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1. Main unit (1)
2. Remote controller (RC-964R) (1), Batteries (AAA/R03) (2)
3. Speaker setup microphone (1)
   • Used during AccuEQ Room Calibration.
4. Indoor FM antenna (1)
5. AM loop antenna (1)
   • Quick Start Guide (1)
   *This is an online user manual. This is not supplied with the product.

- Connect speakers with an impedance of 6 Ω to 16 Ω.
- The power cord must be connected only after all other connections are completed.
- We will not accept any responsibility for damage arising from the connection with equipment manufactured by other companies.
- Specifications and appearance are subject to change without prior notice.
Part Names

Front Panel

1. [BLUETOOTH] (BACK, FRONT)
2. [HOME] (BACK, FRONT)
3. [LISTENING MODE] (BACK, FRONT)
4. [ON/OFF CONTROL] (BACK, FRONT)
5. [MULTI ZONE] (BACK, FRONT)
6. [CD / DVD / STRM / BOX / BLUETOOTH / SAT / GAME / USB] (BACK, FRONT)
7. [LISTENING MODE] (BACK, FRONT)
8. [ON/OFF CONTROL] (BACK, FRONT)
9. [MULTI ZONE] (BACK, FRONT)
10. [CD / DVD / STRM / BOX / BLUETOOTH / SAT / GAME / USB] (BACK, FRONT)

For details, see (→ p6)
1. ON/STANDBY button
2. BLUETOOTH button: Switches the input to "BT" (BLUETOOTH).
3. LISTENING MODE button: Switches the listening mode (→p53).
4. Remote control sensor: Receives signals from the remote controller.
   - The reception range of the remote controller is within a distance of approx. 23'/7 m, and an angle of 30° to right and left.
5. MULTI ZONE buttons: Used to operate the multi-zone function. (→p49)
6. Display (→p7)
7. HOME button: You can display advanced setting items on the TV and the display to have a more enjoyable experience with this unit. (→p59)
8. Cursor buttons (▲ / ▼ / ◀ / ▶) and ENTER button: Select an item with the cursors, and press ENTER to confirm your selection. When using the TUNER, use ▲TUNING▼ for manual selection, and ◀PRESET▶ for preset selection. (→p44)
9. RETURN button: Returns the display to the previous state while setting.
10. MASTER VOLUME
11. PHONES jack: Connect headphones with a standard plug (Ø1/4"/6.3 mm).
12. You can adjust the sound quality of the front speakers. Press the TONE button to select either "BASS" or "TRE", and press the +/- buttons to adjust the setting. (→p51)
13. Input selector buttons: Switches the input to be played.
14. SETUP MIC jack: Connect the supplied speaker setup microphone. (→p34)
15. USB port: Connect a USB storage device to play music files stored in it. (→p41)
1. Lights in the following conditions.
   TUNE: Receiving AM/FM radio.
   ST: Receiving FM stereo.
   RDS (Australian models): Receiving RDS broadcasting.
2. Lights in the following conditions.
   ZONE: When ZONE 2 is on.
   SPA: When the speaker system is turned on.
3. Lights when the sleep timer is set. (→p52)
4. Lights in the following conditions.
   PRESET: When a registered preset radio station is selected.
   MEM: Blinks while presetting radio stations.
   kHz/MHz: When receiving AM/FM frequencies.
5. Indicates the preset number of the selected AM/FM station or the type of input signal.
6. Displays various information of this unit.
7. Lights according to the type of input digital audio signal and the listening mode.
8. Lights in the following conditions according to the type of audio input signal.
   HDMI: HDMI signals are input and the HDMI input is selected. If there is no HDMI signal input, this indicator blinks.
   DIGITAL: Digital signals are input and the digital input is selected. If there is no Digital signal input, this indicator blinks.
9. Lights when the DIRECT listening mode is selected.
Rear Panel

1. HDMI OUT
2. BD/DVD IN
3. CBL/SAT IN
4. STRM BOX IN
5. GAME IN
6. DIGITAL IN
7. AM
8. BD/DVD OUT
9. CBL/SAT OUT
10. MONITOR OUT
11. SPEAKERS
12. ZONE 3 SUBWOOFER KEY

For details, see (→ p9)
1. BLUETOOTH antenna is built in.
2. HDMI OUT jack: Transmit video signals and audio signals with an HDMI cable connected to a TV.
3. HDMI IN jacks: Transmit video signals and audio signals with an HDMI cable connected to an AV component.
4. POWER OUT jack: The power (5 V/1 A) can be supplied to a streaming media player, etc. using a USB cable. (→p26)
5. DIGITAL IN OPTICAL/COAXIAL jacks: Input TV or AV component digital audio signals with a digital optical cable or digital coaxial cable.
6. Power cord
7. TUNER AM/FM antenna terminal: Connect the supplied antennas.
8. VIDEO IN jacks: Input AV component video signals with an analog video cable.
9. MONITOR OUT jack: Transmit video signals with an analog video cable connected to a TV.
   • This connection is required to output video signals input from the VIDEO IN jack to the TV using the analog video cable.
10. AUDIO IN jacks: Input TV or AV component audio signals with an analog audio cable.
11. SUBWOOFER jacks: Connect a powered subwoofer with a subwoofer cable. Up to two powered subwoofers can be connected. The same signal is output from each SUBWOOFER jack.
12. SPEAKERS terminals: Connect speakers with speaker cables. (FRONT terminals for North American models support banana plugs.)
Remote Controller

1. Sleep button: Used for the sleep timer that allows the unit to enter standby automatically when the specified time elapses. (→p52)
2. Input selector buttons: Switches the input to be played.
3. USB control button: Used for the playback operation for the USB storage device (→p41).
4. Q (QUICK MENU) button: Pressing this button during playback can make settings such as “M.OPT” quickly while playing. (→p66)
5. Cursor buttons and ENTER button: Select an item with the cursors, and press ENTER to confirm your selection.
6. button: Display advanced setting items on the TV or the display to have a more enjoyable experience with this unit. (→p59)
7. LISTENING MODE button: Select a listening mode (→p53).
8. BASS and TREBLE buttons: You can adjust the sound quality of the front speakers. (→p51)
9. TUNER control buttons: Used for the TUNER operation. (→p44)
10. ON/STANDBY button
11. AUDIO SEL button: Used to switch among audio input signals to be played. (→p39)
12. LATE NIGHT button: Used for the LATE NIGHT function that allows detailed sounds to be easily heard even if the volume is lowered.
13. M.OPT button: Improves the quality of the compressed audio.
14. button: Temporarily mutes audio. Press the button again to cancel muting.
15. VOLUME buttons
16. button: Returns the display to the previous state while setting.
17. button: Switches the information on the display.
18. DIMMER button: Switches the brightness of the display with four levels. It cannot be turned off completely.
19. ZONE 2 button: Used to control the multi-zone function (→p49).
## Preparation

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Connecting speakers

Speaker Installation

5.1 Channel System

This is a basic 5.1 Channel System. Front speakers output the front stereo sound, and a center speaker outputs the sound of the center of the screen, such as dialogs and vocals. Surround speakers create the back sound field. Powered subwoofer reproduces the bass sound, and creates the rich sound field.

The front speakers should be positioned at ear height while the surround speakers should be positioned just above ear height. The center speaker should be set up facing the listening position at an angle. Placing the powered subwoofer between the center speaker and the front speaker gives you a natural sound even when playing music sources.

1, 2 Front Speakers
3 Center Speaker
4, 5 Surround Speakers
6 Powered Subwoofer

*1: 22° to 30°, *2: 120°
This is a 7.1 Channel System that consists of the basic 5.1 Channel System (→p12) and added surround back speakers. Front speakers output the front stereo sound, and a center speaker outputs the sound of the center of the screen, such as dialogs and vocals. Surround speakers create the back sound field. Powered subwoofer reproduces the bass sound, and creates the rich sound field. Surround back speakers improves the sense of envelopment and connectivity of sound in the back sound field, and provides a more real sound field. Also, installing the surround back speakers allows you to enjoy listening modes such as PLIIx (→p58).

The front speakers should be positioned at ear height while the surround speakers should be positioned just above ear height. The center speaker should be set up facing the listening position at an angle. Placing the powered subwoofer between the center speaker and the front speaker gives you a natural sound even when playing music sources. The surround back speakers should be positioned at ear height.

- If surround back speakers are installed, be sure to install surround speakers as well.
- Surround back speakers can be connected with only one unit. In this case, place it right behind the listening position.

1,2 Front Speakers
3 Center Speaker
4,5 Surround Speakers
6 Powered Subwoofer
7,8 Surround Back Speakers
7.1 Channel System (Using Front Height Speakers)

This is a 7.1 Channel System that consists of the basic 5.1 Channel System (→p12) and added front height speakers. Front speakers output the front stereo sound, and a center speaker outputs the sound of the center of the screen, such as dialogs and vocals. Surround speakers create the back sound field. Powered subwoofer reproduces the bass sound, and creates the rich sound field. Front height speakers improve the sense of envelopment of sound in the front sound field, and provides a more real sound field. Also, installing the front height speakers allows you to enjoy listening modes such as PLIIz HEIGHT (→p58).

The front speakers should be positioned at ear height while the surround speakers should be positioned just above ear height. The center speaker should be set up facing the listening position at an angle. Placing the powered subwoofer between the center speaker and the front speaker gives you a natural sound even when playing music sources. Install the front height speakers just above the front speakers. The front height speakers should be set up facing the listening position at an angle.

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

1, 2 Front Speakers
3 Center Speaker
4, 5 Surround Speakers
6 Powered Subwoofer
7, 8 Front Height Speakers
Connections for each speaker layout

Connections

■ (Note) Speaker Impedance
Connect speakers with an impedance of 6 Ω to 16 Ω.

■ Connect the Speaker Cables

Make correct connection between the unit's jacks and speaker's jacks (+ side to + side, and - side to - side) for each channel. If the connection is wrong, a bass sound will not be reproduced properly due to reverse phase. Twist the wires exposed from the tip of the speaker cable so that the wires do not stick out of the speaker terminal when connecting. If the exposed wires touch the rear panel, or the + side and – side wires touch each other, the protection circuit will be activated.
Connect a powered subwoofer with this unit using a subwoofer cable. Up to two powered subwoofers can be connected. The same signal is output from each SUBWOOFER jack.
5.1 Channel System

This is a basic 5.1 Channel System. For details of the speaker layout, refer to "Speaker Installation" (→ p12).
5.1 Channel System + ZONE SPEAKER

**MAIN ROOM:**
This is a basic 5.1 Channel System. For details of the speaker layout, refer to "Speaker Installation" (→p12).

**ZONE 2:**
You can enjoy 2-ch audio in the separate room (ZONE 2) while performing 5.1-ch playback in the main room (where this unit is located). The same source can be played back in the main room and ZONE 2 simultaneously. Also, different sources can be played back in both rooms.

**Setup**
- In this case, settings are required. Refer to "Menu operations" (→p60) and set "2. Manual SP Setup" (→p61) - "a. Speaker System" to "ZONE 2" after all connections are completed.

To output audio from an externally connected AV component to ZONE 2, use an analog audio cable for connection. (→p28)
## 7.1 Channel System (Using Surround Back Speakers)

This is a 7.1 Channel System that consists of the basic 5.1 Channel System and added surround back speakers. For details of the speaker layout, refer to "Speaker Installation" (p13).

- Surround back speakers can be connected with only one unit. In this case, place it right behind the listening position and connect ⑧ in the figure (SURROUND BACK L terminal).
This is a 7.1 Channel System that consists of the basic 5.1 Channel System and added front height speakers. For details of the speaker layout, refer to "Speaker Installation" (→p14).

Setup

• In this case, settings are required. After all connections are completed, refer to "Menu operations" (→p60) and set "2. Manual SP Setup" (→p61) - "a. Speaker System" to "Height".
## Speaker combinations

- Up to two powered subwoofers can be connected in either combination.

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<tr>
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<th>CENTER</th>
<th>SURROUND</th>
<th>SURROUND BACK</th>
<th>FRONT HEIGHT</th>
<th>ZONE 2 (ZONE SPEAKER)</th>
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<tr>
<td>2.1 ch</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>3.1 ch</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>4.1 ch</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>5.1 ch</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>6.1 ch</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>6.1 ch</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓ (*1)</td>
</tr>
<tr>
<td>7.1 ch</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓ (*2)</td>
</tr>
</tbody>
</table>

(*1) Only one surround back speaker can be connected.

(*2) You can select either SURROUND BACK or FRONT HEIGHT.
Connecting the TV

Connect this unit between a TV and AV component. Connection method between this unit and the TV differs depending on how this unit is connected to AV component, whether the TV is equipped with an HDMI jack, and whether the TV supports the ARC (Audio Return Channel) function or not. The ARC function transmits the audio signals of the TV via an HDMI cable, and plays the audio of the TV on this unit.

- To check if the TV supports the ARC function, refer to the instruction manual of the TV, etc.

Does the AV component connected to this unit support the HDMI output?

Support

- The TV is equipped with an HDMI jack, and supports the ARC function.
  
  - To ARC TV (→p23)

Not support

- Connecting with the TV using an analog video cable (→p25)

- The TV is equipped with an HDMI jack, and does not support the ARC function.
  
  - To Non-ARC TV (→p24)
To ARC TV

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

**Setup**

- Settings are required to use the ARC function. Refer to "Menu operations" (→p60) and set "5. HDMI Setup" (→p64) - a. Control” and "b. ARC” to “ON” respectively.

- For detailed settings for TV connection, CEC function and audio output, refer to the instruction manual of the TV.

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

If the TV does not support the ARC (Audio Return Channel) function (*), connect an HDMI cable and digital optical cable. If you use a cable set-top box, etc. connected to the input jack of this unit to watch TV (without using a TV's built-in tuner), connection with a digital optical cable is not required.

Setup

- If a digital optical cable is used for connection and "5. HDMI Setup" - "a. Control" is set to "ON" on the Setup menu (→p59), set "b. ARC" to "OFF".
- If the TV does not have a DIGITAL OPTICAL OUT jack, you can use an analog audio cable to connect with the AUDIO IN(CD) jack. In this case, refer to "Menu operations" (→p60) and set "3. Input Assign" - "a. Analog Input" to "TV" after all connections are completed.

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

a HDMI cable, b Digital optical cable
Connecting with the TV using an analog video cable

If an HDMI cable is not used to connect this unit with AV component, or the TV is not equipped with an HDMI jack, use an analog video cable to connect this unit with the TV.

- When using the analog video cable to connect with the TV, the OSD (On-Screen Display) function that displays operation screens on the TV cannot be used. Check the display on this unit instead.

a Analog video cable
Connecting Playback Devices

Connecting an AV Component with HDMI Jack Mounted

This is a connection example of an AV component equipped with an HDMI jack. To play 4K or 1080p video, use a high speed HDMI cable. When connecting with an AV component that conforms to the CEC (Consumer Electronics Control) standard, you can use the "Control" function(*) that enables linking with input selectors, etc. and the "Standby Through" function that can transmit video and audio signals of the AV component to the TV even if this unit is in standby mode. Also, the POWER OUT jack on the rear panel can supply power (5 V/1 A) to a streaming media player, etc. using a USB cable. To supply power even when this unit is in standby mode, change the setting value of "POWER OUT Standby" (→p65) to "ON".

Setup

• Settings are required to use the "Control" function and "Standby Through" function. After all the connections are completed, check the setting method on Menu operations (→p60), and refer to "Control" (→p64) and "Standby Through" (→p65) respectively to make the settings.

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

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

a HDMI cable
Connecting an AV Component without HDMI Jack Mounted

This is a connection example of an AV component unequipped with an HDMI jack. For example, when video input is connected to the BD/DVD jack, connect the audio input to BD/DVD jack, too. Thus, video input jacks and audio input jacks should have the same name for connection. Note that video signals input to the VIDEO IN jack are not converted to HDMI video signals. Use an analog video cable to output video signals from the MONITOR OUT jack of this unit. (→p25)

- 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 a digital optical cable. (→p28)

When the audio from a device connected using the digital coaxial cable or digital optical cable is output on this unit, switch the input signal with the AUDIO SEL button of the remote controller. (→p39)

Setup

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

This is a connection example of an audio component. Connect a CD player using a digital coaxial cable or analog audio cable.

- You can also connect an audio component to OPTICAL 1 (TV) terminal using a digital optical cable. Adjust the input signal with the AUDIO SEL button on the remote controller according to the connected cable. (→ p39)

a Analog audio cable, b Digital coaxial cable
Connecting Antennas

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

a Indoor FM antenna, b AM loop antenna
Connecting the Power Cord

Connect the power cord after all the connections are completed.

a Power cord
Initial Setup

Turning the power on

After all the connections are completed, set the Automatic Speaker Setting (AccuEQ Room Calibration) (\(→p34\)) and HDMI setting (\(→p36\)). When this unit and the TV are connected with an HDMI cable, use the OSD (On-Screen Display) that appears on the TV to make the settings. Switch the input on the TV to the input connected to the unit.

- When you do not use an HDMI cable but use an analog video cable to connect with the TV, the operation screens cannot be displayed on the TV. In such a case, see the display of the main unit to make the settings.

1. Switch the input on the TV to the input connected to the unit.
2. Put the batteries in the remote controller, and press the \(\bigcirc\) button to turn on this unit.
"Speaker System" setting (when using ZONE SPEAKER or Front Height Speakers)

When connecting ZONE SPEAKER or front height speakers, settings are required in the setup menu.
- Make the settings before the "Automatic Speaker Setting (AccuEQ Room Calibration)" (p34) procedure.

1. Press BD/DVD button.
2. Press button.
   - Select the item with the cursors of the remote controller, and press ENTER button to confirm your selection. To return to the previous screen, press button.

5. Select "ZONE 2" or "Height" according to the type of connected speakers.

• To exit the settings, press  button.
Automatic Speaker Setting (AccuEQ Room Calibration)

By setting the supplied speaker setup microphone at the listening position, connection statuses of each speaker are automatically checked, and each volume is automatically set to the optimal level according to the room environment.

- Turn the subwoofer on, and turn up the volume beforehand.
1. Connect the speaker setup microphone to the SETUP MIC jack of the main unit, and place it at the listening position.

2. Press BD/DVD.

3. Press \( \bigcirc \).

4. Select "1. AccuEQ Room Cal.", and press ENTER.
   - Select the item with the cursors of the remote controller, and press ENTER to confirm your selection. To return to the previous screen, press \( \bigcirc \).

5. Press ENTER again.
   - Test tones are output from each speaker, and the connected speakers and the noise in the surrounding environment are automatically measured.

6. The above measurement results are displayed. After a while, the test tones are output again. Then, the unit automatically sets the optimal volume levels, crossover frequency, etc. When the setting is completed, the display returns to the setup screen.

7. Disconnect the speaker setup microphone.
HDMI settings

Make the HDMI-related settings, such as "Control" function (→p64), "ARC" function (→p64) and "Standby Through" function (→p65). Check the setting procedure in Menu operations (→p60), see the descriptions for each function, and then make the necessary settings.
### Playback

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</table>
AV Component Playback

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

Basic Operations

Perform the following procedure when this unit is on.
1. Switch the input on the TV to the input connected to the unit.
2. Press the input selector whose name is the same as that of the jack to which the player is connected.
   For example, press BD/DVD to play the player connected to the BD/DVD jack. Press TV to listen to the sound of the TV.
   • When the CEC link function works, the input switches automatically when a CEC compliant TV or player is connected to this unit using HDMI connection.
3. Start play on the AV component.
   • If the playback sound cannot be heard even if the input is switched, switch the input signal with AUDIO SEL on the remote controller. (→p39)
**Selecting audio input signals**

With AUDIO SEL on the remote controller, you can select audio input signals assigned to each input source. Once selected, the same audio input signal is played next time.

1. Press the input selector button to switch to the input whose assignment is changed.
   • The assignment can be changed only for "BD/DVD", "TV", "CBL/SAT" and "CD" inputs.
2. Press AUDIO SEL, and select the audio input signal to assign.
   • Each time the button is pressed, the setting item is switched among "H" (HDMI IN), "A" (AUDIO IN), "C1" (COAXIAL1) and "O1" (OPTICAL1). Audio input signals that can be assigned to each input source are as follows.

<table>
<thead>
<tr>
<th>Input Selector</th>
<th>H (HDMI IN)</th>
<th>C1 (COAXIAL1)</th>
<th>O1 (OPTICAL1)</th>
<th>A (AUDIO IN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BD/DVD</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>TV</td>
<td></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>CBL/SAT</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔ (*1)</td>
</tr>
<tr>
<td>CD</td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>STRM BOX</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GAME</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*1) When selecting "A" (AUDIO IN) for "TV" input, set "3. Input Assign" - "a. Analog Input" to "TV" on the Setup menu beforehand.

• If "H", "C1" or "O1" is selected with AUDIO SEL, but the corresponding input signal is not present, then "A" is selected.
BLUETOOTH® Playback

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

Basic Operations

Perform the following procedure when this unit is on.

Pairing

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

2. Enable (turn on) the BLUETOOTH function of the BLUETOOTH-enabled device, and then select this unit from among the devices displayed. When the pairing procedure is competed, "CONNECT" will be displayed. If a password is requested, enter "0000".
   • This unit is displayed as "Onkyo TX-SR383".
   • To connect another BLUETOOTH-enabled device, disconnect the connection with the BLUETOOTH-enabled devices being connected and perform the pairing operation.
   • The coverage area is within a radius of 10 m. Note that connection is not always guaranteed with all BLUETOOTH-enabled devices.

Playing Back

1. Press BLUETOOTH.
2. Perform the connection procedure on the BLUETOOTH-enabled device.
   Turn up the volume of the BLUETOOTH-enabled device to an appropriate level.
   • Due to the characteristics of BLUETOOTH wireless technology, the sound produced on this unit may slightly be behind the sound played on the BLUETOOTH-enabled device.
**USB Storage Device**

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

**Basic Operations**

Perform the following procedure when this unit is on.

- When you do not use an HDMI cable but use an analog video cable to connect with the TV, the list screens cannot be displayed on the TV. In such a case, see the display of the main unit to operate the list.

1. Switch the input on the TV to the input connected to the unit.
2. Connect your USB storage device containing music files to the USB port of this unit’s front panel.
3. Press USB. When the USB device is recognized, playback of the first song automatically starts.
   - While recognizing the USB device, "Loading" is displayed on the screen. Do not unplug the USB storage device connected to this unit. This may cause data corruption or malfunction.
4. To select a song, press TOP MENU to display the list of folders and music files on the screen. Select the folder or music file with the cursor and press ENTER to play. To return to the previous screen press ‹.
• Characters that cannot be displayed on this unit appear with "*"
• The USB port of this unit complies with the USB 2.0 standard. The transfer speed may be insufficient for some content you play, and sound interruptions, etc. may occur.
• Note that operation is not always guaranteed for all USB storage devices.
• This unit can use USB storage devices that comply with the USB mass storage class standard. Also the format of USB storage devices supports FAT16 or FAT32 file system format.

❐ Device and Supported Format ( →p43)
Device and Supported Format

USB Storage Device Requirements

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

Supported Audio Formats

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

MP3 (.mp3/.MP3):
- Supported formats: MPEG-1/MPEG-2/MPEG-2.5 Audio Layer 3
- Supported sampling rates: 32 kHz, 44.1 kHz, 48 kHz
- Supported bitrates: Between 32 kbps and 320 kbps, and VBR

WMA (.wma/.WMA):
- Supported sampling rates: 32 kHz, 44.1 kHz, 48 kHz
- Supported bitrates: Between 48 kbps and 192 kbps, and VBR
- WMA Pro/Voice/WMA Lossless formats are not supported.

AAC (.aac/.m4a/.mp4/.AAC/.M4A/.MP4):
- Supported formats: MPEG-2/MPEG-4 Audio
- Supported sampling rates: 32 kHz, 44.1 kHz, 48 kHz
- Supported bitrates: Between 16 kbps and 320 kbps, and VBR
- Apple Lossless format is not supported.
- When playing files recorded with VBR (Variable bit-rate), the playback time may not be displayed correctly.
Listening To the AM/FM Radio

You can receive AM and FM radio stations on this unit with the built-in tuner.

Tuning into a Radio Station

Perform the following procedure when this unit is on.

**Tuning Automatically**

1. Press TUNER to switch to "TUNER" input.
2. Press BAND repeatedly to select either "AM" or "FM ST".
3. When you press TUNING +/- approx. one second and release your finger, automatic tuning starts, and searching stops when a station is found. When tuned in to a radio station, the "TUNE" indicator on the display lights up. When tuned in to an FM radio station, the "ST TUNE" indicator lights up.
Tuning Manually

1. Press TUNER to switch to "TUNER" input.
2. Press BAND repeatedly to select either "AM" or "FM ST".
3. Press TUNING +/– to select the desired radio station.
   • Each time you press TUNING +/–, the frequency changes by 1 step. If the button is held down, the frequency changes continuously.

Improving FM reception

When FM broadcasts reception is poor, set the receiver to the mono reception mode.
1. Press BAND to select "FM MONO".

Frequency step setting (Australian models)

If you find that you can't tune into stations successfully, the frequency step may not be suitable for your country/region. In such a case, select a frequency step suitable for your region.
1. Set the unit to standby mode.
2. While pressing and holding the ▼ TUNING button of the main unit, press the ◄ ON/STANDBY button to turn the unit on. Each time you operate, the setting is switched between "9 kHz/0.05 MHz" and "10 kHz/0.1 MHz".
   • Default: 9 kHz/0.05 MHz
   • This operation is not possible if "Control" and "Standby Through" are set to other than "OFF".

Presetting a Radio Station (→p46)
Presetting a Radio Station

Registration Procedure
You can preset up to 30 of your favorite AM/FM radio stations.

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

1. Press EDIT to display PRESET on the display. Then the preset number and MEM will blink.

   ![Registration Procedure illustration]

2. Press PRESET +/- repeatedly to select a number between 1 and 30.
3. Press ENTER to register the station.

   When the station is registered, the preset number stops blinking. Repeat this steps to register your favorite AM/FM radio stations.

   • Even if a radio station received with FM MONO is registered, the sound is reproduced in stereo after registration.
Selecting a Preset Radio Station

1. Press TUNER.
2. Press PRESET +/- to select a preset number.

Naming Registered Radio Stations

You can name the preset radio stations.
1. Press TUNER.
2. Press PRESET +/- to select a preset number.
3. Press EDIT twice.
   - The cursor blinks at the position of the first character.
4. Input the name. Press TUNING +/- to select a character. After selecting the character, press PRESET +/- to move the cursor.
   - Up to 8 characters can be input for the name.
5. When you have finished entering the name, press ENTER to confirm the setting.
   - Pressing DISPLAY will display the registered name. Pressing DISPLAY repeatedly will return to the frequency display.

Using RDS (Australian models) (→p48)
Using RDS (Australian models)

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

Display Text Information (Radio Text)
1. The following information is displayed each time you press the DISPLAY button on the remote controller once while the name of the station is being displayed on the display.
   • Listening mode
   • Master volume
   • Radio Text (RT) – Messages sent by the radio station. For example, a talk radio station may provide a phone number as RT.
   • Program Service Name (PS) – The name of the radio station.
   • Program Type (PTY) – This indicates the kind of program currently being broadcast.
   • Current tuner frequency (FREQ)
   "NO TEXT", or "NO NAME" etc. is displayed when no information is delivered.

Search for Stations by Program Type
1. Press the PTY button on the remote controller.
2. Press the PRESET +/- button to select the Program Type you want to search for, and then press ENTER to start the search.
   • The Program Types displayed are as follows: NEWS (News reports) / AFFAIRS (Current affairs) / INFO (Information) / SPORT / EDUCATE (Education) / DRAMA / CULTURE / SCIENCE (Science and technology) / VARIED / POP M (Pop music) / ROCK M (Rock music) / EASY M (Middle of the road music) / LIGHT M (Light classics) / CLASSICS (Serious classics) / OTHER M (Other music) / WEATHER / FINANCE / CHILDREN (Children’s programmes) / SOCIAL (Social affairs) / RELIGION / PHONE IN / TRAVEL / LEISURE / JAZZ (Jazz music) / COUNTRY (Country music) / NATION M (National music) / OLDIES (Oldies music) / FOLK M (Folk music) / DOCUMENT (Documentary)
   • The information displayed may not match the content delivered by the station.
3. When a station is found, the station is displayed.
   • Search can be performed only for the stations registered with preset numbers. If stations are not registered with preset numbers, or no stations are found, "NO PTY" is displayed.
   • Spaces may be displayed when the unit receives unsupported characters. This is not a malfunction. If any noise is picked up while displaying the RT scroll, some characters may be displayed incorrectly.
Multi-zone

You can enjoy 2-ch audio in the separate room (ZONE 2) while performing 5.1-ch playback in the main room (where this unit is located). The same source can be played back in the main room and ZONE 2 simultaneously. Also, different sources can be played back in both rooms. When listening to AM/FM broadcasting, you cannot select different stations for the main room and separate room. To use the multi-zone function, settings are required beforehand. Refer to "Menu operations" (→p60) and set "2. Manual SP Setup" (→p61) - "a. Speaker System" to "ZONE 2".

Playing Back

Notes on operation

In the remote controller operation, while pressing and holding the ZONE 2 button on the remote controller, operate with each button.
1. Point the remote controller at the unit, and while pressing and holding the ZONE 2, press ✎. Alternatively, press the MULTI ZONE ON/OFF button on the main unit.
   • “ZONE” on the display of the main unit lights up.

2. While pressing and holding the ZONE 2, press the input selector of the input source you want to play in the separate room.
   • Selectable input sources are, "BD/DVD", "CBL/SAT", "CD", "TV", "TUNER" and "BT" (BLUETOOTH). Select any of them.
   • To control on the main unit, press MULTI ZONE CONTROL, and then within 8 seconds, press the input selector button of the input to be played in the separate room.

3. While pressing and holding the ZONE 2, adjust the volume on the remote controller.
   • To do this on the main unit, press MULTI ZONE CONTROL, and then within 8 seconds, adjust the volume using the MASTER VOLUME dial.
   • If you turn the unit to standby during multi-zone playback, the playback mode is switched to playback in the separate room only. Setting ZONE 2 to on while the unit is in standby also switches the playback mode to playback in the separate room only.
   • To output audio from an externally connected AV component to ZONE 2, use an analog audio cable for connection.
   • If ZONE 2 is on, power consumption during standby will increase.

To disable the function: While pressing and holding ZONE 2, press ✎. Alternatively, press the MULTI ZONE ON/OFF button on the main unit.
Convenience functions

Adjusting the tone

You can adjust the sound quality of the front speakers.

1. Press the TONE button on the main unit to select the setting to adjust from "BASS" and "TRE".
   - BASS: Enhances or moderates the low-tone range of the front speakers.
   - TRE: Enhances or moderates the high-tone range of the front speakers.
2. Press the +/- buttons to adjust.

The tone can be adjusted using the remote controller. (→p10)

- It cannot be adjusted if the listening mode is DIRECT.
- If "2. Manual SP Setup" - "b. Speaker Setting" - "Front" is set to "SMALL", and
  "2. Manual SP Setup" - "c. X.Over" is set to "150Hz" or more on the Setup menu, the sound quality of the subwoofer can be adjusted by pressing BASS +/- button.
Using the Sleep Timer

You can allow the unit to enter standby automatically when the specified time has elapsed.

1. Press SLEEP to set the time.
   - Select the time from "30", "60" and "90" minutes. Select "OFF" if you do not allow the unit to automatically enter standby mode.
   - When you press SLEEP once while the sleep timer is running, the remaining time is displayed.
Listening Mode

This unit is equipped with a variety of listening modes, and you can select the optimum listening mode for movies, TV, music, and games by pressing DIRECT, STEREO, SURR or DSP.

Selecting a Listening mode

1. Press any of DIRECT, STEREO, SURR and DSP during playback to switch the mode that appears on the display of the main unit. Pressing SURR or DSP repeatedly can switch to various modes.

   - DIRECT
   - STEREO
   - SURR
   - DSP

   ALL CH STEREO

Selectable Listening mode (→ p54)
Listening modes that can be selected with each button are as follows. For the audio formats supported by this unit, refer to "Supported Audio Formats" section.

* Important: The listening modes may not be available depending on the current source, settings and status of the receiver.

** DIRECT button:**
The DIRECT mode blocks some portion of the processing such as the tone control function that affects sound qualities. Selecting this mode allows you to enjoy the sound quality better than that of the input audio format. With this mode, the sound is reproduced with the sound field based on the number of channels in the input signal. For example, a 2ch input signal is output only from the front speakers.

** STEREO button:**
You can select the STEREO mode that reproduces the sound only with the front speakers and subwoofer.

** SURR button:**
Pressing this button repeatedly allows you to select various modes.
If the number of channels of the input signal and the number of channels of the installed speakers are the same (e.g. The input signal is 5.1ch and the speaker setting is 5.1ch), the input audio format is displayed on the display. For the audio formats supported by this unit, refer to "Supported Audio Formats" section.
If the number of channels of the input signal and the number of channels of the installed speakers are different (e.g. The input signal is 5.1ch and the speaker setting is 7.1ch), the following modes are displayed on the display.

* When the input signal is 2 ch
  - DOLBY PLII MOVIE
  - DOLBY PLIIx MOVIE
  - DOLBY PLII MUSIC
  - DOLBY PLIIx MUSIC
  - DOLBY PLII GAME
  - DOLBY PLIIx GAME
  - NEO:6 CINEMA
  - NEO:6 MUSIC

* When the input signal is multi-channel
  - DOLBY PLII MOVIE
  - DOLBY PLIIx MOVIE
  - DOLBY PLII MUSIC
  - DOLBY PLIIx MUSIC
  - DOLBY PLII GAME
  - DOLBY PLIIx GAME
  - NEO:6 CINEMA
  - NEO:6 MUSIC

*1 Surround back speakers need to be installed.  
*2 Front height speakers need to be installed.

** When the input signal is multi-channel**
(For the following listening modes, "DOLBY D", "DTS" or "PCM" may be displayed at the beginning of the display.)
- PLII MOVIE
- PLIIx MOVIE
- PLII MUSIC
- PLIIx MUSIC
- PLII GAME
- PLIIx GAME
- NEO:6 CINEMA
- NEO:6 MUSIC
- EX
- DTS-ES
- DTS Express

*1 Surround back speakers need to be installed.  
*2 Front height speakers need to be installed.

** DSP button:**
Pressing this button repeatedly will display the following modes on the display.
- ALL CH STEREO
- TV LOGIC
- GAME-ACTION
- GAME-RPG
- GAME-SPORTS
- GAME-ROCK
- ORCHESTRA

** Supported Audio Formats:**
This unit supports the inputs of the following audio formats. (When connecting with an HDMI cable)
- Dolby Digital
- Dolby Digital Plus
- Dolby TrueHD
- DTS
- DTS 96/24
- DTS-ES
- DTS Express
- DTS-HD High Resolution Audio
- DTS-HD Master Audio
• PCM (32 kHz to 192 kHz sampling frequencies)
• DSD (2ch only)

Checking the input format and listening mode

Pressing \( i \) repeatedly allows you to check the listening mode → volume → input audio format → speaker system → input selector on the display.

\[
\begin{align*}
\text{ALL CH STEREO} \\
\downarrow \\
\text{VOL 30} \\
\downarrow \\
\text{DOLBY DIGITAL} \\
\downarrow \\
\text{SURR. BACK} \\
\downarrow \\
\text{BD/DVD} \ 
\end{align*}
\]

You can also check the listening mode and input audio format with the indicator at the bottom of the display.

\[
\text{DTS HD ES 56/24 NEO\#} \ 
\text{\& HD D + EX} \ 
\text{\& PL\text{\&}EX}
\]
Listening Mode Effects

For the following listening modes, "DOLBY D", "DTS" or "PCM" may be displayed at the beginning of the display.

In alphabetical order

▪ ALL CH STEREO
This mode is ideal for background music. Stereo sound is played through the surround speakers as well as the front speakers, creating a stereo image.

▪ DIRECT
This listening mode can be selected for all input signals. Processing that affects sound quality is shut down, and sound closer to the original is reproduced. The sound is reproduced with the sound field based on the number of channels in the input signal. For example, a 2ch input signal is output only from the front speakers. Note that the sound adjustment is not available when this mode is selected.

▪ 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. and is widely adopted for use in movie production. It is also a standard audio format for 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, one 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 a digital cable and set the audio output on the player to Bitstream output.

▪ DOLBY DIGITAL +
This mode faithfully reproduces the sound design recorded in the Dolby Digital Plus audio format. The Dolby Digital Plus format has been improved 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 an optional audio format based on 5.1ch for Blu-ray Discs. It is possible to record a maximum of 7.1 channels with additional channels such as the surround back channel.
  • To enable transfer of this audio format, connect via an HDMI cable and set the audio output on the player to Bitstream output.

▪ DOLBY TRUEHD
This mode faithfully reproduces the sound design recorded in the Dolby TrueHD audio format. The Dolby TrueHD audio format is a "lossless" format expanded based on the lossless compression technology referred to as MLP, and it faithfully reproduces the master audio recorded in the studio. Dolby TrueHD is an optional audio format based on 5.1ch for Blu-ray Discs. It is possible to record a maximum of 7.1 channels with additional channels such as the surround back channel. 7.1ch is recorded at 96 kHz/24 bit, and 5.1ch is recorded at 192 kHz/24 bit.
  • To enable transfer of this audio format, connect via an HDMI cable and set the audio output on the player to Bitstream output.

▪ 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 for DVD-Video and a standard format for Blu-ray Discs. It enables recording of 5.1 channels; two front channels, one 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 a maximum sampling rate of 48 kHz, at a resolution of 24 bits and a bit rate of 1.5 Mbps.
  • To enable transfer of this audio format, connect via a digital cable and set the 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 for DVD-Video and Blu-ray Discs. It enables recording of 5.1 channels; two front channels, one 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 96 kHz and at a
resolution of 24 bits.
• To enable transfer of this audio format, connect via a digital cable and set the
audio output on the player to Bitstream output.

■ DTS ES DSCRT (DTS-ES Discrete)
This mode faithfully reproduces the sound design recorded in the DTS-ES
Discrete audio format. DTS-ES Discrete is an optional audio format based on
5.1ch for DVD-Video and Blu-ray Discs. It is possible to record a maximum of 6.1
channels with a monaural surround back channel added.
• To enable transfer of this audio format, connect via a digital cable and set the
audio output on the player to Bitstream output.

■ DTS ES MTRX (DTS-ES Matrix)
This mode faithfully reproduces the sound design recorded in the DTS-ES Matrix
audio format. DTS-ES Matrix is an optional audio format based on 5.1ch for DVD-
Video and Blu-ray Discs. A monaural surround back channel is inserted to this
format by matrix encoding. During playback, 6.1 channel-playback is achieved by
the matrix decoder on this unit.
• To enable transfer of this audio format, connect via a digital cable and set the
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 an optional audio format based on 5.1ch for Blu-
ray Discs. It is possible to record a maximum of 7.1 channels with additional
channels such as the surround back channel. It also supports low bit rates.
• To enable transfer of this audio format, connect via an HDMI cable and set the
audio output on the player to Bitstream output.

■ DTS-HD HI RES (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 an optional
audio format based on 5.1ch for Blu-ray Discs. It is possible to record a maximum
of 7.1 channels with additional channels such as the surround back channel at a
sampling rate of 96 kHz and at a resolution of 24 bits.
• To enable transfer of this audio format, connect via an HDMI cable and set the
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 an optional audio format based on 5.1ch for Blu-ray Discs. It is possible to record a maximum of 7.1 channels with additional channels such as the surround back channel using the lossless audio reproduction technology. 96 kHz/24 bit is supported for 7.1ch, and 192 kHz/24 bit is supported for 5.1ch.
• To enable transfer of this audio format, connect via an HDMI cable and set the
audio output on the player to Bitstream output.

■ EX (DOLBY DIGITAL EX)
This listening mode expands actual channels to more channels for playback to
suit the configuration of the connected speakers by expanding movies or music
recorded with 5.1ch to 7.1ch using surround back speakers, for example.
• To enable transfer of this audio format, connect via a digital cable and set the
audio output on the player to Bitstream output.

■ GAME-ACTION
This mode is suitable for games with a lot of action.

■ GAME-ROCK
This mode is suitable for games with rock content.

■ GAME-RPG
This mode is suitable for role-playing games.

■ GAME-SPORTS
This mode is suitable for sports games.

■ NEO:6
This listening mode expands 2ch or 5.1ch input signals to 7.1ch using surround
back speakers. It offers full-bandwidth on all channels, with great independence
between the channels. The selectable modes are CINEMA mode suitable for movies and MUSIC mode suitable for music playback.

- NEO:6 CINEMA : Suitable to enjoy 2ch movies.
- NEO:6 MUSIC : Suitable to enjoy 2ch music.
- NEO:6 : This mode can expand 5.1ch input signals to 6.1ch or 7.1ch using surround back speakers.

**ORCHESTRA**

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

**PCM**

This mode is suitable to play sources recorded in multichannel PCM.

**PLII MOVIE/MUSIC/GAME**

This listening mode expands actual channels to more channels for playback to suit the configuration of the connected speakers by expanding 2ch input signals to 5.1ch, for example.

- PLII MOVIE : Suitable to enjoy movies.
- PLII MUSIC : Suitable to enjoy music.
- PLII GAME : Suitable to enjoy games.

**PLIIx MOVIE/MUSIC/GAME**

This listening mode expands actual channels to more channels for playback to suit the configuration of the connected speakers by expanding 2ch or 5.1ch input signals to 7.1ch using surround back speakers.

- PLIIx MOVIE : Suitable to enjoy movies.
- PLIIx MUSIC : Suitable to enjoy music.
- PLIIx GAME : Suitable to enjoy games.

**PLIIz HEIGHT**

This listening mode expands actual channels to more channels for playback to suit the configuration of the connected speakers by expanding 2ch or 5.1ch input signals to 7.1ch using front height speakers. Various sources of movies and music can be mixed. This mode is especially suitable to mix game content.

**STEREO**

This mode outputs audio from the right and left front speakers and subwoofer.

**TV LOGIC**

Suitable for TV shows produced in a TV studio, This mode gives clarity to voices by enhancing the entire surround sounds, and creates a realistic acoustic image.
## Setup Menu

### Menu list

You can configure advanced settings to have a more enjoyable experience with this unit. For operation details, refer to "Menu operations" (→p60).

<p>| | | |</p>
<table>
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<th></th>
<th></th>
</tr>
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<td>Set the connection status, volume, etc. of each speaker automatically.</td>
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<td><strong>2. Manual SP Setup</strong></td>
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</tr>
<tr>
<td><strong>4. Auto Power Down</strong></td>
<td>Auto Power Down</td>
<td>Set the automatic standby.</td>
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<td>a. Control</td>
<td>Set the linking function with a CEC-compatible device connected via HDMI.</td>
</tr>
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<td>d. 4k60p Setting</td>
<td>Make this setting when a TV supporting 4k/60p is connected.</td>
<td>p65</td>
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<td><strong>6. Power Management</strong></td>
<td>POWER OUT Standby</td>
<td>Make the setting related to power supply from the POWER OUT port on the back side.</td>
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</table>
Menu operations

Use the OSD (On-Screen Display) that appears on the TV to make the settings.
• When you do not use an HDMI cable but use an analog video cable to connect with the TV, the operation screens cannot be displayed on the TV. In such a case, see the display of the main unit to make the settings.
• When the input is set to "USB", or headphones are connected to the PHONE jack of the main unit, the Setup menu cannot be operated.

Press ⊗ on the remote controller to display the Setup menu.

Select the item with the cursors ▲/▼ 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 ⊗.
## 1. AccuEQ Room Cal.

Set the connection status, volume, etc. of each speaker automatically. (→p34)

## 2. Manual SP Setup

### a. Speaker System

Change the settings of the speakers connected to ZONE 2, SURROUND BACK, and FRONT HEIGHT jacks.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
</table>

### b. Speaker Setting

Change the settings of connection environment of the speakers.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center</td>
<td>SMALL</td>
<td>Make the setting according to the size of the center speaker and low-range reproduction capability. <em>SMALL</em>: When using small speakers with insufficient low-range reproduction capability (The low-tone range of the center speaker is sent to the subwoofer or other speakers for which &quot;LARGE&quot; is set.) <em>LARGE</em>: When using full range speakers with sufficient low-range reproduction capability <em>NO</em>: When the center speaker is not connected (The sound of the center speaker channel is output from other speakers.) • When &quot;Front&quot; is set to &quot;SMALL&quot;, &quot;LARGE&quot; cannot be selected.</td>
</tr>
<tr>
<td>Surr</td>
<td>SMALL</td>
<td>Make the setting according to the size of the surround speakers and low-range reproduction capability. <em>SMALL</em>: When using small speakers with insufficient low-range reproduction capability (The low-tone range of the surround speakers is sent to the subwoofer or other speakers for which &quot;LARGE&quot; is set.) <em>LARGE</em>: When using full range speakers with sufficient low-range reproduction capability <em>NO</em>: When surround speakers are not connected (The sound of the surround speaker channel is output from other speakers.) • When &quot;Front&quot; is set to &quot;SMALL&quot;, &quot;LARGE&quot; cannot be selected.</td>
</tr>
</tbody>
</table>

Front SMALL Make the setting according to the size of the front speakers and low-range reproduction capability. *SMALL*: When using small speakers with insufficient low-range reproduction capability (The low-tone range of the front speakers is sent to the subwoofer.) *LARGE*: When using full range speakers with sufficient low-range reproduction capability, or a subwoofer is not connected.

Front Height ---- Make the setting according to the size of the front height speakers and low-range reproduction capability. *SMALL*: When using small speakers with insufficient low-range reproduction capability *LARGE*: When using full range speakers with sufficient low-range reproduction capability • This can be set only when "a. Speaker System" - "SP System" is set to "Height", and "Surr" is set to "LARGE" or "SMALL". • When "Front" is set to "SMALL", "LARGE" cannot be selected.
### Setting Item | Default Value | Setting Details
---|---|---
Surr.Back | SMALL×2 | Make the setting according to the size of the surround back speakers, low-range reproduction capability and the number of connected speakers.
- "SMALL×1": When connecting one small speaker with insufficient low-range reproduction capability (The low-tone range of the surround back speaker is sent to the subwoofer or other speakers for which "LARGE" is set.)
- "SMALL×2": When connecting two small speakers with insufficient low-range reproduction capability (The low-tone range of the surround back speakers is sent to the subwoofer or other speakers for which "LARGE" is set.)
- "LARGE×1": When connecting one full range speaker with sufficient low-range reproduction capability
- "LARGE×2": When connecting two full range speakers with sufficient low-range reproduction capability
- "NO": When surround back speakers are not connected
  - This cannot be set when "Surr" is set to "NO".
  - When "Front" or "Surr" is set to "SMALL", "LARGE×1" or "LARGE×2" cannot be selected.

Subwoofer | YES | Set whether a subwoofer is connected or not.
- "YES": When a subwoofer is connected
- "NO": When a subwoofer is not connected
  - LFE (low-frequency effect) signals and low-tone range of the speakers set to "SMALL" are output from speakers other than the subwoofer.
  - "PLUS": Can be selected when "Front" is set to "LARGE". The low-tone range can be enhanced more by making the subwoofer output the low-tone range simultaneously which is output from each speaker set to "LARGE".
  - To set the subwoofer to "NO", set "Front" to "LARGE".
  - Setting "Front" to "SMALL" will fix the subwoofer to "YES".

#### c. X.Over
Change the settings of crossover frequencies.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>100 Hz</td>
<td>When speakers set to &quot;SMALL&quot; are present, set the maximum Hz of low-tone range reproduced from other speakers (including the subwoofer) or the maximum Hz of low-tone range of LFE (low-frequency effect) signals reproduced. Select from among &quot;50Hz&quot;, &quot;80Hz&quot;, &quot;100Hz&quot;, &quot;150Hz&quot; and &quot;200Hz&quot;.</td>
</tr>
</tbody>
</table>

#### d. Channel Level
Adjust the volume level of each speaker.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
</table>
| Test Tone | Manual | Before adjusting, select the method to output the test tone. Select the output method and press the ENTER button. Then the test tone starts to be output.
- "Manual": Switch speakers manually that output test tones, and adjust the volume levels.
- "Auto": Test tones are output for each speaker one by one. The volume levels are adjusted accordingly.
  - When "Manual" is selected, switch speakers with ▲/▼.
| Front L | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments). |
| Front Height L | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments).  
  - This can be set only when "a. Speaker System" - "SP System" is set to "Height", and "b. Speaker Setting" - "Front Height" is set to a value other than "NO". |
| Center | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments). |
### Setting Item | Default Value | Setting Details
--- | --- | ---
Front Height R | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments).<br>• This can be set only when "a. Speaker System" - "SP System" is set to "Height", and "b. Speaker Setting" - "Front Height" is set to a value other than "NO".

Front R | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments).

Surround R | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments).

Surr. Back R | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments).<br>• This can be set only when "a. Speaker System" - "SP System" is set to "Surr. Back", and "b. Speaker Setting" - "Surr. Back" is set to a value other than "NO".

Surr. Back L | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments).<br>• This can be set only when "a. Speaker System" - "SP System" is set to "Surr. Back", and "b. Speaker Setting" - "Surr. Back" is set to a value other than "NO".

Surround L | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments).

Subwoofer | 0 dB | Select a value between "-15 dB" and "+15 dB" (in 1 dB increments).

### e. Speaker Distance
Set the distance from each speaker to the listening position.

| Setting Item | Default Value | Setting Details |
--- | --- | --- |
Front L | 10.0ft/3.0m | Specify the distance between each speaker and the listening position. |
Front Height L | 10.0ft/3.0m | Specify the distance between each speaker and the listening position. <br>• This can be set only when "a. Speaker System" - "SP System" is set to "Height", and "b. Speaker Setting" - "Front Height" is set to a value other than "NO". |
Center | 10.0ft/3.0m | Specify the distance between each speaker and the listening position. |
Front Height R | 10.0ft/3.0m | Specify the distance between each speaker and the listening position. <br>• This can be set only when "a. Speaker System" - "SP System" is set to "Height", and "b. Speaker Setting" - "Front Height" is set to a value other than "NO". |
Front R | 10.0ft/3.0m | Specify the distance between each speaker and the listening position. |
Surround R | 10.0ft/3.0m | Specify the distance between each speaker and the listening position. |
Surr. Back R | 10.0ft/3.0m | Specify the distance between each speaker and the listening position. <br>• This can be set only when "a. Speaker System" - "SP System" is set to "Surr. Back", and "b. Speaker Setting" - "Surr. Back" is set to a value other than "NO". |
Surr. Back L | 10.0ft/3.0m | Specify the distance between each speaker and the listening position. <br>• This can be set only when "a. Speaker System" - "SP System" is set to "Surr. Back", and "b. Speaker Setting" - "Surr. Back" is set to a value other than "NO". |
Surround L | 10.0ft/3.0m | Specify the distance between each speaker and the listening position. |
Subwoofer | 10.0ft/3.0m | Specify the distance between each speaker and the listening position.
• Default values vary depending on the regions.
• The unit of distance can be switched by pressing the \( \text{i} \) button on the remote controller. When using the unit "feet", the setting is available in increments of 0.1 ft from 0.1 ft to 30.0 ft. When using the unit "meter", the setting is available in increments of 0.1 m from 0.1 m to 9.0 m.

3. Input Assign

■ a. Analog Input

The device connected to the AUDIO IN (CD) jack can be selected with "CD" of the input selector. Also, it can be selected with "TV" of the input selector by changing the setting.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analog</td>
<td>CD</td>
<td>• Select either &quot;CD&quot; or &quot;TV&quot;.</td>
</tr>
</tbody>
</table>

4. Auto Power Down

■ Auto Power Down

Set the automatic standby.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Power Down</td>
<td>OFF(*)</td>
<td>This setting allows the unit to enter standby mode automatically after a certain period of time of inactivity. &quot;OFF&quot;: When the Auto Power Down function is not used. &quot;2H&quot;, &quot;4H&quot;, &quot;6H&quot;: Select the time that elapses before the power is turned off with Auto Power Down.</td>
</tr>
</tbody>
</table>

(*) For Australian models, the default value is "6H"

5. HDMI Setup

Change the settings of the HDMI function.

■ a. Control

Set the linking function with a CEC-compatible device connected via HDMI.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>OFF</td>
<td>Setting this to &quot;ON&quot; enables the input selection link and other link functions with an HDMI-connected CEC-compatible device. &quot;ON&quot;: When this function is used. &quot;OFF&quot;: When this function is not used. When this setting is changed, turn off and then on again the power of all connected devices. Depending on the TV to use, a link setting may be required on the TV. When this is set to &quot;ON&quot;, the power consumption in standby mode will increase. If abnormal behavior is observed when this is set to &quot;ON&quot;, set it to &quot;OFF&quot;. When connecting a non-CEC compatible device, or when you are not sure whether it is compatible, set the setting to &quot;OFF&quot;.</td>
</tr>
</tbody>
</table>

■ b. ARC

Enjoy the sound of an ARC-compatible TV through the speakers connected to the unit.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC</td>
<td>ON</td>
<td>You can enjoy the sound of the HDMI-connected ARC-compatible TV through the speakers connected to the unit. To use this function, set &quot;Control&quot; to &quot;ON&quot; beforehand. &quot;ON&quot;: When enjoying the TV sound through the speakers of this zero. &quot;OFF&quot;: When the ARC function is not used. When connecting TV using a digital optical cable or analog audio cable and setting &quot;Control&quot; to &quot;ON&quot;, set &quot;ARC&quot; to &quot;OFF&quot;.</td>
</tr>
</tbody>
</table>
### c. Standby Through

Play the video and audio of an HDMI-connected player on the TV even if the unit is in standby mode.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
</table>
| Standby Through     | OFF           | 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.  
* • The power consumption in standby mode will increase if it is set to anything other than "OFF", "BD/DVD", "CBL/SAT", "STRM BOX", "GAME": For example, if you select "BD/DVD", you can play the device connected to the "BD/DVD" jack on the TV even if the unit is in standby mode. Select this setting if you have decided which player to use with this function.  
* • "LAST": You can play on the TV the video and audio of the input selected immediately before the unit is switched to standby.  
* • To play a non-CEC compliant player on the TV, turn the unit on and switch the input. |

### d. 4k60p Setting

When using a TV supporting 4k/60p, you can change the setting according to the TV.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>BD/DVD</td>
<td>Select the input jack from among &quot;BD/DVD&quot;, &quot;CBL/SAT&quot;, &quot;STRM BOX&quot; and &quot;GAME&quot;.</td>
</tr>
</tbody>
</table>
| 4k60p        | 4:2:0         | "4:2:0": When using a 4k60p 4:2:0 24 bit TV  
* • "4:4:4": When using a 4k60p 4:4:4 24 bit TV  
* • Selecting "4:4:4" will allow you to enjoy higher quality images.  
* • If your HDMI cable does not support 4k60p 4:4:4 24 bit (Not 18 Gbps transmission), the TV images may not be reproduced correctly. For example, images may become blurry or unclear. In such a case, select "4:2:0".  
* • If you select "4:4:4" with the HDMI jack to which a player incompatible with 4k60p 4:4:4 24 bit is connected, the images output from the player may become reddish, or 3D signals may not be output. In such a case, select "4:2:0". |

### 6. Power Management

#### POWER OUT Standby

Change the setting related to power supply from the POWER OUT port on the back side.

<table>
<thead>
<tr>
<th>Setting Item</th>
<th>Default Value</th>
<th>Setting Details</th>
</tr>
</thead>
</table>
| POWER OUT Standby  | ON            | When this function is set to "ON", electricity can be supplied to the device connected to the POWER OUT port even if this unit is in standby mode.  
* • While using this function, power consumption in standby mode will increase. |
Quick Menu

Menu operations

While checking the display of this unit, you can adjust the settings you frequently use.
1. Press the Q button on the remote controller.
2. Select the item with the cursors ▲/▼ of the remote controller, change the setting with ◀/▶.
   • To exit the settings, press the Q button.
   • Depending on the input source, setting condition and connection status, some items may not be selected.

■ EQ (Acoustic Calibration EQ)
You can choose whether to enable or disable the frequency characteristic correction by the measurement result of "Automatic Speaker Setting (AccuEQ Room Calibration)". (→p34)
   • It cannot be set when the listening mode is Direct or headphones are used.

■ AV. SYN (A/V SYNC)
If the video is behind the audio, you can delay the audio to offset the gap.
   • It cannot be set when the listening mode is Direct with analog signal input.

■ M.OPT (Advanced Music Optimizer)
Improves the quality of the compressed audio. Playback sound of lossy compressed files such as MP3 will be improved. The setting can be set for each input.
   • This can also be set with the M.OPT button of the remote control.
   • It cannot be set if the listening mode is Direct.

■ DUAL MONO
Set the audio channel or language to be output when playing multiplex audio or multilingual broadcasts, etc.
"CH1": Main channel only
"CH2": Sub channel only
"CH1/CH2": Main and sub channels are output at the same time.

**F.PCM (Fixed PCM)**
Set this to "ON" if truncation at the beginning of a track occurs when playing PCM sources.
- Selecting "ON" may not produce sound of sources other than PCM sources, and may cause noise.

To display the "F.PCM" setting
Perform the following procedure.
1. Set the unit to standby mode.
2. While pressing and holding the RETURN button of the main unit, press the ON/STANDBY button to turn the unit on. Each time you operate, the "F.PCM" setting display is switched between Show and Hide.
- This operation is not possible if "Control" and "Standby Through" are set to other than "OFF".

**LATE. (LATE NIGHT)**
Enables small sounds to be easily heard in detail. It is useful when you need to reduce the volume while watching a movie late night. You can enjoy the effect only when playing the Dolby series and DTS series input signals.
- You can select from among "AUTO", "OFF", "MID" and "MAX".

**HDMI (HDMI Audio)**
Select whether to output audio from the HDMI jack to the receiver ("AMP") or to the TV ("THRU") via receiver.
- If "Control" is set to "ON", this cannot be selected.

**A.DLY (Auto Delay)**
Automatically corrects desynchronization between the video and audio signals based on the information from the HDMI Lip-Sync-compatible TV.
- If you find desynchronization between video and audio unnatural when selecting "ON", switch the setting to "OFF".

**C.WIDTH (Center Width)**
(Available only when using a center speaker)
Adjust the width of the sound field of the front channel when playing in the Dolby Pro Logic II Music listening mode. The smaller the setting value, the more concentrated sound in the center speaker. The larger the setting value, the more distributed sound to the front left and right speakers from the center speaker.

**DIMEN. (Dimension)**
Adjust the width of the sound field in front-back direction when playing in the Dolby Pro Logic II Music listening mode. As the setting value becomes smaller, the sound field shifts backward. As the value becomes larger, it shifts forward.

**PNRM. (Panorama)**
Adjust the width of the sound field in lateral direction when playing in the Dolby Pro Logic II Music listening mode.
- "ON": When this function is used
- "OFF": When this function is not used

**C.IMG (Center Image)**
(Available only when using a center speaker)
Adjust the width of the sound field of the front channel when playing in the DTS Neo:6 MUSIC/CINEMA listening mode. The smaller the setting value, the more distributed sound to the front left and right speakers from the center speaker. The larger the setting value, the more concentrated sound in the center speaker.

**H.GAIN**
Adjust the output from the front height speaker when playing in the PLIIz HEIGHT listening mode.
- You can select from among "L"(Low), "M"(Mid), and "H"(High). If this is set to "H", the sound from the top will be more emphasized.
## Troubleshooting

### Before starting the procedure

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

- The AV receiver contains a microPC for signal processing and control functions. In very rare situations, severe interference, noise from an external source, or static electricity may cause it to lockup. In the unlikely event that this happens, unplug the power cord from the wall outlet, wait at least 2 minutes, and then plug it back in.
- Onkyo is not responsible for damages (such as CD rental fees) due to unsuccessful recordings caused by the unit’s malfunction. Before you record important data, make sure that the material will be recorded correctly.

### When the unit is operating erratically

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<tbody>
<tr>
<td>Resetting the unit</td>
<td>(this resets the unit settings to the default)</td>
</tr>
</tbody>
</table>

### Troubleshooting

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<td>Display</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
</tbody>
</table>

---

Before starting the procedure

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

- The AV receiver contains a microPC for signal processing and control functions. In very rare situations, severe interference, noise from an external source, or static electricity may cause it to lockup. In the unlikely event that this happens, unplug the power cord from the wall outlet, wait at least 2 minutes, and then plug it back in.
- Onkyo is not responsible for damages (such as CD rental fees) due to unsuccessful recordings caused by the unit’s malfunction. Before you record important data, make sure that the material will be recorded correctly.
When the unit is operating erratically

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

If the restart of the unit does not solve the problem, reset the unit, and restore all the settings to the factory default at the time of purchase. This may solve the problem.

If the unit is reset, your settings are restored to the default values. Be sure to note down your setting contents before performing the following operations.

- This operation is not possible if "Control" and "Standby Through" are set to other than "OFF".

1. In standby mode, while pressing and holding LISTENING MODE of the main unit, press STANDBY/ON.
2. When "RESET?" appears on the display, press MULTI ZONE ON/OFF.
3. When "OK?" appears on the display, press MULTI ZONE CONTROL.
Troubleshooting

- **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 outlet once, wait 2 minutes or more, then plug it in again. (→p30)
  - **The unit turns off unexpectedly**
    - If "4. Auto Power Down" on the Setup menu is activated, the unit automatically enters the standby mode.
    - The speaker cables may be short-circuited. Check if the core wire of a speaker cable is not in contact with the core wire of another speaker cable or the rear panel, and turn the power on again. (→p64)
  - **The unit turns off and after restoring the power, it does not turn on.**
    - The protection circuit has been activated. Remove the power cord from the wall outlet immediately. Make sure that all speaker cables and AV components are properly connected, and leave the unit with its power cord disconnected for 1 hour. After that, reconnect the power cord and turn the power on.
    - If the unit still does not turn on, avoid resetting it and unplug the power cord. Then contact your Onkyo authorized service company / center.
    - **WARNING:** If smoke, smell or abnormal noise is produced by the unit, unplug the power cord from the outlet immediately, and contact the dealer or Onkyo Support.

- **Audio**
  - Confirm that the connection between the output jack on the connected device and the input jack on this unit is correct.
  - Make sure that none of the connecting cables are bent, twisted, or damaged.
  - If the "MUTING" is on the display, press  
    on the remote controller to cancel muting.
  - While headphones are connected to the PHONES jack, no sound is output from the speakers.
  - Check the following if the problem persists after you have confirmed the above.

- **No sound from the TV**
  - If the TV supports the ARC function, set "5. HDMI Setup" - "a. Control" and "b. ARC" to "ON" respectively on the setup menu.
  - If the TV does not support the ARC function, along with the connection by an HDMI cable, connect the TV with this unit using a digital optical cable, or analog audio cable. If a digital optical cable or analog audio cable is used for connection and "5. HDMI Setup" - "a. Control" is set to "ON" on the Setup menu (→p59), set "b. ARC" to "OFF".
  - Change the input selector on this unit to the position of the terminal to which the TV is connected. (→p64) (→p24)
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 device. On some game consoles, such as those supporting DVD, the default setting may be off.
- For some DVD-Video discs, you need to select an audio output format from a menu.
- When the audio from a device connected using the digital coaxial cable or digital optical cable is output on this unit, switch the input signal with the AUDIO SEL button of the remote controller. (→p39)

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. (→p15)
- Make sure that the speaker cables are not shorting out.
- Check "Connect the Speaker Cables" to see if the speaker connections have been made correctly. Also, check the settings in "2. Manual SP Setup" - "a. Speaker System" and "b. Speaker Setting" on the setup menu. (→p61)
- Depending on the input signal and listening mode, no sound may be output from speakers. Select another listening mode to see if sound is output.

The subwoofer produces no sound

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

1. Change the setting for the front speakers to "SMALL".
   The low range elements will be output from the subwoofer instead of from the front speakers. If your front speakers have a high low-range reproduction capability, changing this setting is not recommended.
2. Change "Subwoofer" to "PLUS".
   The low range elements of the front speakers will be output from both the front speakers and the subwoofer. Due to this, the bass sound may be emphasized too much. In such a case, do not change the setting, or make the setting with the above option 1.
- For the setting details, refer to "Setup Menu" - "2. Manual SP Setup" - "b. Speaker Setting". (→p61)
- If the input signals do not contain subwoofer audio elements (LFE), the subwoofer may produce no sound.

Noise can be heard

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

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

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

- To enjoy digital surround playback in formats such as Dolby Digital, you need to make a connection for audio signals with an HDMI cable, digital coaxial cable or digital optical cable. Also, audio output need to be set to Bitstream output on the connected Blu-ray Disc player, etc.
- Press the remote controller several times to switch the display of the main unit, and you can check the input format. Check the following if the problem persists after you have confirmed the above.

### Cannot select a desired listening mode

- Depending on the current source, settings and status of the unit, some listening modes may not be selected. Refer to "Selecting a Listening mode" in "Listening Mode".  

### Cannot listen to the sound in Dolby TrueHD or DTS-HD Master Audio format

- If the audio in Dolby TrueHD or DTS-HD Master Audio format cannot be output correctly in the source format, set "BD video supplementary sound" (or reencode, secondary sound, video additional audio, etc.) to "Off" in the setting of a connected Blu-ray Disc player, etc. After changing the setting, switch the listening mode to that for each source, and confirm.

## Video

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

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

### No image appears.

- Change the input selector on this unit to the position of the jack to which the player is connected.
- Images from the VIDEO IN jack (analog) are not output from HDMI. Images from the HDMI jack are not output from MONITOR OUT (analog). Use the same type of jack and cable for input and output.

### No image from a device connected to HDMI IN jack

- To display video from the connected player on the TV while the unit is in standby, you need to enable "5. HDMI Setup" - "c. Standby Through" in the Setup menu.
- Normal operation with an HDMI-DVI adapter is not guaranteed. In addition, video signals output from a PC are not guaranteed.


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

- **Video and audio are out of synch**
  - Depending on the settings on your TV and connection environment, the video may be behind the audio. Press Q on the remote controller to display "Quick Menu", and make the adjustment in "AV. SYN". (→p66)

- **Linked operation**

- **HDMI linked operation does not work with CEC-compliant devices, such as a TV**
  - In the Setup menu of the unit, set "5. HDMI Setup" - "a. Control" to "ON". (→p64)
  - It is also necessary to set HDMI linking on the CEC-compliant device. Check the instruction manual.

- **Tuner**

- **Poor reception or much noise**
  - Recheck the antenna connection. (→p29)
  - Move the antenna away from the speaker cord or power cord.
  - Move the unit away from your TV or PC.
  - Passing cars or airplanes in the vicinity can cause interference.
  - If radio waves are blocked by concrete walls, etc., radio reception may be poor.
  - Change the reception mode to mono.
  - Operating the remote controller during AM reception may cause noise.
  - FM reception may be clearer if you use the antenna jack on the wall used for the TV.
■ BLUETOOTH function

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

❑ Cannot connect with this unit
- Check if the BLUETOOTH function of the BLUETOOTH-enabled device is enabled.

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

❑ Sound is interrupted
- There may be a problem with the BLUETOOTH-enabled device. Check the information on a web page.

❑ The audio quality is poor after connection with a BLUETOOTH-enabled device
- The BLUETOOTH reception is poor. Move the BLUETOOTH-enabled device closer to the unit, or remove any obstacle between the BLUETOOTH-enabled device and this unit.

■ USB storage device

❑ USB storage device is not displayed
- Check if the USB storage device or USB cable is securely inserted to the USB port of the unit.
- Disconnect the USB storage device once from the unit, and then reconnect it.
- Note that operation is not always guaranteed for all USB storage devices.
- Depending on the type of content, the playback may not be performed normally. Check the types of supported file formats.
- Operations of USB storage devices equipped with security functions are not guaranteed.
"USB Error 4 (I/U ERR4)" appears on the display.

- The power requirements of the USB device are too high for this receiver. Switch off the receiver and reconnect the USB to the receiver.

**Multi-zone function**

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

- To output audio to ZONE 2, you need to set "2. Manual SP Setup" - "a. Speaker System" to "ZONE 2" on the setup menu.
- To output audio from an externally connected AV component to ZONE 2, use an analog audio cable for connection. (→p61)

**Remote Controller**

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

**Display**

**The display does not light up**

- When the Dimmer function is working, the display may go dim. Press the DIMMER button, and change the brightness level of the display. (→p10)

**Others**

**Strange noise can be heard from the unit**

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

**The measurement results of AccuEQ Room Cal. show different distances to the speakers from the actual ones**

- Depending on the speakers you are using, measurement results may differ from the actual distance.

"OVERHEAT" appears in the display and the volume level drops.

- The temperature within the unit has exceeded the allowable value. Try moving the unit for better ventilation.
- Lower the volume level.
The OSD is not displayed on the TV

- The TV system (PAL/NTSC) setting on this unit is not suitable for your country or region. Switch the setting with the following procedure.

1. Set the unit to standby mode.
2. While pressing and holding the TUNING ▲ button of the main unit, press the ◎ ON/STANDBY button to turn the power on. Each time you operate, the setting is switched between "PAL" and "NTSC".

- This operation is not possible if "Control" and "Standby Through" are set to other than "OFF".
About HDMI

Compatible functions

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

HDMI CEC function:
By connecting a device that complies with CEC (Consumer Electronics Control) of the HDMI standard using an HDMI cable, a variety of linked operations between devices are possible. This function enables various linking operations with players, such as switching input selectors interlocking with a player, adjusting the volume of this unit using the remote controller of a TV, and automatically switching this unit to standby when the TV is turned off.

The unit is designed to link with products that comply with the CEC standard, however, linked operation is not always guaranteed with all CEC devices. For linked functions to work properly, do not connect CEC-compliant devices exceeding the connectable number to the HDMI jack as shown below.

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

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

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

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

x.v.Color™:
This technology reproduces even more realistic colors by expanding the color gamut.

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

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

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

Supported Audio Formats

2 ch linear PCM:
32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz, 16/20/24 bit

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 Digital, Dolby Digital Plus, Dolby TrueHD, DTS, 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 the HDMI output of the above audio formats.
Supported resolutions

HDMI IN:
- 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), YCbCr4:2:2:2 (12 bit), YCbCr4:2:0 (8/10/12 bit)
General Specifications

■ Amplifier Section
Rated Output Power
With 8 ohm loads, both channels driven, from 20-20,000 Hz; rated 80 watts per channel minimum RMS power, with no more than 0.08% total harmonic distortion from 250 milli watts to rated output. (FTC) (North American)
7 ch × 135 W at 6 ohms, 1 kHz, 1 ch driven of 1% THD (IEC) (Others)
100 W per channel (20 Hz to 20 kHz, 8 Ω, 0.09%) (Others)
Maximum Effective Output Power (North American)
155 W at 6 ohms, 1 kHz, 1 ch driven of 10% THD
THD+N (Total Harmonic Distortion+Noise)
0.06% (20 Hz to 20,000 Hz, 50 W)
Input Sensitivity and Impedance
200 mV/47 kΩ (LINE (RCA))
Frequency Response
5 Hz to 100 kHz/+1 dB, −3 dB (Direct)
Tone Control Characteristics
±10 dB, 100 Hz (BASS)
±10 dB, 10 kHz (TREBLE)
Signal to Noise Ratio
106 dB (IHF-A, LINE IN, SP OUT)
Speaker Impedance
6 Ω - 16 Ω

■ Video Section
Signal level
1 Vp-p/75 Ω (Composite Video)

■ Tuner Section
FM Tuning Frequency Range
87.5 MHz to 108.0 MHz
AM Tuning Frequency Range
530 kHz to 1700 kHz (North American and Taiwanese)

■ BLUETOOTH Section
Communication system
BLUETOOTH Specification version 3.0
Frequency band
2.4 GHz band
Modulation method
FHSS (Freq Hopping Spread Spectrum)
Compatible BLUETOOTH profiles
A2DP
Supported Codecs
SBC
AAC
Qualcomm® aptX™
Transmission range (A2DP)
20 Hz - 20 kHz (Sampling frequency 44.1 kHz)
Maximum communication range
Line of sight approx. 10 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
120 V AC, 60 Hz (North American and Taiwanese)
220 - 240 V AC, 50/60 Hz (Others)
Power Consumption

- 270 W
- 0.2 W (Full Standby mode) (North American and Taiwanese)
- 0.3 W (Full Standby mode) (Others)
- 0.8 W (Standby mode (HDMI Control: ON))

Dimensions (W × H × D)

- 435 mm × 168 mm × 326.5 mm
- 17” × 6-1/2” × 13”

Weight

- 8.2 kg (18.1 lbs.)

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

- 2402 MHz - 2480 MHz (+4 dBm (e.i.r.p))

**HDMI**

**Input**
- BV/DVD, CBL/SAT, STRM BOX, GAME

**Output**
- HDMI OUT  55 mA

**Supported**
- Deep Color, x.v.Color™, Audio Return Channel, 3D, 4K 60 Hz, CEC, HDR (HDR10, BT.2020, HLG)

**Audio Format**
- Dolby TrueHD, Dolby Digital, Dolby Digital Plus, DTS, DTS-HD Master Audio, DTS-HD High Resolution Audio, DTS 96/24, DTS-ES, DSD, PCM

**HDCP version**
- 2.2

**Maximum Video Resolution**
- 4k 60 Hz (YCbCr 4:4:4)

**Video Inputs**

**VIDEO**
- BD/DVD, CBL/SAT

**Audio Inputs**

**Digital**
- OPTICAL (TV)
- COAXIAL (CD)

**Analogue**
- RCA (BD/DVD, CBL/SAT, CD)

**Audio Outputs**

**Pre Out**
- 2 SUBWOOFER

**Speaker Outputs**
- FRONT L/R (North American models support banana plugs.), CENTER, SURROUND L/R, SURROUND BACK L/R or FRONT HEIGHT L/R or ZONE 2 L/R

**Phones**
- PHONES (Front, ø 6.3 mm, 1/4”)

**Video Outputs**

**Audio**
- MONITOR OUT

**Others**

**Setup Mic**
- 1 (Front)

**USB**
- Ver. 2.0, Full Speed, Type-A, 5 V/1 A (Front)
- POWER OUT
- 5V/1A (Rear)

**Power consumption in standby mode**

- In the following cases, the power consumption in standby mode may reach up to a maximum of 0.8 W:
  - When "5. HDMI Setup" - "Control" is set to "ON"
  - When "Standby Through" is set to other than "OFF"
  - When "POWER OUT Standby" is set to "ON"

Specifications and features are subject to change without notice.

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