Pioneer

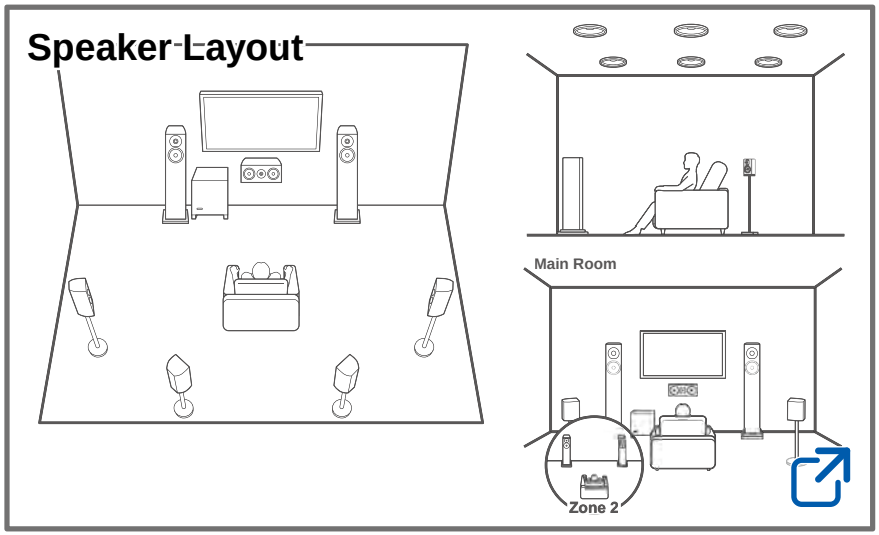
Instruction Manual

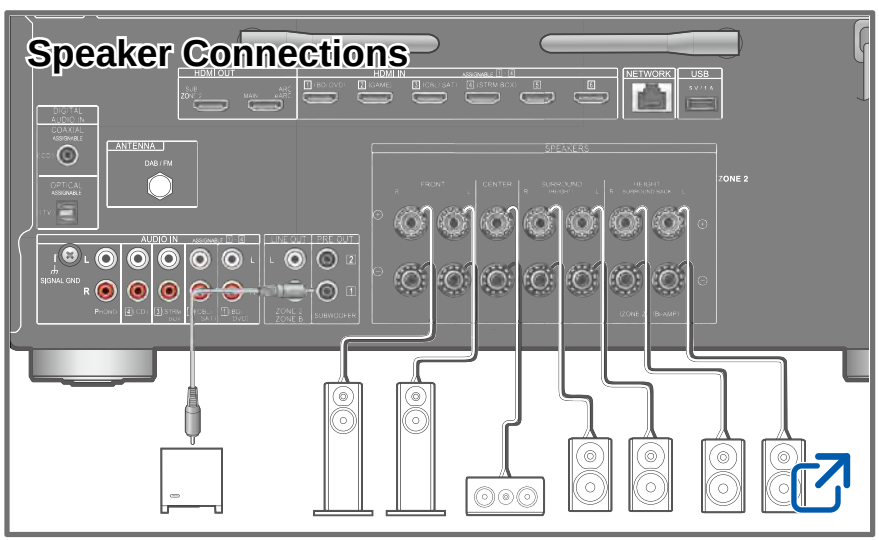
AV RECEIVER

VSX-935

En

Table of contents





Firmware Update

Troubleshooting

Supplementary Information

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 (→p123)
- HDMI Standby Through (→p123)
- USB Power Out at Standby (→p125)
- Network Standby (→p125)
- Bluetooth Wakeup (→p125)

❑ Detailed contents (Next page)

Before starting the procedure 7
Firmware Update 8
Update Information of the firmware 8
Firmware Update Procedure 8
Part Names 11
Front Panel 11
Display 13
Rear Panel (North American models) 14
Rear Panel (European, A Australian and Asian models) 16
Remote Controller 18
Inputting Characters 20

Speaker Layout

The listening room and the speaker layout 22
3.1 Channel System 23
5.1 Channel System 24
7.1 Channel System 25
3.1.2 Channel System 26
5.1.2 Channel System 27

Speaker Installation

Speaker Connections

Speakers you can use with this unit and cable connections 34

Connections

Notes regarding connections with HDMI cables 53
Connections 53
Connecting the TV 54
To ARC/eARC TV 54
To Non-ARC TV 54
Connecting the SUB Monitor 55
SUB Monitor 55
Connecting Playback Devices 56
Connections to BD/DVD and GAME with HDMI jacks 56
Connecting an Audio Component 57
Connecting a TV or Integrated Amplifier in a separate room (Multi-zone) 58
Connecting a TV (ZONE 2) 58
Connecting an Integrated Amplifier (ZONE 2) 59
Connecting Antennas 60
Network Connection 61
Connecting the Power Cord 62

Playback

Playing audio from an externally connected device 64
Basic Operations 64
BLUETOOTH® Playback 65

Playing audio from BLUETOOTH wireless technology enabled devices with this unit 65
Transmitting audio from this unit to BLUETOOTH wireless technology enabled devices 67
Listening To the Radio 69
Listening To the AM/FM Radio 69
Listening To DAB Digital Radio (European models only) 72
Presetting a Radio Station 74
Listening Mode 75
AV Adjust 77
Menu operations 77
Spotify 79
AirPlay® 80
Basic Operations 80
Playing Back on multiple devices (AirPlay2) 81
DTS Play-Fi® 82
Playing Back 82
Amazon Alexa 83
Registering this unit with an Amazon account 83
Operating this unit 84
Amazon Music 85
Registering This Unit with Amazon Music 85
Playing Amazon Music using the Pioneer Remote App 86
Playing Amazon Music using the remote controller 86
TIDAL 87
Registering this unit with TIDAL 87
Playing TIDAL 87
Connecting the Sonos System for Playback 88
Necessary Equipment 88
How to Connect This Unit and Sonos Connect 88
Setting Up 88
Playing Sonos on This Unit 89
Internet Radio 90
Playing Back 90
Multi-zone 92
Playing Back 93
Using PERSONAL PRESET 95
USB Storage Device 97
Supported Audio Formats 97
USB Storage Device Requirements 97
Playing music files saved on a USB storage device 98
Music Server 100
Supported Audio Formats 100
Windows Media® Player 12 settings 100

Playing Back 101
Play Queue 103
Adding Play Queue Information 103
Sort and Delete 103
Playing Back 104
Connecting a transmitter for playback 105
Connections 105
Setting Up 105
Playing Back 105

Setup

System Setup 108
Menu list 108
Input/Output Assign 110
Speaker 115
Audio Adjust 119
Source 121
Hardware 123
Multi Zone 127
Miscellaneous 128
MCACC 130
Menu operations 130
Full Auto MCACC 131
Manual MCACC 132
MCACC Data Check 133
Network/Bluetooth 134
Menu operations 134
Network 135
Bluetooth 138
Web Setup 141
Menu operations 141
Initial Setup with Auto Start-up Wizard 142
Operations 142
1. Speaker Setup 143
2. Multi Zone Sound Check 144
3. ARC Setup 144
4. Full Auto MCACC 144
Pioneer Remote App 145
Main features 145
Initial Setup 145

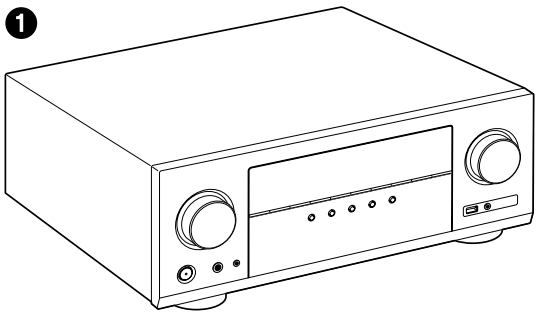
Troubleshooting

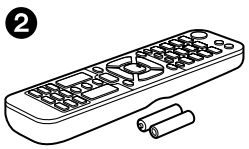
Before starting the procedure 147
When the unit is operating erratically 148
Troubleshooting 149

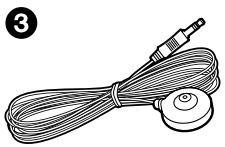
Appendix

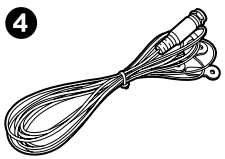
Speaker Layouts and Selectable Listening Modes 160
Input Formats and Selectable Listening Modes 163
Listening Mode Effects 167
Speaker combinations 171
General Specifications 173

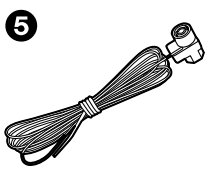
What's in the box

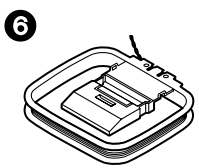












1. Main unit (1)
2. Remote controller (RC-974R) (1), Batteries (AAA/R03) (2)
3. Speaker setup microphone (1)
   - Used during Initial Setup.
4. DAB/FM antenna (European models) (1)
5. Indoor FM antenna (North American,Australian and Asian models) (1)
6. AM loop antenna (North American,Australian and Asian models) (1)

- Initial Setup Guide (1)

* This document is an online instruction manual. This is not supplied with the product.

Note

- Connect speakers with an impedance of 4 Ω to 16 Ω.
- 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 European models unless otherwise mentioned.
- Specifications and appearance are subject to change without prior notice.

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 ☎ button on the remote controller to display the Home screen, and refer to "System Setup" - "Miscellaneous" - "Firmware Update" - "Version" (→p129).

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 cursors on the remote controller, and press the ENTER button. 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 any playing Internet radio, USB storage device, or server content.
- If the multi-zone function is active, turn it off.
- If "HDMI CEC" is set to "On", set it to "Off".
  – Press ☎ to display the Home screen. Next, select "System Setup" - "Hardware" - "HDMI", press ENTER, 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 ☎.
   The Home screen is displayed on the TV screen.
2. Select "System Setup" - "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 ⏻ STANDBY/ON 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 ⏻ 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 1 GB 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 any playing Internet radio, USB storage device, or server content.
- If the multi-zone function is active, turn it off.
- If "HDMI CEC" is set to "On", set it to "Off".
  – Press ⌂ to display the Home screen. Next, select "System Setup" - "Hardware" - "HDMI", press ENTER, 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.
   PIOAVR∗∗∗∗_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 ⌂.
   The Home screen is displayed on the TV screen.
6. Select "System Setup" - "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 ⏻ STANDBY/ON 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 ⏻ on the remote controller.

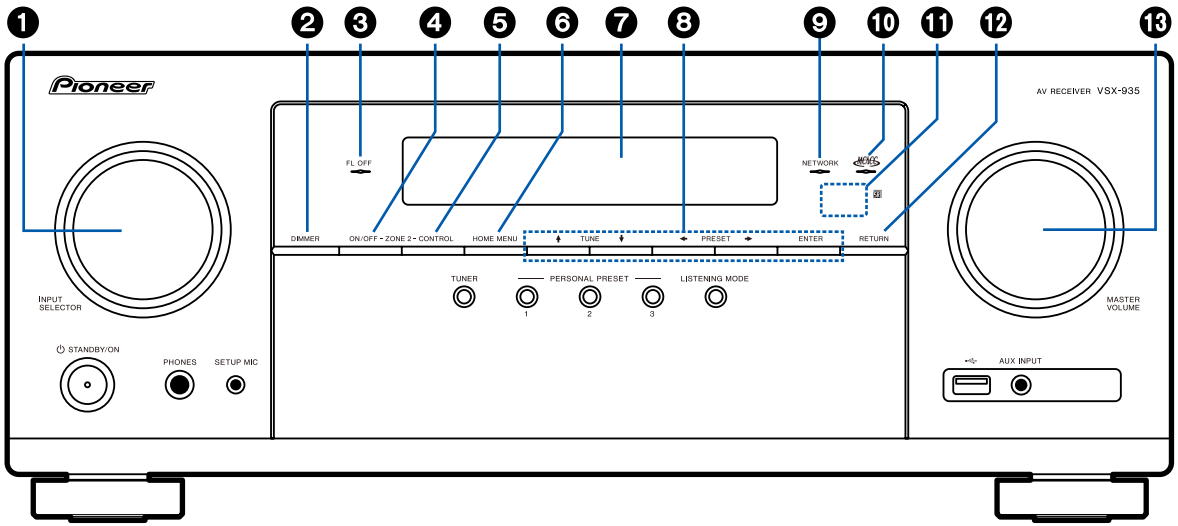
If an Error Message is Displayed

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

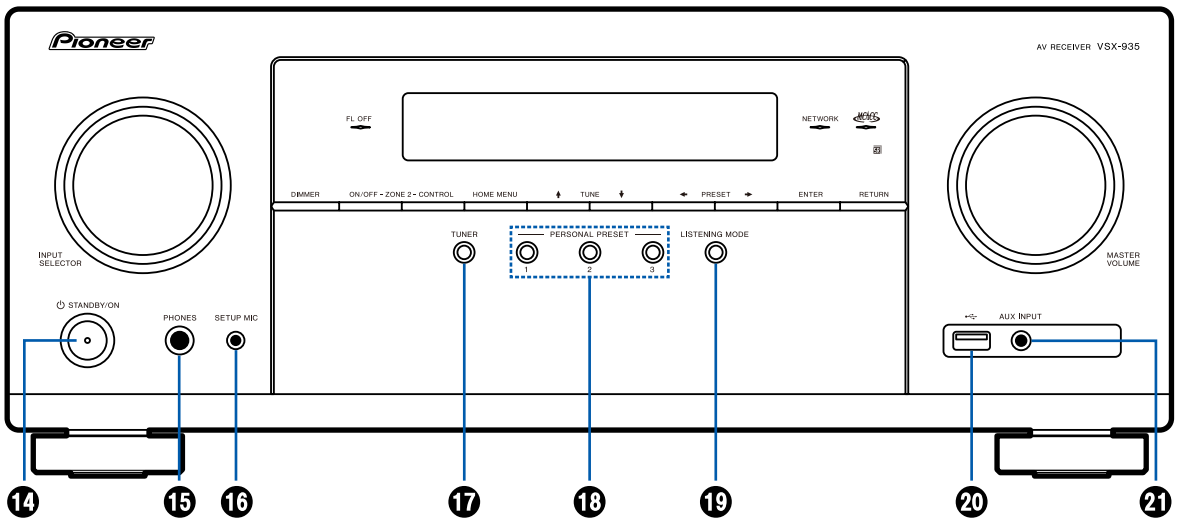
- ∗-01, ∗-10:
  The USB storage device cannot be recognized. Check if the USB storage device or USB cable is securely inserted to the USB port of the unit.
  Connect the USB storage device to an external power source if it has its own power supply.
- ∗-05, ∗-13, ∗-20, ∗-21:
  The firmware file is not 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.

Front Panel



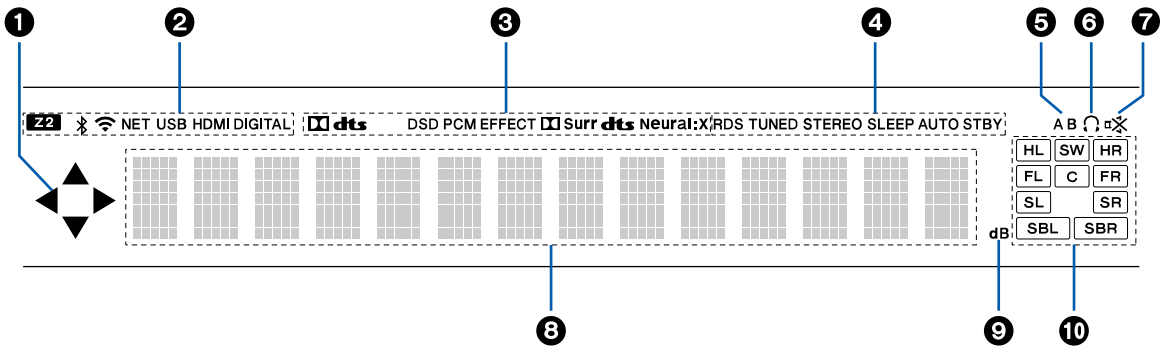
1. **INPUT SELECTOR dial**: Switch the input to be played.
2. **DIMMER button**: You can switch the display off or adjust the brightness of the display in three steps.
3. **FL OFF indicator**: This lights when you have pressed DIMMER repeatedly to turn the display off.
4. **ZONE 2-ON/OFF button**: Switches the multi-zone function on/off. (→p92)
5. **ZONE 2-CONTROL button**: Controls the multi-zone function. (→p92)
6. **HOME MENU button**: Displays the Home. (→p107, p130, p134)
7. **Display** (→p13)
8. **Cursor buttons (▲ / ▼ / ◀ / ▶) and ENTER button**: Select the item with the cursors, and press ENTER to confirm. Use them to tune to stations when using TUNER. (→p69)
9. **NETWORK indicator**: This lights when "NET" is selected with the input selector and the unit is connected to the network. 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. It does not light when ZONE 2 is on, however.
   - HDMI CEC (→p123)
   - HDMI Standby Through (→p123)
   - USB Power Out at Standby (→p125)
   - Network Standby (→p125)
   - Bluetooth Wakeup (→p125)
10. **MCACC indicator**: This lights when you have enabled the speaker calibration made with MCACC. (→p131, p144)
11. **Remote control sensor**: Receives signals from the remote controller.
    - The signal range of the remote controller is within about 16′/5 m, at an angle of 20° on the perpendicular axis and 30° to either side.
12. **RETURN button**: Returns the display to the previous state.
13. **MASTER VOLUME**

player, etc. using a stereo mini plug cable (ø1/8″/3.5 mm).



14. ⏻ **STANDBY/ON button**
15. **PHONES jack**: Headphones with a standard plug (ø1/4"/6.3 mm) are connected.
16. **SETUP MIC jack**: Connect the supplied speaker setup microphone. (→p131, p144)
17. **TUNER button**: Switches the input to be played to "TUNER". Also, pressing this button repeatedly switches the input between "AM" (Australian and Asian models), "FM" and "DAB" (European models).
18. **PERSONAL PRESET 1/2/3 buttons**: Registers the current setting conditions such as input selector, listening mode, etc. or call the registered settings. (→p95)
19. **LISTENING MODE button**: Switches the listening mode. (→p75)
20. **USB port**: A USB storage device is connected so that music files stored in it can be played. (→p97)
21. **AUX INPUT jack**: Connect a mobile music

Display

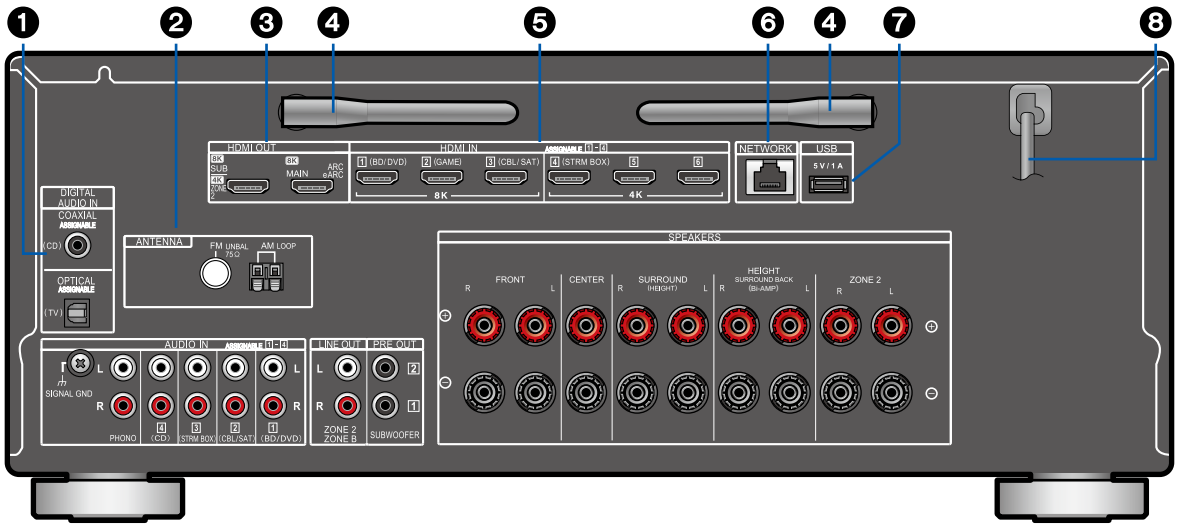


1. ▲ / ▼ / ◀ / ▶: These may light when performing operations while "NET" or "USB" is selected with the input selector. ▲ / ▼ light when there are multiple folders or files that are available to be selected. ◀ / ▶ light when text information does not fit with the range provided by "❽".
2. Lights in the following conditions.
   Z2: ZONE 2 is on.
   : Connected by BLUETOOTH.
   : Connected by Wi-Fi.

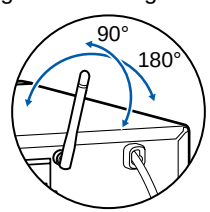
NET: Lights when connected to the network with the "NET" input selector. It will blink if incorrectly connected to the network.
USB: Lights when the "USB" input selector is selected, a USB device is connected and the USB input is selected. It will blink if the USB device is not properly connected.
HDMI: HDMI signals are input and the HDMI input is selected.
DIGITAL: Digital signals are input and the digital input is selected.

3. Lights according to the type of input digital audio signal and the listening mode.
4. Lights in the following conditions.
   RDS: Receiving RDS broadcasting.
   TUNED: Receiving DAB (European models)/AM (North American,Australian and Asian models)/ FM radio
   STEREO: Receiving FM stereo.
   SLEEP: Sleep timer is set. (→p124)
   AUTO STBY: Auto Standby is set. (→p124)
5. Displays the audio output destination.
   A: Outputs audio only to ZONE A.
   B: Outputs audio only to ZONE B.
   AB: Outputs audio to both ZONE A and ZONE B.
6. Lights when headphones are connected.
7. Blinks when muting is on.
8. Displays various information of the input signals.
9. Lights when adjusting the volume.
10. **Speaker/Channel display**: Displays the output channel that corresponds to the selected listening mode.

Rear Panel (North American models)

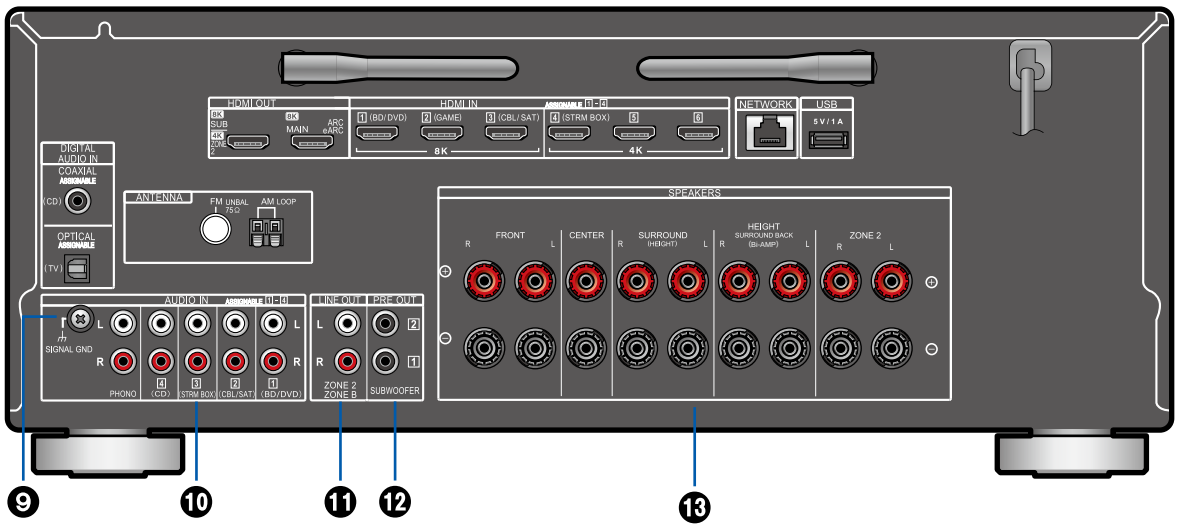


1. **DIGITAL AUDIO IN OPTICAL/COAXIAL jacks**: Input TV or AV component digital audio signals with a digital optical cable or digital coaxial cable
2. **ANTENNA AM LOOP/FM UNBAL 75 Ω terminal**
3. **HDMI OUT jacks**: Transmit video signals and audio signals with an HDMI cable connected to a monitor such 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.



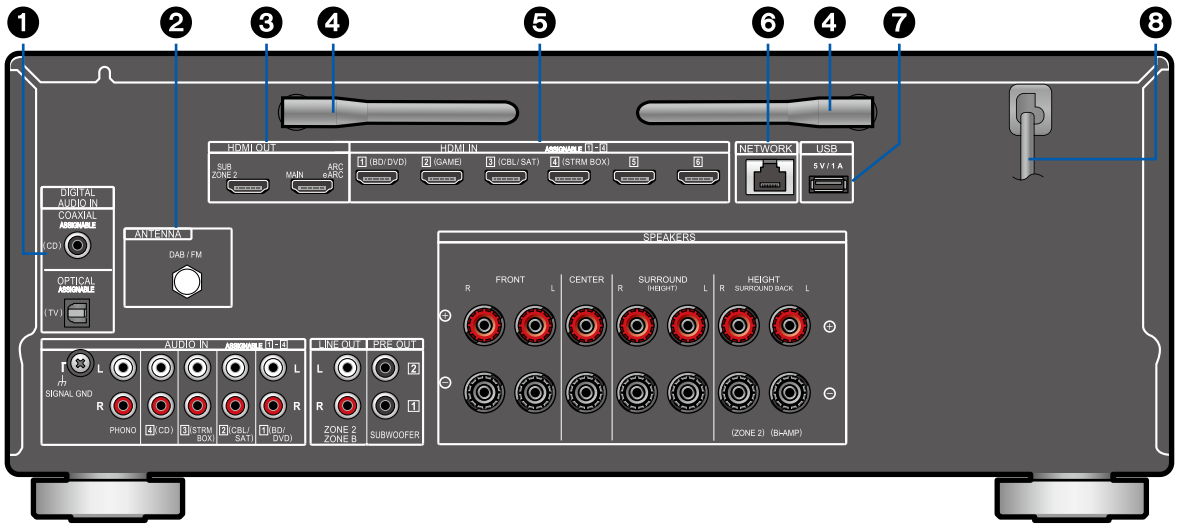
5. **HDMI IN jacks**: Transmit video signals and audio signals with an HDMI cable connected to an AV component.
6. **NETWORK port**: Connect to the network with an Ethernet cable.
7. **USB port**: Connect a USB storage device to play music files (→p97). You can also supply power (5 V/1 A) to USB devices with a USB cable.
8. **Power cord**

Rear Panel (North American models)



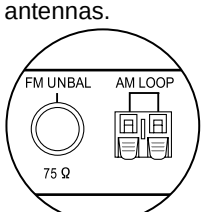
9. **SIGNAL GND terminal**: Connect the ground wire of the turntable.
10. **AUDIO IN jacks**: Input AV component audio signals with an analog audio cable.
11. **ZONE 2 LINE OUT jacks**: Output audio signals with an analog audio cable connected to an integrated amplifier in a separate room (ZONE 2).
    ZONE B LINE OUT jacks: Simultaneously output the same audio source as the speakers (ZONE A) connected to this unit by connecting this unit to wireless headphones, wireless speaker transmitter, etc., using an analog audio cable.
12. **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 of the SUBWOOFER PRE OUT jacks.
13. **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.)

Rear Panel (European, A Australian and Asian models)

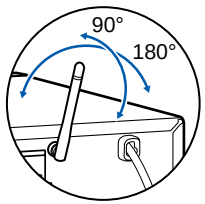


1. **DIGITAL AUDIO IN OPTICAL/COAXIAL jacks**: Input TV or AV component digital audio signals with a digital optical cable or digital coaxial cable.

2. **ANTENNA DAB/FM terminal** (European models): Connect the supplied antennas.
   ANTENNA AM LOOP/FM UNBAL 75 Ω terminal (Australian and Asian models): Connect the supplied antennas.

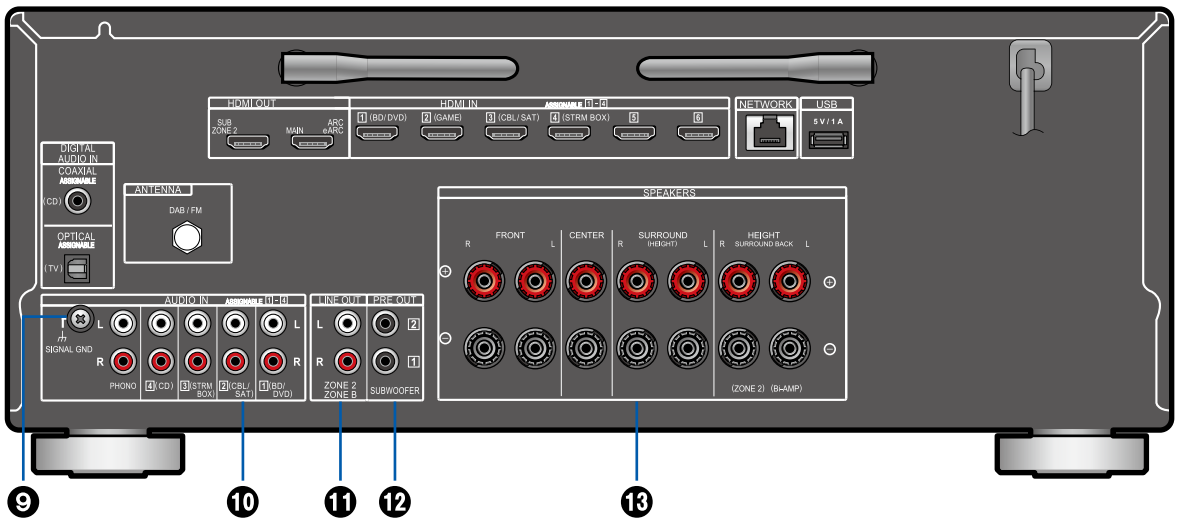


3. **HDMI OUT jacks**: Transmit video signals and audio signals with an HDMI cable connected to a monitor such as a TV or projector.
4. **Wireless antenna**: Used for Wi-Fi connection or when using a BLUETOOTH enabled device. Adjust the angles according to the connection status.



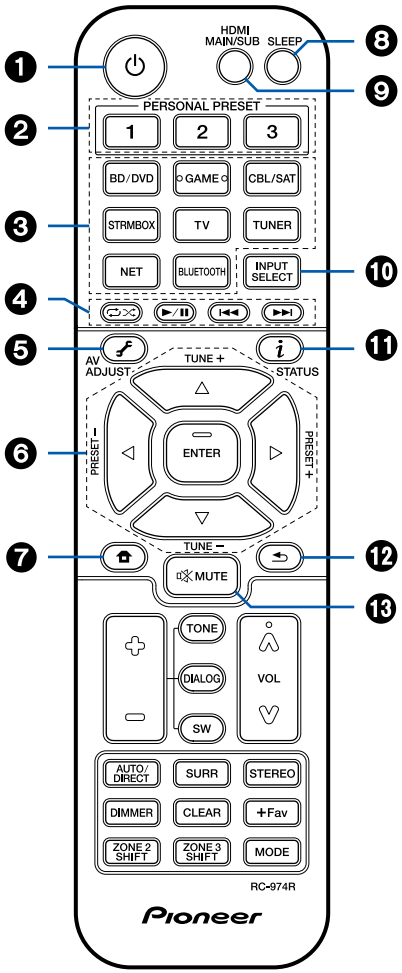
5. **HDMI IN jacks**: Transmit video signals and audio signals with an HDMI cable connected to an AV component.
6. **NETWORK port**: Connect to the network with an Ethernet cable.
7. **USB port**: Connect a USB storage device to play music files (→p97). You can also supply power (5 V/1 A) to USB devices with a USB cable.
8. **Power cord**

Rear Panel (European, A Australian and Asian models)

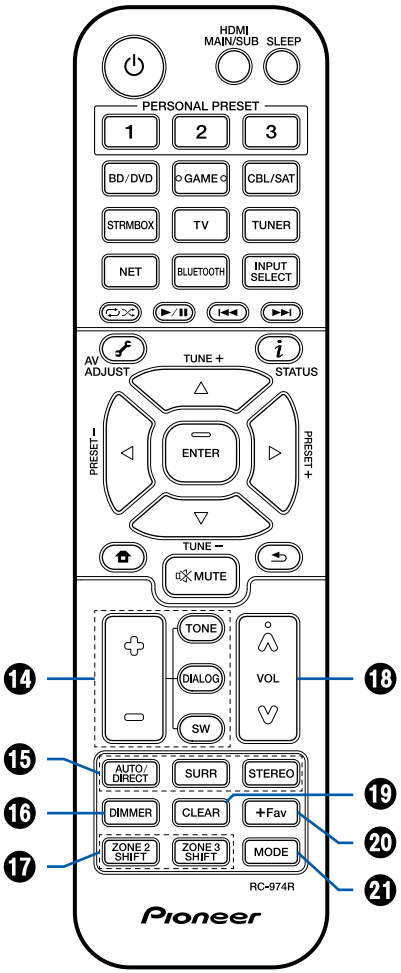


9. **SIGNAL GND terminal**: Connect the ground wire of the turntable.
10. **AUDIO IN jacks**: Input AV component audio signals with an analog audio cable.
11. **ZONE 2 LINE OUT jacks**: Output audio signals with an analog audio cable connected to an integrated amplifier in a separate room (ZONE 2).
    ZONE B LINE OUT jacks: Simultaneously output the same audio source as the speakers (ZONE A) connected to this unit by connecting this unit to wireless headphones, wireless speaker transmitter, etc., using an analog audio cable.
12. **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 of the SUBWOOFER PRE OUT jacks.
13. **SPEAKERS terminals**: Connect speakers with speaker cables. (Y plug connection is not supported.)

Remote Controller



1. ⏻ **STANDBY/ON button**
2. **PERSONAL PRESET 1/2/3 buttons**: Registers the current setting conditions such as input selector, listening mode, etc. or call the registered settings. (→p95)
3. **Input selector buttons**: Switches the input to be played.
4. **Play buttons**: Used for playback operations for the Music Server (→p100) or USB device (→p97). Also, switching to "CEC MODE" with "21. MODE button" allows you to operate an HDMI CEC function-enabled AV component. (Some devices may not be operated.)
5. **(AV ADJUST) button**: Settings such as "HDMI" and "Audio" can be made quickly during play on the TV screen. (→p77)
6. **Cursor buttons and ENTER button**: Select the item with the cursors, and press ENTER to confirm your selection. When the folder or file lists are not shown on one screen on the TV, press ◀/▶ to change the screen.
7. **button**: Displays the Home. (→p107, p130, p134)
8. **SLEEP button**: You can allow the unit to enter standby automatically when the specified time has elapsed. Select the time from "30 min", "60 min", "90 min" and "Off". When you do not want to turn the unit to standby automatically, select "Off". You can also set this by pressing the button on the remote controller to display the Home screen and selecting "System Setup" - "Hardware" - "Power Management" - "Sleep Timer" (→p124).
9. **HDMI MAIN/SUB button**: Select the HDMI OUT jack to output video signals from "MAIN", "SUB", and "MAIN+SUB".
10. **INPUT SELECT button**: Switches the input to be played.
11. **(STATUS) button**: Switches the information on the display and is used to operate RDS. (→p70)
12. **button**: Returns the display to the previous state.
13. **MUTE button**: Temporarily mutes audio. Press the button again to cancel muting.



14. **TONE/DIALOG/SW buttons**: Adjusts the sound quality of the speakers and volume level of the subwoofer.
    TONE button: You can adjust the sound quality of the speakers.
    1. Press TONE repeatedly to select Treble or Bass and adjust the content.
       Treble: Enhances or moderates the high-tone range of the speakers.
       Bass: Enhances or moderates the low-tone range of the speakers.
    2. Press + or - for adjustment.

    DIALOG button: Emphasizes movie dialogues and music vocals to listen to them more easily. It is effective to movie lines in particular. Also, it exerts the effect even if the center speaker is not used. Select a desired level from "1" (low) to "5" (high).
    1. Press DIALOG.
    2. Press + or - for adjustment.

    • Depending on the input source or listening mode setting, selection is not possible, or the desired effect may not be achieved.

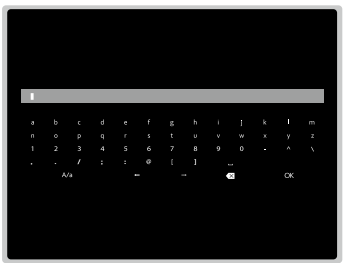
    SW button: Adjust the speaker level of the subwoofer while listening to the sound.
    1. Press SW.
    2. Press + or - to adjust the level between "-15.0 dB" and "+12.0 dB".

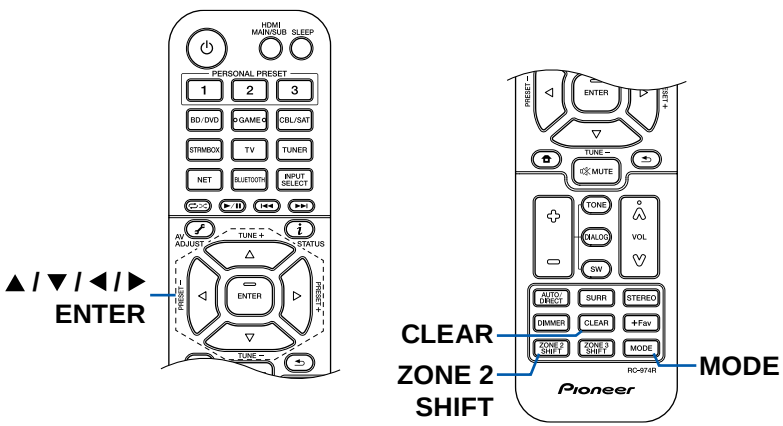
    • If you set the unit to the standby mode, the adjustments you made will be restored to the previous statuses.
15. **LISTENING MODE buttons**: Selects a listening mode (→p75).
16. **DIMMER button**: You can switch the display off or adjust the brightness of the display in three steps.
17. **ZONE 2 SHIFT button**: Used to control the multi-zone function (→p92). (The ZONE 3 SHIFT button cannot be used with this unit.)
18. **Volume buttons**
19. **CLEAR button**: Deletes all characters you have entered when entering text on the TV screen.
20. **+Fav button**: Used to register AM (North American, Australian and Asian models)/ FM/DAB (European models) radio stations. (→p74)
21. **MODE button**: Switches between automatic tuning and manual tuning (→p69) for AM (North American, Australian and Asian models)/ FM stations, and allows you to select the order for displaying DAB stations (→p73). Also, when an HDMI CEC function-enabled AV component is connected to this unit, you can switch "4. Play buttons" between "CEC MODE" and "RCV MODE" (normal mode).

Inputting Characters

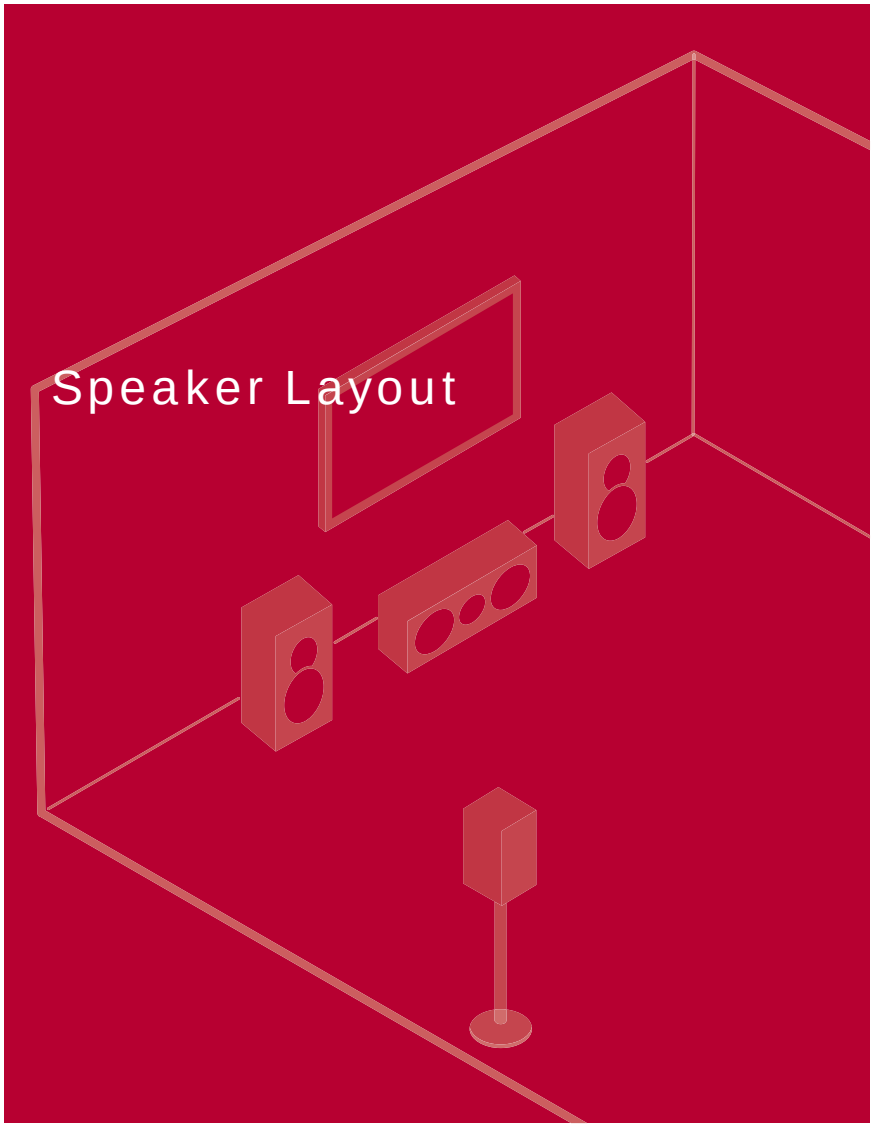
You can input characters or symbols on the keyboard displayed on the TV screen such as when inputting a password for Wi-Fi Setup (→p135) or naming a preset radio station (→p121).

1. Select a character or symbol with the cursors ▲ / ▼ / ◀ / ▶ on the remote controller and press the ENTER button.
2. When saving characters after input, select "OK" and press the ENTER button.





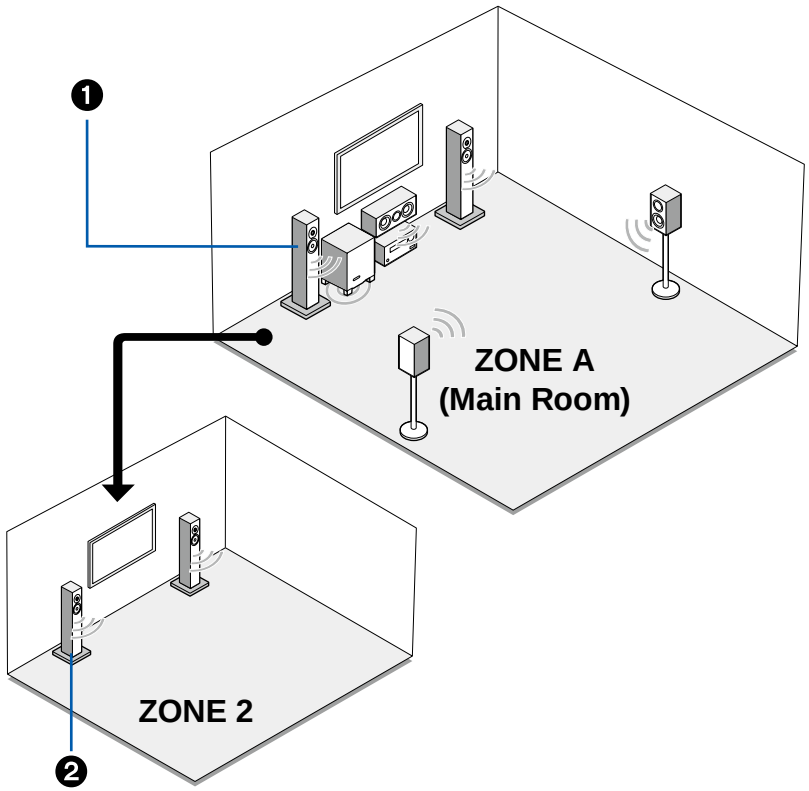
- Select "A/a" to switch between upper and lower cases. (Can also be switched with the MODE button on the remote controller.)
- To enter a space, select "␣".
- To delete a character on the left of the cursor, select "⌫".
- To delete all the input characters, press the CLEAR button on the remote control.
- On the ZONE 2 playback screen, operate the remote controller while pressing and holding the ZONE 2 SHIFT button. To delete all the input characters, only press the CLEAR button without pressing the ZONE 2 SHIFT button.



This unit can be used in different ways, depending on the layout of the speakers you are installing. Select the speaker layout that suits the installation environment, then confirm the methods for installation and connection.

- ❑ **Speaker layout (→p23)**
- ❑ **Speaker Installation (→p28)**
- ❑ **Speaker Connections (→p33)**
- ❑ **Speaker Combinations (→p171)**

The listening room and the speaker layout



1. ZONE A Speakers
The speaker system set up in the main room (where this unit is located).

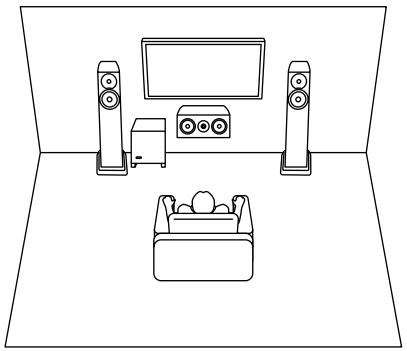
2. ZONE 2 Speakers
The 2 ch speaker system set up in a separate room (ZONE 2). This enables you to play the same source in the main room and the separate at the same time, or to play separate sources.

3.1ch
5.1ch
7.1ch
3.1.2ch
5.1.2ch

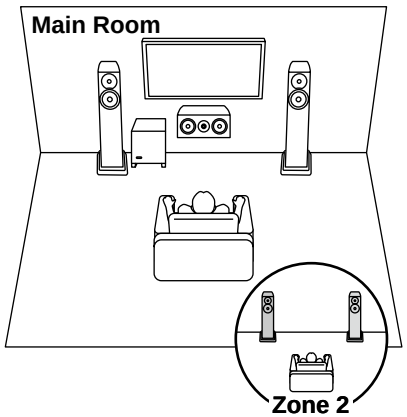
3.1 Channel System

A 3.1 Channel System that combines front speakers with a center speaker and a subwoofer.

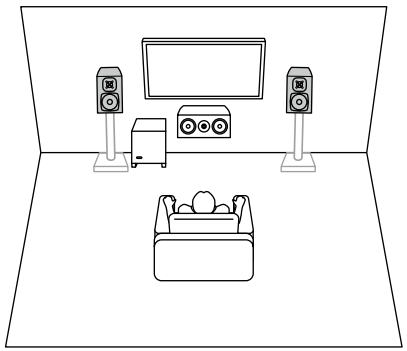
Basic system (→p29)



3.1 ch + ZONE 2 (→p29)



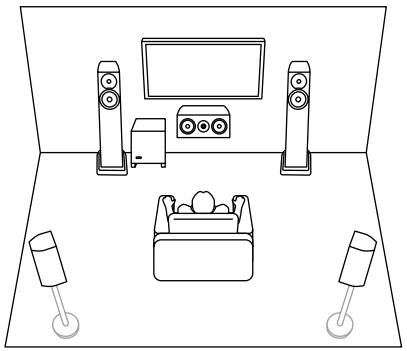
3.1 ch (Bi-Amping (Front)) (→p29)



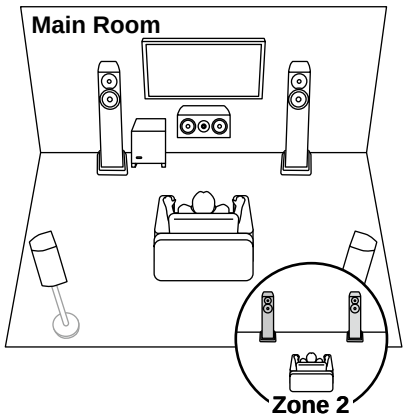
5.1 Channel System

This is a basic 5.1 Channel System.

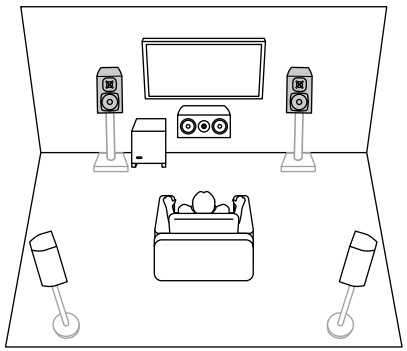
Basic system (→p29)



5.1 ch + ZONE 2 (→p29)



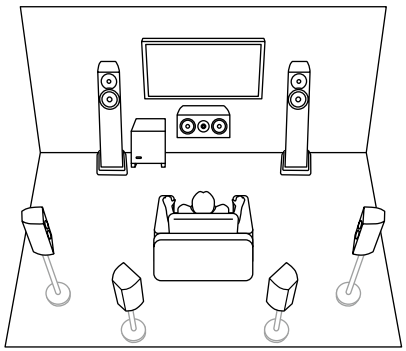
5.1 ch (Bi-Amping (Front)) (→p29)



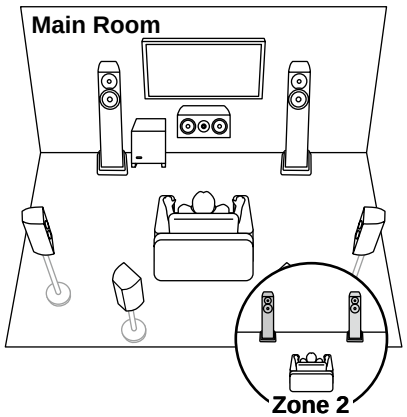
7.1 Channel System

This is a 7.1 Channel System that consists of the basic 5.1 Channel System and added surround back speakers.

Basic system (→p30)



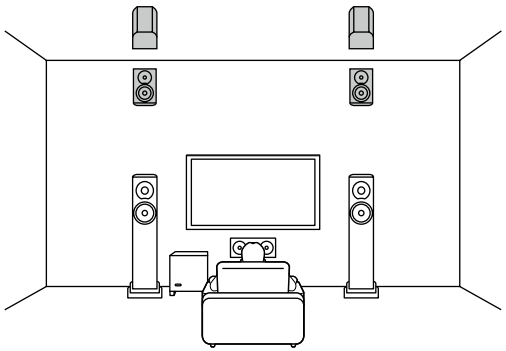
7.1 ch + ZONE 2 (North American models)
(→p30)



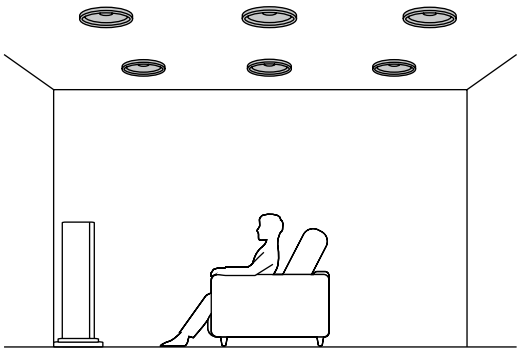
3.1.2 Channel System

A Speaker System that is a 3.1 Channel System with one set of height speakers added.

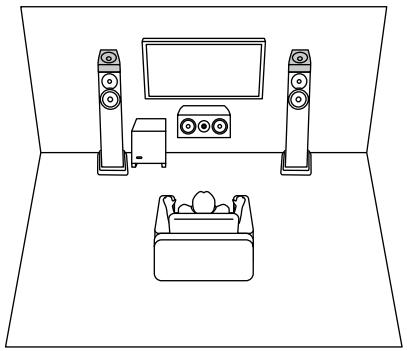
3.1.2 ch (Front High or Rear High) (→p31)



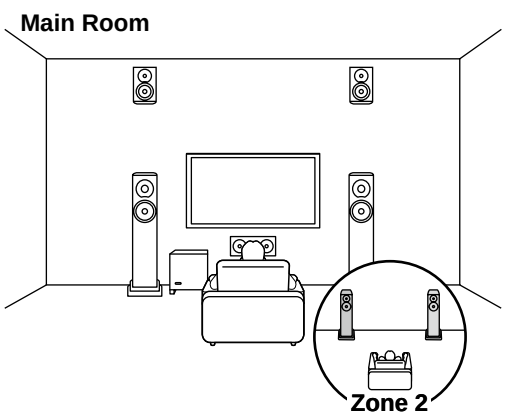
3.1.2 ch (Top Front or Top Middle or Top Rear) (→p31)



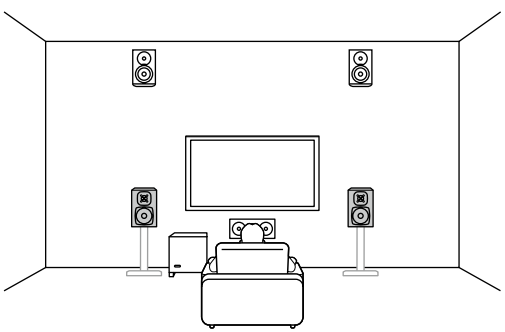
3.1.2 ch (Dolby Enabled Speakers (Front)) (→p31)



3.1.2 ch + ZONE 2 (→p31)



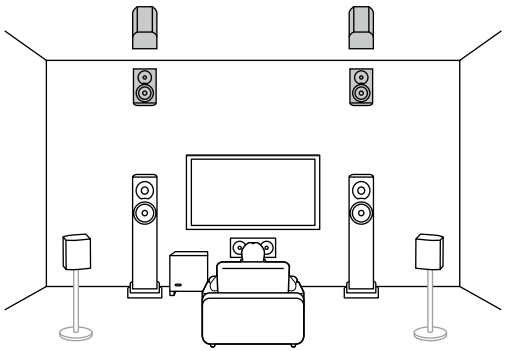
3.1.2 ch (Bi-Amping (Front)) (→p31)



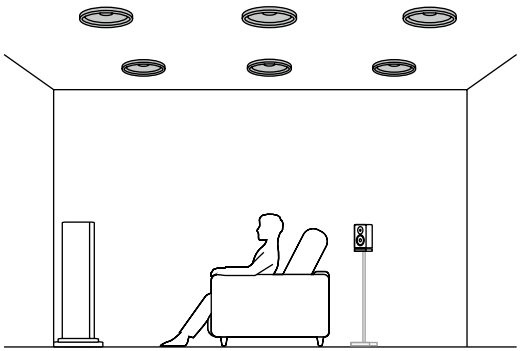
5.1.2 Channel System

A Speaker System that is a 5.1 Channel System with one set of height speakers added.

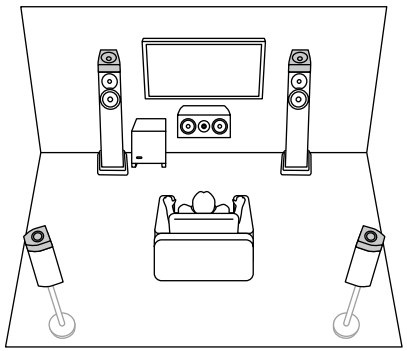
5.1.2 ch (Front High or Rear High) (→p32)



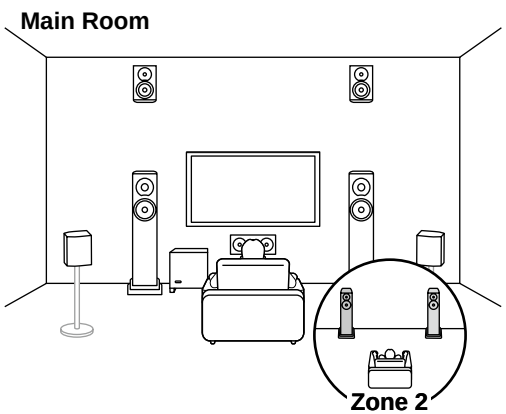
5.1.2 ch (Top Front or Top Middle or Top Rear) (→p32)

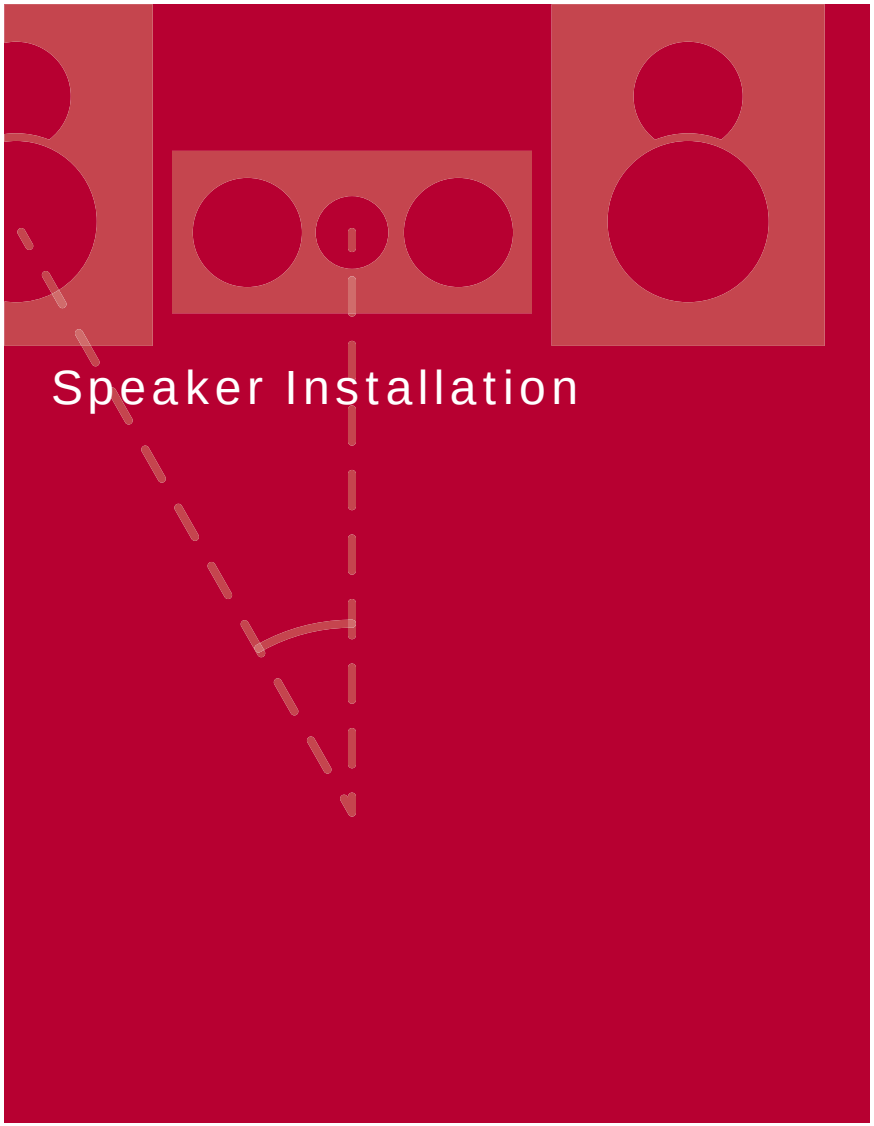


5.1.2 ch (Dolby Enabled Speakers (Front or Surround)) (→p32)



5.1.2 ch + ZONE 2 (North American models) (→p32)



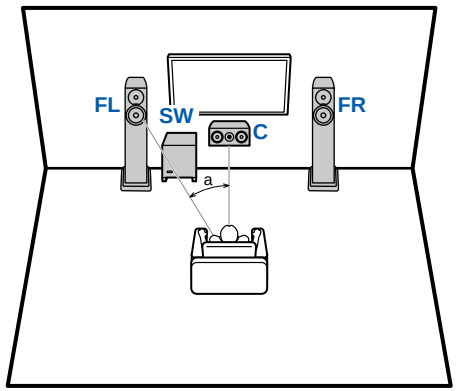


How the speakers are set up depends on the size and shape of the room, so here we introduce just a basic layout example.

The alphabetic symbols used in this chapter represent the following speakers:

FL	Front speaker Left
FR	Front speaker Right
C	Center speaker
SW	powered SubWoofer
SL	Surround speaker Left
SR	Surround speaker Right
SBL	Surround Back speaker Left
SBR	Surround Back speaker Right
FHL	Front High speaker Left
FHR	Front High speaker Right
RHL	Rear High speaker Left
RHR	Rear High speaker Right
TFL	Top Front speaker Left
TFR	Top Front speaker Right
TML	Top Middle speaker Left
TMR	Top Middle speaker Right
TRL	Top Rear speaker Left
TRR	Top Rear speaker Right
DFL	Dolby enabled speaker Front Left
DFR	Dolby enabled speaker Front Right
DSL	Dolby enabled speaker Surround Left
DSR	Dolby enabled speaker Surround Right

3.1 Channel System

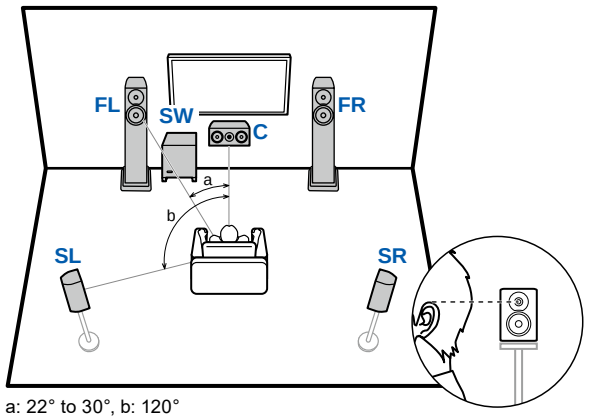


a: 22° to 30°

FL, FR Place the Left and Right Front Speakers to match ear height.
C The center speaker should be set up facing the listening position at an angle.
SW Place the powered subwoofer between the center speaker and a front speaker.

3.1 ch connection (→p36)
3.1 ch + ZONE 2 connection (→p37, p38)
3.1 ch (Bi-Amping (Front)) connection (→p39)

5.1 Channel System

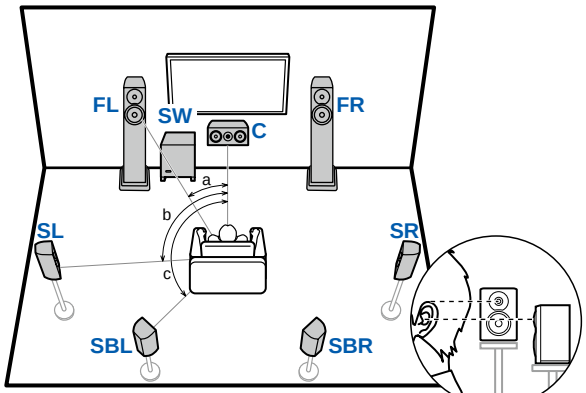


a: 22° to 30°, b: 120°

FL, FR Place the Left and Right Front Speakers to match ear height.
C The center speaker should be set up facing the listening position at an angle.
SW Place the powered subwoofer between the center speaker and a front speaker.
SL, SR Place the Left and Right Surround Speakers to be just above ear height.

5.1 ch connection (→p40)
5.1 ch + ZONE 2 connection (→p41, p42)
5.1 ch (Bi-Amping (Front)) connection (→p43)

7.1 Channel System



a: 22° to 30°, b: 90° to 110°, c: 135° to 150°

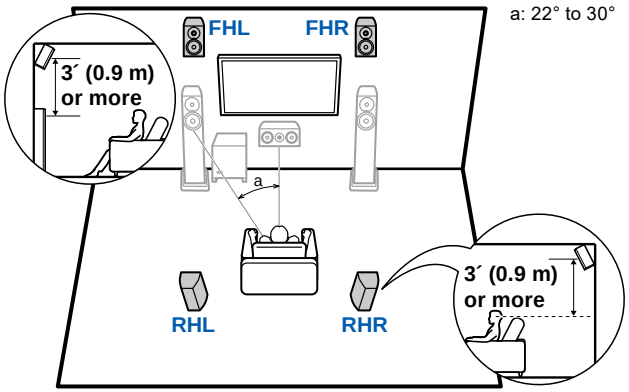
FL, FR Place the Left and Right Front Speakers to match ear height.
C The center speaker should be set up facing the listening position at an angle.
SW Place the powered subwoofer between the center speaker and a front speaker.
SL, SR Place the Left and Right Surround Speakers to be just above ear height.
SBL, SBR Place the Left and Right Surround Back Speakers at ear height.

- If surround back speakers are installed, be sure to install surround speakers as well.

7.1 ch connection (→p44)
7.1 ch + ZONE 2 connection (→p45)

3.1.2 Channel System

High Speakers

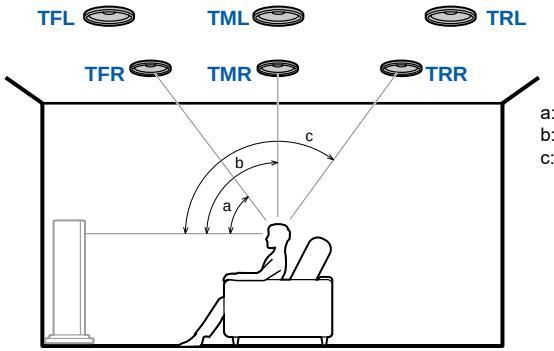


a: 22° to 30°

FHL, FHR Place the front high speakers directly above the front speakers, angled to face the listening position.

RHL, RHR Place the rear high speakers so the lateral distance matches the front speakers, angled to face the listening position.

Top Speakers



a: 30° to 55°
b: 65° to 100°
c: 125° to 150°

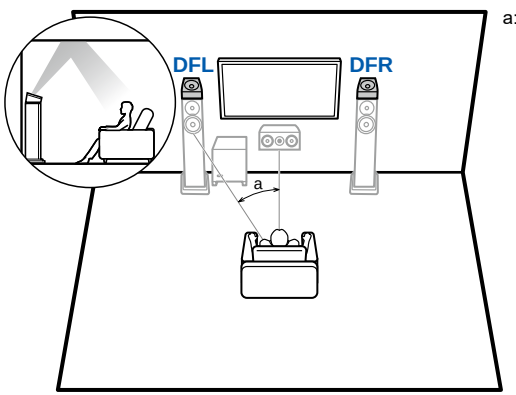
TFL, TFR Fit top front speakers on the ceiling in front of the listening position.

TML, TMR Fit top middle speakers on the ceiling directly above the listening position.

TRL, TRR Fit top rear speakers on the ceiling behind the listening position.

- Match the lateral distance of the top speakers to the front speakers.

Dolby Enabled Speakers



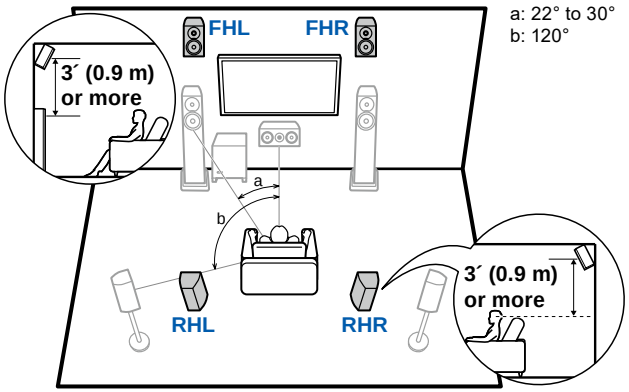
a: 22° to 30°

DFL, DFR The Dolby enabled speakers (front) are installed on top of the front speakers.

3.1.2 ch connection (→p46)
3.1.2 ch + ZONE 2 (→p47, p48)
3.1.2 ch (Bi-Amping (Front)) connection (→p49)

5.1.2 Channel System

High Speakers



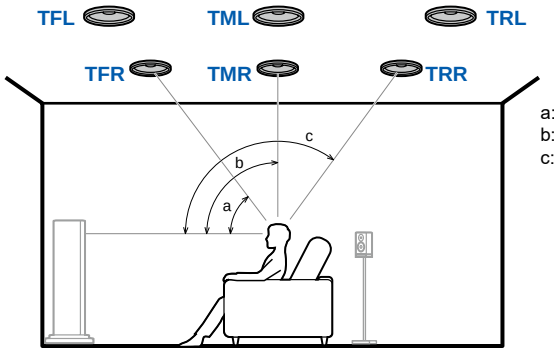
a: 22° to 30°
b: 120°

FHL, FHR Place the front high speakers directly above the front speakers, angled to face the listening position.

RHL, RHR Place the rear high speakers so the lateral distance matches the front speakers, angled to face the listening position.

5.1.2 ch connection (→p50)
5.1.2 ch + ZONE 2 connection (→p51)

Top Speakers

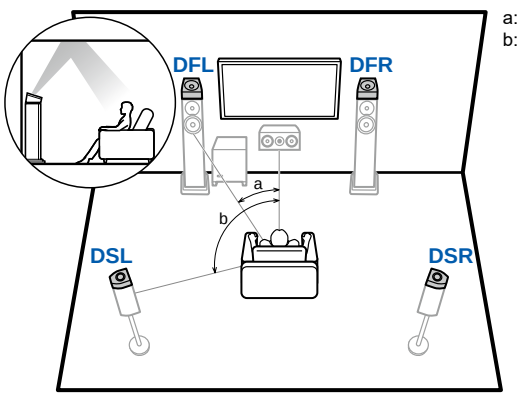


a: 30° to 55°
b: 65° to 100°
c: 125° to 150°

TFL, TFR Fit top front speakers on the ceiling in front of the listening position.
TML, TMR Fit top middle speakers on the ceiling directly above the listening position.
TRL, TRR Fit top rear speakers on the ceiling behind the listening position.

- Match the lateral distance of the top speakers to the front speakers.

Dolby Enabled Speakers



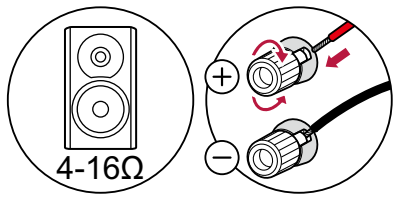
a: 22° to 30°
b: 120°

DFL, DFR The Dolby enabled speakers (front) are installed on top of the front speakers.

DSL, DSR The Dolby enabled speakers (surround) are installed on top of the surround speakers.

Speaker Connections

(Before starting the procedure)
Speakers you can use with this unit and cable connections 34



3.1 Channel System 36, 37, 38, 39
5.1 Channel System 40, 41, 42, 43
7.1 Channel System 44, 45
3.1.2 Channel System 46, 47, 48, 49
5.1.2 Channel System 50, 51

Speakers you can use with this unit and cable connections

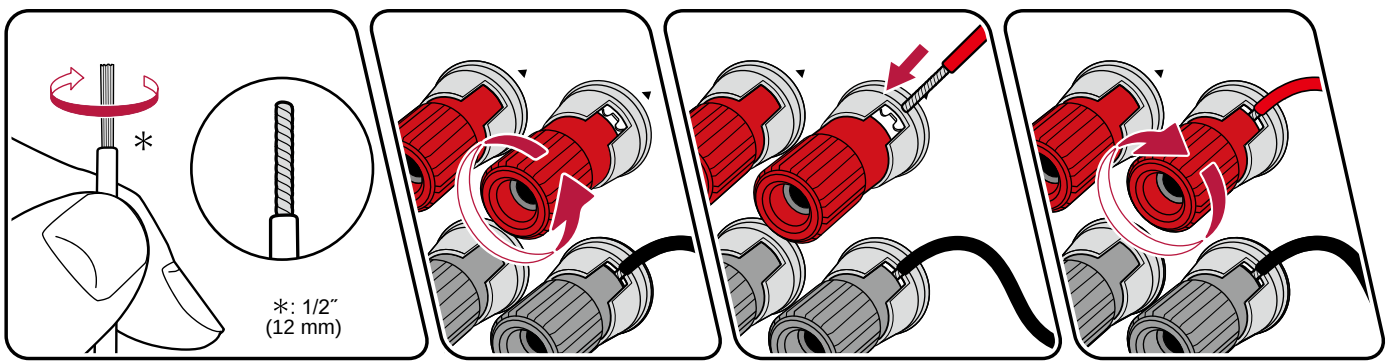
■ Speakers you can use with this unit

This unit supports speakers with 4 Ω to 16 Ω impedance. For speaker impedance, check the speaker instruction manual.

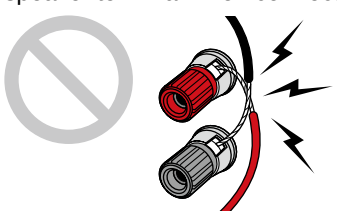
■ (Note) Speaker Impedance

If any of the speakers to be connected has an impedance of 4 Ω or more and less than 6 Ω, set "Speaker Impedance" to "4ohms" for "Speaker Setup" in the Initial Setup section (→p142). When setting "Speaker Impedance" from the System Setup menu, press the ☎ button on the remote controller to display the Home screen, and select "System Setup" - "Speaker" - "Configuration", then set "Speaker Impedance" (→p115) to "4ohms".

■ Connect the Speaker Cables

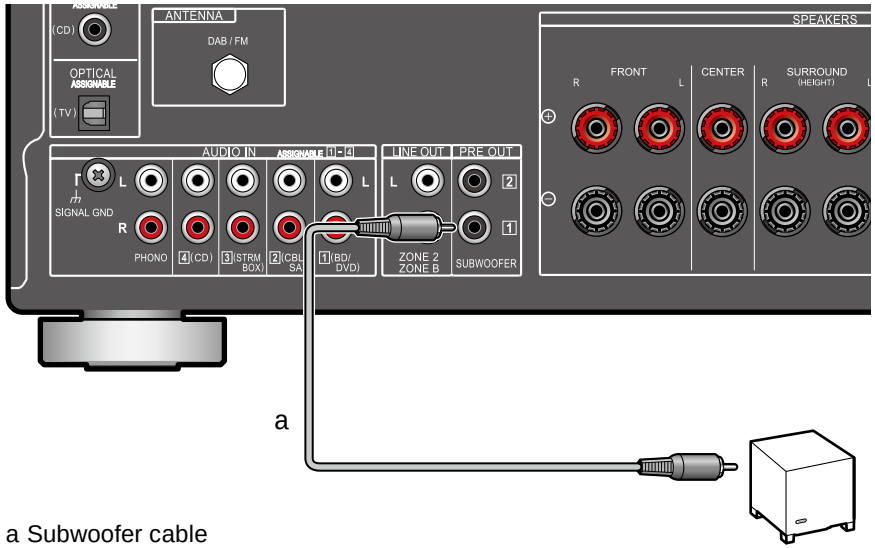


Make correct connection between the unit's jacks and speaker's jacks (+ side to + side, and - side to - side) for each channel. If the connection is wrong, a bass sound will not be reproduced properly due to reverse phase. Twist the wires exposed from the tip of the speaker cable so that the wires do 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.



3.1ch
5.1ch
7.1ch
3.1.2ch
5.1.2ch

■ Connect the Subwoofer

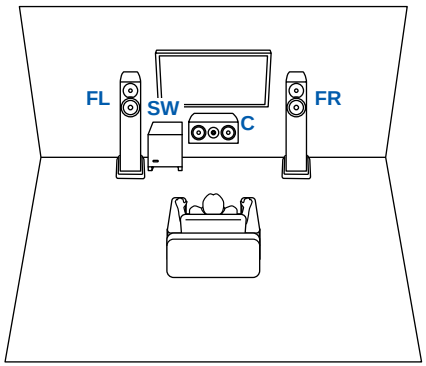


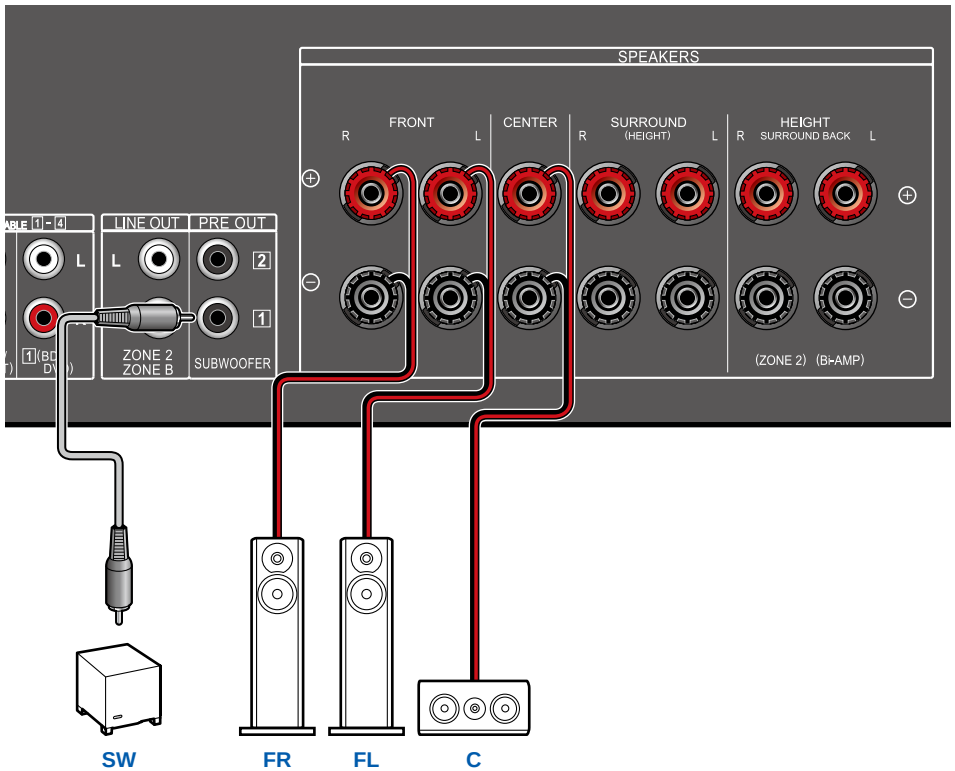
a Subwoofer cable

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.

3.1ch
5.1ch
7.1ch
3.1.2ch
5.1.2ch

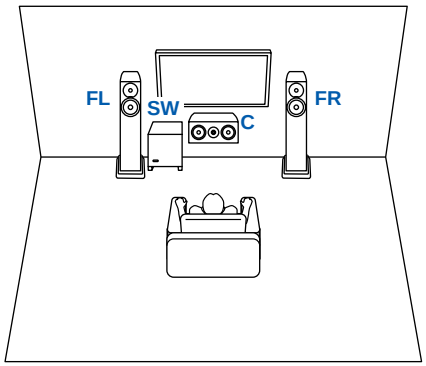
3.1 Channel System



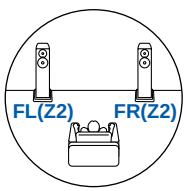


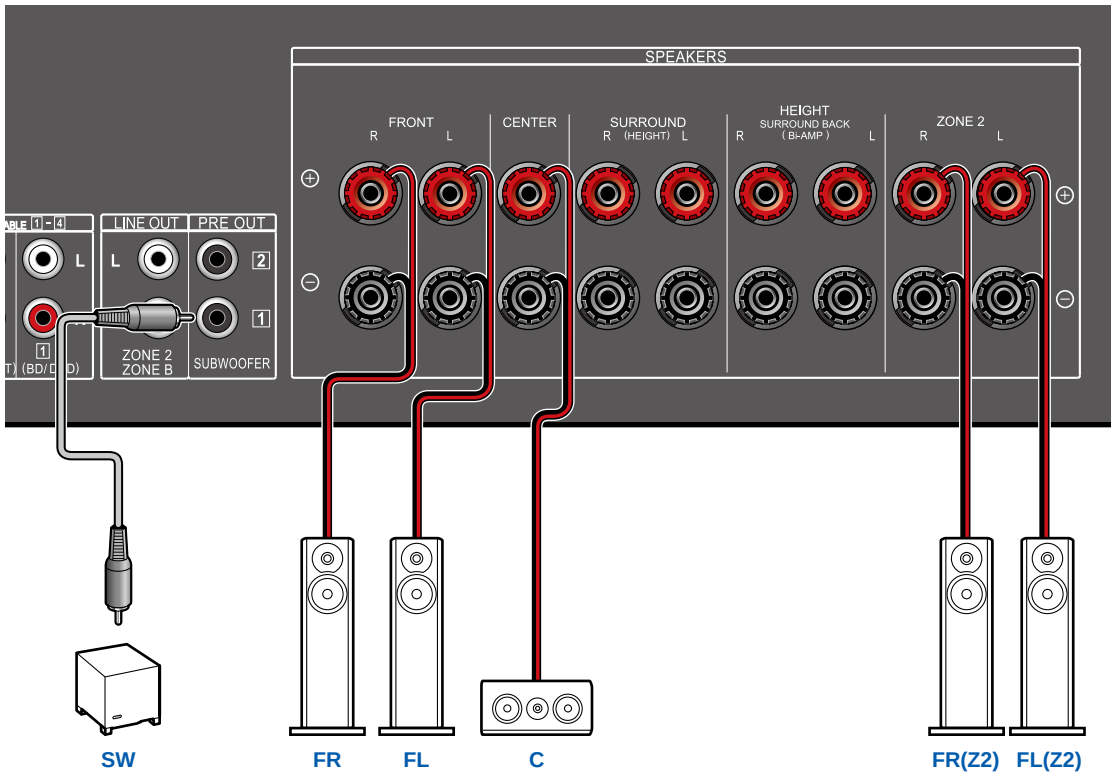
■ 3.1 Channel System + ZONE SPEAKER (North American models)

MAIN ROOM



ZONE 2

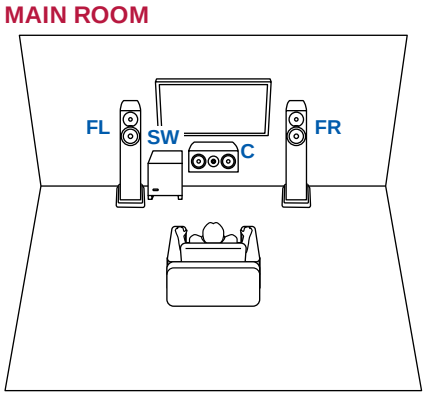




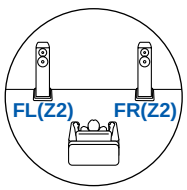
❑ **3.1 Channel System + ZONE SPEAKER (European, Australian and Asian models)** **(→p38)**

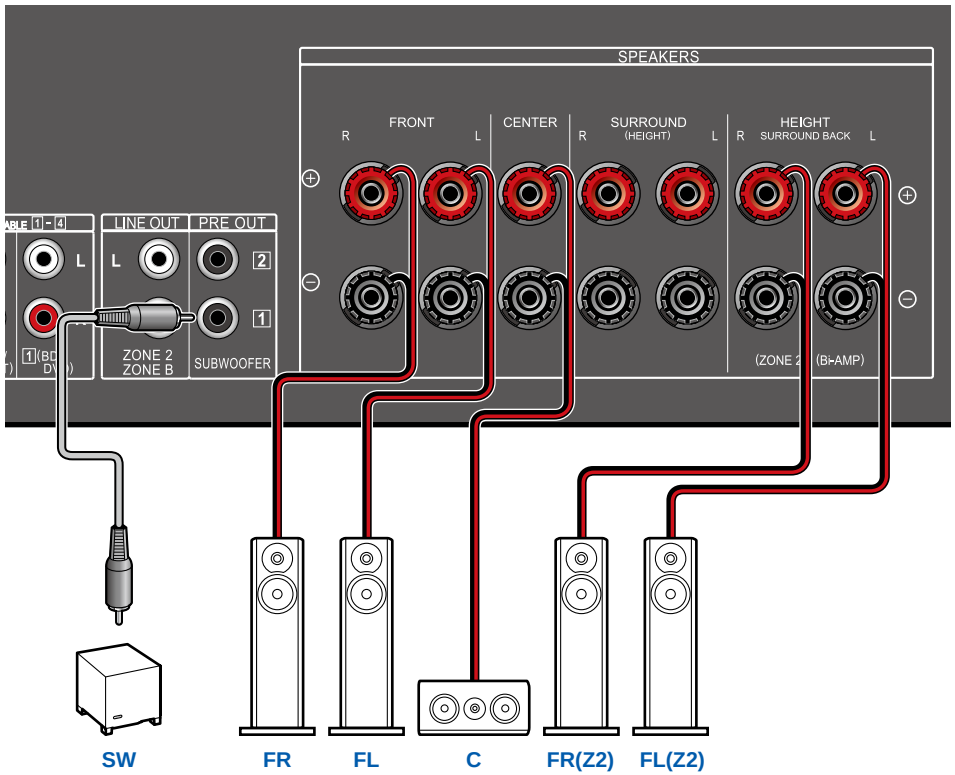
■ 3.1 Channel System + ZONE SPEAKER (European, Australian and Asian models)

MAIN ROOM

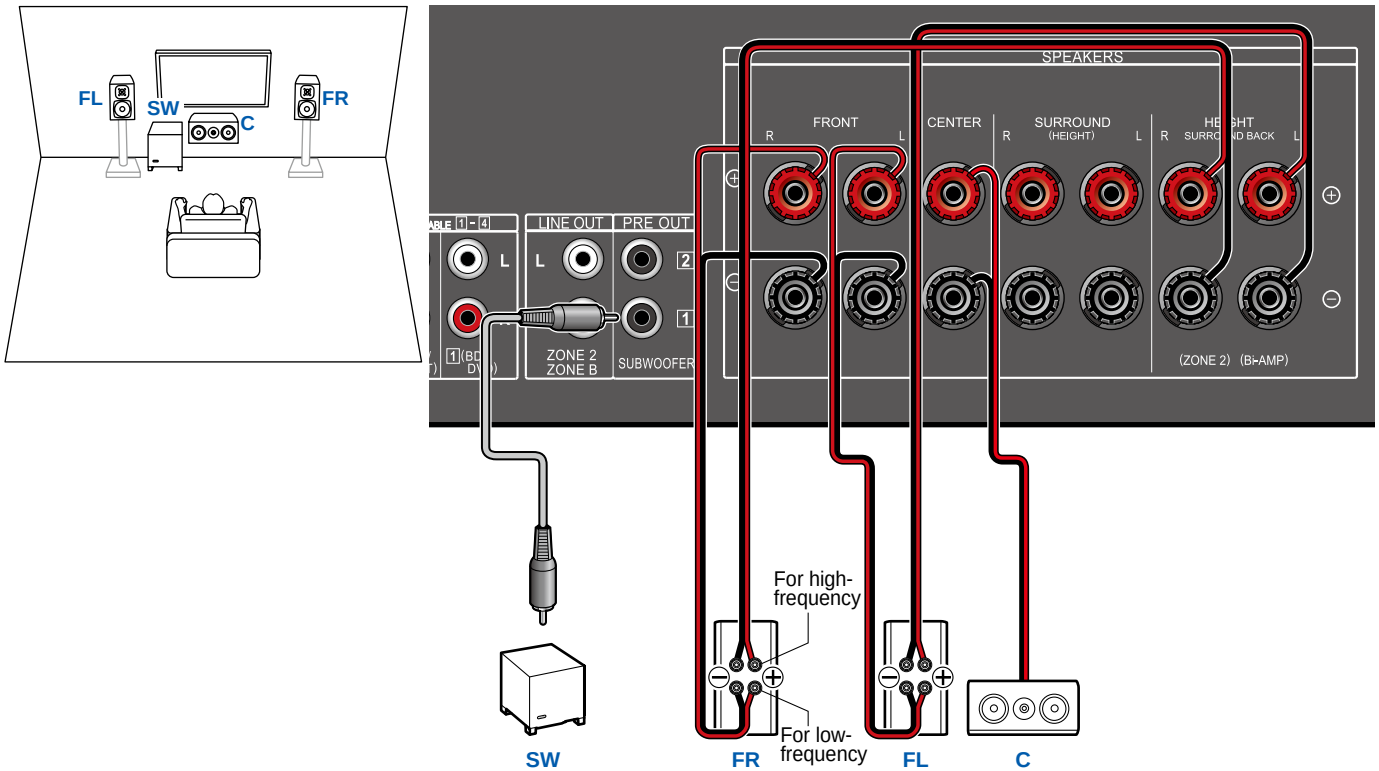


ZONE 2





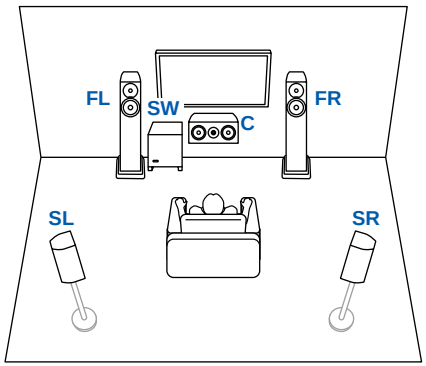
3.1 Channel System (Bi-Amping the Speakers)

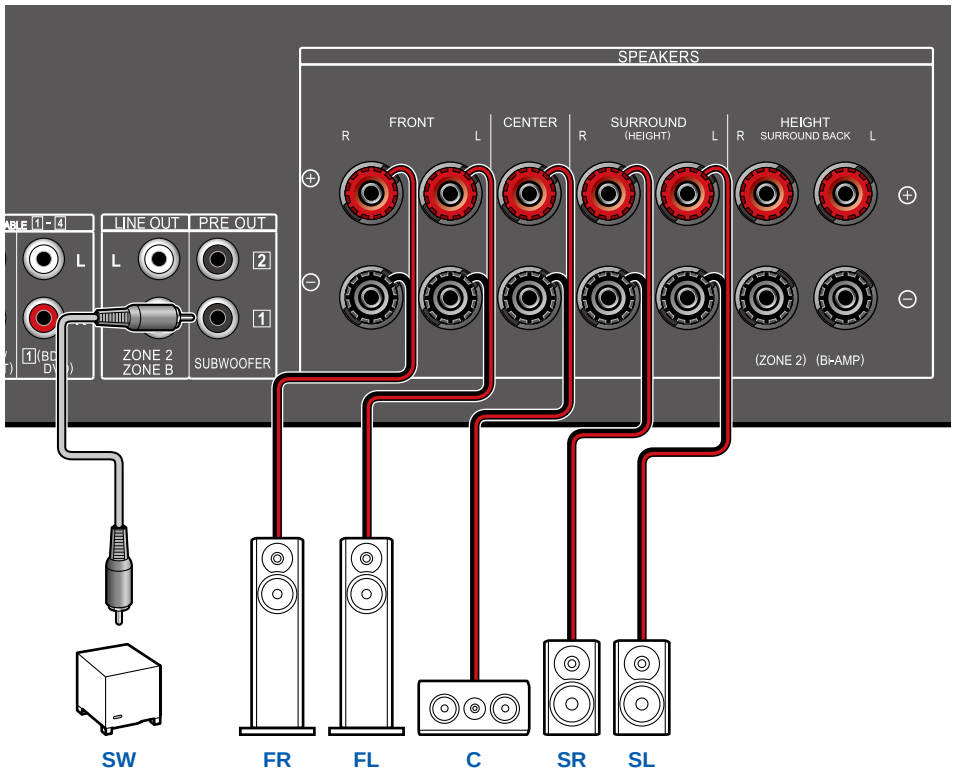


Be sure to remove the jumper bar connecting between the woofer jacks and tweeter jacks of the Bi-Amping supported speakers. Refer to the instruction manual of your speakers as well.

3.1ch
5.1ch
7.1ch
3.1.2ch
5.1.2ch

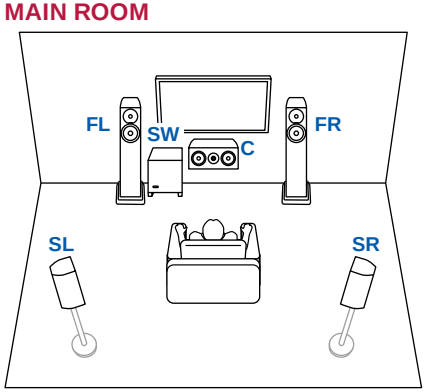
5.1 Channel System



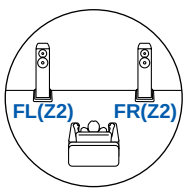


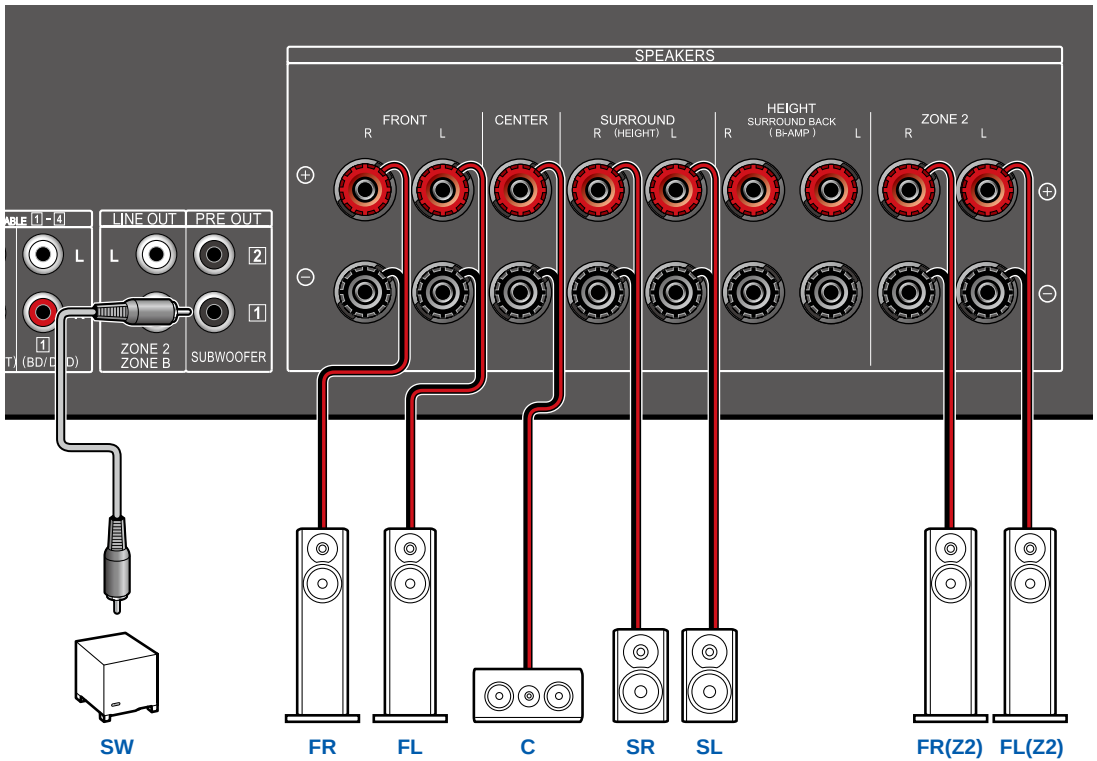
■ 5.1 Channel System + ZONE SPEAKER (North American models)

MAIN ROOM



ZONE 2

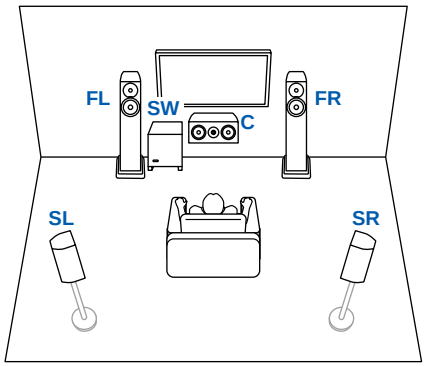




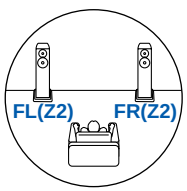
❑ **5.1 Channel System + ZONE SPEAKER (European, Australian and Asian models)** **(→p42)**

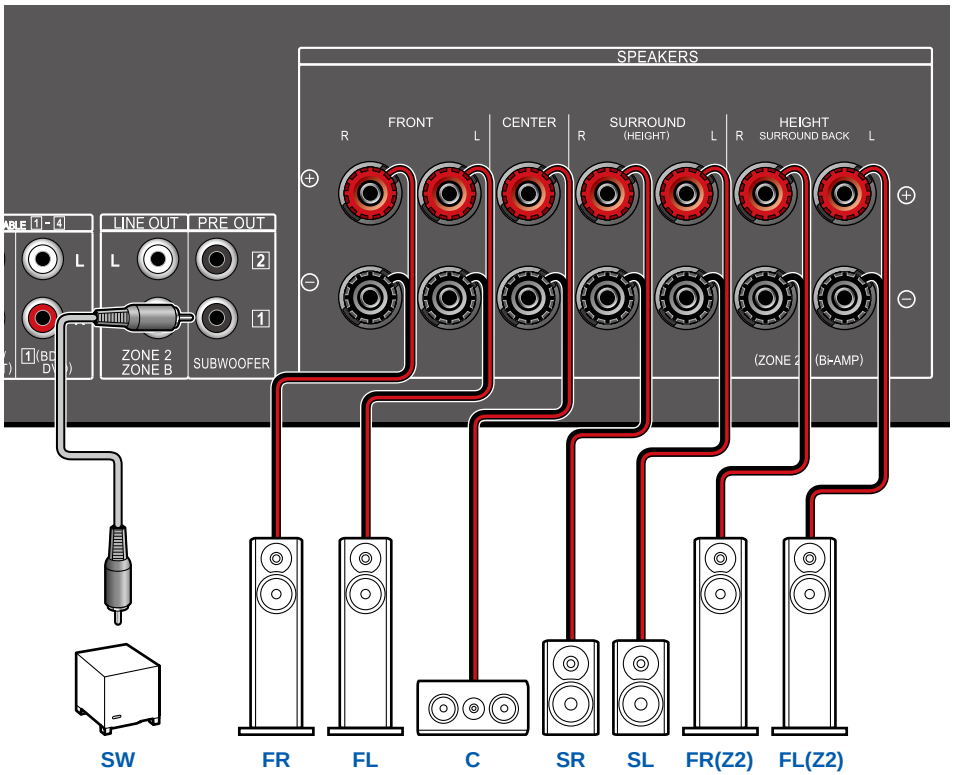
■ 5.1 Channel System + ZONE SPEAKER (European, Australian and Asian models)

MAIN ROOM

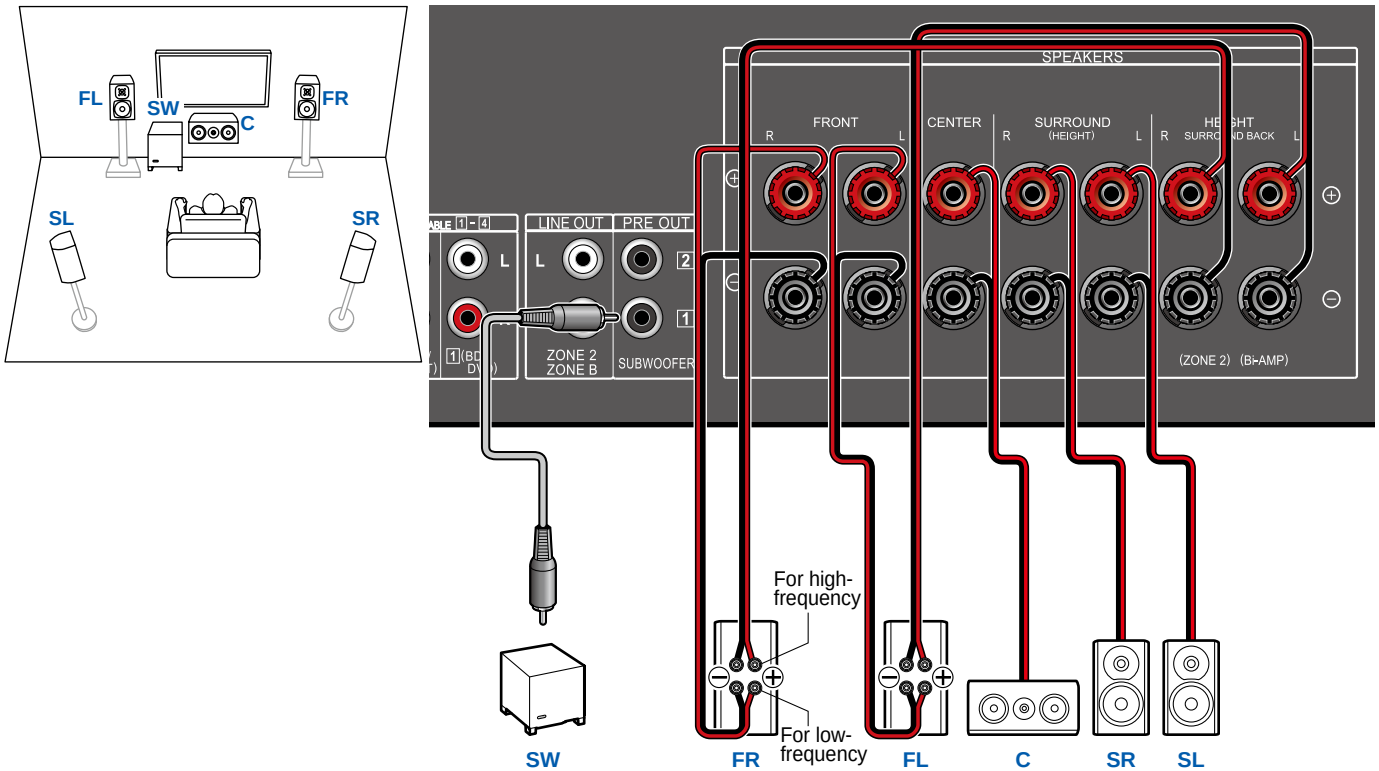


ZONE 2





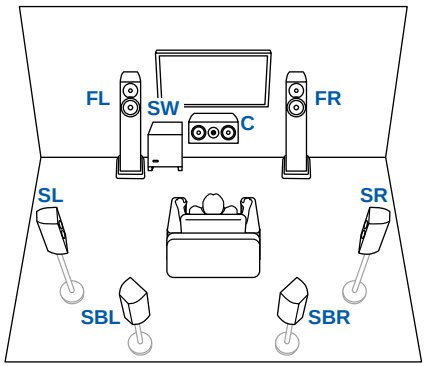
5.1 Channel System (Bi-Amping the Speakers)

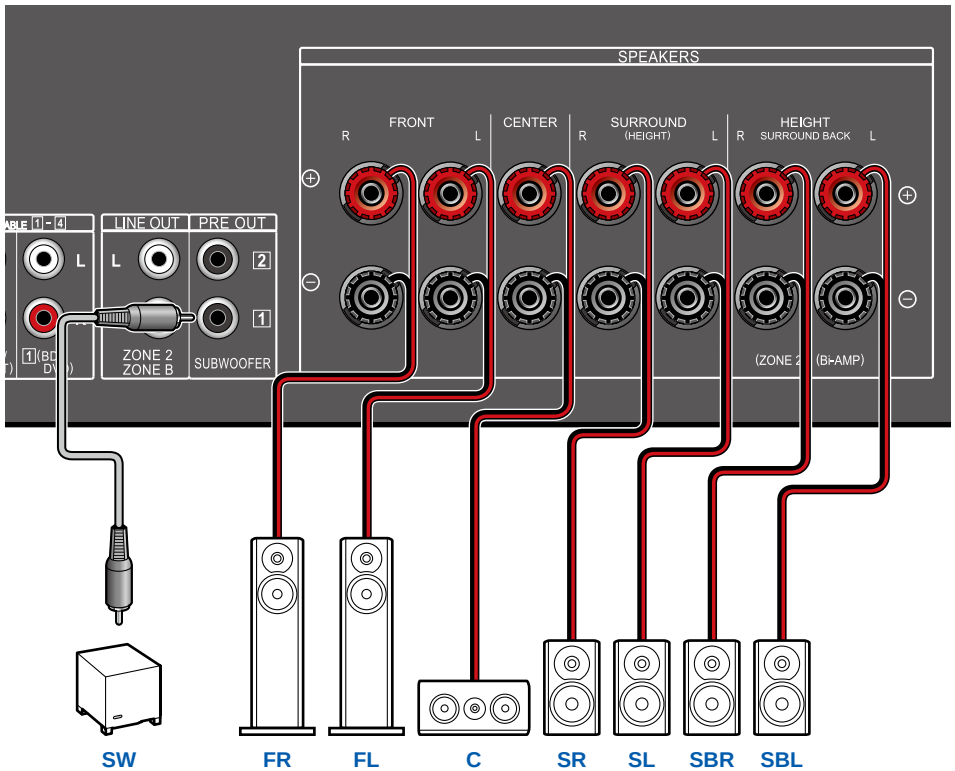


Be sure to remove the jumper bar connecting between the woofer jacks and tweeter jacks of the Bi-Amping supported speakers. Refer to the instruction manual of your speakers as well.

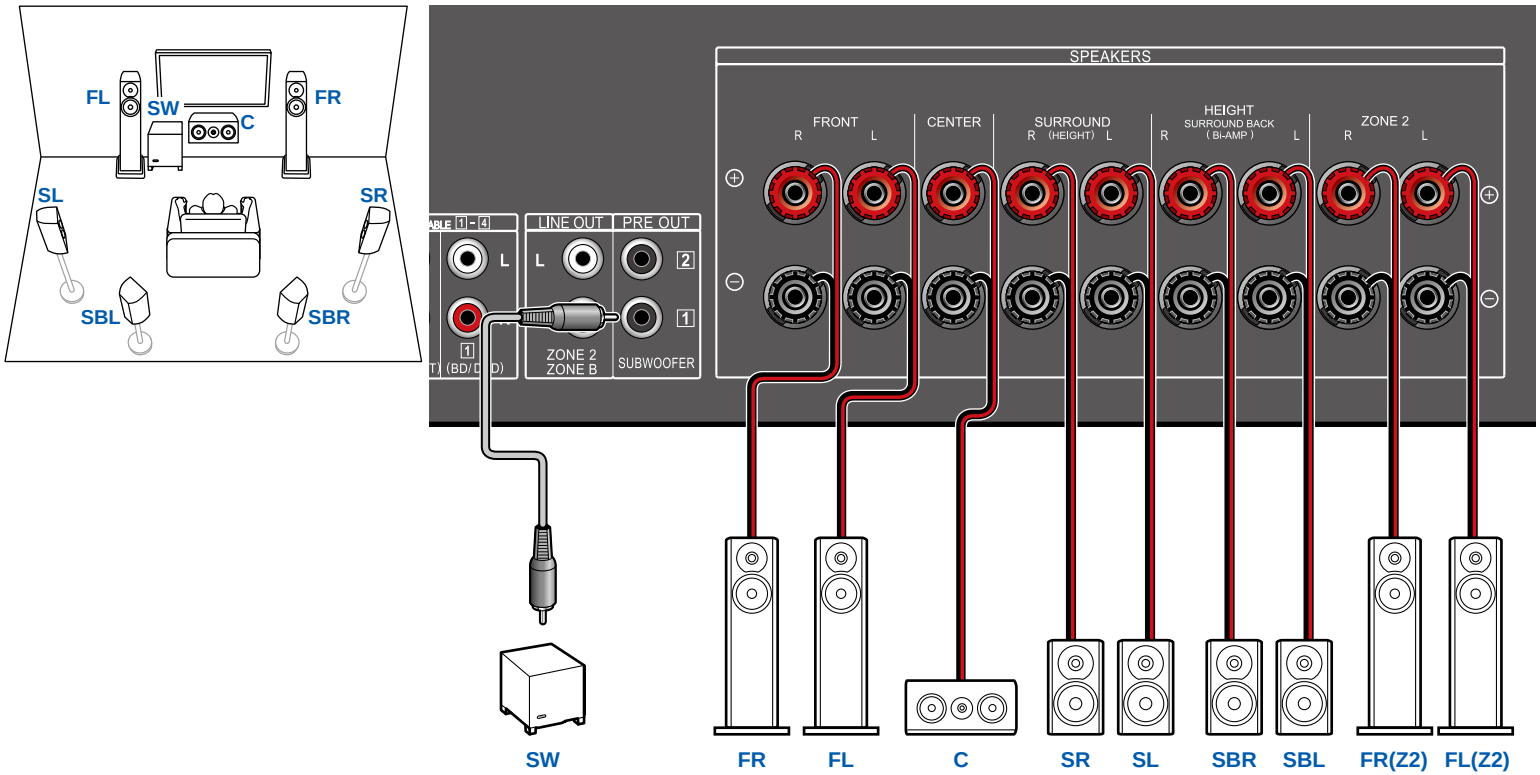
3.1ch
5.1ch
7.1ch
3.1.2ch
5.1.2ch

7.1 Channel System



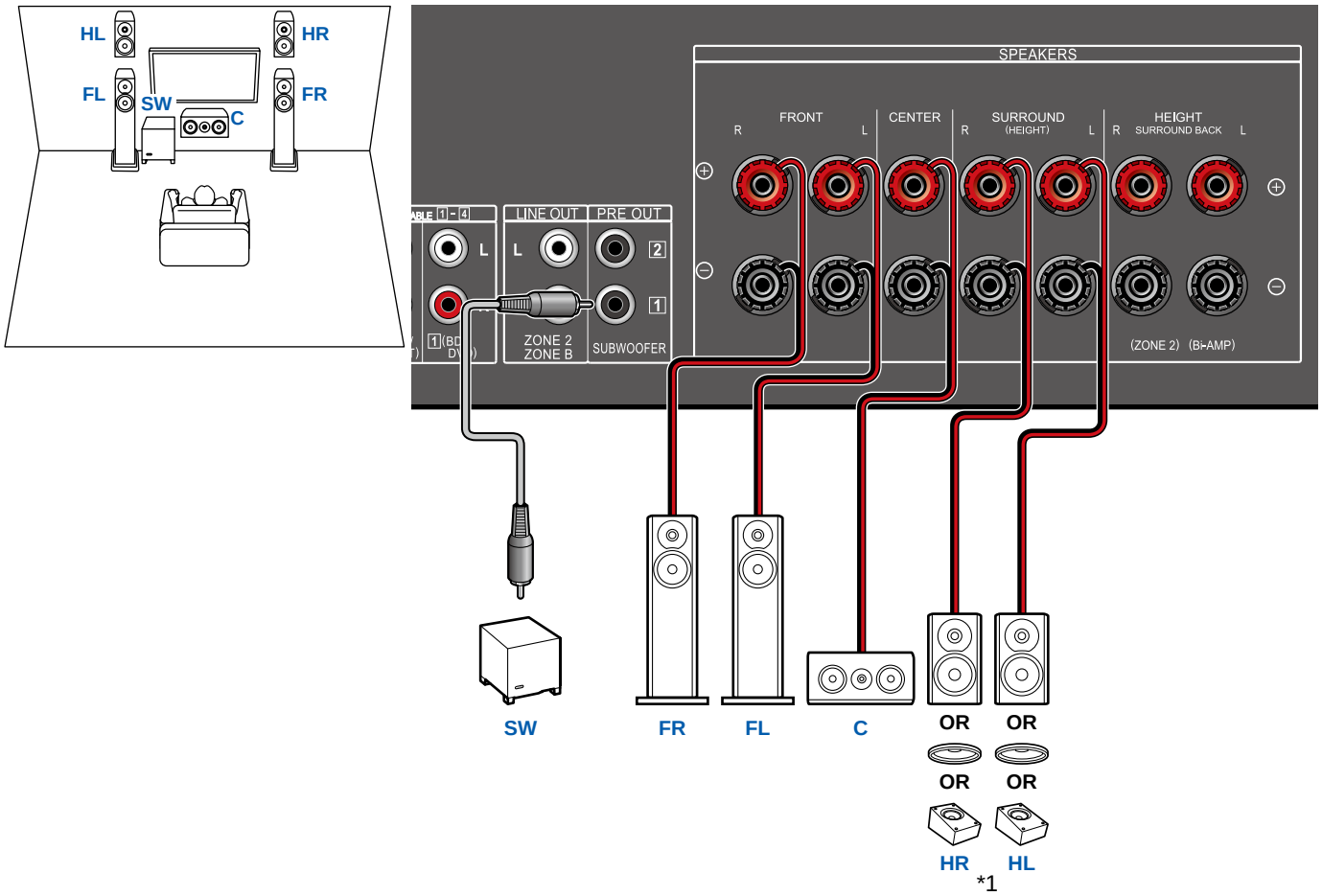


7.1 Channel System + ZONE SPEAKER (For North American models only)



While ZONE 2 playback is being performed, surround back speakers installed in the main room cannot play audio.

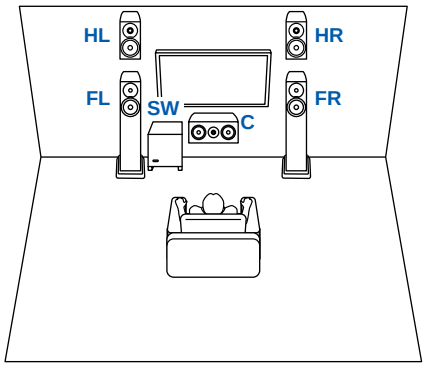
3.1.2 Channel System



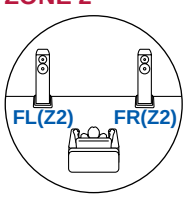
*1 Connect the Height Speakers you have actually installed (HL/HR: Height Speakers, Top Speakers, Dolby Enabled Speakers).

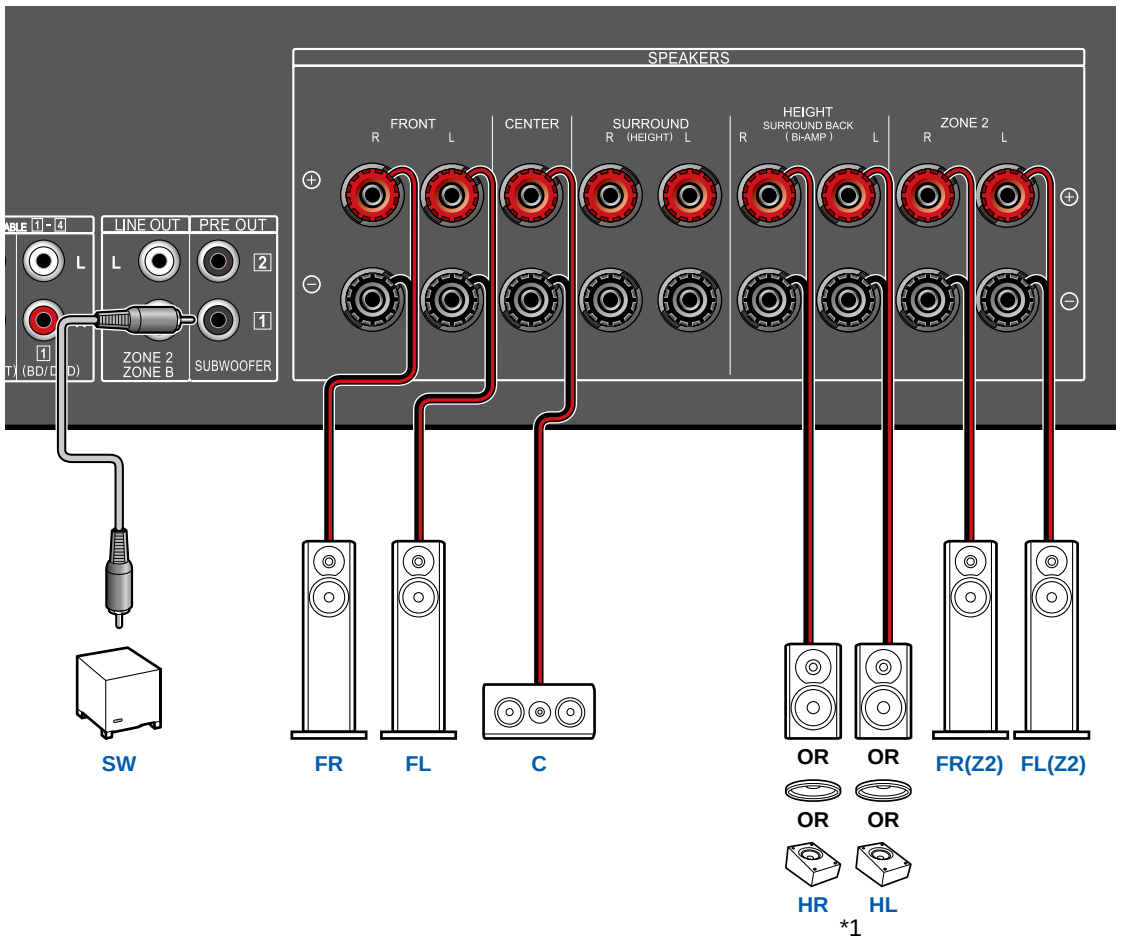
■ 3.1.2 Channel System + ZONE SPEAKER (North American models)

MAIN ROOM



ZONE 2



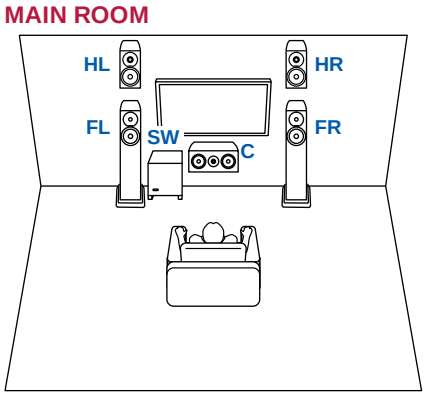


*1 Connect the Height Speakers you have actually installed (HL/HR: Height Speakers, Top Speakers, Dolby Enabled Speakers).

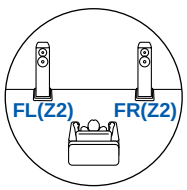
❑ **3.1.2 Channel System + ZONE SPEAKER (European, Australian and Asian models)** **(→p48)**

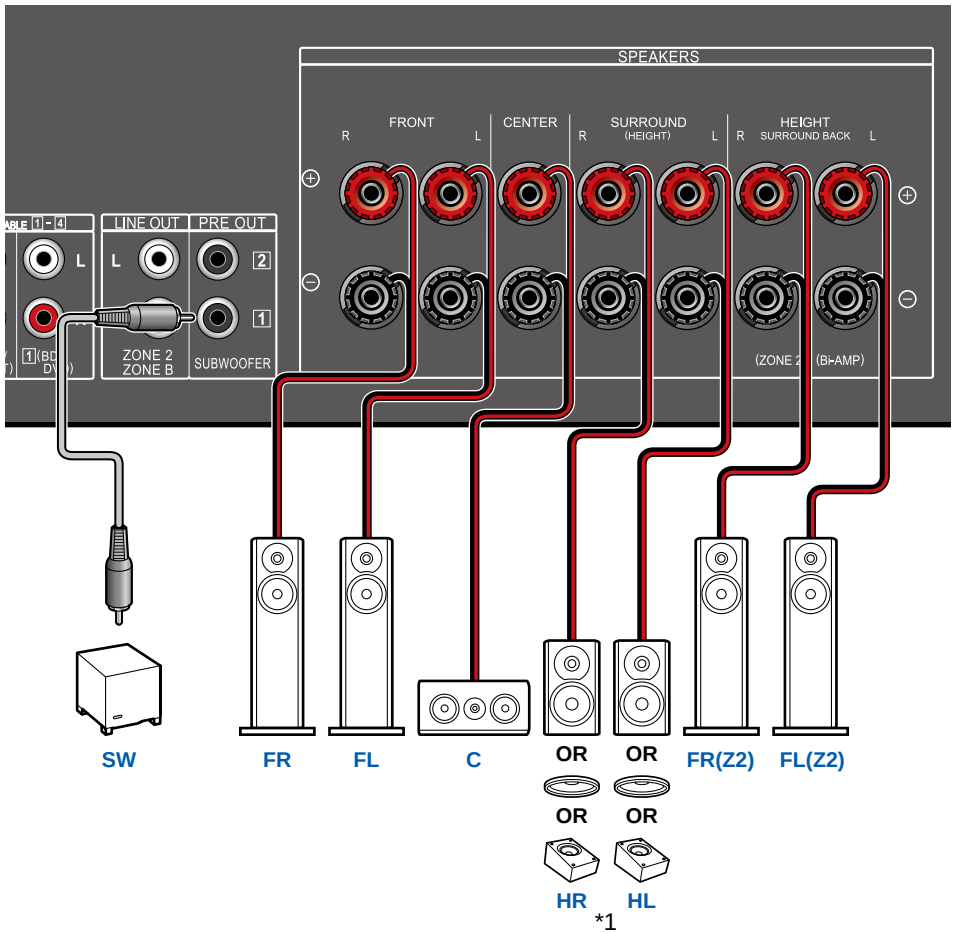
■ 3.1.2 Channel System + ZONE SPEAKER (European, Australian and Asian models)

MAIN ROOM



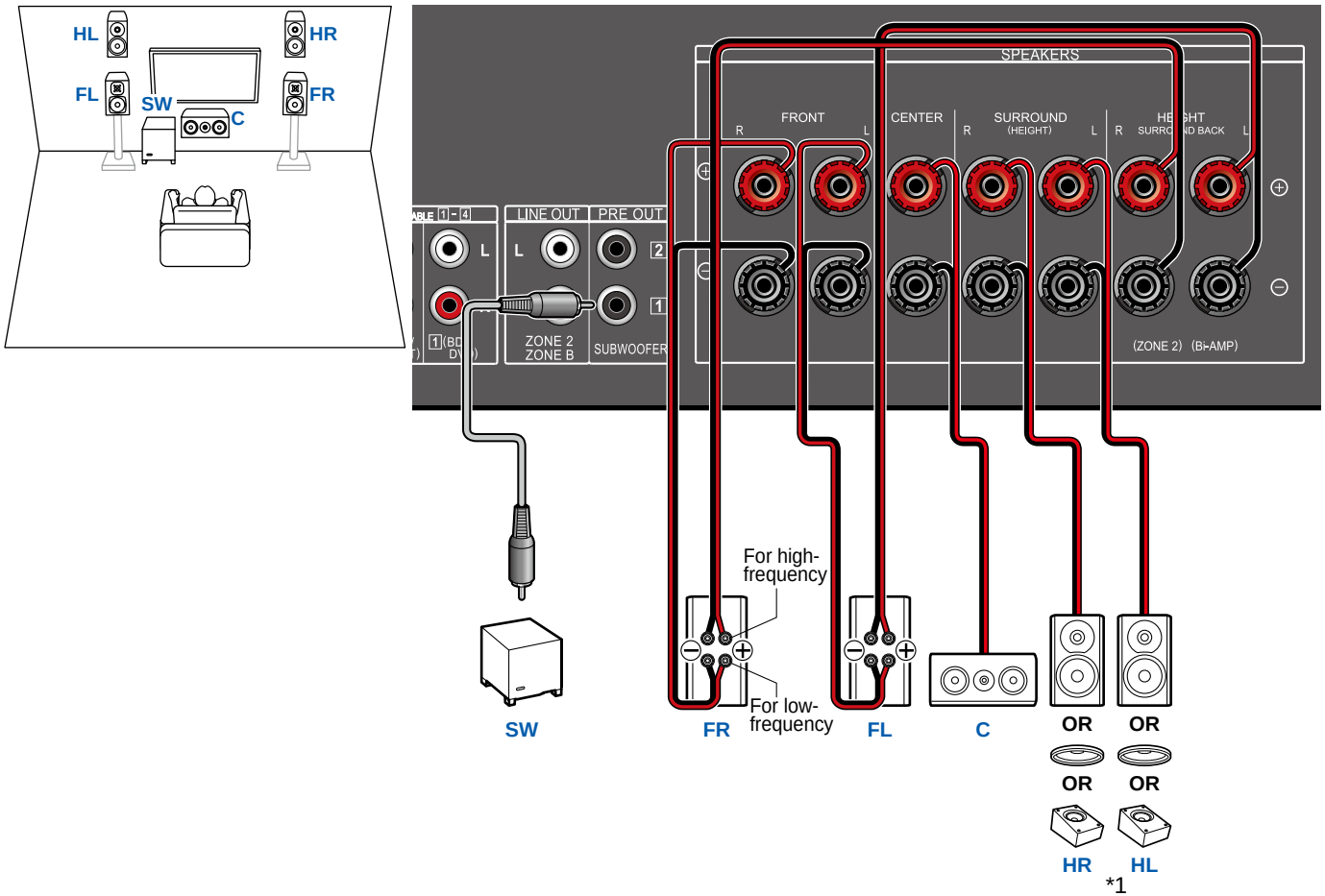
ZONE 2





*1 Connect the Height Speakers you have actually installed (HL/HR: Height Speakers, Top Speakers, Dolby Enabled Speakers).

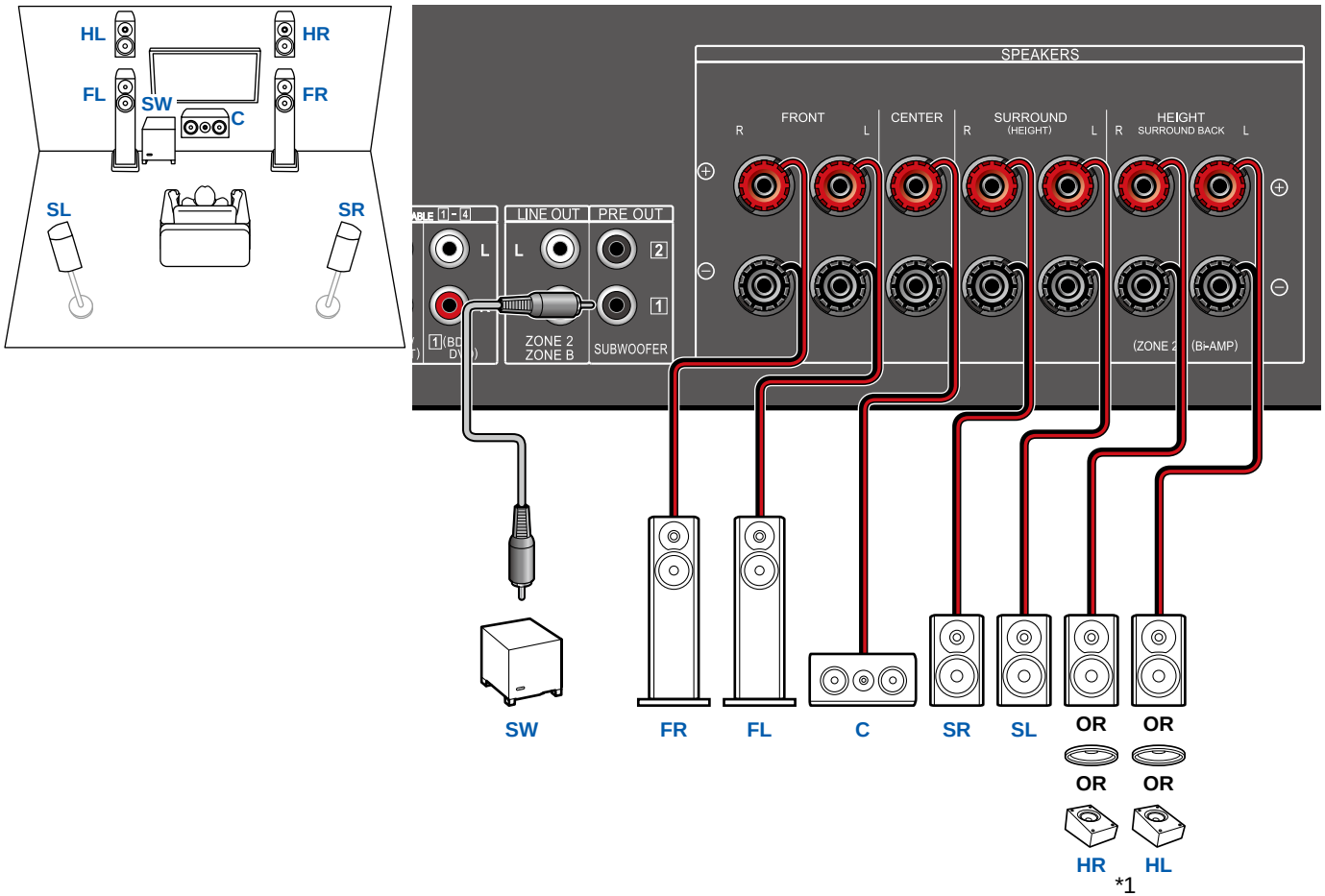
3.1.2 Channel System (Bi-Amping the Speakers)



Be sure to remove the jumper bar connecting between the woofer jacks and tweeter jacks of the Bi-Amping supported speakers. Refer to the instruction manual of your speakers as well.

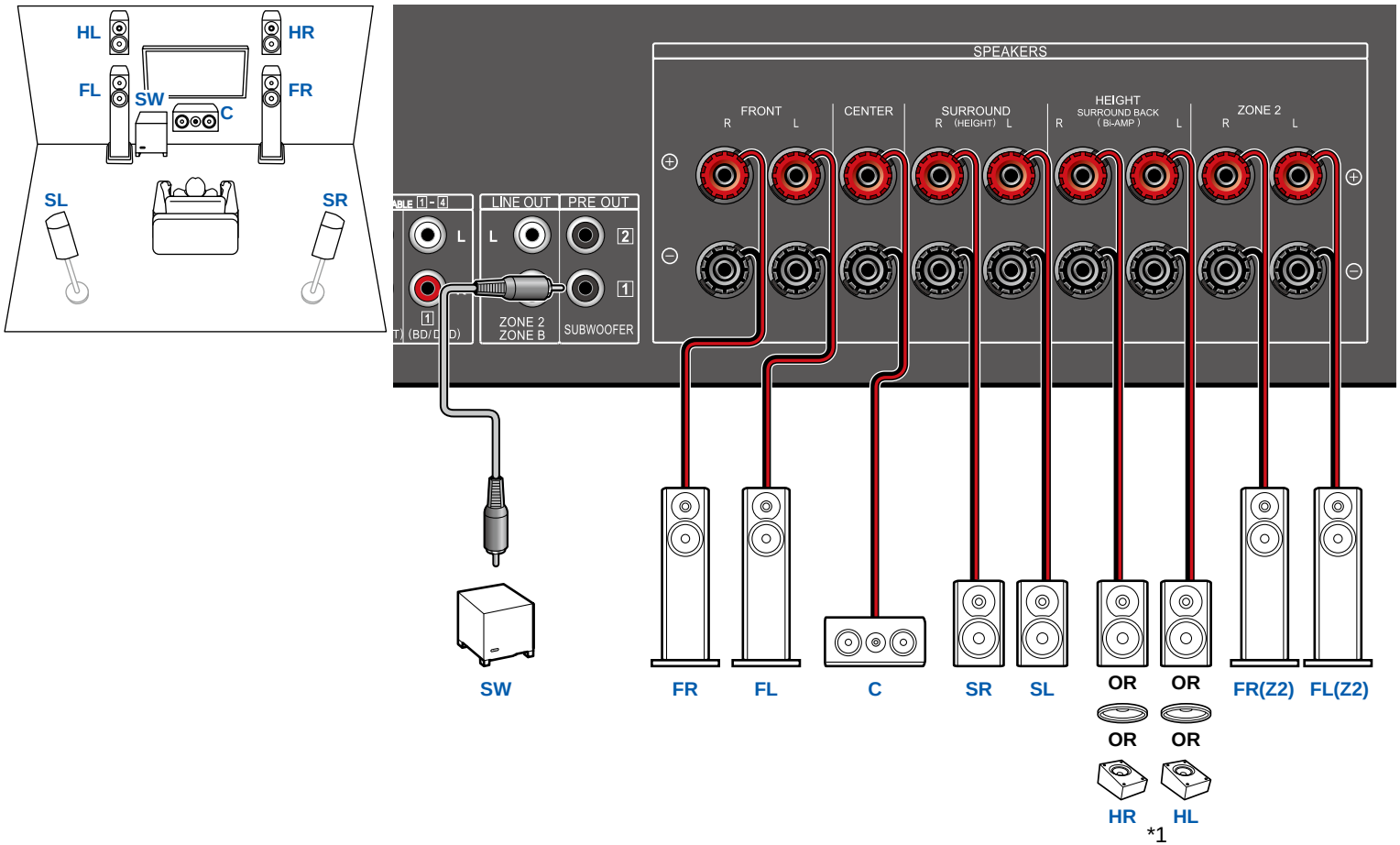
*1 Connect the Height Speakers you have actually installed (HL/HR: Height Speakers, Top Speakers, Dolby Enabled Speakers).

5.1.2 Channel System



*1 Connect the Height Speakers you have actually installed (HL/HR: Height Speakers, Top Speakers, Dolby Enabled Speakers).

5.1.2 Channel System + ZONE SPEAKER (For North American models only)



While ZONE 2 playback is being performed, height speakers installed in the main room cannot play audio.

*1 Connect the Height Speakers you have actually installed (HL/HR: Height Speakers, Top Speakers, Dolby Enabled Speakers).

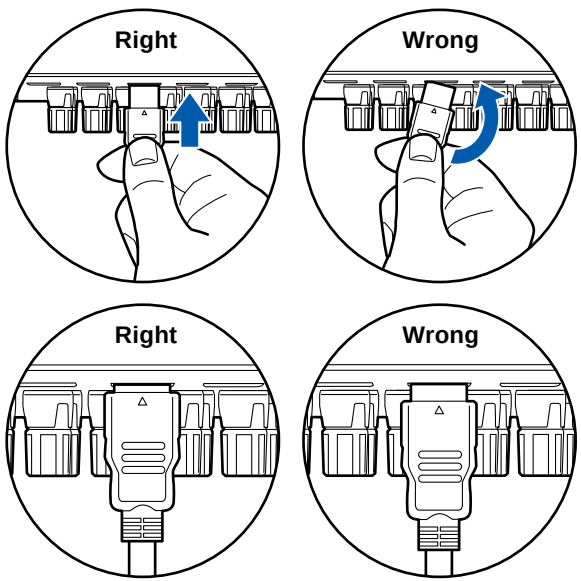
Notes regarding connections with HDMI cables 53
Connecting the TV 54
Connecting the SUB Monitor 55
Connecting Playback Devices 56
Connecting a TV or Integrated Amplifier in a separate room (Multi-zone) 58
Connecting Antennas 60
Network Connection 61
Connecting the Power Cord 62

Notes regarding connections with HDMI cables

HDMI (High-Definition Multimedia Interface) is a digital interface standard for connecting TVs, projectors, Blu-ray Disc players, game consoles, and other video components. With HDMI, a single cable can carry control signals, digital video, and digital audio.

Connections

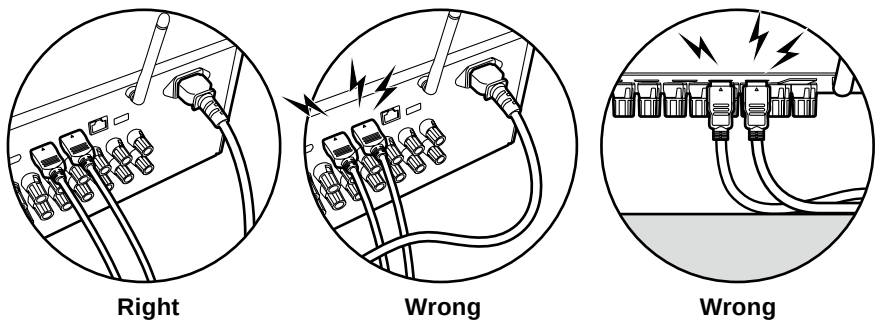
Push HDMI cables straight in and all the way. You can damage the terminals if you try to insert at an angle.



- Hold the terminal housing on the HDMI cable when unplugging. Pulling on the cable may lead to damaged cabling.

■ (Note) Placement of cables

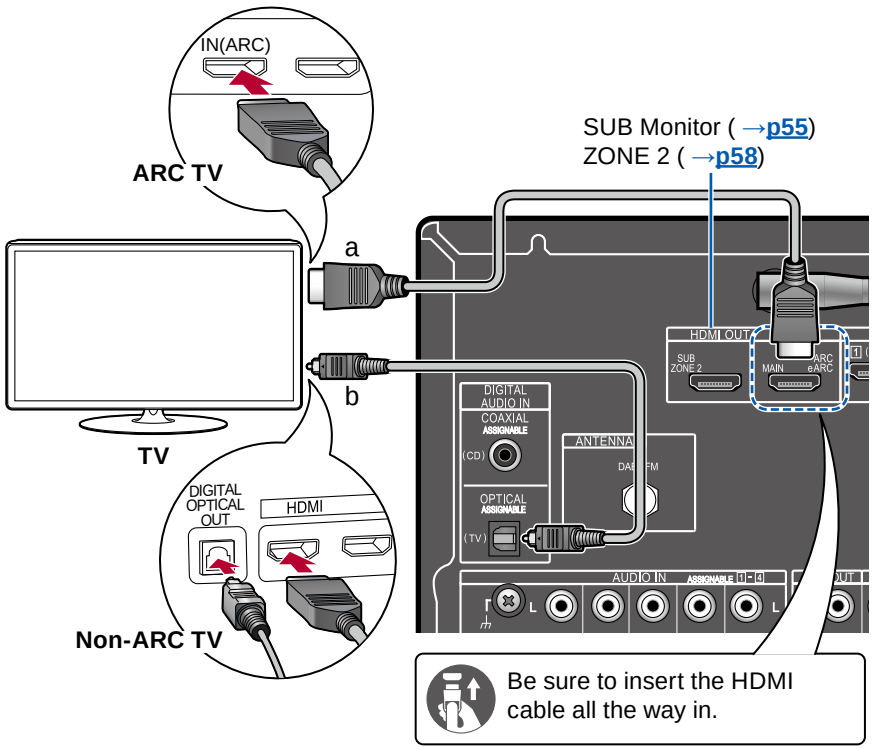
Putting a load on HDMI cables can lead to poor operational performance. Place the cables so there is no load put on them.



- When 4K high-quality video (4K 60Hz, 4K HDR, etc.) is to be played, use Premium High Speed HDMI Cable or Premium High Speed HDMI Cable with Ethernet that have the "PREMIUM Certified Cable" label attached to the packaging.
- When 8K high-quality video (8K 60Hz, etc.) is to be played, use ULTRA High Speed HDMI Cable that has the "ULTRA HIGH SPEED" label attached to the packaging.

Connecting the TV

By connecting a TV to this unit, you can show the video from AV devices connected to this unit on the TV and also play the sound from the TV through this unit.



a HDMI cable, b Digital optical cable

To ARC/eARC TV

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 MAIN jack labeled "ARC" on the receiver side.

- When a TV compatible with the eARC function is connected, use an HDMI cable that supports Ethernet.

To Non-ARC TV

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 is not required.

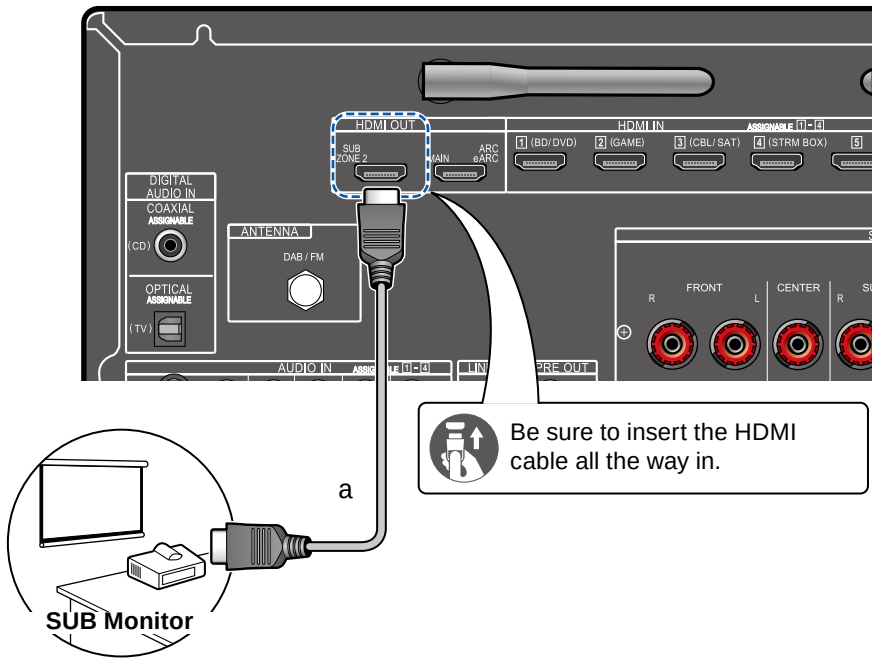
Setup

- When not using the ARC function, in the Home screen, set "System Setup" - "Hardware" - "HDMI" - "Audio Return Channel (eARC supported)" (→p124) to "Off".

(*)The ARC function and eARC function transmit 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 and eARC function, refer to the instruction manual of the TV, etc.
ARC/eARC compatible audio formats (→p175)

- Settings are required when 4K or 8K high-quality video is to be played. Refer to "HDMI 4K/8K Signal Format" (→p111) for information on the settings. Also, use an HDMI cable that supports 4K or 8K video.

Connecting the SUB Monitor



SUB Monitor

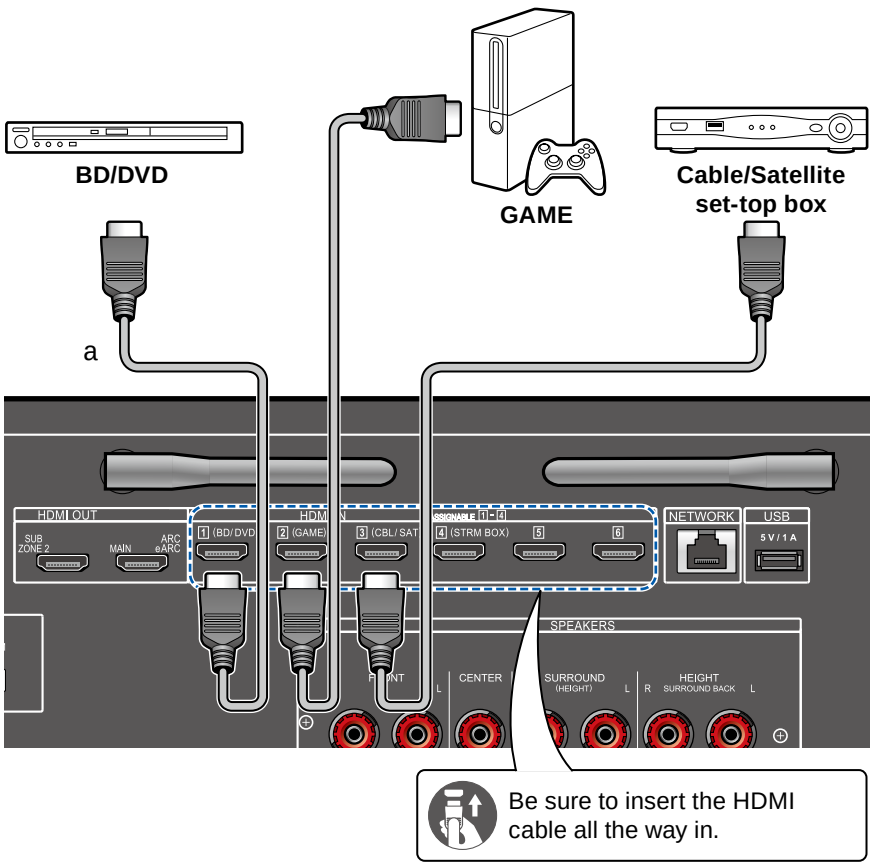
This unit has multiple HDMI OUT jacks, and another TV or projector can be connected to the HDMI OUT SUB jack.

- Switch between MAIN and SUB using the HDMI MAIN/SUB button on the remote controller (→p18) or "AV Adjust" (→p77). 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.

a HDMI cable

Connecting Playback Devices

Connections to BD/DVD and GAME with HDMI jacks



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.

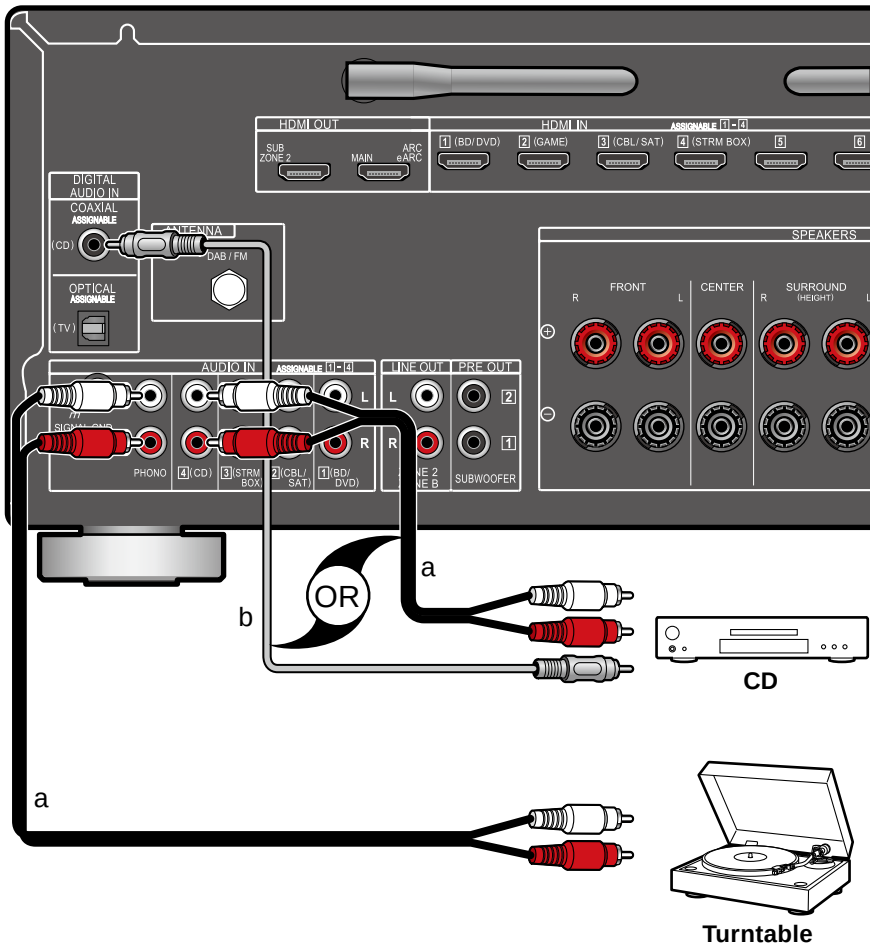
- Settings are required when 4K or 8K high-quality video is to be played. Refer to "HDMI 4K/8K Signal Format" (→p111) for information on the settings. Also, use an HDMI cable that supports 4K or 8K video.
- The corresponding resolution is different depending on the HDMI jack connected. See "Corresponding input resolutions" (→p176) for details.

Note

- To enjoy digital surround sound including Dolby Digital, set the audio output of the connected Blu-ray Disc player etc. to the Bitstream output.

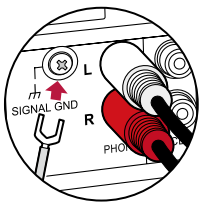
(*)The HDMI CEC function: This function enables various linking operations with CEC-compliant devices, such as switching input selectors interlocking with a CEC-compliant player, switching audio output between TV and this unit or adjusting the volume using the remote controller of a CEC-compliant TV,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

Connecting an Audio Component



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

- 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.

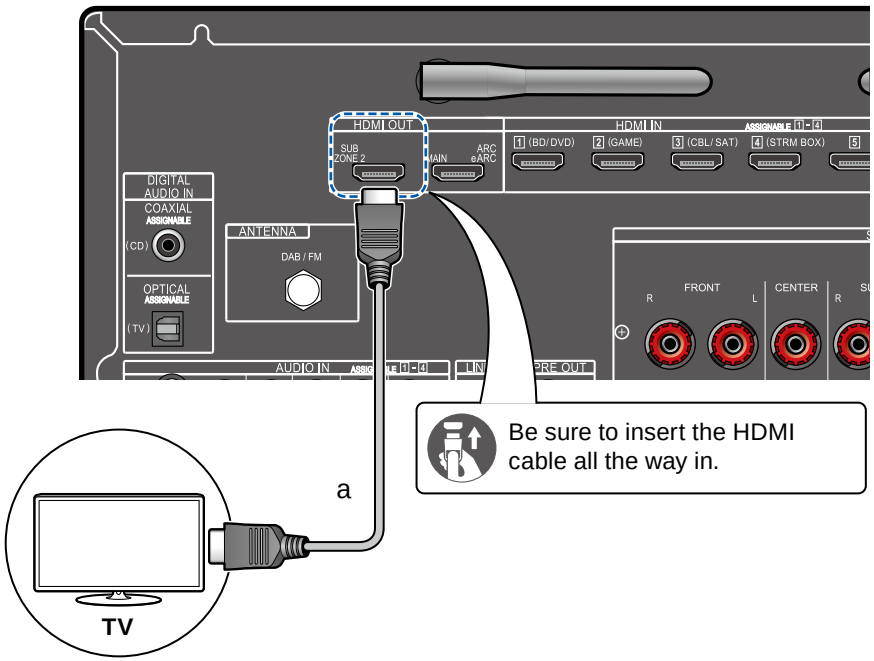


If the turntable has a ground wire, connect it to the SIGNAL GND terminal of this unit.

a Analog audio cable, b Digital coaxial cable

Connecting a TV or Integrated Amplifier in a separate room (Multi-zone)

Connecting a TV (ZONE 2)



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.

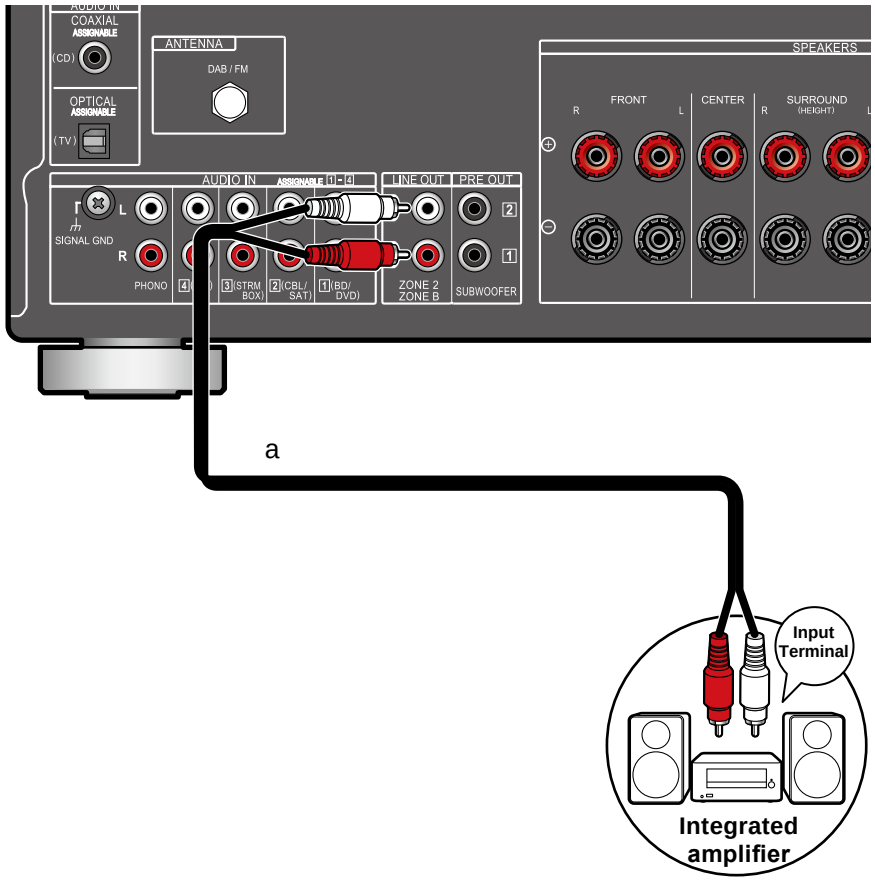
- The audio from externally connected AV components can be output only when the signal is 2 ch PCM audio. It may also be necessary to convert the audio output of the AV component to PCM output.

Setup

- When video and audio via HDMI input are output to ZONE 2, set "Input/ Output Assign" - "TV Out / OSD" - "Zone 2 HDMI" (→p111) to "Use" on the System Setup menu. Note that when "Zone 2 HDMI" is set to "Use", the resolution of the video that can be output by the HDMI OUT SUB/ZONE 2 jack will be limited to "4K Standard" (→p111).

a HDMI cable

Connecting an Integrated Amplifier (ZONE 2)



a Analog audio cable

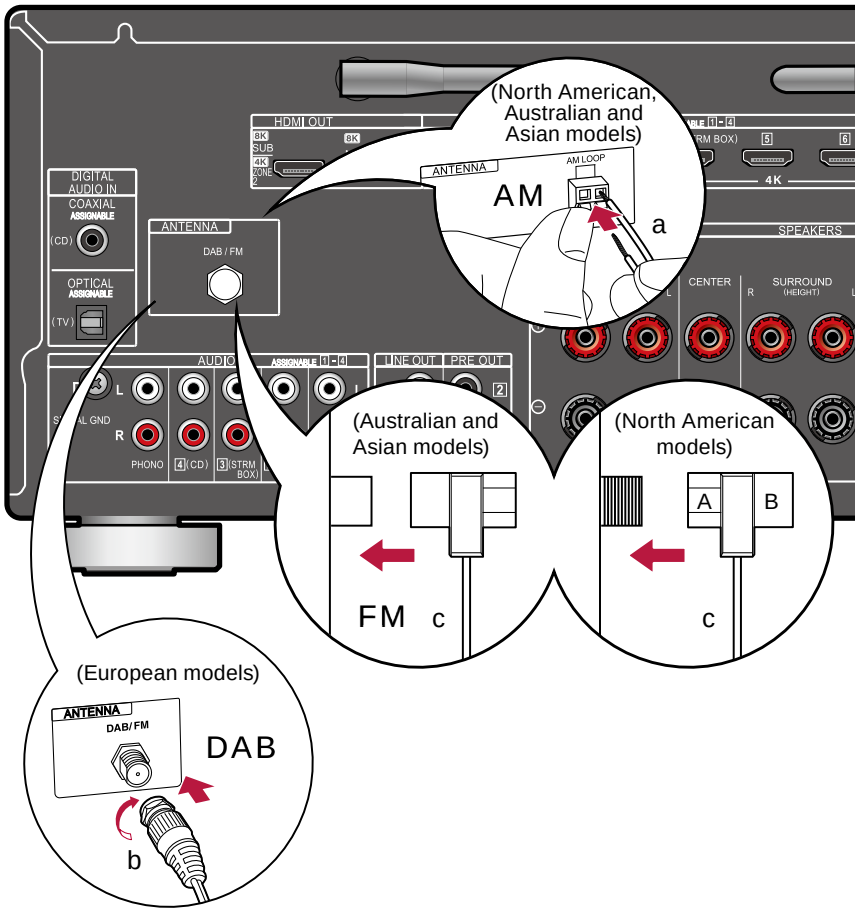
You can enjoy 2 ch audio in the separate room (ZONE 2) while performing playback in the main room (where this unit is located). Use an analog audio cable to connect the ZONE 2 LINE OUT terminal on this unit to the input jack on an integrated amplifier in the separate room.

- 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 2 ch 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

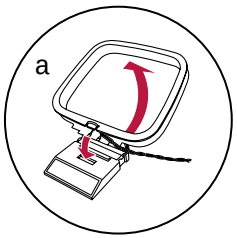
- Settings are required to output audio to ZONE 2. Press ⌂ on the remote controller to display the Home screen, then set "System Setup" - "Speaker" - "Configuration" - "Zone 2 Lineout" (→p115) to "Zone 2".

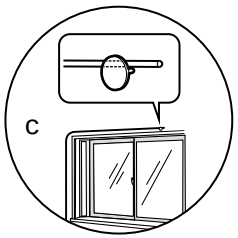
Connecting Antennas



North American, Australian and Asian models

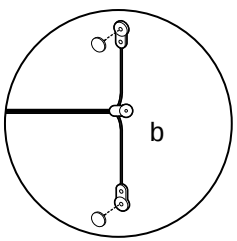
Connect the antenna to this unit, and set up the antenna at the best position for listening while receiving radio signals. Attach the indoor FM antenna to the wall using push pins or adhesive tape.





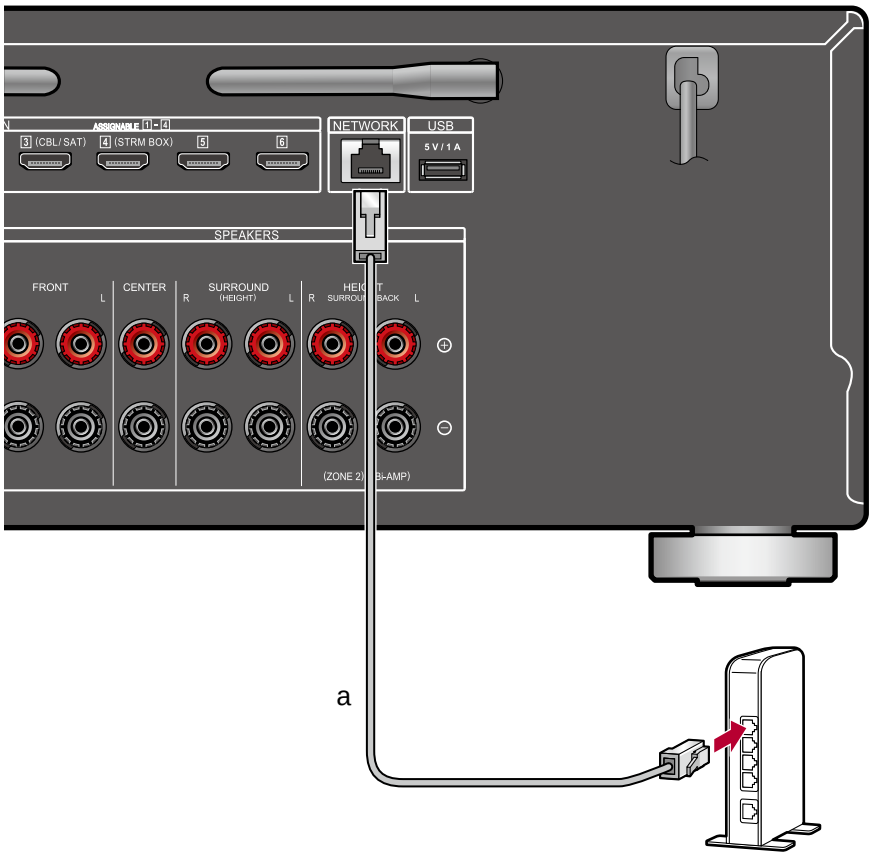
European models

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.



a AM loop antenna, b DAB/FM antenna, c Indoor FM antenna

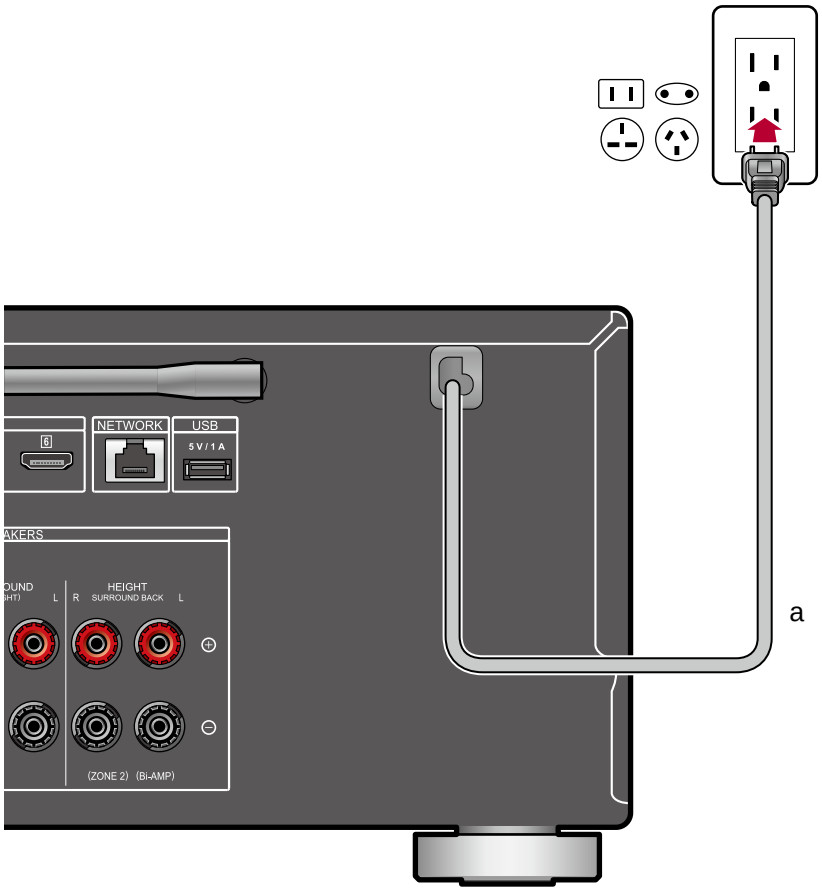
Network Connection



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 NETWORK jack with the Ethernet cable as shown in the illustration. To connect by Wi-Fi, select your desired setting method in "Network Connection" (→p143) of Initial Setup, and then follow the on-screen instructions. To set in the System Setup menu after completing Initial Setup, press ⌂ on the remote controller, then from the Home screen displayed, set in "Network/Bluetooth" - "Network" (→p135). For the Wi-Fi connection, stand the wireless antenna for use.

a Ethernet cable

Connecting the Power Cord



Connect the power cord after all the connections are completed.

a Power cord