
ONKYO

NETWORK STEREO RECEIVER

TX-8390

Instruction Manual

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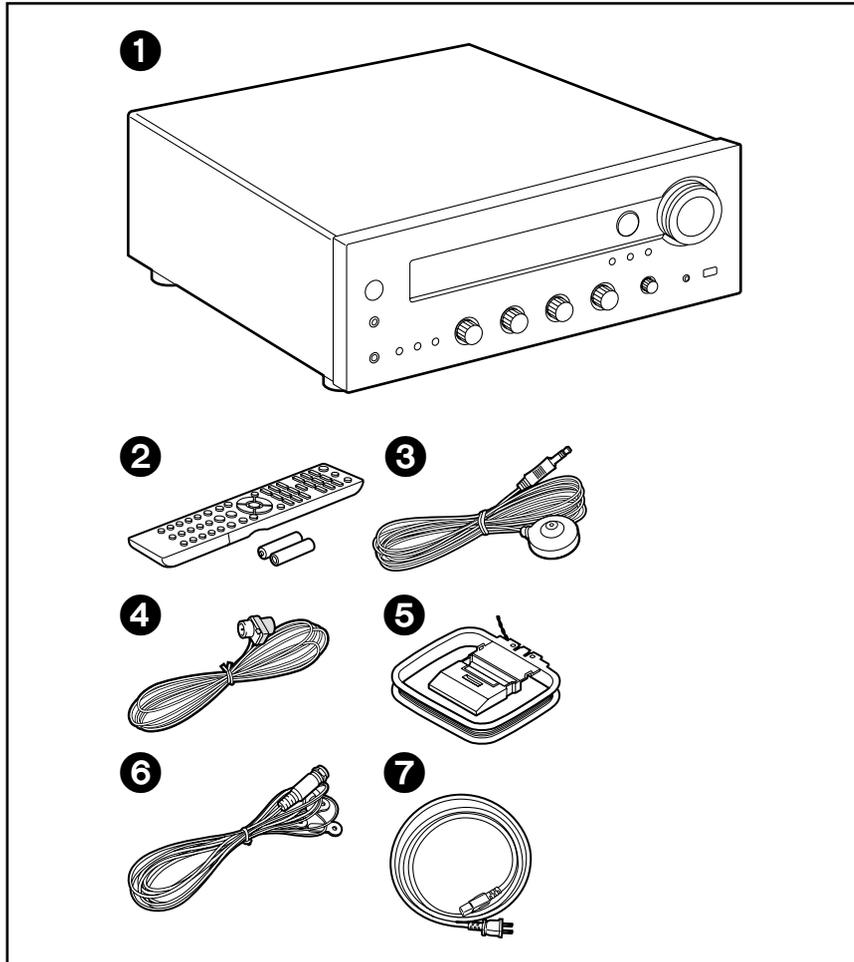
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What's in the box



1. Main unit (1)
 2. Remote controller (RC-975S) (1), Batteries (AAA/R03) (2)
 3. Speaker setup microphone (1)
 - Used during Initial Setup.
 4. Indoor FM antenna (For North American models only) (1)
 5. AM loop antenna (For North American models only) (1)
 6. DAB/FM antenna (For European models only) (1)
 7. Power cord (1)
 - Quick Start Guide (1)
 - * This is an online user manual. This is not supplied with the product.
- Connect speakers with an impedance of 4 Ω to 16 Ω . When using the 2.1 Channel System (A+B) (→p22) for simultaneous output from SPEAKER A and B, connect speakers with 8 Ω to 16 Ω impedance.
 - The power cord must be connected only after all other connections are completed.
 - We will not accept any responsibility for damage arising from the connection with equipment manufactured by other companies.
 - Network services and content that can be used may no longer be available if new functions are added by updating firmware or the service providers terminate their services. Also, available services may differ depending on your area.
 - Details on the firmware update will be posted on our website and through other means at a later date.
 - The illustrations in this manual use those of North American models unless otherwise mentioned.
 - Specifications and appearance are subject to change without prior notice.

Additional Function (Firmware Update)

This unit is equipped with a function to update the firmware via network or USB port when the firmware update is announced after purchase. This enables various functions to be added and operations to be improved.

Depending on the manufacturing timing of the product, the firmware may be switched to the updated one. In such a case, new functions may be added from the start. For how to confirm the latest firmware contents and the firmware version of your product, see the following section.

Update Information of the firmware

For the latest firmware contents and the firmware version, visit our company's website. If the firmware version of your product differs from the latest one, it is recommended to update the firmware.

To confirm the firmware version of your product, press the SETUP button on the remote controller, and refer to "7. Miscellaneous" - "Firmware Update" - "Version" (→ [p96](#)).

Operation of added new functions

If functions are added or changed from contents described in the Instruction Manual, see the following reference.

[Supplementary Information](#) »

□ **Firmware Update Procedure (→[p7](#))**

Firmware Update Procedure

The update may take approx. 20 minutes to complete via network or via USB port. Existing settings are guaranteed in either updating method.

When this unit is connected to the network, notifications of firmware updates may be displayed. To update the firmware, select "Update Now" with the cursor buttons of the remote controller and press ENTER. The unit automatically enters standby mode after "Completed!" is displayed, and the update is completed.

Disclaimer: The program and accompanying online documentation are furnished to you for use at your own risk.

Our company will not be liable and you will have no remedy for damages for any claim of any kind whatsoever concerning your use of the program or the accompanying online documentation, regardless of legal theory, and whether arising in tort or contract.

In no event will our company be liable to you or any third party for any special, indirect, incidental, or consequential damages of any kind, including, but not limited to, compensation, reimbursement or damages on account of the loss of present or prospective profits, loss of data, or for any other reason whatsoever.

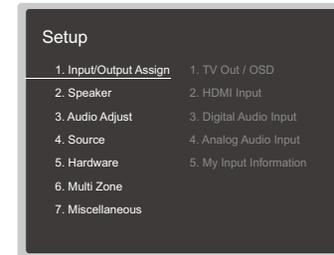
Updating the Firmware via Network

- While updating the firmware, do not do the following:
 - Disconnecting and reconnecting cables, USB storage device, speaker setup microphone or headphones, or performing operations on the unit such as turning the power off
 - Accessing this unit from a PC or smartphone using their applications
- Check that the unit is turned on, and the connection to the Internet is secured.
- Turn off control devices (PC etc.) connected to the network.
- Stop an Internet radio, USB storage device, or server content being played.
- If the multi-zone function is active, turn it off.
- If "HDMI CEC" is set to "On", set it to "Off".
 - Press SETUP. Next, select "5. Hardware" - "HDMI" and press ENTER, then select "HDMI CEC" and select "Off".
- * The descriptions may differ from the actual on-screen displays, however, operations and functions are the same.

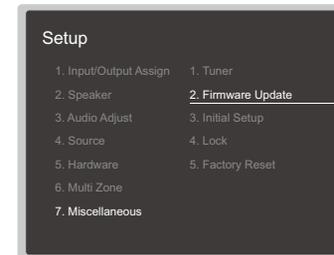
Update

1. Press SETUP.

The Setup menu is displayed on the TV screen.



2. Select "7. Miscellaneous" - "Firmware Update" - "Update via NET" with the cursors in order, then press ENTER.



- If "Firmware Update" is grayed out and cannot be selected, wait for a while until it starts up.
 - If there is no updatable firmware, "Update via NET" cannot be selected.
3. Press ENTER with "Update" selected, and start update.
 - During the update, the TV screen may go black depending on the program to be updated. In such a case, check the progress on the display of the unit. The TV screen will remain black until the update is completed and the power is turned on again.
 - When "Completed!" is displayed, the update is complete.

4. Press \odot ON/STANDBY on the main unit to turn the unit into standby mode. The process is completed, and your firmware is updated to the latest version.
 - Do not use \odot on the remote controller.

If an Error Message is Displayed

If an error occurs, "*-*-* Error!" is displayed on the display of the unit. ("*" represents an alphanumeric character.) Refer to the following descriptions and check.

Error Code

- *-01, *-10:
LAN cable not found. Connect the LAN cable properly.
- *-02, *-03, *-04, *-05, *-06, *-11, *-13, *-14, *-16, *-17, *-18, *-20, *-21:
Internet connection error. Check the following:
 - Whether the router is turned on
 - Whether this unit and the router are connected via the network
 Unplug and plug the power cords of this unit and the router. This may solve the problem. If you are still unable to connect to the Internet, the DNS server or proxy server may be temporarily down. Check the server operation status with your Internet service provider.
- Others:
After removing the power plug once, insert it to the outlet, and then start the operation from the beginning.

Updating via USB

- While updating the firmware, do not do the following:
 - Disconnecting and reconnecting cables, USB storage device, speaker setup microphone or headphones, or performing operations on the unit such as turning the power off
 - Accessing this unit from a PC or smartphone using their applications
- Prepare a 256 MB or larger USB storage device. The format of USB storage devices supports FAT16 or FAT32 file system format.
 - Media inserted into a USB card reader may not be used for this function.
 - USB storage devices equipped with the security function are not supported.
 - USB hubs and USB devices equipped with the hub function are not supported. Do not connect these devices to the unit.
- Delete any data stored on the USB storage device.

- Turn off control devices (PC etc.) connected to the network.
- Stop an Internet radio, USB storage device, or server content being played.
- If the multi-zone function is active, turn it off.
- If "HDMI CEC" is set to "On", set it to "Off".
 - Press SETUP. Next, select "5. Hardware" - "HDMI" and press ENTER, then select "HDMI CEC" and select "Off".
 - * Depending on the USB storage device or its content, long time may be required for loading, the content may not be loaded correctly, or power may not be supplied correctly.
 - * Our company will not be liable whatsoever for any loss or damage of data, or storage failure arising from the use of the USB storage device. Please note this in advance.
 - * The descriptions may differ from the actual on-screen displays, however, operations and functions are the same.

Update

1. Connect the USB storage device to your PC.
2. Download the firmware file from the our company's website to your PC and unzip.

Firmware files are named as below.

ONKAVR****_R***.zip

Unzip the file on your PC. The number of unzipped files and folders varies depending on the model.
3. Copy all unzipped files and folders to the root folder of the USB storage device.
 - Make sure to copy the unzipped files.
4. Connect the USB storage device to the USB port of this unit.
 - If an AC adapter is supplied with the USB storage device, connect the AC adapter, and use it with a household outlet.
 - If the USB storage device has been partitioned, each section will be treated as an independent device.
5. Press SETUP.

The Setup menu is displayed on the TV screen.



6. Select "7. Miscellaneous" - "Firmware Update" - "Update via USB" with the cursors in order, then press ENTER.



- If "Firmware Update" is grayed out and cannot be selected, wait for a while until it starts up.
 - If there is no updatable firmware, "Update via USB" cannot be selected.
7. Press ENTER with "Update" selected, and start update.
 - During the update, the TV screen may go black depending on the program to be updated. In such a case, check the progress on the display of the unit. The TV screen will remain black until the update is completed and the power is turned on again.
 - During the update, do not turn the power off, or disconnect or reconnect the USB storage device.
 - When "Completed!" is displayed, the update is complete.
 8. Disconnect the USB storage device from the unit.
 9. Press \odot ON/STANDBY on the main unit to turn the unit into standby mode. The process is completed, and your firmware is updated to the latest version.
 - Do not use \odot on the remote controller.

If an Error Message is Displayed

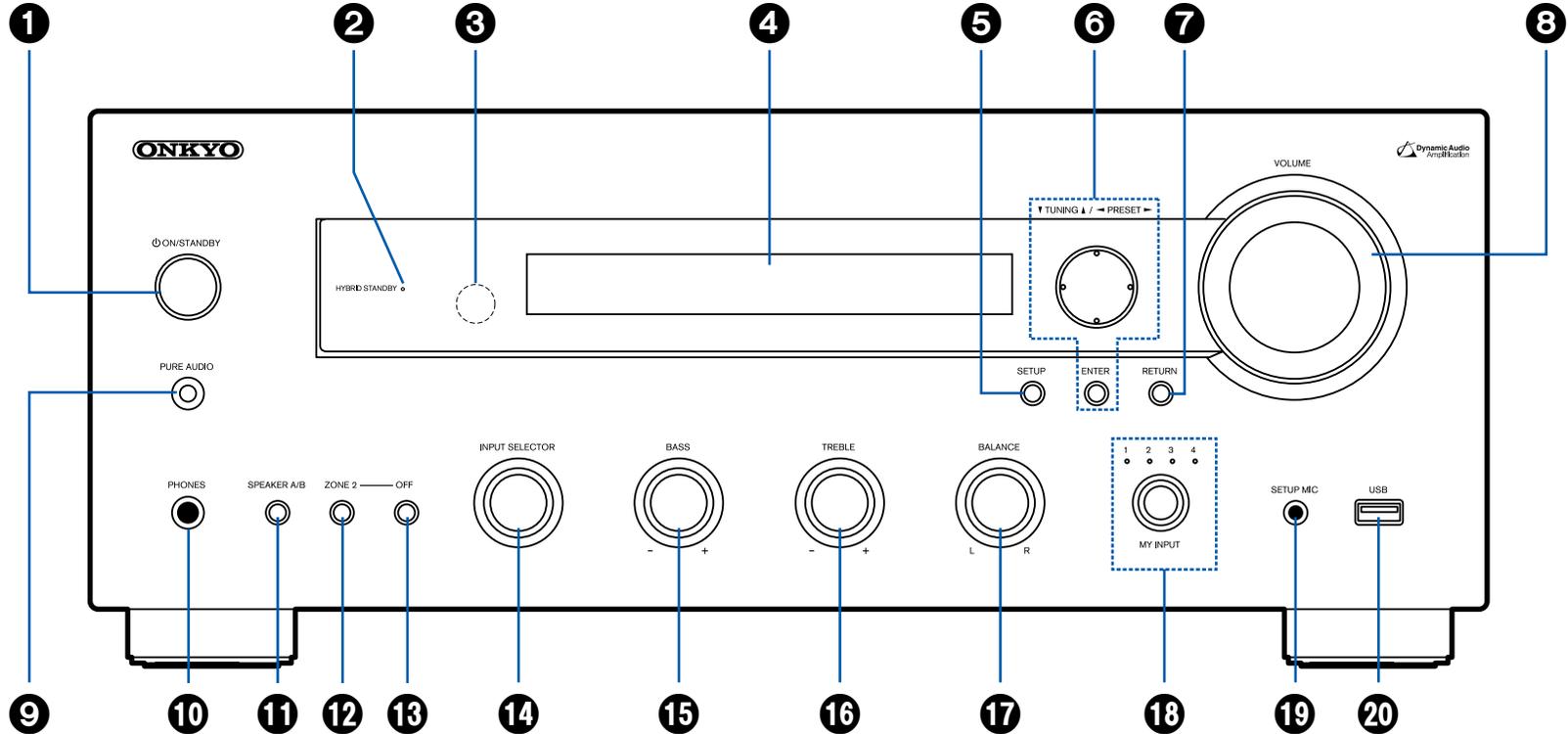
If an error occurs, "*-* * Error!" is displayed on the display of the unit. ("*" represents an alphanumeric character.) Refer to the following descriptions and check.

Error Code

- *-01, *-10:
The USB storage device cannot be recognized. Check if the USB storage device or USB cable is securely inserted to the USB port of the unit. Connect the USB storage device to an external power source if it has its own power supply.
- *-05, *-13, *-20, *-21:
The firmware file is not present in the root folder of the USB storage device, or the firmware file is for another model. Retry from the download of the firmware file.
- Others:
After removing the power plug once, insert it to the outlet, and then start the operation from the beginning.

Part Names

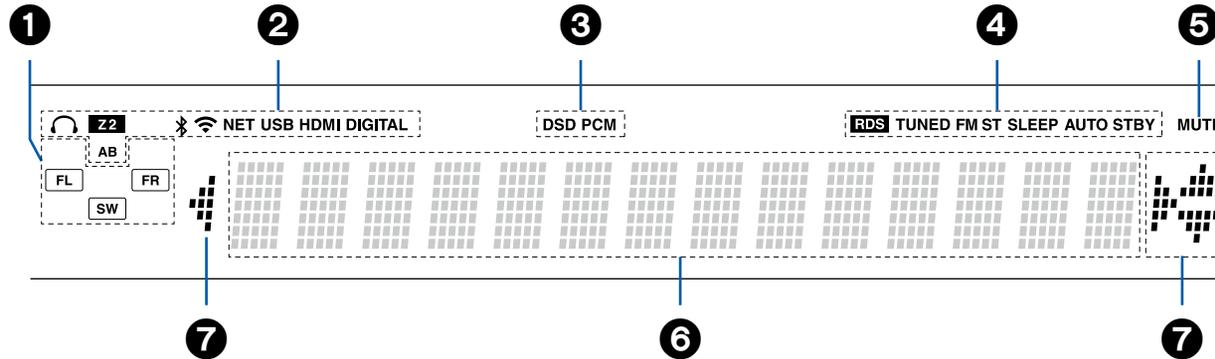
Front Panel



☐ For details, see (→ [p11](#))

1. \odot ON/STANDBY button
2. HYBRID STANDBY indicator: Lights up when any of the following functions is working or enabled in standby state of this unit. When this indicator is lighting, the power consumption in standby state increases, however, the increase in power consumption is minimized by entering the HYBRID STANDBY mode where only the essential circuits operate.
 - HDMI CEC (→[p89](#))
 - HDMI Standby Through (→[p89](#))
 - USB Power Out at Standby (→[p93](#))
 - Network Standby (→[p94](#))
 - Bluetooth Wakeup (→[p94](#))
3. Remote control sensor: Receives signals from the remote controller.
 - The reception range of the remote controller is within a distance of approx. 16'5 m, and an angle of 20° in vertical direction and 30° to right and left.
4. Display (→[p12](#))
5. SETUP button: You can display advanced setting items on the TV and the display to have a more enjoyable experience with this unit. (→[p78](#))
6. Cursor buttons ($\wedge / \vee / \lt / \gt$) and ENTER button: Select an item with the cursors, and press ENTER to confirm your selection. When using TUNER, use them to tune in to stations. (→[p61](#))
7. RETURN button: Returns the display to the previous state while setting.
8. VOLUME
9. PURE AUDIO button/indicator: Used to switch to the Pure Audio listening mode. The LED lights when it is on, the display turns off, and the "Bass" and "Treble" settings are disabled.
 - Pure Audio mode cannot be selected when using the Multi-zone feature. Activating the Multi-zone feature while this mode is selected automatically switches the listening mode to Direct.
10. PHONES jack: Connect headphones with a standard plug ($\varnothing 1/4"/6.3$ mm).
11. SPEAKER A/B button : Select whether to output audio from SPEAKER A, SPEAKER B or both.
12. ZONE 2 button: Controls the multi-zone function. (→[p69](#))
13. OFF button: Switches the multi-zone function off. (→[p69](#))
14. INPUT SELECTOR dial: Switches the input to be played.
15. BASS dial: Adjusts the bass.
16. TREBLE dial: Adjusts the treble.
17. BALANCE dial: Adjusts the balance of the sounds output from the left and right speakers.
18. MY INPUT dial/indicators: You can register settings conditions such as the current input selection or listening mode, and then recall them. The indicator corresponding to the selected MY INPUT number lights. (→[p73](#))
19. SETUP MIC jack: Connect the supplied speaker setup microphone. (→[p101](#))
20. USB jack: A USB storage device is connected so that music files stored in it can be played. You can also supply power (5 V/0.5 A) to USB devices with a USB cable.

Display

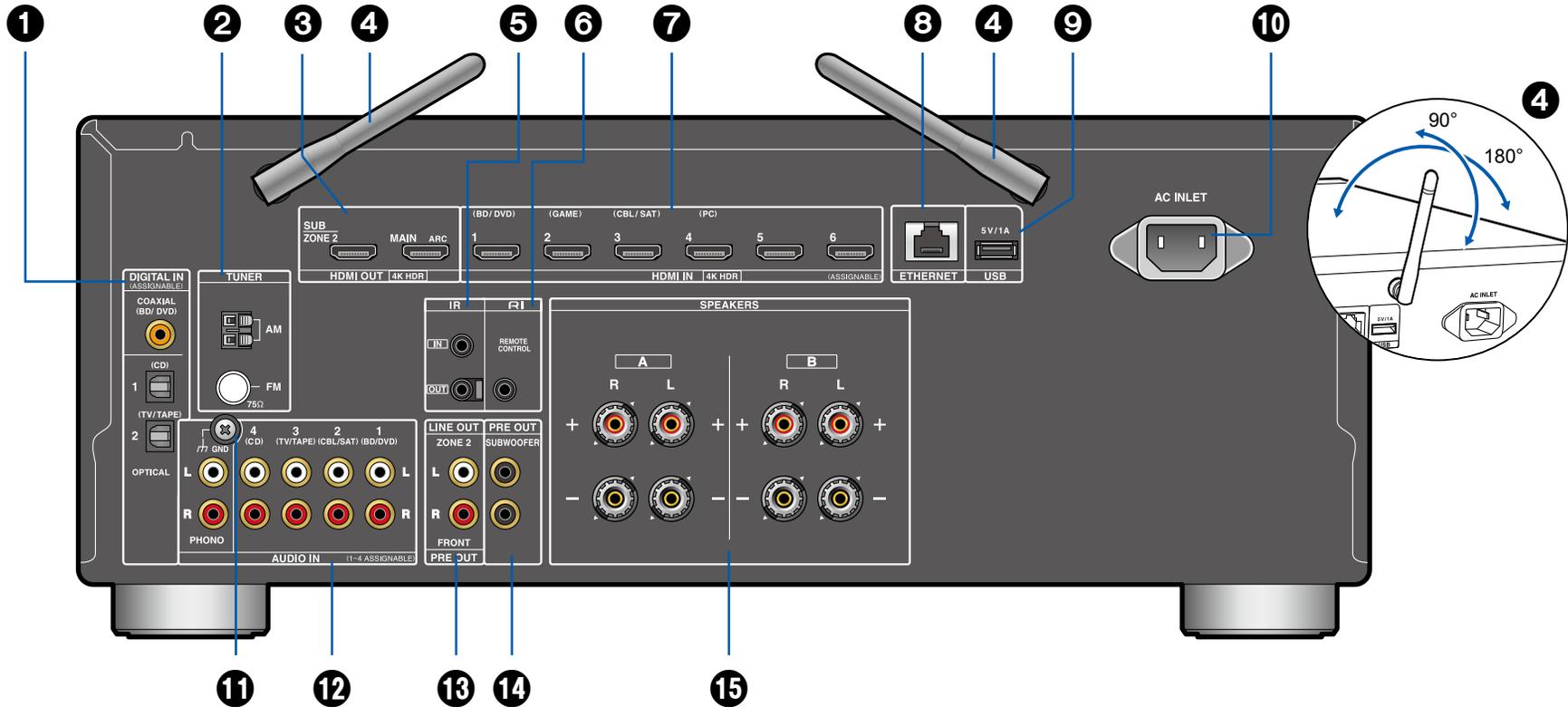


1. Speaker/Channel display: The currently selected speaker system lights.
2. Lights in the following conditions.
 - 🎧: Headphones are connected.
 - Z2: ZONE 2 is on.
 - 📶: Connected by BLUETOOTH.
 - 📶: Connected by Wi-Fi.
 - NET: Lights when connected to the network with the "NET" input selector. It will blink if incorrectly connected to the network.
 - USB: Lights when the "NET" input selector is selected, a USB device is connected and the USB input is selected. It will blink if the USB device is not properly connected.
 - HDMI: HDMI signals are input and the HDMI input is selected.
 - DIGITAL: Digital signals are input and the digital input is selected.
 - A: Audio is output only to SPEAKER A.
 - B: Audio is output only to SPEAKER B.
 - AB: Audio is output to both SPEAKER A and SPEAKER B.
3. Lights according to the type of input digital audio signals.
4. Lights in the following conditions.
 - RDS (European models): Receiving RDS broadcasting.
 - TUNED: Receiving DAB (European models)/AM (North American models)/FM radio

- FM ST: Receiving FM stereo.
 - SLEEP: Sleep timer is set. (→p93)
 - AUTO STBY: Auto Standby is set. (→p93)
5. Blinks when muting is on.
 6. Displays various information of the input signals.
 7. Cursors (^ / v / < / >): These may light when performing operations while "NET" is selected with the input selector. ^ / v light when there are multiple folders or files that are available to be selected. < / > light when text information does not fit with the range provided by "6".

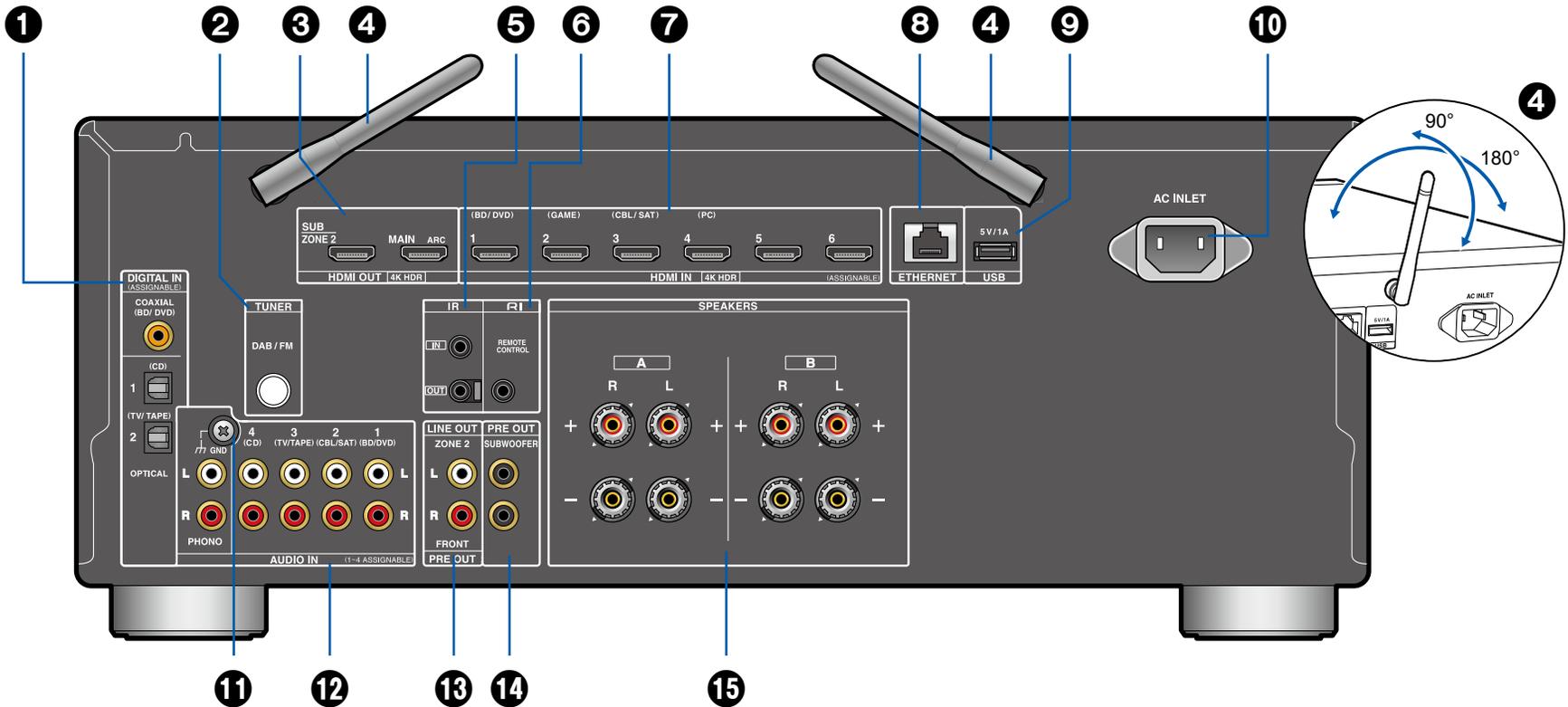
Rear Panel

(North American models)



□ For details, see (→[p15](#))

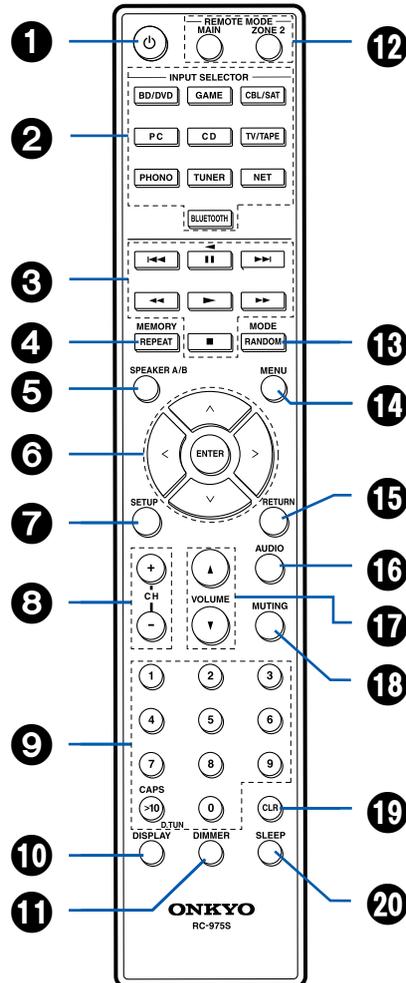
(European models)



□ For details, see (→ [p15](#))

1. DIGITAL IN OPTICAL/COAXIAL jacks: Input TV or AV component digital audio signals with a digital optical cable or digital coaxial cable.
2. TUNER AM/FM terminal (North American models): Connect the supplied antennas.
TUNER DAB/FM terminal (European models): The supplied antenna is connected.
3. HDMI OUT jacks: Transmit video signals and audio signals with an HDMI cable connected to a monitor such as a TV or projector.
4. Wireless antenna: Used for Wi-Fi connection or when using a BLUETOOTH enabled device. Adjust the angles according to the connection status.
5. IR IN/OUT terminals: Connect a remote control receiver unit. (→[p34](#))
6. REMOTE CONTROL jack: An Onkyo product with RI ("Remote Interactive") jack can be connected and synchronized with this unit. (→[p29](#))
7. HDMI IN jacks: Transmit video signals and audio signals with an HDMI cable connected to an AV component.
8. ETHERNET port: Connect to the network with a LAN cable.
9. USB port: Connect a USB storage device to play music files. (→[p47](#)) You can also supply power (5 V/1 A) to USB devices with a USB cable.
10. AC INLET: Connect the supplied power cord.
11. GND terminal: Connect the ground wire of the turntable.
12. AUDIO IN jacks: Input AV component audio signals with an analog audio cable.
13. ZONE 2 LINE OUT jacks: Output audio signals with an analog audio cable connected to a pre-main amplifier in a separate room (ZONE 2).
PRE OUT FRONT jacks: Connect to a power amplifier. (→[p24](#))
14. SUBWOOFER PRE OUT jacks: Connect a powered subwoofer with a subwoofer cable. Up to two powered subwoofers can be connected. The same signal is output from each SUBWOOFER PRE OUT jack.
15. SPEAKERS terminals: Connect speakers with speaker cables. (North American models support banana plugs. Use a plug 4 mm in diameter. Y plug connection is not supported.)

Remote Controller



1. ON/STANDBY button
2. INPUT SELECTOR buttons: Switches the input to be played.
3. Play buttons: Used to control play of a Music Server (→p50) or device connected via USB (→p47), or of RI connected devices. Also, switching to "CEC MODE" with "13. MODE button" allows you to operate an HDMI CEC function-enabled AV component. (Some devices may not be operated.)
 - The ◀◀, ▶▶, and ◀ buttons can only be used when playing RI connected devices.
4. REPEAT button: Used for repeat play operations when playing Music Server or USB. Each time you press the button, the mode switches from 1 (1-track repeat) to (folder repeat).
MEMORY button: Used to register DAB (European models)/AM (North American models)/FM radio stations.
5. SPEAKER A/B button: Select whether to output audio from SPEAKER A, SPEAKER B or both.
6. Cursor buttons (▲/▼/◀/▶) and ENTER button: Select an item with the cursors, and press ENTER to confirm your selection. Pressing ◀/▶ button allows you to switch the screen when a music folder list or file list is not displayed on one screen on the TV.
7. SETUP button: Displays advanced setting items on the TV or the display to have a more enjoyable experience with this unit. (→p78)
8. CH (+/-) buttons: Used to select DAB (European models)/AM (North American models)/FM radio stations.
9. Numbered buttons
10. DISPLAY button: Switches the information on the display. You can display information such as the input source and input format when pressed repeatedly during play.
When receiving stations transmitting RDS, it displays text information. (European models)
11. DIMMER button: Switches the brightness of the display with three levels. It cannot be turned off completely.
12. REMOTE MODE MAIN/ZONE 2 buttons: Switch the remote controller operation mode to the main room or the separate room (ZONE 2). (→p69)
13. RANDOM button: Used for random play operations when playing Music Server

or USB. \sharp (random) turns on or off each time you press the button.

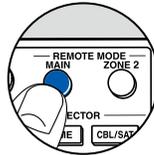
MODE button (North American models): Switches between automatic tuning and manual tuning for AM/FM stations (→p61).

MODE button (European models): Switches tuning to an FM station between automatic tuning and manual tuning (→p61), and allows you to select the order for displaying DAB stations (→p65).

Also, when an HDMI CEC function-enabled AV component is connected to this unit, you can switch "3. Play buttons" between "CEC MODE" and "RCV MODE" (normal mode).

14. MENU button: Used to display the internet radio service menus.
15. RETURN button: Returns the display to the previous state while setting.
16. AUDIO button: Pressing this button during playback allows you to make settings such as "HDMI" and "Level" quickly on the TV screen while playing. (→p97)
17. VOLUME buttons
18. MUTING button: Temporarily mutes audio. Press the button again to cancel muting.
19. CLR button: Deletes all characters you have entered when entering text on the TV screen.
20. SLEEP button: Sets the sleep timer. Select the time from "30 min", "60 min" and "90 min". (→p75)

When the remote controller isn't working: The remote controller may have switched to the mode for controlling ZONE 2. Press REMOTE MODE MAIN to switch to the mode to control the main room.



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Connecting speakers

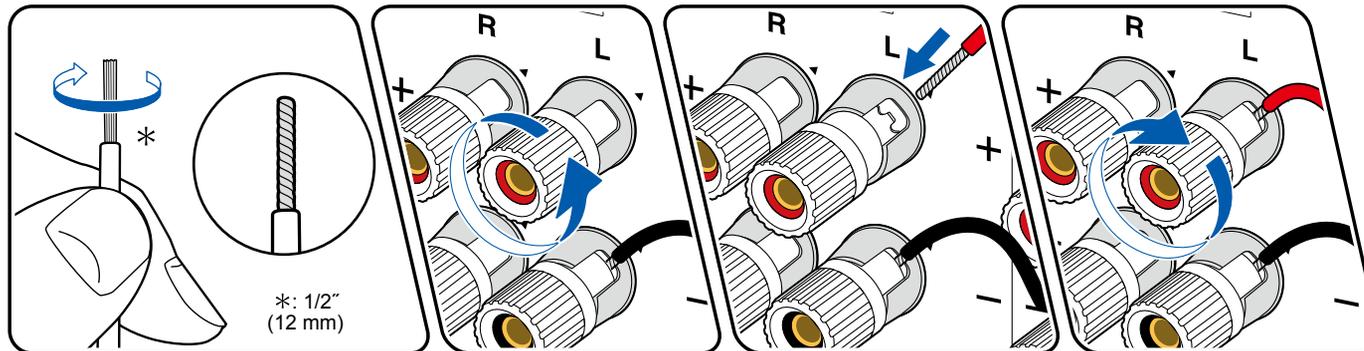
Speaker Connections and "Speaker Setup" Settings

Connections

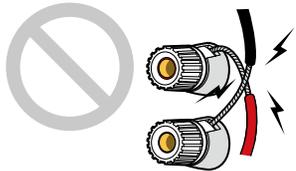
■ (Note) Speaker Impedance

Connect speakers with an impedance of 4 Ω to 16 Ω. When using the 2.1 Channel System (A+B) (→p22) for simultaneous output from SPEAKER A and B, connect speakers with 8 Ω to 16 Ω impedance.

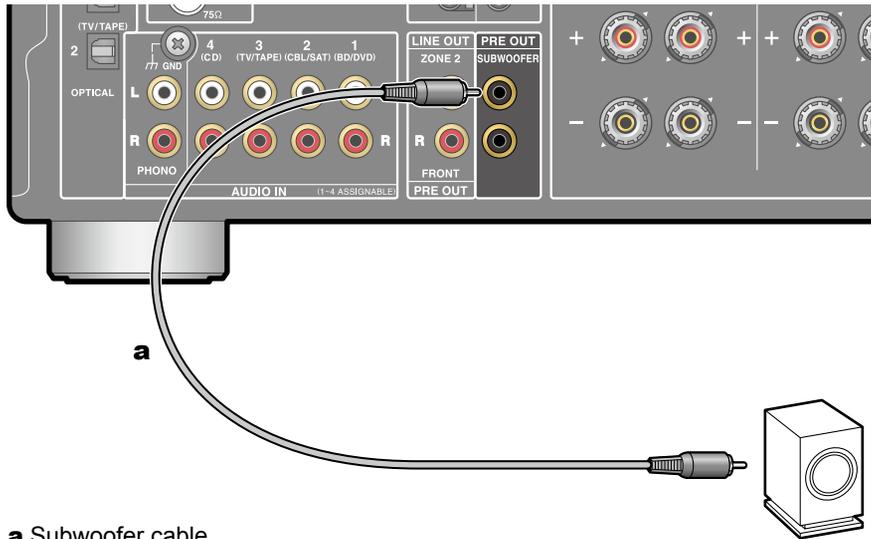
■ Connect the Speaker Cables



Make correct connection between the unit's jacks and speaker's jacks (+ side to + side, and - side to - side) for each channel. If the connection is wrong, a bass sound will not be reproduced properly due to reverse phase. Twist the wires exposed from the tip of the speaker cable so that the wires do not stick out of the speaker terminal when connecting. If the exposed wires touch the rear panel, or the + side and - side wires touch each other, a malfunction may occur.



■ Connect the Subwoofer

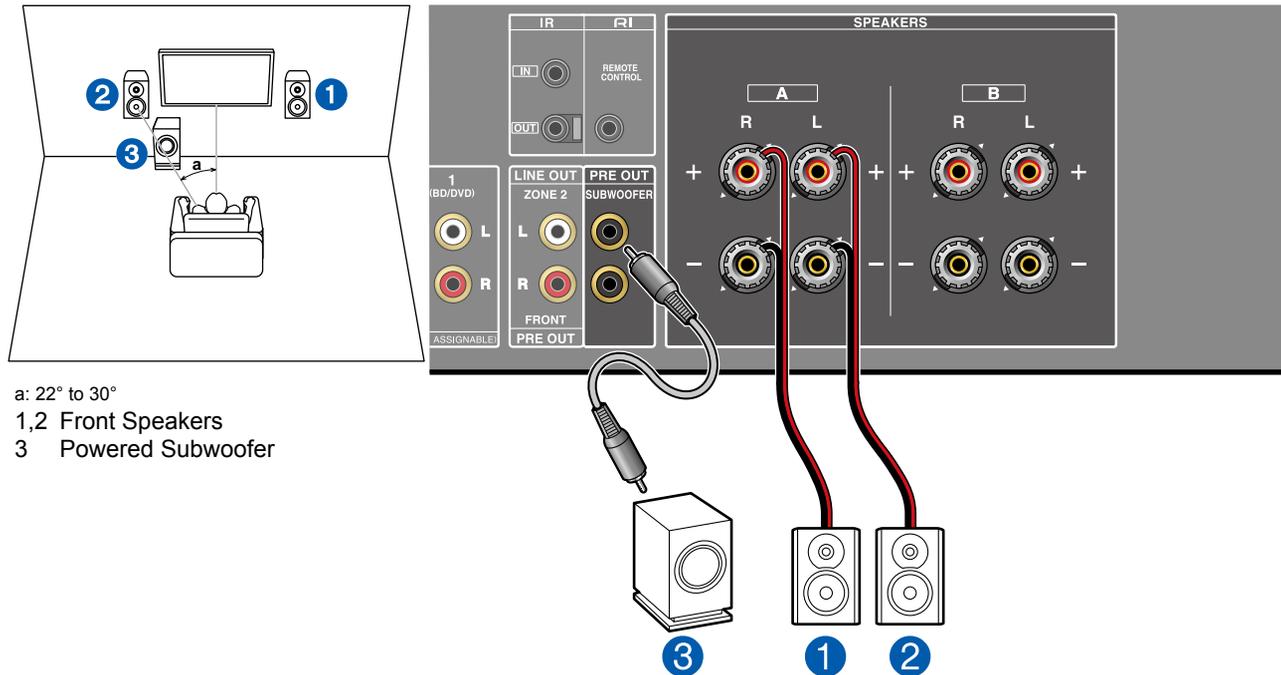


a Subwoofer cable

Connect a powered subwoofer with this unit using a subwoofer cable. Up to two powered subwoofers can be connected. The same signal is output from each SUBWOOFER PRE OUT jack.

- When only SPEAKER B (→[p22](#)) is outputting audio, there will be no audio output from the powered subwoofer.

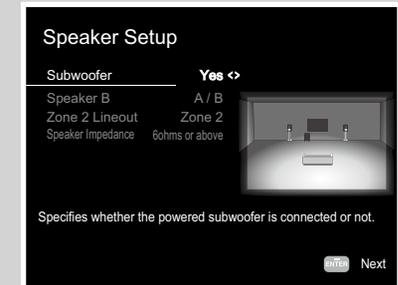
■ 2.1 Channel System (SPEAKERS A)



- a: 22° to 30°
 1,2 Front Speakers
 3 Powered Subwoofer

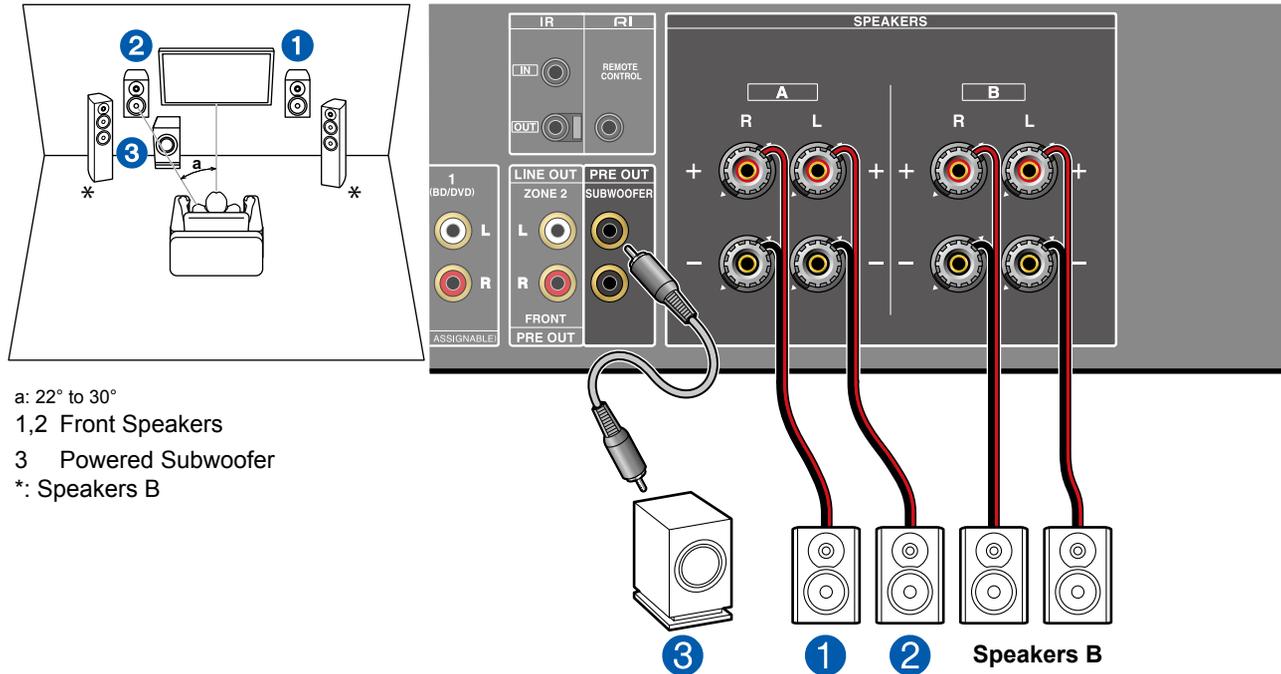
Front speakers output front stereo sound. The powered subwoofer reproduces bass sounds and enriches the sound field. The optimal positioning for front speakers is ear height. Placing the powered subwoofer between the front of the listening position and a front speaker gives you a natural sound even when playing music.

■ "Speaker Setup" settings during Initial Setup (→p101)



- Subwoofer: **Yes**
(Select "No" when not using a Subwoofer)
- Speaker B: **A/B**
- Zone 2 Lineout/(Preout): **Any value** (→p85)
- Speaker Impedance:
4 ohms: When any of the connected speakers have 4 Ω or more to less than 6 Ω impedance.
6 ohms or above: When the connected speakers all have 6 Ω or more impedance.

2.1 Channel System (SPEAKERS A+B)



- a: 22° to 30°
 1,2 Front Speakers
 3 Powered Subwoofer
 *: Speakers B

Along with the 2.1 Channel System (SPEAKERS A) (→p21), you can connect one more set of front speakers to use as a Speaker B System.

When outputting audio simultaneously from 2 speaker systems

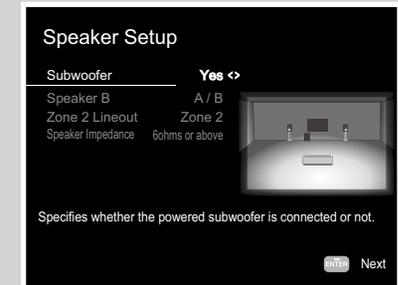
Connect speakers with an impedance of 8 Ω to 16 Ω.

When switching to either A or B for audio output

Connect speakers with an impedance of 4 Ω to 16 Ω.

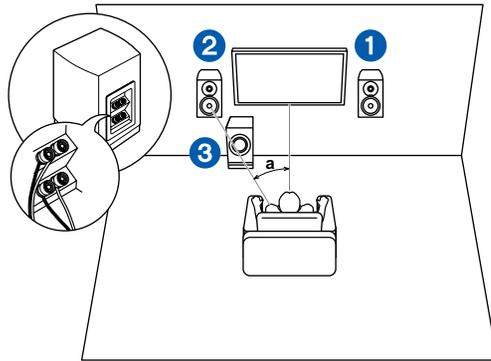
- Press SPEAKER A/B on the remote controller or the main unit to switch the audio output. The selection changes in the order SPEAKER A, SPEAKER B, SPEAKER A+B with each press.
- When only SPEAKER B is outputting audio, there will be no audio output from the powered subwoofer.

"Speaker Setup" settings during Initial Setup (→p101)

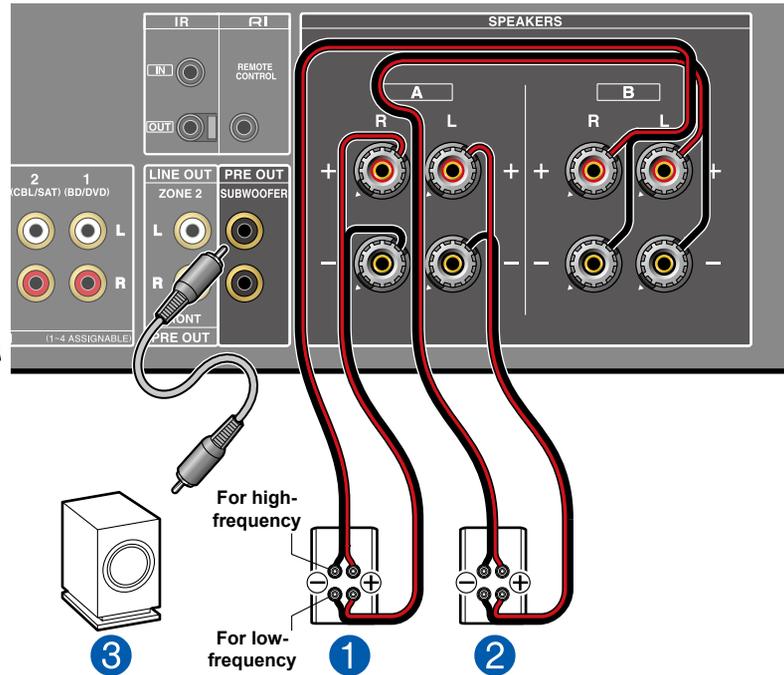


- Subwoofer: **Yes**
 (Select "No" when not using a Subwoofer)
- Speaker B: **A/B**
- Zone 2 Lineout/(Preout): **Any value (→p85)**
- Speaker Impedance:
4 ohms: When switching A/B for audio output, at least one of the connected speakers have 4 Ω or more to less than 6 Ω impedance. Also when outputting audio simultaneously from 2 speaker systems.
6 ohms or above: When switching A/B for audio output, the connected speakers all have 6 Ω or more impedance.

2.1 Channel System (Bi-wiring the Speakers)



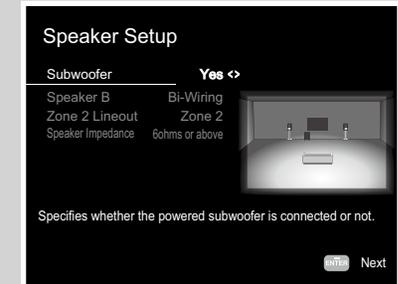
- a: 22° to 30°
 1,2 Front Speakers
 3 Powered Subwoofer



You can connect speakers that support bi-wiring to this unit. Connect the treble and bass correctly. Be sure to remove the jumper bar connecting between the woofer jacks and tweeter jacks of the Bi-wiring supported speakers. Refer to the instruction manual of your speakers as well.

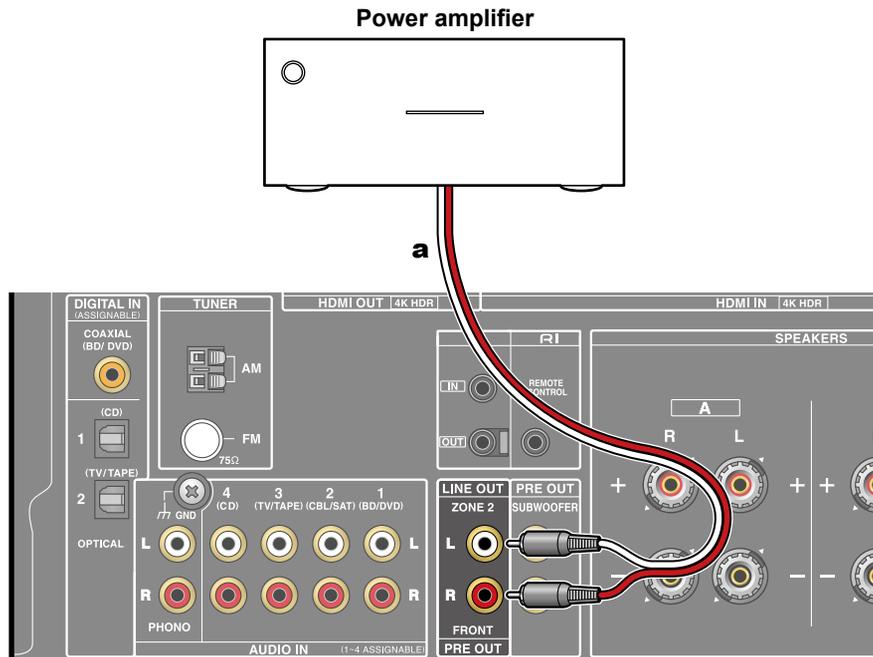
- As shown on the illustration, the wiring terminals of SPEAKERS B are connected to the tweeter and SPEAKERS A are connected to the woofer. However, wiring them the other way around is also possible.

"Speaker Setup" settings during Initial Setup (→p101)



- Subwoofer: **Yes**
 (Select "No" when not using a Subwoofer)
- Speaker B: **Bi-Wiring**
- Zone 2 Lineout/(Preout): **Any value** (→p85)
- Speaker Impedance:
4 ohms: When any of the connected speakers have 4 Ω or more to less than 6 Ω impedance.
6 ohms or above: When the connected speakers all have 6 Ω or more impedance.

Connecting a Power Amplifier



a Analog audio cable

You can connect a power amplifier to the unit and use the unit as a pre-amplifier in order to produce a large volume that cannot be output with the unit only. Connect the front speakers to the power amplifier. For details, refer to the power amplifier's instruction manual.

- Use the PRE OUT FRONT jacks for connection as show on the left.



Setup

- Settings are required to output audio to the power amplifier. Press SETUP on the remote controller, and set "2. Speaker" - "Configuration" - "Zone 2 Lineout" (→ [p85](#)) to "Front".

Connecting the TV

Connect this unit between a TV and AV component. Connecting this unit with the TV can output the video and audio signals of the AV component to the TV, or play the audio of the TV on this unit. Connection with the TV differs depending on whether the TV supports the ARC (Audio Return Channel) function or not. The ARC function transmits the audio signals of the TV via an HDMI cable, and plays the audio of the TV on this unit. To check if the TV supports the ARC function, refer to the instruction manual of the TV, etc.

Does your TV support the ARC function?

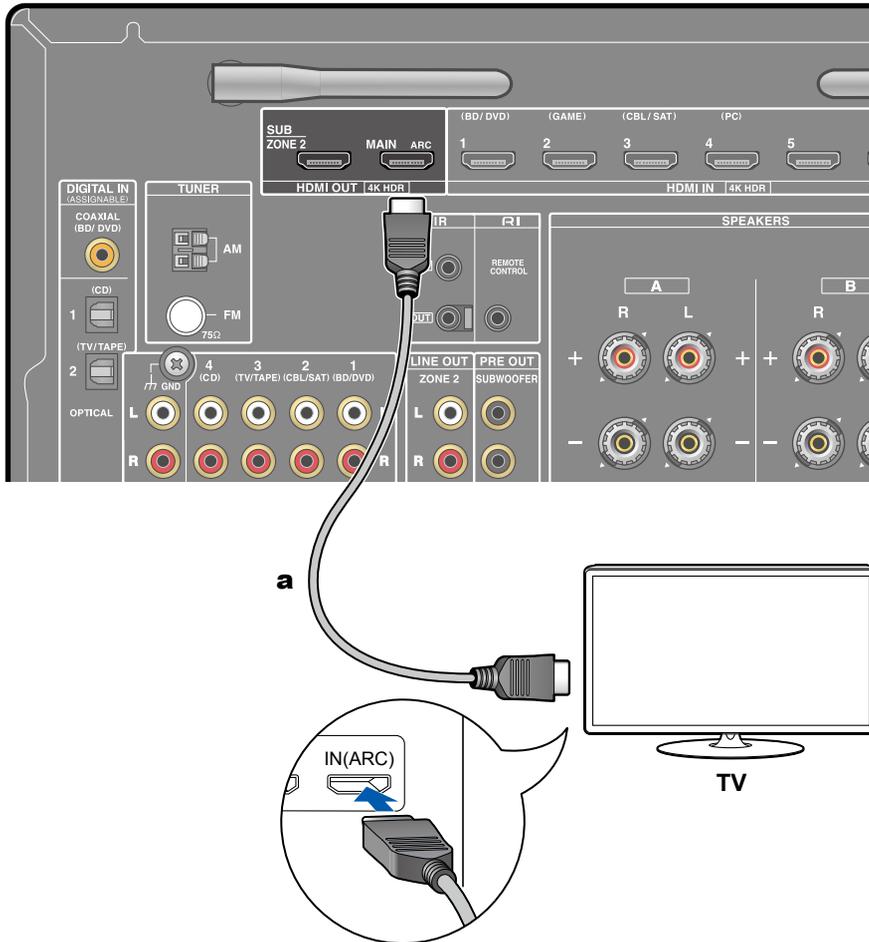
Yes

• To ARC TV (→[p26](#))

No

• To Non-ARC TV (→[p27](#))

To ARC TV



a HDMI cable

If the TV supports the ARC (Audio Return Channel) function (*), use only the HDMI cable to connect with the TV. Use the ARC-compatible HDMI IN jack of the TV for connection. You connect the HDMI cable to the HDMI OUT jack labeled "ARC" on the receiver side.

- Another TV or projector can be connected to the HDMI OUT SUB jack. Switch between MAIN and SUB using the "AUDIO Menu" (→p97). Note that this jack is not ARC-compatible.
- If devices with different resolutions are connected to HDMI OUT MAIN jack and SUB jack, images are output with the lower resolution.
- If a 4K high-quality video is played, use a Premium High Speed HDMI Cable or Premium High Speed HDMI Cable with Ethernet whose package has a "PREMIUM Certified Cable" label. Furthermore, in "Switching the HDMI 4K Signal Format Input and Output by this Unit" (→p77), change the setting value to "Enhanced".

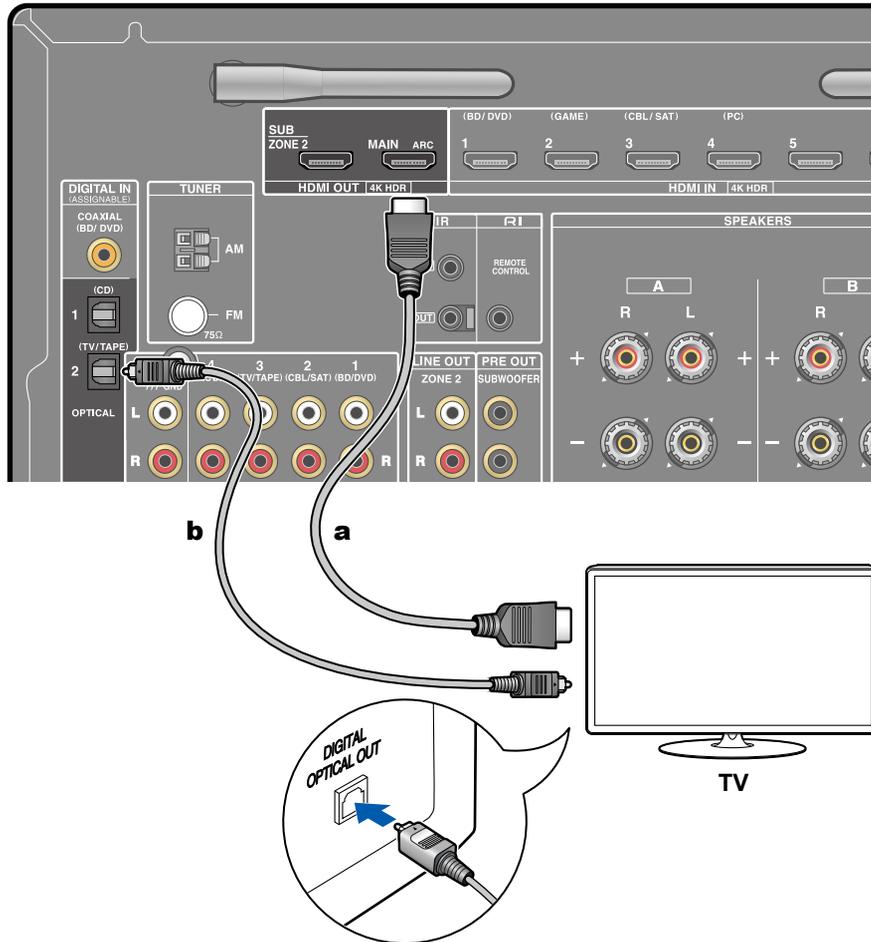


Setup

- Settings are required to use the ARC function. Select "Yes" for "3. ARC Setup" in Initial Setup (→p100). If "No, Skip" is selected, settings are required in the Setup menu after Initial Setup is completed. Press SETUP on the remote controller, and set "5. Hardware" - "HDMI" - "Audio Return Channel" to "On". (→p90)
- For detailed settings for TV connection, CEC function and audio output, refer to the instruction manual of the TV.

(*) ARC function: Transmits the audio signals of the TV via an HDMI cable, and plays the audio of the TV on this unit. Connection to an ARC-compatible TV is complete with one HDMI cable. To check if the TV supports the ARC function, refer to the instruction manual of the TV, etc.

To Non-ARC TV



a HDMI cable, **b** Digital optical cable

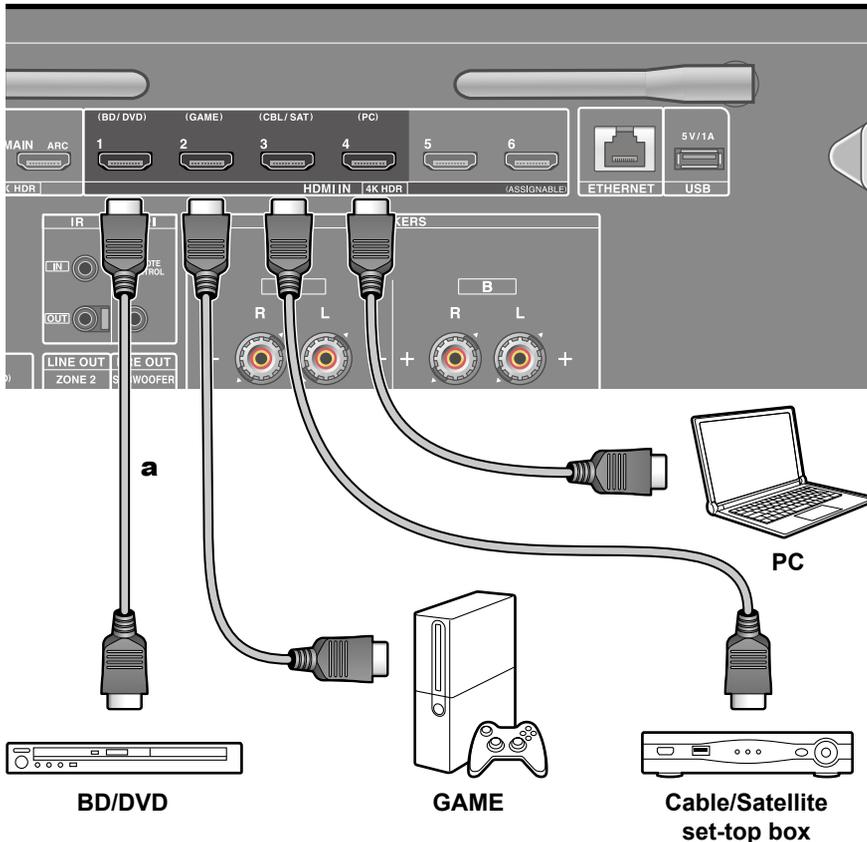
If the TV does not support the ARC (Audio Return Channel) function (*), connect an HDMI cable and digital optical cable.

- If you use a cable set-top box, etc. connected to the input jack of this unit to watch TV (without using a TV's built-in tuner), connection with a digital optical cable or analog audio cable is not required.
- Another TV or projector can be connected to the HDMI OUT SUB jack. Switch between MAIN and SUB using the "AUDIO Menu" (→[p97](#)). Note that this jack is not ARC-compatible.
- If devices with different resolutions are connected to HDMI OUT MAIN jack and SUB jack, images are output with the lower resolution.
- If a 4K high-quality video is played, use a Premium High Speed HDMI Cable or Premium High Speed HDMI Cable with Ethernet whose package has a "PREMIUM Certified Cable" label. Furthermore, in "Switching the HDMI 4K Signal Format Input and Output by this Unit" (→[p77](#)), change the setting value to "Enhanced".
- The audio from the connected TV can only be played when the audio is PCM. To play PCM audio, set the audio output on the TV to PCM output.

(*) ARC function: Transmits the audio signals of the TV via an HDMI cable, and plays the audio of the TV on this unit. Connection to an ARC-compatible TV is complete with one HDMI cable. To check if the TV supports the ARC function, refer to the instruction manual of the TV, etc.

Connecting Playback Devices

Connecting an AV Component with HDMI Jack Mounted



a HDMI cable

This is a connection example of an AV component equipped with an HDMI jack. When connecting with an AV component that conforms to the CEC (Consumer Electronics Control) standard, you can use the HDMI CEC function (*) that enables linking with input selectors, etc. and the HDMI Standby Through function that can transmit video and audio signals of the AV component to the TV even if this unit is in standby mode.

- If a 4K high-quality video is played, use a Premium High Speed HDMI Cable or Premium High Speed HDMI Cable with Ethernet whose package has a "PREMIUM Certified Cable" label. Furthermore, in "Switching the HDMI 4K Signal Format Input and Output by this Unit" (→[p77](#)), change the setting value to "Enhanced".

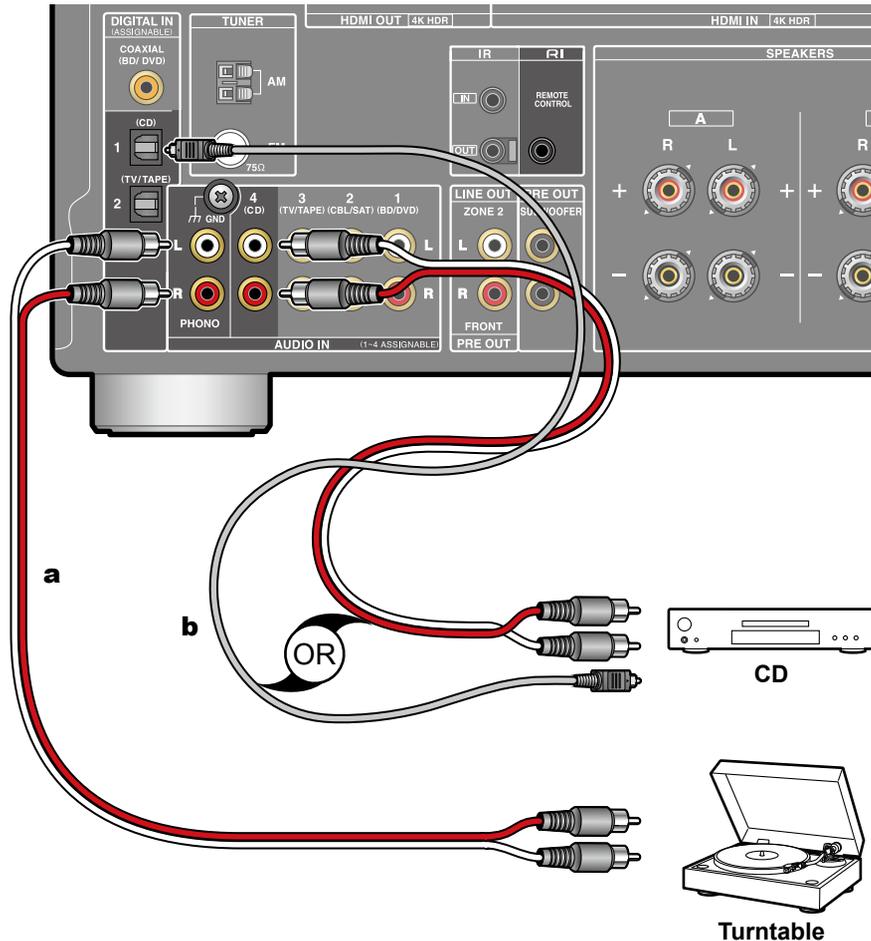


Setup

- The HDMI CEC function and HDMI Standby Through function are automatically enabled if you select "Yes" for "3. ARC Setup" in Initial Setup (→[p100](#)). If "No, Skip" is selected, settings are required in the Setup menu after Initial Setup is completed. Press SETUP on the remote controller, and select "5. Hardware" - "HDMI" to make the settings. (→[p89](#))
- The audio from connected AV components can only be played when the audio is PCM or DSD. To play PCM audio, set the audio output on the AV component to output PCM.

(*) The HDMI CEC function: This function enables various linking operations with CEC-compliant devices, such as switching input selectors interlocking with a CEC-compliant player, switching audio output between TV and this unit or adjusting the volume using the remote controller of a CEC-compliant TV, and automatically switching this unit to standby when the TV is turned off.

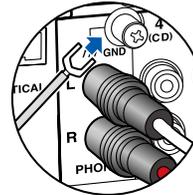
Connecting an Audio Component



a Analog audio cable, **b** Digital optical cable

This is a connection example of an audio component. Connect a CD player using a digital optical cable or analog audio cable. You can also connect a turntable that has an MM-type cartridge to the PHONO jack.

- Only PCM audio is supported for input through the DIGITAL IN OPTICAL/COAXIAL jacks. Set the audio output on the external device to output PCM.
- If the turntable has a built-in phono equalizer, connect it to any of the AUDIO IN jacks other than the PHONO jack. Further, if the turntable uses an MC type cartridge, install a phono equalizer compatible with the MC type cartridge between the unit and the turntable, and then connect it to any of the AUDIO IN jacks other than the PHONO jack.

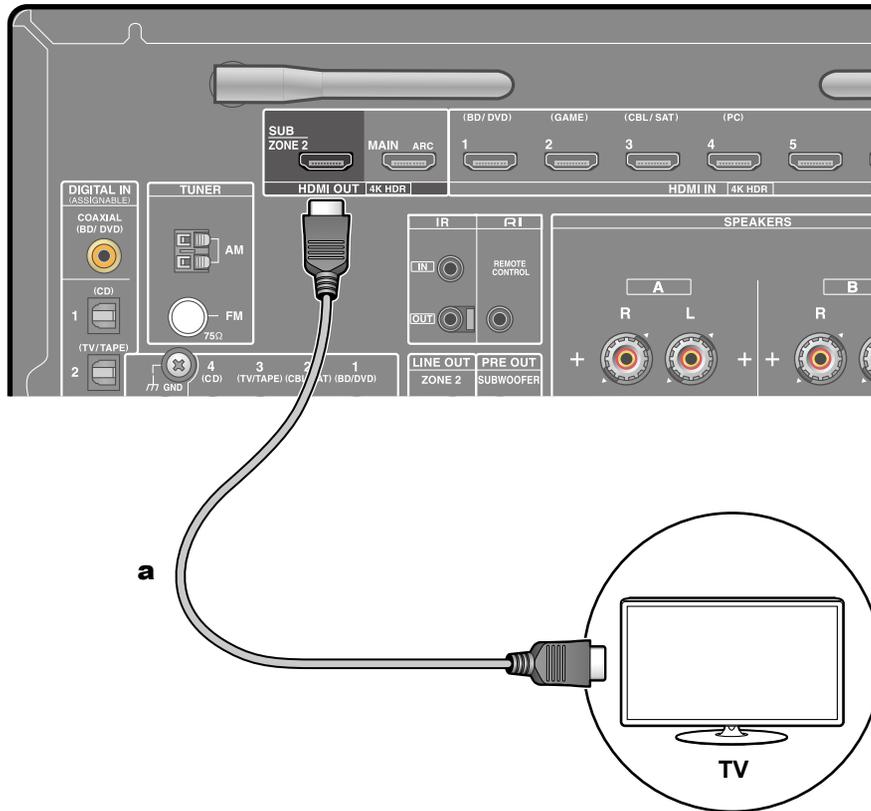


If the turntable has a ground wire, connect it to the GND terminal of this unit.

- By connecting an Onkyo component with RI jack to the unit by using an RI cable and an analog audio cable, you can link the unit's power and input selection and enable operation with this unit's remote controller. For details, refer to the instruction manual of the component with the RI jack.
- Part of the function may not operate even if it is connected via RI depending on the equipment.
- The RI dock function does not work if ZONE 2 is on.
- When connecting an RI dock, you must rename the input selectors on the unit to make the system link work. Select the GAME input selector to display "GAME" on the main unit display. Then press and hold RETURN on the main unit for 3 seconds to switch the display to "DOCK".

Connecting an AV Component in a Separate Room (Multi-zone Connection)

Connecting a TV (ZONE 2)



a HDMI cable

While a disc is played on a Blu-ray Disc player in the main room (where this unit is located), you can play the video and audio of the same Blu-ray Disc player or another AV component on the TV equipped with an HDMI IN jack in a separate room (ZONE 2). Note that only the devices connected to the HDMI IN1 to IN3 jacks can be played on the TV in the separate room.

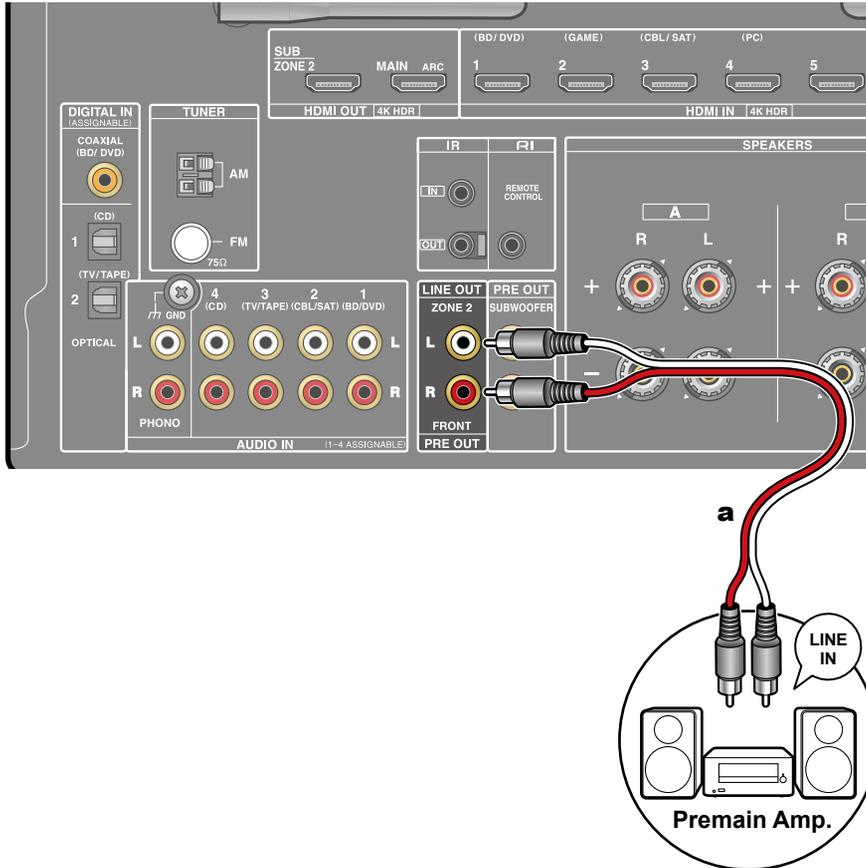
- Audio from an externally connected AV component can be output only when the audio is 2ch PCM audio signal. Also, the audio output of the AV component may need to be changed to the PCM output.



Setup

- When video and audio via HDMI input are output to ZONE 2, set "1. Input/Output Assign" - "TV Out / OSD" - "Zone 2 HDMI" (→[p81](#)) to "Use" on the Setup menu.

Connecting a Pre-main Amplifier (ZONE 2)



a Analog audio cable

You can enjoy 2-ch audio in the separate room (ZONE 2) while performing playback in the main room (where this unit is located). Use an analog cable to connect the ZONE 2 LINE OUT jack of this unit and the LINE IN jack of the premain amplifier in the separate room. The same source can be played back in the main room and ZONE 2 simultaneously. Also, different sources can be played back in both rooms.

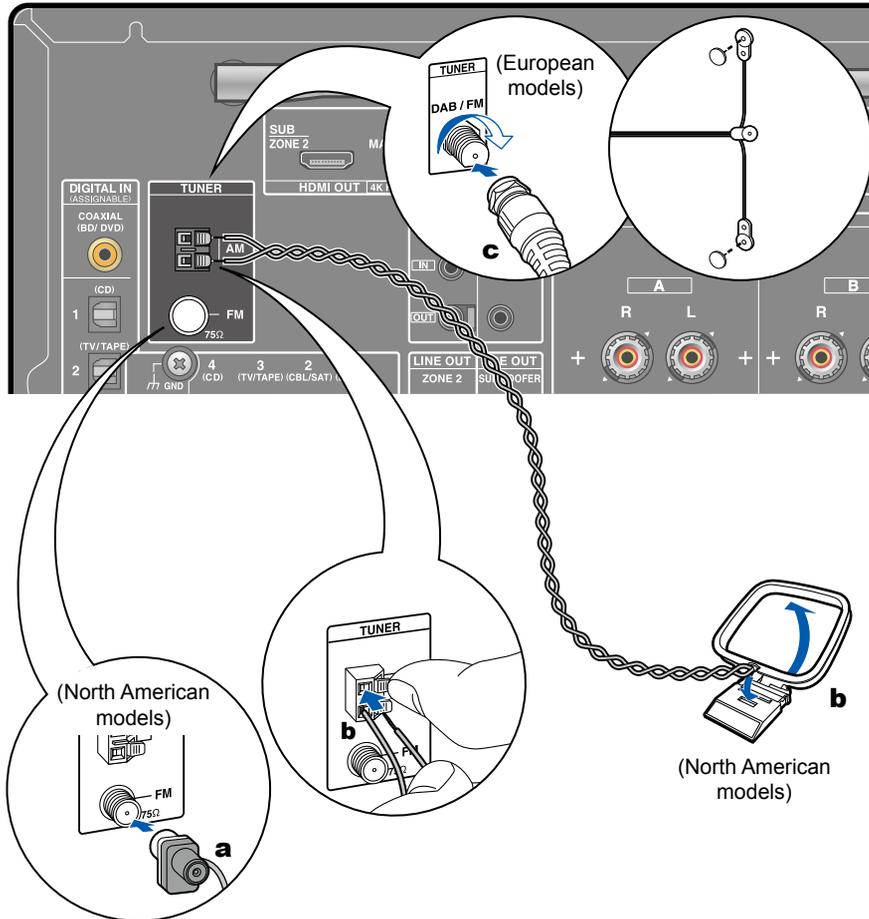
- To output audio from an externally connected AV component to ZONE 2, connect it to any of HDMI IN1 to IN3 jacks. If the AV component is not equipped with an HDMI jack, use a digital coaxial cable, digital optical cable or analog audio cable. Also, the audio from externally connected AV components can be output to ZONE 2 only when the audio is analog or 2ch PCM signal. When the AV component is connected to this unit with a digital coaxial cable or digital optical cable, change the audio output of the AV component to the PCM output.



Setup

- Settings are required to output audio to ZONE 2. Press SETUP on the remote controller, and set "2. Speaker" - "Configuration" - "Zone 2 Lineout" (→ [p85](#)) to "Zone 2".

Connecting Antennas



a FM indoor antenna, **b** AM indoor antenna, **c** DAB/FM antenna

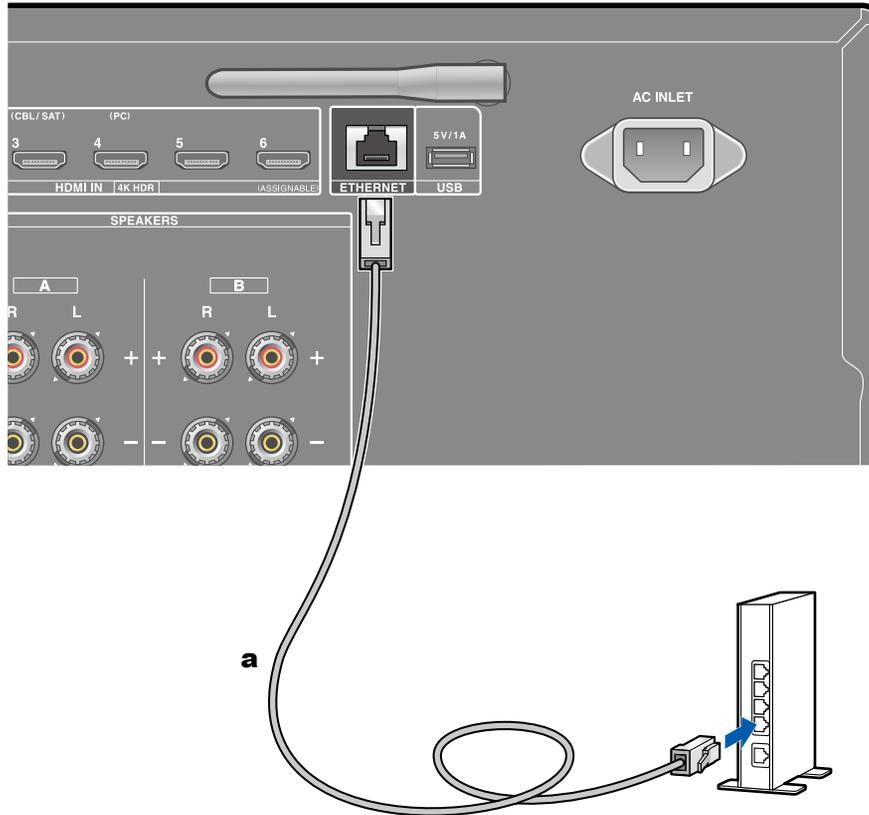
North American models

Connect the antenna to this unit, and set up the antenna at the best position for listening while receiving radio signals. Attach the indoor FM antenna to the wall using push pins or adhesive tape.

European models

Make sure the plug is pushed in all the way, then fix in place by turning the nut to the right. Use a tack or similar to fix the antenna to a wall.

Network Connection

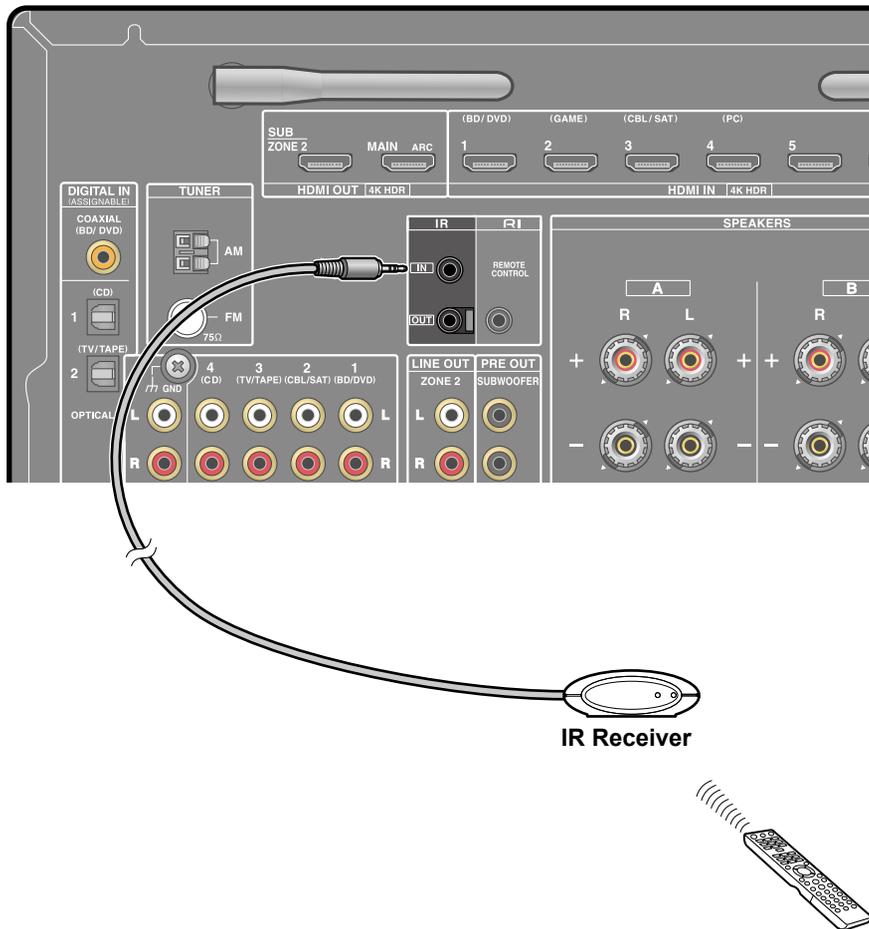


a LAN cable

This unit can be connected to the network using a wired LAN or Wi-Fi (wireless LAN). You can enjoy network functions such as Internet radio by network connection. If connection is made by the wired LAN, connect the router and the ETHERNET jack with the LAN cable as shown in the illustration. To connect by Wi-Fi, select "Wireless" for "4. Network Connection" in Initial Setup (→[p101](#)), select your desired setting method, and then follow the on-screen instructions. To configure the setting on the Setup menu after the completion of Initial Setup, press the SETUP button on the remote controller, and select "5. Hardware" - "Network" to make the setting. (→[p90](#)) For the Wi-Fi connection, stand the wireless antenna for use.

Connecting External Control Devices

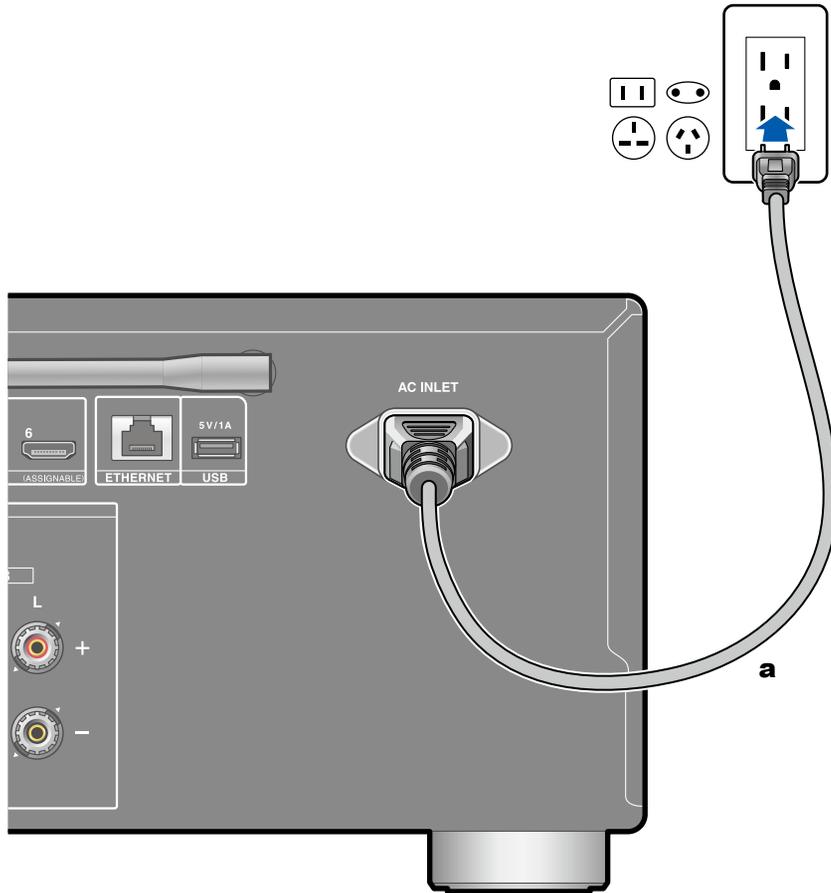
IR IN/OUT port



When connecting a remote control receiver unit consisting of an IR Receiver, etc. to this unit, operation using the remote controller is possible even if the remote control signal is difficult to reach (due to installation in the cabinet, etc.). It is also possible to operate this unit from other room such as ZONE 2 with a remote controller, or operate other devices with the remote controller by connecting other devices to this unit. For adopting a remote control receiver unit, contact the specialized stores.

- For the type of cable required for connection, refer to the operation manual, etc. of the remote control receiver unit.

Connecting the Power Cord



Connect the power cord after all the connections are completed.

- This model includes a removable power cord. Be sure to connect the power cord to the AC INLET of the unit first, and then connect it to the outlet. Always disconnect the outlet side first when disconnecting the power cord.

a Power cord

Playback

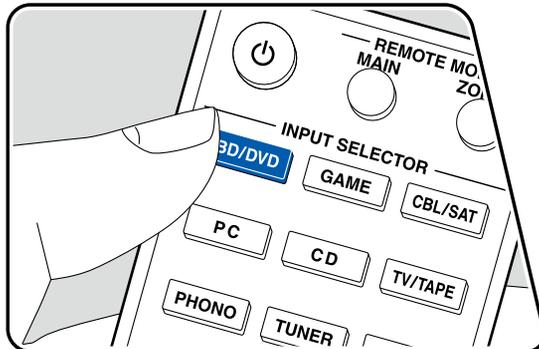
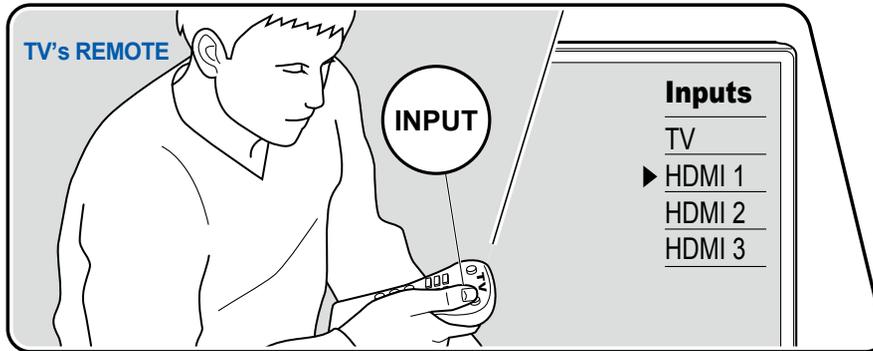
AV Component Playback	37
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AV Component Playback

You can play the audio from AV components, such as Blu-ray disc players through this unit.

- When a TV is connected to the HDMI OUT SUB jack, use the "AUDIO Menu" (→p97) to switch between MAIN and SUB.

Basic Operations

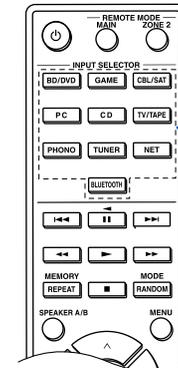


Perform the following procedure when this unit is on.

1. Switch the input on the TV to the input connected to the unit.
2. Press the input selector whose name is the same as that of the jack to which the player is connected.

For example, press BD/DVD to play the player connected to the BD/DVD jack. Press TV/TAPE to listen to the sound of the TV.

- When the CEC link function works, the input switches automatically when a CEC compliant TV or player is connected to this unit using HDMI connection.
3. Start play on the AV component.

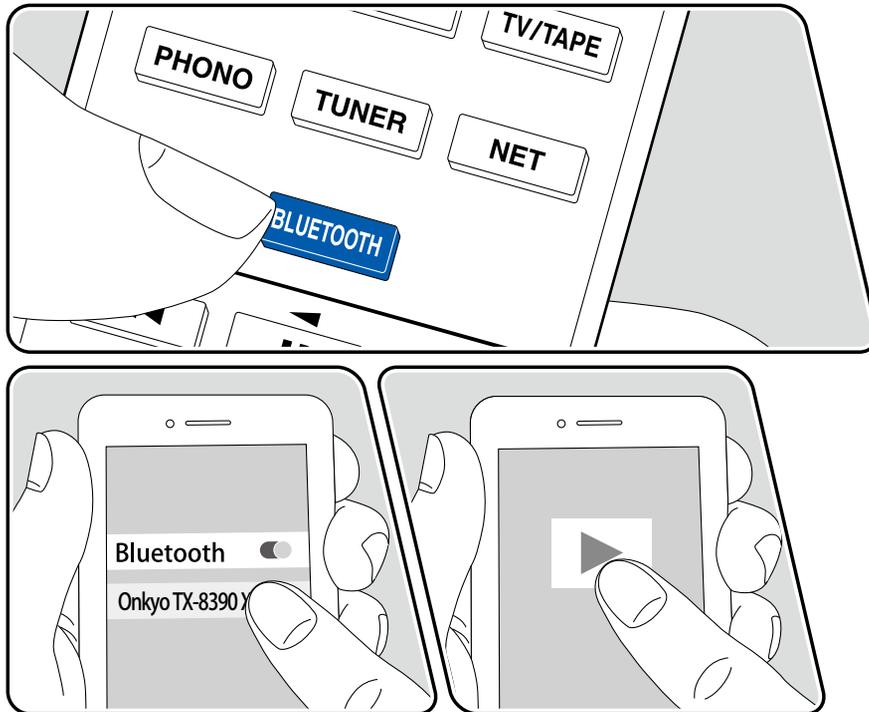


Input selector

BLUETOOTH® Playback

You can wirelessly play the audio on a BLUETOOTH-enabled device, such as a smartphone.

Basic Operations



Perform the following procedure when this unit is on.

Pairing

1. When you press the BLUETOOTH button, "Now Pairing..." appears on the display, and the pairing mode is enabled.

Now Pairing...

2. Enable (turn on) the BLUETOOTH function of the BLUETOOTH-enabled device, and then select this unit from among the devices displayed. If a password is requested, enter "0000".
 - This unit is displayed as "Onkyo TX-8390 XXXXXX". This display can be changed using the Friendly Name function (→p91) or Onkyo Controller (available on iOS or Android™).
 - To connect another BLUETOOTH wireless technology enabled device, press and hold BLUETOOTH until "Now Pairing..." is displayed, then perform step 2. This unit can store the pairing information of up to 8 paired devices.
 - The coverage area is approx. 48'/15 m. Note that connection is not always guaranteed with all BLUETOOTH-enabled devices.

Playing Back

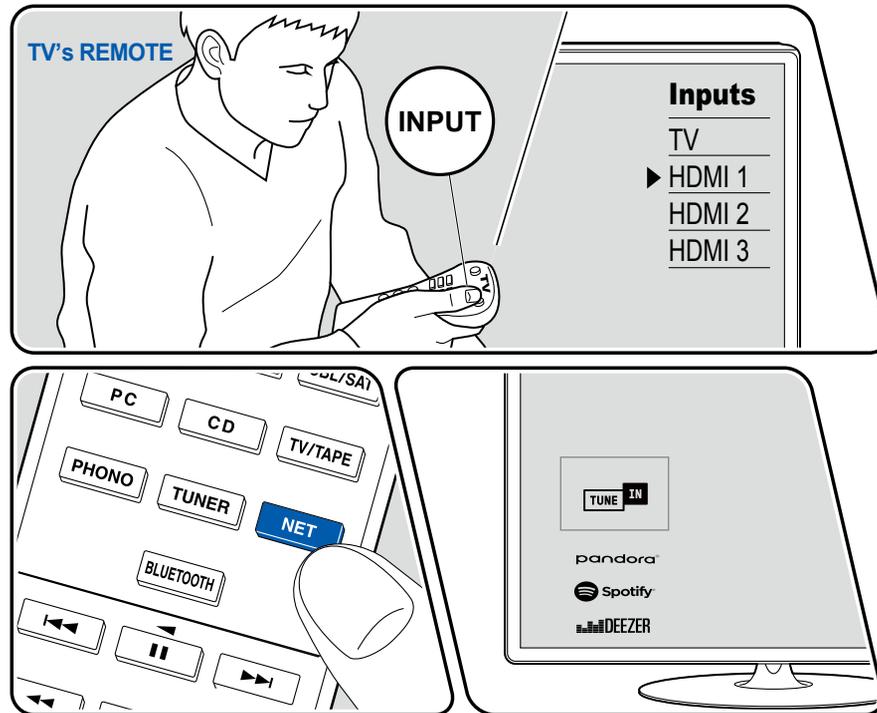
1. Perform the connection procedure on the BLUETOOTH-enabled device.
2. Playing the music file.
The input on this unit automatically switches to "BLUETOOTH".
Turn up the volume of the BLUETOOTH-enabled device to an appropriate level.
 - Due to the characteristics of BLUETOOTH wireless technology, the sound produced on this unit may slightly be behind the sound played on the BLUETOOTH-enabled device.

Internet Radio

By connecting this unit to an Internet-connected network, you can enjoy Internet radio services such as TuneIn Radio.

- To play Internet radio services, the network needs to be connected to the Internet.
- Depending on the Internet radio service, a user registration may be required on your PC beforehand. For details of each service, visit the website of each service.

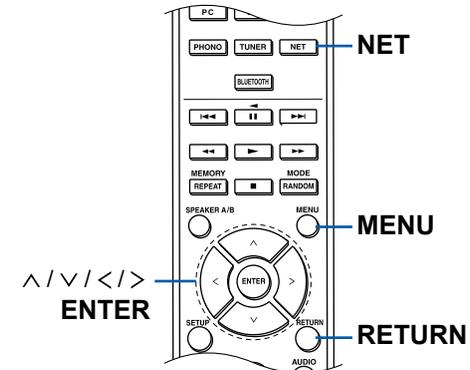
Playing Back



The illustration shows an image.

Perform the following procedure when this unit is on.

1. Switch the input on the TV to the input connected to the unit.
2. Pressing NET will display the Network Functions list screen on the TV.
3. Select your preferred Internet radio service using cursor, and press ENTER to confirm the selection.
4. Following the on-screen instructions, select a radio station and program using cursor, and then press ENTER to play.
 - To return to the previous screen, press RETURN.



Internet Radio Service Menu

You can bookmark specific stations, or delete stations that have been bookmarked. The displayed menu varies according to the service being selected. The menu icon  is displayed while a station is being played. When only this icon is displayed, pressing ENTER will display the menu on the screen (The operation is also available with MENU). When multiple icons are displayed, select the  icon with the cursor, and press ENTER.

Regarding the TuneIn Radio Account

If you create an account on the TuneIn Radio website (tunein.com), and log in it from this unit, your favorite radio stations or programs you have followed on the website are automatically added to your "My Presets" on this unit. "My Presets" is displayed on the next level in the hierarchical structure of TuneIn Radio. To display a radio station added to "My Presets", you need log into TuneIn Radio from the unit. To log in, select "Login" - "I have a TuneIn account" in the "TuneIn Radio" top list on the unit, and then enter your user name and password.

- If you select "Login" on this unit, a registration code is displayed. By using this code, you can associate the device on the My Page section of the TuneIn Radio website so that you can log in from "Login" - "Login with a registration code" without entering the user name and password.

Spotify



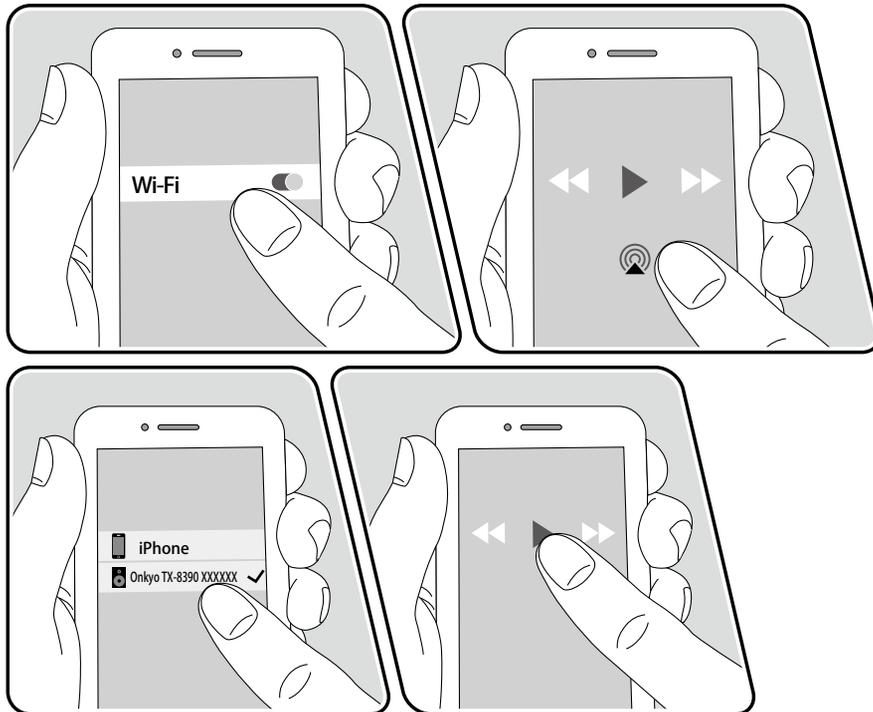
Use your phone, tablet or computer as a remote control for Spotify.
Go to spotify.com/connect to learn how.

AirPlay®

By connecting this unit to the same network as that of iOS devices such as iPhone®, iPod touch® and iPad®, you can enjoy music files on iOS devices wirelessly.

- Update the OS version on your iOS device to the latest version.
- Depending on the iOS version, operation screens or operation procedures on the iOS device may be different. For details, refer to the operating instructions for the iOS device.

Playing Back on This Unit

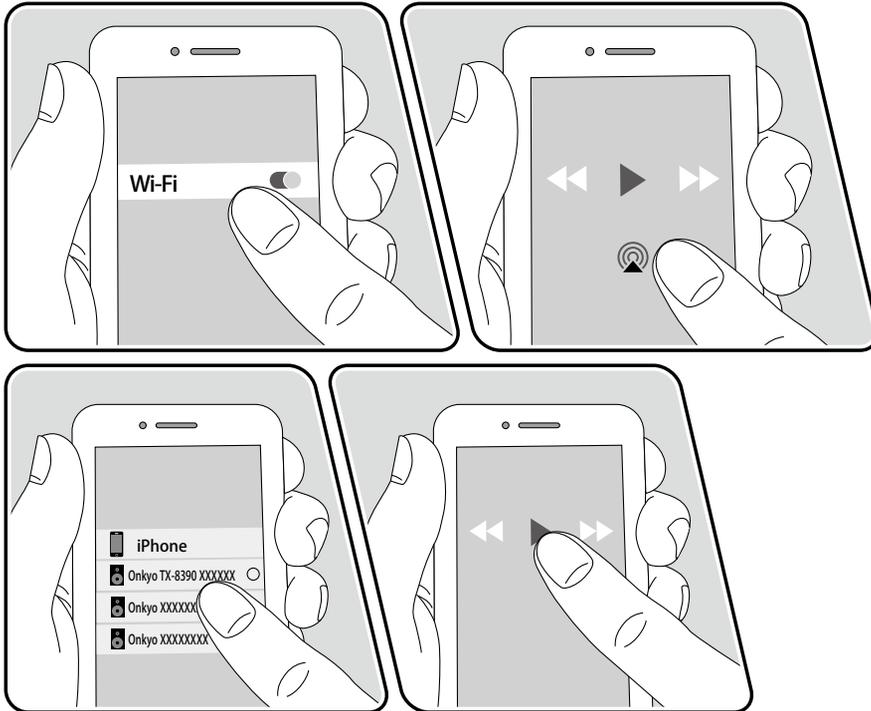


e.g., iOS 10

1. Connect the iOS device to the access point where this unit is connected via network.
2. Tap the AirPlay icon  in the play screen of the music app on an iOS device that supports Airplay and select this unit from the list of devices displayed.
3. Play the music file on the iOS device.
 - When "5. Hardware" - "Power Management" - "Network Standby" is set to "Off" in the Setup menu, turn this unit on manually, and press the NET button on the remote controller. In the factory default setting, the Network Standby function (→p94) is set to On.
 - Due to the characteristics of AirPlay wireless technology, the sound produced on this unit may slightly be behind the sound played on the AirPlay-enabled device.

You can also play the music files on a PC with iTunes (Ver. 10.2 or later) equipped. Confirm that this unit and the PC are connected to the same network beforehand. Then, press NET button on the remote controller. Next, click the AirPlay icon  in iTunes, select this unit from the displayed devices, and start play of a music file.

Playing Back on multiple devices (AirPlay2)



e.g., iOS 11.4

This unit supports AirPlay2. If the version of the iOS device is iOS11.4 or later, you can play the music of the iOS device on this unit and other devices that support AirPlay2.

1. Connect the iOS device to the access point where this unit is connected via network.
2. Tap the AirPlay icon  in the play screen of the music app on an iOS device that supports Airplay, and select this unit and AirPlay2-supported devices to play from the displayed devices.
 - AirPlay2-supported devices are displayed with white circle on the right side.
 - Multiple AirPlay2-supported devices can be selected.
 - The volume can be adjusted on individual devices.
3. Play the music file on the iOS device.
 - When "5. Hardware" - "Power Management" - "Network Standby" is set to "Off" in the Setup menu, turn this unit on manually, and press the NET button on the remote controller. In the factory default setting, the Network Standby function (→p94) is set to On.
 - Due to the characteristics of AirPlay wireless technology, the sound produced on this unit may slightly be behind the sound played on the AirPlay-enabled device.

You can also play the music files on a PC with iTunes (Ver. 12.8 or later) equipped. Confirm that this unit and the PC are connected to the same network beforehand. Then, press NET button on the remote controller. Next, click the AirPlay icon  in iTunes, select this unit and AirPlay2-supported devices to play from the displayed devices, and start play of a music file.

DTS Play-Fi®



<https://play-fi.com/>

When connecting this unit to the same network as mobile devices, such as a smartphone and tablet, you can enjoy music played on the mobile device wirelessly. Music from a streaming distribution service or music in the music library on a mobile device can be played. This function also supports a playlist on iTunes. Also, connecting multiple speakers supporting DTS Play-Fi on the same network will enable "Group playback" that plays the same music in separate rooms at home. To enjoy this function, download Onkyo Music Control App (available on iOS or Android™).



Playing Back

1. Download Onkyo Music Control App using your mobile device.
http://www.onkyo.com/playfi/app_o.html



2. Connect the mobile device to the network where this unit is connected.
 3. Starting up Onkyo Music Control App will automatically display compatible devices.
 4. Select this device from the compatible devices. Then, a list of applications such as a music streaming distribution service is displayed. Select the content to play, and perform operation according to the on-screen instructions.
- When "5. Hardware" - "Power Management" - "Network Standby" is set to "Off" in the Setup menu, turn this unit on manually, and press the NET button on the remote controller. In the factory default setting, the Network Standby function (→p94) is set to On.
 - For detailed operation and FAQ, visit the following URL.
http://www.onkyo.com/playfi/info_o.html
 - To use a music streaming distribution service, user registration may be required.
 - This unit does not support the following DTS Play-Fi functions.
 - Spotify
 - Wireless Surround Sound
 - Line In Rebroadcast
 - Internet Radio
 - Critical Listening
 - L/R Stereo Speaker Pairing
 - Some of the settings in the "Setup menu" cannot be changed on this unit. To change those settings, cancel the connection of this unit from the application.
 - Listening modes cannot be selected during playback.

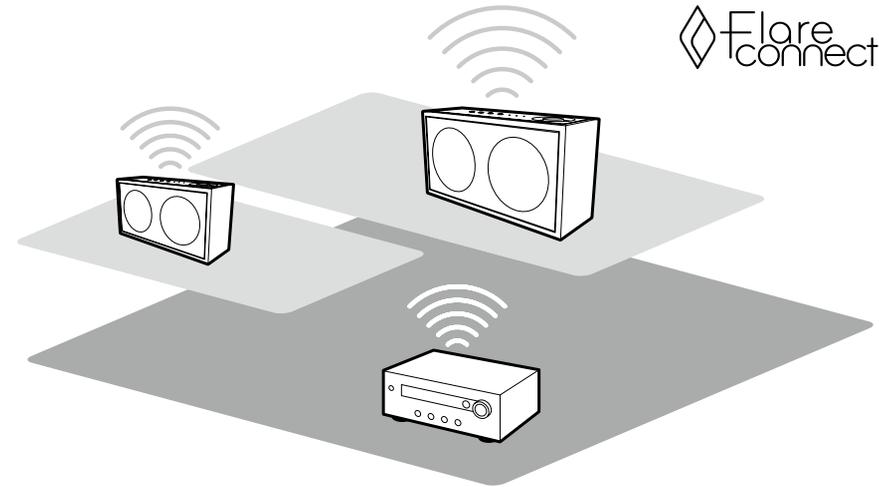
FlareConnect™



When downloading Onkyo Controller (available on iOS or Android™) to mobile devices, such as a smartphone and tablet, you can enjoy the group playback that plays the same music on multiple audio products supporting the FlareConnect function. You can play audio from external playback devices connected to each product, music from an Internet radio or network audio service such as a music streaming distribution service, and music in the music library on a mobile device.

Playing Back

1. Connect this unit and other devices supporting FlareConnect to the same network.
2. Download Onkyo Controller from App Store or Google Play™ Store.
3. Connect the mobile device to the network where this unit is connected.
4. Starting up Onkyo Controller will automatically recognize compatible devices.
5. Select the screen of the compatible device to operate, and tap the Group icon at the bottom of the screen.
6. Add a check mark for the audio product on which you want to play the same music.
7. Select the content to play, and operate according to the on-screen instructions.
 - When "5. Hardware" - "Power Management" - "Network Standby" is set to "Off" in the Setup menu, turn this unit on manually, and press the NET button on the remote controller. In the factory default setting, the Network Standby function (→p94) is set to On. For other devices, check their respective instruction manuals.



The illustration shows an image.

Playing MQA files



MQA and the Sound Wave Device are registered trade marks of MQA Limited. © 2016

MQA (Master Quality Authenticated) is an award-winning British technology that delivers the sound of the original master recording. The master MQA file is fully authenticated and is available to stream, download and on CD. Visit mqa.co.uk for more information.

Playing MQA files

To play MQA files on this unit, you can connect the USB storage device containing the MQA files to the USB port of this unit (→[p47](#)) or use the "Music Server" functionality (→[p50](#)) of this unit to play MQA files stored on an NAS or PC. Note that the "Music Server" feature does not support playback of WAV format MQA files. It can play FLAC format MQA files that are provided by music distribution services.

- To playback MQA-CD, download the MQA-CD music files and use the MQA Tag Renaming Application to manage files*. This application can examine files ripped from CD, determine whether they are MQA and build a sub-folder containing correctly formed MQA files. Files that are not MQA remain unchanged.

* The link to MQA Tag Renaming Application:

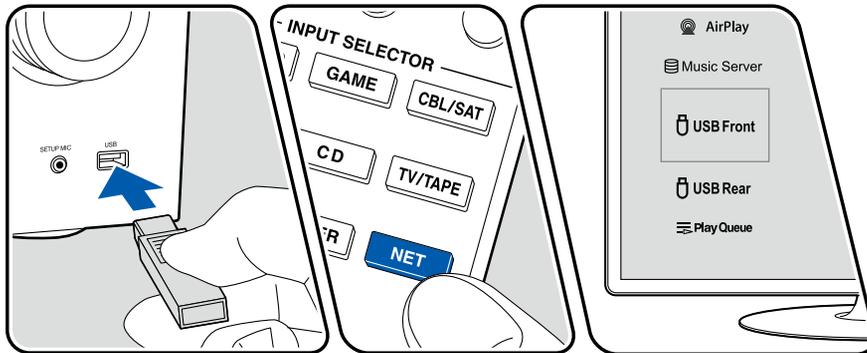
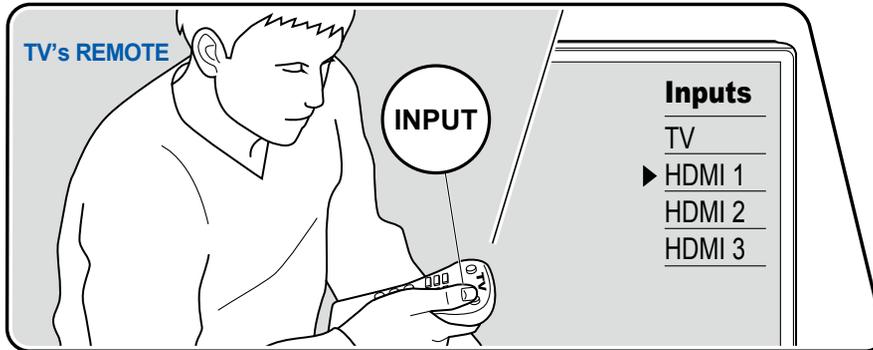
<https://www.mqa.co.uk/customer/tag435sdf43te>

- When you play MQA files, the listening mode automatically switches to Direct.
- There is no change to the sound if you try to adjust the sound quality with functions such as BASS or TREBLE while you are playing MQA files.
- MQA audio is not output from the ZONE 2 terminals.

USB Storage Device

You can play music files stored on a USB storage device.

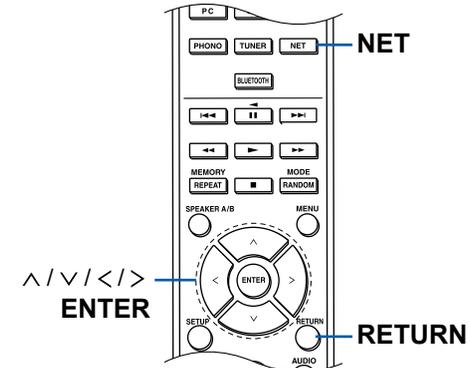
Basic Operations



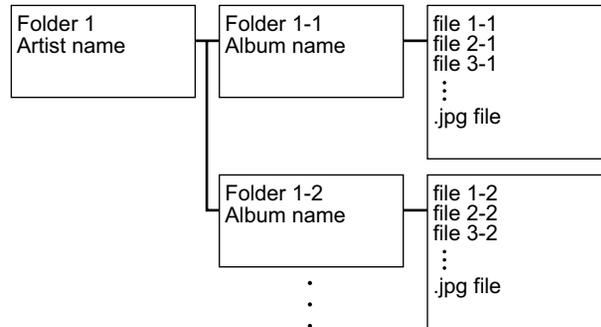
The illustration shows an image.

Perform the following procedure when this unit is on.

1. Switch the input on the TV to the input connected to the unit.
2. Plug your USB storage device with the music files into the USB port either on the front panel or rear panel of this unit.
3. Press NET to display the network service list screen.
4. Select "USB Front" or "USB Rear" with the cursors, and then press ENTER.
 - If the "USB" indicator blinks on the display, check whether the USB storage device is plugged in properly.
 - Do not unplug the USB storage device while "Connecting..." is being displayed on the display. This may cause data corruption or malfunction.
5. Press ENTER on the next screen again. The list of folders and music files on the USB storage device is displayed. Select the folder with the cursors, and press ENTER to confirm your selection.
6. Select the music file with the cursors, and then press ENTER to start playback.



- To return to the previous screen, press RETURN.
- To display an album title, artist name and album art of a file in WAV format, make the folder structure and file names as shown below when saving music files. The album art can be displayed by saving a .jpg file to display on the screen in the folder of bottom level. Note that a large volume of .jpg file may take time to be displayed, or may not be displayed.



- Characters that cannot be displayed on this unit appear with "*"
- The USB port of this unit complies with the USB 2.0 standard. The transfer speed may be insufficient for some content you play, and sound interruptions, etc. may occur.
- Note that operation is not always guaranteed for all USB storage devices.
- This unit can use USB storage devices that comply with the USB mass storage class standard. Also the format of USB storage devices supports FAT16 or FAT32 file system format.

□ **Device and Supported Format (→[p49](#))**

Device and Supported Format

USB Storage Device Requirements

- This unit can use USB storage devices that comply with the USB mass storage class standard.
- The format of USB storage devices supports FAT16 or FAT32 file system format.
- If the USB storage device has been partitioned, each section will be treated as an independent device.
- Up to 20,000 tracks per folder are supported, and folders can be nested up to 16 levels deep.
- USB hubs and USB storage devices with hub functions are not supported. Do not connect these devices to the unit.
- USB storage devices with security functions are not supported on this unit.
- If an AC adapter is supplied with the USB storage device, connect the AC adapter, and use it with a household outlet.
- Media inserted to the USB card reader may not be available in this function. Furthermore, depending on the USB storage device, proper reading of the contents may not be possible.
- In use of a USB storage device, our company accepts no responsibility whatsoever for the loss or modification of data stored on a USB storage device, or malfunction of the USB storage device. We recommend that you back up the data stored on a USB storage device before using it with this unit.

Supported Audio Formats

This unit supports the following music file formats. Note that sound files that are protected by copyright cannot be played on this unit.

MP3 (.mp3/.MP3):

- Supported formats: MPEG-1/MPEG-2 Audio Layer 3
- Supported sampling rates: 44.1 kHz, 48 kHz
- Supported bitrates: Between 8 kbps and 320 kbps, and VBR

WMA (.wma/.WMA):

- Supported sampling rates: 44.1 kHz, 48 kHz
- Supported bitrates: Between 5 kbps and 320 kbps, and VBR
- WMA Pro/Voice/WMA Lossless formats are not supported.

WAV (.wav/.WAV):

WAV files contain uncompressed PCM digital audio.

- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

AIFF (.aiff/.aif/.AIFF/.AIF):

AIFF files contain uncompressed PCM digital audio.

- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

AAC (.aac/.m4a/.mp4/.3gp/.3g2/.AAC/.M4A/.MP4/.3GP/.3G2):

- Supported formats: MPEG-2/MPEG-4 Audio
- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
- Supported bitrates: Between 8 kbps and 320 kbps, and VBR

FLAC (.flac/.FLAC):

- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

Apple Lossless (.m4a/.mp4/.M4A/.MP4):

- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Quantization bit: 16 bit, 24 bit

DSD (.dsf/.dff/.DSF/.DFF):

- Supported formats: DSF/DSDIFF
- Supported sampling rates: 2.8 MHz, 5.6 MHz, 11.2 MHz
- When playing files recorded with VBR (Variable bit-rate), the playback time may not be displayed correctly.
- This unit supports the gapless playback of the USB storage device in the following conditions.

When continuously playing WAV, FLAC and Apple Lossless files with the same format, sampling frequency, the number of channels and quantization bit rate.

Playing back files on a PC and NAS (Music Server)

Streaming play of music files stored on PCs or NAS devices connected to the same network as this unit is supported.

- The network servers supported by this unit are PCs that incorporate players equipped with the server functions such as Windows Media® Player 11 or 12, or NASes supporting the home network function. When using Windows Media® Player 11 or 12, you need to make the settings beforehand. Note that with PCs, only music files registered in the library of Windows Media® Player can be played.

Windows Media® Player settings

On Windows Media® Player11

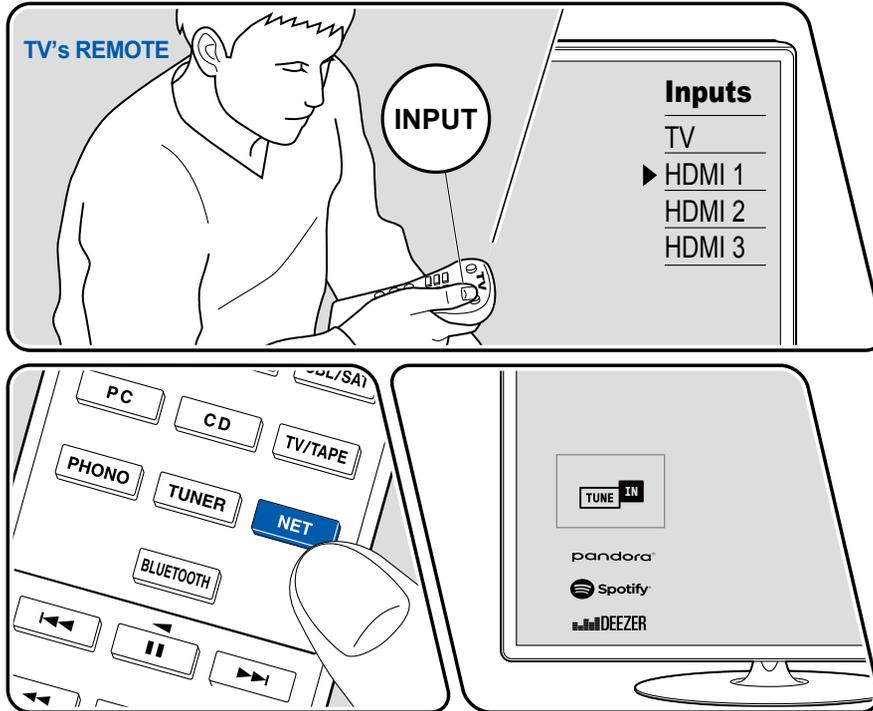
1. Turn on your PC, and start Windows Media® Player 11.
2. In the "Library" menu, select "Media Sharing" to display a dialog box.
3. Select the "Share my media" check box, and then click "OK" to display the compatible devices.
4. Select this unit, and then click "Allow".
 - When it is clicked, the corresponding icon is checked.
5. Click "OK" to close the dialog.
 - Depending on the version of Windows Media® Player, the names of items to select may differ from the above description.

On Windows Media® Player12

1. Turn on your PC, and start Windows Media® Player 12.
2. In the "Stream" menu, select "Turn on media streaming" to display a dialog box.
 - If the media streaming is already turned on, select "More streaming options..." in the "Stream" menu to display the list of playback devices in the network, and then go to step 4.
3. Click "Turn on media streaming" to display the list of playback devices in the network.
4. Select this unit in "Media streaming options" and check that it is set to "Allow".
5. Click "OK" to close the dialog.
 - Depending on the version of Windows Media® Player, the names of items to select may differ from the above description.

□ **Playing Back** (→[p51](#))

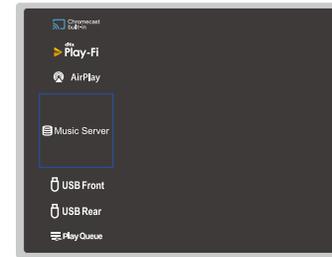
Playing Back



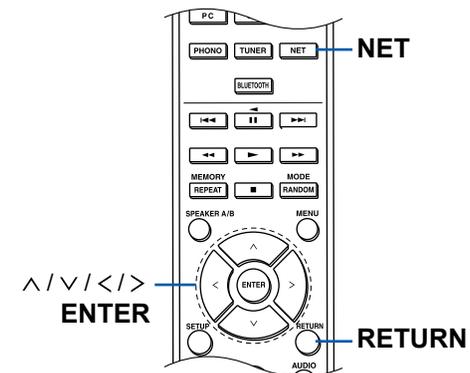
The illustration shows an image.

Perform the following procedure when this unit is on.

1. Switch the input on the TV to the input connected to the unit.
2. Start the server (Windows Media® Player 11, Windows Media® Player 12, or NAS device) containing the music files to play.
3. Make sure that the PC or NAS is properly connected to the same network as this unit.
4. Press NET to display the network service list screen.
 - If the "NET" indicator on the display blinks, the unit is not properly connected to the network. Check the connection.



5. With the cursors, select "Music Server", and then press ENTER.



6. Select the target server with the cursors, and press ENTER to display the items list screen.
 - This unit cannot access pictures and videos stored on servers.
 - Depending on the server sharing settings, contents stored on the server may not be displayed.
7. With the cursors, select the music file to play, and then press ENTER to start playback.
 - If "No Item" is displayed on the screen, check whether the network is properly connected.
 - To return to the previous screen, press RETURN.
 - For music files on a server, up to 20,000 tracks per folder are supported, and folders can be nested up to 16 levels deep.
 - Depending on the type of media server, the unit may not recognize it, or may not be able to play its music files.

Searching music files to select

If the server you use supports search functions, the following search function can be used.

Perform the following procedure with available servers displayed using Music Server.

1. With \wedge / \vee , select the server containing music files you want to play, and press ENTER.
2. With \wedge / \vee , select the Search folder, and press ENTER. The Search folder contains the following three folders.
 - "Search by Artist": Select this when searching by artist name.
 - "Search by Album": Select this when searching by album title.
 - "Search by Track": Select this when searching by track title.
3. With \wedge / \vee , select the folder, and press ENTER.
4. Input a character string to search for, and press ENTER. Then, the search result is displayed.
5. With \wedge / \vee , select the music files to play, and press ENTER.

Controlling Remote Playback from a PC

You can use this unit to play music files stored on your PC by operating the PC in your home network. The unit supports remote playback via Windows Media® Player 12. To use the remote playback function of this unit with Windows Media®

Player 12, it must be configured beforehand.

Setting PC

1. Turn on your PC, and start Windows Media® Player 12.
2. In the "Stream" menu, select "Turn on media streaming" to display a dialog box.
 - If the media streaming is already turned on, select "More streaming options..." in the "Stream" menu to display the list of playback devices in the network, and then go to step 4.
3. Click "Turn on media streaming" to display the list of playback devices in the network.
4. Select this unit in "Media streaming options" and check that it is set to "Allow".
5. Click "OK" to close the dialog box.
6. Open the "Stream" menu and confirm that "Allow remote control of my Player..." is checked.
 - Depending on the version of Windows Media® Player, the names of items to select may differ from the above description.

Remote playback

1. Turn on the power of the unit.
2. Turn on your PC, and start Windows Media® Player 12.
3. Select and right-click the music file to play with Windows Media® Player 12.
 - To remotely play a music file on another server, open the target server from "Other Libraries", and select the music file to play.
4. Select this unit in "Play to" to open the "Play to" window of Windows Media® Player 12, and start playback on this unit.
 - If your PC is running on Windows® 8.1, click "Play to", and select this unit. If your PC is running on Windows® 10, click "Cast to Device", and select this unit. Operations during remote playback are possible from the "Play to" window on the PC. The playback screen is displayed on the HDMI-connected TV.
5. Adjust the volume using the volume bar on the "Play to" window.
 - Sometimes, the volume displayed on the remote playback window may differ from the volume displayed on the display of this unit.
 - When the volume is changed on this unit, the value is not reflected in the "Play to" window.
 - This unit cannot play music files remotely in the following conditions.
 - It is using a network service.

- It is playing a music file on a USB storage device.
- Depending on the version of Windows Media® Player, the names of items to select may differ from the above description.

□ **Supported Audio Formats (→[p54](#))**

Supported Audio Formats

This unit supports the following music file formats. Remote play of FLAC and DSD is not supported.

MP3 (.mp3/.MP3):

- Supported formats: MPEG-1/MPEG-2 Audio Layer 3
- Supported sampling rates: 44.1 kHz, 48 kHz
- Supported bitrates: Between 8 kbps and 320 kbps, and VBR

WMA (.wma/.WMA):

- Supported sampling rates: 44.1 kHz, 48 kHz
- Supported bitrates: Between 5 kbps and 320 kbps, and VBR
- WMA Pro/Voice/WMA Lossless formats are not supported.

WAV (.wav/.WAV):

WAV files contain uncompressed PCM digital audio.

Playback of WAV format MQA files is not supported.

- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

AIFF (.aiff/.aif/.AIFF/.AIF):

AIFF files contain uncompressed PCM digital audio.

- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

AAC (.aac/.m4a/.mp4/.3gp/.3g2/.AAC/.M4A/.MP4/.3GP/.3G2):

- Supported formats: MPEG-2/MPEG-4 Audio
- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
- Supported bitrates: Between 8 kbps and 320 kbps, and VBR

FLAC (.flac/.FLAC):

- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

LPCM (Linear PCM):

- Supported sampling rates: 44.1 kHz, 48 kHz
- Quantization bit: 16 bit

Apple Lossless (.m4a/.mp4/.M4A/.MP4):

- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
- Quantization bit: 16 bit, 24 bit

DSD (.dsf/.dff/.DSF/.DFF):

- Supported formats: DSF/DSDIFF
- Supported sampling rates: 2.8 MHz, 5.6 MHz, 11.2 MHz
- When playing files recorded with VBR (Variable bit-rate), the playback time may not be displayed correctly.
- Remote playback does not support the gapless playback.

Play Queue



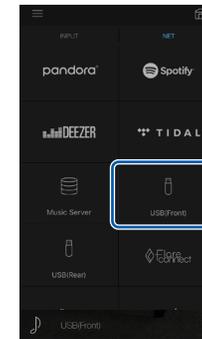
When downloading Onkyo Controller (available on iOS or Android™) to mobile devices, such as a smartphone and tablet, you can save your favorite playlist (Play Queue information) among music files stored in the USB storage device connected to this unit and music files stored in PC or NAS connected to the same network as this unit, and you can play the music on the playlist. The Play Queue information is effective until the power cord of this unit is removed from the outlet.

Initial Setup

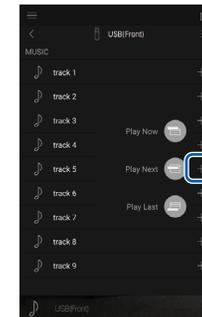
1. Connect this unit to your home network by the network settings on this unit.
2. Download Onkyo Controller from App Store or Google Play™ Store.
3. Connect the mobile device to the network where this unit is connected.
4. Start up Onkyo Controller, and select this unit

Adding Play Queue Information

1. Select the "INPUT" input on the application screen, and tap the "USB" icon. Or, select the "NET" input, and tap the "USB" icon or "Music Server" icon. (Depending on the model, the icon names may be different.)



2. Tapping the "+" icon of the track you want to add will open the pop-up to add the Play Queue information.

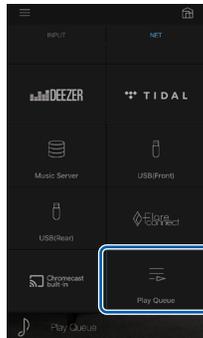


3. Touch the "Play Now" (⏮️), "Play Next" (⏭️) or "Play Last" (⏮️) icon to add the track to Play Queue.

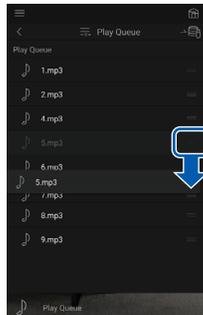
- If there are no tracks on the Play Queue list, only "Play Now" is displayed.

Sort and Delete

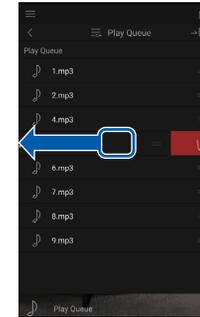
1. Select the "NET" input, tap the "Play Queue" icon, and enter the Play Queue service screen.



2. Tap the "≡" icon of the track to sort, and drag the icon to the destination.



3. To delete a track, slide the track to the left until the trash icon changes to "🗑️". If the device is on iOS, slide the "≡" icon to the left. Releasing your finger will delete the track from Play Queue.



Playing Back

Playback starts when you select "Play Now" for Play Queue addition, or select the track in the Play Queue service screen.

Amazon Music



Registering this unit with Amazon Music allows you to enjoy the music distribution service provided by Amazon. You can register this unit on the screen of Onkyo Controller by downloading Onkyo Controller (available on iOS or Android™) to mobile devices such as a smartphone and tablet.

- To play Amazon Music, you need to have your Amazon account and sign up for Amazon Prime or Amazon Music Unlimited. For more information, see the Amazon website.

Amazon Music is now available in several countries. If Amazon Music is not available in your country, please visit <https://music.amazon.com/> for more info.

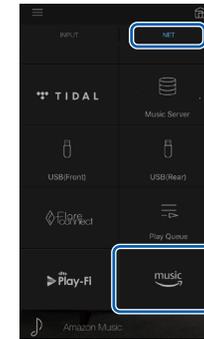


Registering This Unit with Amazon Music

- You can register this unit with Amazon Music using Onkyo Controller. The registration cannot be performed by operation of this unit.
1. Connect this unit to your home network by the network settings on this unit.
 2. Download Onkyo Controller using your mobile device.
 3. Connect the mobile device to the network where this unit is connected.
 4. Start up Onkyo Controller to automatically display this unit. Tap and select this unit displayed.
 5. Tap "NET" or "NETWORK" on the upper part of the Onkyo Controller's screen

to switch to the network menu. Then tap the "Amazon Music" icon to display the login screen of Amazon Music. (Depending on the model, the icon names may be different.)

- If the login screen is not displayed but an update or installation screen is displayed instead, perform the update or installation according to the onscreen instructions.



Available services may differ depending on your area.

6. Enter the Amazon account information such as email address and password to log in to Amazon. When the login is successful and this unit is registered, the Amazon Music menu is displayed.
- For playback, proceed to step 3 in the next section.

Playing Amazon Music

1. Start up Onkyo Controller. This unit is automatically displayed after startup. Then, tap and select this unit displayed.
2. Tap "NET" or "NETWORK" on the upper part of the screen to switch to the network screen. Then tap the "Amazon Music" icon.
3. Select the content to play from the menu screen of Amazon Music to start playback.
 - To play Amazon Music using the remote controller, operate the input

selector on the remote controller to display the network menu, and select "Amazon Music" from the menu.

Connecting the Sonos System for Playback

Connecting this unit and Sonos Connect allows you to send the music or music sources on the Sonos App to this unit. Through Sonos Connect, you can play this unit with the same group of another Sonos device on the network or can play only on this unit. Also, if you start to play music from Sonos App, this unit is automatically turned on and the link function to switch input works.

- When "5. Hardware" - "Power Management" - "Network Standby" is set to "Off" in the Setup menu, turn this unit on manually, and press the NET button on the remote controller. In the factory default setting, the Network Standby function (→p94) is set to On.

Necessary Equipment

- Sonos Connect
- RCA audio cable (supplied with Sonos Connect)

How to Connect This Unit and Sonos Connect

1. Connect the Sonos Connect to the AUDIO IN jack of this unit with the RCA audio cable supplied with the Sonos Connect. Any input jacks other than the PHONO jack can be used.
 - A digital cable can also be connected. For details, refer to the instruction manual of Sonos.
 - You can change the name of the input selector displayed on this unit to easier-to-understand name. For example, the input connected to Sonos Connect can be changed from "CD" (or another input selector) to "SONOS". Press the SETUP button on the remote controller, select "4. Source" - "Name Edit" and then change the name.

Setting Up

A setup is required to play Sonos on this unit. Make the setting according to the following procedure.

1. Press the SETUP button on the remote controller, select "5. Hardware" - "Works with SONOS", and press the ENTER button.
2. Select the following items with the cursors \wedge / \vee and set each item.

Input Selector:

Enable the interlocking function with the Sonos Connect. With the cursors $</>$, select the input selector to which the Sonos Connect is connected.

Connected Device:

Press the ENTER button to display Sonos devices connected to the same network as the network of this unit. Select the Sonos Connect connected to the unit and press the ENTER button.

- Products (e.g. Play:3 unequipped with an output terminal) other than the Sonos Connect are also displayed in the device list and selectable. In that case, when playback on the Sonos side starts, the input is switched, however, audio is not output. Select the room name of the connected Sonos Connect.
- Up to 32 devices can be displayed on the Sonos product list screen. If you cannot find the Sonos Connect to be interlocked, return to the previous screen, turn off the product you do not interlock, and try again.

Output Zone:

With the cursors $</>$, select the ZONE where you want to listen to the music.

"MAIN": Outputs audio only to the main room (where this unit is located).

"Zone 2": Outputs audio only to the separate room (ZONE 2).

"Main/Zone 2": Outputs audio to both the main room and separate room.

Preset Volume:

You can set the volume that Sonos Connect will be played at in the main room (where this unit is located) beforehand. Select a value from "Last" (Volume level before entering standby mode), "Min", "0.5" to "99.5" and "Max".

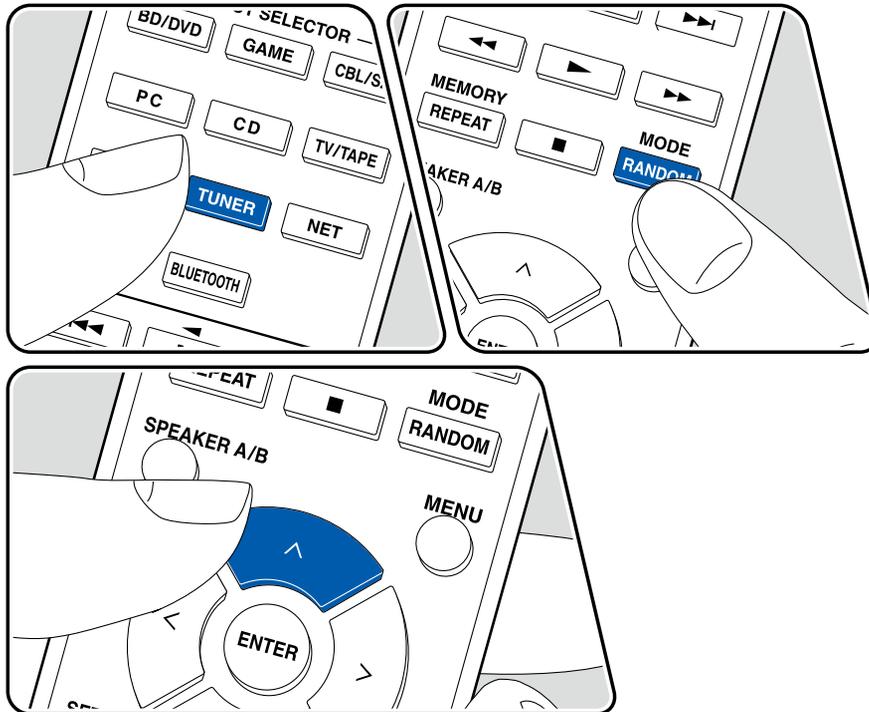
Playing Sonos on This Unit

1. Select desired tracks using Sonos App and send the tracks to the room where this unit is located (or to the group). It is recommended to give an easy-to-remember name to the combination of this unit and Sonos Connect, such as TV Room or Living Room where this unit is located.
 - If the input selector of this unit is not automatically switched even after the start of music playback, stop the playback once and start again.

Listening To the Radio

You can receive AM (North American models)/FM/DAB (European models) radio stations on this unit with the built-in tuner.

Listening To the AM/FM Radio (AM: North American models only)



Tuning into a Radio Station

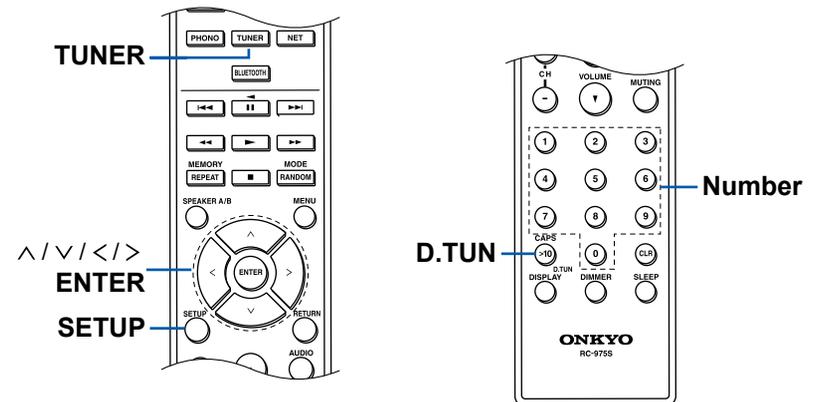
Perform the following procedure when this unit is on.

■ Tuning Automatically

1. Press TUNER repeatedly to select either "AM" or "FM".
2. Press MODE repeatedly to display "TunMode: Auto".

TunMode# Auto

3. When you press the cursors \wedge / \vee , automatic tuning starts, and searching stops when a station is found. When tuned in to a radio station, the "TUNED" indicator on the display lights up. When tuned in to an FM radio station, the "FM ST" indicator lights up.



When FM broadcasts reception is poor: Perform the procedure for "Tuning Manually" (→p62). Note that if you tune manually, the reception for FM broadcasts will be monaural rather than stereo, irrespective of the sensitivity of the reception.

■ Tuning Manually

Note that if you tune manually, the reception for FM broadcasts will be monaural rather than stereo, irrespective of the sensitivity of the reception.

1. Press TUNER repeatedly to select either "AM" or "FM".
2. Press MODE repeatedly to display "TunMode: Manual" on the display.

TunMode:Manual

3. While pressing the cursors \wedge / \vee , select the desired radio station.
 - Each time you press the cursors \wedge / \vee , the frequency changes by 1 step. If the button is held down, the frequency changes continuously, and if the button is released, the frequency stops changing.

■ Tuning into stations by frequency

It allows you to directly enter the frequency of the radio station you want to listen to.

1. Press TUNER repeatedly to select either "AM" or "FM".
2. Press D.TUN.
3. Using the number buttons, enter the frequency of the radio station within 8 seconds.
 - To enter 87.5 (FM), for example, press 8, 7, 5 or 8, 7, 5, 0. If the entered number is incorrect, press the D.TUN again and re-enter the number.

■ Frequency step setting (North American models)

Press SETUP, and using the cursors and ENTER, select "7. Miscellaneous" - "Tuner" - "AM/FM Frequency Step", and select the frequency step for your region. Note that when this setting is changed, all radio presets (→p66) are deleted.

Using RDS (European models)

RDS stands for Radio Data System, and is a method of transmitting data in FM radio signals. In regions where RDS can be used, when you tune in to a radio station broadcasting program information, the radio station name is displayed on the display. When you press the DISPLAY button on the remote controller in this state, you can use the following functions.

■ Display Text Information (Radio Text)

1. While the name of the station is being displayed on the display, press the DISPLAY button on the remote controller once.
 - The Radio Text (RT), which is text information delivered by the station, is displayed scrolling across the display. "No Text Data" is displayed when no text information is delivered.

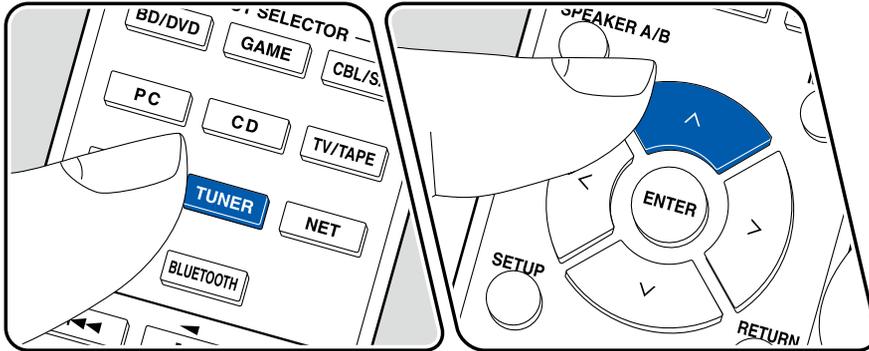
■ Search for Stations by Program Type

1. While the name of the station is being displayed on the display, press the DISPLAY button on the remote controller twice.
 - If none of the Program Types are set for the radio station under reception, "None" is displayed.
2. Press the cursor buttons \langle / \rangle on the remote controller to select the ProgramType you want to search for, and then press the ENTER button to start the search.
 - The Program Types displayed are as follows: None / News (News reports) / Affairs (Current affairs) / Info (Information) / Sport / Educate (Education) / Drama / Culture / Science (Science and technology) / Varied / Pop M (Pop music) / Rock M (Rock music) / Easy M (Middle of the road music) / Light M (Light classics) / Classics (Serious classics) / Other M (Other music) / Weather / Finance / Children (Children's programmes) / Social (Social affairs) / Religion / Phone In / Travel / Leisure / Jazz (Jazz music) / Country (Country music) / Nation M (National music) / Oldies (Oldies music) / Folk M (Folk music) / Document (Documentary)
 - The information displayed may not match the content delivered by the station.
3. When a station is found, the station blinks on the display. Pressing the ENTER button in this state will receive that station. If you don't press the ENTER button, the unit starts to search for another station.

- If no stations are found, the message "Not Found" is displayed.
- Unusual characters may be displayed when the unit receives unsupported characters. This is not a malfunction. Also, if the signal from a station is weak, information may not be displayed.

□ Presetting a Radio Station (→[p66](#))

Listening to DAB Digital Radio (European models only)



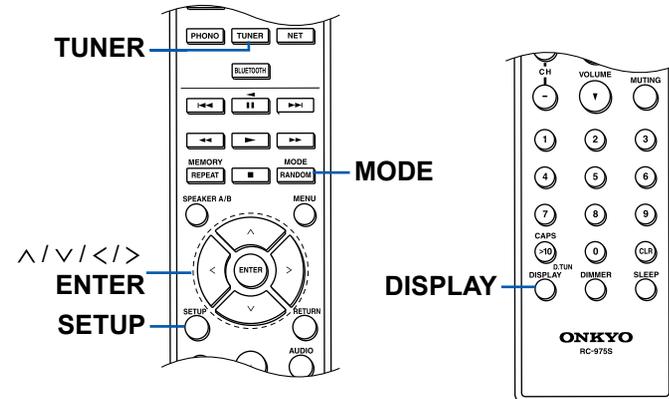
Tuning into a Radio Station

Perform the following procedure when this unit is on.

1. Press TUNER repeatedly to select "DAB".
 - The very first time you select DAB, the Auto Tuning function automatically scans the DAB Band 3 for the multiplexes (i.e., stations) available in your area. Once the scanning process is complete, the first station that was detected is selected.

Scan# 100%

2. Select the desired radio station with \wedge / \vee .
 - If a new DAB station is introduced, or you move to a new area, press SETUP, then use the cursors and ENTER button to run the "DAB Auto Scan" in "7. Miscellaneous" - "Tuner".



■ Changing the order stations are displayed

You can sort the available stations alphabetically or by multiplex.

1. Press MODE repeatedly to set the method for sorting the display order from the following.

Alphabet (default setting) : Sort stations alphabetically.

Multiplex : Sort stations by multiplex.

■ Displaying DAB Radio Information

1. Press the DISPLAY repeatedly to display more information about the selected DAB station.

DLS (Dynamic Label Segment) : When tuned to a station that's broadcasting DLS text data, the text will scroll across the display.

Program Type : Displays the type of program.

Bit Rate and Audio Mode : Displays the station's bit rate and audio mode (Stereo, Mono).

Quality : Displays the signal quality.

0 - 59: Poor reception

60 - 79: Good reception

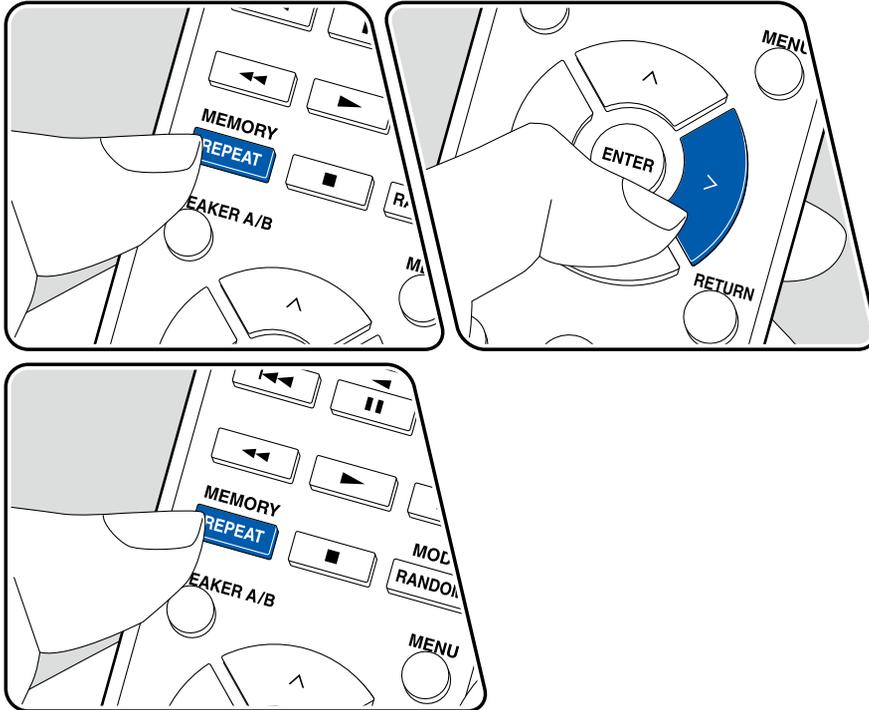
80 - 100: Excellent reception

Multiplex Name : Displays the name of the current multiplex.

Multiplex Number and Frequency :

Displays the number and frequency of the current multiplex.

Presetting a Radio Station



■ Registration Procedure

You can preset up to 40* of your favorite radio stations.

*North American models: AM and FM stations

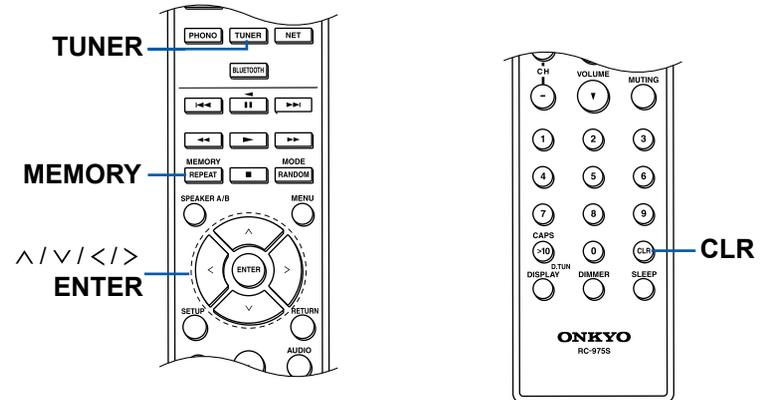
European models: FM and DAB stations

After tuning in to the radio station you want to register, perform the following procedure.

1. Press MEMORY so that the preset number on the display blinks.

FM 87.5 MHz |

2. While the preset number is blinking (approx. 8 seconds), repeatedly press the cursors </> to select a number between 1 and 40.
 3. Press MEMORY again to register the station.
- When the station is registered, the preset number stops blinking. Repeat this steps to register your favorite radio stations.



■ Selecting a Preset Radio Station

1. Press TUNER.
2. Press the cursors < / > to select a preset number.

■ Deleting a Preset Radio Station

1. Press TUNER.
2. Press the cursors < / > to select the preset number to delete.
3. After pressing MEMORY, press CLR while the preset number is blinking, and delete the preset number. When deleted, the number on the display disappears.

Multi-zone

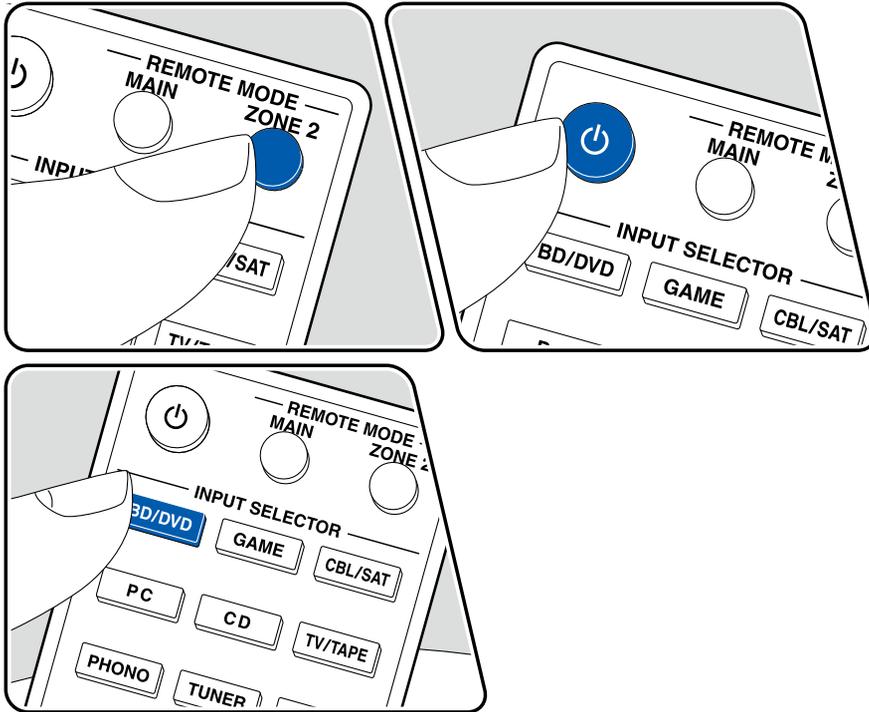
You can enjoy 2-ch audio in the separate room (ZONE 2) while performing playback in the main room (where this unit is located). The same source can be played back in the main room and ZONE 2 simultaneously. Also, different sources can be played back in both rooms. For the "NET" or "BLUETOOTH" input selector, you can select only the same source for the main room and separate room. If you select "NET" in the main room and then select "BLUETOOTH" in the separate room, the main room setting switches to "BLUETOOTH". You cannot select different stations of DAB (European models)/AM (North American models)/FM broadcasts for the main room and separate room.

Using Onkyo Controller is convenient for operations of multi-zone playback. You can use it on mobile devices, such as a smartphone and tablet to which Onkyo Controller (available on iOS or Android™) has been downloaded.



□ **Playing Back** (→ [p69](#))

Playing Back



When operating with the remote controller, perform the following procedure when the unit is on.

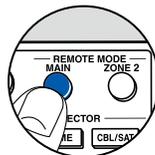
1. Press REMOTE MODE ZONE 2.
 - The remote controller switches to the mode for controlling ZONE 2.
2. Face the remote controller at this unit and press \odot . On the main unit, after pressing ZONE 2, within 8 seconds turn the INPUT SELECTOR dial to select the input to be played in the separate room. To play the same source in the main room and separate room, press ZONE 2 on the main unit twice.
 - "Z2" on the display of the main unit lights up.



3. Adjust the volume on the pre-main amplifier for the separate room.
 - If you turn the unit to standby during multi-zone playback, the Z2 indicator is dimmed, and the playback mode is switched to playback in a separate room only. Setting ZONE 2 to on while the unit is in standby also switches the playback mode to playback in the separate room only.
 - The audio from externally connected AV components can be output to ZONE 2 only when the audio is analog or 2ch PCM signal. When the AV component is connected to this unit with an HDMI cable, digital coaxial cable or digital optical cable, change the audio output of the AV component to the PCM output.
 - When video and audio via HDMI input are output to ZONE 2, set "1. Input/Output Assign" - "TV Out / OSD" - "Zone 2 HDMI" ([→p81](#)) to "Use" on the Setup menu.
 - DSD audio signals cannot be output to ZONE 2 with the "NET" input selector.
 - If ZONE 2 is on, power consumption during standby will increase.
 - If ZONE 2 is turned on when the Pure Audio listening mode is selected in the main room, the mode will automatically switch to the Direct listening mode.

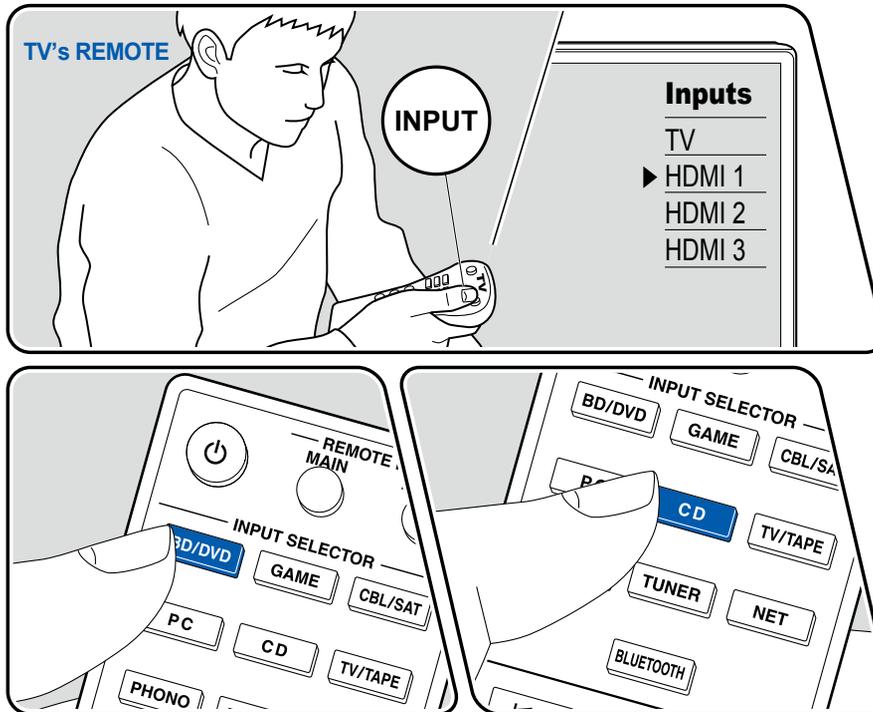
To turn off the function: Press the \odot button while the remote controller is in the mode for controlling ZONE 2. Alternatively press OFF on the main unit.

To return the remote controller to main room control mode:
Press REMOTE MODE MAIN on the remote controller.



Convenience functions

Displaying Your Favorite Video on TV While Playing Music

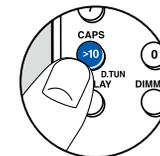


While listening to the music from a CD or BLUETOOTH-enabled device, you can display video on TV from an AV component such as a Blu-ray Disc player.

- For audio playback, you can select an input selector to which video input is not assigned, such as "CD", "PHONO", "TUNER", "NET" and "BLUETOOTH".
- When "OSD Language" (→p81) is set to Chinese, the audio from "NET" and "BLUETOOTH" cannot be played.

Perform the following procedure when this unit is on.

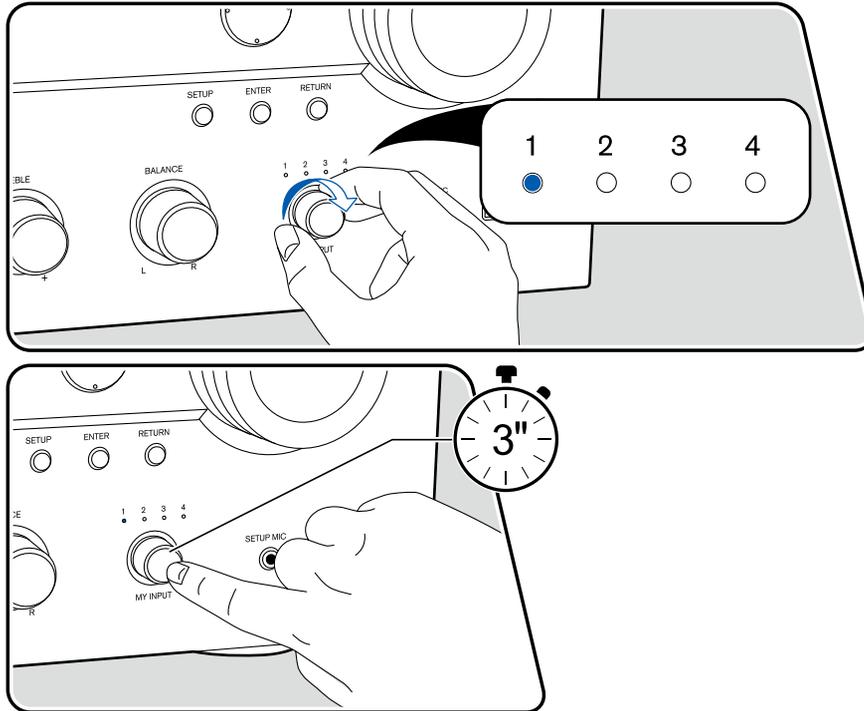
1. Switch the input on the TV to the input connected to the unit.
2. Press an input selector such as BD/DVD button connected to the AV component of which the video is to be displayed on TV.
 - This operation is not necessary if the same input selector has been selected in the previous operation.
3. Press an input selector of the audio you want to play, such as the CD or BLUETOOTH button and perform playback operation.
4. Perform the playback operation of the AV component such as a Blu-ray Disc player. To play the audio of NET or BLUETOOTH, the following step 5 operation is required.
5. To play the audio of NET or BLUETOOTH, press the CAPS button to switch the TV display from the NET or BLUETOOTH playback screen to the video of the AV component. Pressing the CAPS button again will return to the NET or BLUETOOTH playback screen.



- When the TV display is switched to the video of the AV component, the playback screen of NET or BLUETOOTH is displayed on the corner of the screen as Mini Player. The setting for Mini Player can be changed on the Setup Menu so that it automatically turns off in 30 seconds after displayed. (→p82 "Mini Player OSD")

Setting the video source to be displayed on TV beforehand: When playing the audio of "TUNER", "NET" and "BLUETOOTH", you can set the input selector to be displayed on TV beforehand using "Video Select" (→[p88](#)) on the Setup Menu. If a value other than "Last" is set, step 2 in the operation procedure is not required.

Using MY INPUT



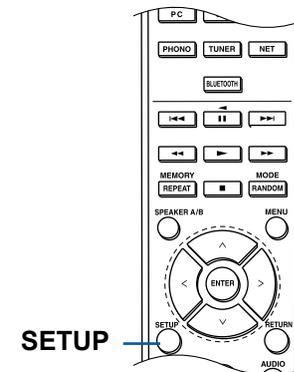
Registration

You can register a variety of settings (→p74), such as the current input selection or listening mode, in the 4 MY INPUT presets, and then recall these easily with the MY INPUT dial.

For example: Turn the MY INPUT dial to select a preset number, and then press the dial to automatically switch input to "TUNER" and start receiving the registered station. Also, the listening mode and volume level are switched as registered.

Perform the following steps in the state of the setting to register.

1. Turn the MY INPUT dial and to light one of the indicators 1 to 4.
2. Press and hold the MY INPUT dial.
3. "Preset Written" appears on the display, and the setting is registered. If registration has already been made, the registered setting is overwritten.



Settings that can be registered

The following settings can be registered with MY INPUT.

- Input selector (Network service or DAB (European models)/AM (North American models)/FM radio stations can also be registered.)
- Listening mode
- Volume level (Upper limit "82")
- Output destination (Multi Zone)
- TREBLE/BASS/BALANCE, etc.

* When AM/FM/DAB radio stations are registered, TUNER's preset numbers "37", "38", "39" and "40" (→[p66](#)) are overwritten.

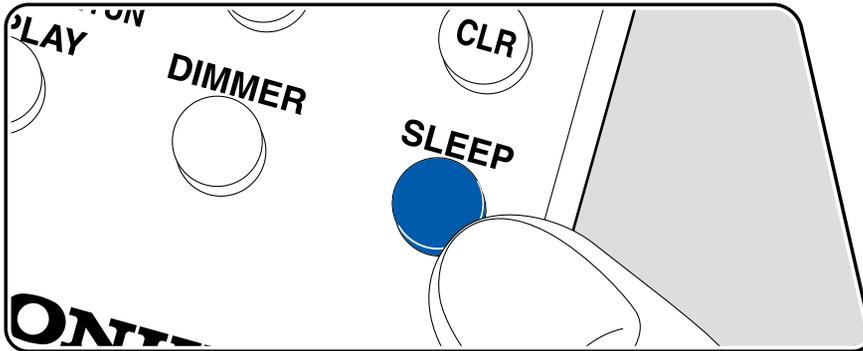
Using the registered settings

1. Turn the MY INPUT dial to select one of the indicators 1 to 4 where the settings are registered.
2. Press the MY INPUT dial.
 - Even when the unit is in standby mode, it comes on when you press the MY INPUT dial.
 - When the main unit is in standby mode and you press the MY INPUT dial, the MY INPUT (setting) selected immediately before the unit entered standby is selected.

Checking the registered settings

1. In the Setup menu screen that appears when you press SETUP, select "1. Input/Output Assign" - "5. MY INPUT Information" (→[p84](#)), and press ENTER.
2. The registered settings are displayed in the list.
 - Some of the items such as TREBLE/BASS/BALANCE function are not displayed in the list.

Sleep Timer



You can allow the unit to enter standby automatically when the specified time has elapsed. Press the SLEEP button on the remote controller, and select any of "30 min", "60 min" and "90 min".

"Off": The unit does not automatically enter standby mode.

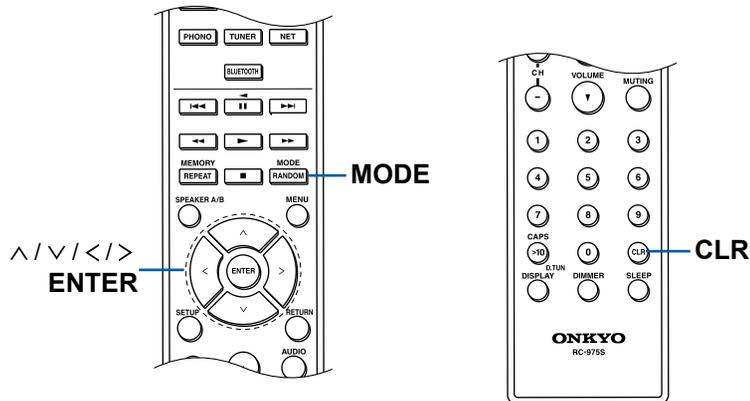
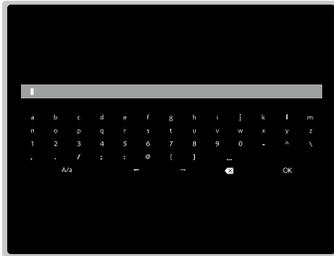
You can also set this by pressing the SETUP button on the remote controller and selecting "5. Hardware" - "Power Management" - "Sleep Timer" (→[p93](#)) on the Setup menu.

Inputting Characters

You can input characters or symbols on the keyboard displayed on the TV screen such as when inputting a password for Wi-Fi Setup (→p90) or naming a preset radio station (→p87).

1. Select a character or symbol with the cursors $\wedge / \vee / \langle / \rangle$ on the remote controller and press the ENTER button.
2. When saving characters after input, select "OK" and press the ENTER button.

- Select "A/a" to switch between upper and lower cases. (Can also be switched with the MODE button on the remote controller.)
- To enter a space, select "␣".
- To delete a character on the left of the cursor, select "⊞".
- To delete all the input characters, press the CLR button on the remote control.



Switching the HDMI 4K Signal Format Input and Output by this Unit

When the AV Component connected to this unit, such as a TV or player, and the HDMI cable (*) supports the high-definition 4K signal formats (4K 60p 4:4:4, 4:2:2 and 4K 60p 4:2:0 10bit), switch the setting value from "Standard" (default value) to "Enhanced".

(*)Premium High Speed HDMI Cable or Premium High Speed HDMI Cable with Ethernet that have the "PREMIUM Certified Cable" label attached to the packaging.



Perform the following procedure when the unit is on.

1. While pressing ZONE 2 on the main unit, press the ^ cursor button to display the current setting on the display. While this is being displayed, while pressing ZONE 2, repeatedly press the ^ cursor button to switch the setting.

**Standard
(Default
Value)**



Select when the AV component connected to this unit, such as a TV or player, supports the standard 4K signal format (4K 60p 4:2:0 8 bit).

Enhanced



Select when the AV component connected to this unit, such as a TV or player, and the HDMI cable (*) supports the high-definition 4K signal formats (4K 60p 4:4:4, 4:2:2 and 4K 60p 4:2:0 10 bit).

- There may be some image disruption depending on the connected component and the HDMI cable. If this occurs, switch to "Standard".

2. To exit the settings, release your finger. After a few seconds, the display goes out and the switching is complete.

Settings and the corresponding resolutions

			Enhanced	Standard
4K (3840×2160p) 24/25/30 Hz 4K SMPTE(4096×2160p) 24/25/30 Hz	RGB/ YCbCr4:4:4	8 bit	✓	✓
		10/12 bit	✓	
	YCbCr4:2:2	12 bit	✓	✓
4K (3840×2160p) 50/60 Hz 4K SMPTE(4096×2160p) 50/60 Hz	RGB/ YCbCr4:4:4	8 bit	✓	
		YCbCr4:2:2	12 bit	✓
	YCbCr4:2:0	8 bit	✓	✓
10/12 bit		✓		

Setup Menu

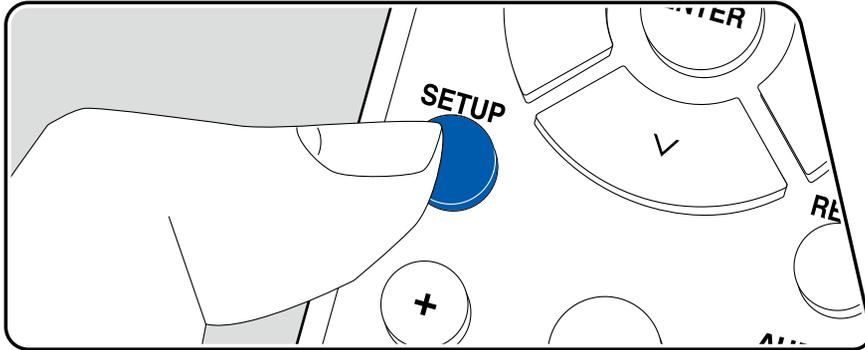
Menu list

You can configure advanced settings to have a more enjoyable experience with this unit. For operation details, refer to "Menu operations" (→[p80](#)).

1. Input/Output Assign	1. TV Out / OSD	Make settings for TV output and On-Screen Displays (OSD) that appear on the TV.	p81
	2. HDMI Input	Change input assignment between the input selectors and HDMI IN jacks.	p82
	3. Digital Audio Input	Change input assignment between the input selectors and DIGITAL IN COAXIAL/OPTICAL jacks.	p83
	4. Analog Audio Input	Change input assignment between the input selectors and AUDIO IN jacks.	p84
	5. My Input Information	Confirm the registered contents of MY INPUT.	p84
2. Speaker	1. Configuration	Change the settings of connection environment of the speakers.	p85
	2. Crossover	Change the settings of crossover frequencies.	p85
	3. Distance	Set the distance from each speaker to the listening position.	p86
	4. Level Calibration	Adjust the volume level of each speaker.	p86
	5. Equalizer Settings	You can adjust the output volume of the range for each connected speaker.	p86
3. Audio Adjust	1. Volume	Change the Volume settings.	p87
4. Source	1. IntelliVolume	Adjust the volume level when there are differences in volume level among multiple devices connected to this unit.	p87
	2. Name Edit	Set an easy name for each input.	p87
	Audio Select	Select the prioritized input terminal when multiple audio sources are connected to one input selector.	p88
	Video Select	When "TUNER", "NET", or "BLUETOOTH" input is selected, you can set the input from which video is displayed on the TV.	p88
5. Hardware	1. HDMI	Change the settings for the HDMI functions.	p89
	2. Network	Change the settings for the Network functions.	p90
	3. Bluetooth	Change the settings for the Bluetooth function.	p92
	4. Power Management	Change the settings for the power-save function.	p93
	5. Works with SONOS	Change the settings to connect with the Sonos Connect.	p94

6. Multi Zone	1. Remote Play Zone	Change the settings for remote play.	p95
7. Miscellaneous	1. Tuner	Change the settings for Tuner.	p95
	2. Firmware Update	Change the settings for Firmware Update.	p96
	3. Initial Setup	Make the initial setup from the setup menu.	p96
	4. Lock	Lock the Setup menu so that the settings cannot be changed.	p96
	5. Factory Reset	All the settings are restored to factory defaults.	p96

Menu operations



Use the on-screen displays (OSD) that appear on the TV to make the settings. Press SETUP on the remote controller to display the Setup menu.



Select the item with the cursors \wedge / \vee of the remote controller, and press the ENTER button to confirm your selection.

Use the cursors \lt / \gt to change the default values.

- To return to the previous screen, press the RETURN button.
- To exit the settings, press the SETUP button.

1. Input/Output Assign

1. TV Out / OSD

Make settings for TV output and On-Screen Displays (OSD) that appear on the TV.

Setting Item	Default Value	Setting Details
HDMI Out	MAIN	Select the HDMI jack to be connected with the TV. "MAIN": When connecting the TV to the HDMI OUT MAIN jack "SUB": When connecting the TV to the HDMI OUT SUB jack "MAIN+SUB": When connecting to both the MAIN and SUB jacks <ul style="list-style-type: none"> If devices with different resolutions are connected to HDMI OUT MAIN jack and SUB jack, images are output with the lower resolution.
1080p -> 4K Upscaling	Off	When a TV supporting 4K is used, video signals input with 1080p can be automatically output with 4K. "Off": When this function is not used "Auto": When this function is used If your TV does not support 4K, set it to "Off". <ul style="list-style-type: none"> If the TV does not support the 4K resolution with the same frequency as the frequency of HDMI input video signals, upscaling to 4K is not correctly performed. Check the frequency of 4K resolution supported by the TV, and change the resolution of the video signals input from the AV component.
Super Resolution	2	When "1080p -> 4K Upscaling" is set to "Auto", select the correction level of the input video signals from "Off" and "1" (weak) to "3" (strong).

Setting Item	Default Value	Setting Details
Zone 2 HDMI	Not Use	Make the setting when you output to the Zone 2 TV connected to the HDMI OUT ZONE 2/SUB jack. "Use": Enable this function "Not Use": Disable this function <ul style="list-style-type: none"> When video and audio via HDMI input are output to ZONE 2, set it to "Use".
OSD Language	English	Select the on-screen display language from the following. (North American models) English, German, French, Spanish, Italian, Dutch, Swedish (European models) English, German, French, Spanish, Italian, Dutch, Swedish, Russian, Chinese
Impose OSD	On	Set whether or not to display information such as volume adjustment or switching of input on the TV screen. "On": OSD is displayed on the TV. "Off": OSD is not displayed on the TV. <ul style="list-style-type: none"> OSD may not be displayed depending on the input signal even if "On" is selected. In this case, change the resolution of the connected device.

Setting Item	Default Value	Setting Details
Mini Player OSD	Always On	<p>You can display on the TV the images from another input selected last while playing the audio from NET or BLUETOOTH input. After switching the input to NET or BLUETOOTH, play the images and audio. And then when you press CAPS on the remote controller, the image is displayed in full-screen mode, and the audio information (Mini Player) for NET or BLUETOOTH is displayed in the corner of the screen. You can set whether to always display this Mini Player on the screen.</p> <p>"Always On": The Mini Player is always displayed.</p> <p>"Auto Off": The Mini Player turns off automatically in 30 seconds after displayed. If operation such as changing the volume is performed, it is displayed again for 30 seconds.</p> <ul style="list-style-type: none"> • Each time the CAPS button is pressed, the image display/non-display can be switched. • This setting cannot be selected if "Impose OSD" is set to "Off". • This function cannot be used when "OSD Language" is set to Chinese. (European models)
Screen Saver	3 minutes	<p>Set the time to start the screen saver.</p> <p>Select a value from "3 minutes", "5 minutes", "10 minutes" and "Off".</p>

■ 2. HDMI Input

Change input assignment between the input selectors and HDMI IN jacks.

Setting Item	Default Value	Setting Details
BD/DVD	HDMI 1 (HDCP 2.3)	"HDMI 1 (HDCP 2.3)" to "HDMI 6 (HDCP 2.3)": Assign a desired HDMI IN jack to the BD/DVD button. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change its setting to "---" first.
GAME	HDMI 2 (HDCP 2.3)	"HDMI 1 (HDCP 2.3)" to "HDMI 6 (HDCP 2.3)": Assign a desired HDMI IN jack to the GAME button. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change its setting to "---" first.
CBL/SAT	HDMI 3 (HDCP 2.3)	"HDMI 1 (HDCP 2.3)" to "HDMI 6 (HDCP 2.3)": Assign a desired HDMI IN jack to the CBL/SAT button. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change its setting to "---" first.
PC	HDMI 4 (HDCP 2.3)	"HDMI 1 (HDCP 2.3)" to "HDMI 6 (HDCP 2.3)": Assign a desired HDMI IN jack to the PC button. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change its setting to "---" first.
CD	---	"HDMI 1 (HDCP 2.3)" to "HDMI 6 (HDCP 2.3)": Assign a desired HDMI IN jack to the CD button. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change its setting to "---" first.
TV/TAPE	---	"HDMI 1 (HDCP 2.3)" to "HDMI 6 (HDCP 2.3)": Assign a desired HDMI IN jack to the TV/TAPE button. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change its setting to "---" first.

Setting Item	Default Value	Setting Details
PHONO	---	"HDMI 1 (HDCP 2.3)" to "HDMI 6 (HDCP 2.3)": Assign a desired HDMI IN jack to the PHONO button. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change its setting to "---" first.

■ 3. Digital Audio Input

Change input assignment between the input selectors and DIGITAL IN COAXIAL/OPTICAL jacks. If you do not assign a jack, select "---".

Setting Item	Default Value	Setting Details
BD/DVD	COAXIAL	"COAXIAL", "OPTICAL 1", "OPTICAL 2": Assign a desired DIGITAL IN jack to the BD/DVD button.
GAME	---	"COAXIAL", "OPTICAL 1", "OPTICAL 2": Assign a desired DIGITAL IN jack to the GAME button.
CBL/SAT	---	"COAXIAL", "OPTICAL 1", "OPTICAL 2": Assign a desired DIGITAL IN jack to the CBL/SAT button.
PC	---	"COAXIAL", "OPTICAL 1", "OPTICAL 2": Assign a desired DIGITAL IN jack to the PC button.
CD	OPTICAL 1	"COAXIAL", "OPTICAL 1", "OPTICAL 2": Assign a desired DIGITAL IN jack to the CD button.
TV/TAPE	OPTICAL 2	"COAXIAL", "OPTICAL 1", "OPTICAL 2": Assign a desired DIGITAL IN jack to the TV/TAPE button.
PHONO	---	"COAXIAL", "OPTICAL 1", "OPTICAL 2": Assign a desired DIGITAL IN jack to the PHONO button.

- Supported sampling rates for PCM signals (stereo, mono) from a digital input are 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz/16bit, 20bit, and 24bit.

4. Analog Audio Input

Change input assignment between the input selectors and AUDIO IN jacks. If you do not assign a jack, select "---".

Setting Item	Default Value	Setting Details
BD/DVD	AUDIO 1	"AUDIO 1" to "AUDIO 4": Assign a desired AUDIO IN jack to the BD/DVD button.
GAME	---	"AUDIO 1" to "AUDIO 4": Assign a desired AUDIO IN jack to the GAME button.
CBL/SAT	AUDIO 2	"AUDIO 1" to "AUDIO 4": Assign a desired AUDIO IN jack to the CBL/SAT button.
PC	---	"AUDIO 1" to "AUDIO 4": Assign a desired AUDIO IN jack to the PC button.
CD	AUDIO 4	"AUDIO 1" to "AUDIO 4": Assign a desired AUDIO IN jack to the CD button.
TV/TAPE	AUDIO 3	"AUDIO 1" to "AUDIO 4": Assign a desired AUDIO IN jack to the TV/TAPE button.
PHONO	PHONO	The setting cannot be changed.

5. My Input Information

You can view the content registered in MY INPUT 1 to 4. The registered settings are displayed in the list.

(Main)

Setting Item	Default Value	Setting Details
Preset	Preset 1	Selects a preset number from among "Preset 1", "Preset 2", "Preset 3" and "Preset 4".
Input Selector	---	Displays the input selector that has been set.
Network Service	---	Displays the Network Service that has been set.
Band	---	Displays the band, "AM", "FM" or "DAB" that has been set.
Station	---	Displays the Preset Name of the radio station that has been set.

Setting Item	Default Value	Setting Details
Listening Mode	---	Displays the listening mode (Stereo, Pure Audio, Direct) that has been set.
Volume	---	Displays the volume level that has been set. (Upper limit "82") <ul style="list-style-type: none"> You cannot set a higher value than that of "3. Audio Adjust" - "Volume" - "Maximum Volume".
Multi Zone	---	Displays the output destination (Multi Zone) that has been set.

- "Band" is displayed only when the input selector is set to "TUNER".
- "Station" is displayed only when the input selector is set to "TUNER" or "NET".
- "Network Service" is displayed only when the input selector is set to "NET".
- Preset Name of "Station" (only when the input selector is set to "TUNER") is displayed with the name set by "4. Source" - "Name Edit". If the name is not set, the frequency of the radio station is displayed instead.

(Zone 2)

Setting Item	Default Value	Setting Details
Input Selector	---	Displays the input selector that has been set.
Network Service	---	Displays the Network Service that has been set.
Band	---	Displays the band, "AM", "FM" or "DAB" that has been set.
Station	---	Displays the Preset Name of the radio station that has been set.

- "Band" is displayed only when the input selector is set to "TUNER".
- "Station" is displayed only when the input selector is set to "TUNER" or "NET".
- "Network Service" is displayed only when the input selector is set to "NET".
- Preset Name of "Station" (only when the input selector is set to "TUNER") is displayed with the name set by "4. Source" - "Name Edit". If the name is not set, the frequency of the radio station is displayed instead.

2. Speaker

■ 1. Configuration

Change the settings of connection environment of the speakers.

Setting Item	Default Value	Setting Details
Subwoofer	Yes	Set whether a subwoofer is connected or not. "Yes": When a subwoofer is connected "No": When a subwoofer is not connected
Speaker B	A/B	Set whether you are connecting another set of front speakers to use as a Speaker B System, or connecting speakers supporting bi-wiring. "A/B": When bi-wiring connection is not used for the front speakers "Bi-Wiring": When bi-wiring connection is used for the front speakers
Zone 2 Lineout	Zone 2	Set an output destination of the audio output from ZONE 2 LINE OUT jack. "Zone 2": When connecting a pre-main amplifier in a separate room (ZONE 2) "Front": When connecting a power amplifier
Speaker Impedance	6 ohms or above	Set the impedance (Ω) of the connected speakers. "4 ohms": When any of the connected speakers have 4 Ω or more to less than 6 Ω impedance. Or when outputting audio simultaneously from 2 speaker systems connected to both the SPEAKERS A/B terminals. "6 ohms or above": When all the connected speakers have an impedance of 6 Ω or more • For impedance, check the indications on the back of the speakers or their instruction manual.

■ 2. Crossover

Change the settings of crossover frequencies.

Setting Item	Default Value	Setting Details
Front	100 Hz	Select the crossover frequency from "40 Hz" to "200 Hz" to start outputting frequencies for each channel. "Full Band": Full band will be output. • If "Configuration" - "Subwoofer" is set to "No", "Front" will be fixed to "Full Band".
Double Bass	On	This can be selected only when "Configuration" - "Subwoofer" is set to "Yes" and "Front" is set to "Full Band". Bass output is boosted by feeding bass sounds from the front right and left, and center speakers to the subwoofer. "On": Bass output is boosted. "Off": Bass output is not boosted. • This function is not automatically set even if AccuEQ Room Calibration is performed.

■ 3. Distance

Set the distance from each speaker to the listening position.

Setting Item	Default Value	Setting Details
Front Left	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.
Front Right	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.
Subwoofer	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.

- Default values vary depending on the regions.
- The unit of distance can be changed by pressing the MODE button on the remote controller. When using the unit "feet", the setting is available in increments of 0.1 ft from 0.1 ft to 30.0 ft. When using the unit "meter", the setting is available in increments of 0.03 m from 0.03 m to 9.00 m.

■ 4. Level Calibration

Adjust the volume level of each speaker.

Setting Item	Default Value	Setting Details
Front Left	0.0 dB	Select a value between "-12.0 dB" and "+12.0 dB" (in 0.5 dB increments). A test tone will be output each time you change the value. Select the desired level.
Front Right	0.0 dB	Select a value between "-12.0 dB" and "+12.0 dB" (in 0.5 dB increments). A test tone will be output each time you change the value. Select the desired level.
Subwoofer	0.0 dB	Select a value between "-15.0 dB" and "+12.0 dB" (in 0.5 dB increments). A test tone will be output each time you change the value. Select the desired level.

■ 5. Equalizer Settings

You can adjust the output volume of the range for each connected speaker. Adjust the volume of different sound ranges for each speaker. You can set three different equalizers in Preset 1 to 3. The number of frequencies that can be selected for each speaker is up to five bands for the Subwoofer and nine bands for the other speakers.

Setting Item	Default Value	Setting Details
Front	0.0 dB	After selecting the speaker frequency between "25 Hz" and "16 kHz" with the cursors < / > , adjust the volume of that frequency between "-6.0 dB" and "+6.0 dB" with ^ / v .
Subwoofer	0.0 dB	After selecting the speaker frequency between "25 Hz" and "16 kHz" with the cursors < / > , adjust the volume of that frequency between "-6.0 dB" and "+6.0 dB" with ^ / v . • This cannot be selected if "Configuration" - "Subwoofer" is set to "No".

- Depending on the input source or listening mode setting, the desired effect may not be achieved.

3. Audio Adjust

■ 1. Volume

Change the Volume settings.

Setting Item	Default Value	Setting Details
Mute Level	-∞ dB	Set the volume lowered from the listening volume when muting is on. Select a value from "-∞ dB", "-40 dB" and "-20 dB".
Maximum Volume	Off	Set the maximum value to prevent the volume from becoming too loud. Select a value from "Off", and "50" to "99".
Power On Volume	Last	Set the volume level of when the power is turned on. Select a value from "Last" (Volume level before entering standby mode), "Min", "0.5" to "99.5" and "Max". <ul style="list-style-type: none"> You cannot set a higher value than that of "Maximum Volume".
Headphone Level	0.0 dB	Adjust the output level of headphones. Select a value between "-12.0 dB" and "+12.0 dB".

4. Source

■ 1. IntelliVolume

Adjust the volume level difference between the devices connected to the unit. Select the input selector to configure.

Setting Item	Default Value	Setting Details
IntelliVolume	0.0 dB	Select from "-12.0 dB" to "+12.0 dB". Set a negative (-) value if the volume of the target device is larger than the others and a positive (+) value if smaller. To check the audio, start playback of the connected device. <ul style="list-style-type: none"> This function is not effective in ZONE 2.

■ 2. Name Edit

Set an easy name for each input. The set name appears on the main unit's display. Select the input selector to make the setting.

Setting Item	Default Value	Setting Details
Name Edit	Input name	<ol style="list-style-type: none"> Select a character or symbol with the cursors, and press ENTER. Repeat this operation to input up to 10 characters. "A/a": Switches between upper and lower cases. (Pressing MODE on the remote controller also toggles between upper and lower cases) "←" "→": Moves the cursor in the arrow direction. "⊗": Removes a character on the left of the cursor. "␣": Enters a space. <ul style="list-style-type: none"> Pressing CLR on the remote controller will remove all the input characters. After inputting, select "OK" with the cursors, and press ENTER. The input name will be saved. To restore the name to the default value, press CLR on the remote controller on the input screen. Then while nothing is entered, select "OK", and press ENTER.

- To name a preset radio station, press TUNER on the remote controller, select AM (North American models)/FM, and select the preset number. (Preset names cannot be given to DAB stations (European models))
- This cannot be set if the "NET" or "BLUETOOTH" input is selected.

■ Audio Select

Select the priority for input selection when multiple audio sources are connected to one input selector, for example, connections to both the "BD/DVD" HDMI IN jack and the "BD/DVD" AUDIO IN jack. The setting can be made for each input selector button. Select the input selector to make the setting. Note that some of the default values cannot be changed.

Setting Item	Default Value	Setting Details
Audio Select	BD/DVD: HDMI GAME: HDMI CBL/SAT: HDMI PC: HDMI CD: Analog PHONO: Analog TV/TAPE: OPTICAL	ARC: When giving priority to the input signal from ARC-compatible TV. <ul style="list-style-type: none"> This item can be selected only when "5. Hardware" - "HDMI" - "Audio Return Channel" is set to "On" and also the "TV/TAPE" input is selected. "HDMI": When giving priority to the input signal from HDMI IN jacks <ul style="list-style-type: none"> This item can be selected only when the input to be set is assigned to the HDMI jack in the "1. Input/Output Assign" - "HDMI Input" setting "COAXIAL": When giving priority to the input signal from DIGITAL IN COAXIAL jacks <ul style="list-style-type: none"> This item can be selected only when the input to be set is assigned to the COAXIAL jack in the "1. Input/Output Assign" - "Digital Audio Input" setting. "OPTICAL": When giving priority to the input signal from DIGITAL IN OPTICAL jacks <ul style="list-style-type: none"> This item can be selected only when the input to be set is assigned to the OPTICAL jack in the "1. Input/Output Assign" - "Digital Audio Input" setting. "Analog": When giving priority to the input signal from AUDIO IN jacks <ul style="list-style-type: none"> This item can be selected only when the input to be set is assigned to the AUDIO IN jack in the "1. Input/Output Assign" - "Analog Audio Input" setting.

■ Video Select

When "TUNER", "NET", or "BLUETOOTH" input is selected, you can set the input from which video is displayed on the TV.

Setting Item	Default Value	Setting Details
Video Select	Last	"Last": Select the video input played last "BD/DVD", "GAME", "CBL/SAT", "PC", "CD", "TV/TAPE", "PHONO": Play the video of each input. <ul style="list-style-type: none"> This setting is effective for an input selector assigned in "1. Input/Output Assign" - "HDMI Input".

- If the OSD language is set to Chinese, you can select this setting only when "TUNER" is selected as input. (European models)

5. Hardware

1. HDMI

Change the settings of the HDMI function.

Setting Item	Default Value	Setting Details
HDMI CEC	Off	<p>Setting this to "On" enables the input selection link and other link functions with HDMI-connected CEC-compatible device.</p> <p>"On": When this function is used "Off": When this function is not used</p> <p>When this setting is changed, turn off and then on again the power of all connected devices.</p> <ul style="list-style-type: none"> Depending on the TV to use, a link setting may be required on the TV. This function is effective only when the device is connected to the HDMI OUT MAIN terminal. Setting this to "On" and closing the operation screen will display the name of the connected CEC-compatible device and "CEC On" on the main unit's display. When this function is set to "On", the power consumption in standby state increases, however, the increase in power consumption is minimized by automatically entering the HYBRID STANDBY mode where only the essential circuits operate. If you operate the VOLUME dial on the main unit when this setting is "On" and audio is output from the TV speakers, audio will be output also from the speakers connected to this unit. To output audio from only either of them, change the setting of this unit or TV, or reduce the volume of this unit. If abnormal behavior is observed when this is set to "On", set it to "Off". If a connected device is not CEC-compatible, or if you are not sure whether it is compatible, set it to "Off".

Setting Item	Default Value	Setting Details
HDMI Standby Through	Off	<p>When this is set to anything other than "Off", you can play the video and audio of an HDMI-connected player on the TV even if the unit is in standby mode. Also, only "Auto" and "Auto (Eco)" can be selected if "HDMI CEC" is set to "On". If you select anything else, set "HDMI CEC" to "Off".</p> <ul style="list-style-type: none"> When this function is set to a value other than "Off", the power consumption in standby state increases, however, the increase in power consumption is minimized by automatically entering the HYBRID STANDBY mode where only the essential circuits operate. <p>"BD/DVD", "GAME", "CBL/SAT", "PC", "CD", "TV/TAPE", "PHONO": For example, if you select "BD/DVD", you can play the device connected to the "BD/DVD" jack on the TV even if the unit is in standby mode. Select this setting if you have decided which player to use with this function.</p> <p>"Last": You can play on the TV the video and audio of the input selected immediately before the unit is switched to standby. When "Last" is selected, you can switch the input of the unit using the remote controller or the Onkyo Controller even in the standby mode.</p> <p>"Auto", "Auto (Eco)": Select either of the settings if the connected player conforms to the CEC standard. You can play the video and audio of the player on the TV using the CEC link function, irrespective of what input is selected immediately before the unit is switched to standby.</p> <ul style="list-style-type: none"> To play a non-CEC compliant player on the TV, turn the unit on and switch the input. When using a CEC-compliant TV, you can reduce the power consumption in standby mode by selecting "Auto (Eco)".

Setting Item	Default Value	Setting Details
Audio TV Out	Off	<p>You can enjoy audio through the speakers of the TV while this unit is on.</p> <p>"On": When this function is used "Off": When this function is not used</p> <ul style="list-style-type: none"> This setting is fixed to "Auto" if you set "1. Input/Output Assign" - "TV Out/OSD" - "HDMI Out" or "HDMI" - "HDMI Out" in the "Audio Menu" to "MAIN" or "MAIN+SUB" and set "HDMI CEC" to "On". If you change this setting, set "HDMI CEC" to "Off". Listening mode cannot be changed while "Audio TV Out" is set to "On" and audio is being output from the TV. Depending on your TV or input signal of the connected device, audio may not be output from the TV even if this is set to "On". In such a case, audio is output from the speakers of the unit. Audio is output from this unit if you operate the VOLUME dial on this unit when audio that is input to this unit is output from your TV speakers. If you do not want to output audio, change the setting of this unit or TV, or reduce the volume of this unit.
Audio Return Channel	Off	<p>You can enjoy the sound of the HDMI-connected ARC-compatible TV through the speakers connected to the unit.</p> <p>"On": When enjoying the TV sound through the speakers of this unit "Off": When not using the ARC function</p>
Auto Lip Sync	On	<p>Automatically corrects desynchronization between the video and audio signals based on the information from the HDMI Lip-Sync-compatible TV.</p> <p>"On": When enabling the automatic correction function "Off": When not using the automatic correction function</p>

2. Network

Change the settings of the Network function.

- When LAN is configured with a DHCP, set "DHCP" to "Enable" to configure the setting automatically. ("Enable" is set by default) To assign fixed IP addresses to each components, you must set "DHCP" to "Disable", assign an address to this unit in the "IP Address" setting, and set information related to your LAN, such as Subnet Mask and Gateway.

Setting Item	Default Value	Setting Details
Wi-Fi	Off(Wired)	<p>Connect the unit to the network via a wireless LAN router.</p> <p>"On": Wireless LAN connection "Off(Wired)": Wired LAN connection</p> <ul style="list-style-type: none"> When switching between "On" and "Off(Wired)", stop the Network service. Also, when group playback is in process, cancel the group playback once, and then switch the setting.
Wi-Fi Setup	-	Configure wireless LAN settings by pressing ENTER with "Start" displayed.
Wi-Fi Status	-	<p>The information of the connected access point is displayed.</p> <p>"SSID": SSID of the connected access point. "Signal": Signal strength of the connected access point. "Status": Status of the connected access point.</p>
MAC Address	-	<p>Check the MAC address of this unit.</p> <p>This value is specific to the component and cannot be changed.</p>
DHCP	Enable	<p>"Enable": Auto configuration by DHCP "Disable": Manual configuration without DHCP</p> <ul style="list-style-type: none"> If you select "Disable", set "IP Address", "Subnet Mask", "Gateway", and "DNS Server" manually.
IP Address	0.0.0.0	Displays/Sets the IP address.
Subnet Mask	0.0.0.0	Displays/Sets the subnet mask.
Gateway	0.0.0.0	Displays/Sets the gateway.
DNS Server	0.0.0.0	Displays/Sets the primary DNS server.
Proxy URL	-	Displays/Sets the proxy server URL.

Setting Item	Default Value	Setting Details
Proxy Port	8080	Displays/Sets the proxy server port number when you input "Proxy URL".
Friendly Name	Onkyo TX-8390 XXXXXX	<p>Change the model name of this unit which is displayed on the device connected to the network to an easily recognized name.</p> <ol style="list-style-type: none"> 1. Press ENTER to display the Edit screen. 2. Select a character or symbol with the cursors, and press ENTER. Repeat this operation to input up to 31 characters. "A/a": Switches between upper and lower cases. (Pressing MODE on the remote controller also toggles between upper and lower cases) "←" "→": Moves the cursor in the arrow direction. "⌫": Removes a character on the left of the cursor. "␣": Enters a space <ul style="list-style-type: none"> • Pressing CLR on the remote controller will remove all the input characters. 3. After inputting, select "OK" with the cursors, and press ENTER. The input name will be saved.

Setting Item	Default Value	Setting Details
AirPlay Device Name	Onkyo TX-8390 XXXXXX	<p>Change the model name of this unit which is displayed on the AirPlay-connected device to an easily recognized name.</p> <ol style="list-style-type: none"> 1. Press ENTER to display the Edit screen. 2. Select a character or symbol with the cursors, and press ENTER. Repeat this operation to input up to 31 characters. "A/a": Switches between upper and lower cases. (Pressing MODE on the remote controller also toggles between upper and lower cases) "←" "→": Moves the cursor in the arrow direction. "⌫": Removes a character on the left of the cursor. "␣": Enters a space <ul style="list-style-type: none"> • Pressing CLR on the remote controller will remove all the input characters. 3. After inputting, select "OK" with the cursors, and press ENTER. The input name will be saved. <ul style="list-style-type: none"> • This function cannot be used when registering this unit to Home App.

Setting Item	Default Value	Setting Details
AirPlay Password		<p>You can set a password of up to 31 digits so that only users that have input can use AirPlay®.</p> <ol style="list-style-type: none"> 1. Press ENTER to display the Edit screen. 2. Select a character or symbol with the cursors, and press ENTER. Repeat this operation to input up to 31 characters. "A/a": Switches between upper and lower cases. (Pressing MODE on the remote controller also toggles between upper and lower cases) "←" "→": Moves the cursor in the arrow direction. "⌫": Removes a character on the left of the cursor. "␣": Enters a space <ul style="list-style-type: none"> • To select whether to mask the password with "*" or display it in plain text, press MEMORY on the remote controller. • Pressing CLR on the remote controller will remove all the input characters. 3. After inputting, select "OK" with the cursors, and press ENTER. The input name will be saved. <ul style="list-style-type: none"> • This function cannot be used when registering this unit to Home App.
Privacy Statement	Not Accepted	<p>When using a network service that requires a login name, email address, password, etc., you need to agree to the Privacy Statement of our company.</p> <ul style="list-style-type: none"> • This setting can be made after confirming the Privacy Statement. When you select "Privacy Statement" and press ENTER, the Privacy Statement is displayed. • When "Not Accepted" is selected, you will log out from the network service you have logged in.
Network Check	-	<p>You can check the network connection. Press ENTER when "Start" is displayed.</p>

- Wait for a while if "Network" cannot be selected. It can be selected when the network function is activated.

■ 3. Bluetooth

Change the settings for the Bluetooth function.

Setting Item	Default Value	Setting Details
Bluetooth	On	<p>Select whether or not to use the BLUETOOTH function. "On": Enables connection with a BLUETOOTH-enabled device by using the BLUETOOTH function. Select "On" also when making various BLUETOOTH settings. "Off": When not using the BLUETOOTH function</p>
Auto Input Change	On	<p>When a BLUETOOTH-enabled device is played while it is connected to the unit, the input of the unit can be automatically switched to "BLUETOOTH". "On": The input is automatically set to "BLUETOOTH" responding to the playback operation of the BLUETOOTH-enabled device. "Off": The function is disabled. <ul style="list-style-type: none"> • If the input is not switched automatically, set this to "Off", and change the input manually. </p>
Auto Reconnect	On	<p>This function automatically reconnects to the BLUETOOTH-enabled device connected last when you change the input to "BLUETOOTH". "On": When this function is used "Off": When this function is not used <ul style="list-style-type: none"> • This may not work with some BLUETOOTH-enabled devices. </p>

Setting Item	Default Value	Setting Details
Pairing Information	-	You can initialize the pairing information stored on this unit. Pressing ENTER when "Clear" is displayed initializes the pairing information stored on this unit. <ul style="list-style-type: none"> This function does not initialize the pairing information on the BLUETOOTH-enabled device. When pairing the unit again with the device, be sure to clear the pairing information on the BLUETOOTH-enabled device beforehand. For information on how to clear the pairing information, refer to the instruction manual of the BLUETOOTH-enabled device.
Device	-	Displays the name of the BLUETOOTH-enabled device connected to the unit. <ul style="list-style-type: none"> The name is not displayed when "Status" is "Ready" and "Pairing".
Status	-	Displays the status of the BLUETOOTH-enabled device connected to the unit. "Ready": Not paired "Pairing": Paired "Connected": Successfully connected

- Wait for a while if "Bluetooth" cannot be selected. It can be selected when the BLUETOOTH function is activated.

■ 4. Power Management

Change the settings for the power-save function.

Setting Item	Default Value	Setting Details
Sleep Timer	Off	You can allow the unit to enter standby automatically when the specified time has elapsed. Select a value from "30 minutes", "60 minutes" and "90 minutes". "Off": The unit does not automatically enter standby mode.

Setting Item	Default Value	Setting Details
Auto Standby	On/Off	This setting allows the unit to enter standby mode automatically after 20 minutes of inactivity without any video or audio input. (When "USB Power Out at Standby" or "Network Standby" is enabled, the unit enters the HYBRID STANDBY mode which minimizes the increase in power consumption.) "On": The unit automatically enters standby mode ("AUTO STBY" lights up). "Off": The unit does not automatically enter standby mode. <ul style="list-style-type: none"> "Auto Standby" is displayed on the main unit's display and TV screen 30 seconds before entering standby mode. "Auto Standby" does not work when Zone 2 is active. Default values vary depending on the regions.
Auto Standby in HDMI Standby Through	On/Off	Enable or disable "Auto Standby" while "HDMI Standby Through" is on. "On": The setting is enabled. "Off": The setting is disabled. <ul style="list-style-type: none"> This setting cannot be set to "On" if "Auto Standby" and "HDMI Standby Through" are set to "Off". Default values vary depending on the regions.
USB Power Out at Standby	Off	When this function is set to "On", electricity can be supplied to the device connected to the USB port on the rear panel even if this unit is in standby mode. The USB port on the front panel does not support power supply to a connected USB device when the unit is in standby mode. <ul style="list-style-type: none"> When this function is set to "On", the power consumption in standby state increases, however, the increase in power consumption is minimized by automatically entering the HYBRID STANDBY mode where only the essential circuits operate.

Setting Item	Default Value	Setting Details
Network Standby	On	<p>When this function is set to "On", the network function works even in standby state, and you can turn on the power of the unit via network using an application such as Onkyo Controller that can control this unit.</p> <ul style="list-style-type: none"> When this function is set to "On", the power consumption in standby state increases, however, the increase in power consumption is minimized by automatically entering the HYBRID STANDBY mode where only the essential circuits operate. Note that even if this function is set to "Off", when any of the HDMI CEC (→p89), HDMI Standby Through (→p89), USB Power Out at Standby (→p93) and Bluetooth Wakeup (→p94) functions is enabled, this function will be in "On" state regardless of the setting. When connection to the network is lost, "Network Standby" may be disabled to reduce power consumption. In such a case, turn the unit on by using the power button on the remote controller or main unit.
Bluetooth Wakeup	Off	<p>This function wakes up the unit on standby by connecting a BLUETOOTH-enabled device.</p> <p>"On": When this function is used "Off": When this function is not used</p> <ul style="list-style-type: none"> When this function is set to "On", the power consumption in standby state increases, however, the increase in power consumption is minimized by automatically entering the HYBRID STANDBY mode where only the essential circuits operate. This setting is fixed to "Off" if "Bluetooth" - "Auto Input Change" is set to "Off".

- Wait for a while if "Network Standby" and "Bluetooth Wakeup" cannot be selected. It can be selected when the network function is activated.

■ 5. Works with SONOS

Change the settings to connect with the Sonos Connect.

Setting Item	Default Value	Setting Details
Input Selector	Off	<p>Select the input selector to which the Sonos Connect is connected.</p> <ul style="list-style-type: none"> Selecting "Off" disables the interlock function with Sonos.
Connected Device	-	<p>Displays the Sonos Connect connected to the same network as the network of this unit. Press the ENTER button to select the connected Sonos Connect.</p> <ul style="list-style-type: none"> Products (e.g. Play:3 unequipped with an output terminal) other than the Sonos Connect are also displayed in the device list and selectable. In that case, when playback on the Sonos side starts, the input is switched, however, audio is not output. Select the room name of the connected Sonos Connect. Up to 32 devices can be displayed on the Sonos product list screen. If you cannot find the Sonos Connect to be interlocked, return to the previous screen, turn off the product you do not interlock, and try again. To use this function, set "Input Selector" beforehand.
Output Zone	Main	<p>Select the zone where you want to listen to the music.</p> <p>"Main": Outputs audio only to the main room (where this unit is located). "Zone 2": Outputs audio only to the separate room (ZONE 2). "Main/Zone 2": Outputs audio to both the main room and separate room.</p> <ul style="list-style-type: none"> To use this function, set "Input Selector" beforehand.

Setting Item	Default Value	Setting Details
Preset Volume	Last	<p>You can set the volume beforehand for playing back the Sonos Connect. Select a value from "Last" (Volume level before entering standby mode), "Min", "0.5" to "99.5" and "Max".</p> <ul style="list-style-type: none"> To use this function, set "Input Selector" beforehand. You cannot set a higher value than that of "3. Audio Adjust" - "Volume" - "Maximum Volume". This function is not effective in ZONE 2.

6. Multi Zone

■ 1. Remote Play Zone

Change the settings for remote play.

Setting Item	Default Value	Setting Details
Remote Play Zone	Auto	<p>When playing with AirPlay or Spotify Connect, or when using the Music Server function to play remotely from your PC, you can set whether to play in the main room (where this unit is located) or in a separate room (ZONE 2).</p> <p>"Auto": When the main room input is NET, music is played in the main room. When the separate room input is NET and the main room input is other than NET, then the music is played in the separate room.</p> <p>"Main", "Zone 2": Select when limiting the play zone to a particular room. For example, when playing only in the separate room, select "Zone 2".</p> <ul style="list-style-type: none"> This function may not work if playback is already proceeding with the same network function.

7. Miscellaneous

■ 1. Tuner

Change the settings for Tuner.

Setting Item	Default Value	Setting Details
AM / FM Frequency Step (North American models)	10 kHz/ 0.2 MHz	<p>Select a frequency step to suit your residential area.</p> <p>Select "10 kHz/ 0.2 MHz" or "9 kHz/ 0.05 MHz".</p> <ul style="list-style-type: none"> When this setting is changed, all radio presets are deleted.
FM Search Level (European models)	Normal	<p>If automatic tuning regularly stops on FM stations with weak reception when "Normal" is selected, select "Strong" so only those FM stations with strong reception are selected.</p>
DAB Auto Scan (European models)	-	<p>You can run the auto scan when new DAB stations are added or when you move house.</p>
DAB DRC (European models)	Off	<p>With the DRC (Dynamic Range Control) setting, you can reduce the dynamic range of DAB digital radio so that you can still hear quiet parts even when listening at low volume levels - ideal for listening to the radio late at night when you don't want to disturb anyone.</p> <p>"Off": DRC off</p> <p>"Large": Large reduction in dynamic range</p> <p>"Small": Small reduction in dynamic range</p>

■ 2. Firmware Update

Change the settings for Firmware Update.

Setting Item	Default Value	Setting Details
Update Notice	Enable	Availability of a firmware update is notified via network. "Enable": Notify updates "Disable": Do not notify updates
Version	-	The current firmware version is displayed.
Update via NET	-	Press ENTER to select when updating the firmware via network. • This setting cannot be selected if you do not have Internet access or there is no updatable firmware.
Update via USB	-	Press ENTER to select when updating the firmware via USB. • This setting cannot be selected if a USB storage device is not connected or there is no updatable firmware in the USB storage device.

- Wait for a while if "Firmware Update" cannot be selected. It can be selected when the network function is activated.

■ 3. Initial Setup

Make the initial setup from the setup menu.

- Wait for a while if "Initial Setup" cannot be selected. It can be selected when the network function is activated.

■ 4. Lock

Lock the Setup menu so that the settings cannot be changed.

Setting Item	Default Value	Setting Details
Setup Parameter	Unlocked	Lock the Setup menu so that the settings cannot be changed. "Locked": The menu is locked. "Unlocked": The menu is unlocked.

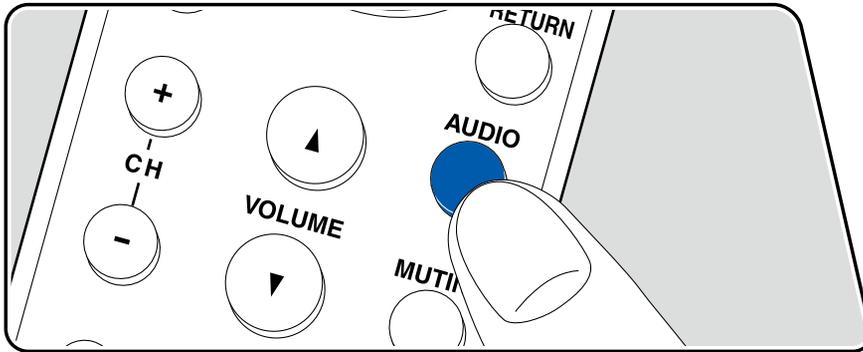
■ 5. Factory Reset

All the settings are restored to factory defaults.

Setting Item	Default Value	Setting Details
Factory Reset	-	All the settings are restored to factory defaults. Select "Start" and press ENTER. • If "Factory Reset" is performed, your settings are restored to the default values. Be sure to note down your setting contents beforehand.

AUDIO Menu

Menu operations



You can quickly adjust the settings you frequently use, such as tone adjustments, etc.

You can make the settings on the TV screen during playback. Press AUDIO on the remote controller to display the AUDIO Menu.



Select the item with the cursors \wedge / \vee of the remote controller, and press the ENTER button to confirm your selection.

Use the cursors to change the settings.

- To return to the previous screen, press RETURN.
- To exit the settings, press AUDIO.

■ HDMI

HDMI Out: Select the HDMI OUT jack to output video signals from "MAIN", "SUB", and "MAIN+SUB".

A/V Sync: If the video is behind the audio, you can delay the audio to offset the gap. The setting can be set for each input.

- It cannot be set if the listening mode is Pure Audio or Direct.

Audio Return Channel: You can enjoy the sound of the HDMI-connected ARC compatible TV through the speakers connected to the unit. Select "On" when listening to the audio of TV using the speakers of this unit. Select "Off" when the ARC function is not used.

■ Audio

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 set for each input. This works in signals whose sampling frequencies are 48 kHz or less.

- It cannot be set if the listening mode is Pure Audio or Direct.

■ AccuEQ

AccuEQ: Enable or disable the equalizer function that corrects for sound distortion caused by the acoustic environment of the room. Select "On" to enable. The setting can be set for each input.

Manual Equalizer: Select "Preset 1" to "Preset 3" configured in "2. Speaker" - "Equalizer Settings" on the Setup menu. When this is set to "Off", the same sound field setting is applied to all ranges.

■ Level

Subwoofer: Adjust the speaker level of the subwoofer while listening to the sound.

- If you set the unit to the standby mode, the adjustments you made will be restored to the previous statuses.

Direct: Switches to the Direct mode. Processing that affects sound quality is shut down, and sound closer to the original is reproduced.

Bass: Enhance or moderate the bass range of the front speakers.

- It cannot be set if the listening mode is Pure Audio or Direct.

Treble: Enhance or moderate the treble range of the front speakers.

- It cannot be set if the listening mode is Pure Audio or Direct.

Balance: Adjust the balance of the sounds output from the left and right speakers.

Web Setup

Menu operations

You can make the settings for the network function of this unit using an Internet browser on a PC, smartphone, etc.

1. Press SETUP on the remote controller to display the Setup menu.
2. Select "5. Hardware" - "Network" with the cursors, and then take a note of the IP address displayed in "IP Address".
3. Start the Internet browser on your PC, smartphone, etc. and enter the IP address of this unit in the URL field.
4. Information for the unit (Web Setup screen) is displayed in the Internet browser.



5. After changing the settings, select "Save" to save the settings.

Device Information

You can change the Friendly Name or AirPlay Device Name, set an AirPlay Password, etc.

Control4: Register this unit if you are using a Control4 system.

Firmware Update: Select the firmware file you have downloaded to your PC so you can update this unit.

Network Setting

Status: You can see information for the network such as the MAC address and IP

address of this unit.

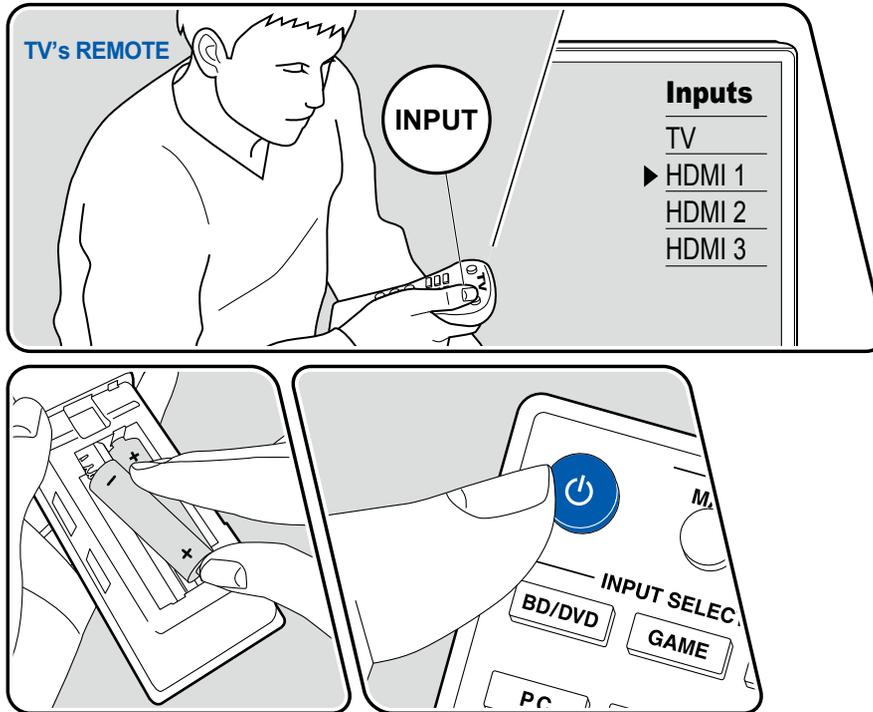
Network Connection: You can select a network connection method. If you select "Wireless", select an access point from "Wi-Fi Setup" to connect.

DHCP: You can change DHCP settings. If you select "Off", set "IP Address", "Subnet Mask", "Gateway" and "DNS Server" manually.

Proxy: Display and set the URL for the proxy server.

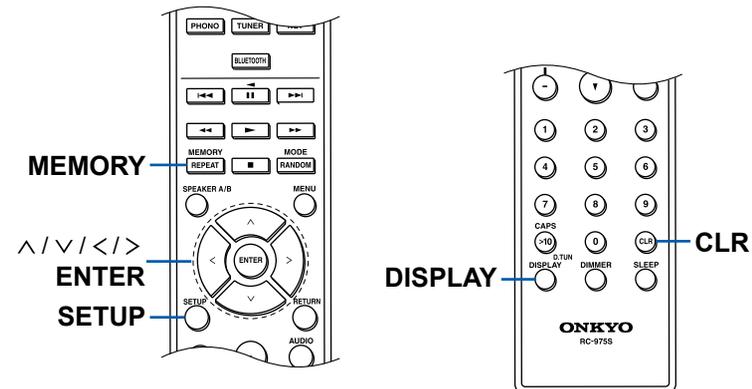
Initial Setup with Auto Start-up Wizard

Operations



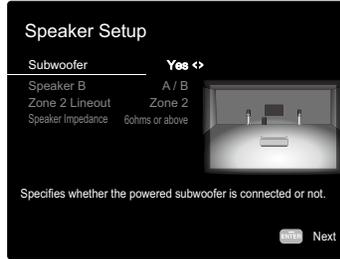
When you turn the unit on for the first time after purchase, the Initial Setup screen is automatically displayed on the TV to allow you to make settings required for startup using simple operations following on-screen guidance.

1. Switch the input of the TV to the input connected to the unit.
2. Put batteries into the remote controller of this unit.
3. Press ⏻ on the remote controller to turn the unit on.
4. When the language selection screen is displayed on TV, select the language with the cursors \wedge / \vee and press ENTER.
 - Select the item with the cursors of the remote controller, and press ENTER to confirm your selection. To return to the previous screen, press RETURN.
 - If you have terminated the Initial Setup halfway, turn this unit to standby mode and turn the power on again. Then you can display the Initial Setup again. The Initial Setup appears on the screen each time the power is turned on unless the Initial Setup is completed or "Never Show Again" is selected on the first screen.
 - To perform the Initial Setup again after the setting is completed, press SETUP, select "7. Miscellaneous" - "Initial Setup", and press ENTER.



■ 1. Speaker Setup

1. Make settings for connected speakers and external output.



2. If the setting is correct, press ENTER.
3. Select "Next" and press ENTER. Then a test tone is output from each speaker to confirm the connection. Selecting each speaker with the cursors \wedge / \vee will output the test tone. Press ENTER after confirmation.
4. If there is no problem with the speaker connection, select "Next" and press ENTER. To return to "Speaker Setup", select "Back to Speaker Setup" and press ENTER.

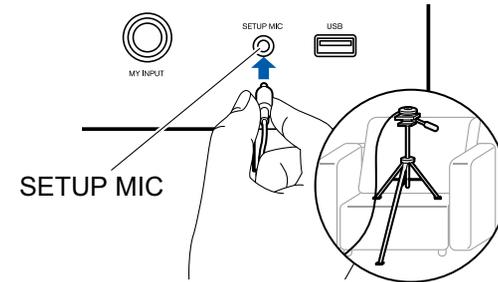
■ 2. AccuEQ Room Calibration

Place the supplied speaker setup microphone at the listening position. The unit automatically measures the test tones output from each speaker, and sets the optimum volume level for each speaker, the crossover frequencies, and the distance from the listening position. This also automatically adjusts the equalizers for the speakers, and enables correction of sound distortion caused by the acoustic environment of the room.

- It takes between 2 and 4 minutes for calibration to be completed. Each speaker outputs the test tone at high volume during measurement, so be careful of your surroundings. Also, keep the room as quiet as possible during measurement.
- If you connect a subwoofer, check the power and volume of the subwoofer. Set the subwoofer volume to more than half.
- If the power of this unit suddenly turns off, the wires in the speaker cables have touched the rear panel or other wires, and the protection circuit is working. Twist the wires again securely, and make sure they do not stick out of

the speaker terminals when connecting.

1. Place the supplied speaker setup microphone at the listening position, and connect it to the SETUP MIC jack on the main unit.



When placing the speaker setup microphone on a tripod, refer to the illustration.

2. Confirm a test tone is output from the subwoofer and press ENTER. Proceed to step 3 if a subwoofer is not connected.
3. Press ENTER to output test tones from each speaker, and the connected speakers and the noise in the surrounding environment are automatically measured.
4. The measurement results in step 3 are displayed. Select "Next", and press ENTER. The test tones are output again. Then, the unit automatically sets the optimum volume level, crossover frequency, etc.
5. When the measurement is completed, the measurement results are displayed. You can check each setting using the cursors \langle / \rangle . Select "Save" and press ENTER to save the settings.
6. Disconnect the speaker setup microphone.

■ 3. ARC Setup

To connect with an ARC-compatible TV, select "Yes". The ARC setting on this unit turns on, and you can listen to the TV's audio through this unit.

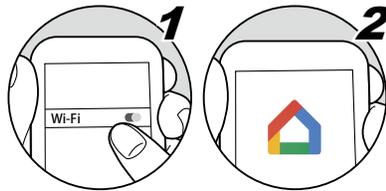
- Pressing "Yes" turns the HDMI CEC function on, and the power consumption in standby mode will increase.

■ 4. Network Connection

1. To make the network connection settings, select "Yes" and press ENTER. A

confirmation screen asking you to agree to the privacy statement is displayed during network setting, so select "Accept" if you agree and then press ENTER.

2. Select the type of connection to the network. To use the Chromecast built-in function to connect, select "Yes" and press ENTER. The Google Home app is required to use the Chromecast built-in function. Download the Google Home app from Google Play or the App Store to your smart phone or tablet.
 - Google Home app can be used on the following operating systems. (As of August 2019)
 - Android™: Android 4.4 or later.
 - iOS: iOS 10.0 or later. Compatible with iPhone®, iPad®, and iPod touch®.



If you select "No", you can connect using either wired LAN or Wi-Fi.

"Wired": Use a wired LAN to connect to a network.

"Wireless": Wi-Fi connection using an access point such as a wireless LAN router.

- There are two methods for Wi-Fi connection.
 - "Scan Networks"**: Search for an access point from this unit. Find out the SSID of the access point beforehand.
 - "Use iOS Device (iOS7 or later)"**: Share the Wi-Fi settings of your iOS device with this unit.
- If you select "Scan Networks", there are another two types of connection methods. Check the following.
 - "Enter Password"**: Enter the password (or key) of the access point to connect.
 - "Push Button"**: If the access point is equipped with an automatic setting button, you can connect without entering the password.
- If the SSID of the access point is not displayed, select "Other..." with the cursor > on the SSID list screen, press ENTER, and then follow the on-screen instructions.

Keyboard Input

To switch between upper and lower cases, select "A/a" on the screen, and press ENTER on the remote controller.

To select whether to mask the password with "*" or display it in plain text, press MEMORY on the remote controller. Pressing CLR on the remote controller will delete all the input characters.

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 contains a microPC for signal processing and control functions. In very rare situations, severe interference, noise from an external source, or static electricity may cause it to lockup. In the unlikely event that this happens, unplug the power cord from the wall outlet, wait at least 5 seconds, and then plug it back in.
- Our company is not responsible for damages (such as CD rental fees) due to unsuccessful recordings caused by the unit's malfunction. Before you record important data, make sure that the material will be recorded correctly.

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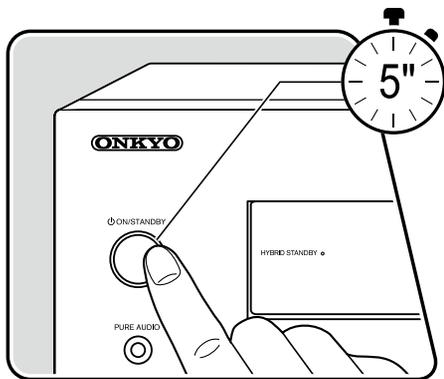
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When the unit is operating erratically

❑ Try restarting the unit

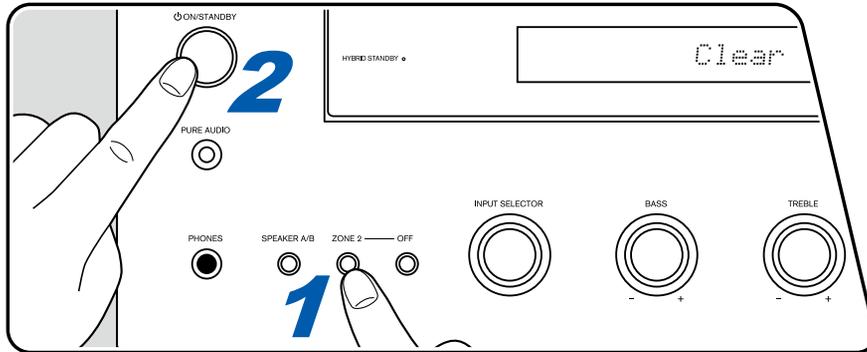
Restarting this unit may solve the problem. After turning the unit to standby mode, press and hold the  ON/STANDBY button of the main unit for at least 5 seconds, and then restart the unit. (The settings on this unit are kept.) If the problem persists after restarting the unit, unplug and plug the power cords of this unit and connected devices or HDMI cable.



❑ Resetting the unit (this resets the unit settings to the default)

If the restart of the unit does not solve the problem, reset the unit, and restore all the settings to the factory default at the time of purchase. This may solve the problem. If the unit is reset, your settings are restored to the default values. Be sure to note down your setting contents before performing the following operations.

1. While pressing and holding ZONE 2 button on the main unit with the unit turned on, press the \odot ON/STANDBY button.
2. "Clear" is displayed on the display, and the unit returns to the standby state. Do not remove the power cord until "Clear" disappears from the display.



Troubleshooting

■ Power

❑ When the power is turned on, "AMP Diag Mode" appears on the display of the main unit.

- The protection circuit function may have operated. If the unit suddenly enters the standby state and "AMP Diag Mode" appears on the display of the main unit when the power is turned on again, this function is diagnosing whether or not the main unit is malfunctioning or there is an abnormality with the speaker cable connection. When the diagnosis is complete, the following messages are displayed.

CH SP WIRE	If the unit returns to the normal ON state after "CH SP WIRE" appears on the display, the speaker cable may have been shortcircuited. After setting the power of this unit to standby state, connect the speaker cable again. Twist the wires exposed from the tip of the speaker cable so that the wires do not stick out of the speaker terminal.
NG:*****	If the operation has stopped with "NG" displayed on the display, set the power of this unit to standby state immediately and remove the power plug from the outlet. The unit may be malfunctioning. Consult a dealer.

❑ The unit turns off unexpectedly

- If "5. Hardware" - "Power Management" - "Auto Standby" on the Setup menu is activated, the unit automatically enters the standby mode.
- The protection circuit function may have operated due to an abnormal rise in temperature of the unit. In such a case, the power turns off repeatedly even if the power is turned on each time. Secure sufficient ventilation space around the unit, wait for a while until the temperature of the unit decreases. Then, turn the power on again.

(→p93)

WARNING: If smoke, smell or abnormal noise is produced by the unit, unplug the power cord from the outlet immediately, and contact the dealer or our company's support.

■ Audio

- Make sure that the speaker setup microphone is no longer connected.
- Confirm that the connection between the output jack on the connected device and the input jack on this unit is correct.
- Make sure that none of the connecting cables are bent, twisted, or damaged.
- If the MUTE indicator on the display blinks, press MUTING on the remote controller to cancel muting.
- While headphones are connected to the PHONES jack, no sound is output from the speakers.

Check the following if the problem persists after you have confirmed the above.

❑ No sound from the TV

- Change the input selector on this unit to the position of the terminal to which the TV is connected.
- If the TV does not support the ARC function, along with the connection by an HDMI cable, connect the TV with this unit using a digital optical cable. (→p27)

❑ No sound from a connected player

- Change the input selector on this unit to the position of the jack to which the player is connected.
- Check the digital audio output setting on the connected device. On some game consoles, such as those supporting DVD, the default setting may be off.
- For some DVD-Video discs, you need to select an audio output format from a menu.
- Only PCM audio is supported by the DIGITAL IN OPTICAL/COAXIAL jacks on this unit. If you have connected with a digital optical cable or digital coaxial cable, change the audio output settings on the player to PCM output.

❑ A speaker produces no sound

- Make sure that the polarity (+/-) of the speaker cables is correct, and that no bare wires are in contact with the metal part of speaker terminals. (→p19)
- Make sure that the speaker cables are not shorting out.
- Check "Connect the Speaker Cables" (→p19) to see if the speaker connections have been made correctly. Settings for the speaker connection environment need to be made in "Speaker Setup" in Initial Setup. Check "Initial Setup with Auto Start-up Wizard" (→p100).
- Be sure to remove the jumper bar on the speakers when using Bi-Wiring connection.

❑ The subwoofer produces no sound

If the setting of the front speakers is "Full Band", the low range elements will be output from the front speakers instead of from the subwoofer during 2 ch audio input of TV or music. To output the sound from the subwoofer, make one of the following settings.

1. Change the setting for the front speakers to a setting of crossover frequency value other than "Full Band".
The range below the specified frequency will be output from the subwoofer instead of from the front speakers. If your front speakers have a high low-range reproduction capability, changing this setting is not recommended.
 2. Change "Double Bass" to "On".
The low range elements of the front speakers will be output from both the front speakers and the subwoofer. Due to this, the bass sound may be emphasized too much. In such a case, do not change the setting, or make the setting with the above option 1.
- For the setting details, refer to "2. Speaker" - "Crossover" on the Setup menu. (→p85)
 - If the input signals do not contain subwoofer audio elements (LFE), the subwoofer may produce no sound.
 - When only SPEAKER B (→p22) is outputting audio, there will be no audio output from the powered subwoofer.

❑ Noise can be heard

- Using cable ties to bundle audio pin cables, power cords, speaker cables, etc. may degrade the audio performance. Do not bundle the cords.
- An audio cable may be picking up interference. Change the position of the cables.

❑ The beginning of audio received by an HDMI IN cannot be heard

- Since it takes longer to identify the format of an HDMI signal than it does for other digital audio signals, audio output may not start immediately.

❑ Sound suddenly reduces

- When using the unit for extended periods with the temperature inside the unit exceeding a certain temperature, the volume may be reduced automatically to protect the circuits.

❑ Sound suddenly changes

- When "InteliVolume" is set, the volume is set for each input selector. Check "4. Source" - "InteliVolume" on the Setup menu (→[p87](#)).

❑ Cannot select Pure Audio mode

- The Pure Audio mode cannot be selected when the Multi-zone function is on.

■ Video

- Confirm that the connection between the output jack on the connected device and the input jack on this unit is correct.
- Make sure that none of the connecting cables are bent, twisted, or damaged.
- When the TV image is blurry or unclear, the power cord or connection cables of the unit may have interfered. In such a case, keep distance between TV antenna cable and cables of the unit.
- Check the switching of the input screen on the monitor side such as a TV.

Check the following if the problem persists after you have confirmed the above.

❑ No image appears

- Change the input selector on this unit to the position of the jack to which the player is connected.

❑ No image from a device connected to HDMI IN jack

- To display video from the connected player on the TV while the unit is in standby, you need to enable "5. Hardware" - "HDMI" - "HDMI Standby Through" on the Setup menu. For details of the HDMI Standby Through function, check "5. Hardware" - "HDMI" on the Setup menu. (→p89)
- To output video to a TV connected to the HDMI OUT SUB jack, press the AUDIO button on the remote controller to display "AUDIO Menu" and select "HDMI" - "HDMI Out" and select the HDMI OUT jack.
- Check if "Resolution Error" is displayed on the main unit display when video input via HDMI IN jack is not displayed. In this case, the TV does not support the resolution of the video input from the player. Change the setting on the player.
- Normal operation with an HDMI-DVI adapter is not guaranteed. In addition, video signals output from a PC are not guaranteed.

❑ Images flicker

- The output resolution of the player may not be compatible with the resolution of the TV. If the player is connected to this unit with an HDMI cable, change the output resolution on the player. Also this may be solved by changing the screen mode on the TV.

❑ Video and audio are out of synch

- Depending on the settings on your TV and connection environment, the video may be behind the audio. Press AUDIO on the remote controller to display "AUDIO Menu", select "HDMI" - "A/V Sync", and make the adjustment. (→p97)

■ Linked operation

❑ HDMI linked operation does not work with CEC-compliant devices, such as a TV

- In the Setup menu of the unit, set "5. Hardware" - "HDMI" - "HDMI CEC" to "On". (→p89)
- It is also necessary to set HDMI linking on the CEC-compliant device. Check the instruction manual.

■ Tuner

❑ Poor reception or much noise

- Recheck the antenna connection. (→p32)
- Move the antenna away from the speaker cord or power cord.
- Move the unit away from your TV or PC.
- Passing cars or airplanes in the vicinity can cause interference.
- If radio waves are blocked by concrete walls, etc., radio reception may be poor.
- Change the reception mode to mono (→p62).
- Operating the remote controller during AM reception may cause noise. (North American models)
- FM reception may be clearer if you use the antenna jack on the wall used for the TV.

■ BLUETOOTH function

- Unplug and plug the power cord of the unit, or turn off and on the BLUETOOTH-enabled device. Restart of the BLUETOOTH-enabled device may be effective.
- BLUETOOTH-enabled devices must support the A2DP profile.
- Because a radio wave interference will occur, this unit may not be used near devices such as a microwave oven or cordless phone which use the radio wave in the 2.4 GHz range.
- A metallic object near the unit can affect on the radio wave, and BLUETOOTH connection may not be possible.

Check the following if the problem persists after you have confirmed the above.

❑ Cannot connect with this unit

- Check if the BLUETOOTH function of the BLUETOOTH-enabled device is enabled.

(→p92)

❑ Music playback is unavailable on the unit even after successful BLUETOOTH connection

- When the audio volume of your BLUETOOTH-enabled device is set low, the audio may not be played back. Turn up the volume of the BLUETOOTH-enabled device.
- Depending on the BLUETOOTH-enabled device, the Send/Receive selector switch may be equipped. Select Send mode.
- Depending on the characteristics or specifications of the BLUETOOTH-enabled device, music may not be played back on this unit.

❑ Sound is interrupted

- There may a problem with the BLUETOOTH-enabled device. Check the information on a web page.

❑ The audio quality is poor after connection with a BLUETOOTH-enabled device

- The BLUETOOTH reception is poor. Move the BLUETOOTH-enabled device closer to the unit, or remove any obstacle between the BLUETOOTH-enabled device and this unit.

■ Network function

- If you cannot select a network service, start up the network function to select it. It may take approx. one minute to start it up.
- When the NET indicator is blinking, this unit is not properly connected to the home network.
- Unplug and plug the power cords of this unit and the router, or restart the router.
- If the desired router is not displayed 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.

Check the following if the problem persists after you have confirmed the above.

❑ Cannot access the Internet radio

- In the case the service provider has terminated the service, the network service or contents may not be used on this unit.
- Check if your modem and router are properly connected, and they are both turned on.
- Check if the LAN side port on the router is properly connected to this unit.
- Check if connecting to Internet from other devices is possible. If it is not possible, turn off all devices connected to the network, wait for a while, and then turn on the devices again.
- Depending on ISP, setting the proxy server is required.
- Check if the router and modem you are using are supported by your ISP.

❑ Cannot access the network server

- This unit needs to be connected to the same router as the network server.
- This unit supports the Windows Media® Player 11 or 12 network servers, or NASes that support the home network function.
- Windows Media® Player may require some settings. Refer to "Playing back files on a PC and NAS (Music Server)".
- When using a PC, only the music files registered in the library of Windows Media® Player can be played.

(→p50)

❑ Sound is interrupted when playing music files on the network server

- Check if the network server meets the requirements for operation.
- When the PC is serving as the network server, quit application software other than the server software (Windows Media® Player 12, etc.).
- If the PC is downloading or copying large files, the playback sound may be interrupted.

■ USB storage device

❑ USB storage device is not displayed

- Check if the USB storage device or USB cable is securely inserted to the USB port of the unit.
- Disconnect the USB storage device once from the unit, and then reconnect it.
- Performance of the hard disk that receive power from the USB port of the unit is not guaranteed.
- Depending on the type of content, the playback may not be performed normally. Check the types of supported file formats.
- Operations of USB storage devices equipped with security functions are not guaranteed.

(→p47)

■ Wireless LAN Network

- Unplug and plug the power cords of this unit and the wireless LAN router, check the power-on status of the wireless LAN router, or restart the wireless LAN router.

Check the following if the problem persists after you have confirmed the above.

□ Cannot access wireless LAN network

- The wireless LAN router setting may be switched to Manual. Restore the setting to Auto.
- Try the manual set-up. The connection may succeed.
- When the wireless LAN router is in stealth mode (mode to hide SSID) or when the ANY connection is off, the SSID is not displayed. Change the setting and try again.
- Check if the SSID and encryption settings (WEP, etc.) are correct. Match the network settings with the settings of this unit.
- Connection to an SSID that includes multi-byte characters is not supported. Set the SSID of the wireless LAN router using single-byte alphanumeric characters only, and try again.

□ Connected to an SSID different from the selected SSID

- Some wireless LAN routers allow you to set multiple SSIDs for one unit. If connecting to such a router using the automatic setting button, you may end up connecting to an SSID different from the SSID you want to connect to. If this occurs, use the connection method requiring you to enter a password.

□ Playback sound is interrupted, or communication is not possible

- You may not receive radio waves due to poor radio wave conditions. Shorten the distance from the wireless LAN router, or remove obstacles to improve visibility, and connect again. Install the unit away from microwave ovens or other access points. It is recommended to install the wireless LAN router and the unit in the same room.
- If there is a metallic object near the unit, wireless LAN connection may not be possible because the metal affects the radio wave.
- When other wireless LAN devices are used near the unit, other symptoms may occur, such as interrupted playback and impossible communication. You can avoid those problems by changing the channel of your wireless LAN router. For instructions on changing channels, refer to the instruction manual supplied with your wireless LAN router.
- There may not be enough bandwidth available in wireless LAN. Use a wired LAN for connection.

■ Multi-zone function

□ Cannot ZONE-output the audio of externally connected AV components

- To output audio from an externally connected AV component to ZONE 2, connect it to any of HDMI IN1 to IN3 jacks. If the AV component is not equipped with an HDMI jack, use a digital coaxial cable, digital optical cable or analog audio cable. Also, the audio from externally connected AV components can be output to ZONE 2 only when the audio is analog or 2ch PCM signal. When the AV component is connected to this unit with an HDMI cable, digital coaxial cable or digital optical cable, change the audio output of the AV component to the PCM output.
- When video and audio via HDMI input are output to ZONE 2, set "1. Input/Output Assign" - "TV Out / OSD" - "Zone 2 HDMI" (→p81) to "Use" on the Setup menu.

□ Others

- If the audio signal is from the NET input selector, the zone output is not possible for DSD audio signals.

■ Remote Controller

- Make sure that the batteries are inserted with the correct polarity.
- Insert new batteries. Do not mix different types of batteries, or old and new batteries.
- Make sure that the sensor of the main unit is not subjected to direct sunlight or inverter-type fluorescent lights. Relocate it if necessary.
- If the main unit is installed in a rack or cabinet with colored-glass doors, or if the doors are closed, the remote controller may not work normally.

■ Display

□ The display does not light up

- When the Dimmer function is working, the display may go dim. Press the DIMMER button, and change the brightness level of the display.
- The display is turned off when the Pure Audio listening mode is selected.

(→p16)

■ Others

□ Strange noise can be heard from the unit

- If you have connected another device to the same outlet as this unit, strange noise may occur under the influence of the device. If the symptom is remedied by removing the power plug of the other device from the outlet, use different outlets for this unit and the device.

□ The message "Noise Error" appears during AccuEQ Room Calibration

- This can be caused by a malfunction in your speaker unit. Check the speaker output, etc.

❑ The measurement results of AccuEQ Room Calibration show different distances to the speakers from the actual ones

- Depending on the speakers you are using, some errors may occur in the measurement results. If this is the case, make the settings in "2. Speaker" - "Distance" in the Setup menu.

(→[p86](#))

❑ The measurement results of AccuEQ Room Calibration show that the volume level of the subwoofer has been corrected to the lower limit

- The volume level correction of the subwoofer may not have been completed. Lower the volume of the subwoofer before AccuEQ Room Calibration measurement.

Reducing the Power Consumption in Standby State

When the following functions are enabled, the power consumption in standby state increases. To reduce the power consumption in standby state, check each setting and set the functions to "Off".

- HDMI CEC (→[p89](#))
- HDMI Standby Through (→[p89](#))
- USB Power Out at Standby (→[p93](#))
- Network Standby (→[p94](#))
- Bluetooth Wakeup (→[p94](#))

About HDMI

Compatible functions

HDMI (High Definition Multimedia Interface) is a digital interface standard for connecting TVs, projectors, Blu-ray Disc/DVD players, digital tuners, and other video components. Several separate video and audio cables have been required to connect AV components so far. With HDMI, a single cable can transmit control signals, digital video and digital audio (2-channel PCM, multichannel digital audio, and multichannel PCM).

HDMI CEC function:

By connecting a device that complies with CEC (Consumer Electronics Control) of the HDMI standard using an HDMI cable, a variety of linked operations between devices are possible. This function enables various linking operations with players, such as switching input selectors interlocking with a player, adjusting the volume of this unit using the remote controller of a TV, and automatically switching this unit to standby when the TV is turned off. The unit is designed to link with products that comply with the CEC standard, however, linked operation is not always guaranteed with all CEC devices. For linked functions to work properly, do not connect CEC-compliant devices exceeding the connectable number to the HDMI jack as shown below.

- Blu-ray Disc/DVD players: up to 3 units
- Blu-ray Disc/DVD recorders: up to 3 units
- Cable TV tuner, terrestrial digital tuner, and satellite broadcasting tuner: up to 4 units

We have confirmed the operations of the following devices. (As of January 2019)
Toshiba brand televisions; Sharp brand televisions; Onkyo and Integra brand RIHD-compatible players; Toshiba brand players and recorders; Sharp brand players and recorders (when used with a Sharp brand television)

ARC (Audio Return Channel):

By connecting an ARC-compliant TV with a single HDMI cable, you can output the audio and video from this unit to the TV, and also input the audio from the TV to this unit.

HDMI Standby Through:

Even if this unit is in standby mode, the input signals from AV components can be transmitted to the TV.

Deep Color:

By connecting devices supporting Deep Color, video signals input from the devices can be reproduced on the TV with even more colors.

x.v.Color™:

This technology reproduces even more realistic colors by expanding the color gamut.

3D:

You can transmit 3D video signals from AV components to the TV.

4K:

This unit supports 4K (3840×2160p) and 4K SMPTE (4096×2160p) video signals.

Lip Sync:

Automatically corrects desynchronization between the video and audio signals based on the information from the HDMI Lip-Sync-compatible TV.

Copyright Protection:

The HDMI jack of this unit conforms to the Revision 1.4, 2.2, and 2.3 standards of the HDCP (High-bandwidth Digital Content Protection), a copy protection system for digital video signals. Other devices connected to the unit must also conform to the HDCP standards.

Supported Audio Formats

2 ch linear PCM:

32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz, 16/20/24 bit

DSD:

Supported sampling rates: 2.8 MHz

Your Blu-ray Disc/DVD player must also support the HDMI output of the above audio formats.

Supported resolutions

HDMI IN1 to IN6:

- Copyright protection technology: HDCP1.4/2.2/2.3
- Color space (Color Depth):
 - 720×480i 60 Hz, 720×576i 50 Hz, 720×480p 60 Hz, 720×576p 50 Hz, 1920×1080i 50/60 Hz, 1280×720p 24/25/30/50/60 Hz, 1680×720p 24/25/30/50/60 Hz, 1920×1080p 24/25/30/50/60 Hz, 2560×1080p 24/25/30/50/60 Hz, 4K (3840×2160p) 24/25/30 Hz, 4K SMPTE (4096×2160p) 24/25/30 Hz : RGB/YCbCr4:4:4 (8/10/12 bit), YCbCr4:2:2 (12 bit)
 - 4K (3840×2160p) 50/60 Hz, 4K SMPTE (4096×2160p) 50/60 Hz : RGB/YCbCr4:4:4 (8 bit), YCbCr4:2:2 (12 bit), YCbCr4:2:0 (8/10/12 bit)

General Specifications

■ Amplifier Section

Rated Output Power (FTC) (North American)

With 8 ohm loads, both channels driven, from 20-20,000 Hz; rated 135 watts per channel minimum RMS power, with no more than 0.08% total harmonic distortion from 250 milliwatts to rated output.

Rated Output Power (IEC) (European)

2 ch × 180 W at 6 ohms, 1 kHz, 2 ch driven of 1% THD

Maximum Effective Output Power (North American)

200 W at 6 ohms, 1 kHz, 2 ch driven of 10% THD

Maximum Effective Output Power (European)

200 W at 6 ohms, 1 kHz, 2 ch driven of 10% THD

Dynamic Power (*)

* IEC60268-Short-term maximum output power

300 W (3 Ω, Front)

250 W (4 Ω, Front)

150 W (8 Ω, Front)

THD+N (Total Harmonic Distortion+Noise)

0.08% (20 Hz - 20,000 Hz, half power)

Input Sensitivity and Impedance

200 mV/47 kΩ (LINE (RCA))

3.5 mV/47 kΩ (PHONO MM)

Rated RCA Output Level and Impedance

1 V/470 Ω (PRE OUT)

1 V/470 Ω (SUBWOOFER PRE OUT)

200 mV/470 Ω (ZONE 2 LINE OUT)

Phono Maximum Input Signal Voltage

70 mV (MM 1 kHz 0.5%)

Frequency Response

10 Hz - 100 kHz/+1 dB, -3 dB (Direct/Pure Audio)

Tone Control Characteristics

±10 dB, 20 Hz (BASS)

±10 dB, 20 kHz (TREBLE)

Signal to Noise Ratio

106 dB (IHF-A, LINE IN, SP OUT)

80 dB (IHF-A, PHONO IN, SP OUT)

Speaker Impedance

A,B: 4 Ω - 16 Ω

A+B: 8 Ω - 16 Ω

Bi-Wiring: 4 Ω - 16 Ω

Headphone Rated Output

80 mW + 80 mW (32 Ω, 1 kHz, 10% THD)

Supported impedance of Headphones

8 Ω - 600 Ω

Headphones Frequency Response

10 Hz - 100 kHz

■ Tuner Section

FM Tuning Frequency Range

87.5 MHz - 107.9 MHz (North American)

87.5 MHz - 108.0 MHz, RDS (European)

50 dB quieting sensitivity (FM MONO)

1.0 μV, 11.2 dBf (IHF, 75 Ω)

AM Tuning Frequency Range (North American)

530 kHz - 1710 kHz

DAB Tuning Frequency Range (European)

174.928 MHz - 239.200 MHz

Preset Channel

40

■ Network Section

Ethernet LAN

10BASE-T/100BASE-TX

Wireless LAN

IEEE 802.11 a/b/g/n/ac standard
(Wi-Fi® standard)
5 GHz/2.4 GHz band

■ BLUETOOTH Section

Communication system

BLUETOOTH Specification version 4.2

Frequency band

2.4 GHz band

Modulation method

FHSS (Frequency Hopping Spread Spectrum)

Compatible BLUETOOTH profiles

A2DP 1.2
AVRCP 1.3

Supported Codecs

SBC
AAC

Transmission range (A2DP)

20 Hz - 20 kHz (Sampling frequency 44.1 kHz)

Maximum communication range

Line of sight approx. 15 m (*)

* 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 (European)

Power Consumption

340 W

0.15 W (Full Standby mode)

2.0 W (Network Standby (wired))

2.0 W (Network Standby (wireless))

2.0 W (Bluetooth Wakeup)

0.15 W (HDMI CEC)

* 3.0 W (Equipment with HiNA functionality Standby mode, Network disconnect and Network Standby ON)

3.0 W (Standby mode (ALL ON))

45 W (No-sound)

6.1 W (HDMI Standby Through)

* This equipment complies with European Commission Regulation (EC) No 1275/2008 as equipment with HiNA functionality.

If you do not to use the Network function, please set Network Standby setting to Off. You can reduce power consumption under standby mode.

Dimensions (W × H × D)

435 mm × 174 mm × 383 mm

17-1/8" × 6 7/8" × 15 1/16"

Weight

11.8 kg (26 lbs.)

Maximum radio-frequency power transmitted in the frequency band(s) (European)

2400 MHz - 2483.5 MHz (20 dBm (e.i.r.p))

5150 MHz - 5350 MHz (23 dBm (e.i.r.p))

5470 MHz - 5725 MHz (23 dBm (e.i.r.p))

■ HDMI

Input

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

Output

OUT MAIN (ARC), OUT ZONE 2/SUB

Supported

Deep Color, x.v.Color™, Lip Sync, Audio Return Channel, 3D, 4K 60 Hz, CEC, Extended Colorimetry (sYCC601, Adobe RGB, Adobe YCC601), Content Type, HDR (HDR10, BT.2020, HLG)

Audio Format

DSD, PCM

HDCP version

2.3

Maximum Video Resolution

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

■ Supported input resolutions

HDMI input

4K, 1080p/24, 1080p, 1080i, 720p, 480p/576p

- Signals are output from the HDMI OUT jack of this unit to the TV with the same resolution as the input resolution. When a TV supporting 4K is used, HDMI video signals with 1080p can be output with 4K.

■ Audio Inputs

Digital

OPTICAL IN1 (CD), IN2 (TV/TAPE)

COAXIAL IN (BD/DVD)

Analog

IN1 (BD/DVD), IN2 (CBL/SAT), IN3 (TV/TAPE), IN4 (CD), PHONO

■ Audio Outputs

Analog

ZONE 2 LINE OUT

2 SUBWOOFER PRE OUT

FRONT L/R PREOUT

Speaker Outputs

SPEAKERS A: FRONT L/R

SPEAKERS B: FRONT L/R

(North American models support banana plugs.)

Phones

PHONES (Front, ø 6.3 mm, 1/4")

■ Others

Setup Mic: 1 (Front)

USB: 2 (Front: Ver.2.0, 5 V/0.5 A, Rear: Ver.2.0, 5 V/1A)

Ethernet: 1

RI REMOTE CONTROL: 1

IR IN: 1

IR OUT: 1

Specifications and features are subject to change without notice.

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