



Basic Manual

SC-LX901

AV RECEIVER

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[The Basic Manual](#) includes information needed when starting up and also instructions for frequently used operations. [The Advanced Manual](#) has more detailed information and advanced settings.



What's in the box

1. Main unit
2. Remote controller (RC-927R) ×1, Batteries (AAA/R03) ×2
3. Indoor FM antenna ×1
4. AM loop antenna ×1
5. Speaker setup microphone ×1
6. Power cord ×1

Glossary

Dolby Atmos

This unit supports playback in the Dolby Atmos format which provides 360° sound placement. Unlike existing surround systems, Dolby Atmos doesn't rely on channels, but rather enables the accurate placement of sound objects that have independent motion in a three-dimensional space with even greater clarity. Dolby Atmos is an optional audio format on Blu-ray Discs and achieves a three-dimensional sound field by introducing a sound field above the listener.

ARC

The ARC (Audio Return Channel) feature transfers TV audio signals via HDMI cable so that you can play the audio from the TV through this unit. Connection to an ARC compatible TV is complete with one HDMI cable. Refer to the instruction manual for your TV to see if it supports ARC. (→P12)

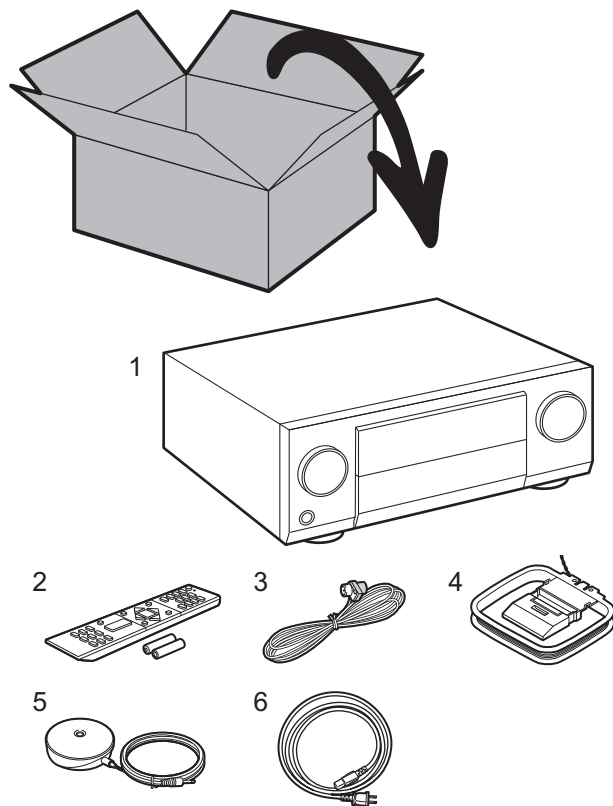
HDMI CEC functionality

Control features such as linking input switching with the input selector and players conforming to the CEC standard, switching audio output and volume using the remote controller of a CEC-compliant TV, and automatically switching this unit to standby when the TV is turned off (→P14)

HDMI Standby Through

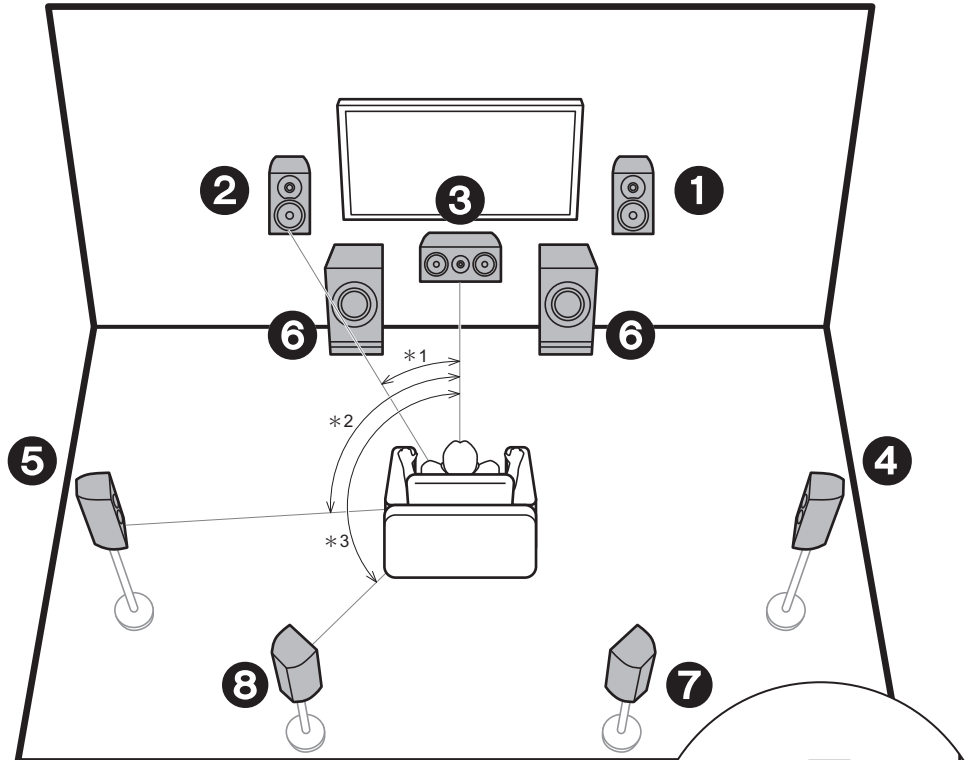
Video and audio signals from AV components can be transmitted to the TV even if this unit is in standby (→P14)

i CAUTION: Connect speakers with 4 Ω to 16 Ω impedance. The power cord must be connected only after all other cable connections are completed. We will not accept responsibility for damage arising from the connection of equipment manufactured by other companies.



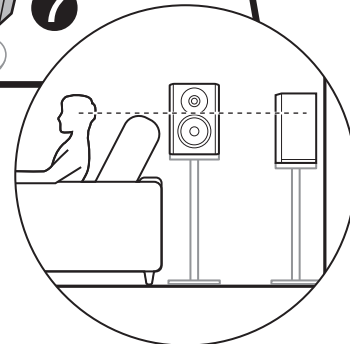


Step1: Speaker Layout



* 1: 22° ~ 30°, * 2: 90° ~ 120°, * 3: 135° ~ 150°

- ❶ ❷ Front Speakers
- ❸ Center Speaker
- ❹ ❺ Surround Speakers
- ❻ Powered Subwoofer
- ❼ ❽ Surround Back Speakers



✓ 7.1-Channel System

Front speakers output front stereo sound and a center speaker outputs center sound such as dialogs and vocals. Surround speakers create back sound field. Powered subwoofer reproduces bass sounds and creates rich sound field.

Surround back speakers improve the sense of envelopment created by the back sound field and provide a more realistic sound field. Furthermore, by installing surround back speakers, you can select the Dolby Atmos listening mode, which realizes the most up-to-date 3D sound, when the input format is Dolby Atmos.

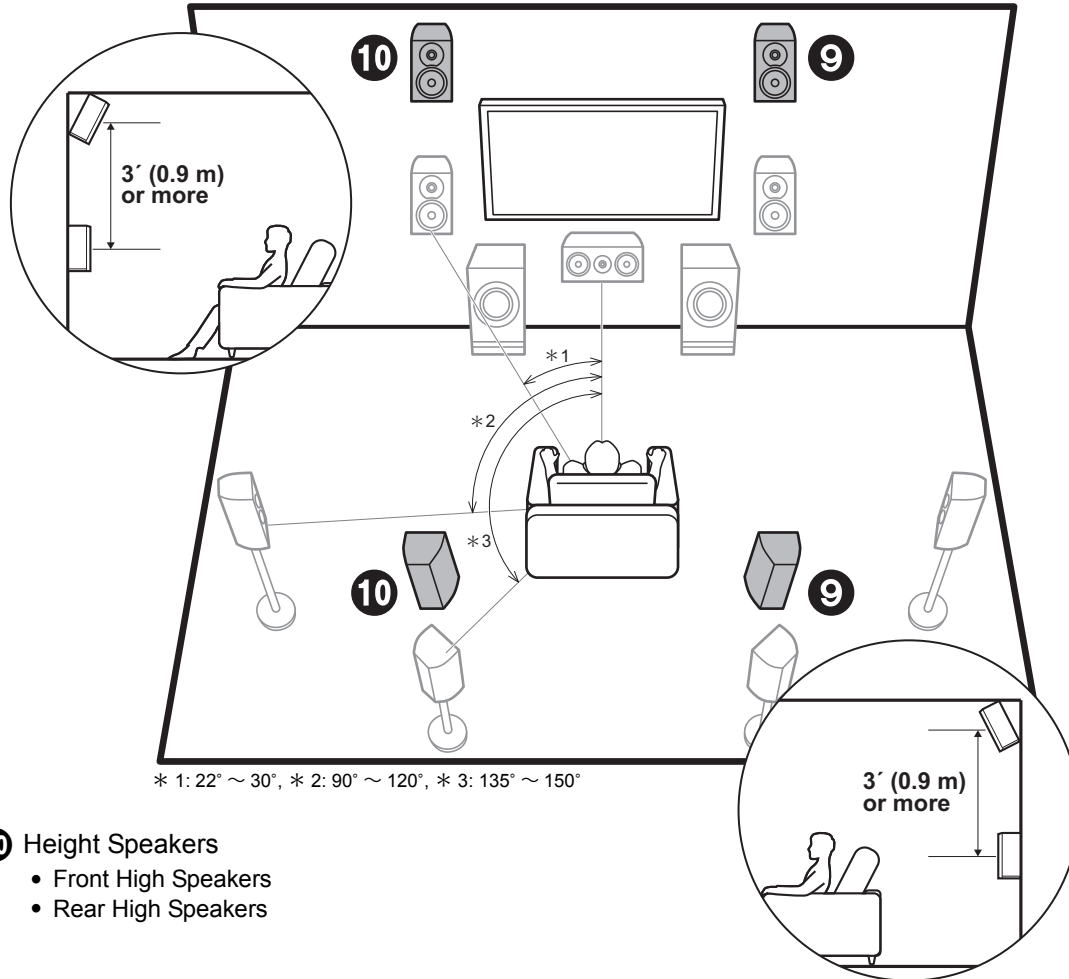
The front speakers should be positioned at ear height, while the surround speakers should be positioned just above ear height. Center speaker should be set up facing the listening position.

Placing the powered subwoofer between the center speaker and a front speaker gives you a natural sound even when playing music.

The optimal positioning is for surround back speakers to be at ear height.

- If you are including surround back speakers in the setup, surround speakers are required.

Go To "Hookup" (→P10)



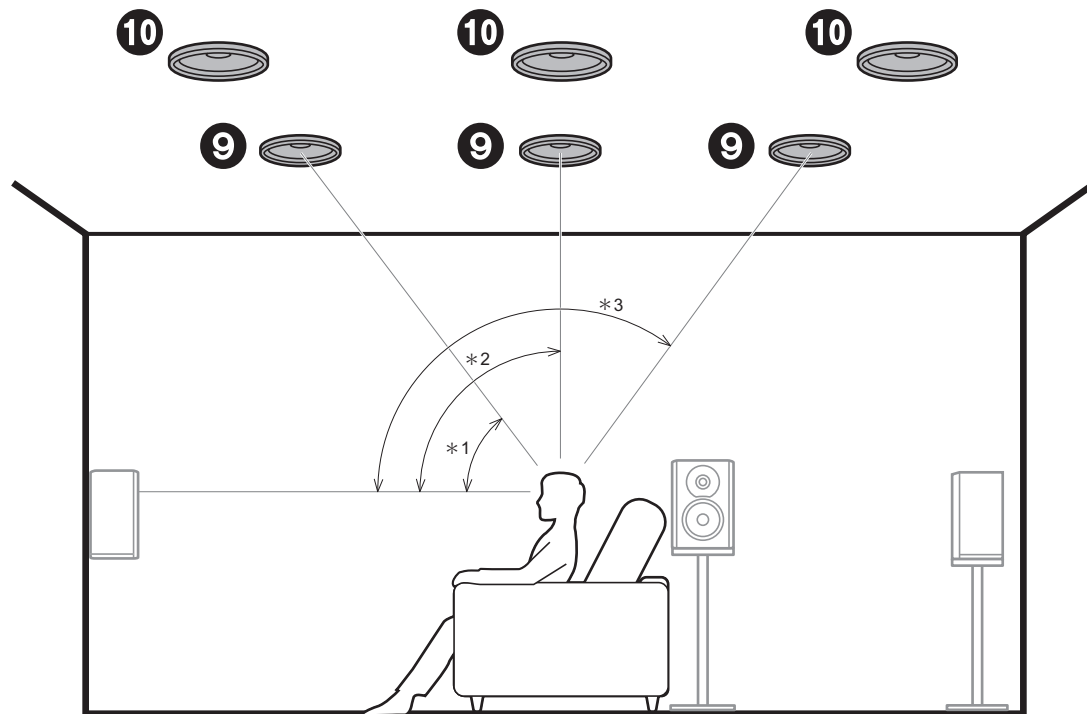
- 9 10** Height Speakers
- Front High Speakers
 - Rear High Speakers

✓ **Height Speakers;
Front High Speakers/
Rear High Speakers**

These are types of height speakers. Furthermore, by installing height speakers, you can select the Dolby Atmos listening mode, which realizes the most up-to-date 3D sound including overhead sounds, when the input format is Dolby Atmos.

Front high speakers or rear high speakers should be situated at least 0.9 m higher than the front speakers. Front high speakers should be situated directly above the front speakers and the distance between the rear high speakers should match the distance between the front speakers. Both should be set up facing the listening position. Note that with height speakers you can install up to two sets; Height 1 Speaker and Height 2 Speaker.

Go To "Hookup" (→P10)



* 1: 30° ~ 55°, * 2: 65° ~ 100°, * 3: 125° ~ 150°

9 10 Height Speakers

- Top Front Speakers
- Top Middle Speakers
- Top Rear Speakers

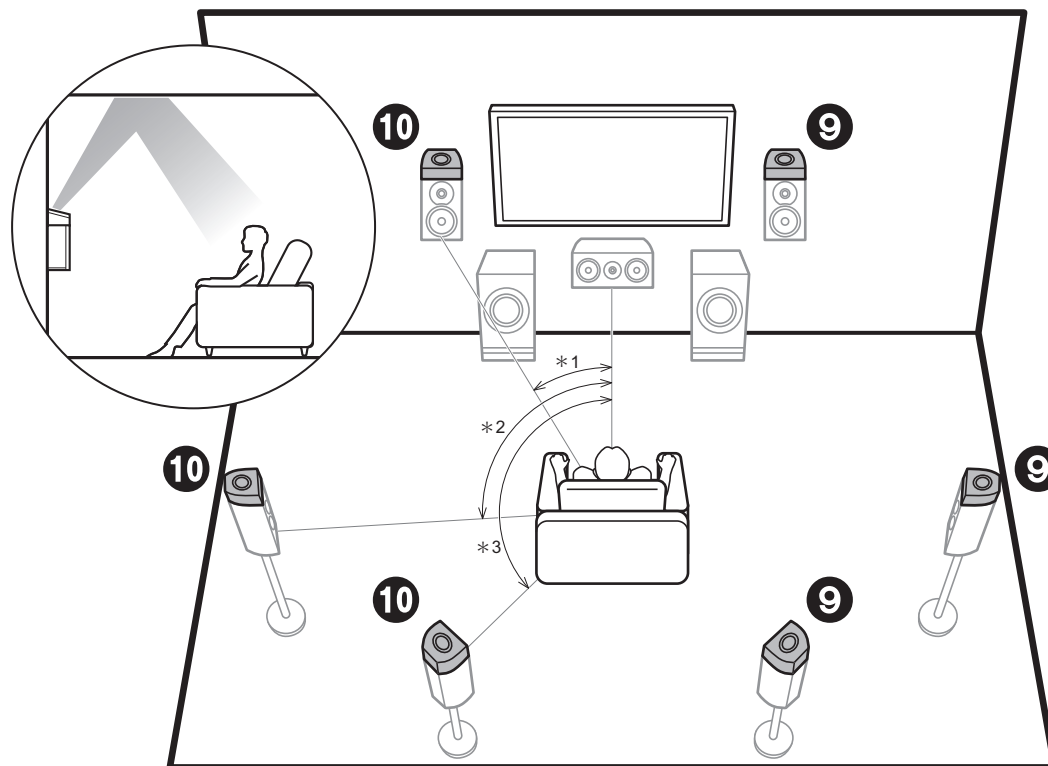
✓ Height Speakers; Ceiling Speakers

These are types of height speakers. Furthermore, by installing height speakers, you can select the Dolby Atmos listening mode, which realizes the most up-to-date 3D sound including overhead sounds, when the input format is Dolby Atmos.

Fit top front speakers on the ceiling forward of the seating position, top middle speakers on the ceiling directly above the seating position, and top rear speakers on the ceiling behind the seating position. The distance between each pair should match the distance between the two front speakers. Note that with height speakers you can install up to two sets; Height 1 Speaker and Height 2 Speaker.

- Dolby Laboratories recommends placing this type of height speakers to obtain the best Dolby Atmos effect.

Go To "Hookup" (→P10)



* 1: 22° ~ 30°, * 2: 90° ~ 120°, * 3: 135° ~ 150°

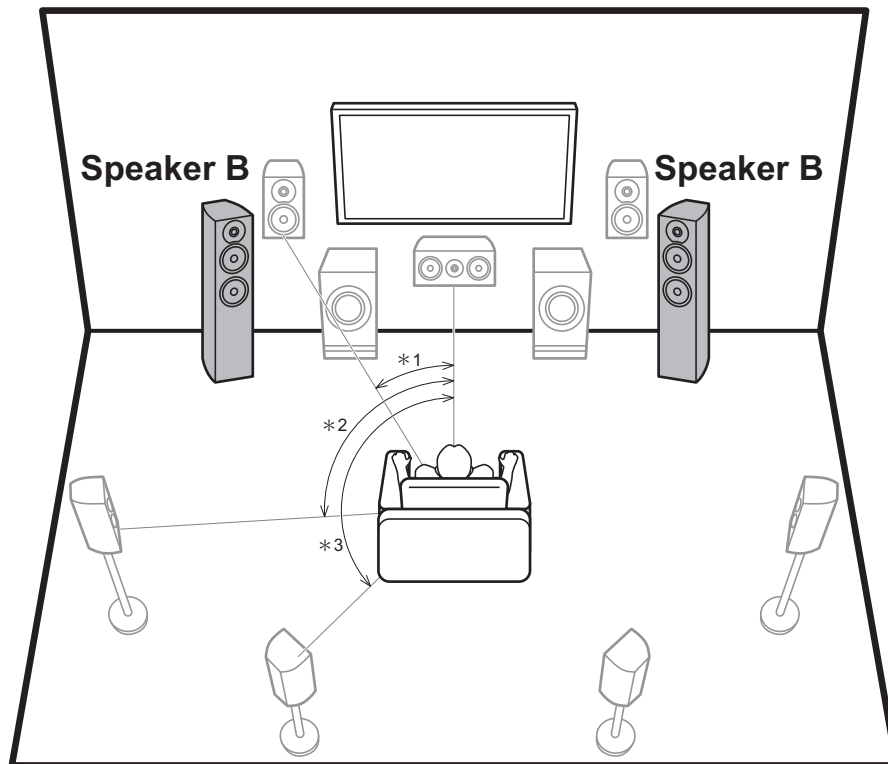
✓ Height Speakers; Dolby Enabled Speakers (Dolby Speakers)

These are types of height speakers. Dolby enabled speakers are special speakers designed to face the ceiling so that sound is heard after bouncing off the ceiling so that sound appears to be coming from overhead. Furthermore, by installing height speakers, you can select the Dolby Atmos listening mode, which realizes the most up-to-date 3D sound including overhead sounds, when the input format is Dolby Atmos. Place them either above the front speakers or above the surround speakers or surround back speakers. Note that with height speakers you can install up to two sets; Height 1 Speaker and Height 2 Speaker.

Go To "Hookup" (→P10)

9 10 Height Speakers

- Dolby Enabled Speakers (Front)
- Dolby Enabled Speakers (Surround)
- Dolby Enabled Speakers (Surround Back)



* 1: 22° ~ 30°, * 2: 90° ~ 120°, * 3: 135° ~ 150°

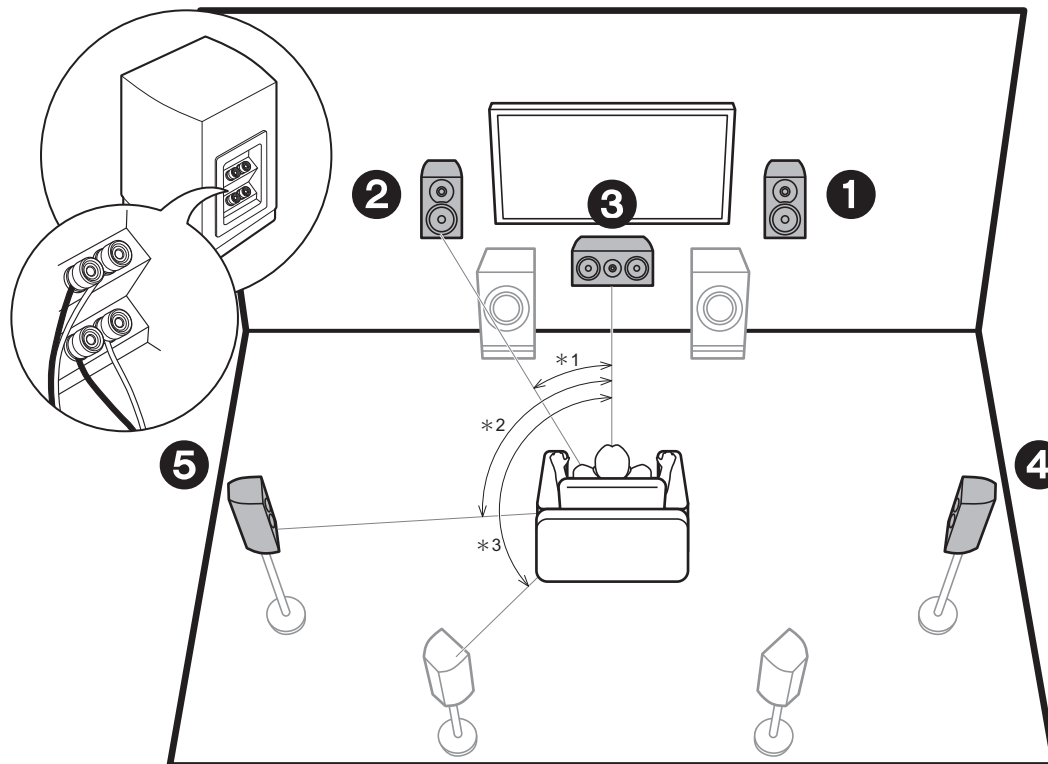
✓ Speaker B System

Apart from the main speaker system (Speaker A System), you can also connect another system of front speakers to be the Speaker B System. When you do so, you can switch the same audio to output from A, B, or A+B. Switch with "Speakers" in AV Adjust (→P28).

 Go To "Hookup" (→P10)

Depending on the configuration of the main speaker system, it is possible to connect a Speaker B System supporting Bi-Amping (→P8) to improve quality of the bass and treble.

 Go To "Hookup" (→P11)



* 1: 22° ~ 30°, * 2: 90° ~ 120°, * 3: 135° ~ 150°

- 1 2** Front Speakers (Bi-Amping)
- 3** Center Speaker (Bi-Amping)
- 4 5** Surround Speakers (Bi-Amping)

✓ Bi-Amping the Speakers

It is possible to connect front speakers, a center speaker, and surround speakers supporting Bi-Amping to improve quality of the bass and treble. The effects and placements for speakers are the same as for a system that doesn't use Bi-Amping speakers.

The following shows the combinations you can connect with Bi-Amping speakers.

- Front speakers only
- Front speakers and center speaker
- Front speakers and surround speakers
- Center speaker and surround speakers
- Front speakers, center speaker, and surround speakers

Except for a case where only the front speakers are Bi-Amping connected, when multiple speakers are combined in a Bi-Amping connection, the maximum speaker configuration is 5.1 ch.

Go To "Hookup" (→P11)



✓ Speaker combinations

In any of the combinations, up to two powered subwoofers can be connected.

Speaker Channels	FRONT	CENTER	SURROUND	SURROUND BACK	HEIGHT 1	HEIGHT 2	SP B * 1 (Speaker B)	Bi-AMP * 1	ZONE 2 * 1 (→P19)	ZONE 3 * 1 (→P20)
2.1 ch	✓						✓ * 2	FRONT	✓	✓
3.1 ch	✓	✓					✓ * 2	FRONT, FRONT/CENTER	✓	✓
4.1 ch	✓		✓				✓ * 2	FRONT, FRONT/SURROUND	✓	✓
5.1 ch	✓	✓	✓				✓ * 2	FRONT, FRONT/CENTER, FRONT/SURROUND, CENTER/SURROUND, FRONT/CENTER/ SURROUND	✓	✓
6.1 ch	✓		✓	✓			✓ * 2	FRONT	✓	✓
7.1 ch	✓	✓	✓	✓			✓ * 2	FRONT	✓	✓
2.1.2 ch	✓				✓ * 3		✓	FRONT	✓	✓ * 4
3.1.2 ch	✓	✓			✓ * 3		✓	FRONT	✓	✓ * 4
4.1.2 ch	✓		✓		✓ * 3		✓	FRONT	✓	✓ * 4
5.1.2 ch	✓	✓	✓		✓ * 3		✓	FRONT	✓	✓ * 4
6.1.2 ch	✓		✓	✓	✓ * 3		✓	FRONT	✓	
7.1.2 ch	✓	✓	✓	✓	✓ * 3		✓	FRONT	✓	
4.1.4 ch	✓		✓		✓	✓				
5.1.4 ch	✓	✓	✓		✓	✓				
6.1.4 ch	✓		✓	✓	✓	✓				
7.1.4 ch	✓	✓	✓	✓	✓	✓				

Points to note with speaker combinations

- * 1: It is not possible to use Speaker B, Bi-AMP, and ZONE speakers at the same time. However, with 2.1 ch to 7.1 ch, it is possible to use Bi-AMP (FRONT) and ZONE 2 speakers at the same time.
- * 2: You can also use Bi-Amping connections with Speakers B.
- * 3: If front speakers are to be Bi-Amping connected, height speakers need to be connected to the HEIGHT 2 jacks.
- * 4: ZONE 2 speakers need to be connected to the HEIGHT 1 jack, ZONE 3 speakers need to be connected to the SURROUND BACK jacks, and height speakers need to be connected to the HEIGHT 2 jacks.

HEIGHT 1/HEIGHT 2

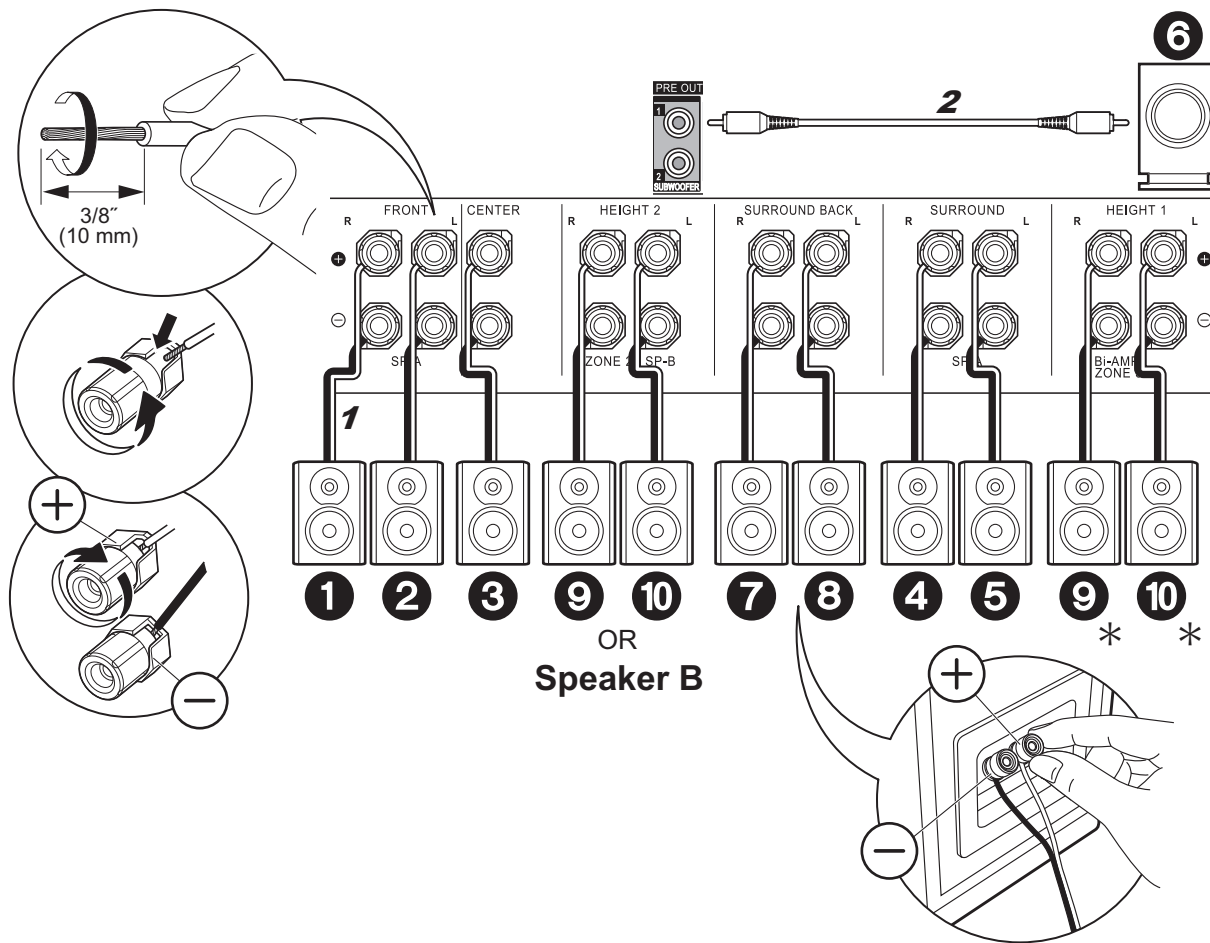
When connecting 2 sets of height speakers, the height speaker combinations you can choose are as follows.

- Height 1 Speaker: Top Middle, Height 2 Speaker: Rear High
- Height 1 Speaker: Front High, Height 2 Speaker: One of Rear High/Top Middle/Top Rear/Dolby Enabled Speaker (Surround)/Dolby Enabled Speaker (Surround Back)
- Height 1 Speaker: Top Front or Dolby Enabled Speaker (Front), Height 2 Speaker: One of Rear High/Top Rear/Dolby Enabled Speaker (Surround)/Dolby Enabled Speaker (Surround Back)

When connecting only one set of height speakers, select one type of height speakers from the types available.

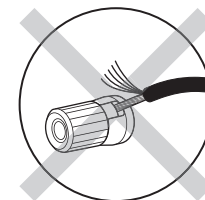


Step2: Connect the Speakers



✓ Standard Connections

Refer to the illustration to connect the speaker system.
 * Depending on the combination of speakers, you may need to connect to other jacks. See "Points to note with speaker combinations" (→P9) for details.

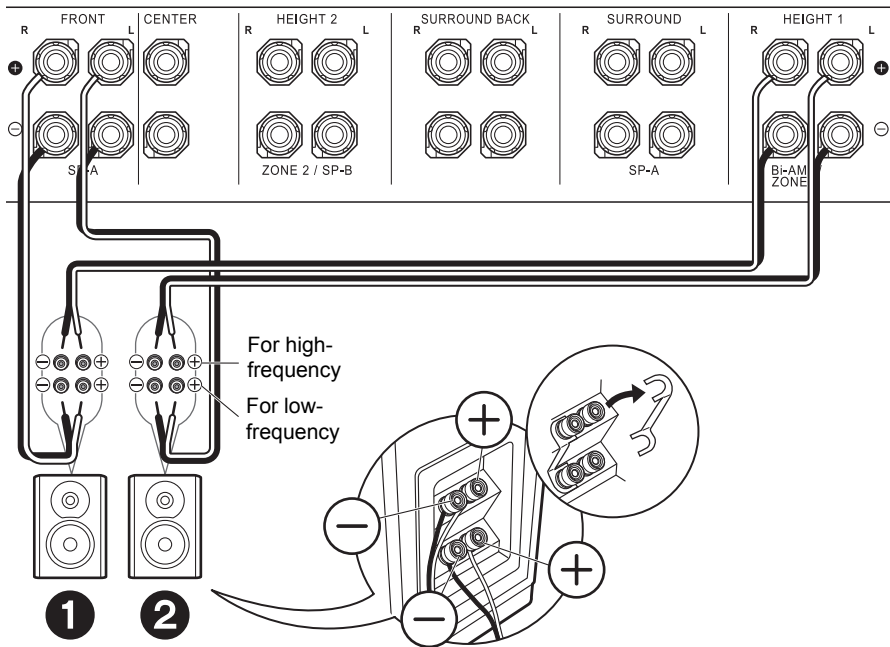


Make sure the exposed wires of the speakers do not stick out of the speaker terminals when connecting. If the exposed wires of the speakers touch the rear panel or the + and - wires touch each other, the protection circuit will be activated.

1 Speaker cable, 2 Subwoofer cable

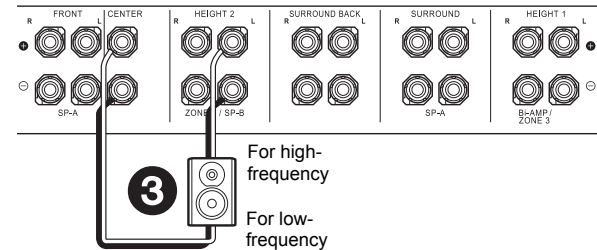
✓ Connections with Bi-Amping speakers

When using Bi-Amping connections for Front Speakers

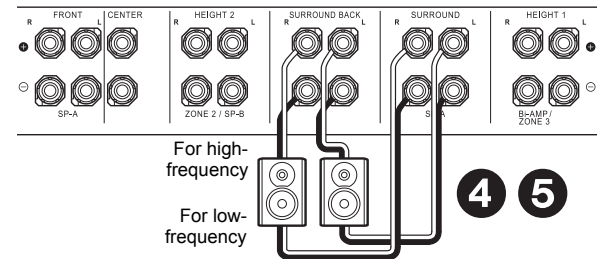


In case of Bi-Amping connection, refer to the instruction manual of your speakers.

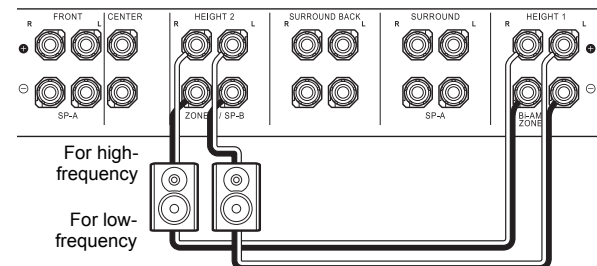
With a Center Speaker



With Surround Speakers



With the Speaker B system



Step3: Connect the TV

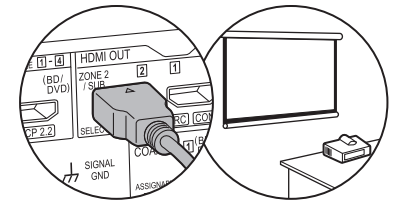
✓ TV-1 (ARC TV)

This describes the connections for a TV that supports the ARC (Audio Return Channel) feature. By connecting with a single HDMI cable, you can not only output the video input to this unit to the TV, but you can also play the sound from the TV through this unit. Choose an HDMI IN jack on the TV that supports ARC when connecting.

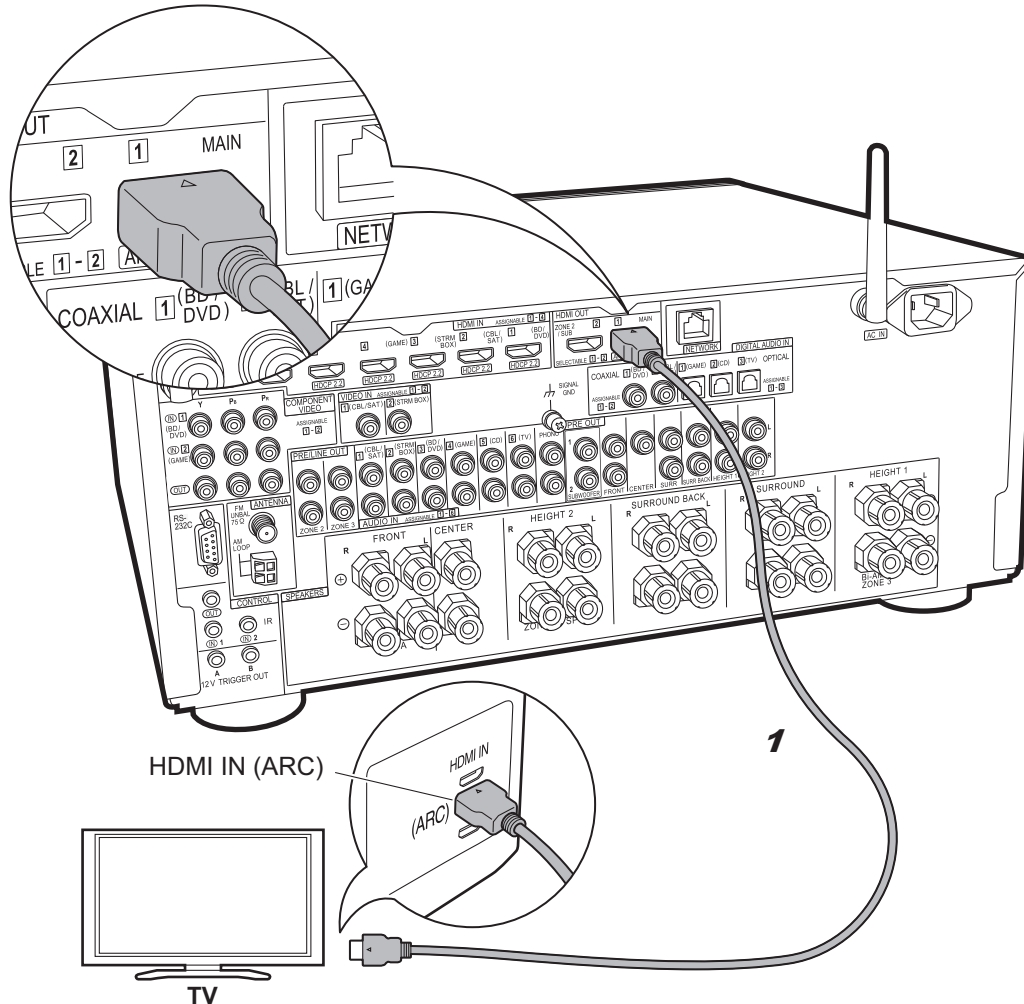


Setup

- Settings are required to use the ARC function. Select "Yes" in "5. Audio Return Channel" (→P23) in the Initial Setup.
- Please refer to the TV's operation manual for directions on connections and setup for the TV.



Another TV or projector can be connected to the HDMI OUT SUB jack. This jack does not support ARC. For details about how to output video from the HDMI OUT SUB jack (→P24)

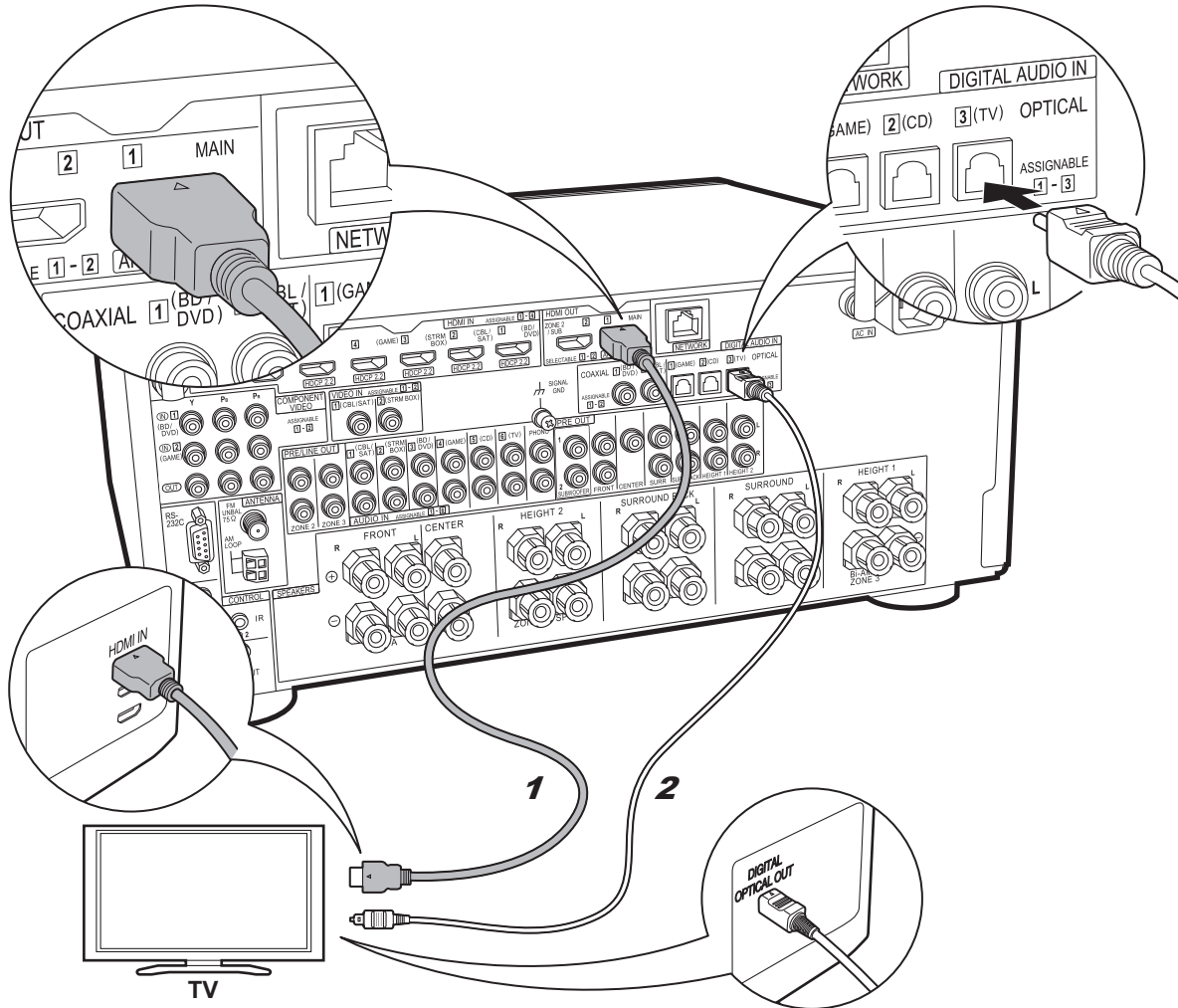


HDMI IN (ARC)

HDMI IN (ARC)

TV

1 HDMI cable



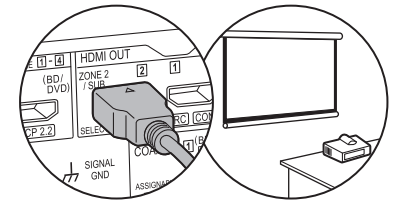
1 HDMI cable, 2 Digital optical cable

✓ TV-2 (Non-ARC TV)

This describes the connections for a TV that does not support the ARC (Audio Return Channel) feature. By connecting with both an HDMI cable and a digital optical cable, you can not only output the video input to this unit to the TV, but you can also play the sound from the TV through this unit.

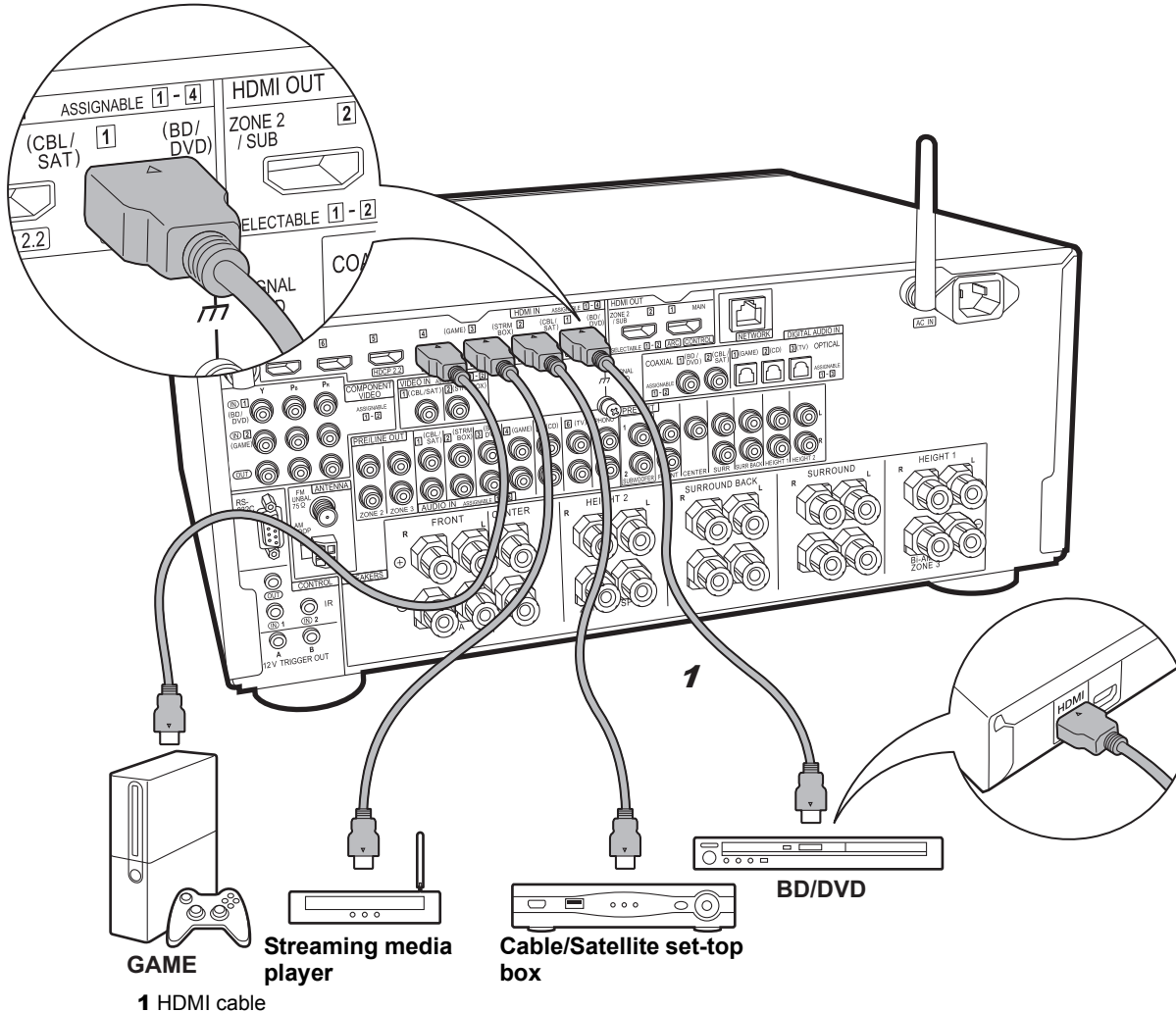
If the TV doesn't have a DIGITAL OPTICAL OUT jack, use an analog audio cable and connect the TV's ANALOG AUDIO OUT jack to the AUDIO IN TV jack on this unit.

- Connection with a digital optical cable is not necessary if you will watch TV through a device such as a cable set-top box (that is, not use a tuner built into the TV) that you have connected to the INPUT jack on this unit.



Another TV or projector can be connected to the HDMI OUT SUB jack. This jack does not support ARC. For details about how to output video from the HDMI OUT SUB jack (→P24)

Step4: Connect the AV Components



✓ HDMI AV Components

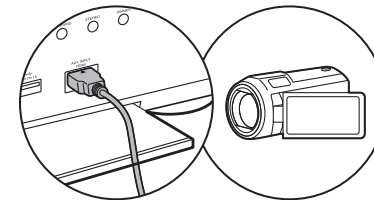
This is an example of connection with an AV component that has an HDMI jack. With connection to an AV component that conforms with the CEC (Consumer Electronics Control) standard, you can use features such as the HDMI CEC feature that links with the input selector, and the HDMI Standby Through feature which allows you to play video and audio from AV components on the TV even when this unit is in standby mode.

- To play 4K or 1080p video, use a high speed HDMI cable. Further, to enjoy HDCP2.2 compatible video, connect to the HDMI IN1 to IN5 jacks.

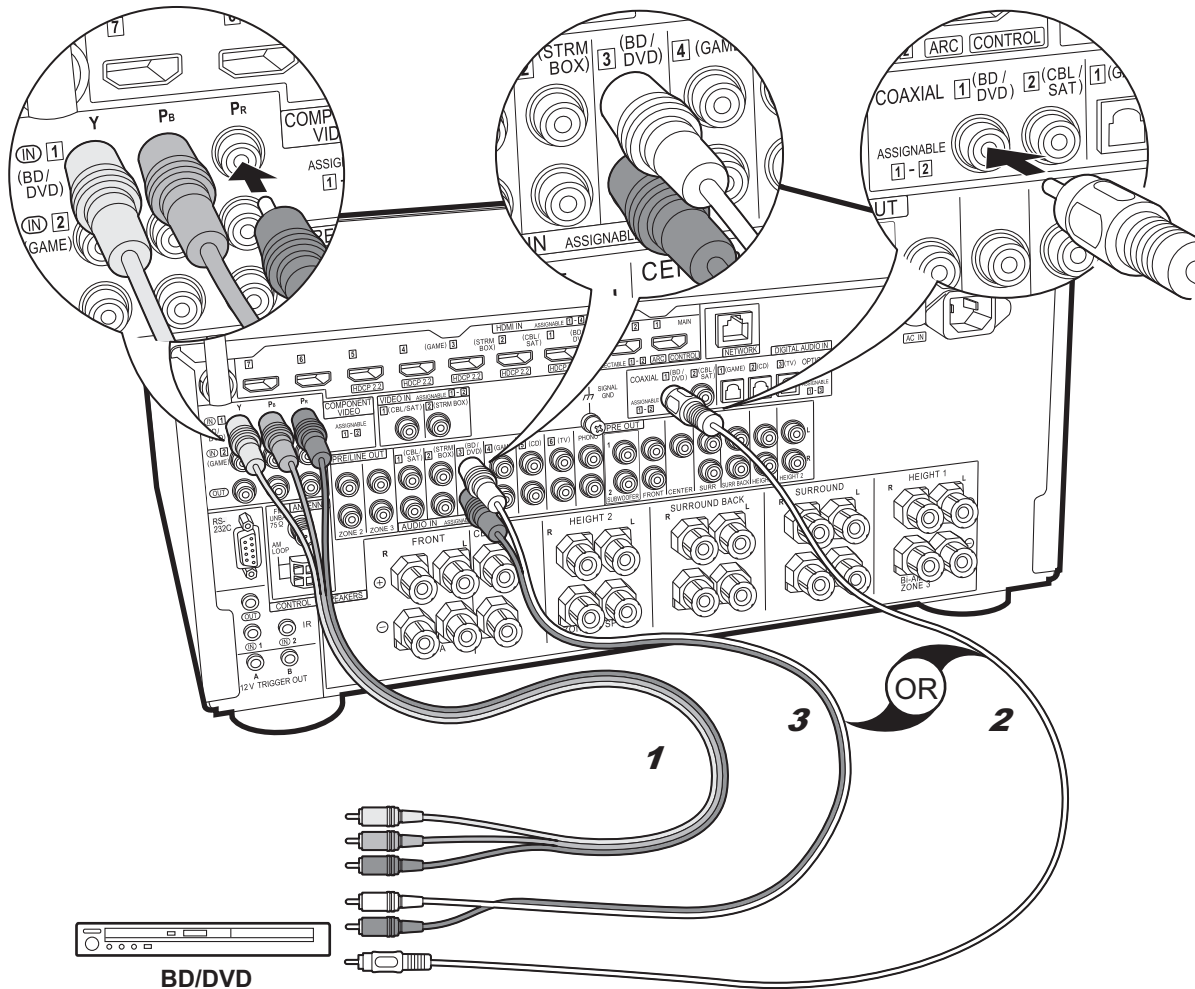


Setup

- HDMI setup (→P23) is required to use the HDMI CEC and HDMI Standby Through features. Make settings after all connections are complete.
- To enjoy digital surround sound including Dolby Digital, audio output should be set to "Bitstream output" on the connected Blu-ray Disc player or other device.



You can connect a device such as a video camera to the AUX INPUT HDMI jack on the front panel.



✓ Non-HDMI AV Components

This is an example of connection with an AV component that does not have an HDMI jack. Make the connections to the AV component to match the jacks it has. When video input connection is to the BD/DVD jack, the audio input connection should also be to the BD/DVD jacks, and so on, so that you connect the video input jacks to the jacks with the same name as the audio input jacks. Note that video signals input to the VIDEO IN jack or the COMPONENT VIDEO IN jacks will be converted to HDMI video signals and then output from the HDMI OUT jack.

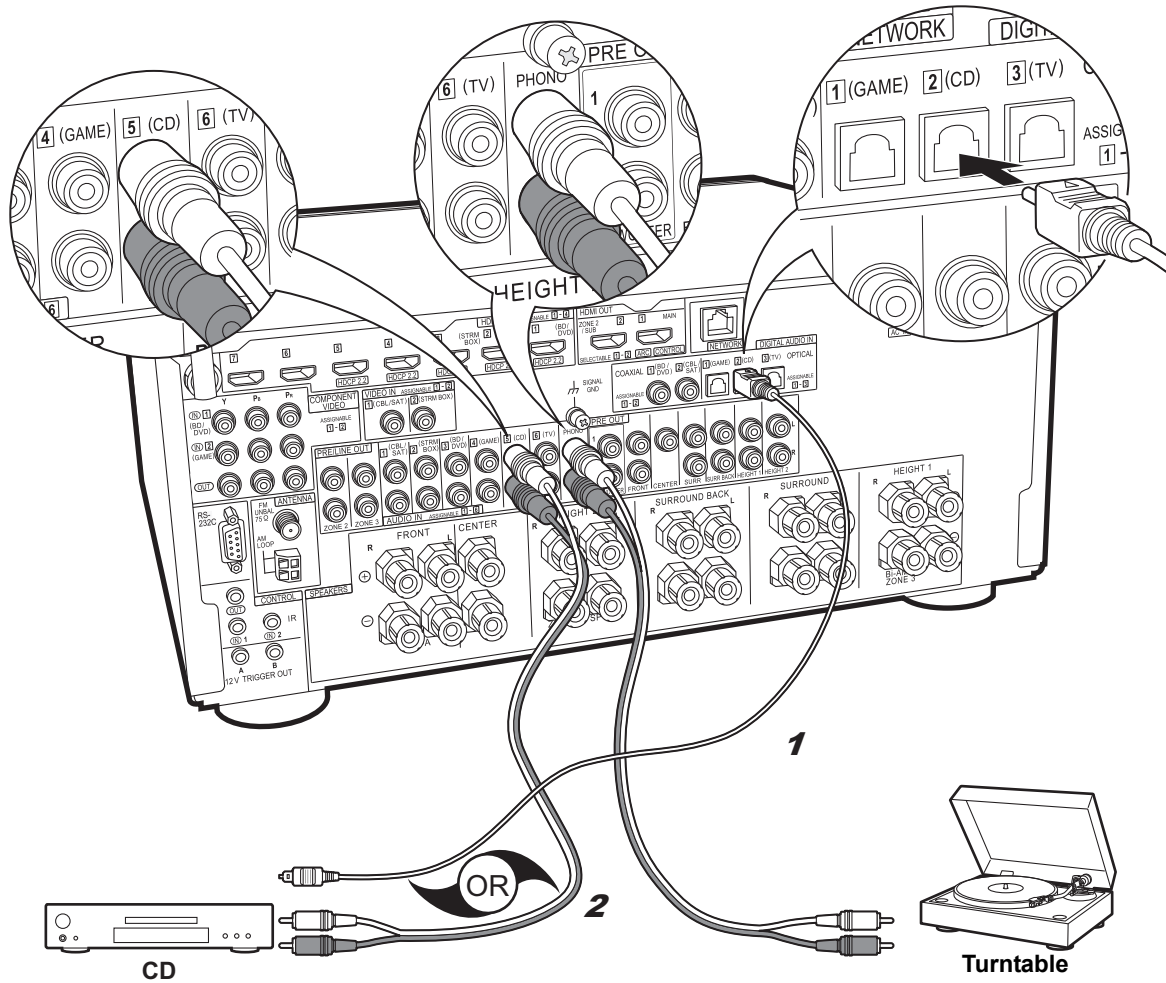
- To enjoy digital surround playback in formats such as Dolby Digital, you need to make a connection for audio signals with a digital coaxial cable or digital optical cable.
- It is possible to change assignment of the input jacks you see in the illustration at left, so you can also connect to any jack other than BD/DVD. For details, see the Advanced Manual.



Setup

- The COMPONENT VIDEO IN jacks are compatible only with 480i or 576i resolution. When you input video signals to the COMPONENT VIDEO IN jacks, set the output resolution of the player to 480i or 576i. Select interlace if there is no option for 480i, etc. If your player does not support 480i or 576i output, use the VIDEO IN jack.
- To enjoy digital surround sound including Dolby Digital, audio output should be set to "Bitstream output" on the connected Blu-ray Disc Player or other device.

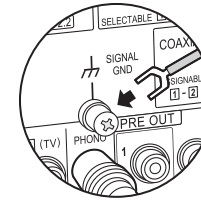
1 Component video cable, 2 Digital coaxial cable, 3 Analog audio cable



✓ Audio Components

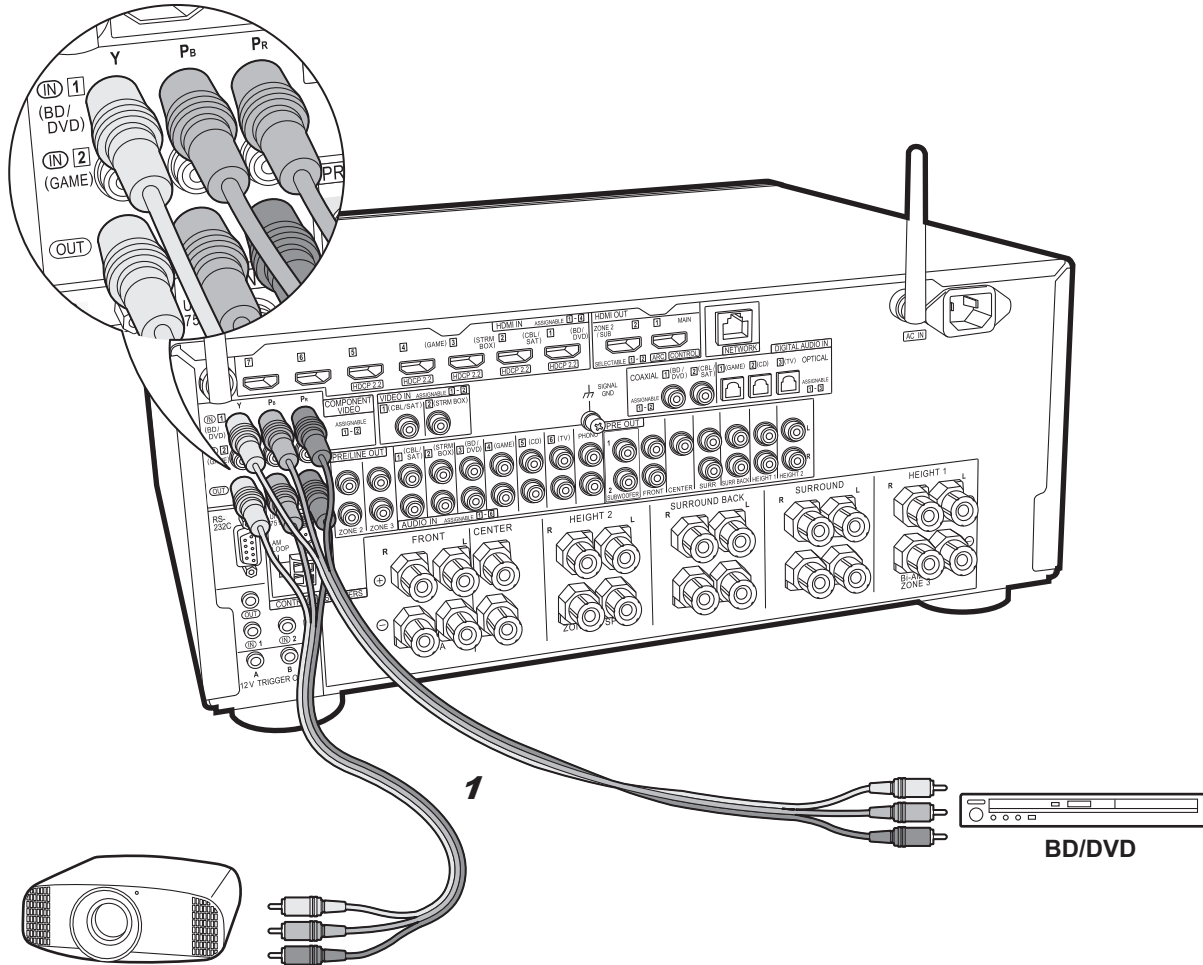
Example of a connection with an Audio Component. Connect a CD player using a digital optical cable or analog audio cable. You can also connect a turntable that has an MM-type cartridge to the PHONO jack.

- If the turntable has a built-in audio equalizer, connect it to an AUDIO IN jack other than the PHONO jack. Further, if the turntable uses an MC type cartridge, install an audio equalizer compatible with the MC type cartridge between the unit and the turntable, then connect to any AUDIO IN jack other than the PHONO jack.



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

1 Digital optical cable, 2 Analog audio cable



✓ Component Video Monitor

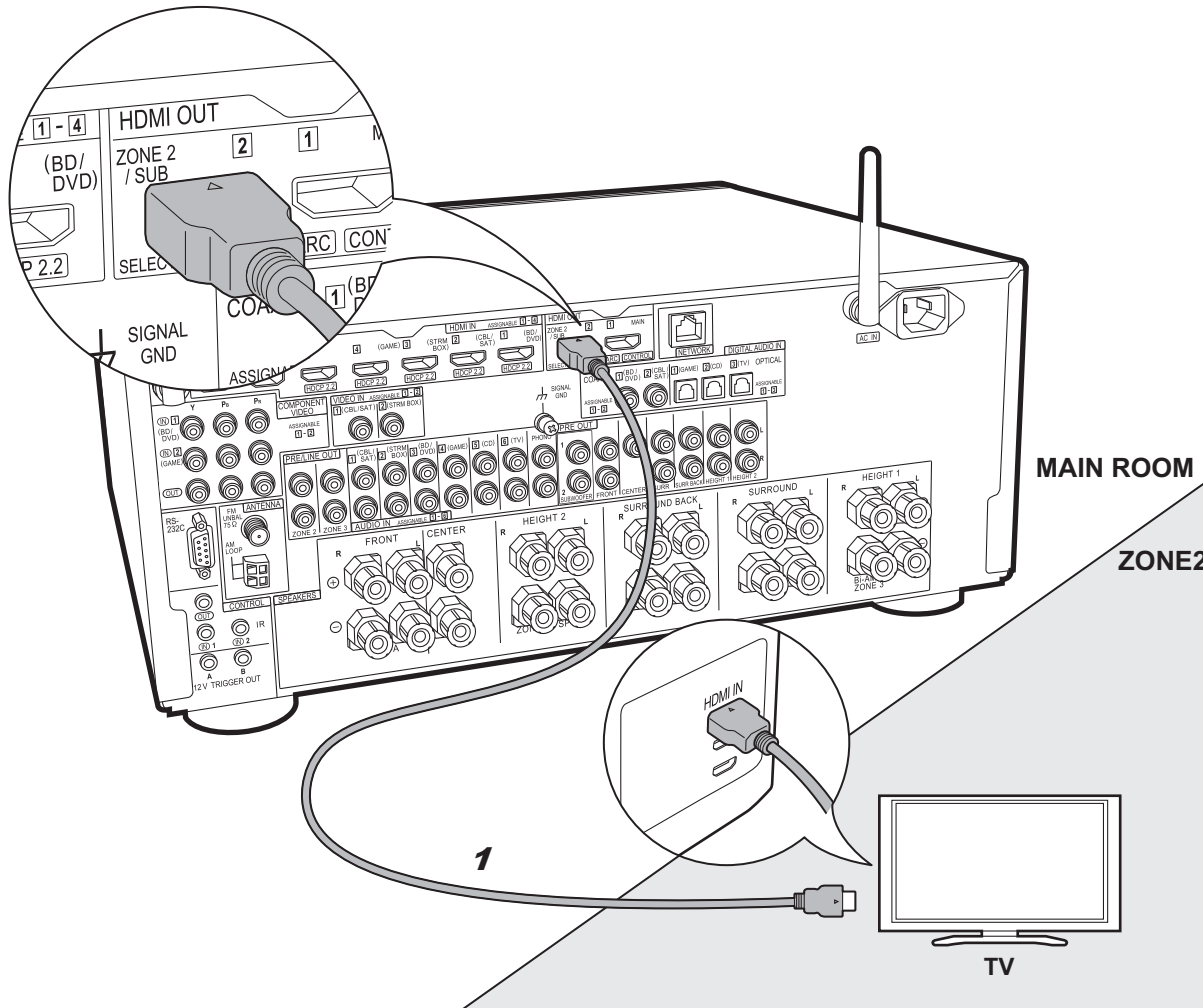
Use a component video cable to connect a TV or projector that has component video input jacks rather than an HDMI input jack. To output video from the COMPONENT VIDEO OUT jacks, you must connect the external AV components using a component video cable.

Projector, etc.

1 Component video cable



Step5: Multi-zone Connection



✓ ZONE 2 TV

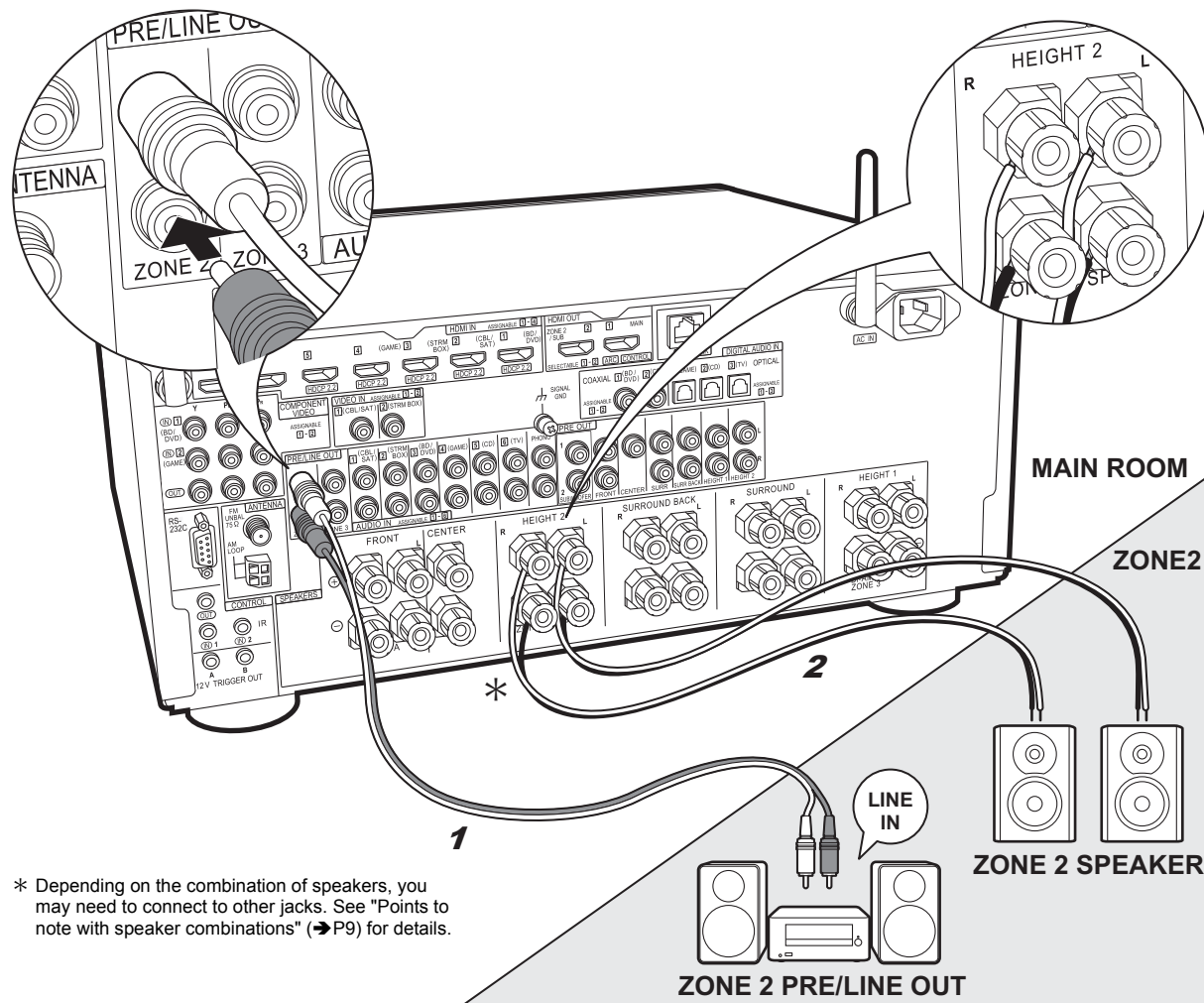
You can enjoy content from a Blu-ray Disc player on a TV equipped with an HDMI input jack in the separate room (ZONE 2) by playing a Blu-ray Disc player in the main room (where this unit is located), or play the content from another AV component. Only the video from devices connected to the HDMI IN1 to IN5 jacks can be played on the TV in the separate room.



Setup

- Settings are required in Initial Setup, "4. Multi Zone Setup" (→P23) to enjoy this feature.
- The audio from externally connected AV components can only be played in ZONE 2 when the audio is analog or 2ch PCM audio. It may also be necessary to convert the audio output of the AV component to PCM output.

1 HDMI cable



* Depending on the combination of speakers, you may need to connect to other jacks. See "Points to note with speaker combinations" (→P9) for details.

1 Analog audio cable, 2 Speaker cable

✓ ZONE 2 PRE/LINE OUT / ZONE 2 SPEAKER

You can enjoy audio in the separate room by, for example, playing a Blu-ray Disc player in the main room (where this unit is located) and listening to internet radio in the separate room (ZONE 2).

Connections with an AV component

Connect with HDMI IN 1 to 5 if you want to output an external AV component to ZONE 2. If the AV component doesn't have an HDMI jack, connect using a digital optical cable, digital coaxial cable, or analog audio cable.

ZONE 2 PRE/LINE OUT

It is possible to play 2 ch sources in a separate room while sources with a maximum of 11.1 ch are being played in the main room. Connect the ZONE 2 PRE/LINE OUT jacks of the unit and the LINE IN jacks of the pre-main amplifier or the power amplifier in a separate room with an analog audio cable.

ZONE 2 SPEAKER

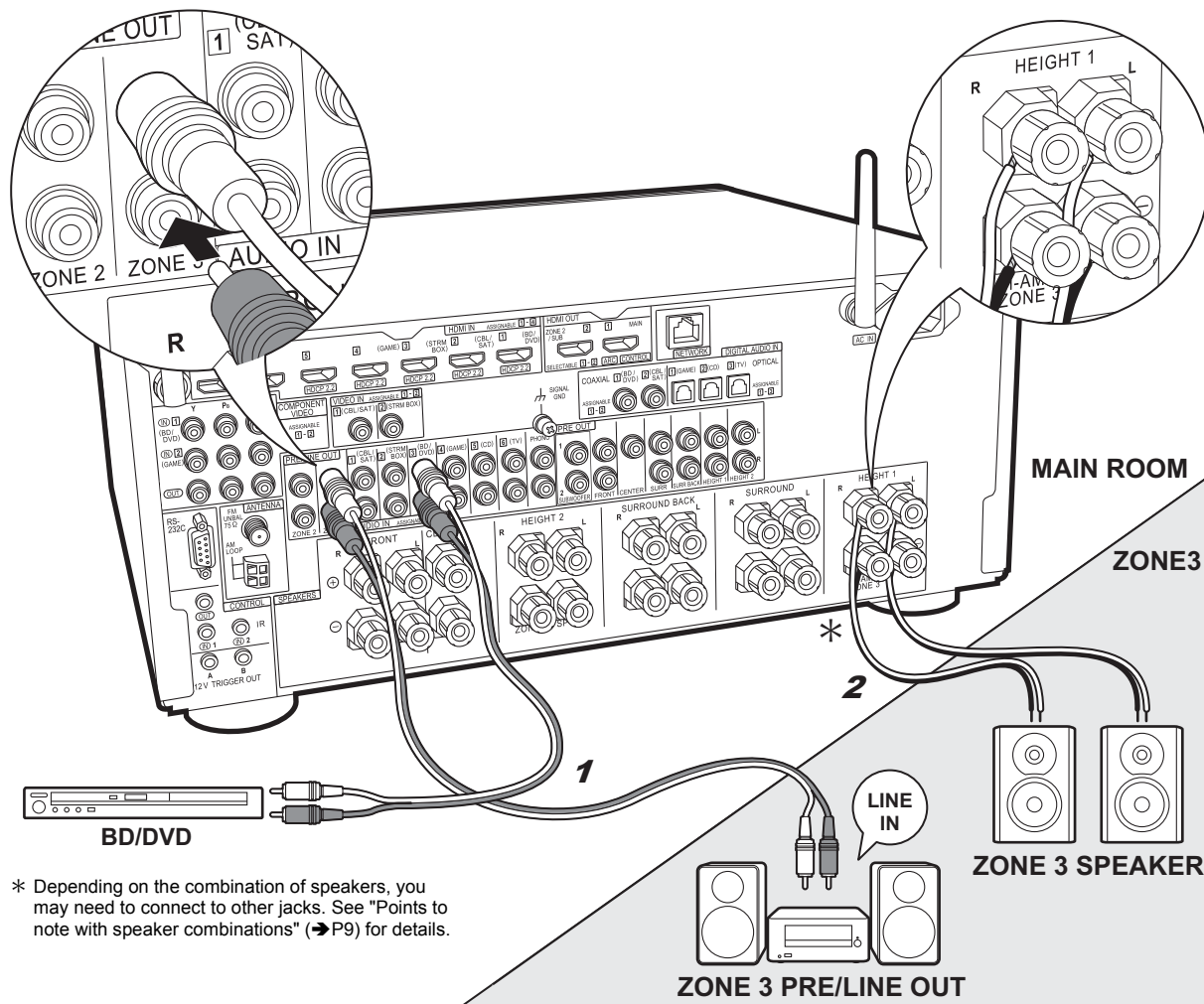
It is possible to connect speakers in a separate room and play 2 ch sources.

- You can play through a maximum of 9.1 channels in the main room during ZONE 2 playback.



Setup

- Settings are required in Initial Setup, "4. Multi Zone Setup" (→P23) to enjoy this feature.
- The audio from externally connected AV components can only be played in ZONE 2 when the audio is analog or 2ch PCM audio. If you have connected to this unit with an HDMI cable or digital optical/coaxial cable, may be necessary to convert the audio output of the AV component to PCM output.



* Depending on the combination of speakers, you may need to connect to other jacks. See "Points to note with speaker combinations" (→P9) for details.

1 Analog audio cable, 2 Speaker cable

✓ ZONE 3 PRE/LINE OUT / ZONE 3 SPEAKER

Along with the main room and ZONE 2, you can also enjoy audio in yet another room (ZONE 3).

Connections with an AV component

To output the audio of an external AV component to ZONE 3, connect using an analog audio cable. Output to ZONE 3 is not possible when you connect with an HDMI cable or digital optical/coaxial cable.

ZONE 3 PRE/LINE OUT

It is possible to play 2 ch sources in a separate room while sources with a maximum of 11.1 ch are being played in the main room. Connect the ZONE 3 PRE/LINE OUT jacks of the unit and the LINE IN jacks of the pre-main amplifier or the power amplifier in a separate room with an analog audio cable.

ZONE 3 SPEAKER

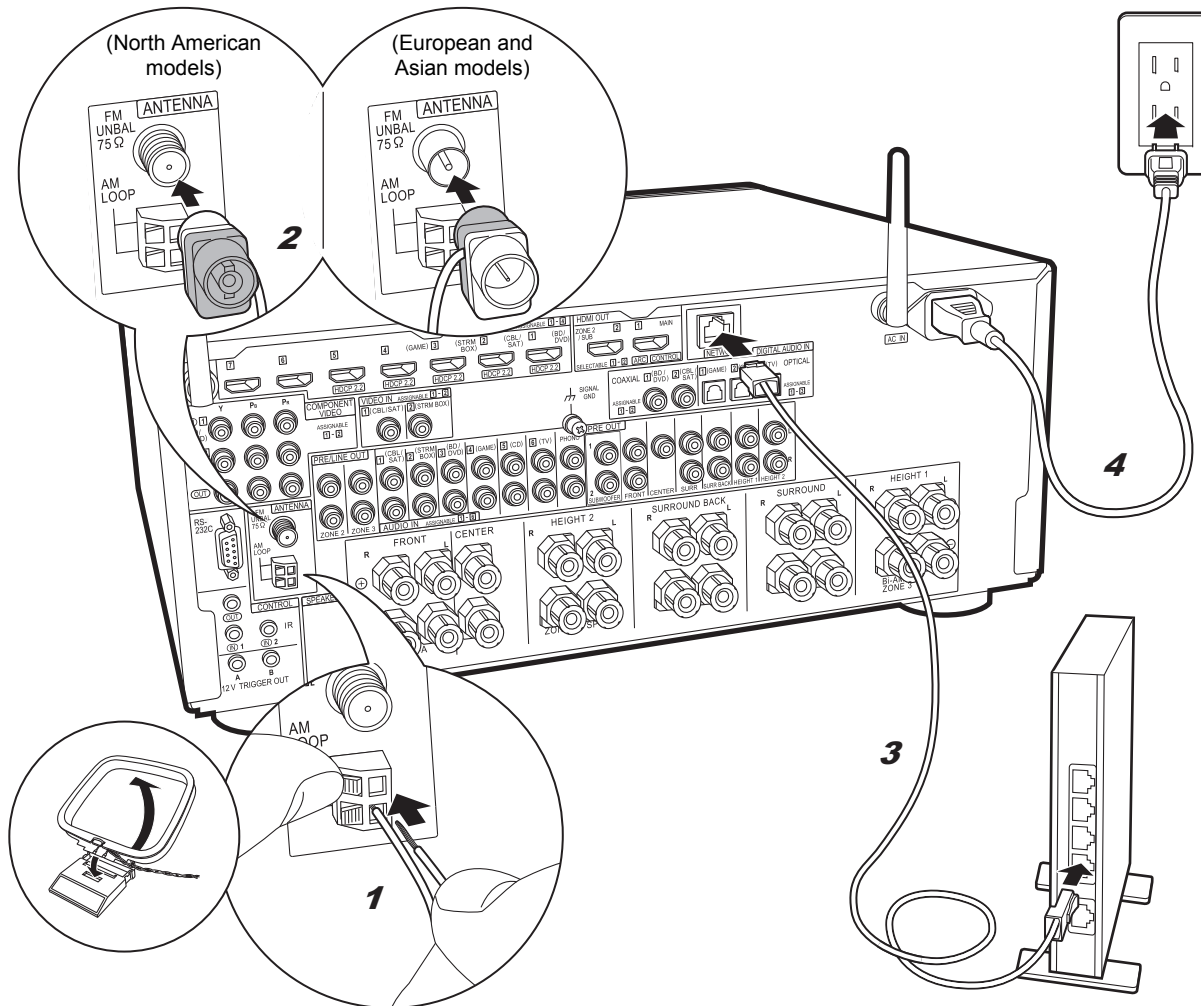
It is possible to connect speakers in a separate room and play 2 ch sources.

- You can play through a maximum of 7.1 channels in the main room during ZONE 3 playback.

Setup

- Settings are required in Initial Setup, "4. Multi Zone Setup" (→P23) to enjoy this feature.

Step6: Connect Other Cables



1 AM loop antenna, 2 Indoor FM antenna, 3 Ethernet cable, 4 Power cord

Antenna Hookup

Move the antenna around while playing the radio to find the position with the best reception. Use a thumb tack or similar to attach the indoor FM antenna to a wall.

Network Hookup

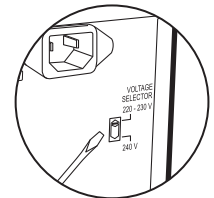
Connect this unit to the network using wired LAN or Wi-Fi (wireless LAN). You can enjoy network features such as internet radio, Music Server, and AirPlay by connecting the unit to the network.

If you connect by wired LAN, connect with an Ethernet cable to the NETWORK port as shown in the illustration. To connect by Wi-Fi, then after selecting "Wireless" in "3. Network Connection" (→P23) in Initial Setup, select the desired setting method and follow the onscreen instructions to configure the connection.

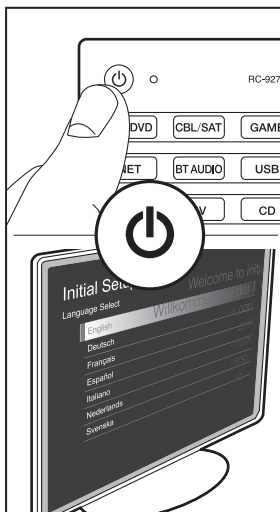
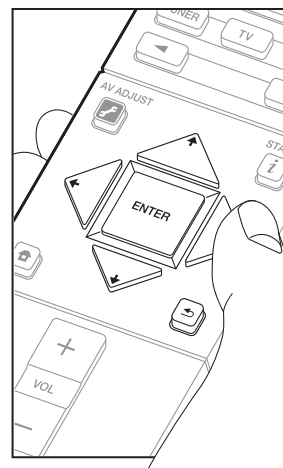
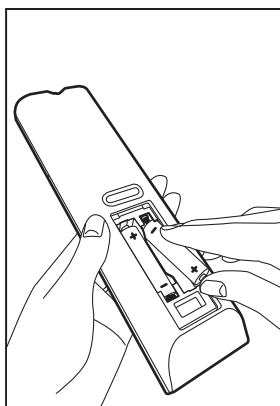
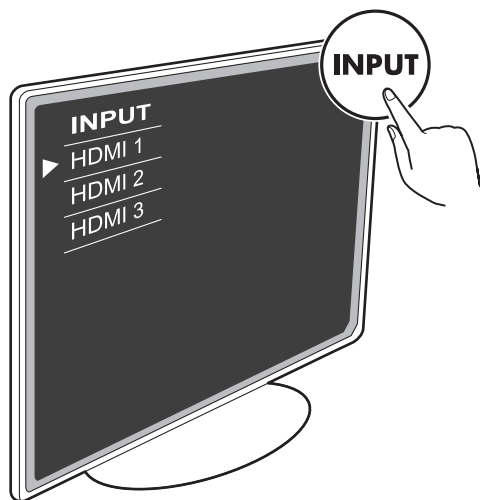
Power Cord Hookup

This unit includes removable power cords. Connect the power cord to the power outlet after completing all other connections. Connect the power cord to AC IN of the unit and then connect to the outlet. Always disconnect the outlet side first when disconnecting the power cord.

You can find the voltage selector switch on the rear panel of multi-voltage models. **Please set it to the correct voltage for your country or region.** Before changing the voltage, disconnect the power cord. Use a medium size screwdriver to change the voltage switch.



Step7: Power On & Initial Setup



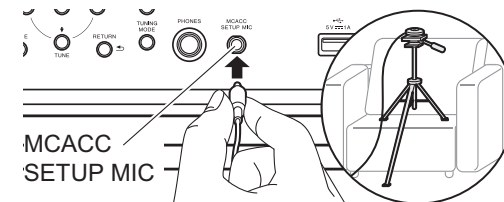
Initial Setup starts automatically

Switch the input on the TV to that assigned to the unit. When you turn the unit on for the first time, Initial Setup is automatically shown on the TV to enable you to make settings required for startup using simple operations following onscreen guidance.

- If you terminate the procedure on the way or want to change a setting made during Initial Setup, press on the remote controller, select "System Setup" – "Miscellaneous" – "Initial Setup" from Home, and press ENTER.

1. Full Auto MCACC

Place the supplied speaker setup microphone in the listening position, measure the test tones emitted by the speakers, then the unit automatically sets the optimum volume level for each speaker, the crossover frequencies, and the distance from the listening position. This also enables correction of distortion caused by the acoustic environment of the room.



- When putting the speaker setup microphone on a tripod, refer to the illustration when putting it in place.
- Set the subwoofer volume to more than halfway.
- Calibration takes between 3 and 12 minutes to be completed. The speakers emit the test tone at high volume during measurement, so be careful of your surroundings. Keep the room as quiet as possible during measurement.
- If "Reverse Phase" is displayed, check whether you have connected the poles of the speakers (+ / -) in reverse. Even if the connections are correct, "Reverse Phase" may be displayed due to the environment surrounding the speakers, but this will not affect the calibration so you can select "Next".
- If the power of this unit suddenly turns off, the wires in the speaker cables may have touch the rear panel or other wires and tripped the protection circuit. Twist the wires again properly and make sure they do not stick out of the speaker terminals when connecting.



2. Source Connection

Check that each input source is connected correctly. Follow the guidance, select the input you want to confirm, start play of the selected player, and confirm that the images appear on the TV and that sound is played.

3. Network Connection

Set up Wi-Fi connection with an access point such as a wireless LAN router. There are the following two methods of connecting by Wi-Fi:

"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 iOS device's Wi-Fi settings with this unit.

If you select "Scan Networks", there are a further two choices of connection method. Check the following.

- **"Enter Password"**: Enter the password (or key) of the access point to connect.
- **"Push Button"**: If the access point has an automatic connection button, you can connect without entering a password.
- If the SSID of the access point is not displayed, then in the screen listing the SSIDs, select "Other..." with the → cursor on the remote controller and press ENTER, then follow the onscreen instructions.

Keyboard input



To switch between upper and lower case, select "A/a" on the screen and press ENTER. To select whether to mask the password with "*" or display it in plain text, press +Fav on the remote controller. Press CLEAR to delete all the input characters.

- A confirmation screen asking you to agree to the privacy policy is displayed during network setting. Select "Yes" and press ENTER to indicate agreement.

4. Multi Zone Setup

Make these settings to enjoy video and audio in a room other than the main room (ZONE 2/ZONE 3).

Select "Using AV Receiver" when connecting speakers in the separate room. Select "with External Pre-main Amplifier" when connecting a pre-main amplifier in the separate room. Select "with External Power Amplifier" when connecting a power amplifier.

If you are going to be connecting a TV in the separate room (ZONE 2), then when "Would you be using TV in 2nd room?" is displayed, select "Yes".

5. Audio Return Channel

If you have connected a TV that supports ARC, select "Yes". This unit's ARC setting turns on and you can listen to the TV's audio through this unit.

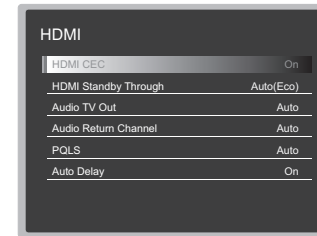
- If you select "Yes", the HDMI CEC function is enabled and power consumption increases during standby.

HDMI Setup

HDMI CEC

Make this setting to enable the control feature for devices complying with the CEC standard. This is set to on automatically if you have selected "Yes" in "5. Audio Return Channel" in the Initial Setup.

Press the button on the remote controller to set "System Setup" – "Hardware" – "HDMI" – "HDMI CEC" to "On" on the TV screen. Also enable the CEC control feature on the CEC device you have connected.



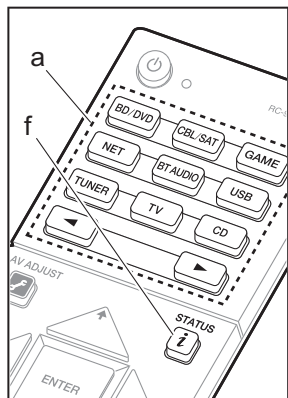
HDMI Standby Through

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

- **"Auto" / "Auto (Eco)"**: Select one of these settings when connected AV components comply with the CEC standard. Irrespective of the input selector selected immediately before switching the unit to standby, you can transmit the input signals from AV components to the TV. Select "Auto (Eco)" if the TV is also CEC-compliant. You can reduce power consumption in standby mode.
- **Input selector names for "BD/DVD", etc.:** You can transmit the input signals from the set input selector to the TV. It can be selected when "HDMI CEC" is set to "Off".
- **"Last"**: You can transfer the input signals of the input selector selected immediately prior to the unit being switched to standby. It can be selected when "HDMI CEC" is set to "Off".

To exit the settings, press .

Basic Playback



AV Component Playback

1. Switch the input on the TV to that assigned to the unit.
2. Press the input selector (a) on the remote controller with the same name as the jack to which you connected the player to switch the input.

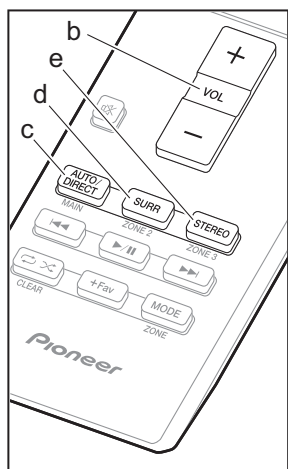
For example, press BD/DVD to play the player connected to the BD/DVD jack.

- Press TV to listen the TV's sound. For equipment connected to the STRM BOX, AUX, or PHONO jacks, press the ◀▶ buttons to switch input.
- When the CEC link function works, the input switches automatically when you have connected a CEC compliant TV and player to this unit using HDMI connection.

3. Start play on the player.
4. Use VOL+/- (b) to adjust the volume.

When a TV is connected to the HDMI OUT SUB jack

Press the button on the remote controller to display the AV Adjust, and set "Other" – "HDMI Out" to either "SUB" or "MAIN+SUB".



Listening Mode

This unit is equipped with a variety of listening modes. For details on the listening modes, see the Advanced Manual. This section introduces some of the popular modes.

AUTO/DIRECT button (c)

Press repeatedly and the listening modes suited to the input signal are switched between "Auto Surround", "Direct", and "Pure Direct". After selecting one of them, "Auto Surround" (or "Direct" or "Pure Direct") is displayed on the

display of the main unit, then the listening mode selected automatically (Dolby Digital for multi-channel input signals, Stereo for 2 channel input signals, etc.) is displayed.

The "Direct" mode shuts down some processing that can affect sound quality, such as the tone control features, so you can enjoy even better sound quality. The "Pure Direct" mode shuts down even more processes that affects sound quality, so you get a more faithful reproduction of the original sound. In this case, the speaker calibration made with MCACC is disabled.

- Depending on the input signal and speaker configuration, the Dolby Surround and DTS Neural:X modes that expand 2 channel and 5.1 channel input signals to a maximum of 11 channel may be automatically selected.

SURR button (d)

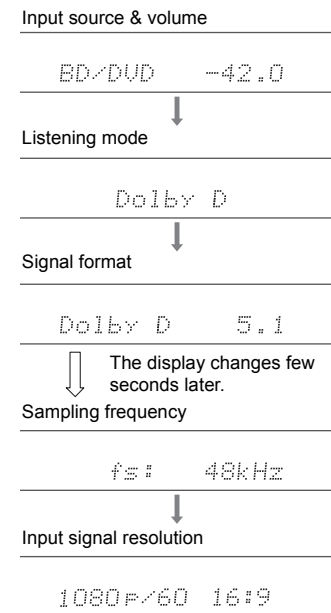
You can select a variety of listening modes to suit your taste. There are the Dolby Digital, DTS-HD Master Audio, and Stereo modes that you can choose to suit the input signal, or the Dolby Surround and DTS Neural:X modes that can expand 2 channel and 5.1 channel input signals to a maximum of 11 channel. You can also enjoy original surround modes such as Ext.Stereo and Drama modes.

STEREO button (e)

You can select the "Stereo" mode to playback only from the front speakers and subwoofer.

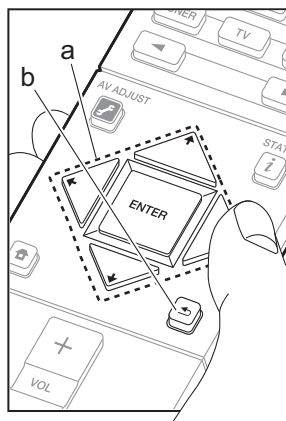
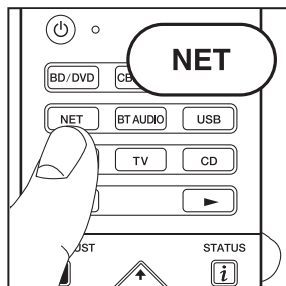
The listening mode last selected for the source is remembered for each of the AUTO/DIRECT, SURR, and STEREO buttons. If content you play is not supported by the listening mode you selected last, the listening mode that is standard for that content is selected automatically.

Press (f) repeatedly to switch the display of the main unit in order of:



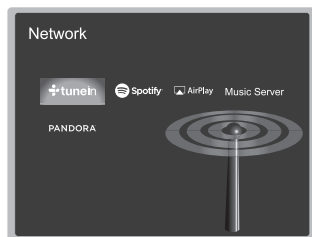


Network Functions



Network Services

1. Switch the input on the TV to that assigned to the unit.
2. Press NET to display the network service list screen.



3. Select the item with the cursors of the remote controller and press ENTER to confirm your selection (a). To return to the previous screen, press ← (b).

Internet Radio

When this unit is connected to a network, you can listen to TuneIn or other preregistered Internet radio services. After selecting the desired service, follow the on-screen instructions, using the cursors to select radio stations and programs, then press ENTER to play. Play starts when 100% is displayed for buffering.

Music Server

You can play music files stored on home-network compliant PCs or NAS devices connected to the same network as this unit. Select the server with the cursors, select the desired music file and press ENTER to start playback. Play starts when 100% is displayed for buffering.

- This unit is compatible with Windows Media®

Player 11 or 12 network servers or NAS that are compatible with home network functionality. You may need to make some settings in advance to use Windows Media® Player 11 or 12. Enable media streaming for this player in Windows Media® Player. For details, see the Advanced Manual.



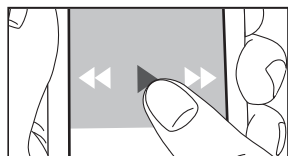
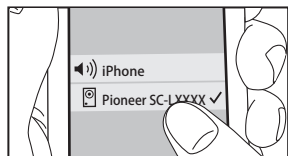
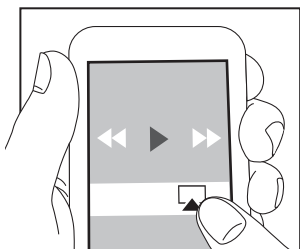
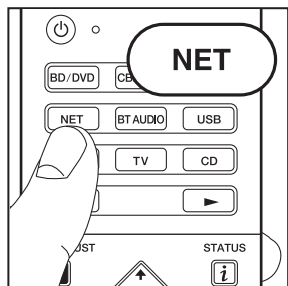
Notes:

- Network services become selectable after the network starts up even if they cannot be selected first.
- Functionality may be introduced by firmware updates and service providers may cease services, meaning that some network services and content may become unavailable in the future. Furthermore, available services may vary depending on your area of residence.

USB



Play music files on a USB storage device. After connecting the USB storage device to the USB port on the front of unit, press USB on the remote controller. Select the desired folder or music file with the cursors of the remote controller and press ENTER to confirm and start playback.


- Operation cannot be guaranteed for all USB storage devices.
- This unit can use USB storage devices that comply with the USB mass storage device class standard. The unit is also compatible with USB storage devices using the FAT16 or FAT32 file system formats.

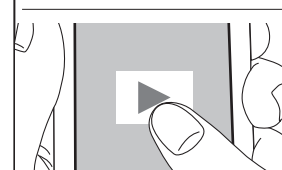
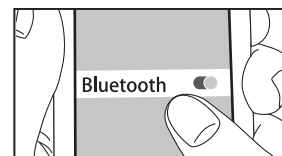
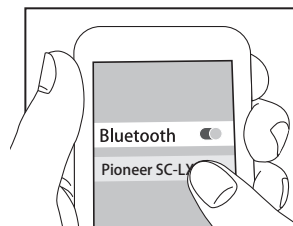
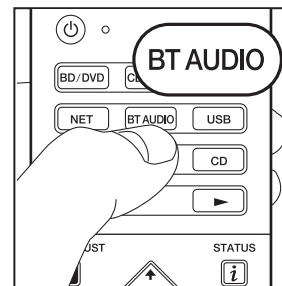


AirPlay

You can wirelessly enjoy the music files on an iPhone®, iPod touch®, or iPad® connected to the same access point as this unit.

- Update the OS version on your iOS device to the latest version.
1. Connect the iOS device to the access point.
 2. Press NET.
 3. Tap the AirPlay icon  in the control center of the iOS device and select this unit from the list of devices displayed, and tap "Done".
 4. Play the music files on the iOS device.
 - The default status is for the Network Standby feature to be on, so when you do steps 3 and 4 above, this unit automatically comes on and input switches to "NET". To reduce the amount of power consumed in standby mode, press the  button on the remote controller, then in the Home displayed set "System Setup" – "Hardware" – "Power Management" – "Network Standby" to "Off".
 - 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 back music files on the computer with iTunes (Ver. 10.2 or later). Before operation, make sure this unit and the PC are connected to the same network, then press NET on this unit. Next, click the AirPlay icon  in iTunes, select this unit from the list of devices displayed, and start play of a music file.



BLUETOOTH® Playback

Pairing

1. When you press BT AUDIO on the remote controller, "Now Pairing..." is displayed on this unit's display, and the pairing mode is enabled.

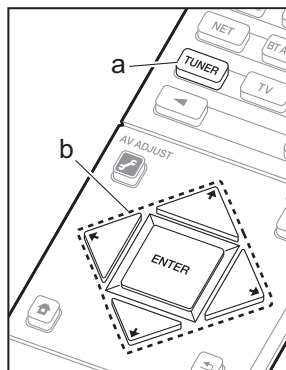
Now Pairing...

2. Enable (turn on) the BLUETOOTH function of the BLUETOOTH enabled device, then select this unit from amongst the devices displayed.
 - If a password is requested, enter "0000".
 - To connect another BLUETOOTH enabled device, press and hold BT AUDIO until "Now Pairing..." is displayed, then perform step 2 above. This unit can store the data of up to 8 paired devices.
 - The coverage area is 48 feet (15 meters). Note that connection is not always guaranteed with all BLUETOOTH enabled devices.

Playing Back

1. When the unit is on, connect the BLUETOOTH enabled device.
2. The input selector of this unit will be automatically switched to "BT AUDIO".
3. Play music. Increase 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.

Others



Listening To the Radio

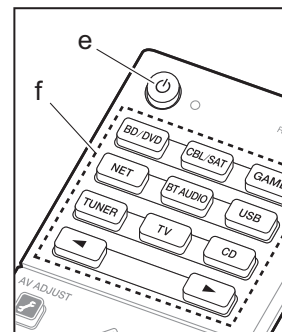
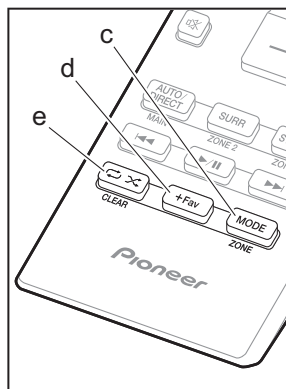
1. Press TUNER (a) on the remote controller repeatedly to select either "AM" or "FM" on the display.
2. Press MODE (c) on the remote controller, so that the "TunMode: Auto" is displayed on the display.
3. When you press the \uparrow / \downarrow cursor (b) buttons on the remote controller, automatic tuning starts, and searching stops when a station is found. When tuned into a radio station, the "TUNED" indicator on the display lights.

You can preset up to 40 stations.

1. Tune into the AM/FM radio station you want to register.
2. Press +Fav (d) on the remote controller so that the preset number on the display flashes.
3. While the preset number is flashing (about 8 seconds), repeatedly press the \leftarrow / \rightarrow cursor (b) buttons on the remote controller to select a number between 1 and 40.
4. Press +Fav (d) again on the remote controller to register the station. When registered, the preset number stops flashing. To select a preset radio station, press the \leftarrow / \rightarrow cursor (b) buttons on the remote controller.
 - To delete a preset station, press the \leftarrow / \rightarrow cursor (b) buttons on the remote controller to select the preset number you want to delete, press +Fav (d) on the remote controller and then press CLEAR (e) while the preset number is flashing. When deleted, the number on the display goes off.

Frequency step setting

Press the HOME button on the remote controller to select "System Setup" – "Miscellaneous" – "Tuner" – "AM/FM Frequency Step" or "AM Frequency Step" and select the frequency step for your area. Note that when this setting is changed, all radio presets are deleted.



Multi-zone

Play

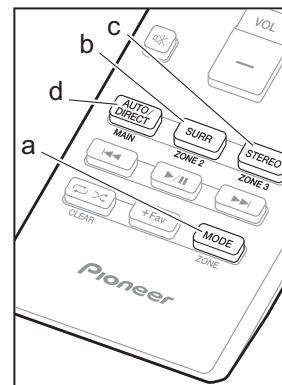
1. Switch the remote controller to the mode for controlling ZONE 2 or ZONE 3.
 - To switch to the mode for controlling ZONE 2, while holding down MODE (a) on the remote controller, press ZONE 2 (b) for 3 or more seconds until the remote indicator blinks twice.
 - To switch to the mode for controlling ZONE 3, while holding down MODE (a) on the remote controller, press ZONE 3 (c) for 3 or more seconds until the remote indicator blinks three times.

i To return the remote controller to main room control mode: While holding down MODE (a) on the remote controller, press MAIN (d) for 3 seconds or more until the remote indicator flashes once.

2. Point the remote controller at the main unit and press POWER (e). "Z2" or "Z3" lights on the main unit display.




3. Press the input selector button (f) of the input to be played in the separate room. On the main unit, after pressing ZONE CONTROL several times to display either "Z2" or "Z3" in the display, within 8 seconds turn the INPUT SELECTOR dial to select the input to be played in the separate room.
 - You can only select the same inputs for the main room and separate room with the "NET" or "BT AUDIO", or "USB" input selector. If you have "NET" selected in the main room and then select "USB" in the separate room, the main room also switches to "USB". You cannot select different stations for the main room and separate room with the AM/FM radio.
 - DSD and Dolby TrueHD audio signals are not output to ZONE 2/ZONE 3 when selected with the "NET",






"USB" input selector.

4. To adjust the volume on the power amplifier in the separate room or the ZONE speaker, adjust with VOL+/- on the remote controller. To control on the main unit, press ZONE CONTROL several times to display either "Z2" or "Z3" in the display, and within 8 seconds, adjust with the MASTER VOLUME dial.

 - The information for a connected device can be displayed on the TV screen in a separate room. Press the  button while the remote controller is in the mode for controlling ZONE 2.
 - Power consumption in standby mode increases when the multi-zone function is being used.

To turn off the function

Press  while in the mode for controlling ZONE 2 or ZONE 3 on the remote controller.

Playing in ZONE 2 or ZONE 3 only


If you turn the unit to standby during multi-zone playback, the Z2 or Z3 indicator is dimmed and the playback mode is switched to playback in a separate room only. Setting ZONE 2/ZONE 3 to on while this unit is in standby will also switch the playback mode to the same setting.

MULTI-ZONE MUSIC

If you press MULTI-ZONE MUSIC while playback is being performed in the main room, the MULTI-ZONE MUSIC is turned on, "Z2" and "Z3" on the display light at the same time and the playback sources of all the rooms are switched to the same source at once.

- The sources that can be played in ZONE 2 can be played in all rooms.
- This function cannot be used if headphones are connected or audio is output from the speakers of the TV.



Settings

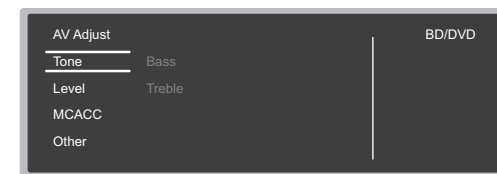
Settings are required in Initial Setup, "4. Multi Zone Setup" (➔P23) to use the multi-zone feature. When checking the setting content, refer to the following, press  on the remote controller, and check in "System Setup" in the

Home that is displayed.

- When you have connected a TV in the separate room with an HDMI cable, have you selected "Use" in "Input/Output Assign" - "TV Out/OSD" - "Zone2 HDMI"?
- When you are playing the audio from an AV component with an HDMI cable in the separate room, have you selected "Use" in "Input/Output Assign" - "TV Out/OSD" - "Zone2 HDMI"?
- When you have connected speakers in a separate room with speaker cable, have you selected "Zone 2" or "Zone 2/Zone 3" in "Speaker" - "Configuration" - "Zone Speaker"?
- When you have connected a power amplifier in a separate room with an analog audio cable and you want to control the volume with this unit, have you selected "Variable" in "Multi Zone" - "Zone 2" or "Zone 3" - "Output Level"?

AV Adjust

By pressing  on the remote controller during play, you can adjust frequently used settings, such as the switching the speakers and adjusting sound quality, using on-screen menus. Select the item with the cursors of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press . Note that there is no display on the TV screen when the input selector is "CD", "TV", "PHONO", "FM", or "AM", so follow the main unit's display while doing the operations.





"Tone": It is possible to enhance or moderate the bass and treble of front speakers.

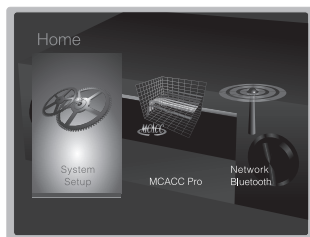
"Other": Enables you to make a variety of settings.

- **"Sound Delay"**: If the video is behind the audio, you can delay the audio to offset the gap.
- **"Sound Retriever"**: Improve the quality of compressed audio.
- **"Speakers"**: You can switch the output for speakers A/B.
- **"HDMI Out"**: Allows you to select the HDMI OUT jack to output video signals from "MAIN", "SUB", and "MAIN+SUB".



Home

When you press  on the remote controller, the Home is displayed and you can make settings in the various menus. Select the item with the cursors of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press .




"System Setup": Advanced settings to provide you with an even better experience.

"MCACC Pro": Setup the speakers automatically or make desired changes to the equalizer.

"Network/Bluetooth": Make Wi-Fi connection settings or settings related to BLUETOOTH.


When the unit is operating erratically


Try restarting the unit

Restarting the unit may help it operate more smoothly. To restart the unit, turn it to standby, and then press  STANDBY/ON on the main unit for at least 5 seconds. (The unit's settings will be maintained.) If there is no improvement even after the unit is restarted, try disconnecting and reconnecting the power cords of the unit and connected equipment.

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

If restarting the unit doesn't fix the problem, resetting the unit to the status at the time of shipment may solve the problem. If you reset the unit status, your preferences will be reset to the defaults. Note them down before the operation below.

1. While holding down AUTO/DIRECT on the main unit, press  STANDBY/ON on the main unit.
2. "Clear" appears on the display and the unit returns to standby. Do not unplug the power cord until "Clear" disappears from the display.

To reset the remote controller, while holding down MODE, press  until the remote indicator flash twice (about 3 seconds).

When the subwoofer produces no sound

If the setting of the front speakers is "Large" and during 2ch input such as from the TV or music, the low range elements will be output from the front speakers rather than from the subwoofer. If you would rather output from the subwoofer, make one of the following settings.

1. Set the front speakers to "Small".

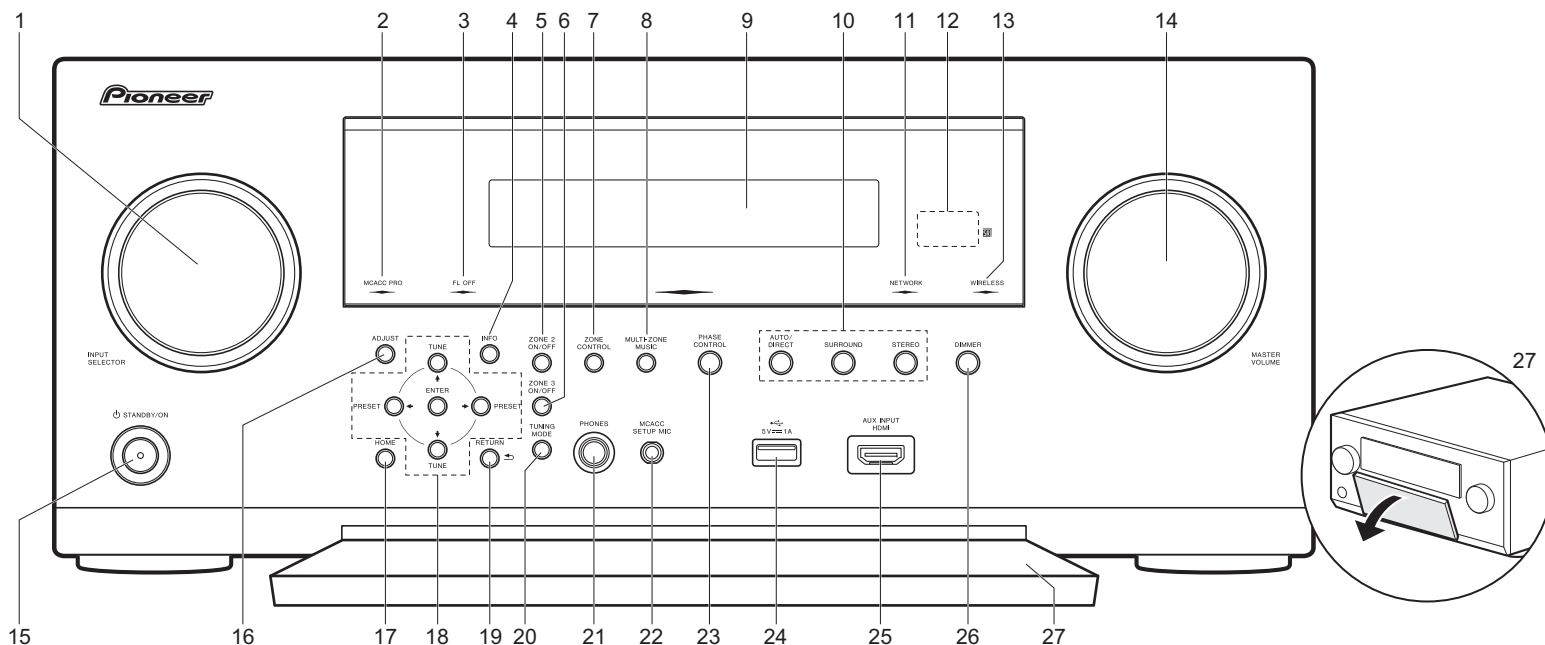
The low range elements will be output from the subwoofer rather than the front speakers. We do not recommend changing this if your front speakers have good low range reproduction capabilities.

2. Change "Double Bass" to "On".

The low range elements will be output from both the front speakers and the subwoofer. This may mean that there is too much bass. Do not change if this happens, or choose option 1.

Refer to "System Setup" – "Crossover" in the Advanced Manual for details.

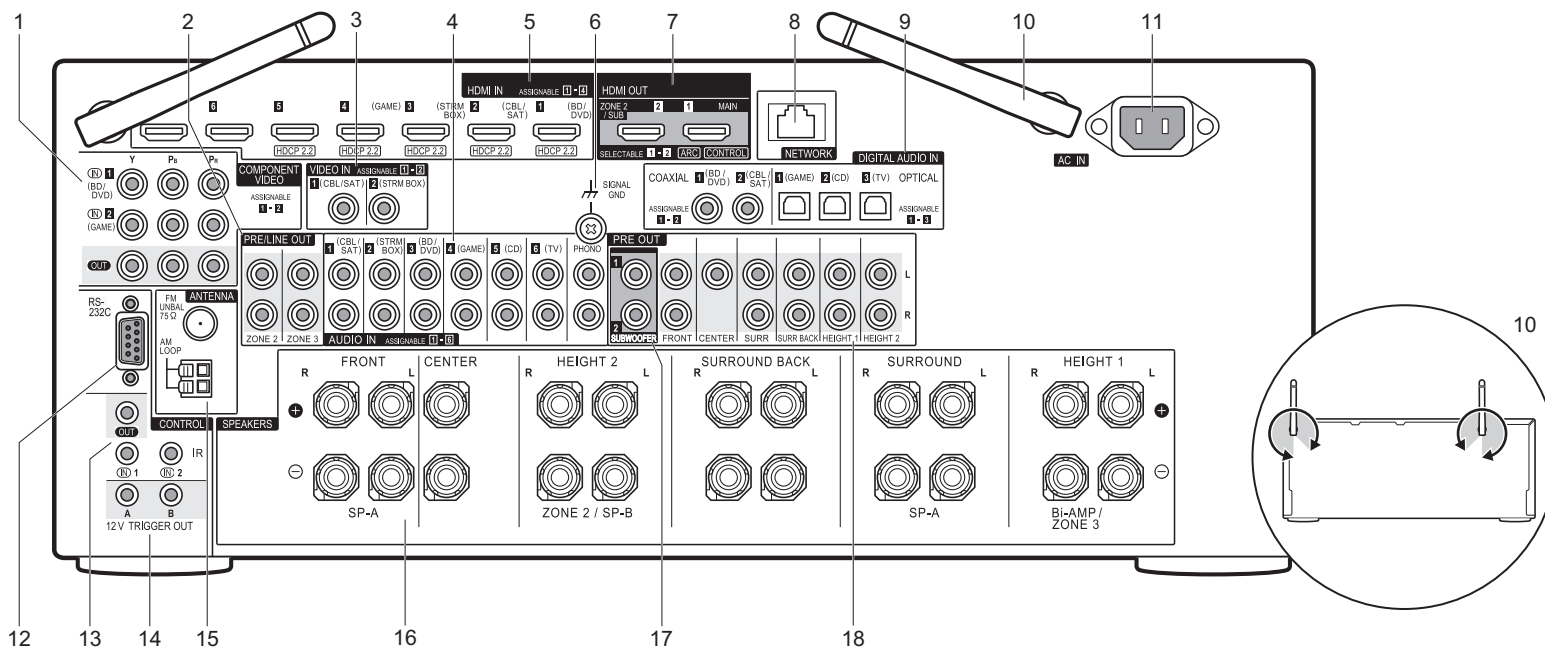
Front Panel



1. INPUT SELECTOR dial: Switch the input to be played.
2. MCACC PRO indicator: This lights when you have enabled the speaker calibration made with MCACC.
3. FL OFF indicator: This lights when you have pressed DIMMER repeatedly to turn the display off.
4. INFO button: Switches the information on the display.
5. ZONE 2 ON/OFF button: Turn ZONE 2 on or off.
6. ZONE 3 ON/OFF button: Turn ZONE 3 on or off.
7. ZONE CONTROL button (→P27)
8. MULTI-ZONE MUSIC button (→P28)
9. Display (→P32)
10. Listening mode button (→P24)
11. NETWORK indicator: When the power of the unit is on, this lights when "NET" is selected with the input selector and the unit is connected to the network. If the unit is in

- standby mode, this lights when functions such as HDMI CEC and network standby are enabled. It does not light when ZONE 2/ZONE 3 is on, however.
12. Remote control sensor
13. WIRELESS indicator: Lights when the unit is connected to the wireless network.
14. MASTER VOLUME dial
15. STANDBY/ON button
16. ADJUST button (AV Adjust) (→P28)
17. HOME button (→P29)
18. Cursor buttons (TUNE $\uparrow\downarrow$ / PRESET $\leftarrow\rightarrow$) and ENTER button: Select the item with the cursors and press ENTER to confirm your selection. When using the TUNER, select the frequency with TUNE $\uparrow\downarrow$, or select preset stations with PRESET $\leftarrow\rightarrow$.
19. RETURN button: Returns the display to the previous state.
20. TUNING MODE button: Switches the tuning mode.
21. PHONES jack: Stereo headphones with a standard plug (1/4 inch or $\phi 6.3$ mm) are connected.
22. MCACC SETUP MIC jack (→P22)
23. PHASE CONTROL button: This turns on or off the Phase Control that corrects phase disturbance in the low range to enhance the bass.
24. USB port: A USB storage device is connected so that music files stored in it can be played. You can also supply power (maximum 5V/1A) to USB devices with a USB cable.
25. AUX INPUT HDMI jack (→P14)
26. DIMMER button: You can adjust the brightness of the display in four steps.
27. Front flap

Rear Panel

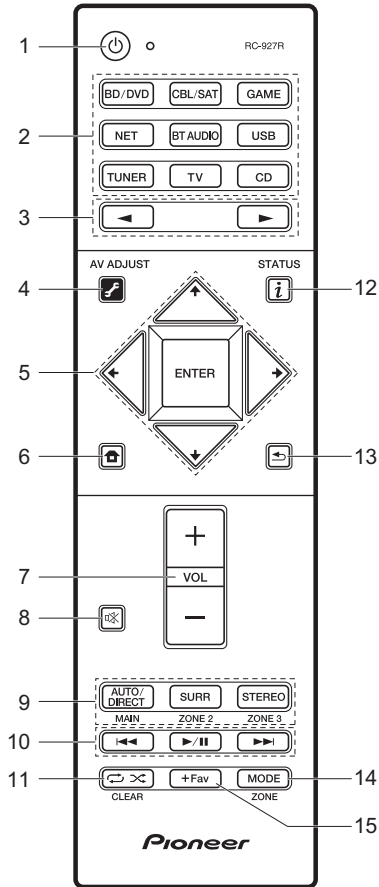


1. COMPONENT VIDEO IN/OUT jacks: Transfer the video signals of an AV component with a component video cable.
2. ZONE 2/ZONE 3 PRE/LINE OUT jacks: Output audio signals with an analog audio cable to a pre-main amplifier or a power amplifier in a separate room (ZONE 2/ZONE 3). (➔P19, 20)
3. VIDEO IN jacks: Input the video signals from AV components with an analog video cable.
4. AUDIO IN jacks: Input the audio signal from AV components with an analog audio cable.
5. HDMI IN jacks: Transmit video signals and audio signals with a HDMI cable connected to an AV component.
6. SIGNAL GND terminal: The ground wire of the turntable is connected.

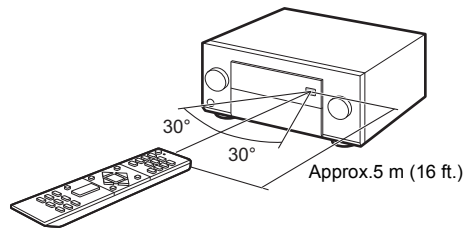
7. HDMI OUT jacks: Transmit video signals and audio signals with a HDMI cable connected to a monitor such as a TV or projector.
8. NETWORK port: Connect to the network with an Ethernet cable.
9. DIGITAL AUDIO IN OPTICAL/COAXIAL jacks: Input the digital audio signals from TV or AV components with a digital optical cable or digital coaxial cable.
10. Wireless antenna: Used upright for Wi-Fi connection or when using a BLUETOOTH enabled device. The diagram shows the movable range for the wireless antenna. Do not try to force it beyond this range otherwise you may break it.
11. AC IN: The supplied power cord is connected.
12. RS-232C port: For connection to the home control system.

13. IR IN/OUT port: Allows you to connect a multiroom remote control kit.
14. 12V TRIGGER OUT A/B jacks: Allows you to connect a device with 12V trigger input jack to enable link operation between the device and the unit.
15. ANTENNA AM LOOP/FM UNBAL 75Ω terminal: The supplied antennas are connected.
16. SPEAKERS terminals: Connect speakers with speaker cables. (North American models are compatible with banana plugs.)
17. SUBWOOFER PRE OUT jacks: Connect a powered subwoofer with a subwoofer cable. Up to two powered subwoofers can be connected. You can set the volume levels of the 2 powered subwoofers to different levels.
18. PRE OUT jacks: Connect a power amplifier.

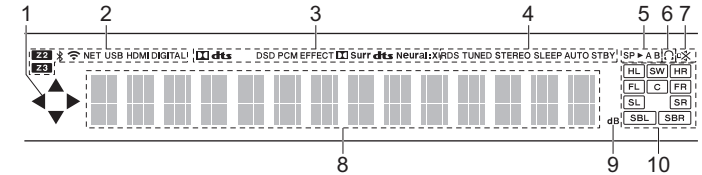
Remote Controller



1. ⏻ button: Turns the unit on or into standby mode.
2. Input selector buttons: Select the input to be played. Use the buttons in 3 to select "STRM BOX", "AUX", or "PHONO".
3. ◀▶ buttons: Input source played switches each time you press one of these buttons.
4. 🔧 (AV ADJUST) button: You can perform common settings on the TV screen. (→P28)
5. Cursor buttons and ENTER button: Select the item with the cursors and press ENTER to confirm your selection.
6. 🏠 button: Displays the Home. (→P29)
7. Volume buttons: Allows you to adjust the volume. This button also cancels the muting.
8. 🔇 button: Temporarily mutes audio. Press again to cancel muting.
9. LISTENING MODE buttons: Allows you to select the listening mode. (→P24)
MAIN/ZONE 2/ZONE 3 buttons: Controls the multi-zone function. (→P27)
10. Play buttons: You can start play of the Music Server or USB.
11. 🔄 button: You can start repeat or random play of the Music Server or USB.
CLEAR button: Deletes all characters you have entered when entering text on the TV screen.
12. i (STATUS) button: Switches the information on the display.
13. 🏠 button: Returns the display to the previous state.
14. MODE button: Switches tuning to an AM/FM station between automatic tuning and manual tuning.
15. +Fav button: Used to register AM/FM radio stations.



Display



1. Lights when operating the "NET", "USB" input selector indicating remote controller cursor operations are possible in screens showing list of tracks, for example.
2. Lights in the following conditions.
Z2/Z3: When ZONE 2/ZONE 3 is on.
📶: When connected by BLUETOOTH.
📶: When connected by Wi-Fi.
NET: When "NET" is selected with the input selector and the unit is connected to the network. It will flash if the connection to the network is not correct.
USB: When "USB" is selected with the input selector and the unit is connected by USB and the USB device is selected. Flashes if the USB is not properly connected.
HDMI: When HDMI signals are input and the HDMI input is selected.
DIGITAL: When digital signals are input and the digital input is selected.
3. Lights according to the type of input digital audio signals and the listening mode.
RDS (European and Asian models): Receiving RDS broadcasting.
TUNED: Receiving AM/FM radio.
STEREO: Receiving FM stereo.
SLEEP: When the sleep timer is set.
AUTO STBY: When Auto Standby function is enabled.
5. The currently selected speaker system lights.
6. Lights when headphones are connected.
7. Flashes when muting is on.
8. Displays various information of the input signals. Characters that cannot be displayed on this unit are replaced with asterisks (*).
9. Lights when adjusting the volume.
10. Speaker/Channel display: Displays the output channel that corresponds to the selected listening mode.

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Pioneer

2-3-12 Yaesu, Chuo-ku, Tokyo 104-0028 JAPAN

<U.S.A.>

18 PARK WAY, UPPER SADDLE RIVER, NEW JERSEY 07458, U.S.A.

Tel: 1-201-785-2600 Tel: 1-844-679-5350

<Germany>

Hanns-Martin-Schleyer-Straße 35, 47877 Willich, Germany

Tel: +49(0)2154 913222

<UK>

Anteros Building, Odyssey Business Park, West End Road, South Ruislip,
Middlesex, HA4 6QQ United Kingdom

Tel: +44(0)208 836 3612

<France>

6, Avenue de Marais F - 95816 Argenteuil Cedex FRANCE

Tel: +33(0)969 368 050

Корпорация О энд Пи

2-3-12, Яэсу, Чуо-ку, г. Токио, 104-0028, ЯПОНИЯ

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Advanced Manual

SC-LX901 AV RECEIVER

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[The Basic Manual](#) includes information needed when starting up and also instructions for frequently used operations. [The Advanced Manual](#) has more detailed information and advanced settings.

Main features

This unit features a Direct Energy HD Amplifier (Class D amplifier) that was developed using the latest digital amplifier technology. It is capable of simultaneous high-power output and very high quality sound. This amplifier provides you with the optimum playback of the latest multi-channel digital content.

- You can connect 11.1ch of speakers to this unit, with 11ch at 200 W (6 ohms, 1 kHz, 0.9%THD) (North American models) / 200 W (6 ohms, 1 kHz, 1%THD) (European and Asian models) per channel plus pre out jack for powered subwoofer.
- Supports playback in Dolby Atmos format and has Dolby Surround listening mode
- Supports playback in DTS:X format and has DTS Neural:X listening mode
- The HDMI jack supports 4K video input and output. Jacks IN1 to 5 and OUT MAIN/SUB support HDCP2.2
- HDMI CEC functionality: Control features such as linking input switching with the input selector and players conforming to the CEC standard, switching audio output and volume using the remote controller of a CEC-compliant TV, and automatically switching this unit to standby when the TV is turned off
- HDMI Standby Through: Video and audio signals from AV components can be transmitted to the TV even if this unit is in standby
- ARC: Connection with an ARC-compatible TV is complete with one HDMI cable
- Easy Initial Setup using onscreen guidance and On-Screen Display (OSD) showing operations on the TV
- Internet radio and AirPlay via wired LAN or Wi-Fi (wireless LAN) and network features such as Music Server that enables PC music file playback, USB playback, plus other playback features such as AM/FM radio and BLUETOOTH® play
- Playback formats supported by Music Server and USB

- include WAV, FLAC and DSD high-res source
- Multi-zone Connection which allows you to play in the main room and listen in a separate room (ZONE 2/ ZONE 3)
- You can connect a speaker B system
- Equipped with RS-232C port, IR IN/OUT jack, and 12V TRIGGER OUT jacks
- Fitted with a Full Band Phase Control function. If the speaker unit is divided into multiple parts, such as tweeter and woofer sections, this corrects for group delay (the difference between phase and timing) between speakers. Further, by lining up the phases of the connected speakers, the unit can achieve more accurate reproduction across the full range (full band) and across all channels.
- By connecting an AV component that supports PQLS (Precision Quartz Lock System) by HDMI, you can reduce the affects of jitter that occurs during the transfer of audio signals, so you get high quality playback of audio from CDs, BDs, and DVDs.
- This unit features PQFA (Precision Quartz for File-based Audio) feature that enables high-quality playback by greatly reducing jitter through the operation of the high-precision Audio Clock device. It works when input is switched to NET, USB, or BT AUDIO.

General Specifications

■ Amplifier Section

(North American)

Continuous average power output (*1)

140 W (*2) per channel (8 Ω)

200 W (*3) per channel (6 Ω)

*1. Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers

*2. 1 kHz with no more than 0.08% (*4) total harmonic distortion

*3. 1 kHz with no more than 1% (*4) total harmonic distortion

*4. Measured by Audio Spectrum Analyzer

Multi channel simultaneous power output (1 kHz, 1%, 8 Ω)
880 W (11 ch total)

Continuous Power Output (1 kHz, 8 Ω, 0.08%)

140 W+140 W (Front)

140 W (Center)

140 W+140 W (Surround)

140 W+140 W (Surround back)

140 W+140 W (Height1)

140 W+140 W (Height2)

Continuous Power Output (1 kHz, 6 Ω, 1.0%)

200 W+200 W (Front)

200 W (Center)

200 W+200 W (Surround)

200 W+200 W (Surround back)

200 W+200 W (Height1)

200 W+200 W (Height2)

Continuous Power Output (1 kHz, 4 Ω, 1.0%)

255 W+255 W (Front)

255 W (Center)

255 W+255 W (Surround)

255 W+255 W (Surround back)

255 W+255 W (Height1)

255 W+255 W (Height2)

(European)

Multi channel simultaneous power output (1 kHz, 1%, 8 Ω)
880 W (11 ch total)

Rated power output (1 kHz, 4 Ω, 1%, 1 ch Driven)
280 W per channel

Rated power output (1 kHz, 6 Ω, 1%, 1 ch Driven)
200 W per channel

(Australian)

Maximum power output (1 kHz, 4 Ω, 10%, 1 ch Driven)
340 W per channel

(Asian)

Multi channel simultaneous power output (1 kHz, 1%, 8 Ω)
880 W (11 ch total)

Maximum power output (1 kHz, THD 10%, 4 Ω, 1 ch Driven)

340 W per channel

Rated power output (1 kHz, 4 Ω, 1%, 1 ch Driven)
280 W per channel

Rated power output (1 kHz, 6 Ω, 1%, 1 ch Driven)
200 W per channel

THD+N (Total Harmonic Distortion+Noise)
0.04% (1 kHz, 100 W)

Input Sensitivity and Impedance (1 kHz, 100 W/8 Ω)
200 mV/82 kΩ (LINE (Unbalance))
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/1.2 kΩ (ZONE LINE OUT)

2 V/1.2 kΩ (ZONE PRE OUT)

Phono Overload
70 mV (MM 1 kHz 0.5%)

Tone Control Characteristics
±10 dB, 100 Hz (BASS)
±10 dB, 10 kHz (TREBLE)

Signal to Noise Ratio
108 dB (IHF-A, LINE IN, SP OUT)
90 dB (IHF-A, PHONO IN, SP OUT)

Speaker Impedance
4 Ω - 16 Ω

Headphone Output Impedance

43 Ω

Headphone Rated Output
57 mW (32 Ω, 1 kHz, 10% THD)

■ Video Section

Signal level

1 Vp-p/75 Ω (Composite Video)

1 Vp-p/75 Ω (Component Video Y)

0.7 Vp-p/75 Ω (Component Video PB/PR)

Maximum resolution supported by component video
1080i (*)

* When output from HDMI, only 480i/576i resolution input is possible.

■ Tuner Section

FM Tuning Frequency Range

87.5 MHz - 107.9 MHz (North American)

87.5 MHz - 108.0 MHz, RDS (Others)

AM Tuning Frequency Range

530 kHz - 1710 kHz (North American)

522/530 kHz - 1611/1710 kHz (Others)

Preset Channel
40

■ Network Section

Ethernet LAN

10BASE-T/100BASE-TX

Wireless LAN

IEEE 802.11 a/b/g/n standard

(Wi-Fi® standard)

5 GHz/2.4 GHz band

■ BLUETOOTH Section

Communication system

BLUETOOTH Specification version 4.1+LE

Frequency band

2.4 GHz band

Modulation method

FHSS (Freq Hopping Spread Spectrum)
 Compatible BLUETOOTH profiles
 A2DP 1.2
 AVRCP 1.3
 HOGP-Host (Client)
 HOGP-HID Device (Server)
 HID Service (HIDS)
 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 - 230 V, 50/60 Hz (European)
 AC 220 - 230/240 V, 50/60 Hz (Asian)
 Power Consumption
 340 W
 0.15 W (Stand-by, North American)
 0.2 W (Stand-by, Others)
 90 W (No-sound)
 6 W (HDMI Standby Through)
 2.5 W (Network Standby)
 Dimensions (W × H × D)
 435 mm × 185 mm × 441 mm
 17-1/8" × 7-5/16" × 17-1/3"
 Weight
 18.0 kg (39.7 lbs.) (North American)
 18.3 kg (40.3 lbs.) (Others)

■ **HDMI**

Input
 IN1 (BD/DVD, HDCP2.2), IN2 (CBL/SAT, HDCP2.2), IN3 (STRM BOX, HDCP2.2), IN4 (GAME, HDCP2.2), IN5 (HDCP2.2), IN6, IN7, AUX INPUT HDMI (front)
 Output
 OUT MAIN (ARC, HDCP2.2) 55 mA
 OUT SUB (HDCP2.2) 55 mA
 Supported
 Deep Color, x.v.Color™, LipSync, Audio Return Channel, 3D, 4K 60 Hz, CEC, Extended Colorimetry (sYCC601, Adobe RGB, Adobe YCC601), Content Type, HDR
 Audio Format
 Dolby Atmos, Dolby TrueHD, Dolby Digital, Dolby Digital Plus, DTS, DTS:X, DTS-HD Master Audio, DTS-HD High Resolution Audio, DTS 96/24, DTS-ES, DTS-HD Express, DSD, PCM
 Maximum Video Resolution
 4k 60 Hz (YCbCr 4:4:4)
 Compatible input resolutions
 HDMI input : 4K, 1080p/24, 1080p, 1080i, 720p, 480p/576p
 Component input : 480i/576i
 Composite input : 480i/576i
 • The output from the HDMI OUT jack to the TV is the same resolution as the input. When using a TV that supports 4K, 1080p HDMI video signals can also be output as 4K.

■ **Video Inputs**

Component
 IN1 (BD/DVD), IN2 (GAME)
 Composite
 IN1 (CBL/SAT), IN2 (STRM BOX)

■ **Video Outputs**

Component
 OUT

■ **Audio Inputs**

Digital
 OPTICAL 1 (GAME), 2 (CD), 3 (TV)
 COAXIAL 1 (BD/DVD), 2 (CBL/SAT)
 Analog
 CBL/SAT, STRM BOX, BD/DVD, GAME, CD, TV, PHONO

■ **Audio Outputs**

Analog
 ZONE2 PRE/LINE OUT L/R
 ZONE3 PRE/LINE OUT L/R
 PRE OUT (FRONT L/R, CENTER, SURROUND L/R, SURROUND BACK L/R, HEIGHT1 L/R, HEIGHT2 L/R, 2 SUBWOOFER)
 Speaker Outputs
 FRONT L/R, CENTER, SURROUND L/R, SURROUND BACK L/R, HEIGHT1 L/R, HEIGHT2 L/R
 (North American models are banana plug ready)
 Phones
 PHONES (Front, ø 6.3 mm, 1/4")

■ **Others**

Setup Mic : 1 (Front)
 USB : 1 (Ver. 2.0, 5 V/1 A)
 Ethernet : 1
 RS232 : 1
 12V TRIGGER OUT : (A : 100 mA, B : 25 mA)
 IR IN : 2
 IR OUT : 1

■ **Power consumption in standby mode**

- In the following cases, the power consumption in standby mode may reach up to a maximum of 6 W:
 - When "Network Standby" is set to "On"
 - When "HDMI CEC" is set to "On"
 - When "HDMI Standby Through" is set to other than "Off"

- When "Bluetooth Wakeup" is set to "On"

Specifications and features are subject to change without notice.

About HDMI

Compatible functions

HDMI (High Definition Multimedia Interface) is a digital interface standard for connecting TVs, projectors, Blu-ray Disc/DVD players, set-top boxes, and other video components. Until now, several separate video and audio cables have been required to connect AV components. With HDMI, a single cable can carry control signals, digital video, and digital audio (2 ch PCM, multichannel digital audio, and multichannel PCM).

HDMI CEC functionality:

By connecting devices and HDMI cables that comply with the CEC (Consumer Electronics Control) specification of the HDMI standard, a variety of linked operation become possible between devices. You can enjoy features such as linking input switching with the input selector and players, control volume using the remote controller of the 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, and that linked operation is not always guaranteed with all CEC devices. For linked functions to work properly, do not connect more CEC-compliant components than the quantities specified below, to the HDMI jack.

- 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

Operation has been confirmed on the following devices from other manufacturers: (As of February 2016)

Toshiba brand televisions; Sharp brand televisions; Toshiba brand players and recorders; Sharp brand players and recorders (when used with a Sharp brand television)

ARC (Audio Return Channel) :

By connection a TV that supports ARC with a single HDMI cable, you can not only output the audio and video from this unit to the TV, but also input the audio from the TV to this unit.

HDMI Standby Through:

Even if this unit is in standby, the input signals from AV components are 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 realizes even more realistic colors by broadening 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.

LipSync:

This setting automatically corrects any desynchronization between the video and audio signals based on data from the HDMI LipSync compatible TV.

Copyright Protection:

The unit supports Revision 1.4 and Revision 2.2 (HDMI OUT MAIN/SUB and HDMI IN1 to 5 only) of the HDCP (High-bandwidth Digital Content Protection), a copy-protection system for digital video signals. Other devices connected to the unit must also support HDCP.

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

Multi-channel linear PCM:

Maximum 7.1 channels, 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz, 16/20/24 bit

Bitstream:

Dolby Atmos, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS:X, DTS-HD High Resolution Audio, DTS-HD Master Audio

DSD:

Supported sampling rates: 2.8 MHz

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

Supported resolutions

HDMI IN1 to IN5:

- Copyright protection technology: HDCP1.4/HDCP2.2
- Color space (Color Depth):
 - 720×480i 60Hz, 720×576i 50Hz, 720×480p 60Hz, 720×576p 50Hz, 1920×1080i 50/60Hz, 1280×720p 24/25/30/50/60Hz, 1680×720p 24/25/30/50/60Hz, 1920×1080p 24/25/30/50/60Hz, 2560×1080p 24/25/30/50/60Hz, 4K (3840×2160p) 24/25/30Hz, 4K SMPTE (4096×2160p) 24/25/30Hz : RGB/YCbCr4:4:4 (8/10/12 bit), YCbCr4:2:2 (12 bit)
 - 4K (3840×2160p) 50/60Hz, 4K SMPTE (4096×2160p) 50/60Hz : RGB/YCbCr4:4:4 (8 bit), YCbCr4:2:2 (12 bit), YCbCr4:2:0 (8/10/12 bit)

HDMI IN6 to IN7, Front:

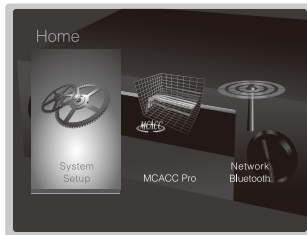
- Copyright protection technology: HDCP1.4
- Color space (Color Depth):
 - 720×480i 60Hz, 720×576i 50Hz, 720×480p 60Hz, 720×576p 50Hz, 1920×1080i 50/60Hz, 1280×720p 24/25/30/50/60Hz, 1680×720p 24/25/30/50/60Hz, 1920×1080p 24/25/30/50/60Hz, 2560×1080p 24/25/30/50/60Hz : RGB/YCbCr4:4:4 (8/10/12 bit), YCbCr4:2:2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

System Setup

The unit allows you to configure advanced settings to provide you with an even better experience.

Operation:

Use the on-screen displays (OSD) that appear on the TV to make the settings. Press **Home** on the remote controller to display the Home screen, then select System Setup with the cursors on the remote controller and press ENTER.



Select the item with the cursor **▲/▼/◀/▶** buttons of the remote controller and press ENTER to confirm your selection.

Use the cursors **◀/▶** to change the default values.

- To return to the previous screen, press **◀**.
- To exit the settings, press **Home**.

Input/Output Assign

Make settings related to output to the TV, change the settings for jack allocations to the various input selectors, and set the feature for displaying operations on the TV (OSD), etc.

■ TV Out/OSD

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
1080p -> 4K Upscaling	Off	When using a TV that supports 4K, video signals input at 1080p can be automatically upscaled to 4K for output. "Off": Do not use this function "Auto": Use this function • Select "Off" if your TV does not support 4K.
Super Resolution	(2)	When you have set "System Setup" - "Input/Output Assign" - "TV Out/OSD" - "1080p -> 4K Upscaling" to "Auto", you can select the degree of video signal correction from "Off" and between "1" (weak) and "3" (strong).
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
OSD Language	English	Select the on-screen display language from the following. (North American models) English, German, French, Spanish, Italian, Dutch, Swedish (European and Asian models) English, German, French, Spanish, Italian, Dutch, Swedish, Russian, Chinese

Setting Item	Default Value	Setting Details
Impose OSD	On	Set whether or not to display the information on the TV when the volume is adjusted or input is changed, for example. "On": OSD displayed on the TV "Off": OSD not displayed on the TV • OSD may not be displayed depending on the input signal even if "On" is selected. If the operation screen is not displayed, change the resolution of the connected device.
Screen Saver	3 minutes	Set the time to start the screen saver. Select a value from "3 minutes", "5 minutes", "10 minutes" and "Off".

■ HDMI Input

You can change input assignment between the input selectors and HDMI IN jacks.

Setting Item	Default Value	Setting Details
BD/DVD	HDMI 1 (HDCP 2.2)	"HDMI 1 (HDCP 2.2)" to "HDMI 4 (HDCP 2.2)": Assign a desired HDMI IN jack to the BD/DVD input selector. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change the input selector setting to "-----" first.
CBL/SAT	HDMI 2 (HDCP 2.2)	"HDMI 1 (HDCP 2.2)" to "HDMI 4 (HDCP 2.2)": Assign a desired HDMI IN jack to the CBL/SAT input selector. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change the input selector setting to "-----" first.
GAME	HDMI 4 (HDCP 2.2)	"HDMI 1 (HDCP 2.2)" to "HDMI 4 (HDCP 2.2)": Assign a desired HDMI IN jack to the GAME input selector. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change the input selector setting to "-----" first.
STRM BOX	HDMI 3 (HDCP 2.2)	"HDMI 1 (HDCP 2.2)" to "HDMI 4 (HDCP 2.2)": Assign a desired HDMI IN jack to the STRM BOX input selector. If you do not assign a jack, select "---". To select an HDMI IN jack already assigned to another input selector, change the input selector setting to "-----" first.

■ Video Input

You can change input assignment between the input selectors and COMPONENT VIDEO IN jack and the VIDEO IN jacks. If you do not assign a jack, select "-----".

Setting Item	Default Value	Setting Details
BD/DVD	COMPONENT 1	"COMPONENT 1", "COMPONENT 2": Assign the COMPONENT VIDEO IN jacks to the BD/DVD input selector. "VIDEO 1", "VIDEO 2": Assign a desired VIDEO IN jack to the BD/DVD input selector.
CBL/SAT	VIDEO 1	"COMPONENT 1", "COMPONENT 2": Assign the COMPONENT VIDEO IN jacks to the CBL/SAT input selector. "VIDEO 1", "VIDEO 2": Assign a desired VIDEO IN jack to the CBL/SAT input selector.
GAME	COMPONENT 2	"COMPONENT 1", "COMPONENT 2": Assign the COMPONENT VIDEO IN jacks to the GAME input selector. "VIDEO 1", "VIDEO 2": Assign a desired VIDEO IN jack to the GAME input selector.
STRM BOX	VIDEO 2	"COMPONENT 1", "COMPONENT 2": Assign the COMPONENT VIDEO IN jacks to the STRM BOX input selector. "VIDEO 1", "VIDEO 2": Assign a desired VIDEO IN jack to the STRM BOX input selector.

■ Digital Audio Input

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

Setting Item	Default Value	Setting Details
BD/DVD	COAXIAL 1	"COAXIAL 1", "COAXIAL 2", "OPTICAL 1", "OPTICAL 2", "OPTICAL 3": Assign a desired DIGITAL AUDIO IN jack to the BD/DVD input selector.
CBL/SAT	COAXIAL 2	"COAXIAL 1", "COAXIAL 2", "OPTICAL 1", "OPTICAL 2", "OPTICAL 3": Assign a desired DIGITAL AUDIO IN jack to the CBL/SAT input selector.
GAME	OPTICAL 1	"COAXIAL 1", "COAXIAL 2", "OPTICAL 1", "OPTICAL 2", "OPTICAL 3": Assign a desired DIGITAL AUDIO IN jack to the GAME input selector.
STRM BOX	-----	"COAXIAL 1", "COAXIAL 2", "OPTICAL 1", "OPTICAL 2", "OPTICAL 3": Assign a desired DIGITAL AUDIO IN jack to the STRM BOX input selector.
CD	OPTICAL 2	"COAXIAL 1", "COAXIAL 2", "OPTICAL 1", "OPTICAL 2", "OPTICAL 3": Assign a desired DIGITAL AUDIO IN jack to the CD input selector.
TV	OPTICAL 3	"COAXIAL 1", "COAXIAL 2", "OPTICAL 1", "OPTICAL 2", "OPTICAL 3": Assign a desired DIGITAL AUDIO IN jack to the TV input selector.

- 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/16 bit, 20 bit, and 24 bit.

■ Analog Audio Input

You can 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 3	"AUDIO 1" to "AUDIO 6": Assign a desired AUDIO IN jack to the BD/DVD input selector.
CBL/SAT	AUDIO 1	"AUDIO 1" to "AUDIO 6": Assign a desired AUDIO IN jack to the CBL/SAT input selector.
GAME	AUDIO 4	"AUDIO 1" to "AUDIO 6": Assign a desired AUDIO IN jack to the GAME input selector.
STRM BOX	AUDIO 2	"AUDIO 1" to "AUDIO 6": Assign a desired AUDIO IN jack to the STRM BOX input selector.
CD	AUDIO 5	"AUDIO 1" to "AUDIO 6": Assign a desired AUDIO IN jack to the CD input selector.
TV	AUDIO 6	"AUDIO 1" to "AUDIO 6": Assign a desired AUDIO IN jack to the TV input selector.

■ Input Skip

You can skip inputs to which nothing is connected when selecting them with the INPUT SELECTOR dial on the main unit or with the ◀ / ▶ input selectors on the remote controller.

Setting Item	Default Value	Setting Details
BD/DVD	Use	Set whether to skip the BD/DVD input selector. Select "Skip" to skip this input.
CBL/SAT	Use	Set whether to skip the CBL/SAT input selector. Select "Skip" to skip this input.
GAME	Use	Set whether to skip the GAME input selector. Select "Skip" to skip this input.
STRM BOX	Use	Set whether to skip the STRM BOX input selector. Select "Skip" to skip this input.
HDMI 5	Use	Set whether to skip the HDMI 5 input selector. Select "Skip" to skip this input.
HDMI 6	Use	Set whether to skip the HDMI 6 input selector. Select "Skip" to skip this input.
HDMI 7	Use	Set whether to skip the HDMI 7 input selector. Select "Skip" to skip this input.
AUX	Use	Set whether to skip the AUX input selector. Select "Skip" to skip this input.
CD	Use	Set whether to skip the CD input selector. Select "Skip" to skip this input.
TV	Use	Set whether to skip the TV input selector. Select "Skip" to skip this input.
PHONO	Use	Set whether to skip the PHONO input selector. Select "Skip" to skip this input.
TUNER	Use	Set whether to skip the TUNER input selector. Select "Skip" to skip this input.
NET	Use	Set whether to skip the NET input selector. Select "Skip" to skip this input.
USB	Use	Set whether to skip the USB input selector. Select "Skip" to skip this input.
BT AUDIO	Use	Set whether to skip the BT AUDIO input selector. Select "Skip" to skip this input.

Speaker

You can make changes to the connection environment of the speakers and change the volume level. Settings are automatically configured if you use Full Auto MCACC. This setting cannot be selected if headphones are connected or audio is output from the speakers of the TV.

■ Configuration

Setting Item	Default Value	Setting Details
Speaker Channels	7.1.4 ch	Select "2.1 ch", "3.1 ch", "4.1 ch", "5.1 ch", "6.1 ch", "7.1 ch", "2.1.2 ch", "3.1.2 ch", "4.1.2 ch", "5.1.2 ch", "6.1.2 ch", "7.1.2 ch", "4.1.4 ch", "5.1.4 ch", "6.1.4 ch", or "7.1.4 ch" to suit the number of speaker channels connected.
Subwoofer	2ch	Set the PRE OUT SUBWOOFER jacks which output audio signals. "1ch": Only the PRE OUT SUBWOOFER 1 jacks output audio signals. "2ch": Both the PRE OUT SUBWOOFER 1 jacks and the PRE OUT SUBWOOFER 2 jacks output audio signals. "No": Neither the PRE OUT SUBWOOFER 1 jacks nor the PRE OUT SUBWOOFER 2 jacks output audio signals.

Setting Item	Default Value	Setting Details
Height 1 Speaker	Top Front	Set the speaker type if height speakers are connected to the HEIGHT 1 terminals. Select "Front High", "Top Front", "Top Middle", "Top Rear", "Rear High", "Dolby Speaker (Front)", "Dolby Speaker (Surr)", or "Dolby Speaker (Back)" according to the type and layout of the connected speakers. <ul style="list-style-type: none"> This setting cannot be selected under any of following conditions. Set the height speakers type to "Height 2 Speaker". <ul style="list-style-type: none"> "System Setup" - "Speaker" - "Configuration" - "Bi-Amp" is set to "Front" "System Setup" - "Speaker" - "Configuration" - "Zone Speaker" is set to "Zone 2/Zone 3" When two sets of height speakers are being used, "Top Rear", "Rear High", "Dolby Speaker (Surr)", and "Dolby Speaker (Back)" cannot be selected "Dolby Speaker (Surr)" and "Dolby Speaker (Back)" can only be selected when surround speakers or surround back speakers are being used, respectively. You can check speakers that you are using on the figure displayed in "System Setup" - "Speaker" - "Configuration" - "Speaker Channels". If an item cannot be selected even though connection is correct, check that the settings in "System Setup" - "Speaker" - "Configuration" - "Speaker Channels" matches the number of connected channels.

Setting Item	Default Value	Setting Details
Height 2 Speaker	Top Rear	<p>Set the speaker type if height speakers are connected to the HEIGHT 2 terminals. Select "Front High", "Top Front", "Top Middle", "Top Rear", "Rear High", "Dolby Speaker (Front)", "Dolby Speaker (Surr)", or "Dolby Speaker (Back)" according to the type and layout of the connected speakers. However, the options selectable for the "Height 1 Speaker" the are as follows.</p> <p>If "Height 1 Speaker" is set to "Front High": Select from "Top Middle", "Top Rear", "Rear High", "Dolby Speaker (Surr)", or "Dolby Speaker (Back)".</p> <p>If "Height 1 Speaker" is set to "Top Front" or "Dolby Speaker (Front)": Select from "Top Rear", "Rear High", "Dolby Speaker (Surr)", or "Dolby Speaker (Back)".</p> <p>If "Height 1 Speaker" is set to "Top Middle": Fixed to "Rear High".</p> <ul style="list-style-type: none"> "Dolby Speaker (Surr)" and "Dolby Speaker (Back)" can only be selected when surround speakers or surround back speakers are being used, respectively. You can check speakers that you are using on the figure displayed in "System Setup" - "Speaker" - "Configuration" - "Speaker Channels". If an item cannot be selected even though connection is correct, check that the settings in "System Setup" - "Speaker" - "Configuration" - "Speaker Channels" matches the number of connected channels.

Setting Item	Default Value	Setting Details
Zone Speaker	No	<p>Set the connection of speakers to Zone 2 or Zone 3 speaker terminals.</p> <p>"Zone 2": When speakers are connected only to Zone 2 speaker terminals</p> <p>"Zone 2/Zone 3": When speakers are connected to both Zone 2 and Zone 3 speaker terminals</p> <ul style="list-style-type: none"> "Zone 2/Zone 3" cannot be selected when surround back speakers and height speakers are being used. <p>"No": When speakers are not connected to either speaker terminals</p> <ul style="list-style-type: none"> This item will be set to "No" when two sets of height speakers are being used.
Speaker B	No	<p>Set whether you will use the Speaker B system.</p> <p>"No": Speaker B system will not be used</p> <p>"Yes": Speaker B system will be used without bi-amp connection</p> <p>"Bi-Amp": Speaker B system will be used with bi-amp connection</p> <ul style="list-style-type: none"> "Bi-Amp" cannot be selected when height speakers are being used. In any of the following cases, this item will be set to "No": <ul style="list-style-type: none"> When "System Setup" - "Speaker" - "Configuration" - "Zone Speaker" is set to other than "No" When two sets of height speakers are being used

Setting Item	Default Value	Setting Details
Bi-Amp	No	<p>Set whether the speakers are bi-amp connected.</p> <p>"No": When speakers are not bi-amp connected to any speaker terminals</p> <p>"Front": When using bi-amp connection for the front speakers only</p> <p>"Front / Center": When using bi-amp connection for the front speakers and the center speaker. This can only be selected when you have set "Speaker Channels" to "3.1 ch" or "5.1 ch".</p> <p>"Front / Surround": When using bi-amp connection for the front speakers and the surround speakers. This can only be selected when you have set "Speaker Channels" to "4.1 ch" or "5.1 ch".</p> <p>"Center / Surround": When using bi-amp connection for the center speaker and the surround speakers. This can only be selected when you have set "Speaker Channels" to "5.1 ch".</p> <p>"Front / Center / Surround": When using bi-amp connection for the front speakers, the center speaker, and the surround speakers. This can only be selected when you have set "Speaker Channels" to "5.1 ch".</p> <ul style="list-style-type: none"> • This item will be set to "No" when using ZONE 3 or Speakers B, or when two sets of height speakers are being used. This item will also be set to "No" when height speakers and ZONE speakers are being used at the same time. • You cannot select a setting other than "No" or "Front" when using ZONE speakers.


■ Crossover

Setting Item	Default Value	Setting Details
Front	Small	<p>Set the low range capabilities for each channel by setting either small or large.</p> <p>"Small": For small speakers whose low range capabilities may be limited</p> <p>"Large": For full-range speakers with sufficient low range capabilities</p> <ul style="list-style-type: none"> • If "System Setup" - "Speaker" - "Configuration" - "Subwoofer" is set to "No", "Front" will be fixed to "Large" and the low pitched range of the other channels will be output from the front speakers. Refer to the instruction manual of your speakers to make the setting.
Center	Small	<p>Set the low range capabilities for each channel by setting either small or large.</p> <p>"Small": For small speakers whose low range capabilities may be limited</p> <p>"Large": For full-range speakers with sufficient low range capabilities</p> <ul style="list-style-type: none"> • When "Front" is set to "Small", this is set to "Small". • If an item cannot be selected even though connection is correct, check that the settings in "System Setup" - "Speaker" - "Configuration" - "Speaker Channels" matches the number of connected channels.
Height 1	Small	<p>Set the low range capabilities for each channel by setting either small or large.</p> <p>"Small": For small speakers whose low range capabilities may be limited</p> <p>"Large": For full-range speakers with sufficient low range capabilities</p> <ul style="list-style-type: none"> • When "Front" is set to "Small", this is set to "Small". • If an item cannot be selected even though connection is correct, check that the settings in "System Setup" - "Speaker" - "Configuration" - "Speaker Channels" matches the number of connected channels.

Setting Item	Default Value	Setting Details
Height 2	Small	<p>Set the low range capabilities for each channel by setting either small or large.</p> <p>"Small": For small speakers whose low range capabilities may be limited</p> <p>"Large": For full-range speakers with sufficient low range capabilities</p> <ul style="list-style-type: none"> • When "Front" is set to "Small", this is set to "Small". • If an item cannot be selected even though connection is correct, check that the settings in "System Setup" - "Speaker" - "Configuration" - "Speaker Channels" matches the number of connected channels.
Surround	Small	<p>Set the low range capabilities for each channel by setting either small or large.</p> <p>"Small": For small speakers whose low range capabilities may be limited</p> <p>"Large": For full-range speakers with sufficient low range capabilities</p> <ul style="list-style-type: none"> • When "Front" is set to "Small", this is set to "Small". • If an item cannot be selected even though connection is correct, check that the settings in "System Setup" - "Speaker" - "Configuration" - "Speaker Channels" matches the number of connected channels.
Surround Back	Small	<p>Set the low range capabilities for each channel by setting either small or large.</p> <p>"Small": For small speakers whose low range capabilities may be limited</p> <p>"Large": For full-range speakers with sufficient low range capabilities</p> <ul style="list-style-type: none"> • When "Surround" is set to "Small", this is set to "Small". • If an item cannot be selected even though connection is correct, check that the settings in "System Setup" - "Speaker" - "Configuration" - "Speaker Channels" matches the number of connected channels.

Setting Item	Default Value	Setting Details
Crossover	80Hz	<p>When there are speakers that have been set to "Small", set the Hz under which you would like other speakers to play bass, and also set Hz under which you would like the LFE (low frequency effect) to play the bass.</p> <p>The value from "50Hz" to "200Hz" can be set.</p>
Double Bass	Off	<p>This can be selected only when "System Setup" - "Speaker" - "Configuration" - "Subwoofer" is set to other than "No" and "Front" is set to "Large".</p> <p>Boost bass output by feeding bass sounds from the front left and right, and center speakers to the subwoofer.</p> <p>"On": Bass output will be boosted</p> <p>"Off": Bass output will not be boosted</p> <ul style="list-style-type: none"> • The setting will not automatically be configured even if you performed Full Auto MCACC.


■ Distance

Set the distance from each speaker to the listening position. Press  on the remote controller, and select the MCACC Memory first in "AV Adjust" - "MCACC" - "MCACC Memory".

Setting Item	Default Value	Setting Details
Front Left	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Center	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Front Right	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Height 1 Left	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Height 1 Right	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Height 2 Left	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Height 2 Right	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Surround Right	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Surr Back Right	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Surr Back Left	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Surround Left	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Subwoofer 1	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.
Subwoofer 2	10' 0" / 3.00 m	Specify the distance between each speaker and the listening position.

- Default values vary depending on the regions.
- Distance units can be switched by pressing MODE on the remote controller. When the unit is set as feet, you can set between 0' 0" 1/2 and 30' 0" in increments of 1/2. When the unit is set as meters, you can set between 0.01 m and 9.00 m in increments of 0.01 m.

■ Channel Level

Set the volume level of the speakers. If multiple settings are saved in the MCACC Memory, press  on the remote controller, and select the MCACC Memory first in "AV Adjust" - "MCACC" - "MCACC Memory".

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.
Center	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.
Height 1 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.
Height 1 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.
Height 2 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.
Height 2 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.
Surround 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.

Setting Item	Default Value	Setting Details
Surr Back 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.
Surr Back 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.
Surround 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.
Subwoofer 1	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.
Subwoofer 2	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.

Speaker"/"Height 2 Speaker" is set to "Dolby Speaker".

■ **Dolby Enabled Speaker**


Setting Item	Default Value	Setting Details
Dolby Enabled Speaker to Ceiling	6' 00" / 1.80 m	Set the distance between the Dolby Enabled Speaker and the ceiling. Select between "0' 0" 1/2" / "0.01 m" to "15' 0" / "4.50 m" (1/2 / 0.01 m units). <ul style="list-style-type: none"> The unit of distance (feet / meters) shown is the unit selected for use in "Distance".
Reflex Optimizer	Off	You can enhance the reflection effect of Dolby Enabled Speakers from the ceiling. <p>"Off": Do not use this function</p> <p>"On": Use this function</p> <ul style="list-style-type: none"> The function is not effective if the listening mode is Pure Direct.

- This setting can be selected when "System Setup" - "Speaker" - "Configuration" - "Height 1

Audio Adjust

Make advanced settings such as those related to multiplex audio or those related to the volume of this unit.

■ Dual Mono/Mono

Setting Item	Default Value	Setting Details
Dual Mono	Main	Set the audio channel or language to be output when playing multiplex audio or multilingual TV broadcasts etc. "Main": Main channel only "Sub": Sub channel only "Main/Sub": Main and sub channels will be output at the same time. <ul style="list-style-type: none"> If multiplex audio is being played, "1+1" will be displayed when  on the remote controller is pressed.
Mono Input Channel	Left+Right	Set the input channel to use for playing any 2 ch digital source such as Dolby Digital, or 2 ch analog/PCM source in the Mono listening mode. "Left": Left channel only "Right": Right channel only "Left+Right": Left and right channels

■ Dolby

Setting Item	Default Value	Setting Details
Loudness Management	On	When playing Dolby TrueHD, enable the dialog normalization function which keeps the volume of dialog at a certain level. Note that when this setting is Off, the DRC function that allows you to enjoy surround at low volumes is fixed to off when playing Dolby Digital Plus/Dolby TrueHD. "On": Use this function "Off": Do not use this function

■ Volume

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".
Volume Limit	Off	Set the maximum value to avoid too high volume. Select "Off" or a value between "-32 dB" and "+17 dB".
Power On Level	Last	Set the volume level of when the power is turned on. Select a value from "Last" (volume before entering standby mode), "-∞ dB", and "-81.5 dB" to "+18.0 dB". <ul style="list-style-type: none"> You cannot set a higher value than that of "Volume Limit".
Headphone Level	0.0 dB	Adjust the output level of the headphones. Select a value between "-12.0 dB" and "+12.0 dB".

Source

Make settings for input sources, such as volume difference adjustments for each input selector for the connected equipment.

■ Input Volume Absorber

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

Setting Item	Default Value	Setting Details
Input Volume Absorber	0.0 dB	Select a value between "-12.0 dB" and "+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/Zone 3.

■ Name Edit

Set an easy name to each input. The set name will be shown on the main unit display. Select the input selector to configure.

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 it to input 10 or less 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 to the arrow direction. "<X>": Removes a character on the left of the cursor. "␣": Enters a space. <ul style="list-style-type: none"> Pressing CLEAR 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 name a preset radio station, press TUNER on the remote controller, select AM/FM and select the preset number.
- This cannot be set if the "NET", "USB" or "BT AUDIO" input is selected.

■ Audio Select

Select the priority for input selection when multiple audio sources are connected to one input selector, such as connections to both the "BD/DVD" HDMI IN jack and the "BD/DVD" AUDIO IN jack. The setting can be separately set to each input selector. Select the input selector to configure. Note that there are some default values you cannot change.

Setting Item	Default Value	Setting Details
Audio Select	BD/DVD: HDMI CBL/SAT: HDMI GAME: HDMI STRM BOX: HDMI HDMI 5: HDMI HDMI 6: HDMI HDMI 7: HDMI AUX: HDMI CD: OPTICAL TV: OPTICAL	<p>"ARC": When giving priority to input signal from ARC compatible TV.</p> <ul style="list-style-type: none"> The setting can be selected only when "System Setup" - "Hardware" - "HDMI" - "Audio Return Channel" is set to "Auto" and also the "TV" input is selected. <p>"HDMI": When giving priority to input signal from HDMI IN jacks</p> <ul style="list-style-type: none"> The setting can be selected only when the input is assigned to the HDMI jack in the "System Setup" - "Input/Output Assign" - "HDMI Input" setting. <p>"COAXIAL": When giving priority to input signal from DIGITAL AUDIO IN COAXIAL jacks</p> <ul style="list-style-type: none"> The setting can be selected only when the input is assigned to the COAXIAL jack in the "System Setup" - "Input/Output Assign" - "Digital Audio Input" setting. <p>"OPTICAL": When giving priority to input signal from DIGITAL AUDIO IN OPTICAL jacks</p> <ul style="list-style-type: none"> The setting can be selected only when the input is assigned to the OPTICAL jack in the "System Setup" - "Input/Output Assign" - "Digital Audio Input" setting. <p>"Analog": To always output analog audio independently of the input signal</p> <ul style="list-style-type: none"> The setting can be selected only when the input is assigned to the AUDIO IN jack in the "System Setup" - "Input/Output Assign" - "Analog Audio Input" setting.

Setting Item	Default Value	Setting Details
Fixed PCM	Off	Select whether to fix input signals to PCM (except multi-channel PCM) when you have selected "HDMI", "COAXIAL", or "OPTICAL" in the "Audio Select" setting. Set this item to "On" if noise is produced or truncation occurs at the beginning of a track when playing PCM sources. Select "Off" normally. <ul style="list-style-type: none"> Changing "Audio Select" changes the setting to "Off".

- The setting cannot be changed when "TUNER", "NET", "USB", "BT AUDIO" or "PHONO" input is selected.

Hardware

Make settings related to the HDMI CEC, HDMI Standby Through, or ARC features, settings related to power management of the unit, such as Auto Standby and Network Standby, and output settings for the 12V Trigger jack.

■ HDMI

Setting Item	Default Value	Setting Details
HDMI CEC	Off	Setting to "On" enables the input selection link and other link functions with HDMI connected CEC compliant device. "On": Use this function "Off": Do not use this function When changing this setting, turn off and then on again the power of all connected components. <ul style="list-style-type: none"> Depending on the TV set, a link may need to be configured on the TV. This function is effective only when the device is connected to the HDMI OUT MAIN terminal. Setting to "On" and closing the on-screen menu displays the name of the CEC-compatible components and "CEC On" on the display. Power consumption in standby mode may increase if "On" is set. (Depending on the TV status, the unit will enter the normal standby mode.) If you operate the MASTER 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 the unit. If you want to output from only either of them, change the unit or TV settings, or reduce the volume of the unit. If abnormal operation occurs when you set the setting to "On", set it to "Off". When connecting a non-CEC compatible component, or when you are not sure whether it is compatible, set the setting 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. 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"> Power consumption in standby mode increases if set to anything other than "Off". <p>"BD/DVD", "CBL/SAT", "GAME", "STRM BOX", "HDMI 5", "HDMI 6", "HDMI 7", "AUX": For example, if you select "BD/DVD", you can play the equipment 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 the video and audio of the input selected immediately prior to the unit being switched to standby on the TV.</p> <p>"Auto", "Auto (Eco)": Select one of these settings when you have connected equipment that conforms to the CEC standard. You can play the video and audio of the input selected on the TV, irrespective of what input was selected immediately prior to the unit being switched to standby, using the CEC link function.</p> <ul style="list-style-type: none"> To play players on the TV that do not conform to the CEC standard, you will need to turn the unit on and switch to the relevant input. When using TV that complies with the CEC standard, 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": Use this function</p> <p>"Off": Do not use this function</p> <ul style="list-style-type: none"> This setting is fixed to "Auto" if you have set "System Setup" - "Input/Output Assign" - "TV Out/OSD" - "HDMI Out" or "Other" - "HDMI Out" in "AV Adjust" to "MAIN" or "MAIN+SUB" and "HDMI CEC" is set 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 through the speakers of the TV. Depending on your TV set or input signal of the component, audio may not output through the speakers of the TV even if this setting is set to "On". In such case, audio is output from the speakers of the unit. If you operate the MASTER VOLUME dial on this unit when audio that is being input through this unit for output from the TV speakers, audio is output from this unit. If you do not want to output audio from the unit, change the unit or TV settings, or reduce the volume of the unit.
Audio Return Channel	(Auto) (*)	<p>You can enjoy sound of the HDMI connected ARC compatible TV through the speakers connected to the unit.</p> <p>* To use this function, set "HDMI CEC" to "On" in advance.</p> <p>"Auto": When enjoying the TV sound through the speakers connected to the unit</p> <p>"Off": When not using the ARC function</p>
PQLS	Auto	<p>Enables high-quality playback of audio from AV components that support PQLS (Precision Quartz Lock System) connected by HDMI.</p> <p>"Auto": Use this function</p> <p>"Off": Do not use this function</p> <ul style="list-style-type: none"> To use this function, set "HDMI CEC" to "On" in advance.

Setting Item	Default Value	Setting Details
Auto Delay	On	This setting automatically corrects any desynchronization between the video and audio signals based on data from the HDMI LipSync compatible TV. "On": Automatic correction will be enabled "Off": Automatic correction will be disabled

■ Power Management

Setting Item	Default Value	Setting Details
Sleep Timer	Off	Allows the unit to enter standby automatically when the specified time elapses. Select a value from "30 minutes", "60 minutes", and "90 minutes". "Off": Does not turn the unit to standby automatically
Auto Standby	On/Off	This setting places the unit on standby automatically after 20 minutes of inactivity without any video or audio input. (When "Network Standby" is on, this becomes the HYBRID STANDBY mode which reduces the increase in power consumption to a minimum.) "On": The unit will automatically enter standby mode ("AUTO STBY" will light.) "Off": The unit will not automatically enter standby mode <ul style="list-style-type: none"> "Auto Standby" is displayed on the display and TV screen 30 seconds before the Auto Standby comes on. "Auto Standby" does not work when Zone 2/ Zone 3 is active. Default values vary depending on the regions.
Auto Standby in HDMI Standby Through	(Off)	Enable or disable "Auto Standby" while "HDMI Standby Through" is on. "On": The setting will be enabled "Off": The setting will be 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".

Setting Item	Default Value	Setting Details
Network Standby	On	<p>When this feature is turned "On", you can turn on the power of the unit via the network using an application such as iControlAV5 that can control this unit.</p> <ul style="list-style-type: none"> When "Network Standby" is used, the power consumption increases even when the unit is on standby. However, the increase in power consumption is kept to a minimum by automatically entering the HYBRID STANDBY mode, where only the essential circuit is operating. "Network Standby", which suppresses power consumption, may be disabled when the network connection is lost. Use the power button on the remote controller or main unit to turn the unit on if this happens.
Bluetooth Wakeup	Off	<p>This function wakes up the unit on standby by connecting a BLUETOOTH enabled device.</p> <p>"On": Use this function "Off": Do not use this function</p> <ul style="list-style-type: none"> Setting to "On" increases the power consumption even when the unit is on standby. However, the increase in power consumption is kept to a minimum by automatically entering the HYBRID STANDBY mode, where only the essential circuit is operating. This setting is fixed to "Off" if "Network/Bluetooth" - "Bluetooth" - "Auto Input Change" is set to "Off".

- Wait for a while if "Network Standby" and "Bluetooth Wakeup" cannot be selected. It will appear when the network feature is started.

■ 12V Trigger A

Set when outputting the control signal (maximum 12 V/100 mA) through the 12V TRIGGER OUT A jack. Different settings can be set for each input selector. You can enable power link operation when you connect the unit and the external devices equipped with 12V trigger input jack.

Setting Item	Default Value	Setting Details
HDMI Out	Off	<p>Set when you want to output a 12V trigger in response to switching of an HDMI OUT jack that outputs video.</p> <p>"Off": No output "MAIN": Output when switched to the HDMI OUT MAIN jack. "SUB": Output when switched to the HDMI OUT SUB jack.</p> <ul style="list-style-type: none"> This can be selected only when "System Setup" - "Input/Output Assign" - "TV Out/OSD" - "Zone 2 HDMI" is set to "Not Use". <p>"ZONE 2": Output when switched to the HDMI OUT ZONE 2 jack.</p> <ul style="list-style-type: none"> This can be selected only when "System Setup" - "Input/Output Assign" - "TV Out/OSD" - "Zone 2 HDMI" is set to "Use".
BD/DVD	Off	<p>Set the 12V trigger output setting to each input.</p> <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. <p>"Off": No output "Main": Output when "BD/DVD" is selected as input source for the main room. "Zone2": Output when "BD/DVD" is selected as input source for ZONE2. "Zone3": Output when "BD/DVD" is selected as input source for ZONE3.</p>

Setting Item	Default Value	Setting Details
CBL/SAT	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "CBL/SAT" is selected as input source for the main room. "Zone2": Output when "CBL/SAT" is selected as input source for ZONE2. "Zone3": Output when "CBL/SAT" is selected as input source for ZONE3.
GAME	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "GAME" is selected as input source for the main room. "Zone2": Output when "GAME" is selected as input source for ZONE2. "Zone3": Output when "GAME" is selected as input source for ZONE3.
STRM BOX	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "STRM BOX" is selected as input source for the main room. "Zone2": Output when "STRM BOX" is selected as input source for ZONE2. "Zone3": Output when "STRM BOX" is selected as input source for ZONE3.
HDMI 5	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "HDMI 5" is selected as input source for the main room. "Zone2": Output when "HDMI 5" is selected as input source for ZONE2.

Setting Item	Default Value	Setting Details
HDMI 6	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "HDMI 6" is selected as input source for the main room.
HDMI 7	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "HDMI 7" is selected as input source for the main room.
AUX	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "AUX" is selected as input source for the main room.
CD	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "CD" is selected as input source for the main room. "Zone2": Output when "CD" is selected as input source for ZONE2. "Zone3": Output when "CD" is selected as input source for ZONE3.
TV	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "TV" is selected as input source for the main room. "Zone2": Output when "TV" is selected as input source for ZONE2. "Zone3": Output when "TV" is selected as input source for ZONE3.

Setting Item	Default Value	Setting Details
PHONO	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "PHONO" is selected as input source for the main room. "Zone2": Output when "PHONO" is selected as input source for ZONE2. "Zone3": Output when "PHONO" is selected as input source for ZONE3.
TUNER	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "TUNER" is selected as input source for the main room. "Zone2": Output when "TUNER" is selected as input source for ZONE2. "Zone3": Output when "TUNER" is selected as input source for ZONE3.
NET	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "NET" is selected as input source for the main room. "Zone2": Output when "NET" is selected as input source for ZONE2. "Zone3": Output when "NET" is selected as input source for ZONE3.

Setting Item	Default Value	Setting Details
USB	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "USB" is selected as input source for the main room. "Zone2": Output when "USB" is selected as input source for ZONE2. "Zone3": Output when "USB" is selected as input source for ZONE3.
BT AUDIO	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "BT AUDIO" is selected as input source for the main room. "Zone2": Output when "BT AUDIO" is selected as input source for ZONE2. "Zone3": Output when "BT AUDIO" is selected as input source for ZONE3.

■ 12V Trigger B

Set when outputting the control signal (maximum 12 V/25 mA) through the 12V TRIGGER OUT B jack. Different settings can be set for each input selector. You can enable power link operation when you connect the unit and the external devices equipped with 12V trigger input jack.

Setting Item	Default Value	Setting Details
HDMI Out	Off	Set when you want to output a 12V trigger in response to switching of an HDMI OUT jack that outputs video. "Off": No output "MAIN": Output when switched to the HDMI OUT MAIN jack. "SUB": Output when switched to the HDMI OUT SUB jack. • This can be selected only when "System Setup" - "Input/Output Assign" - "TV Out/OSD" - "Zone 2 HDMI" is set to "Not Use". "ZONE 2": Output when switched to the HDMI OUT ZONE 2 jack. • This can be selected only when "System Setup" - "Input/Output Assign" - "TV Out/OSD" - "Zone 2 HDMI" is set to "Use".
BD/DVD	Off	Set the 12V trigger output setting to each input. • To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "BD/DVD" is selected as input source for the main room. "Zone2": Output when "BD/DVD" is selected as input source for ZONE2. "Zone3": Output when "BD/DVD" is selected as input source for ZONE3.

Setting Item	Default Value	Setting Details
CBL/SAT	Off	Set the 12V trigger output setting to each input. • To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "CBL/SAT" is selected as input source for the main room. "Zone2": Output when "CBL/SAT" is selected as input source for ZONE2. "Zone3": Output when "CBL/SAT" is selected as input source for ZONE3.
GAME	Off	Set the 12V trigger output setting to each input. • To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "GAME" is selected as input source for the main room. "Zone2": Output when "GAME" is selected as input source for ZONE2. "Zone3": Output when "GAME" is selected as input source for ZONE3.
STRM BOX	Off	Set the 12V trigger output setting to each input. • To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "STRM BOX" is selected as input source for the main room. "Zone2": Output when "STRM BOX" is selected as input source for ZONE2. "Zone3": Output when "STRM BOX" is selected as input source for ZONE3.
HDMI 5	Off	Set the 12V trigger output setting to each input. • To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "HDMI 5" is selected as input source for the main room. "Zone2": Output when "HDMI 5" is selected as input source for ZONE2.

Setting Item	Default Value	Setting Details
HDMI 6	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "HDMI 6" is selected as input source for the main room.
HDMI 7	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "HDMI 7" is selected as input source for the main room.
AUX	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "AUX" is selected as input source for the main room.
CD	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "CD" is selected as input source for the main room. "Zone2": Output when "CD" is selected as input source for ZONE2. "Zone3": Output when "CD" is selected as input source for ZONE3.
TV	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "TV" is selected as input source for the main room. "Zone2": Output when "TV" is selected as input source for ZONE2. "Zone3": Output when "TV" is selected as input source for ZONE3.

Setting Item	Default Value	Setting Details
PHONO	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "PHONO" is selected as input source for the main room. "Zone2": Output when "PHONO" is selected as input source for ZONE2. "Zone3": Output when "PHONO" is selected as input source for ZONE3.
TUNER	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "TUNER" is selected as input source for the main room. "Zone2": Output when "TUNER" is selected as input source for ZONE2. "Zone3": Output when "TUNER" is selected as input source for ZONE3.
NET	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "NET" is selected as input source for the main room. "Zone2": Output when "NET" is selected as input source for ZONE2. "Zone3": Output when "NET" is selected as input source for ZONE3.

Setting Item	Default Value	Setting Details
USB	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "USB" is selected as input source for the main room. "Zone2": Output when "USB" is selected as input source for ZONE2. "Zone3": Output when "USB" is selected as input source for ZONE3.
BT AUDIO	Off	Set the 12V trigger output setting to each input. <ul style="list-style-type: none"> To use this function, set "HDMI Out" to "Off" in advance. "Off": No output "Main": Output when "BT AUDIO" is selected as input source for the main room. "Zone2": Output when "BT AUDIO" is selected as input source for ZONE2. "Zone3": Output when "BT AUDIO" is selected as input source for ZONE3.

Multi Zone

Make settings related to Multi-zone Connection, such as the volume for the separate room.

■ Zone 2

Setting Item	Default Value	Setting Details
Output Level	Fixed	Select whether to adjust the volume on the pre-main amplifier in the separate room or on this unit when outputting to Zone 2. "Fixed": Adjust on the pre-main amplifier in the separate room "Variable": Adjust on this unit
Volume Limit	Off	Set the maximum value for Zone 2 to avoid too high volume. Select "Off" or a value between "-32 dB" and "+17 dB".
Power On Level	Last	Set the Zone 2 volume level of when this unit is turned on. Select a value from "Last" (volume before the unit was turned off), "-∞ dB", and "-81.5 dB" to "+18.0 dB". <ul style="list-style-type: none"> You cannot set a higher value than that of "Volume Limit".
Bass	0 dB	Adjust the volume of the bass for Zone 2. Select a value between "-10 dB" and "+10 dB".
Treble	0 dB	Adjust the volume of the treble for Zone 2. Select a value between "-10 dB" and "+10 dB".
Balance	0	Set the left-right balance for Zone 2. Select a value between "L + 10" to "R + 10".

■ Zone 3

Setting Item	Default Value	Setting Details
Output Level	Fixed	Select whether to adjust the volume on the pre-main amplifier in the separate room or on this unit when outputting to Zone 3. "Fixed": Adjust on the pre-main amplifier in the separate room "Variable": Adjust on this unit
Volume Limit	Off	Set the maximum value for Zone 3 to avoid too high volume. Select "Off" or a value between "−32 dB" and "+17 dB".
Power On Level	Last	Set the Zone 3 volume level of when this unit is turned on. Select a value from "Last" (volume before the unit was turned off), "−∞ dB", and "−81.5 dB" to "+18.0 dB". • You cannot set a higher value than that of "Volume Limit".
Bass	0 dB	Adjust the volume of the bass for Zone 3. Select a value between "−10 dB" and "+10 dB".
Treble	0 dB	Adjust the volume of the treble for Zone 3. Select a value between "−10 dB" and "+10 dB".
Balance	0	Set the left-right balance for Zone 3. Select a value between "L + 10" to "R + 10".

Miscellaneous

Change the frequency step for the tuner, update the firmware, and perform Initial Setup, etc.

■ Tuner

Setting Item	Default Value	Setting Details
AM / FM Frequency Step (North American models)	10 kHz / 0.2 MHz	Select a frequency step depending on your area of residence. Select "10 kHz/0.2 MHz" or "9 kHz/0.05 MHz". • When this setting is changed, all radio presets are deleted.
AM Frequency Step (European and Asian models)	9 kHz	Select a frequency step depending on your area of residence. Select "10 kHz" or "9 kHz". • When this setting is changed, all radio presets are deleted.
AM Noise Cut Mode	1	You can improve reception sensitivity by changing this mode if you are finding AM broadcasts difficult to hear. Select "1" or "2".

■ Remote ID

Setting Item	Default Value	Setting Details
Remote ID	1	<p>Select an ID for the unit's remote controller from "1", "2", and "3" to prevent interference between the unit and other Pioneer components that are installed in the same room. After changing the ID on the main unit, change the ID on the remote controller accordingly with the following procedure.</p> <p>While holding down MODE, press the following buttons for about 3 seconds.</p> <ul style="list-style-type: none"> To change the remote controller ID to "1": ◀◀ (The remote indicator flashes once.) To change the remote controller ID to "2": ▶ / (The remote indicator flashes twice.) To change the remote controller ID to "3": ▶▶ (The remote indicator flashes three times.)

■ Preamp Mode

If speakers are connected to the PRE OUT jacks on this unit via a power amplifier, you can reduce the power consumed by this unit by turning off the power supplied to the SPEAKERS terminals you are not using on this unit.

Setting Item	Default Value	Setting Details
Preamp Mode	No	<p>Select the SPEAKERS terminals whose power you want to turn off.</p> <p>"No": Power is supplied to all SPEAKERS terminals. Select when a power amplifier is not connected.</p> <p>"Front": Turns off the power for the SPEAKERS terminals for the front speakers.</p> <p>"Front + Center": Turns off the power for the SPEAKERS terminals for the front speakers and center speaker.</p> <p>"All": Turns off the power for all SPEAKERS terminals. Select when this unit is to be used as the pre-amplifier.</p> <ul style="list-style-type: none"> This setting cannot be selected when bi-amp connection is used for front speakers. Only "Front" can be selected when bi-amp connection is used for the center speaker and surround speakers.

■ Firmware Update

Setting Item	Default Value	Setting Details
Update Notice	Enable	Availability of a firmware update will be notified via network. "Enable": Notify updates "Disable": Do not notify updates
Version	-	The current firmware version will be displayed.
Update via NET	-	Press ENTER to select when you want to update the firmware via network. <ul style="list-style-type: none"> You will not be able to select this setting if you do not have Internet access or there is nothing to update.
Update via USB	-	Press ENTER to select when you want to update the firmware via USB. <ul style="list-style-type: none"> You will not be able to select this setting if a USB storage device is not connected or there is nothing to update in the USB storage device.

- Wait for a while if "Firmware Update" cannot be selected. It will appear when the network feature is started.

■ Initial Setup

You can make the initial setup from the setup menu.

- Wait for a while if "Initial Setup" cannot be selected. It will appear when the network feature is started.


■ Lock

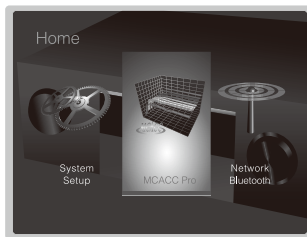
Setting Item	Default Value	Setting Details
Setup Parameter	Unlocked	Lock the Setup menu to protect the settings. "Locked": The menu is locked. "Unlocked": The menu is unlocked.





MCACC Pro



Setup the speakers automatically or make advanced settings. You can also check the values set currently for each speaker setting.



Operation:

Use the on-screen displays (OSD) that appear on the TV to make the settings. Press  on the remote controller to display the Home screen, then select MCACC Pro with the cursors on the remote controller and press ENTER.



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

Use the cursors / to change the default values.

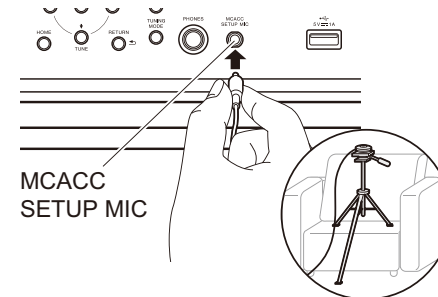
- To return to the previous screen, press .
- To exit the settings, press .

Full Auto MCACC

Place the supplied speaker setup microphone in the listening position, measure the test tones emitted by the speakers, then the unit automatically sets the optimum volume level for each speaker, the crossover frequencies, and the distance from the listening position. The influence of standing waves can be reduced to suit the listening environment, the reverberation characteristics can be measured to increase the precision of calibration, the speaker equalizers can be adjusted, and the difference in phase and timing between speakers and speaker units can be corrected. These settings and calibrations can be readjusted with Manual MCACC, and you can enable or disable them in AV Adjust.

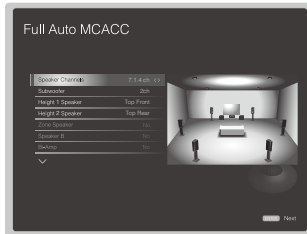
- Calibration takes between 3 to 12 minutes to be completed. The speakers emit the test tone at high volume during measurement, so be careful of your surroundings. Keep the room as quiet as possible during measurement.
- If the power of this unit suddenly turns off, the wires in the speaker cables may have touch the rear panel or other wires and tripped the protection circuit. Twist the wires again properly and make sure they do not stick out of the speaker terminals when connecting.

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



When putting the speaker setup microphone on a tripod, refer to the illustration when putting it in place.

- To cancel Full Auto MCACC partway through, disconnect the speaker setup microphone.
2. Select the connected speaker configuration, and select the calibration type for which you want to save the measurement results from amongst "Symmetry", "All Channel Adjust", and "Front Align".



The image on the screen changes as you choose the number of channels in "Speaker Channels", so refer to it when performing the settings.

Use this screen to select whether you have connected a subwoofer and to select the type of height speaker, etc.

- If you have connected a subwoofer, check the power and volume of the subwoofer. Set the subwoofer volume to more than halfway.

"Symmetry" is a type of calibration that emphasizes phase characteristics. "All Channel Adjust" emphasizes frequency characteristics. "Front Align" calibrates to emphasize the characteristics of the front speakers. The initial setting is "Symmetry". To save the measurement results of other calibration types, select from "M1.Memory 1" to "M3.Memory 3". If multiple calibration types are selected, you can select the calibration type to use in "AV Adjust" - "MCACC" - "MCACC Memory". Note that you cannot select the same save destination for different calibration types.




After making the above settings, press ENTER.

3. Test tones are emitted by the speakers, and firstly the unit detects the speakers connected and the noise in the environment.
 - If "Reverse Phase" is displayed, check whether you have connected the poles of the speakers (+ / -) in reverse. Even if the connections are correct, "Reverse Phase" may be displayed due to the speakers or the environment surrounding the speakers, but this will not affect the calibration so you can proceed to the next step.
4. After the results of the above measurements are displayed, select "Next", press ENTER

- on the remote controller, and the test tones are emitted again, and the unit automatically makes settings such as the optimum volume level and the crossover frequency.
5. Calibration finishes, so when "Please unplug setup microphone." is displayed, disconnect the speaker setup microphone. You cannot use any menu options other than MCACC Pro while it is connected.

Manual MCACC

When Full Auto MCACC is run, a variety of speaker settings are made automatically, but Manual MCACC enables you to make further adjustments manually, giving you the opportunity to make even more detailed settings.

- Before making these adjustments, run Full Auto MCACC first.
- Depending on the settings, speakers may emit test tones at high volume during measurement, so be careful of your surroundings.
- If multiple settings are saved in the MCACC Memory, press  on the remote controller, and select the MCACC Memory first in "AV Adjust" - "MCACC" - "MCACC Memory".

■ Fine Channel Level

Adjust the volume level of the speakers while listening to the test tone. After firstly adjusting the Front Left speaker to the desired volume, adjust the volume level so that each channel is the same level, starting from the Front Right speaker. Test tone output alternates between the selected speaker and the benchmark speaker, so adjust the volume so it becomes the same.

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). Test tone output alternates between this speaker and the benchmark Front Left speaker, so adjust the volume so it becomes the same.
Center	0.0 dB	Select a value between "- 12.0 dB" and "+ 12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Front Left speaker, so adjust the volume so it becomes the same.
Height 1 Left	0.0 dB	Select a value between "- 12.0 dB" and "+ 12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Front Left speaker, so adjust the volume so it becomes the same.

Setting Item	Default Value	Setting Details
Height 1 Right	0.0 dB	Select a value between "- 12.0 dB" and "+ 12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Height 1 Left speaker, so adjust the volume so it becomes the same.
Height 2 Left	0.0 dB	Select a value between "- 12.0 dB" and "+ 12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Front Left speaker, so adjust the volume so it becomes the same.
Height 2 Right	0.0 dB	Select a value between "- 12.0 dB" and "+ 12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Height 2 Left speaker, so adjust the volume so it becomes the same.
Surround Left	0.0 dB	Select a value between "- 12.0 dB" and "+ 12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Front Left speaker, so adjust the volume so it becomes the same.
Surround Right	0.0 dB	Select a value between "- 12.0 dB" and "+ 12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Surround Left speaker, so adjust the volume so it becomes the same.
Surr Back Left	0.0 dB	Select a value between "- 12.0 dB" and "+ 12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Surround Left speaker, so adjust the volume so it becomes the same.
Surr Back Right	0.0 dB	Select a value between "- 12.0 dB" and "+ 12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Surround Back Left speaker, so adjust the volume so it becomes the same.

Setting Item	Default Value	Setting Details
Subwoofer 1	0.0 dB	Select a value between "-15.0 dB" and "+12.0 dB" (in 0.5 dB increments). Test tone output alternates between this speaker and the benchmark Front Left speaker, so adjust the volume so it becomes the same.
Subwoofer 2	0.0 dB	Select a value between "-15.0 dB" and "+12.0 dB" (in 0.5 dB increments). Test tone output alternates between this subwoofer and the benchmark Subwoofer 1, so adjust the volume so it becomes the same.

■ Fine Speaker Distance

Make fine adjustments to the distance of the speakers from the listening position while listening to the test pulse. After firstly setting the measured distance of the Front Left speaker from the listening position, adjust the distance of the other speakers, starting with the Front Right speaker. The test pulse is output from the selected speaker and the benchmark speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.

Setting Item	Default Value	Setting Details
Front Left	10' 0" / 3.00 m	Set the measured distance of the Front Left speaker from the listening position.
Front Right	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Front Left speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Center	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Front Left speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Height 1 Left	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Front Left speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Height 1 Right	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Height 1 Left speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Height 2 Left	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Front Left speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Height 2 Right	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Front Right speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.

Setting Item	Default Value	Setting Details
Surround Left	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Front Left speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Surround Right	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Front Right speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Surr Back Left	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Surround Left speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Surr Back Right	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Surround Right speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Subwoofer 1	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Front Left speaker, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.
Subwoofer 2	10' 0" / 3.00 m	The test pulse is output from this speaker and the benchmark Subwoofer 1, so adjust the distance so the point where the test pulse is heard is in the middle of the two speakers.

- Default values vary depending on the regions.
- Distance units can be switched by pressing MODE on the remote controller. When the unit is set as feet, you can set between 0' 0" 1/2 and 30' 0" in increments of 1/2. When the unit is set as meters, you can set between 0.01 m and 9.00 m in increments of 0.01 m.

■ Standing Wave

This controls the affect of the standing waves that occur when sound waves reverberating off obstacles such as walls interfere with the original sound waves.

Setting Item	Default Value	Setting Details
Main	0.0dB	Control the effect of standing waves for speakers other than the center speaker and the subwoofer. 1. After selecting "Filter" with $\blacktriangle/\blacktriangledown$, select the filter to be adjusted from "1" to "3" with $\blacktriangleleft/\blacktriangleright$ and press ENTER. 2. After selecting the central frequency with $\blacktriangleleft/\blacktriangleright$, adjust the bandwidth with $\blacktriangleleft\blacktriangleleft/\blacktriangleright\blacktriangleright$, then adjust the attenuation with $\blacktriangle/\blacktriangledown$. The central frequency can be selected between "63Hz" and "250Hz". The bandwidth can be selected between "2.0" and "9.8" (0.2 intervals). Attenuation can be selected between "0.0dB" and "12.0dB" (0.5dB intervals).
Center	0.0dB	Control the effect of standing waves for the center speaker. 1. After selecting "Filter" with $\blacktriangle/\blacktriangledown$, select the filter to be adjusted from "1" to "3" with $\blacktriangleleft/\blacktriangleright$ and press ENTER. 2. After selecting the central frequency with $\blacktriangleleft/\blacktriangleright$, adjust the bandwidth with $\blacktriangleleft\blacktriangleleft/\blacktriangleright\blacktriangleright$, then adjust the attenuation with $\blacktriangle/\blacktriangledown$. The central frequency can be selected between "63Hz" and "250Hz". The bandwidth can be selected between "2.0" and "9.8" (0.2 intervals). Attenuation can be selected between "0.0dB" and "12.0dB" (0.5dB intervals).

Setting Item	Default Value	Setting Details
Subwoofer	0.0dB	<p>Control the effect of standing waves for the subwoofer.</p> <ol style="list-style-type: none"> After selecting "Filter" with $\blacktriangle/\blacktriangledown$, select the filter to be adjusted from "1" to "3" with $\blacktriangleleft/\blacktriangleright$ and press ENTER. After selecting the central frequency with $\blacktriangleleft/\blacktriangleright$, adjust the bandwidth with $\blacktriangleleft\blacktriangleleft/\blacktriangleright\blacktriangleright$, then adjust the attenuation with $\blacktriangle/\blacktriangledown$. The central frequency can be selected between "63Hz" and "250Hz". The bandwidth can be selected between "2.0" and "9.8" (0.2 intervals). Attenuation can be selected between "0.0dB" and "12.0dB" (0.5dB intervals).

■ EQ Adjust

You can adjust the output volume of the range of each speaker while listening to test noises. You can adjust the volume of the different sound ranges for each of the speakers. You can select up to four bands for the Subwoofer and nine bands for all other speakers. If the overall volume balance changes by adjusting the volume of each frequency, you can readjust the balance in "Trim".

Setting Item	Default Value	Setting Details
Front Left	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors $\blacktriangleleft/\blacktriangleright$, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with $\blacktriangle/\blacktriangledown$. To readjust the overall volume balance with "Trim", select "Trim" in $\blacktriangleleft/\blacktriangleright$, and use $\blacktriangle/\blacktriangledown$ to adjust the volume.</p> <ul style="list-style-type: none"> If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".
Center	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors $\blacktriangleleft/\blacktriangleright$, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with $\blacktriangle/\blacktriangledown$. To readjust the overall volume balance with "Trim", select "Trim" in $\blacktriangleleft/\blacktriangleright$, and use $\blacktriangle/\blacktriangledown$ to adjust the volume.</p> <ul style="list-style-type: none"> If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".

Setting Item	Default Value	Setting Details
Front Right	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors ◀/▶, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. • "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".
Height 1 Left	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors ◀/▶, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. • "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".

Setting Item	Default Value	Setting Details
Height 1 Right	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors ◀/▶, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. • "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".
Height 2 Left	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors ◀/▶, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. • "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".

Setting Item	Default Value	Setting Details
Height 2 Right	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors ◀/▶, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. • "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".
Surround Right	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors ◀/▶, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. • "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".

Setting Item	Default Value	Setting Details
Surr Back Right	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors ◀/▶, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. • "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".
Surr Back Left	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors ◀/▶, adjust the volume of that frequency between "-12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. • "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".

Setting Item	Default Value	Setting Details
Surround Left	0 dB	<p>After selecting the speaker frequency from between "63 Hz" and "16 kHz" with the cursors ◀/▶, adjust the volume of that frequency between "− 12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears. • "63 Hz" can only be selected when this speaker is set to "Large" in "System Setup" - "Speaker" - "Crossover".
Subwoofer 1	0 dB	<p>After selecting the speaker frequency from between "31 Hz" and "250 Hz" with the cursors ◀/▶, adjust the volume of that frequency between "− 12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears.
Subwoofer 2	0 dB	<p>After selecting the speaker frequency from between "31 Hz" and "250 Hz" with the cursors ◀/▶, adjust the volume of that frequency between "− 12.0 dB" and "+12.0 dB" (in 0.5 dB intervals) with ▲/▼.</p> <p>To readjust the overall volume balance with "Trim", select "Trim" in ◀/▶, and use ▲/▼ to adjust the volume.</p> <ul style="list-style-type: none"> • If "OVER!" is displayed during adjustment, the volume of the frequency band or another frequency band is too high, so reduce the volume of the frequency bands until the display disappears.

- The result may not be as expected depending on the input source and listening mode setting.

■ EQ Professional

You can automatically measure and calibrate the reverberation characteristics (how the sound echoes) of the room. First measure the reverberations with "Reverb Measurement", then check the results with "Reverb View". Specify the calibrated time position in "Advanced EQ Setup" based on the measured results to automatically calibrate the reverberation characteristics.

Reverb Measurement :

Measure the reverberation characteristics of the room. After making the following settings, place the speaker setup microphone in the listening position, and connect to the MCACC SETUP MIC jack on the main unit. Press ENTER and follow the on screen instructions.

Setting Item	Default Value	Setting Details
Reverb Measure	without EQ	Select the method for measuring the reverberation characteristics. "without EQ": MCACC is used to measure the reverberation characteristics of the room without any adjustments made to the equalizer of the speakers. "with EQ": Measures the reverberation characteristics of the room using the adjustments to the equalizer of the speakers saved in the MCACC Memory.

Reverb View :

The results of the measurements of the reverberation characteristics are shown in graphs for each speaker and frequency. If there is no reverberation, the graph stays horizontal, but if there is reverberation the graph rises to the right. If the "Symmetry" calibration type has been selected and Full Auto MCACC was performed, predicted values for the reverberation characteristics after calibration are also shown.

Advanced EQ Setup :

Reverberation characteristics are automatically calibrated according to the settings made. After making the following settings, place the speaker setup microphone in the listening position, and connect to the MCACC SETUP MIC jack on the main unit. Press ENTER and follow the on screen instructions.

Setting Item	Default Value	Setting Details
Time Position	30 - 50 msec	Specify the calibrated time position in the range between "0 - 20 msec" and "60 - 80 msec" (10 msec intervals). If the reverberation characteristics differ for each frequency or each channel in the Reverb View graph, we recommend selecting "30 - 50 msec". If the overall reverberation characteristics are similar, we recommend selecting "60 - 80 msec".
EQ Type	Symmetry	Select the calibration type. "Symmetry": Speakers that make one set as a left and right pair have their frequency characteristics calibrated flatly. Speakers not in pairs, such as the center speaker, are adjusted individually. Select when you want to give weight to phase characteristics for calibration. "All Channel Adjust": Flatly calibrates individually the frequency characteristics of all speakers. Select when you want to give weight to frequency characteristics for calibration. "Front Align": Calibrates speakers other than the front speakers so their characteristics match those of the front speakers (front speakers are not calibrated). Select when you want to give weight to characteristics of the front speakers for calibration.
Standing Wave Multi Position	No	When you select "Yes", standing wave calibration can be performed at two listening positions along with the main listening position. If there is only one listening position, select "No". • If you select "Yes", calibration is first performed for the locations other than the main position, then the main position is calibrated last.

■ Precision Distance

With the distance of the Front Left speaker from the listening position as the standard, adjust the position of each speaker with a precision up to the closest 1 cm. Adjust the distance in order starting at the Front Right speaker. Test tone output alternates between the selected speaker and the speaker that is used as its benchmark. First setup the speaker setup microphone in the listening position and connect it to the MCACC SETUP MIC jack on the main unit, then select this setting.

Setting Item	Default Value	Setting Details
Front Right	-	Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved. <ul style="list-style-type: none"> Do not move the Front Left speaker, upon which calibration is based, during the adjustments.
Center	-	Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved. <ul style="list-style-type: none"> Do not move the Front Left speaker, upon which calibration is based, during the adjustments.
Height 1 Left	-	Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved. <ul style="list-style-type: none"> Do not move the Front Left speaker, upon which calibration is based, during the adjustments.

Setting Item	Default Value	Setting Details
Height 1 Right	-	Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved. <ul style="list-style-type: none"> Do not move the Height 1 Left speaker, upon which calibration is based, during the adjustments.
Height 2 Left	-	Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved. <ul style="list-style-type: none"> Do not move the Front Left speaker, upon which calibration is based, during the adjustments.
Height 2 Right	-	Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved. <ul style="list-style-type: none"> Do not move the Front Right speaker, upon which calibration is based, during the adjustments.
Surround Left	-	Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved. <ul style="list-style-type: none"> Do not move the Front Left speaker, upon which calibration is based, during the adjustments.

Setting Item	Default Value	Setting Details
Surround Right	-	<p>Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved.</p> <ul style="list-style-type: none"> Do not move the Front Right speaker, upon which calibration is based, during the adjustments.
Surr Back Left	-	<p>Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved.</p> <ul style="list-style-type: none"> Do not move the Surround Left speaker, upon which calibration is based, during the adjustments.
Surr Back Right	-	<p>Move the speakers back and forth about a centimeter at a time in relation to the speaker setup microphone so that "Score" becomes "10.0" If the number does not become "10.0", put the speaker in the position where the maximum value is achieved.</p> <ul style="list-style-type: none"> Do not move the Surround Right speaker, upon which calibration is based, during the adjustments.

MCACC Data Check

You can check the number of speaker channels connected and the content and values you have set for each of the speaker settings. Depending on the item, you can check by changing the MCACC memory or Channel with the cursors.

■ Speaker Setting

You can check the number of speaker channels connected and the large and small settings you have set for the low range reproduction capabilities for each of the speakers.

■ Channel Level

You can check the output level settings for each of the speakers.

■ Speaker Distance

You can check the distance from each speaker to the listening position.

■ Standing Wave

You can check the settings of the standing wave control filter.

■ Acoustic Calibration EQ

You can check the calibration values for the frequency characteristics of each speaker that were set in "Manual MCACC".

■ Group Delay

You can check the group delay of speakers before and after calibration.

Data Management

You can change the name of the MCACC Memory, or copy or delete the settings you have made.

■ Memory Rename

Change the name of the MCACC Memory.

Setting Item	Default Value	Setting Details
M1	Memory 1	You can select a name for the memory from "Memory 1", "Symmetry", "All Adj", "F.Align", "Movie", "Music", "Game", "Party", "Sofa", and "Seat".
M2	Memory 2	You can select a name for the memory from "Memory 2", "Symmetry", "All Adj", "F.Align", "Movie", "Music", "Game", "Party", "Sofa", and "Seat".
M3	Memory 3	You can select a name for the memory from "Memory 3", "Symmetry", "All Adj", "F.Align", "Movie", "Music", "Game", "Party", "Sofa", and "Seat".

■ MCACC Memory Copy

Copy the speaker settings from a Memory to another Memory. After making the following settings, press ENTER and follow the on screen instructions.

Setting Item	Default Value	Setting Details
Copy	All Data	Select the content you want to copy. "All Data": Copy all settings. "Level & Distance": Copy only the output level and distance from the listening position for each speaker.
Copy from	M1.Memory 1	Select the Memory you want to copy.
Copy to	M1.Memory 1	Select the Memory you want to copy to.

■ MCACC Memory Clear

Delete the speaker settings from a Memory. After selecting the memory, press ENTER and follow the on screen instructions.

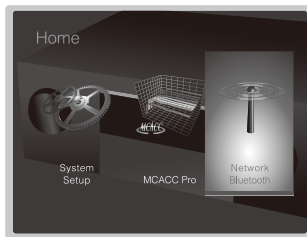
Network/Bluetooth

Make settings related to network connections and BLUETOOTH .

Operation:

Use the on-screen displays (OSD) that appear on the TV to make the settings.

Press **Home** on the remote controller to display the Home screen, select Network/Bluetooth with the cursors on the remote controller, then press ENTER.



Select the item with the cursor **▲/▼/◀/▶** buttons of the remote controller and press ENTER to confirm your selection.

Use the cursors **◀/▶** to change the default values.

- To return to the previous screen, press **↶**.
- To exit the settings, press **Home**.

Network

- 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 component, you must set "DHCP" to "Disable" and assign an address to this unit in "IP Address" as well as set information related to your LAN, such as Subnet Mask and Gateway.

Setting Item	Default Value	Setting Details
Wi-Fi	Off (Wired)	Connect the unit to network via wireless LAN router. "On": Wireless LAN connection "Off (Wired)": Wired LAN connection
Wi-Fi Setup	-	You can configure wireless LAN settings by pressing ENTER when "Start" is displayed.
Wi-Fi Status	-	The information of the connected access point will be displayed. "SSID": SSID of the connected access point. "Signal": Signal strength of the connected access point. "Status": Status of the connected access point.
MAC Address	-	This is the MAC address of this unit. This value is specific to the component and cannot be changed.
DHCP	Enable	"Enable": Auto configuration by DHCP "Disable": Manual configuration without DHCP <ul style="list-style-type: none"> • If selecting "Disable", you must 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.
Proxy Port	8080	Displays/Sets the proxy server port number when you enter "Proxy URL".

Setting Item	Default Value	Setting Details
Friendly Name	Pioneer SC-LX901 XXXXXX	<p>Change the device name for this unit which is shown on other devices 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 it to input 31 or less 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 to the arrow direction. "⌫": Removes a character on the left of the cursor. "␣": Enters a space. <ul style="list-style-type: none"> • Pressing CLEAR 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 Password		<p>You can set a password of up to 31 characters so that only registered users 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 it to input 31 or less 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 to 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 +Fav on the remote controller. • Pressing CLEAR on the remote controller will remove all the input characters. 3. After inputting, select "OK" with the cursors and press ENTER. The input password will be saved.
Usage Data	No	<p>As a means of improving the quality of our products and services, Pioneer may collect information about your usage over the network. Select "Yes" if you agree to our collecting this information. Select "No" if you do not want us to collect this information.</p> <ul style="list-style-type: none"> • You can set this after confirming the Privacy Policy. When you select "Usage Data" and press ENTER, the Privacy Policy is displayed. (The same screen is displayed once also when setting up the network connection.) If you agree to the collection of the information, this setting also becomes "Yes". Note that if you agree to the Privacy Policy but select "No" for this setting, the information will not be collected.
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 will appear when the network feature is started.

Bluetooth

Setting Item	Default Value	Setting Details
Bluetooth	On	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
Auto Input Change	On	The input of the unit will automatically be switched to "BT AUDIO" when connection is made from a BLUETOOTH enabled device to the unit. "On": The input will automatically become "BT AUDIO" when a BLUETOOTH enabled device is connected. "Off": The function is disabled. <ul style="list-style-type: none"> • If the input is not switched automatically, set to "Off" and change the input manually.
Auto Reconnect	On	This function automatically reconnects to the BLUETOOTH enabled device connected last when you change the input to "BT AUDIO". "On": Use this function "Off": Do not use this function <ul style="list-style-type: none"> • This may not work with some BLUETOOTH enabled devices.


Setting Item	Default Value	Setting Details
Pairing Information	-	You can initialize the pairing information saved on this unit. Pressing ENTER when "Clear" is displayed initializes the pairing information stored in 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 in advance. For information on how to clear the pairing information, refer to the BLUETOOTH enabled device's instruction manual.
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

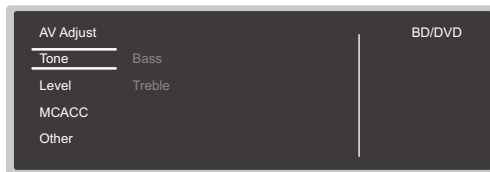
- Wait for a while if "Bluetooth" cannot be selected. It will appear when the BLUETOOTH function is started up.


AV Adjust

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



Operation:

You can make the settings on the TV screen while playing something. Press  on the remote controller to display the AV Adjust menu. Note that there is no display on the TV screen when the input selector is "CD", "TV", "PHONO", "FM", or "AM", so follow the main unit's display while doing the operations.



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

Use the cursors to change the settings.

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

■ Tone

Bass :

Enhance or moderate the bass range of the speaker.

Treble :

Enhance or moderate the treble range of the speaker.

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

■ Level

Center :

Adjust the speaker level of the center speaker while listening to some sound.

Subwoofer 1 / Subwoofer 2 :

Adjust the speaker level of the subwoofer while listening to some sound.

- The adjustment you made will be reset to the previous status when you turn the unit to standby mode.

■ MCACC

MCACC Memory :

From MCACC Memory 1 to 3 where speaker settings calibrated with "Full Auto MCACC" or "Manual MCACC" are saved, select which Memory to use.

MCACC EQ :

Enable or disable the equalizer function that corrects for distortion caused by the acoustic environment of the room.

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

Reflex Optimizer :

Enhance the reflection effect of Dolby enabled speakers from the ceiling.

- This setting can be selected when "System Setup" - "Speaker" - "Configuration" - "Height 1 Speaker"/"Height 2 Speaker" is set to "Dolby Speaker".
- It cannot be set if the listening mode is Pure Direct.

Standing Wave :

Select whether to enable or disable the standing wave

control calibrated in "MCACC Pro" - "Manual MCACC" - "Standing Wave.

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

Phase Control :

Correct phase disturbance in the low range to enhance the bass. This enables you to achieve powerful bass reproduction that is faithful to the original sound.

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

When "Phase Control" is set to "Full Band":

Along with the Phase Control function, the Full Band Phase Control function is also enabled. The Full Band Phase Control function corrects for group delay (the difference between phase and timing) between speakers when speaker units are divided into multiple parts, such as tweeter and woofer sections, and furthermore it lines up the phases of the connected speakers so the unit can achieve more accurate reproduction across the full range (full band) and across all channels. Furthermore, if the "Front Align" calibration type has been selected and Full Auto MCACC was performed, the phases of speakers other than the front speakers are corrected to match the frequency phase characteristics of the front speakers.

- "Full Band" cannot be selected if Full Auto MCACC has not been performed.

Phase Control + :

Except for discs made according to the phase control standard, the lower frequency range on discs is recorded later than the other ranges. This adjusts the phase for such discs. If you select "Auto", the polarity and correlation is also detected and adjusted, not just the delay in low frequency.

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

LFE Mute Level :

Adjust the low-frequency effect (LFE) level for Dolby Digital series, DTS series, Multichannel PCM, and DSD signals.

Theater Filter :

Adjust the soundtrack that was processed to enhance its high pitch range, in order to make it suitable for home theater. This function can be used in the following listening

modes: Dolby Digital, Dolby Digital Plus, Dolby Surround, Dolby TrueHD, Multichannel, DTS, DTS-ES, DTS 96/24, DTS-HD High Resolution Audio, DTS-HD Master Audio, DTS Neural:X, DTS Express, and DSD.

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

■ Other

Sound Delay :

If the video is behind the audio, you can delay the audio to offset the gap. Different settings can be set for each input selector.

- This has no affect if the listening mode is Pure Direct and the input signal is analog or DSD.

Sound Retriever :

Improve the quality of the compressed audio. Playback sound of lossy compressed files such as MP3 will be improved. The setting can be separately set to each input selector. The setting is effective with 2 ch signals with a sampling frequency of 48 kHz or less. The setting is not effective in the bitstream signals. This function works in the Auto Surround, Stereo, Mono, Extended Stereo, and Extended Mono listening modes.

Speakers :

When Speaker B are used, you switch output between Speaker A/B/A+B.

HDMI Out :

Allows you to select the HDMI jack to output video signals from "MAIN", "SUB", and "MAIN+SUB".

Audio Scalar :

By selecting "Auto", "Hi-bit 32", "Upsampling", and "Digital Filter" are each automatically set to the optimum values so that you get the high-quality playback of music files and CDs. The setting can be separately set to each input selector. Select "Manual" if you want to manually adjust "Hi-bit 32", "Upsampling", and "Digital Filter".

Hi-bit 32 :

By expanding the dynamic range of digital audio signal

sources such as CDs, DVDs, and BDs, it is possible to achieve a smoother and more refined sound. The setting can be separately set to each input selector. This can be set when the sampling frequency is 44.1 kHz or more.

- This cannot be set if "Auto" is selected for "Audio Scalar".

Upsampling :

By increasing the sampling frequency of PCM 2 channel audio by a factor of 2 or 4, you can achieve high-quality sound reproduction. The setting can be separately set to each input selector. This can be set when the sampling frequency is between 44.1 kHz and 96 kHz. This function works in the Direct, Pure Direct, and Stereo listening modes.

- This cannot be set if "Auto" is selected for "Audio Scalar".

Digital Filter :

You can switch the type of digital filter in the AUDIO DAC (digital analog converter). You can choose "Slow" (gives the sound a soft and fluid feel), "Sharp" (gives the sound more structure and firmer feel), or "Short" (gives the sound a feeling of a quick start and moving forward). The setting can be separately set to each input selector. This can be set when the sampling frequency is 44.1 kHz or more.

- This cannot be set if "Auto" is selected for "Audio Scalar".

DRC :

Make small sounds easily heard. It is useful when you need to reduce the volume while watching a movie late night. You can enjoy the effect only when playing Dolby series and DTS series input signals.

- It cannot be set if the listening mode is Direct or Pure Direct.
- The setting cannot be used in the following cases.
 - If "Loudness Management" is set to "Off" when playing Dolby Digital Plus or Dolby TrueHD
 - When the input signal is DTS:X and "Dialog Control" is other than 0 dB

Center Spread :

Adjust the width of the sound field of the front channel when playing in the Dolby Surround listening mode. To spread the width of the sound field to the left and right, set to "On". To concentrate sound in the center, set to "Off".

- Depending on the speaker settings, this becomes "Off".

Dialog Control :

You can increase the dialog portion of the audio in 1 dB steps up to 6 dB so that you can make dialog easier to hear over background noise.

- This cannot be set for content other than DTS:X.
- The effect may not be selectable with some content.

Dialog Enhancement :

By adjusting the localization of the center elements, you can make it easier to hear dialog in movies or give more prominence to the vocals in music. If you are using front high speakers, you can select from "1" (low) to "4" (high).

- This cannot be set for DTS:X playback.
- It cannot be set if the listening mode is Direct or Pure Direct.

Control Function Settings

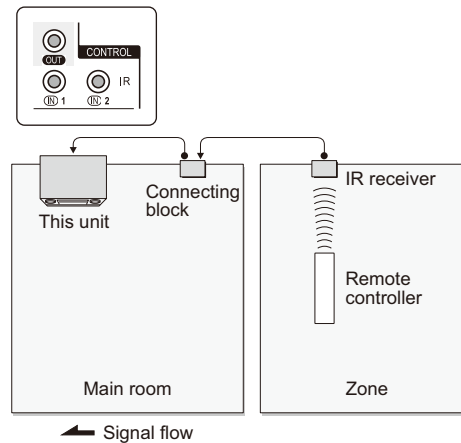
You can enable the control functions between the unit and external devices. Special devices or cable connections are necessary to enable the functions. For more information about installation, contact a store specializing in these products.

■ RS-232C port

Use this port for connection with an integrated control system that can enable home automation. Some integrated control systems provide a centralized operation with a single touch panel controller in order to control audio and video home appliances and security devices together. For more information about adopting an integrated control system, contact the specialized stores.

■ IR jack

If you use a commercially available multiroom remote control kit with this jack, you can operate the unit with the remote controller even when you are in a separate room, or operate the unit with the remote controller even if its remote control sensor is difficult to see. You can also connect a device with the unit and operate it with the remote controller.



Other companies may use indications other than IR on their products. Confirm in the instruction manual included with your components.

- Refer to the instruction manual of the IR receiver for the types of cables required for connection.

■ 12V trigger output jack

You can enable power link operation when you connect the unit and an external device such as power amplifier equipped with 12V trigger input jack. When the desired input is selected on the unit or when an HDMI OUT jack that outputs video is switched, external unit power link operation will be activated with a control signal of maximum 12 V/100 mA from the 12V TRIGGER OUT A jack or maximum 12 V/25 mA when using the 12V TRIGGER OUT B jack. You can select the zone to output the control signal by setting each of the inputs. For connection, use a monaural mini plug cable.

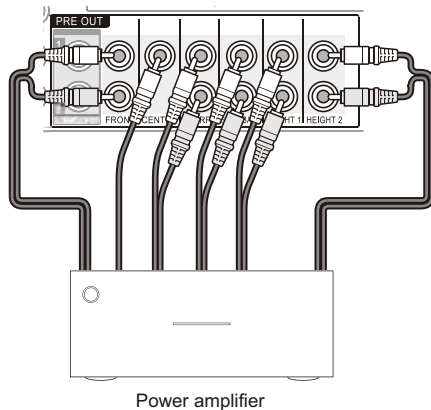
Connecting a Power Amplifier


Setup" - "Miscellaneous" - "Preamp Mode".

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 speakers to the power amplifier. For details, refer to the power amplifier's instruction manual.

■ Connections

1. Connect as below using the PRE OUT terminals.



- Set to suit the number of speaker channels connected.
 - Press  on the remote controller to display the Setup menu. Select "2. Speaker" - "Configuration" - "Speaker Channels" in order with the cursors, and set the number of speaker channels.
- You can reduce power consumption by turning off the power of the SPEAKERS terminals you are not using on this unit. Make the setting in "System

Firmware Update

About Firmware Update

There are two methods for updating the firmware: via network and via USB.

Use the one that best suits your environment.

- For the latest information on updates, visit the our company's website. There is no need to update the firmware on this unit if there is no update available.
- Before updating, make sure that the speaker setup microphone is not connected.
- During an update, do not
 - Disconnect and reconnect any cable, USB storage device, speaker setup microphone or headphones, or perform any operation on the component such as turn off its power
 - Accessing this unit from a PC or smartphone using an application
- The update may take about 20 minutes to complete for either method: via network or via USB. Furthermore, existing settings are guaranteed regardless of the method used for update.

Note that when this unit is connected to a network, you may see notifications about firmware updates on the display. To execute updating, select "Update Now" with the cursor buttons of the remote controller and press ENTER. The unit automatically turns itself into standby mode after "Completed!" appears on the display, and updating will be complete.

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

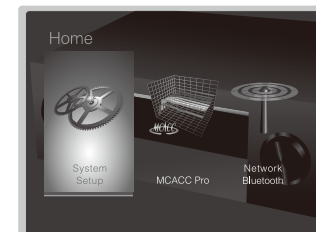
Preparation:

- Check that the unit is turned on, and the connection to the Internet is secured.
- Turn off the controller component (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  on the remote controller to display the Home screen. Next, select "System Setup" - "Hardware" - "HDMI", press ENTER, select "HDMI CEC" and select "Off".

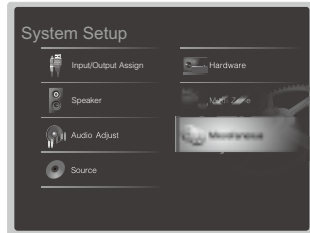
* The description may differ from the on-screen display but that will not change the way to operate or the function.

■ Update

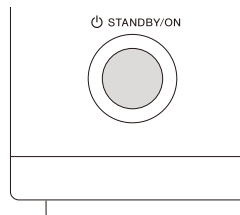
1. Press  on the remote controller. The Home screen is displayed on the TV screen.



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.
 - You will not be able to select "Update via NET" if there is nothing to update.
3. Press ENTER with "Update" selected to start update.
 - During the update, the TV screen may go black depending on the updated program. In that case, check the progress on the display of the unit. The TV screen will remain black until the update is complete and the power is turned on again.
 - "Completed!" is displayed when the update is complete.
 4. Press \odot STANDBY/ON on the main unit to switch the unit to standby. 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

When an error occurs, "*-* * Error!" is displayed on the display of the unit. ("*" represents an alphanumeric character.) Check the following:

Error Code

- *-01, *-10: Ethernet cable not found. Connect the Ethernet cable properly.
- *-02, *-03, *-04, *-05, *-06, *-11, *-13, *-14, *-16, *-17, *-18, *-20, *-21: Internet connection error. Check the following:
 - The router is turned on
 - This unit and the router are connected via the network
 Try to disconnect and then connect again the power to the unit and 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 service status with your ISP provider.
- **Others**
Disconnect then reconnect the AC power cord, then repeat from the beginning.


Updating via USB

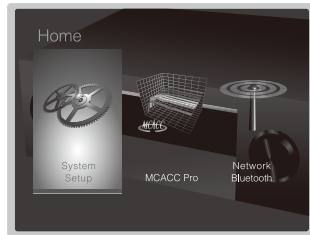
Preparation:

- Prepare a 128MB or larger USB storage device. FAT16 or FAT32 file system format.
 - Media inserted in a USB card reader may not be used for this function.
 - USB storage devices with security function are not supported.
 - USB hubs and USB devices with hub function are not supported. Do not connect these devices to the unit.
- Delete any data stored on the USB storage device.
- Turn off the controller component (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 HOME on the remote controller to display the Home screen. Next, select "System Setup" - "Hardware" - "HDMI", press ENTER, select "HDMI CEC" and select "Off".
- * Some USB storage devices may take long to load, may not be loaded correctly, or may not be correctly fed depending on the device or their content.
- * 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 with this unit. Thank you for your understanding.
- * The description may differ from the on-screen display but that will not change the way to operate or the function.

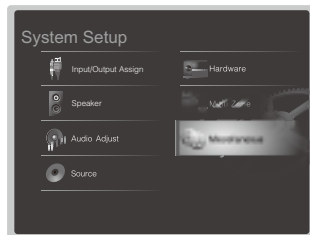
■ Update

1. Connect the USB storage device to your PC.
2. Download the firmware file from our company's website to your PC and unzip.
Firmware files are named in the following way:
PIOAVR***_*****.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 the unit.
 - If you connect a USB hard disk drive to the USB port of the unit, we recommend that you use its AC adapter to power it.
 - If the USB storage device has been partitioned, each section will be treated as an independent device.
 5. Press  on the remote controller.
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.

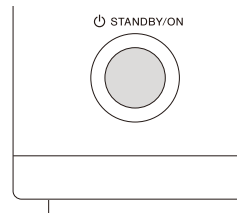


- If "Firmware Update" is grayed out and cannot be selected, wait for a while until it starts up.
 - You will not be able to select "Update via USB" if there is nothing to update.
7. Press ENTER with "Update" selected to start update.
 - During the update, the TV screen may go black

depending on the updated program. In that case, check the progress on the display of the unit. The TV screen will remain black until the update is complete and the power is turned on again.

- During the update, do not turn off, or disconnect then reconnect the USB storage device.
 - "Completed!" is displayed when the update is complete.
8. Disconnect the USB storage device from the unit.
 9. Press  STANDBY/ON on the main unit to switch the unit to standby. The process is completed and your firmware is updated to the latest version.
 - Do not use  on the remote controller.

repeat from the beginning.



■ If an Error Message is Displayed

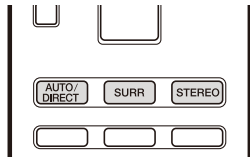
When an error occurs, "*-* * Error!" is displayed on the display of the unit. ("*" represents an alphanumeric character.) Check the following:

Error Code

- *-01, *-10 :
USB storage device not found. Check whether the USB storage device or USB cable is correctly 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**
Disconnect then reconnect the AC power cord, then

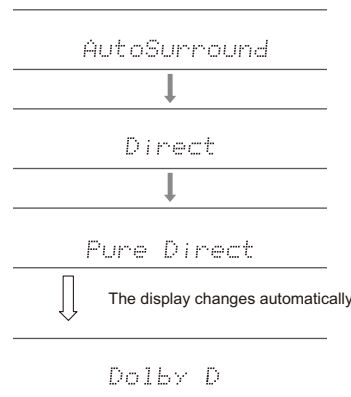
Selecting Listening Modes

You can change the listening mode during play by pressing repeatedly "AUTO/DIRECT", "SURR", or "STEREO".



■ AUTO/DIRECT button

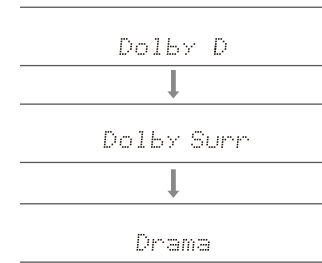
Press repeatedly and the listening modes suited to the input signal are switched between "Auto Surround", "Direct", and "Pure Direct". After selecting one of them, "Auto Surround" (or "Direct" or "Pure Direct") is displayed, then the most suitable listening mode for the audio format is selected automatically (Dolby Digital for multi-channel input signals, Stereo for 2 channel input signals, etc.) and an indicator such as "Dolby D" is displayed on the display.



The "Direct" mode shuts down some processing that can affect sound quality, such as the tone control features, so you can enjoy even better sound quality. The "Pure Direct" mode shuts down even more processes that affects sound quality, so you get a more faithful reproduction of the original sound. In this case, the speaker calibration made with MCACC is invalid.

■ SURR button

By pressing repeatedly you can select the audio format of the signals being input and switch between a variety of listening modes. Select the mode that suits your preference. The selected listening mode is displayed on the display.



■ STEREO button

You can select the "Stereo" mode to playback only from the front speakers and subwoofer.

For details on the effects of each of the listening modes see "Listening Mode Effects". For listening modes selectable for each of the audio formats in the input signals, refer to "Selectable Listening Modes".

Listening Mode Effects

In alphabetical order

■ Action

Mode suitable for movies with a lot of action scenes.

■ AdvancedGame

Mode suitable for game content.

■ Classical

Suitable for classical or operatic music. This mode emphasizes the surround channels in order to widen the stereo image, and simulates the natural reverberation of a large hall.

■ Dolby Atmos

This mode faithfully reproduces the sound design recorded in the Dolby Atmos audio format.

The Dolby Atmos audio format has been implemented in movie theaters equipped with the latest facilities and enables a revolutionary sound experience in home theaters. Unlike existing surround systems, Dolby Atmos doesn't rely on channels, but rather enables the accurate placement of sound objects that have independent motion in a three-dimensional space with even greater clarity. Dolby Atmos is an optional audio format on Blu-ray Discs and achieves a three-dimensional sound field by introducing a sound field above the listener.

- To enable transfer of this audio format, connect via HDMI cable and set audio output on the player to bitstream output.

■ Dolby D (Dolby Digital)

This mode faithfully reproduces the sound design recorded in the Dolby Digital audio format.

Dolby Digital is a multi-channel digital format developed

by Dolby Laboratories, Inc. widely adopted for use in movie production. It is also a standard audio format on DVD-Video and Blu-ray Discs. It is possible to record a maximum of 5.1 channels on a DVD-Video or Blu-ray Disc; two front channels, a center channel, two surround channels, and the LFE channel dedicated to the bass region (sound elements for the subwoofer).

- To enable transfer of this audio format, connect via digital cable and set audio output on the player to bitstream output.

■ Dolby D+ (Dolby Digital Plus)

This mode faithfully reproduces the sound design recorded in the Dolby Digital Plus audio format.

The Dolby Digital Plus format is a revision based on Dolby Digital, increasing the number of channels and endeavoring to improve sound quality by giving more flexibility in data bit rates. Dolby Digital Plus is used as an optional audio format on Blu-ray Discs, based on 5.1ch, but with additional channels such as the Surround Back channel added for a maximum of 7.1ch.

- To enable transfer of this audio format, connect via HDMI cable and set audio output on the player to bitstream output.

■ Dolby Surround

These listening modes allow you to expand the playback signal to a maximum of 11 channels to suit the connected speaker configuration when the input signal is 2 channels or 5.1 channels. Dolby surround is a next generation surround technology that intelligently up mixes stereo; 5.1 and 7.1 content for playback through your surround speaker system. Dolby surround is compatible with traditional speaker layouts, as well as Dolby Atmos enabled playback systems that employ in-ceiling speakers or products with Dolby speaker technology.

■ Dolby TrueHD

This mode faithfully reproduces the sound design recorded in the Dolby TrueHD audio format.

The Dolby TrueHD audio format is a reversible format expanded based on the lossless compression technology

referred to as MLP, and it makes it possible to faithfully reproduce the master audio recorded in the studio. Dolby TrueHD is used as an optional audio format on Blu-ray Discs, based on 5.1ch, but with additional channels such as the Surround Back channel added for a maximum of 7.1ch. 7.1ch is recorded at 96kHz/24bit, and 5.1ch is recorded at 192kHz/24bit.

- To enable transfer of this audio format, connect via HDMI cable and set audio output on the player to bitstream output.

■ Drama

Suitable for TV shows produced in a TV studio. This mode enhances the surround effects to the entire sound to give clarity to voices and create a realistic acoustic image.

■ DSD

Mode suitable for playing sources recorded in DSD.

- This unit supports DSD signals input through HDMI IN. However, depending on the connected player, better sound is possible when output from the PCM output of the player.
- This listening mode cannot be selected if the output setting on your Blu-ray Disc/DVD player is not set to DSD.

■ DTS

This mode faithfully reproduces the sound design recorded in the DTS audio format.

The DTS audio format is a multi-channel digital format developed by DTS, Inc. This format is an optional audio format on DVD-Video and a standard on Blu-ray Discs. It enables recording of 5.1 channels; two front channels, a center channel, two surround channels, and the LFE channel dedicated to the bass region (sound elements for the subwoofer). The content is recorded with a rich volume of data, with maximum sampling rate of 48kHz at a resolution of 24 bits and a bit rate of 1.5 Mbps.

- To enable transfer of this audio format, connect via digital cable and set audio output on the player to bitstream output.

■ DTS 96/24

This mode faithfully reproduces the sound design recorded in the DTS 96/24 audio format.

The DTS 96/24 format is an optional audio format on DVD-Video and Blu-ray Discs. It enables recording of 5.1 channels; two front channels, a center channel, two surround channels, and the LFE channel dedicated to the bass region (sound elements for the subwoofer). Detailed reproduction is achieved by recording the content at a sampling rate of 96kHz at a resolution of 24 bits.

- To enable transfer of this audio format, connect via digital cable and set audio output on the player to bitstream output.

■ DTS Express

This mode faithfully reproduces the sound design recorded in the DTS Express audio format.

DTS Express is used as an optional audio format on Blu-ray Discs, based on 5.1ch, but with channels such as the surround back channel added for a maximum of 7.1ch. It also supports low bit rates.

- To enable transfer of this audio format, connect via HDMI cable and set audio output on the player to bitstream output.

■ DTS-HD HR (DTS-HD High Resolution Audio)

This mode faithfully reproduces the sound design recorded in the DTS-HD High Resolution Audio audio format.

DTS-HD High Resolution Audio is used as an optional audio format on Blu-ray Discs, based on 5.1ch, but with additional channels such as the Surround Back channel added for a maximum of 7.1ch. It can be recorded at a sampling rate of 96kHz with a resolution of 24 bits.

- To enable transfer of this audio format, connect via HDMI cable and set audio output on the player to bitstream output.

■ DTS-HD MSTR (DTS-HD Master Audio)

This mode faithfully reproduces the sound design recorded in the DTS-HD Master Audio audio format.

DTS-HD Master Audio is used as an optional audio format

on Blu-ray Discs, based on 5.1ch, but with additional channels such as the Surround Back channel added for a maximum of 7.1ch, recorded using lossless audio reproduction technology. 96kHz/24bit is supported with 7.1ch, and 192kHz/24bit is supported with 5.1ch.

- To enable transfer of this audio format, connect via HDMI cable and set audio output on the player to bitstream output.

■ DTS Neural:X

This listening mode allows you to expand the playback signal to a maximum of 11ch to suit the connected speaker configuration when the input signal is 2 channels or 5.1 channels. Neural:X enables upmixing of legacy content such as mono, stereo, 5.1 or 7.1ch to many higher speaker count including the layout using elevated channels set for DTS:X playback.

■ DTS:X

This mode faithfully reproduces the sound design recorded in the DTS:X audio format.

The DTS:X audio format is a combination of the mixing methodology based on past channel based formats (5.1ch and 7.1ch) and object based dynamic audio mixing, and it is characterized by the precise positioning of sounds and the ability to express movement. DTS:X is DTS's next-generation object-based surround sound technology that includes height to deliver a fully-immersive listening experience to your living room.

- To enable transfer of this audio format, connect via HDMI cable and set audio output on the player to bitstream output.

■ ES Discrete (DTS-ES Discrete)

This mode faithfully reproduces the sound design recorded in the DTS-ES Discrete audio format.

DTS-ES Discrete is used as an optional audio format on DVD-Video and Blu-ray Discs, based on 5.1ch, but with an additional monaural back channel added for a maximum of 6.1ch.

- To enable transfer of this audio format, connect via digital cable and set audio output on the player to

bitstream output.

■ ES Matrix (DTS-ES Matrix)

This mode faithfully reproduces the sound design recorded in the DTS-ES Matrix audio format.

DTS-ES Matrix is used as an optional audio format on DVD-Video and Blu-ray Discs, based on 5.1ch, but with a monaural Surround Back channel included by matrix encoding. The matrix decoder on this unit decodes this during playback to produce 6.1 channels.

- To enable transfer of this audio format, connect via digital cable and set audio output on the player to bitstream output.

■ Ent.Show (Entertainment Show)

Suitable for rock or pop music. Listening to music in this mode creates a lively sound field with a powerful acoustic image, like being at a club or rock concert.

■ Ext.Mono (Extended Mono)

In this mode, all speakers output the same sound in mono, so the sound you hear is the same regardless of where you are within the listening room.

■ Ext.Stereo (Extended Stereo)

Ideal for background music, this mode fills the entire listening area with stereo sound from the front, surround, and surround back speakers.

■ F.S.Surround (Front Stage Surround Advance)

In this mode, you can enjoy a virtual playback of multichannel surround sound even with only two or three speakers. This works by controlling how sounds reach the listener's left and right ears.

■ Mono

Use this mode when watching an old movie with a mono soundtrack, or use it to separately reproduce soundtracks in two different languages recorded in the left and right channels of some movies. It is also suitable for DVDs or

other sources containing multiplexed audio.

■ **Multich PCM (Multichannel PCM)**

Mode suitable for playing sources recorded in multichannel PCM.

■ **Rock/Pop**

Mode suitable for rock content.

■ **Sports**

Mode suitable for sport content.

■ **Stereo**

In this mode, sound is output from the front left and right speakers and subwoofer.

■ **Unplugged**

Suitable for acoustic instruments, vocals and jazz. This mode emphasizes the front stereo image, giving the impression of being right in front of the stage.

Selectable Listening Modes

You can select a variety of listening modes to suit the audio format of the signal being input.

- The Stereo mode can be selected with any audio format.
- When analog signals or DSD 2 ch signals are being input in the Pure Direct mode, the modes switches to the Analog Direct mode or DSD Direct mode which passes signals directly to the amplifier without passing through the DSP (Digital Signal Processor). However, when you are using Speaker B, the listening mode suited to the input signal is selected automatically.
- Listening modes available when headphones are connected are Pure Direct and Stereo only. Only Stereo can be selected when the input signal is DSD.

■ Selectable listening modes

Input Format	Listening Mode
Analog	Stereo
	Mono
	Dolby Surround
	DTS Neural:X
	Classical ^{*1}
	Unplugged ^{*1}
	Ent.Show ^{*1}
	Drama ^{*1}
	AdvancedGame ^{*1}
	Action ^{*1}
	Rock/Pop ^{*1}
	Sports ^{*1}
	Ext.Stereo ^{*2}
	Ext.Mono ^{*2}
F.S.Surround	

^{*1} Surround speakers or height speakers need to be installed.

^{*2} A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
PCM Music files (except DSD/ Dolby TrueHD)	Stereo
	Mono
	Dolby Surround
	DTS Neural:X
	Classical ^{*1}
	Unplugged ^{*1}
	Ent.Show ^{*1}
	Drama ^{*1}
	AdvancedGame ^{*1}
	Action ^{*1}
	Rock/Pop ^{*1}
	Sports ^{*1}
	Ext.Stereo ^{*2}
	Ext.Mono ^{*2}
F.S.Surround	

^{*1} Surround speakers or height speakers need to be installed.

^{*2} A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
Multich PCM	Stereo
	Multich PCM ^{*1}
	Dolby Surround ^{*2}
	DTS Neural:X
	Classical ^{*3}
	Unplugged ^{*3}
	Ent.Show ^{*3}
	Drama ^{*3}
	AdvancedGame ^{*3}
	Action ^{*3}
	Rock/Pop ^{*3}
	Sports ^{*3}
	Ext.Stereo ^{*4}
Ext.Mono ^{*4}	
F.S.Surround	

^{*1} A center speaker or surround speakers need to be installed.

^{*2} Cannot be selected when the input format is 1.1 ch or 2.1 ch.

^{*3} Surround speakers or height speakers need to be installed.

^{*4} A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
DSD	Stereo
	DSD ^{*1 *2}
	Dolby Surround
	DTS Neural:X
	Classical ^{*3}
	Unplugged ^{*3}
	Ent.Show ^{*3}
	Drama ^{*3}
	AdvancedGame ^{*3}
	Action ^{*3}
	Rock/Pop ^{*3}
	Sports ^{*3}
	Ext.Stereo ^{*4}
Ext.Mono ^{*4}	
F.S.Surround	

^{*1} Cannot be selected when the input format is monaural or 2 ch.

^{*2} A center speaker or surround speakers need to be installed.

^{*3} Surround speakers or height speakers need to be installed.

^{*4} A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
Dolby Atmos • You can select the Dolby Digital Plus or Dolby TrueHD listening modes if a surround back speaker or height speaker is not connected.	Stereo
	Dolby Atmos
	Classical
	Unplugged
	Ent.Show
	Drama
	AdvancedGame
	Action
	Rock/Pop
	Sports
	Ext.Stereo
	Ext.Mono
	F.S.Surround

Input Format	Listening Mode
Dolby D	Stereo
	Dolby D ^{*1 *2}
	Dolby Surround ^{*3}
	Classical ^{*4}
	Unplugged ^{*4}
	Ent.Show ^{*4}
	Drama ^{*4}
	AdvancedGame ^{*4}
	Action ^{*4}
	Rock/Pop ^{*4}
	Sports ^{*4}
	Ext.Stereo ^{*5}
	Ext.Mono ^{*5}
F.S.Surround	

*1 Cannot be selected when the input format is 2 ch.

*2 A center speaker or surround speakers need to be installed.

*3 Cannot be selected when the input format is 1.1 ch or 2.1 ch.

*4 Surround speakers or height speakers need to be installed.

*5 A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
Dolby D+	Stereo
	Dolby D+ ^{*1 *2}
	Dolby Surround ^{*3}
	Classical ^{*4}
	Unplugged ^{*4}
	Ent.Show ^{*4}
	Drama ^{*4}
	AdvancedGame ^{*4}
	Action ^{*4}
	Rock/Pop ^{*4}
	Sports ^{*4}
	Ext.Stereo ^{*5}
	Ext.Mono ^{*5}
F.S.Surround	

*1 Cannot be selected when the input format is 2 ch.

*2 A center speaker or surround speakers need to be installed.

*3 Cannot be selected when the input format is 1.1 ch or 2.1 ch.

*4 Surround speakers or height speakers need to be installed.

*5 A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
Dolby TrueHD	Stereo
	Dolby TrueHD ^{*1 *2}
	Dolby Surround ^{*3}
	Classical ^{*4}
	Unplugged ^{*4}
	Ent.Show ^{*4}
	Drama ^{*4}
	AdvancedGame ^{*4}
	Action ^{*4}
	Rock/Pop ^{*4}
	Sports ^{*4}
	Ext.Stereo ^{*5}
	Ext.Mono ^{*5}
F.S.Surround	

*1 Cannot be selected when the input format is 2 ch.

*2 A center speaker or surround speakers need to be installed.

*3 Cannot be selected when the input format is 1.1 ch or 2.1 ch.

*4 Surround speakers or height speakers need to be installed.

*5 A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
DTS	Stereo
	DTS ^{*1 *2}
	DTS Neural:X
	Classical ^{*3}
	Unplugged ^{*3}
	Ent.Show ^{*3}
	Drama ^{*3}
	AdvancedGame ^{*3}
	Action ^{*3}
	Rock/Pop ^{*3}
	Sports ^{*3}
	Ext.Stereo ^{*4}
	Ext.Mono ^{*4}
F.S.Surround	

*1 Cannot be selected when the input format is 2 ch.

*2 A center speaker or surround speakers need to be installed.

*3 Surround speakers or height speakers need to be installed.

*4 A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
DTS 96/24	Stereo
	DTS 96/24 ^{*1 *2}
	Classical ^{*3}
	Unplugged ^{*3}
	Ent.Show ^{*3}
	Drama ^{*3}
	AdvancedGame ^{*3}
	Action ^{*3}
	Rock/Pop ^{*3}
	Sports ^{*3}
	Ext.Stereo ^{*4}
	Ext.Mono ^{*4}
	F.S.Surround

*1 Cannot be selected when the input format is 2 ch.

*2 A center speaker or surround speakers need to be installed.

*3 Surround speakers or height speakers need to be installed.

*4 A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
DTS Express	Stereo
	DTS Express ^{*1 *2}
	DTS Neural:X
	Classical ^{*3}
	Unplugged ^{*3}
	Ent.Show ^{*3}
	Drama ^{*3}
	AdvancedGame ^{*3}
	Action ^{*3}
	Rock/Pop ^{*3}
Sports ^{*3}	
Ext.Stereo ^{*4}	
Ext.Mono ^{*4}	
F.S.Surround	

*1 Cannot be selected when the input format is 2 ch.

*2 A center speaker or surround speakers need to be installed.

*3 Surround speakers or height speakers need to be installed.

*4 A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
DTS-HD HR	Stereo
	DTS-HD HR ^{*1 *2}
	DTS Neural:X ^{*3}
	Classical ^{*4}
	Unplugged ^{*4}
	Ent.Show ^{*4}
	Drama ^{*4}
	AdvancedGame ^{*4}
	Action ^{*4}
	Rock/Pop ^{*4}
	Sports ^{*4}
	Ext.Stereo ^{*5}
	Ext.Mono ^{*5}
F.S.Surround	

*1 Cannot be selected when the input format is 2 ch.

*2 A center speaker or surround speakers need to be installed.

*3 Cannot be selected when the sampling rate of the input format is 88.2 kHz or more.

*4 Surround speakers or height speakers need to be installed.

*5 A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
DTS-HD MSTR	Stereo
	DTS-HD MSTR ^{*1 *2}
	DTS Neural:X ^{*3}
	Classical ^{*4}
	Unplugged ^{*4}
	Ent.Show ^{*4}
	Drama ^{*4}
	AdvancedGame ^{*4}
	Action ^{*4}
	Rock/Pop ^{*4}
	Sports ^{*4}
	Ext.Stereo ^{*5}
	Ext.Mono ^{*5}
F.S.Surround	

*1 Cannot be selected when the input format is 2 ch.

*2 A center speaker or surround speakers need to be installed.

*3 Cannot be selected when the sampling rate of the input format is 88.2 kHz or more.

*4 Surround speakers or height speakers need to be installed.

*5 A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
DTS-ES	Stereo
	DTS ^{*1}
	ES Matrix ^{*2}
	ES Discrete ^{*2}
	DTS Neural:X
	Classical ^{*3}
	Unplugged ^{*3}
	Ent.Show ^{*3}
	Drama ^{*3}
	AdvancedGame ^{*3}
	Action ^{*3}
	Rock/Pop ^{*3}
	Sports ^{*3}
Ext.Stereo ^{*4}	
Ext.Mono ^{*4}	
F.S.Surround	

*1 This can only be selected when no surround back speaker is connected.

*2 Surround back speakers need to be installed.

*3 Surround speakers or height speakers need to be installed.

*4 A center speaker, surround speakers, or height speakers need to be installed.

Input Format	Listening Mode
DTS:X	Stereo
	DTS:X
	Classical* ¹
	Unplugged* ¹
	Ent.Show* ¹
	Drama* ¹
	AdvancedGame* ¹
	Action* ¹
	Rock/Pop* ¹
	Sports* ¹
	Ext.Stereo* ²
	Ext.Mono* ²
	F.S.Surround

*¹ Surround speakers or height speakers need to be installed.

*² A center speaker, surround speakers, or height speakers need to be installed.

AM/FM radio

Tuning into a Radio Station

■ Tuning Automatically

1. Press TUNER on the remote controller several times to select either "AM" or "FM".
2. Press MODE on the remote controller so that "TunMode:Auto" appears on the display.
3. Press the cursors $\blacktriangle/\blacktriangledown$ on the remote controller to start automatic tuning.
 - Searching automatically stops when a station is found. When tuned into a radio station, the "TUNED" indicator on the display lights. When tuned into an FM radio station, the "STEREO" indicator lights.
 - No sound is output while the "TUNED" indicator is off.

When FM broadcasts reception is poor:

Radio waves may be weak depending on the building structure and environmental conditions. In that case, perform the procedure as explained below in "Tuning Manually" to manually select the desired station.

■ Tuning Manually

1. Press TUNER on the remote controller several times to select either "AM" or "FM".
2. Press MODE on the remote controller so that "TunMode:Manual" appears on the display.
3. While pressing the cursors $\blacktriangle/\blacktriangledown$ on the remote controller, select the desired radio station.
 - The frequency changes by 1 step each time you press the button. The frequency changes continuously if the button is held down and stops when the button is released. Tune by looking at the display.

To return to the auto tuning mode:

Press MODE on the remote controller again so that "TunMode:Auto" appears on the display. The unit tunes automatically into a radio station.

Presetting a Radio Station

It allows you to register up to 40 of your favorite AM/FM radio stations. Registering radio stations in advance allows you to tune into your radio station of choice directly.

■ Registration Procedure

1. Tune into the AM/FM radio station you want to register.
2. Press +Fav on the remote controller so that the preset number on the display flashes.
3. While the preset number is flashing (about 8 seconds), repeatedly press $\blacktriangle/\blacktriangledown$ on the remote controller to select a number between 1 and 40.
4. Press +Fav on the remote controller again to register the station.
 - When the station is registered, the preset number stops flashing.
 - Repeat this procedure for all of your favorite AM/FM radio stations.

■ Selecting a Preset Radio Station

1. Press TUNER on the remote controller.
2. Press $\blacktriangle/\blacktriangledown$ on the remote controller to select a preset number.

■ Deleting a Preset Radio Station

1. Press TUNER on the remote controller.
2. Press $\blacktriangle/\blacktriangledown$ on the remote controller to select the preset number to delete.
3. After pressing +Fav on the remote controller, press CLEAR while the preset number is flashing to delete the preset number.
 - When deleted, the number on the display goes off.

Using RDS (European, Australian and Asian models)

RDS stands for Radio Data System and is a method of transmitting data in FM radio signals. In regions using RDS, the radio station name is displayed when you tune into a radio station broadcasting program information. When you press **i** 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 **i** on the remote controller once. Radio Text (RT) broadcast by the station is displayed scrolling across the display. "No Text Data" is displayed when no text information is available.
- Unusual characters may be displayed when the unit receives unsupported characters. However, this is not a malfunction. Also, if the signal from a station is weak, information may not be displayed.

■ Search for stations by Program Type

1. While the name of the station is being displayed on the display, press **i** on the remote controller twice.
2. Press **◀▶** on the remote controller to select the Program Type you want to find, then press ENTER 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 sometimes not match the content being broadcast by the station.
3. When a station is found, the station flashes on the display. Press ENTER while this is happening to start receiving that station. If you don't press ENTER, the unit continues 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. However, this is not a malfunction. Also, if the signal from a station is weak, information may not be displayed.

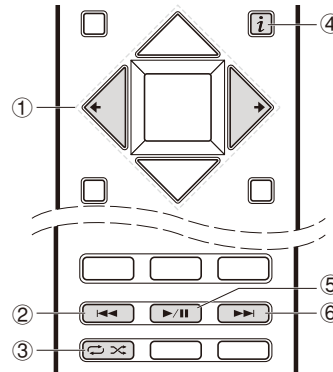
USB Storage Device







■ Playing Back

Play music files on a USB storage device.

1. Switch the input on the TV to that assigned to the unit.
 2. Plug your USB storage device with the music files into the USB port of this unit.
 3. Press "USB" on the remote controller.
 - If the "USB" indicator flashes on the display, check whether the USB storage device is plugged in properly.
 - Do not unplug the USB storage device while "Connecting..." is appeared on the display. This may cause data corruption or malfunction.
 4. Press ENTER on the remote controller again in the next screen. The list of folders and music files on the USB storage device are displayed. Select the folder with the cursors and press ENTER to confirm your selection.
 5. With the cursors on the remote controller, select the music file, and then press ENTER to start playback.
 - The USB port of this unit conforms with the USB 2.0 standard. The transfer speed may be insufficient for some content you play, which may cause some interruption in sound.
- To return to the previous screen, press .






Operations with the remote controller:




- ① : When the folder or file lists are not shown on one screen, you can change the screen.
- ② : This button plays the previous track.
- ③ : This button lets you start repeat or random playback. Pressing this button repeatedly cycles through the repeat modes.
- ④ : Pressed during play, this button changes the displayed track information. Pressed while a folder or file list is displayed, this button returns you to the play screen.
- ⑤ : Pressed during play this button pauses playback. Pressed while paused, and it restarts play.
- ⑥ : This button plays the next track.


Icons Displayed during Playback:

Icons are displayed on the display during music file playback. The meaning of each icon is as follows:

- : Folder
- : Track
- : Play
- : Pause
- : Artist
- : Album

: Repeat One Track

: Repeat within a folder

: Shuffle

■ USB Storage Device Requirements

- This unit can use USB storage devices that comply with the USB mass storage device class standard.
- 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 can be displayed, and folders may 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 function are not supported on this unit.
- If you connect a USB hard disk drive to the USB port of the unit, we recommend that you use its AC adapter to power it.
- Media inserted to the USB card reader may not be available in this function. Depending on the USB storage device, proper reading of the contents may not be possible.
- Our company accepts no responsibility whatsoever for the loss or damage to data stored on a USB storage device when that device is used with this unit. We recommend that you back up your important music files beforehand.

■ Supported Audio Formats

For server playback and playback from a USB storage device, 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. Incompatible files cannot be played.

WMA (.wma/.WMA):

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

WAV (.wav/.WAV):

WAV files include 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/.aifc/.afc/.AIFF/.AIF/.AIFC/.AFC):

AIFF files include 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. Incompatible files cannot be played.

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

Dolby TrueHD (.vr/.mlp/.VR/.MLP):

- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Variable bit-rate (VBR) files are supported. However, playback times may not be displayed correctly.
- This unit supports the gapless playback of the USB storage device in the following conditions. When playing WAV, FLAC and Apple Lossless, and the same format, sampling frequency, channels and quantization bit rate are played continuously

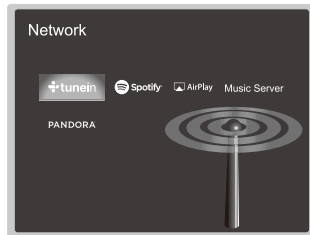
Internet Radio


TuneIn Radio

With more than 70,000 radio stations and 2 million on-demand programs registered, TuneIn Radio is a service where you can enjoy music, sports and news from all over the world.

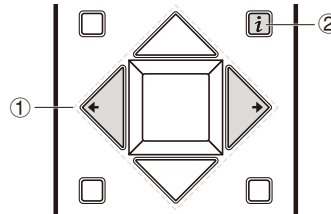
■ Playing Back



1. Switch the input on the TV to that assigned to the unit.
2. Press NET on the remote controller to display the network service list screen.



3. Select "TuneIn" with the cursors of the remote controller and press ENTER to confirm your selection.
 4. Follow the on-screen instructions, using the cursors on the remote controller to select radio stations and programs, then press ENTER to play. Play starts when 100% is displayed for buffering.
- To return to the previous screen, press .

Operations with the remote controller:



- ① : When the station or program lists are not shown on one screen, you can change the screen.
- ② : Pressed during play, this button changes the displayed track information. Pressed while a station or program list is displayed, this button returns you to the play screen.

■ Regarding the TuneIn Radio Menu

To display the TuneIn Radio menu during play, press ENTER on the remote controller. Selecting the corresponding menu item with the cursors and pressing ENTER allows you to perform the following operations:

Add to My Presets: Registers radio stations being broadcast and programs in "My Presets". Once registered, "My Presets" is displayed in the level under TuneIn Radio. To play, select the program you like from "My Presets".

Remove from My Presets: Removes a radio station or program from "My Presets".

■ Regarding the TuneIn Radio Account

Creating an account on the TuneIn Radio website (tunein.com) and logging in it from the unit allows you to automatically add your favorite radio stations and programs to your "My Presets" on the unit as you follow them on the website. "My Presets" are displayed in the level under TuneIn Radio.

To display a radio station registered in "My Presets", you must 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 associate the device on My Page within the TuneIn Radio website using the registration code obtained by selecting "Login" - "Login with a registration code" on the unit, you can log in without entering the user name and password.

■ Icons on the display

 : Folder

 : Radio station

 : Playing

 : Artist

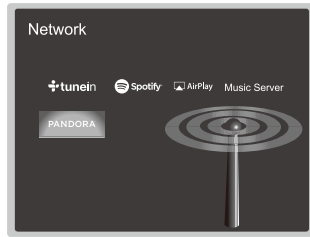
 : Album

Pandora®—Getting Started (U.S., Australia and New Zealand only)

Pandora is a free, personalized Internet radio service that plays the music you know and helps you discover music you'll love.

■ Playing Back

1. Switch the input on the TV to that assigned to the unit.
2. Press NET on the remote controller to display the network service list screen.

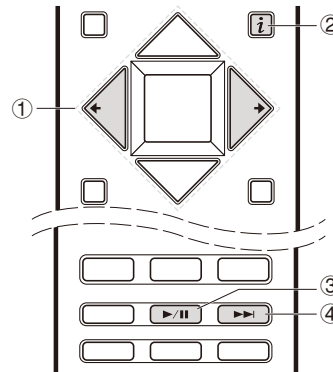


3. With the cursors on the remote controller, select "Pandora", and then press ENTER.
4. Use ▲/▼ on the remote controller to select "I have a Pandora Account" or "I'm new to Pandora" and then press ENTER.
If you are new to Pandora, select "I'm new to Pandora". You will see an activation code on your TV screen. Please write down this code. Go to an Internet connected computer and point your browser to www.pandora.com/pioneer. Enter your activation code and then follow the instructions to create your Pandora account and your personalized Pandora stations. You can create your stations by entering your favorite tracks and artists when prompted. After you have created your account and stations you can return to your receiver and press ENTER to begin listening to your personalized Pandora.
If you have an existing Pandora account, you can add your Pandora account to your receiver by selecting "I

have a Pandora Account" and logging in with your email and password.

5. To play a station, use ▲/▼ on the remote controller to select the station from your station list, and then press ENTER. Playback starts and the playback screen appears.
 - To return to the previous screen, press ⏪.

Operations with the remote controller:



- ① ◀▶: When the station or program lists are not shown on one screen, you can change the screen.
- ② i: Pressed during play, this button changes the displayed track information. Pressed while a station or program list is displayed, this button returns you to the play screen.
- ③ ▶/||: Pressed during play this button pauses playback. Pressed while paused, and it restarts play.
- ④ ▶▶: This button plays the next track.

■ Create new station

Enter the name of a track, artist, or genre and Pandora will create a unique radio station for you based on the musical qualities of that track, artist, or genre.

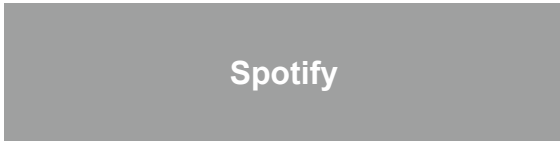
■ Regarding the Pandora Menu

Icons are displayed at the bottom right of the screen while playing a station. You can do the following by selecting the icon with ▲/▼ on the remote controller and pressing ENTER:

- 👍 (I like this track): Give a track "thumbs-up" and Pandora will play more music like it.
- 👎 (I don't like this track): Give a track "thumbs-down" and Pandora will ban that track from the current station.
- 🔍: Automatically find stations matching your preferences based on genre, specific artists, and songs, and delete those stations you don't need.

■ Icons on the display

- 📁: Folder
- 📻: Radio station
- 🎵: Playing
- ⏸: Pause
- 👤: Artist
- 📀: Album



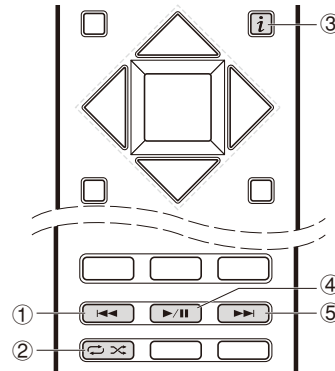
This unit supports Spotify Connect. To enable Spotify Connect, install the Spotify application on your smartphone or tablet and create a Spotify premium account.

- This unit needs to be connected to the same router as the smartphone or tablet.
- Refer to the following for Spotify settings: www.spotify.com/connect/
- The Spotify software is subject to third party licenses found here: www.spotify.com/connect/third-party-licenses

■ Playing Back

1. Connect the smartphone to the network that this unit is connected to.
 2. When the power of this unit is on, click the Connect icon in the track play screen of the Spotify app.
 3. Select this unit.
 4. The input selector of this unit automatically changes to NET and streaming of Spotify starts.
- When "System Setup" - "Hardware" - "Power Management" - "Network Standby" in the Home screen is set to "On", by clicking the Connect icon and selecting this unit, then even if this unit is in standby mode, the power will come on automatically and streaming starts.

Operations with the remote controller:



- ① : This button plays the previous track.
- ② : This button lets you start repeat or random playback. Pressing this button repeatedly cycles through the repeat modes.
- ③ : Pressed during play, this button changes the displayed track information.
- ④ : Pressed during play this button pauses playback. Pressed while paused, and it restarts play.
- ⑤ : This button plays the next track.

■ Notes for using multi-zone

- To enjoy Spotify music in a separate room, manually select "NET" as the input of the separate room. After doing that, select this unit with the Spotify app.
- Volume adjustment with the Spotify app is possible only for speakers connected to the ZONE speaker terminals or when the volume of the audio device in the other room is configured so that its volume can be adjusted on this unit. Adjust the volume on the audio equipment in the other room in any other case.
- To enjoy Spotify music in the main room after playing it in a separate room, select "NET" as the input of the main room.



■ Icons on the display

- : Playing
- : Pause
- : Artist
- : Album

Music Server

Overview

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

- The network servers this unit is compatible with are those PCs with players installed that have the server functionality of Windows Media® Player 11 or 12, or NAS that are compatible with home network functionality. You may need to make some settings in advance to use Windows Media® Player 11 or 12. Note that only music files registered in the library of Windows Media® Player can be played.

Configuring the Windows Media® Player

■ Windows Media® Player 11

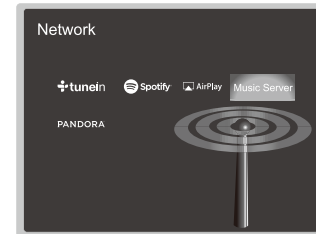
- Turn on your PC and start Windows Media® Player 11.
- In the "Library" menu, select "Media Sharing" to display a dialog box.
- Select the "Share my media" check box, and then click "OK" to display the compatible devices.
- Select this unit, and then click "Allow".
 - When it is clicked, the corresponding icon is checked.
- Click "OK" to close the dialog.
 - Depending of the version of Windows Media® Player, there may be differences in the names of items you can select.

■ Windows Media® Player 12

- Turn on your PC and start Windows Media® Player 12.
- In the "Stream" menu, select "Turn on media streaming" to display a dialog box.
 - If media streaming is already turned on, select "More streaming options..." in the "Stream" menu to list players in the network, and then go to step 4.
- Click "Turn on media streaming" to list players in the network.
- Select this unit in "Media streaming options" and check that it is set to "Allow".
- Click "OK" to close the dialog.
 - Depending of the version of Windows Media® Player, there may be differences in the names of items you can select.

Play

- Start the server (Windows Media® Player 11, Windows Media® Player 12, or NAS device) containing the music files to play.
- Make sure that the PCs and/or NASs are properly connected to the same network as this unit.
- Press NET on the remote controller to display the network service list screen.
 - If the "NET" indicator flashes in the display, the unit is not properly connected to the network. Check the connection.



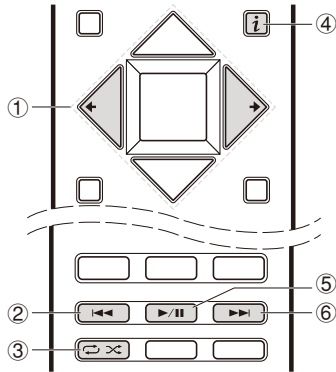
- With the cursors on the remote controller, select "Music Server", and then press ENTER.
- Select the target server with the cursors on the remote controller and press ENTER to display the items list screen.
 - The unit cannot access pictures and videos stored on servers.
 - Contents stored on the server may not be displayed depending on the server sharing settings.
- With the cursors on the remote controller, select the music file to play, and then press ENTER to start playback.
 - If "No Item." is displayed, check whether the network is properly connected.
- To return to the previous screen, press ↶.

- For music files on a server, there can be up to 20,000 tracks per folder, and folders may be nested up to 16

levels deep.

- Depending on the media server, the unit may not recognize it, or may not be able to play its music files.

Operations with the remote controller:



- ① ◀▶: When the folder or file lists are not shown on one screen, you can change the screen.
- ② ◀◀: This button plays the previous track.
- ③ ↺ ∞: This button lets you start repeat or random playback. Pressing this button repeatedly cycles through the repeat modes.
- ④ ⓘ: Pressed during play, this button changes the displayed track information. Pressed while a folder or file list is displayed, this button returns you to the play screen.
- ⑤ ▶▶/||: Pressed during play this button pauses playback. Pressed while paused, and it restarts play.
- ⑥ ▶▶: This button plays the next track.

Icons Displayed during Playback:

Icons are displayed on the display during music file playback. The meaning of each icon is as follows:

■: Folder

■: Track

■: Playing

||: Pause

■: Artist

■: Album

10: Repeat One Track

■ 10: Repeat within a folder

■: Shuffle

Controlling Remote Playback from a PC

You can use this unit to play music files stored on your PC by operating the PC inside your home network. The unit supports remote playback with Windows Media® Player 12. To use the remote playback function with Windows Media® Player 12, it must be configured in advance.

■ Setting PC

- Turn on your PC and start Windows Media® Player 12.
- In the "Stream" menu, select "Turn on media streaming" to display a dialog box.
 - If media streaming is already turned on, select "More streaming options..." in the "Stream" menu to list players in the network, and then go to step 4.
- Click "Turn on media streaming" to list players in the network.
- Select this unit in "Media streaming options" and check that it is set to "Allow".
- Click "OK" to close the dialog box.
- Open the "Stream" menu and check that "Allow remote control of my Player..." is checked.
 - Depending of the version of Windows Media® Player, there may be differences in the names of items you can select.

■ Remote playback

- Turn on the power of the unit.
- Turn on your PC and start Windows Media® Player 12.
- 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.
- Select this unit in "Play to" to open the "Play to" window of Windows Media® Player 12 and start playback on the unit.
 - Operations during remote playback are possible

from the "Play to" window on the PC. The playback screen is displayed on the TV connected to the HDMI output of the unit. If your PC is running on Windows® 8.1, click "Play to", and then select this unit.

- Adjust the volume using the volume bar on the "Play to" window.
 - Sometimes, the volume displayed on the remote playback window may differ from that appeared on the display of the unit.
 - When the volume is adjusted from the 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 of the version of Windows Media® Player, there may be differences in the names of items you can select.

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. Incompatible files cannot be played.

WMA (.wma/.WMA):

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

WAV (.wav/.WAV):

WAV files include 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/.aifc/.afc/.AIFF/.AIF/.AIFC/.AFC):

AIFF files include 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. Incompatible files cannot be played.

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
- Variable bit-rate (VBR) files are supported. However, playback times may not be displayed correctly.
- Remote playback does not support the gapless playback.

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.

- This unit 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 2 minutes, and then plug it back in.
- Our company is not responsible for reparations 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.

Power

■ Cannot turn on the unit

- Make sure that the power cord is properly plugged into the wall outlet.
- Unplug the power cord from the wall outlet, wait 2 minutes or more, then plug it in again.

■ The unit turns off unexpectedly



- The unit automatically switches to standby when the "System Setup" - "Hardware" - "Power Management" - "Auto Standby" setting in the Home screen functions.
- If you play at high volumes or allow input of excessive bass, the protection circuits in the amplifier can be tripped which may suddenly turn the unit off. Try the following if this occurs.
 - Reduce the volume
 - Select 63 Hz or 125 Hz for each of the speakers in "MCACC Pro" - "Manual MCACC" - "EQ Adjust" in the Home screen, and reduce the volume compared to the current setting.
 - In "System Setup" - "Speaker" - "Crossover" in the Home screen, set "Front" to "Small" or set "Front" to "Large" and set "Double Bass" to "On"
- If the power turns off and indicators on the front panel continually blink, there may have been a malfunction with the amplifier or the protection circuit may have tripped.
 - If the WIRELESS indicator is blinking:
The wires in the speaker cables may have touch the rear panel or other wires. Twist the wires again properly and make sure they do not stick out of the speaker terminals when connecting.
If "FAN STOP" is displayed on the main unit's display, the internal cooling fan has malfunctioned. Unplug the power cord from the wall outlet immediately and contact the dealer or our company's support.
 - If the MCACC PRO indicator is blinking:
Unplug the power cord from the wall outlet immediately and contact the dealer or our company's support.
 - If the FL OFF indicator is blinking:

The temperature inside the unit has exceeded the admissible value. Make sure the unit has plenty of space for ventilation around it, wait for the unit to cool down sufficiently, and then try turning it on again. It is also possible that the amplifier circuits in the unit have malfunctioned. Wait for at least a minute and then turn the unit on again.

If the same symptoms such as being unable to turn the unit on happen repeatedly, unplug the power cord from the wall outlet immediately and contact the dealer or our company's support.

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

Audio

- Make sure that the speaker setup microphone is not still connected.
- Confirm that the connection between the output jack on the 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  indicator on the display flashes, press  on the remote controller to cancel muting.
- While headphones are connected to the PHONES jack, no sound is output from the speakers.
- When "System Setup" - "Source" - "Audio Select" - "Fixed PCM" in the Home Menu is set to "On", no sound is played when signals other than PCM are input. Change the setting to Off.

Check the following if the above does not fix the problem:

■ There is 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 doesn't support the ARC function, along with connection by HDMI, connect the TV and this unit using a digital optical cable, digital coaxial cable, or analog audio cable.

■ **No sound from a connected player**

- Change the input selector on this unit to the position of the terminal to which the player is connected.
- Check the digital audio output setting on the connected component. On some game consoles, such as those that support DVD, the default setting is off.
- With some DVD-Video discs, you need to select an audio output format from a menu.

■ **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.
- Make sure that the speaker cables are not shorting.
- Check in "Connect the Speakers" in the Basic Manual that the speaker connections have been made correctly. Settings for the speaker connection environment need to be made in "Full Auto MCACC" in Initial Setup. Check in "Initial Setup" in the Basic Manual.
- Depending on the source and current listening mode, not much sound may be produced by the surround speakers. Select another listening mode to see if sound is output.
- If you are installing surround back speakers, surround speakers are required.
- With bi-amp connections, except for a case where only the front speakers are bi-amp connected, when multiple speakers are combined in a bi-amp connection, the maximum number of channels that can be played back is 5.1 ch. Further, make sure you remove the jumper bar on the speakers when using Bi-Amping connection.

■ **The subwoofer produces no sound**

- When you play source material that contains no information in the LFE channel, the subwoofer produces no sound.
- When "System Setup" - "Speaker" - "Crossover" - "Front" in the Home Menu is set to "Large" and during 2ch input such as from the TV or music, the low range elements will be output from the front speakers rather than from the subwoofer. If you would rather output from the subwoofer, make one of the following settings.
 - Change "Front" setting to "Small":
The low range elements will be output from the

subwoofer rather than the front speakers. We do not recommend changing this if your front speakers have good low range reproduction capabilities.

- Change "Double Bass" setting to "On":
The low range elements will be output from both the front speakers and the subwoofer. This may mean that there is too much bass. We recommend that you do not change the setting or change "Front" setting to "Small" if this happens.

■ **Noise can be heard**

- Using cable ties to bundle audio cables with power cords, speaker cables, etc. may degrade the audio performance, so refrain from doing it.
- An audio cable may be picking up interference. Try repositioning your 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 is interrupted**

- When "Upsampling" in "AV Adjust" is used to raise the sampling frequency, there may be some interruption to the sound depending on the connected device. Change the setting to "x2". If sound is still interrupted, change it to "x1".

Listening Modes

- To enjoy digital surround playback, such as Dolby Digital, the audio signals need to pass through a connection via HDMI cable, digital coaxial cable, or digital optical cable. Audio output should be set to bitstream output on the connected Blu-ray Disc player or other device.
- Press **i** on the remote controller several times to switch the display of the main unit to check the input format.

Check the following if the above does not fix the problem:

■ **Cannot select a desired listening mode**

- Depending on the connecting status of the speaker, some listening modes may not be selected. Check in "Selectable Listening Modes" in "Listening Modes" in the Advanced Manual.

■ **There is no sound with Dolby TrueHD, Dolby Atmos, and DTS-HD Master Audio**

- You need to connect surround back speakers or height speakers to enjoy Dolby Atmos. Furthermore, Dolby Atmos can only be enjoyed when the input signals are Dolby Atmos.
- If you cannot output formats such as Dolby TrueHD, Dolby Atmos, or DTS-HD Master Audio according to the format of the source, in the Blu-ray Disc player settings try setting "BD video supplementary sound" (or re-encode, secondary sound, video additional audio, etc.) to "Off". Change the listening mode for each source after changing the setting to confirm.

■ **About DTS signals**

- With media that switches suddenly from DTS to PCM, PCM playback may not start immediately. In such cases, you should stop your player for about 3 seconds and then resume playback.
- With some CD and LD players, you will not be able to playback DTS material properly even though your player is connected to a digital input on the unit. This is usually because the DTS bitstream has been processed (e.g., output level, sampling rate, or frequency response changed) and the unit does not recognize it as a genuine DTS signal. In such cases, you may hear noise.
- Playing DTS program material, using the pause, fast forward, or fast reverse function on your player may produce a short audible noise. This is not a malfunction.

Video


- Confirm that the connection between the output jack on the 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, power cord or connection cables of the unit may have interfered. In that case, keep distance between TV antenna cable and cables of the unit.
- Make sure the switching of input screens is proper at the monitor side such as a TV.

Check the following if the above does not fix the problem:

■ There is no video

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


■ There is no picture from a source connected to an HDMI IN terminal.

- To display video from the connected player on the TV screen while the unit is in standby, you need to enable "System Setup" - "Hardware" - "HDMI" - "HDMI Standby Through" in the Home screen. Refer to "HDMI Setup" in "Setup" in the Basic Manual for information about HDMI Standby Through.
- To output video to a TV connected to the HDMI OUT SUB jack, in the "AV Adjust" menu displayed when  is pressed on the remote controller select the HDMI OUT jack for output in "Other" - "HDMI Out".
- If you connect a player supporting HDCP2.2, be sure to connect it to one of the HDMI IN1 to IN5 jacks of the unit.
- 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.
- Reliable operation with an HDMI-DVI adapter is not guaranteed. In addition, video signals from a PC are not supported.

■ Images flicker

- It is possible that the resolution of the player is not compatible with the TV's resolution. If you have connected the player to this unit with an HDMI cable, try changing the output resolution on the player. There also may be an improvement if you change the screen mode on the TV.

■ Video and audio are out of synch

- Video may be delayed relative to audio depending on the settings and connections with your television. To adjust, press  on the remote controller, and adjust in "Other" - "Sound Delay" in "AV Adjust".

Linked operation

■ There is no linked operation with CEC compliant devices, such as a TV.

- Set "System Setup" - "Hardware" - "HDMI" - "HDMI CEC" in the Home screen of the unit to "On".
- It is also necessary to set HDMI linking on the CEC compliant device. Check the instruction manual.
- When connecting a Sharp brand player or recorder to the HDMI IN 1 to IN 5 jacks, set "System Setup" - "Hardware" - "HDMI" - "HDMI Standby Through" in the Home Menu to "Auto".

Tuner

■ Radio reception is poor or there is a lot of noise.

- Re-check the antenna connection.
- Relocate your antenna.
- Move the unit away from your TV or PC.
- Passing cars and airplanes can cause interference.
- Concrete walls weaken radio signals.
- Listen to the station in mono.
- When listening to an AM station, operating the remote controller may cause noise.
- You can improve reception sensitivity by changing the setting in "System Setup" - "Miscellaneous" - "Tuner" - "AM Noise Cut Mode" in the Home screen if you are finding AM broadcasts difficult to hear.
- FM reception may become clearer if you use the antenna jack on the wall used for the TV.

BLUETOOTH function

- Try plugging/unplugging the power of the unit and try turning on/off the BLUETOOTH enabled device. Re-startup of the BLUETOOTH enabled device may be effective.
- The BLUETOOTH enabled devices must support the A2DP profile.
- Near components such as microwave oven or cordless phone, which use the radio wave in the 2.4 GHz range, a radio wave interference may occur, which disables the use of this unit.
- If there is a metallic object near the unit, BLUETOOTH connection may not be possible as the metal can effect on the radio waves.

Check the following if the above does not fix the problem:

■ Cannot connect with this unit

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

■ 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 playback of audio may be unavailable. Volume up the BLUETOOTH enabled device.
- Depending on the BLUETOOTH enabled device, Send/Receive selector switch may be provided. Select Send mode.
- Depending on the characteristics or specifications of your BLUETOOTH enabled device, playback on the unit is not guaranteed.

■ Sound is interrupted

- Problem may be occurring at the BLUETOOTH enabled device. Check the information on the internet.

■ 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, it will become selectable when the network function is started. It may take about a minute to start up.
- When NET is blinking, this unit is not properly connected to the home network.
- Try plugging/unplugging the power supply of this unit and the router, and try rebooting the router.
- If the desired wireless LAN router is not in the access point list, it may be set to hide SSID or the ANY connection may be off. Change the setting and try again.

Check the following if the above does not fix the problem:

■ Cannot access the Internet radio

- Certain network service or contents available through the unit may not be accessible in case the service provider terminates its service.
- Make sure that your modem and router are properly connected, and make sure they are both turned on.
- Make sure that the LAN side port on the router is properly connected to this unit.
- Make sure that connecting to Internet from other components is possible. If connecting is not possible, turn off all components connected to the network, wait for a while, and then turn on the components again.
- If a specific radio station is unavailable for listening, make sure the registered URL is correct, or whether the format distributed from the radio station is supported by this unit.
- Depending on ISP, setting the proxy server is necessary.
- Make sure that the used router and/or modem is 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 is compatible with Windows Media® Player 11 or 12 network servers or NAS that are compatible with home network functionality.
- You may need to make some settings on Windows Media® Player. Check in "Music Server" in "Playback Function" in the Advanced Manual.
- When using a PC, only music files registered in the Windows Media® Player library can be played.

■ Playback stops while listening to music files on the network server

- Make sure the network server is compatible with this unit.
- When the PC is serving as the network server, try quitting any application software other than the server software (Windows Media® Player 12, etc.).
- If the PC is downloading or copying large files, the playback may be interrupted.

USB storage device

■ USB storage device is not displayed

- Check whether the USB storage device or USB cable is correctly inserted to the USB port of the unit.
- Disconnect the USB storage device from the unit, and then try reconnecting.
- Performance of the hard disk that receive power from the USB port of the unit is not guaranteed.
- Depending on the type of format, the playback may not be performed normally. Check the type of the file formats that is supported.
- USB storage devices with security functions may not be played.

Wireless LAN Network

- Try plugging/unplugging the power supply of wireless LAN router and the unit, check the wireless LAN router power-on status, and try reboot of the wireless LAN router.

Check the following if the above does not fix the problem:

■ Cannot access wireless LAN network

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

■ Connected to an SSID different to the SSID selected

- Some wireless LAN routers allow you to set multiple SSIDs for one unit. If you use the automatic setting button on such a router, you may end up connecting with a different SSID from the SSID you wanted to connect to. Use the connection method requiring you to enter a password if this happens.

■ Playback is interrupted and communication does not work

- You may not receive radio waves due to bad radio wave conditions. Shorten the distance from the wireless LAN access point or remove obstacles to improve visibility, and try again. Place the unit away from microwave ovens or other access points. It is recommended to place the wireless LAN router (access point) and the unit in the same room.
- If there is a metallic object near the unit, wireless LAN connection may not be possible as the metal can effect

on the radio wave.

- When other wireless LAN devices are used near the unit, several issues such as interrupted playback and communication may occur. You can avoid these issues by changing the channel of your wireless LAN router. For instructions on changing channels, see the instruction manual provided with your wireless LAN router.
- There may not be enough bandwidth available in wireless LAN. Connect using an Ethernet cable.

Multi-zone function

■ Cannot ZONE output audio of external AV component

- Depending on the model, input by HDMI cable may not be supported. Check in "Multi-zone Connection" in the Basic Manual, and if input by HDMI cable is not supported, connect using a cable that is supported.
- The audio from externally connected AV components can only be output when the audio is analog or 2ch PCM audio signals. If you have connected the AV component to this unit with a digital optical/coaxial cable, the audio output of the AV component needs to be set to PCM.

■ Others

- Settings are required in Initial Setup, "Multi Zone Setup" to use the multi-zone feature. Check in "Initial Setup" in the Basic Manual.
- If the audio signal is from the NET or USB input selector, zone output is not possible for DSD and Dolby TrueHD audio signals.

Remote Controller

- Make sure that the batteries are installed with the correct polarity.
- Install new batteries. Do not mix different types of batteries, or old and new batteries.
- Make sure that the unit is not subjected to direct sunshine or inverter-type fluorescent lights. Relocate if

necessary.

- If the unit is installed in a rack or cabinet with colored-glass doors or if the doors are closed, the remote controller may not work reliably.
- After operating the Multi-zone function, the remote controller may have switched to the mode for operating ZONE output audio. Check "Multi-zone" in "Playback" in the Basic Manual to switch the remote controller back to the mode for operating in the main room.

Display, OSD

■ The display doesn't light

- The display may go dim while the Dimmer is working, and may also turn off. Press DIMMER button and change the brightness level of the display.

Others

■ Strange noises can be heard from the unit

- If you have connected another unit to the same wall outlet as this unit, this noise may be an effect from the other unit. If the symptoms improve by unplugging the power cord of the other unit, use different wall outlets for this unit and the other unit.

■ When performing Full Auto MCACC, the message "Noise Error" appears

- This can be caused by a malfunction in your speaker unit. Check if the unit produces normal sounds.

■ DRC function does not work

- Make sure the source material is Dolby Digital, Dolby Digital Plus, Dolby TrueHD, or DTS.

Reference Information

Information about products with Wi-Fi/BLUETOOTH features

■ Radio Wave Caution

Products with Wi-Fi/BLUETOOTH use radio waves in the 2.4 GHz and 5GHz frequency bands. There are nations and regions where the use of particular 5 GHz bands are prohibited outdoors, so do not use these products outside. 2.4 GHz radio waves are used by a variety of devices, as shown in lists 1 and 2 below.

1. Devices which use a 2.4 GHz radio wave frequency
 - Cordless phones
 - Cordless facsimiles
 - Microwave ovens
 - Wireless LAN devices (IEEE802.11b/g/n)
 - Wireless AV equipment
 - Wireless controllers for game systems
 - Microwave oven-based health aids
 - Video transmitter
 - Specific type of external monitor and LCD display
2. Less common devices which use a 2.4 GHz radio wave frequency
 - Anti-theft systems
 - Amateur radio stations (HAM)
 - Warehouse logistic management systems
 - Discrimination systems for train or emergency vehicles

If these devices and the AV receiver are used at the same time, the audio may be undesirably stopped or disturbed due to a radio wave interference.

Suggestions for improvement

- Switch off the devices which emit the radio wave.
- Place the interfering devices away from the AV receiver.

- The AV receiver uses radio wave, and a third person can receive the wave on purpose or accidentally. Do not use the communication for important or fatal matters.
- We assume no responsibility whatsoever for any error or damage of network environment or access device resulting from the use of this apparatus. Confirm with the provider or access device maker for more information.

■ Scope of Operation

Use of the AV receiver is limited to home use. (Transmission distances may be reduced depending on communication environment.)

In the following locations, poor condition or inability to receive radio waves may cause the audio to be interrupted or stopped:

- In reinforced concrete buildings or steel framed or iron framed buildings.
- Near large metallic furniture.
- In a crowd of people or near a building or obstacle.
- In a location exposed to the magnetic field, static electricity or radio wave interference from radio communication equipment using the same frequency band (2.4 GHz) as the AV receiver, such as a 2.4 GHz wireless LAN device (IEEE802.11b/g/n) or microwave oven.
- If you live in a heavily populated residential area (apartment, townhouse, etc.) and if your neighbor's microwave oven is placed near your AV receiver, you may experience radio wave interference. If this occurs, move your AV receiver to a different place. When the microwave oven is not in use, there will be no radio wave interference.

■ Radio Wave Reflections

The radio waves received by the AV receiver include the radio wave coming directly from the devices and waves coming from various directions due to reflections by walls, furniture and building (reflected waves). The reflected waves (due to obstacles and reflecting objects) further

produce a variety of reflected waves as well as variation in reception condition depending on locations. If the audio cannot be received properly due to this phenomenon, try moving the location of the wireless LAN device a little. Also note that audio may be interrupted due to the reflected waves when a person crosses or approaches the space between the AV receiver and the wireless LAN device.

- We assume no responsibility whatsoever for any damages resulting from the use of this apparatus except in the cases deemed acceptable under the applicable laws and regulations.
- Operation in all environment is not guaranteed for wireless LAN. The communication may not be possible or have desirable communication speed.

■ Precautions

- Do not use this apparatus near an electronic device handling high-accuracy controls or weak signals. Doing so may cause an accident due to a malfunction of the device.
- Do not use this apparatus in use prohibited location such as an aircraft equipment or a hospital. Doing so may cause an accident due to a malfunction of an electronic device or an electro-medical apparatus. Follow the instructions of the medical facilities.

Electronic device which requires cautions :

Hearing aid, pace maker, other medical electronic devices, fire alarm, automatic door, and other automatic control device.

When using a pace maker or other medical electronic devices, confirm with the medical electronic device maker or dealer for the effect of the radio wave.

Pioneer

2-3-12 Yaesu, Chuo-ku, Tokyo 104-0028 JAPAN

<U.S.A.>

18 PARK WAY, UPPER SADDLE RIVER, NEW JERSEY 07458, U.S.A.

Tel: 1-201-785-2600 Tel: 1-844-679-5350

<Germany>

Hanns-Martin-Schleyer-Straße 35, 47877 Willich, Germany

Tel: +49(0)2154 913222

<UK>

Anteros Building, Odyssey Business Park, West End Road, South Ruislip,
Middlesex, HA4 6QQ United Kingdom

Tel: +44(0)208 836 3612

<France>

6, Avenue de Marais F - 95816 Argenteuil Cedex FRANCE

Tel: +33(0)969 368 050

Корпорация О энд Пи

2-3-12, Яэсу, Чуо-ку, г. Токио, 104-0028, ЯПОНИЯ

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