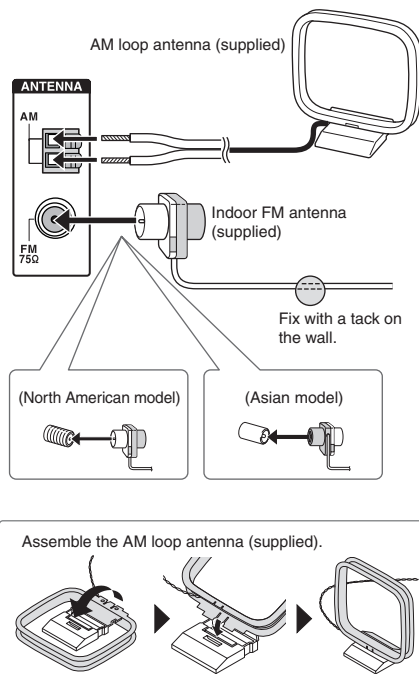
When using commercially available banana plugs: tighten the speaker terminals to the end and then insert the banana plugs. Do not insert the cable core directly into the center hole of the speaker terminal. (North American model)



3 Other connections

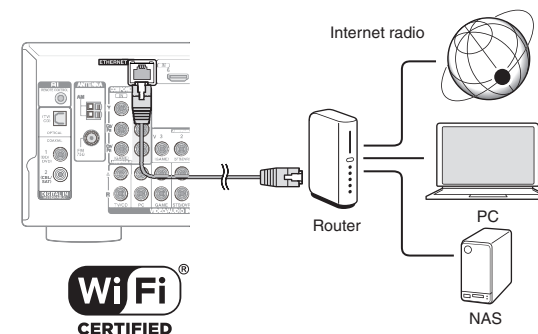
AM/FM antenna connections

Connect the antennas to listen to AM/FM broadcast. When listening to the broadcast for the first time, adjust the antenna position and orientation to get the best reception.



Network connection

You can enjoy Internet radio and DLNA by connecting the unit to LAN. The unit can be connected to the router with an Ethernet cable or to the wireless LAN router with Wi-Fi connection. In case of wired connection, connect the Ethernet cable to the Ethernet port. For Wi-Fi setup, see the section 3 of "Step 2: Setting Up".



Headphones connection

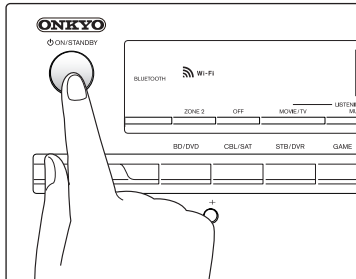
Connect stereo headphones with a standard plug (1/4 inch or ϕ 6.3 mm) to the PHONES jack. Sound from the speakers will be off while you are using the headphones.

- If you selected any other listening mode than Pure Audio (Asian model), Stereo, Mono and Direct, connecting headphones will switch the listening mode to Stereo.

Step 2: Setting Up

1 Turning the power on

Connect the power cord to the outlet. Press **ON/STANDBY** on the main unit or **RECEIVER** on the remote controller to turn the unit on or to standby mode.

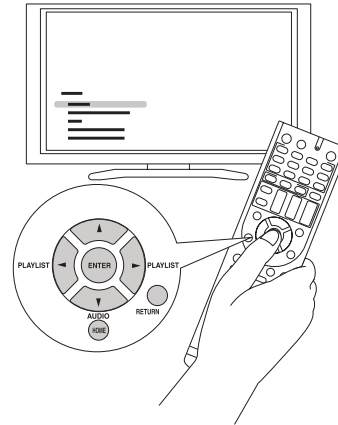


- When the unit is turned on, a large instantaneous current may flow affecting functionality of the computer and other devices. It is recommended to use a separate outlet from that for the computer or such other sensitive devices.

Firmware update notification: If the unit is connected via LAN and there is firmware update available, the "Update New F/W" message will appear. Press the **▲/▼** buttons on the remote controller to select whether to update or not and press **ENTER** to confirm your selection. For details on firmware update, see the Advanced Manual.

2 Making automatic speaker setting

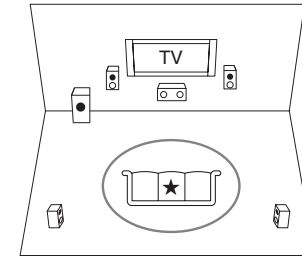
The AccuEQ Room Calibration function, our proprietary technology, collects the test tones coming from each speaker with the supplied speaker setup microphone and performs automatic setting of the number of speakers, volume level, each speaker's optimum crossover frequencies, and distance from the primary listening position. Distortion caused by difference of room acoustic environment will also be corrected to produce clear, well-balanced sound.



- **Operation:** You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press **ENTER** to confirm your selection. To return to the previous screen, press **RETURN**. To return to the Home menu, press **HOME**.

1. Place the speaker setup microphone at the measurement position ★.

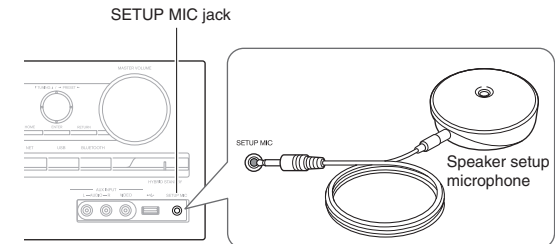
- Correct measurement will not be possible if the microphone is held by hand. It is desirable that the microphone be placed on a stand at the height of listener's ears. Measurement is not possible if headphones are being used.



○ : Listening area

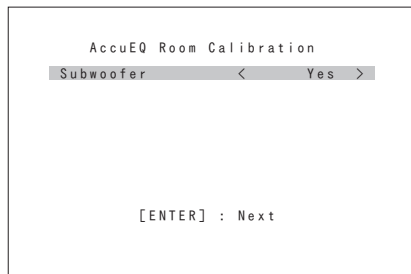
★ : Measurement position with microphone

2. Connect the speaker setup microphone to the SETUP MIC jack on the unit.



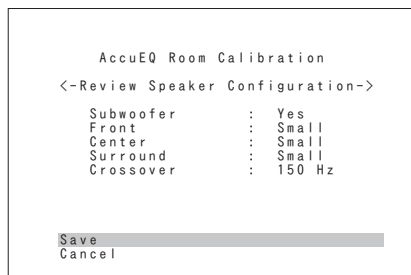
3. Follow the guidance displayed on the TV screen.

You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection.

**4. The test tones sound from the connected speaker and automatic speaker setting starts.**

The microphone measures the test tones. Measurement will be made twice for each speaker. It takes several minutes to be completed.

- Each speaker generates test tones at high volume level during measurement. Keep the room as quite as possible during measurement. Measurement may be interrupted if there is ambient noise or radio frequency interference. Close the window and turn off the home appliance and fluorescent light.
- To cancel measurement on the way, disconnect the microphone plug.

5. When the measurement is completed, the measurement result is displayed.

Press ◀▶ on the remote controller to check the settings. Pressing ENTER when "Save" is selected will save the settings.

- The subwoofer sound may not be detected since it is extremely low frequencies. If "No" is shown for "Subwoofer" in the measurement result screen, raise the subwoofer volume to around the half of its maximum volume and make its frequency to the maximum level.

6. On the screen showing "AccuEQ" is "On", press ENTER.

The settings will be applied to all the inputs.

7. When "Please unplug setup microphone." is displayed, disconnect the microphone.

- If you change the speaker positions, the room furniture layout or the number of speakers, perform automatic speaker setting again.
- If there is an error message, follow the on-screen instruction to remove the error cause.

3 Making Wi-Fi setting

Items to be checked before starting the procedure

Wi-Fi connection requires an access point such as wireless LAN router (*). Write down the SSID and password (key) of the access point if they are shown in the label of the main body. If the access point has an automatic setting button (may be called differently according to the manufacturer), you can set up without inputting the password. For how to use the automatic setting button of the access point, refer to its instruction manual.

* The unit supports Wi-Fi connection with 2.4 GHz access point.

● **Operation:** You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.

1. Start "Wi-Fi Setup".

- ① Press RCV on the remote controller and then press HOME.
- ② Select "Setup" with the cursor buttons and press ENTER.
- ③ Select "12. Network Setup" with the cursor buttons and press ENTER.

- "12. Network Setup" becomes selectable after the network starts up even if it cannot be selected first. It may take about a minute to start up.
- ④ Select "Wi-Fi" with the cursor buttons and select "On" to display "Wi-Fi Setup".
 - ⑤ Select "Start" in "Wi-Fi Setup" with the cursor buttons and press ENTER.

2. Select the SSID of the access point to be connected with the cursor buttons and press ENTER.

When the SSID of the access point appears on the TV screen, select the desired access point.

- If you changed the initial setting of the access point to skip password entry, step 4 starts automatically.
- If you changed the initial setting of the access point to hide the SSID, see "When the access point is not displayed".

3. Select and set the authentication method.

When the screen above is displayed, select and set one of the three authentication methods: "Enter Password", "Push Button" and "PIN code". See below for details of and how to set each method.

Enter Password: Enter the password of the access point to establish connection.

- ① Select "Enter Password" with the cursor buttons and press ENTER.
- ② Enter the password (*) on the keyboard screen, select "OK" with the cursor buttons and press ENTER.
 - In some case, the key board screen is displayed automatically instead of authentication screen depending on access point device.

* To switch uppercase/lowercase, select "Shift" and press ENTER. Select "Left" or "Right" and press ENTER to move the cursor to the selected direction. Select "BS" and press ENTER to delete the character at the left of the cursor position. To select whether to mask the password with "*" or display it in plain text, press D on the remote control. Press + 10 on the remote controller to enable the "Shift" function and CLR to delete all the input characters.

- ③ If the security method of the access point to be connected is WEP, select "Default Key ID", select "OK" and press ENTER.

Push Button: Use the automatic setting button of the access point to establish connection.

- ① Select "Push Button" with the cursor buttons and press ENTER.
- ② Hold down the automatic setting button of the access point for the necessary seconds, select "OK" with the cursor buttons and press ENTER.

PIN code: Select this method when the automatic setting button of the access point is beyond the reach. Select "PIN code" with the cursor buttons and press ENTER to display the 8-digit PIN code. Register the displayed PIN code to the access point, select "OK" with the cursor buttons and press ENTER. For how to register the PIN code to the access point, refer to its instruction manual.

4. Establish connection.

The connection process starts and the Wi-Fi indicator on the left of the unit's display starts flashing. When connection has been established, the Wi-Fi indicator changes from flashing to staying lit. If the Wi-Fi indicator does not stay lit, connection has not been established. Make the setting again. If "Push Button" does not work, try "Enter Password".

When the access point is not displayed

Select "Other..." with ► on the remote controller and press ENTER to display the keyboard screen. Input the SSID and password. Make the following settings according to the router setting.

■ WPA/WPA2 method

Select "WPA" or "WPA2" in "Security method", select "OK" and press ENTER.

■ WEP method

Select "WEP" in "Security method", and select "Default Key ID". Then select "OK" and press ENTER.

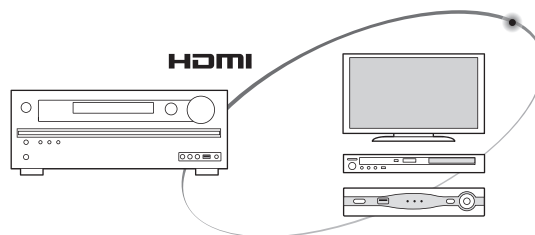
- If encryption setting has not been made on the wireless LAN router, select "None" in "Security method", select "OK" and press ENTER.

4 HDMI Setup

The unit supports the linked system function such as power on/off link when connected via HDMI cable with a CEC (Consumer Electronics Control) compliant TV or player. You need to change the initial setting to use the linked system function, HDMI Through function and ARC (Audio Return Channel) function.

● **Operation:** You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.

HDMI CEC (RIHD)



- Turning the TV to standby mode will turn the unit to standby mode.
- On the TV side, it is possible to set whether to output audio from the speakers connected to the unit or from the TV's speakers.
- Starting playback of a CEC compliant player/recorder will automatically switch the unit's input to the HDMI input of the player/recorder. If the unit is in standby mode, it will automatically be turned on.

1. Press RCV on the remote controller and then press HOME.
2. Select "Setup" with the cursor buttons and press ENTER.
3. Select "11. HDMI Setup" with the cursor buttons and press ENTER.
4. Select "HDMI CEC (RIHD)" with the cursor buttons and select "On".

HDMI Through

The function allows transmission from players to the TV even if the unit is in standby. Setting the HDMI CEC (RIHD) setting mentioned above to "On" can enable this setting automatically. It is also necessary to make the HDMI linked system setting on the TV. See the TV's instruction manual for details.

- Although enabling the HDMI Through function increases power consumption during standby, the unit automatically enters the HYBRID STANDBY mode that can minimize the increase of power consumption by keeping only the minimum circuits active.

ARC (Audio Return Channel)

Simple connection to the ARC compatible TV using a single HDMI cable allows to listen to the TV sound from the speakers connected to the unit. To use the ARC function, connect the unit to the ARC compatible HDMI jack of the TV. Then, set the HDMI CEC (RIHD) mentioned above to "On" on the unit, and make the following setting.

1. Press RCV on the remote controller and then press HOME.
2. Select "Setup" with the cursor buttons and press ENTER.
3. Select "11. HDMI Setup" with the cursor buttons and press ENTER.
4. Select "Audio Return Ch" with the cursor buttons and select "Auto".

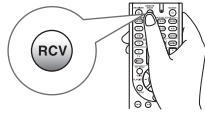
Audio output of connected players

To enjoy digital surround sound including Dolby Digital and DTS, audio output should be set to "Bitstream output" on the connected blu-ray disc player or other devices. If the TV does not support bitstream signals, set the audio output to "PCM output" on the player to listen to the audio from the TV's speakers. For how to set the player, see the instruction manual of the player. Some settings of the blu-ray disc player may prevent reproduction of DTS-HD Master Audio. In that case, turn "BD video supplementary sound" (or secondary sound) to "Off" and try again.

Step 3: Playing Back

1

Playing the player and TV



● **To control the unit:** The remote controller may be in the remote mode that enables control of other devices. In the state of remote mode, you will not be able to operate this unit. When you operate the unit, operate it from back to (a mode in which to operate this unit) RECEIVER mode by pressing ② RCV always.

1. Turning the power on.

Press ① **RECEIVER** on the remote controller to turn the power on.

- You need to change the input setting of the TV to the one for connection with this unit. Use the TV's remote controller.

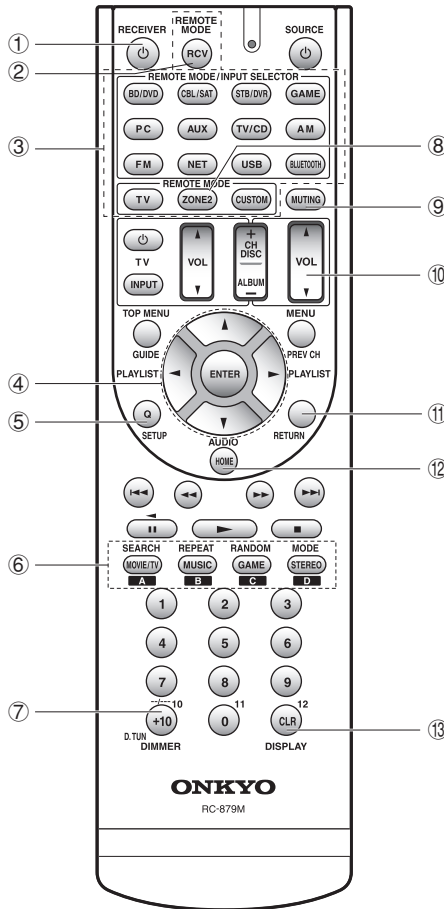
2. Select the input of the unit and start playback on the player or TV.

- Press ③ **INPUT SELECTOR** to which the desired player has been assigned. Press TV/CD to play the TV's sound. You can also use the input selector buttons on the main unit.
- Input will automatically be selected if the TV or player is CEC compliant and connected to the unit with HDMI cable.

3. Select the desired listening mode.

Press the ⑥ listening mode buttons to switch the mode so that you can enjoy different listening modes. For details about the listening modes, see "Listening modes".

4. Adjust the volume with ⑩.



- ① **RECEIVER button:** Turns the unit on or into standby mode.
- ② **RCV button:** Switches the remote controller to the mode for operating this unit.
- ③ **REMOTE MODE/INPUT SELECTOR buttons:** Switches the input to be played.
- ④ **Cursor buttons and ENTER button:** Moves the cursor and confirms the selection.
- ⑤ **Q SETUP button:** Displays the Quick Setup menu that allows you to set the frequently used functions including input selection and volume adjustment.
- ⑥ **Listening mode buttons:** Allows you to select the listening mode.
- ⑦ **DIMMER button:** Switches the brightness of the display.
- ⑧ **ZONE2 button:** For use when the unit is connected with a pre-main amplifier in a separate room and sound is played there.
- ⑨ **MUTING button:** Temporarily mutes audio.
- ⑩ **VOLUME buttons:** Allows you to adjust the volume. This button also cancels the muting.
- ⑪ **RETURN button:** Returns the display to the previous state.
- ⑫ **HOME button:** Displays the Home menu that allows you to make advanced settings and use Internet radio and DLNA.
- ⑬ **DISPLAY button:** Switches the information on the display.

- The buttons other than ①-⑬ are for operating other devices.

Listening modes

Select the desired mode by switching and listening actual sound in different modes. The selectable listening modes depend on the format of the input signals.

MOVIE/TV: You can select a listening mode suitable for movies and TV programs.

MUSIC: You can select a listening mode suitable for music.

GAME: You can select a listening mode suitable for games.

STEREO: You can select a listening mode for stereo and all channel stereo sources.

PURE AUDIO (main unit only) (Asian model): The display and analog video circuit is cut off to provide purer sound.

- For details on the listening modes, see the Advanced Manual.

"Direct" for playing the input signals as-is

Selecting this mode allows the input signals to be played as they are. For example, 2 ch signals of music CD will be played in stereo, 5.1 ch signals in 5.1 ch, and Dolby Digital signals of blu-ray disc or DVD in the Dolby Digital sound field according to the specified number of channels.

Other useful functions

■ **Playing Video and Audio from Different Sources:** It is possible to play audio and video from different sources. For example, you can play audio from the CD player and video from the BD/DVD player. In this case, press BD/DVD and then TV/CD. Then start playback on the BD/DVD player and CD player. This function is effective when an input with audio only has been selected (TV/CD, AM or FM in the initial setting).

■ **Adjusting Sound Quality:** It is possible to enhance or moderate the bass and treble of front speakers. Press TONE on the main unit several times to select the desired setting from "Bass", "Treble", and "PM Bass" (Phase Matching Bass), and adjust with +/-.

- It cannot be set if the listening mode is Pure Audio (Asian model) or Direct.

"**Bass**": Allows you to enhance or moderate the bass.

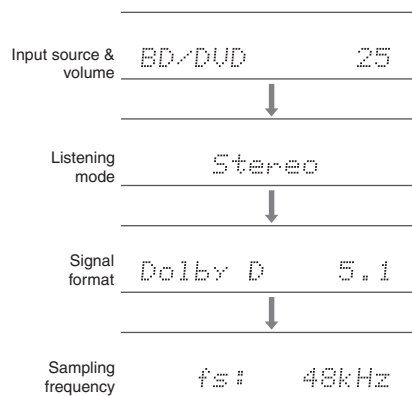
"**Treble**": Allows you to enhance or moderate the treble.

"**PM Bass**": Allows you to keep the clear midrange and effectively enhance the bass.

■ **Muting Temporarily:** Press MUTING on the remote controller. To cancel the muting, press MUTING again, or press VOL ▲/▼.

■ **Changing the Display Brightness:** Press DIMMER on the remote controller several times to select the desired brightness.

■ **Checking the Input Format:** Press DISPLAY on the remote controller several times to switch the display of the main unit in order of:



- If "Dolby D 5.1" is displayed in signal format, the Dolby Digital 5.1 ch signals are being input. When listening to AM/FM radio, the band, frequency and preset number are displayed.

2 Listening to AM/FM Radio

Auto tuning method is explained in Basic Manual. For more details on AM/FM radio station, see Advanced Manual.

- Press **AM** or **FM** on the unit to select either "**AM**" or "**FM**".
- Press **TUNING MODE** on the unit so that the "**AUTO**" indicator on the unit's display lights.
- Press **▼TUNING▲** on the unit.

The automatic search for a radio station starts. Searching stops when one is found. When tuned into a radio station, the "▶TUNED◀" indicator on the unit's display lights. The "FM STEREO" indicator lights if the radio station is an FM radio station.



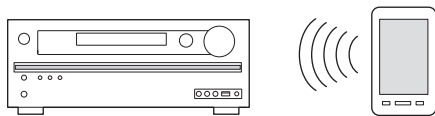
(Actual display depends on the country.)

■ **Registering a Radio Station:** It allows you to register up to 40 of your favorite AM/FM radio stations.

- Tune into the AM/FM radio station you want to register.
- Press **MEMORY** on the unit so that the preset number on the display flashes.
- Repeatedly press **◀PRESET▶** on the unit to select a number between 1 and 40 while the preset number is flashing (about 8 seconds).
- Press **MEMORY** on the unit again. When registered, the preset number stops flashing. Repeat this procedure for all of your favorite AM/FM radio stations. Press **◀PRESET▶** or **CH +/-** to select the registered radio station.

3 Connecting and playing the Bluetooth-enabled device

You can wirelessly enjoy music files stored in a smartphone or other Bluetooth-enabled device. The coverage area is 48 feet (15 meters).



- The Bluetooth-enabled device needs to support the A2DP profile.
- Note that connection is not always guaranteed with all Bluetooth-enabled devices.

Pairing

Pairing is necessary when using the Bluetooth-enabled device for the first time. Before starting the procedure, learn how to enable the Bluetooth setting function and to connect with other devices on the Bluetooth-enabled device.

1. Press **BLUETOOTH** on the remote controller.

The unit enters the pairing mode and the **BLUETOOTH** indicator starts flashing.

2. While the **BLUETOOTH** indicator is flashing, complete connection on the Bluetooth-enabled device in the nearby area within about 2 minutes.

If the name of this unit is displayed on the Bluetooth-enabled device's display, select this unit. Pairing will end after a short time.

- If a password is requested, enter "0000".
- When connecting the unit to any other Bluetooth-enabled device, start pairing by pressing and holding **BLUETOOTH** until the **BLUETOOTH** indicator starts flashing. This unit can store the data of up to ten paired devices.

Playing sound of the Bluetooth-enabled device

If the unit is on and the Bluetooth-enabled device is connected, the input will be automatically switched to **BLUETOOTH**. Play music in this state.

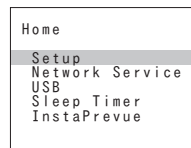
- It may take about a minute until connection is established when the unit is on since the Bluetooth function takes some time to start up.
- If the volume setting on the Bluetooth-enabled device is low, the sound will not be output from this unit.
- Due to the characteristics of Bluetooth wireless technology, the sound produced on this unit may slightly be behind the sound played on the Bluetooth-enabled device.

4 Using the Home menu

In the Home menu, you can make advanced settings and use Internet radio and DLNA. For more information about the operation, see the Advanced Manual.

1. Press **RCV** on the remote controller and then press **HOME**.

The Home menu displays on the TV screen. You can also use the **HOME** button on the main unit.



2. Select the item with the cursor buttons of the remote controller and press **ENTER** to confirm your selection.

To return to the previous screen, press **RETURN**. To return to the Home menu, press **HOME**.

■ **Setup:** You can change the assignment of input terminals and input selector buttons and also make various speaker settings and other advanced settings.

■ **Network Service:** Select to use Internet radio services and the DLNA function. When you connect the unit to the network and press **ENTER**, the network service screen will be displayed on the TV. On the TV screen, select the desired service or music file with the cursors of the remote controller and press **ENTER** to confirm and start playback.

Internet radio service: You can listen to TuneIn or such other Internet radio stations registered in advance.

DLNA : You can play music files stored in the PC or

NAS device connected to the network. Select the server with the cursors, select the desired music file and press **ENTER** to start playback.

■ **Home Media:** You can play music files in a shared folder on the PC or NAS device connected to the network. Select the server with the cursors, select the desired music file and press **ENTER** to start playback.

- "Network Service" becomes selectable after the network starts up even if it cannot be selected first. It may take about a minute to start up.

■ **USB:** Select "USB" in the TV screen and connect a USB storage device to the USB port on the front panel. On the TV screen, select the desired folder or music file with the cursors of the remote controller and press **ENTER** to confirm and start playback.

- "USB" becomes selectable after the USB function starts up even if it cannot be selected first. It may take about a minute to start up.

■ **Sleep Timer:** Select to turn the unit into standby mode automatically when the specified time elapses.

■ **InstaPrevue:** Select to preview videos input from the HDMI input jacks collectively in a single screen. The screen has a main window (current input video) and sub windows (other input videos). To switch the current input, select the desired sub window with the cursor buttons and press **ENTER**.

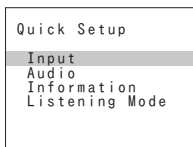
- A black sub window is shown for the input with no video signals.
- "InstaPrevue" cannot be selected if the video is being input from HDMI IN 6 or there is no signal from the input currently selected.
- Depending on video signals, the picture may not be properly rendered on the preview thumbnails.

5 Using Quick Setup menu

In the Quick Setup menu, you can set frequently used functions including input selection and volume adjustment.

1. Press Q SETUP on the remote controller.

The Quick Setup menu is displayed on the connected TV's screen.



2. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection.

To return to the previous screen, press RETURN.

■ **Input:** Select the input and check the assignment of input selector buttons.

■ **Audio:** You can change various audio settings including the ones for adjusting audio quality and speaker level.

- You cannot select this item when audio is played from the TV's speakers.

A/V Sync: If the video is behind the audio, you can delay the audio to offset the gap.

- It cannot be set if the input is "NET", "USB" or "BLUETOOTH".
- It cannot be set if the listening mode is Pure Audio (Asian model) or Direct.

Bass, Treble: Adjust volume of the front speaker.

- It cannot be set if the listening mode is Pure Audio (Asian model) or Direct.

PM Bass (Phase Matching Bass): Suppress phase shift in the midrange to enhance bass sound. Thus smooth and powerful bass sound can be obtained.

- It cannot be set if the listening mode is Pure Audio (Asian model) or Direct.

Subwoofer Level, Center Level: Adjust the speaker level while listening to the sound. The adjustment you made will be reset to the previous status when you turn the unit to standby mode.

- The speakers cannot be adjusted if they have been set to "No" or "None" in "Sp Config".

AccuEQ: Disables the sound field correction settings set in the automatic speaker setting. The setting can be separately set to each input.

- The setting cannot be selected if the automatic speaker setting has not been performed.
- It cannot be set if headphones are connected or the listening mode is Pure Audio (Asian model) or Direct.

Late Night: Make small sounds to be easily heard. It is useful when you need to reduce the volume while watching a movie late night. You can enjoy the effect on Dolby Digital, Dolby Digital Plus and Dolby TrueHD sources only.

- Turning the unit to standby mode will set the setting to "Off". In case of Dolby TrueHD, the setting will be set to "Auto".

Music Optimizer : Improve the quality of the compressed audio. Playback sound of lossy compressed files such as MP3 will be improved. The setting can be separately set to each input.

- The setting is effective in the signals of 48 kHz or less. The setting is not effective in the bitstream signals.
- It cannot be set if the listening mode is Pure Audio (Asian model) or Direct.

Cinema Filter: Adjust the soundtrack that was processed to enhance its high pitch range, in order to make it suitable for home theater.

- This function can be used in the following listening modes: Multichannel, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD High Resolution Audio, DTS-HD Master Audio, DTS Express, DTS 96/24, Dolby PL II Movie, DTS NEO:6 and Neo:6 Cinema.

■ **Information:** Display the audio information.

■ **Listening Mode:** Select the listening mode from the categories of "MOVIE/TV", "MUSIC" and "GAME".

- It cannot be set when audio is played from the TV's speakers.

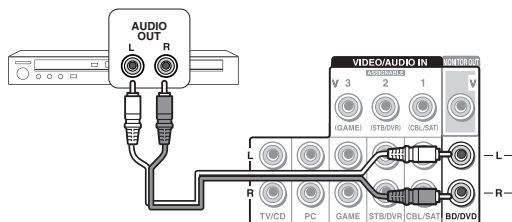
6 Using the multi-zone function

You can connect the unit with a pre-main amplifier or speakers in a separate room and playback audio sources from an external device connected to the analog audio input jacks of the unit. And also, you can enjoy sources of "NET", "USB", "BLUETOOTH" as well as AM/FM broadcasting. It is also possible to play the sound from different analog connected devices in the main room and separate room.

- As for the "NET", "USB" and "BLUETOOTH", you cannot select different inputs for the main room and separate room. For example, if "NET" has been selected in the main room and then "USB" is selected on the pre-main amplifier in the separate room, the input in the main room will change to "USB" accordingly.
- When listening to AM/FM broadcasting, you cannot select different stations for the main room and separate room. Therefore broadcasting of the same station will be heard in the both rooms.

Connecting with Player

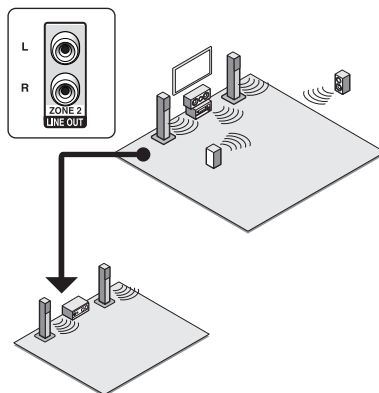
To use a Blu-ray Disc player or other players as the source of multi-zone audio output, it is necessary to connect the RCA audio output jacks of the player and the analog audio input jacks of the unit using the analog audio (RCA) cable.



- Multi-zone audio output is not possible if the player and the unit are connected only via HDMI cable or digital cable.
- Some players require analog audio output setting.

Making multi-zone connection

Connect the ZONE 2 LINE OUT jacks of the unit and the line-in jacks of the pre-main amplifier in a separate room with an analog audio (RCA) cable.



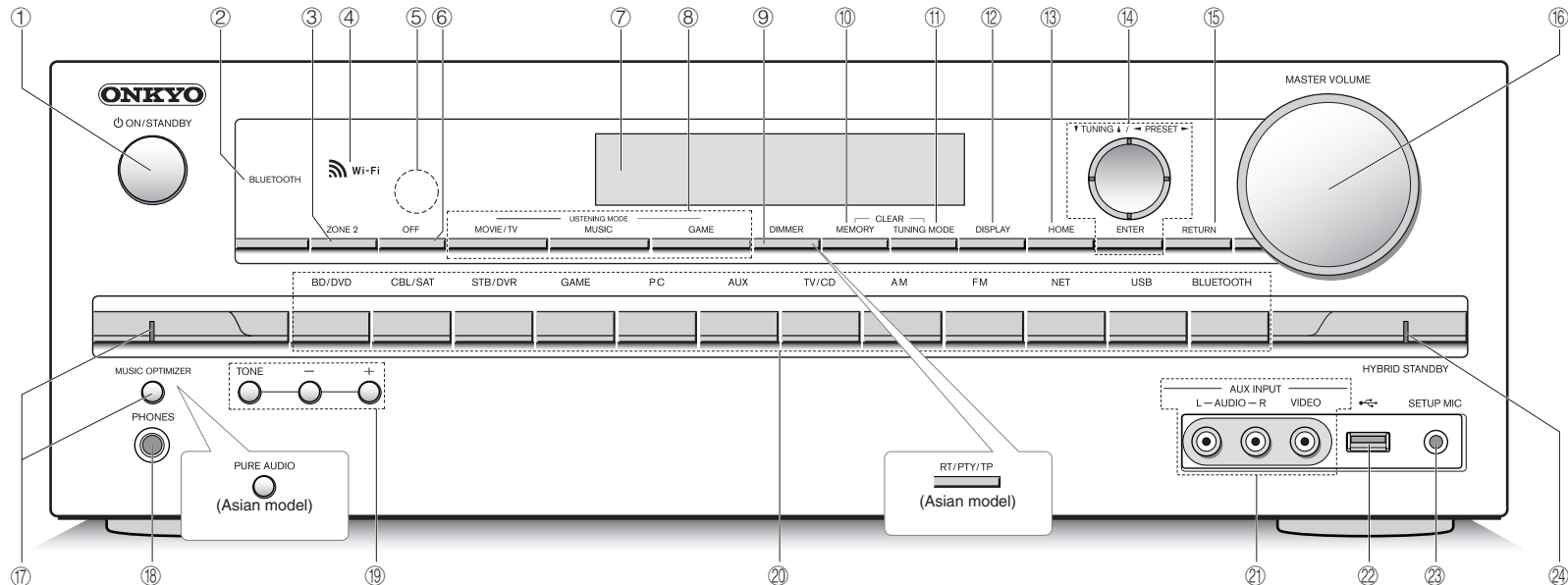
Performing multi-zone playback

1. Press **ZONE2** on the remote controller, point the remote controller at the unit and press **RECEIVER**. "Z2" lights on the unit and the ZONE function is enabled. (ZONE 2 is now on.)
2. Press **ZONE2** on the remote controller again and press **INPUT SELECTOR** of the input to be played in a separate room.
To play the same source in the main room and separate room, hold down ZONE2 for approximately 3 seconds. The volume should be adjusted with the pre-main amplifier used in the separate room.

To control on the main unit: Press ZONE2 and within 8 seconds, press the input selector button of the input to be played in a separate room. To play the same source in the main room and separate room, press ZONE2 twice.

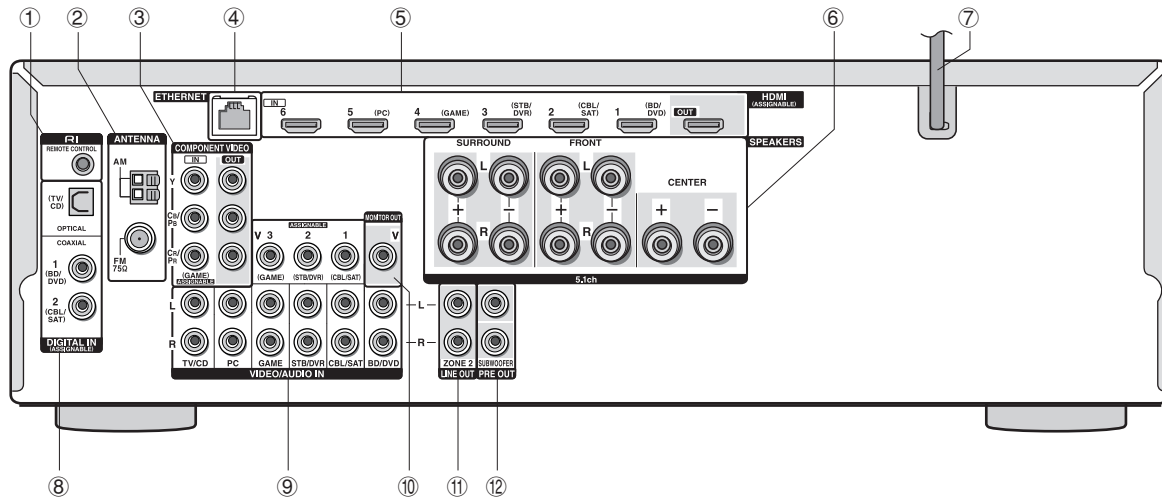
To turn off the multi-zone function: Press ZONE2 on the remote controller and press **RECEIVER**. Alternatively press **OFF** on the main unit.

- Multi-zone playback cannot be performed if a player is connected to HDMI jack using HDMI cable or OPTICAL/COAXIAL jack using digital cable. Connect the players using analog audio cable for multi-zone playback. Analog audio output setting may be necessary on the player.
- If ZONE 2 is on, power consumption during standby becomes larger than normal.
- If ZONE 2 is turned on when the listening mode of the main room is Pure Audio, it will automatically switch to Direct. (Asian model)
- While ZONE 2 is on, the RI linked system function (interlink between Onkyo components) is disabled.



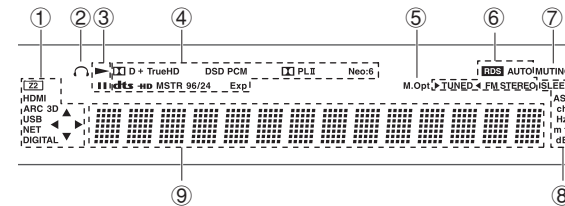
Front Panel

- ① **ON/STANDBY button:** Turns the unit on or into standby mode.
- ② **BLUETOOTH indicator:** Flashes while pairing with a Bluetooth-enabled device is in progress and stays lit when pairing is completed.
- ③ **ZONE 2 button:** Controls the multi-zone function.
- ④ **Wi-Fi indicator:** Lights when the unit is connected to the wireless LAN router.
- ⑤ **Remote control sensor:** Receives signals from the remote controller.
- ⑥ **OFF button:** Switches the multi-zone function to off.
- ⑦ **Display**
- ⑧ **LISTENING MODE buttons:** Allows you to select the listening mode.
- ⑨ **DIMMER button (North American model):** Switches the brightness of the display.
RT/PTY/TP button (Asian model): Can be used when receiving the station transmitting text information.
- ⑩ **MEMORY button:** Registers or deletes a station.
- ⑪ **TUNING MODE button:** Switches the tuning mode.
- ⑫ **DISPLAY button:** Switches the information on the display.
- ⑬ **HOME button:** Displays the Home menu.
- ⑭ **Cursor buttons, \blacktriangledown TUNING \blacktriangle button, \blacktriangleleft PRESET \blacktriangleright button and ENTER button:** Moves the cursor and confirms the selection. When listening to AM/FM broadcasting, tune in to the station with \blacktriangledown TUNING \blacktriangle or select the registered station with \blacktriangleleft PRESET \blacktriangleright .
- ⑮ **RETURN button:** Returns the display to the previous state.
- ⑯ **MASTER VOLUME:** Allows you to adjust the volume.
- ⑰ **MUSIC OPTIMIZER button and indicator (North American model):** Turns on/off the MUSIC OPTIMIZER function that improves the quality of the compressed audio.
PURE AUDIO button and indicator (Asian model): Switches to the Pure Audio mode.
- ⑱ **PHONE and Tone Level buttons:** Adjusts the high tone and low tone.
- ⑲ **TONE and Tone Level buttons:** Adjusts the high tone and low tone.
- ⑳ **Input selector buttons:** Switches the input to be played.
- ㉑ **AUX INPUT AUDIO/VIDEO jacks:** A video camera or such other device is connected.
- ㉒ **USB port:** A USB storage device is connected so that music files stored in it can be played.
- ㉓ **SETUP MIC jack:** The supplied speaker setup microphone is connected.
- ㉔ **HYBRID STANDBY indicator:** Lights if the unit enters standby mode when the HDMI Through, network standby or Wakeup from Bluetooth function is enabled.



Rear Panel

- ① **RI REMOTE CONTROL jack:** An Onkyo product with RI jack can be connected and synchronized with this unit.
- ② **FM ANTENNA jack (75 Ω) and AM ANTENNA terminal:** The supplied antennas are connected.
- ③ **COMPONENT VIDEO IN and OUT jacks:** Component video input/output jacks
- ④ **ETHERNET port:** Used for LAN connection
- ⑤ **HDMI IN/OUT jacks:** Digital video signals and audio signals are transmitted between the unit and the connected devices.
- ⑥ **SPEAKERS terminals:** Speakers are connected.
- ⑦ **Power cord**
- ⑧ **DIGITAL IN COAXIAL/OPTICAL jacks:** Digital audio signals are input.
- ⑨ **COMPOSITE VIDEO/AUDIO IN jacks:** Analog video signals and audio signals are input.
- ⑩ **COMPOSITE MONITOR OUT V jack:** Video signals are output to the connected monitor or TV.
- ⑪ **ZONE 2 LINE OUT jacks:** Audio output jacks connected to the pre-main amplifier for multi-zone playback in a separate room.
- ⑫ **SUBWOOFER PRE OUT jacks:** A subwoofer with built-in amplifier is connected.



Display

- ① Lights in the following conditions. "Z2": ZONE 2 output is on. / "HDMI": HDMI signals are input and HDMI input selector is selected. / "ARC": Audio signals are input from ARC compatible TV and TV/CD input selector is selected. / "3D": Input signals are 3D. / "USB" (*): "USB" input is selected and USB storage device is connected. / "NET" (*): "NET" input is selected and the unit is connected to the network. / "DIGITAL": Digital signals are input and the digital input selector is selected. / Cursor indicators: NET or USB is controlled.
* "USB" and "NET" will flash if the connection is not correct.
- ② Lights when headphones are connected.
- ③ Lights when NET or USB is controlled.
- ④ Lights according to the type of input digital signals and the listening mode.
- ⑤ Lights when Music Optimizer is enabled.
- ⑥ Lights in the following conditions. "AUTO": Tuning mode is auto. / "▶TUNED◀": Receiving AM/FM radio. ▶◀ flashes while tuning is automatically performed. / "FM STEREO": Receiving FM stereo. / "RDS" (Asian model): Receiving RDS broadcasting.
- ⑦ "MUTING": Flashes when muting is on.
- ⑧ Lights in the following conditions. "SLEEP": Sleep timer has been set. / "ASb" (Auto Standby): Auto Standby is on. / "ch": Channel is being set. / "Hz": Crossover frequencies are being set. / "m/ft": Speaker distances are being set. / "dB": Speaker volume is being set.
- ⑨ Displays various information of the input signals. Pressing DISPLAY displays the type of input digital signals and the listening mode.

Troubleshooting

Before starting the procedure

Problems may be solved by simply turning the power on/off or disconnecting/connecting the power cord, which is easier than working on the connection, setting and operating procedure. Try the simple measures on both the unit and the connected device. If the problem is that the video or audio is not output or the HDMI linked operation does not work, disconnecting/connecting the HDMI cable may solve it. When reconnecting, be careful not to wind the HDMI cable since if wound the HDMI cable may not fit well. After reconnecting, turn off and on the unit and the connected device.

The AV receiver turns off unexpectedly.

- The AV receiver will automatically enter standby mode when Auto Standby is set and launched.

There's no sound, or it's very quiet.

- A wrong input selector button has been selected. Select a correct input for the player. Also check that muting is not on.
- Not all listening modes use all speakers.

There's no picture.

- A wrong input selector button has been selected.
- Video is not displayed if the listening mode is Pure Audio. (Asian model)
- To display video from the connected player on the TV screen while the unit is in standby, you need to enable HDMI Through function.
- When the TV image is blurry or unclear, power cord or connection cables of the unit may have interfered. In that case, keep distance between TV antenna cable and cables of the unit.

HDMI control does not function correctly.

- Set the CEC link function of the unit to on. It is also necessary to make the HDMI linked system setting on the TV. See the TV's instruction manual for details.

The remote controller does not work.

- Be sure to press RCV first before operating the unit with the remote controller.

There is no sound for multi-zone function.

- With multi-zone function, sound is output only when the signal input source is an external component connected to the analog audio input jacks of the unit, "NET", "USB" or "BLUETOOTH". Multi-zone playback is not possible if the player and the unit are connected via HDMI cable or digital cable. Connect the RCA audio output jacks of the player and the analog audio input jacks of the unit with analog audio cable. Also analog audio output setting may be necessary on the player.

Cannot access to network.

- Try plugging/unplugging the unit or the wireless LAN router or check their power-on status. This will work well in many cases.
- If the desired wireless LAN router is not in the access point list, it may be set to hide SSID or the ANY connection may be off. Change the setting and try again.

Bluetooth

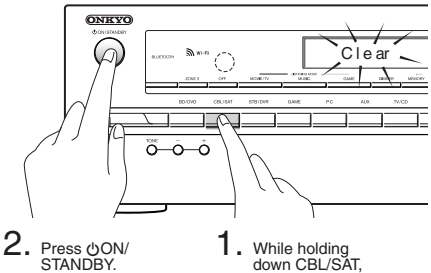
- Try plugging/unplugging the unit and the Bluetooth-enabled player. After that, check that the Bluetooth function is enabled on the Bluetooth-enabled device and the connection with the unit has been established.

Resetting the unit

Resetting the unit to the status at the time of shipment may solve the problem. If the measures above do not solve the problem, reset the unit with the following procedure. If you reset the unit status, your preferences will be reset to the defaults. Note them down before starting reset.

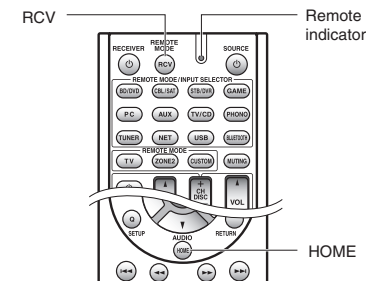
How to reset:

1. While holding down CBL/SAT on the main unit (note that step 2 must be performed with this button pressed down)
2. Press ON/STANDBY on the main unit ("Clear" appears on the display and the unit returns to standby)



How to reset the remote controller:

1. While holding down RCV on the remote controller, press HOME until the remote indicator lights (about 3 seconds)
2. Within 30 seconds, press RCV again



Specifications

Amplifier Section

Rated Output Power

All channels: 65 watts minimum continuous power per channel, 8 ohm loads, 2 channels driven from 20 Hz to 20 kHz, with a maximum total harmonic distortion of 0.7% (FTC)
90 watts minimum continuous power per channel, 6 ohm loads, 2 channels driven at 1 kHz, with a maximum total harmonic distortion of 0.7% (FTC)

(North American)

5 ch × 100 W at 6 ohms, 1 kHz,
1 ch driven of 1% (IEC) (Others)

Maximum Effective Output Power

5 ch × 120 W at 6 ohms, 1 kHz,
1 ch driven (JEITA)
(Asian)

Dynamic Power (*):

* IEC60268-Short-term maximum output power
160 W (3 Ω, Front)
125 W (4 Ω, Front)
85 W (8 Ω, Front)

THD+N (Total Harmonic Distortion+Noise)

0.7% (20 Hz - 20 kHz, half power)

Damping Factor

60 (Front, 1 kHz, 8 Ω)

Input Sensitivity and Impedance (Unbalance)

200 mV/47 kΩ (LINE)

Rated RCA Output Level and Impedance

200 mV/2.2 kΩ (LINE OUT)

Maximum RCA Output Level and Impedance

2 V/2.2 kΩ (LINE OUT)

Frequency Response

5 Hz - 100 kHz/+1 dB, -3 dB (Direct mode)

Tone Control Characteristics

±10 dB, 20 Hz (BASS)
±10 dB, 20 kHz (TREBLE)

Signal to Noise Ratio

100 dB (LINE, IHF-A)

Speaker Impedance

6 Ω - 16 Ω

Video Section

Input Sensitivity/Output Level and Impedance

1 V_{p-p}/75 Ω (Component Y)
0.7 V_{p-p}/75 Ω (Component P_B/C_B, P_R/C_R)
1 V_{p-p}/75 Ω (Composite)

Component Video Frequency Response

5 Hz - 100 MHz/+0 dB, -3 dB

Tuner Section

FM Tuning Frequency Range

87.5 MHz - 107.9 MHz (North American)
87.5 MHz - 108.0 MHz, RDS (Others)

AM Tuning Frequency Range

522/530 kHz - 1611/1710 kHz

Preset Channel

40

Network Section

Ethernet LAN

10BASE-T/100BASE-TX

Wireless LAN

IEEE 802.11 b/g/n standard
(Wi-Fi® standard)

2.4 GHz band:

1 - 11 ch (North American)
10 - 11 ch (Spain)
10 - 13 ch (France)
1 - 13 ch (Others)
(Wi-Fi® standard)

Bluetooth Section

Communication system

Bluetooth Specification version 2.1 +EDR (Enhanced Data Rate)

Maximum communication range

Line of sight approx. 15 m (*)

Frequency band

2.4 GHz band (2.4000 GHz - 2.4835 GHz)

Modulation method

FHSS (Freq Hopping Spread Spectrum)

Compatible Bluetooth profiles

A2DP 1.2 (Advanced Audio Distribution Profile)
AVRCP 1.3 (Audio Video Remote Control Profile)

Supported Codecs

SBC

Transmission range (A2DP)

20 Hz - 20,000 Hz (Sampling frequency 44.1 kHz)

* The actual range will vary depending on factors such as obstacles between devices, magnetic fields around a microwave oven, static electricity, cordless phone, reception sensitivity, antenna's performance, operating system, software application, etc.

General

Power Supply

AC 120 V, 60 Hz (North American)
AC 220 - 240 V, 50/60 Hz (Others)

Power Consumption

3.2 A (North American)
380 W (Others)
0.1 W (Stand-by, North American)
0.2 W (Stand-by, Others)
55 W (No-sound)

Dimensions (W × H × D)

435 mm × 150 mm × 329 mm
17-1/8" × 5-7/8" × 12-15/16"

Weight

7.6 kg (16.8 lbs.) (North American)
8.1 kg (17.9 lbs.) (Others)

■ HDMI

Input

IN1 (BD/DVD), IN2 (CBL/SAT), IN3 (STB/DVR), IN4 (GAME), IN5 (PC), IN6

Output

OUT

Video Resolution

4K 60 Hz (YCbCr 4:2:0)

Audio Format

DTS-HD Master Audio, DTS-HD High Resolution Audio, Dolby TrueHD, Dolby Digital Plus, DSD, Multichannel PCM

Supported

3D, Audio Return Channel, DeepColor, x.v.Color, LipSync, CEC (RIHD), 4K Passthrough

■ Video Inputs

Component

IN (GAME)

Composite

IN1 (CBL/SAT), IN2 (STB/DVR), IN3 (GAME), AUX

■ Video Outputs

Component

OUT

Composite

MONITOR OUT

■ Audio Inputs

Digital

OPTICAL (TV/CD)
COAXIAL 1 (BD/DVD), 2 (CBL/SAT)

Analog

BD/DVD, CBL/SAT, STB/DVR, GAME, PC, TV/CD, AUX

■ Audio Outputs

Analog

ZONE2 LINE OUT
2 SUBWOOFER PRE OUT

Speaker Outputs

FRONT L/R, CENTER, SURROUND L/R

Phones

PHONES (Front, ø 6.3)

■ Others

| | |
|-----------|-----------|
| Setup Mic | 1 (Front) |
| RI | 1 |
| USB | 1 (Front) |
| Ethernet | 1 |

Specifications and features are subject to change without notice.

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SN 29401839

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