



Operating Instructions

AV RECEIVER

TX-SR252

CAUTION

TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

D3-4-2-1-1_B1_En

WARNING

This equipment is not waterproof. To prevent a fire or shock hazard, do not place any container filled with liquid near this equipment (such as a vase or flower pot) or expose it to dripping, splashing, rain or moisture.

D3-4-2-1-3_A1_En

WARNING

To prevent a fire hazard, do not place any naked flame sources (such as a lighted candle) on the equipment.

D3-4-2-1-7a_A1_En

Operating Environment

Operating environment temperature and humidity:
+5 °C to +35 °C (+41 °F to +95 °F); less than 85 %RH
(cooling vents not blocked)

Do not install this unit in a poorly ventilated area, or in locations exposed to high humidity or direct sunlight (or strong artificial light).

D3-4-2-1-7c*_A2_En

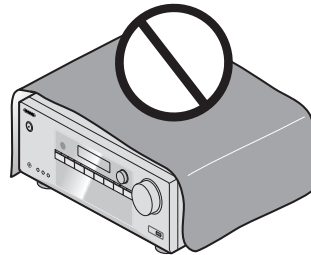
VENTILATION CAUTION

When installing this unit, make sure to leave space around the unit for ventilation to improve heat radiation (at least 40 cm at top, 20 cm at rear, and 20 cm at each side).

WARNING

Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product, and to protect it from overheating. To prevent fire hazard, the openings should never be blocked or covered with items (such as newspapers, table-cloths, curtains) or by operating the equipment on thick carpet or a bed.

D3-4-2-1-7b*_A1_En



Information for users on collection and disposal of old equipment and used batteries

(Symbol for equipment)



(Symbol examples for batteries)



Pb

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

These symbols are only valid in the European Union.

For countries outside the European Union:

If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

K058a_A1_En

CAUTION

The **ON/STANDBY** switch on this unit will not completely shut off all power from the AC outlet. Since the power cord serves as the main disconnect device for the unit, you will need to unplug it from the AC outlet to shut down all power. Therefore, make sure the unit has been installed so that the power cord can be easily unplugged from the AC outlet in case of an accident. To avoid fire hazard, the power cord should also be unplugged from the AC outlet when left unused for a long period of time (for example, when on vacation).

D3-4-2-2-2a*_A1_En

WARNING

Store small parts out of the reach of children and infants. If accidentally swallowed, contact a doctor immediately.

D41-6-4_A1_En

This product is for general household purposes. Any failure due to use for other than household purposes (such as long-term use for business purposes in a restaurant or use in a car or ship) and which requires repair will be charged for even during the warranty period.

K041_A1_En

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Thank you for buying this Onkyo product. Please read through these operating instructions so you will know how to operate your model properly.

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Before you start

Checking what's in the box

Please check that you've received the following supplied accessories:

- Remote control
- AAA size IEC R03 dry cell batteries (to confirm system operation) x2
- AM loop antenna
- FM wire antenna
- Quick start guide
- Safety Brochure

Installing the receiver

- When installing this unit, make sure to put it on a level and stable surface.

Don't install it on the following places:

- on a color TV (the screen may distort)
- near a cassette deck (or close to a device that gives off a magnetic field). This may interfere with the sound.
- in direct sunlight
- in damp or wet areas
- in extremely hot or cold areas
- in places where there is vibration or other movement
- in places that are very dusty
- in places that have hot fumes or oils (such as a kitchen)

Flow of settings on the receiver

The unit is a full-fledged AV receiver equipped with an abundance of functions and terminals. It can be used easily after following the procedure below to make the connections and settings.

The colors of the steps indicate the following:

Required setting item

Setting to be made as necessary

1 Connecting the speakers

Where you place the speakers will have a big effect on the sound.

- Placing the speakers ([page 10](#))
- Connecting the speakers ([page 11](#))

2 Connecting the components

For surround sound, you'll want to hook up using a digital connection from the Blu-ray Disc/DVD player to the receiver.

- About video outputs connection ([page 13](#))
- Connecting a TV and playback components ([page 14](#))
- Connecting antennas ([page 16](#))
- Plugging in the receiver ([page 17](#))

3 Power On

Make sure you've set the video input on your TV to this receiver. Check the manual that came with the TV if you don't know how to do this.

4 Making the initial settings according to the region and environment in which you live

- Changing the TV format setting of Graphical User Interface ([page 25](#))
- Changing the frequency step of AM Radio ([page 26](#))

5 Specify the size and number of speakers you've connected

- Speaker Setting ([page 26](#))

6 The Input Assign menu ([page 28](#))

(When using connections other than the recommended connections.)

The HDMI Setup menu ([page 29](#))

(When the connected TV supports the HDMI Audio Return Channel function.)

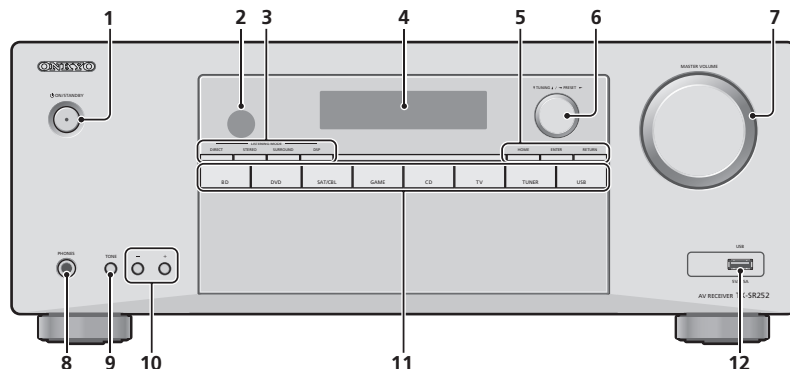
7 Basic playback ([page 18](#))

- Selecting the audio input signal ([page 18](#))
- Playing a USB device ([page 20](#))
- Choosing the listening mode ([page 23](#))

8 Adjusting the sound as desired

- Using the Music Optimizer ([page 23](#))
- Setting the Audio options ([page 24](#))
- Manual speaker setup ([page 26](#))

Front panel



1 ON/STANDBY

2 Remote sensor

Receives the signals from the remote control (see [Operating range of remote control on page 9](#)).

3 Listening mode buttons

DIRECT – Switches to the DIRECT mode ([page 23](#)).

STEREO – Switches to the STEREO mode ([page 23](#)).

SURROUND – Press for standard decoding and to switch between the modes of Pro Logic II and NEO:6.

DSP – Switches between the various surround modes ([page 23](#)).

4 Character display

See [Display on page 7](#).

5 HOME/ENTER/RETURN buttons

HOME – Use to access the Home Menu.

ENTER – Press to confirm the specified settings.

RETURN – Press to confirm and exit the current menu screen.

6 Tuner control dial

▼ **TUNING** ▲ – Used to find radio frequencies ([page 21](#)).

◀ **PRESET** ▶ – Use to select preset radio stations ([page 21](#)).

7 MASTER VOLUME dial

8 PHONES jack

Use to connect headphones. When the headphones are connected, there is no sound output from the speakers.

9 TONE

Switches the display between **Bass** settings and **Treble** settings.

10 TONE +/-

Press to change the settings while the **Bass** or **Treble** settings are displayed.

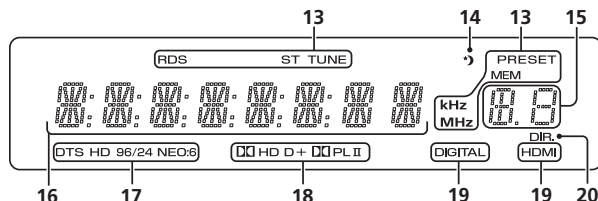
11 INPUT SELECTOR buttons

Selects an input source ([page 18](#)).

12 USB terminal

Use to connect your USB mass storage device as an audio source ([page 17](#)).

Display



13 Tuner indicators

RDS – Lights when an RDS broadcast is received ([page 22](#)). (For Europe)

ST – Lights when a stereo FM broadcast is being received in auto stereo mode ([page 21](#)).

TUNE – Lights when a normal broadcast channel.

PRESET – Shows when a preset radio station is registered or called.

MEM – Blinks when a radio station is registered.

kHz/MHz – Lights when the character display is showing the currently received AM/FM broadcast frequency.

14 Sleep timer indicator

Lights when the receiver is in sleep mode ([page 8](#)).

15 PRESET information or input signal indicator

Shows the preset number of the tuner or the input signal type, etc.

16 Character display

Displays various system information.

17 DTS indicators

DTS – Lights when a source with DTS encoded audio signals is detected.

HD – Lights when a source with DTS-EXPRESS or DTS-HD encoded audio signals is detected.

96/24 – Lights when a source with DTS 96/24 encoded audio signals is detected.

NEO:6 – When one of the NEO:6 modes of the receiver is on, this lights to indicate NEO:6 processing ([page 23](#)).

18 Dolby Digital indicators

D – Lights when a Dolby Digital encoded signal is detected.

D+ – Lights when a source with Dolby Digital Plus encoded audio signals is detected.

HD – Lights when a source with Dolby TrueHD encoded audio signals is detected.

PLII – Lights to indicate **Pro Logic II** decoding (see [Listening in surround sound on page 23](#) for more on this).

19 SIGNAL SELECT indicators

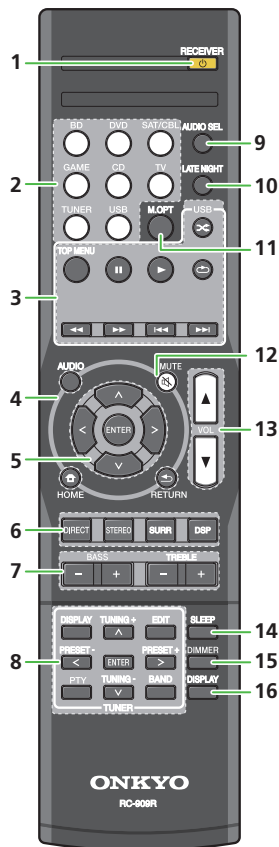
DIGITAL – Lights when a digital audio signal is selected. Blinks when a digital audio signal is selected and selected audio input is not provided.

HDMI – Lights when an HDMI signal is selected. Blinks when an HDMI signal is selected and selected HDMI input is not provided.

20 DIR.

Lights when the **DIRECT** mode is switched on ([page 23](#)).

Remote control



As for operating other devices, the remote control codes for the Onkyo products are preset. The settings cannot be changed.

1 RECEIVER

Switches the receiver between standby and on.

2 Input function buttons

Use to select the input source to this receiver ([page 18](#)). This will enable you to control other Onkyo components with the remote control.

3 Component control buttons

Use to control the **USB** source. This button cannot be used to control the **BD**, **DVD** and **CD** sources.

4 Receiver control buttons

AUDIO – Use to access the Audio options ([page 24](#)).

HOME – Press to access the Home Menu ([page 26](#)).

RETURN – Confirm and exit the current menu screen.

5 ↑/↓/←/→, ENTER

Use the arrow buttons when setting up your surround sound system ([page 26](#)). Also used to control Blu-ray Disc/DVD menus/options.

6 Listening mode and component control buttons

DIRECT – Press to select Direct playback ([page 23](#)).

STEREO – Press to select stereo playback ([page 23](#)).

SURR – Press for standard decoding and to switch between the modes of **IX** Pro Logic II and NEO:6 ([page 23](#)).

DSP – Switches between the various surround modes ([page 23](#)).

7 BASS +/-, TREBLE +/-

Use to adjust Bass or Treble.

- These controls are disabled when the listening mode is set to **DIRECT**.
- When the front speaker is set at **SMALL** in the Speaker Setting and the X.Over is set above 150 Hz, the subwoofer channel level will be adjusted by pressing **BASS +/-** ([page 27](#)).

8 TUNER control buttons

See [Listening to the radio on page 21](#).

9 AUDIO SEL

Press to select the audio input signal of the component to play back ([page 18](#)).

10 LATE NIGHT

Turns ON and OFF the **LATE NIGHT** function ([page 24](#)).

11 M.OPT

Press to restore CD quality sound to compressed audio sources ([page 23](#)).

12 MUTE

Mutes/unmutes the sound.

13 VOLUME +/-

Use to set the listening volume.

14 SLEEP

Press to change the amount of time before the receiver switches into standby (**30 min – 60 min – 90 min – Off**). You can check the remaining sleep time at any time by pressing **SLEEP** once.

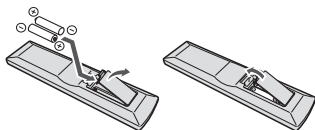
15 DIMMER

Dimms or brightens the display. The brightness can be controlled in four steps.

16 DISPLAY

Switches the display of this unit. The listening mode, sound volume or input name can be checked by selecting an input source.

Loading the batteries



The batteries included with the unit are to check initial operations; they may not last over a long period. We recommend using alkaline batteries that have a longer life.

⚠ WARNING

- Do not use or store batteries in direct sunlight or other excessively hot place, such as inside a car or near a heater. This can cause batteries to leak, overheat, explode or catch fire. It can also reduce the life or performance of batteries.

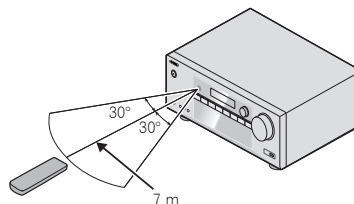
⚠ CAUTION

- Incorrect use of batteries may result in such hazards as leakage and bursting. Observe the following precautions:
 - Never use new and old batteries together.
 - Insert the plus and minus sides of the batteries properly according to the marks in the battery case.
 - Batteries with the same shape may have different voltages. Do not use different batteries together.
 - When disposing of used batteries, please comply with governmental regulations or environmental public institution's rules that apply in your country/area.
 - When inserting the batteries, make sure not to damage the springs on the battery's (-) terminals. This can cause batteries to leak or overheat.

Operating range of remote control

The remote control may not work properly if:

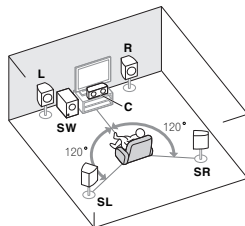
- There are obstacles between the remote control and the receiver's remote sensor.
- Direct sunlight or fluorescent light is shining onto the remote sensor.
- The receiver is located near a device that is emitting infrared rays.
- The receiver is operated simultaneously with another infrared remote control unit.



Placing the speakers

By connecting the left and right front speakers (**L/R**), the center speaker (**C**), the left and right surround speakers (**SL/SR**), and the subwoofer (**SW**), a 5.1 ch surround system can be enjoyed. To achieve the best possible surround sound, install your speakers as shown below.

5.1 channel surround system:



Hints on the speaker placement

Where you put your speakers in the room has a big effect on the quality of the sound. The following guidelines should help you to get the best sound from your system.

- The subwoofer can be placed on the floor. Ideally, the other speakers should be at about ear-level when you're listening to them. Putting the speakers on the floor (except the subwoofer), or mounting them very high on a wall is not recommended.
- For the best stereo effect, place the front speakers 2 m to 3 m apart, at equal distance from the TV.
- If you're going to place speakers around your CRT TV, use shielded speakers or place the speakers at a sufficient distance from your CRT TV.
- If you're using a center speaker, place the front speakers at a wider angle. If not, place them at a narrower angle.
- Place the center speaker above or below the TV so that the sound of the center channel is localized at the TV screen. Also, make sure the center speaker does not cross the line formed by the leading edge of the front left and right speakers.
- It is best to angle the speakers towards the listening position. The angle depends on the size of the room. Use less of an angle for bigger rooms.
- Surround speakers should be positioned 60 cm to 90 cm higher than your ears and tilted slightly downward. Make sure the speakers don't face each other. For DVD-Audio, the speakers should be more directly behind the listener than for home theater playback.
- Try not to place the surround speakers farther away from the listening position than the front and center speakers. Doing so can weaken the surround sound effect.

CAUTION

- Make sure that all speakers are securely installed. This not only improves sound quality, but also reduces the risk of damage or injury resulting from speakers being knocked over or falling in the event of external shocks such as earthquakes.

Connecting the speakers

The receiver will work with just two stereo speakers (the front speakers in the diagram) but using at least three speakers is recommended, and a complete setup is best for surround sound.

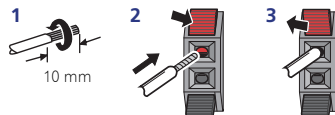
Make sure you connect the speaker on the right to the right (R) terminal and the speaker on the left to the left (L) terminal. Also make sure the positive and negative (+/-) terminals on the receiver match those on the speakers.

You can use speakers with a nominal impedance between 6 Ω and 16 Ω .

Be sure to complete all connections before connecting this unit to the AC power source.

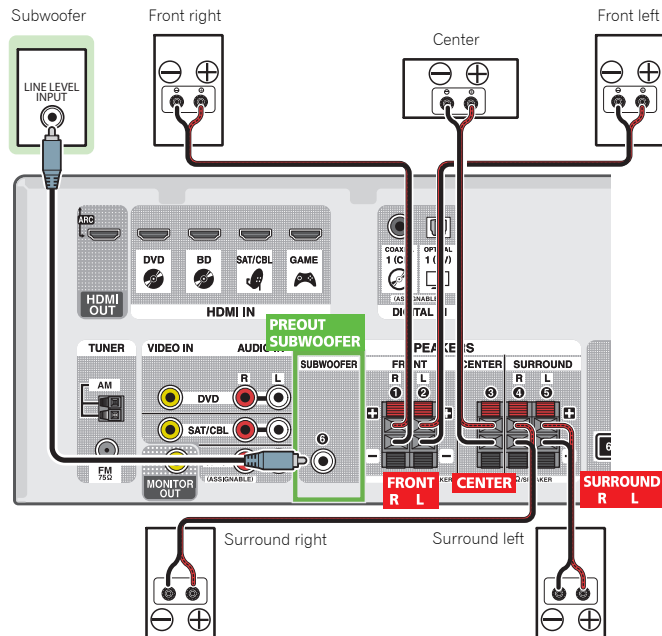
Bare wire connections

- 1 Twist exposed wire strands together.
- 2 Push open the tabs and insert exposed wire.
- 3 Release the tabs.



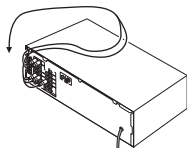
CAUTION

- These speaker terminals carry **HAZARDOUS LIVE voltage**. To prevent the risk of electric shock when connecting or disconnecting the speaker cables, disconnect the power cord before touching any uninsulated parts.
- Make sure that all the bare speaker wire is twisted together and inserted fully into the speaker terminal. If any of the bare speaker wire touches the back panel it may cause the power to cut off as a safety measure.



Making cable connections

Make sure not to bend the cables over the top of this unit (as shown in the illustration). If this happens, the magnetic field produced by the transformers in this unit may cause a humming noise from the speakers.

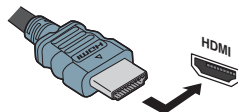


Important

- Before making or changing connections, switch off the power and disconnect the power cord from the AC outlet.
- Before unplugging the power cord, switch the power into standby.

HDMI cables

Both video and sound signals can be transmitted simultaneously with one cable. If connecting the player and the TV via this receiver, for both connections, use HDMI cables.



Be careful to connect the terminal in the proper direction.

Note

- Set the HDMI parameter in [Setting the Audio options on page 24](#) to **THRU** (THROUGH) and set the input signal in [Selecting the audio input signal on page 18](#) to **HDMI**, if you want to hear HDMI audio output from your TV (no sound will be heard from this receiver).

- If the video signal does not appear on your TV, try adjusting the resolution settings on your component or display. Note that some components (such as video game units) have resolutions that may not be displayed. In this case, use a (analog) composite connection.
- When the video signal from the HDMI is 480i, 480p, 576i or 576p, Multi Ch PCM sound and HD sound cannot be received.

About HDMI

The HDMI connection transfers uncompressed digital video, as well as almost every kind of digital audio that the connected component is compatible with, including DVD-Video, DVD-Audio, SACD, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio (see below for limitations), Video CD/ Super VCD and CD.

This receiver incorporates High-Definition Multimedia Interface (HDMI®) technology.

This receiver supports the functions described below through HDMI connections.

- Digital transfer of uncompressed video (contents protected by HDCP (1080p/24, 1080p/60, etc.))
- 3D signal transfer
- Deep Color signal transfer
- x.v.Color signal transfer
- Audio Return Channel (see [The HDMI Setup menu on page 29](#))
- Input of multi-channel linear PCM digital audio signals (192 kHz or less) for up to 8 channels
- Input of the following digital audio formats:
 - Dolby Digital, Dolby Digital Plus, DTS, High bitrate audio (Dolby TrueHD, DTS-HD Master Audio), DVD-Audio, CD, SACD (DSD 2 ch only), Video CD, Super VCD
- 4K signal transfer
 - This may not operate properly, depending on the connected equipment.
 - 4K 24p, 4K 25p, 4K 30p, 4K 50p and 4K 60p signals are supported.

Note

- Use a High Speed HDMI® Cable. If HDMI cable other than a High Speed HDMI® Cable is used, it may not work properly.
- When an HDMI cable with a built-in equalizer is connected, it may not operate properly.
- 3D, Deep Color, x.v.Color, 4K signal transfer and Audio Return Channel are only possible when connected to a compatible component.
- HDMI format digital audio transmissions require a longer time to be recognized. Due to this, interruption in the audio may occur when switching between audio formats or beginning playback.
- Turning on/off the device connected to this unit's HDMI OUT terminal during playback, or disconnecting/connecting the HDMI cable during playback, may cause noise or interrupted audio.

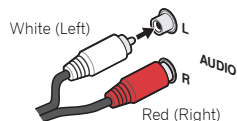
HDMI®
HIGH-DEFINITION MULTIMEDIA INTERFACE

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"x.v.Color" and x.v.Color are trademarks of Sony Corporation.

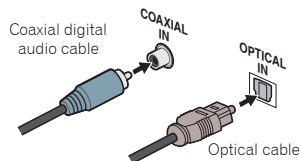
Analog audio cables

Use stereo RCA phono cables to connect analog audio components. These cables are typically red and white, and you should connect the red plugs to R (right) terminals and white plugs to L (left) terminals.



Digital audio cables

Commercially available coaxial digital audio cables or optical cables should be used to connect digital components to this receiver.



Note

- When connecting optical cables, be careful when inserting the plug not to damage the shutter protecting the optical socket.
- When storing optical cable, coil loosely. The cable may be damaged if bent around sharp corners.
- You can also use a standard RCA video cable for coaxial digital connections.

Standard RCA video cables

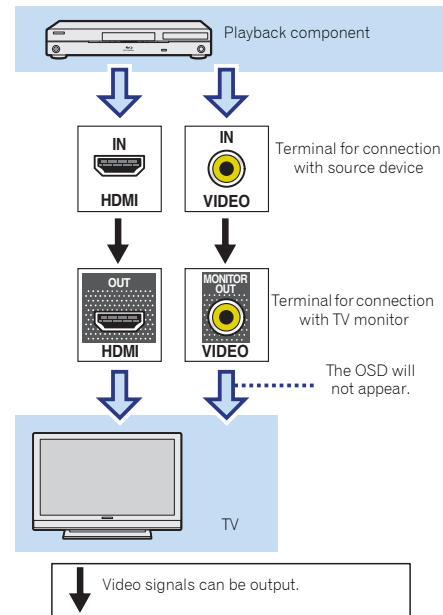
These cables are the most common type of video connection and are used to connect to the composite video terminals. The yellow plugs distinguish them from cables for audio.



About video outputs connection

This receiver is not loaded with a video converter. When you use HDMI cables for connecting to the input device, the same cables should be used for connecting to the TV.

The signals input from the analog (composite) video inputs of this unit will not be output from the **HDMI OUT**.



Connecting a TV and playback components

Connecting using HDMI

If you have an HDMI or DVI (with HDCP) equipped component (Blu-ray Disc player, etc.), you can connect it to this receiver using a commercially available HDMI cable.

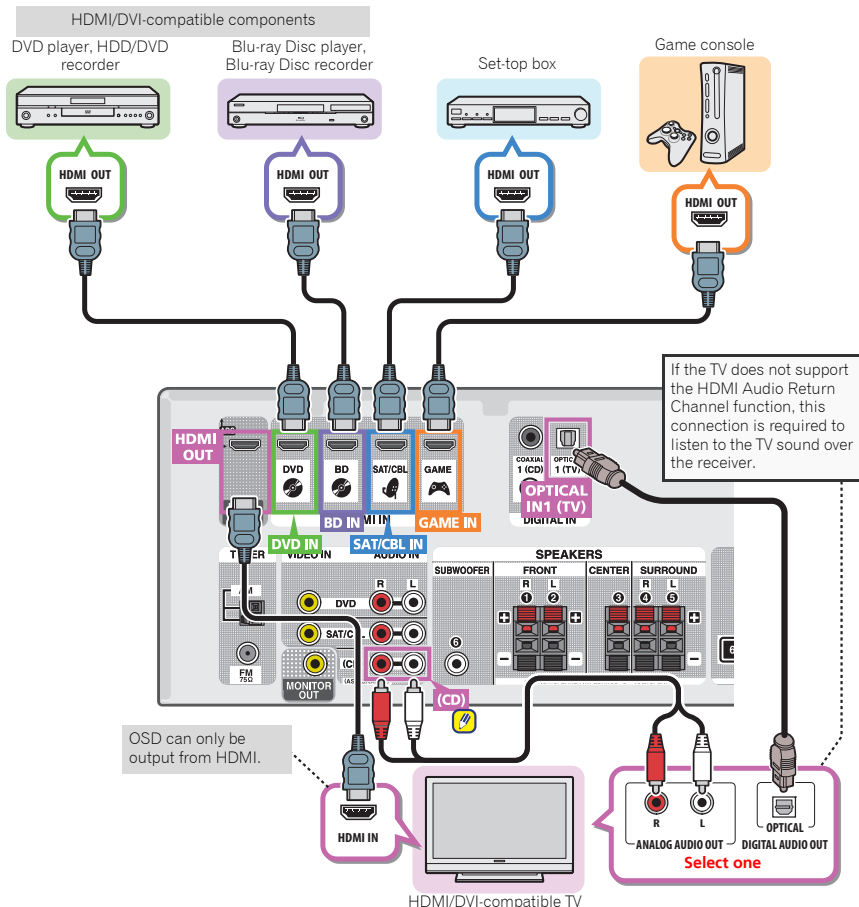
- The following connection/setting is required to listen to the sound of the TV over this receiver.
 - If the TV does not support the HDMI Audio Return Channel function, connect the receiver and TV with audio cables (as shown).
 - If the TV supports the HDMI Audio Return Channel function, the sound of the TV is input to the receiver via the HDMI terminal, so there is no need to connect an audio cable. In this case, set **ARC** at **HDMI Setup** to **ON** (see [The HDMI Setup menu on page 29](#)).
 - Please refer to the TV's operation manual for directions on connections and setup for the TV.

Important

- When the ARC function is **ON** and the receiver is connected to a compatible TV with an HDMI cable, and you switch the input of the TV to composite, the input of the receiver may automatically switch to **TV**. If this happens, switch the receiver's input back to the original input, or turn **OFF** the ARC function (see [The HDMI Setup menu on page 29](#)).

Note

- In order to listen to the audio from the TV that is connected to this receiver using an analog audio cables, set-up for analog audio input is required (see [The Input Assign menu on page 28](#)).



Connecting your component with no HDMI terminal

This diagram shows connections of a TV and DVD player (or other playback component) with no HDMI terminal to the receiver.

Important

- When the receiver and TV are connected by composite cable, the OSD function allowing display of the receiver's settings, operations, etc., on the TV's screen cannot be used. In this case, watch the receiver's front panel display while performing the various operations and making settings.

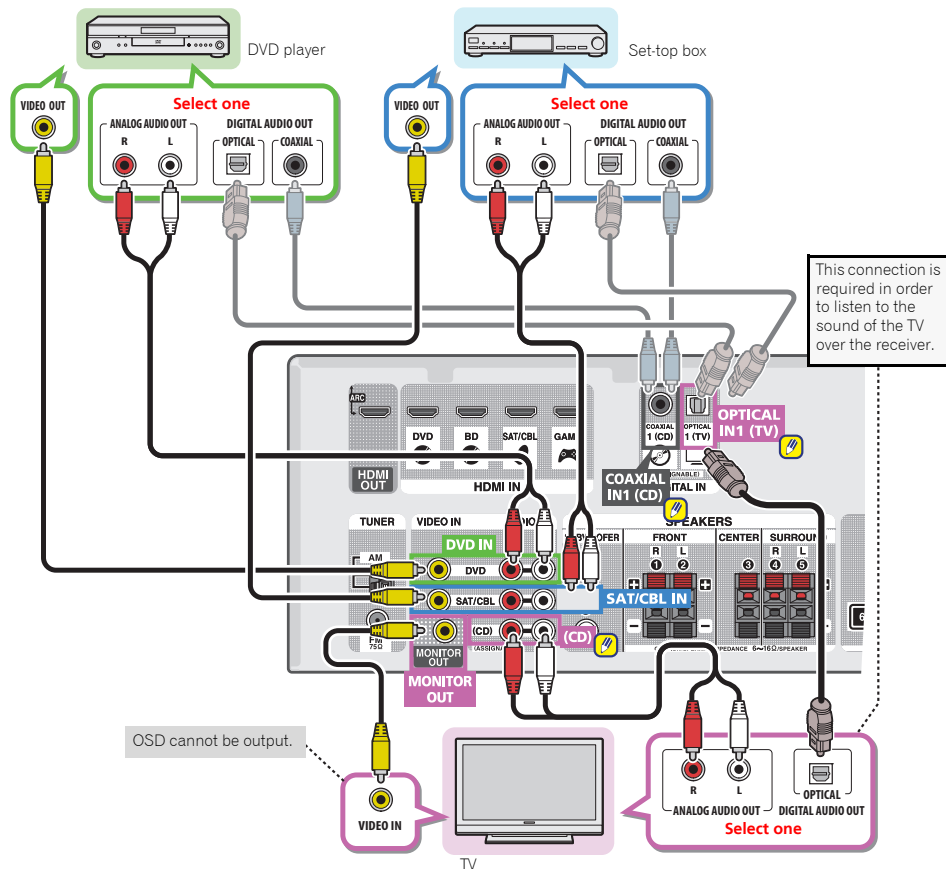
Note

- You can only connect one component to the optical input terminal. If connecting other devices, please use a different method to connect the audio.

In order to listen to the audio from the source component that is connected to this receiver using an optical cable, first, switch to the **DVD** (DVD player) or **SAT/CBL** (set-top box), then press **AUDIO SEL** to choose the audio signal **O1** (OPTICAL1) (see [Selecting the audio input signal on page 18](#)).

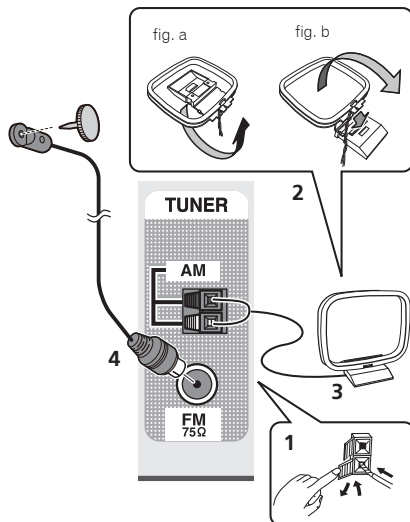
- You can only connect one component to the coaxial input terminal. If connecting other devices, please use a different method to connect the audio.

In order to listen to the audio from the source component that is connected to this receiver using a coaxial cable, first, switch to the **DVD** (DVD player) or **SAT/CBL** (set-top box), then press **AUDIO SEL** to choose the audio signal **C1** (COAXIAL1) (see [Selecting the audio input signal on page 18](#)).



Connecting antennas

Connect the AM loop antenna and the FM wire antenna as shown below. To improve reception and sound quality, connect external antennas (see [Using external antennas](#) below).



1 Push open the tabs, then insert one wire fully into each terminal, then release the tabs to secure the AM antenna wires.

2 Fix the AM loop antenna to the attached stand.

To fix the stand to the antenna, bend in the direction indicated by the arrow (fig. a) then clip the loop onto the stand (fig. b).

3 Place the AM antenna on a flat surface and in a direction giving the best reception.

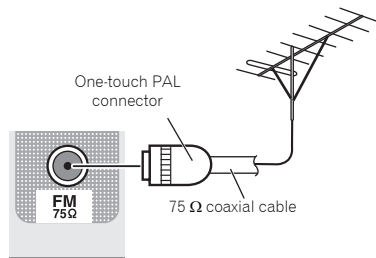
4 Connect the FM wire antenna into the FM antenna socket.

For best results, extend the FM antenna fully and fix to a wall or door frame. Don't drape loosely or leave coiled up.

Using external antennas

To improve FM reception

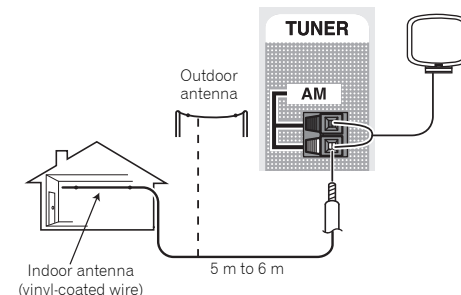
Use a PAL connector (not supplied) to connect an external FM antenna.



To improve AM reception

Connect a 5 m to 6 m length of vinyl-coated wire to the AM antenna terminal without disconnecting the supplied AM loop antenna.

For the best possible reception, suspend horizontally outdoors.

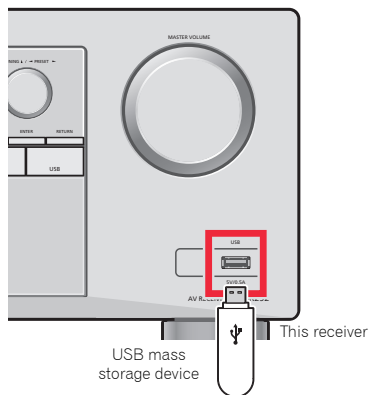


Connecting a USB device

It is possible to listen to two-channel audio using the USB interface on the front of this receiver.

► **Switch the receiver into standby then connect your USB device to the USB terminal on the front panel of this receiver.**

- It is not possible to connect an iPod/iPhone or a similar device to this receiver and play back music files.
- This receiver does not support a USB hub.
- For instructions on playing the USB device, see [Playing a USB device on page 20](#).



Plugging in the receiver

Only plug in after you have connected all your components to this receiver, including the speakers.

► **Plug the AC power cord into a convenient AC power outlet.**

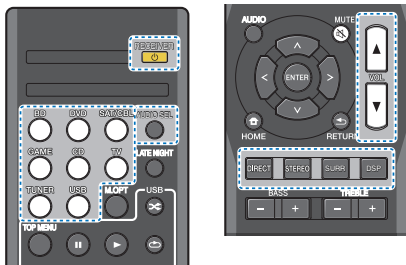
CAUTION

- Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest Onkyo authorized service center or your dealer for a replacement.
- The receiver should be disconnected by removing the mains plug from the wall socket when not in regular use, e.g., when on vacation.



Playing a source

Here are the basic instructions for playing a source (such as a DVD disc) with your home theater system.



1 Switch on your system components and receiver.

Start by switching on the playback component (for example a DVD player), your TV and subwoofer (if you have one), then the receiver (press **RECEIVER**).

2 Switch the TV input to the input that connects this receiver.

For example, if you connected this receiver to the **VIDEO** jacks on your TV, make sure that the **VIDEO** input is now selected.

3 Press input function buttons to select the input function you want to play.

If you selected the proper input source and there is still no sound, select the audio input signal for playback (see [Selecting the audio input signal below](#)).

4 Press the **DIRECT** button.

Change the listening mode as necessary.

It is possible to check on the front panel display whether or not surround sound playback is being performed properly.

If the display does not correspond to the input signal and listening mode, check the connections and settings.

Note

- You may need to check the digital audio output settings on your DVD player or digital satellite receiver. It should be set to output Dolby Digital, DTS and 88.2 kHz/96 kHz PCM (2 channel) audio, and if there is an MPEG audio option, set this to convert the MPEG audio to PCM.
- Depending on your DVD player or source discs, you may only get digital 2 channel stereo and analog sound. In this case, the receiver must be set to a multichannel listening mode if you want multichannel surround sound.

5 Use **VOLUME +/-** to adjust the volume level.

Turn down the volume of your TV so that all sound is coming from the speakers connected to this receiver.

Selecting the audio input signal

The audio input signal can be selected for each input source. Once it is set, the audio input that was selected will be applied whenever you select the input source using the input function buttons.



Press **AUDIO SEL** to select the audio input signal corresponding to the source component.

Each press cycles through the following:

- H** – Selects an HDMI signal. **H** can be selected for **BD**, **DVD**, **SAT/CBL** or **GAME** input. For other inputs, **H** cannot be selected.
 - When the **HDMI** option in [Setting the Audio options on page 24](#) is set to **THRU**, the sound will be heard through your TV, not from this receiver.
- A** – Selects the analog inputs.
- C1/O1** – Selects the digital input. The coaxial 1 input is selected for **C1**, and the optical 1 audio input is selected for **O1**.

When **H** (HDMI) or **C1/O1** (digital) is selected and the selected audio input is not provided, **A** (analog) is automatically selected.

Note

- BD** and **GAME** inputs are fixed to **H** (HDMI). It cannot be changed.
- For the **TV** input, only **A** (analog) or **C1/O1** (digital) can be selected. However, if the **ARC** at **HDMI Setup** is set to **ON**, the input is fixed to **H** (HDMI) and cannot be changed.
- When set to **H** (HDMI) or **C1/O1** (digital), **DD** lights when a Dolby Digital signal is input, and **DTS** lights when a DTS signal is input.
- When the **H** (HDMI) is selected, the **A** and **DIGITAL** indicators are off (see [page 7](#)).

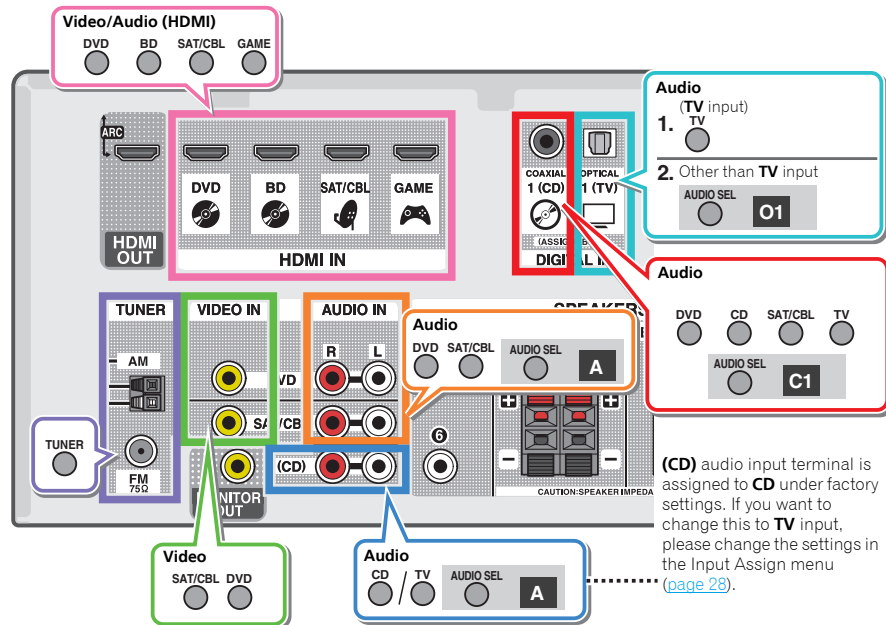
- When digital input (optical or coaxial) is selected, this receiver can only play back Dolby Digital, PCM (32 kHz to 96 kHz) and DTS (including DTS 96 kHz/24 bit) digital signal formats. The compatible signals via the HDMI terminals are: Dolby Digital, DTS, SACD (DSD 2 ch only), PCM (32 kHz to 192 kHz sampling frequencies), Dolby TrueHD, Dolby Digital Plus, DTS-EXPRESS, DTS-HD Master Audio and DVD Audio (including 192 kHz). With other digital signal formats, set to **A** (analog).
- You may get digital noise when a LD or CD player compatible with DTS is playing an analog signal. To prevent noise, make the proper digital connections ([page 13](#)) and set the signal input to **C1/O1** (digital).
- Some DVD players don't output DTS signals. For more details, refer to the instruction manual supplied with your DVD player.

Input function	Input Terminals			
	HDMI	COAXIAL	OPTICAL	ANALOG
BD	✓	✗	✗	✗
DVD	✓	✓	✓	✓
TV	✗ ^a	✓	✓	✗ ^b
SAT/CBL	✓	✓	✓	✓
CD	✗	✓	✓	✓
GAME	✓	✗	✗	✗

- a. The HDMI terminals can be used for the TV input by turning ON the ARC function in the HDMI setting ([page 29](#)).
- b. In order to listen to the audio from the TV that is connected to this receiver using an analog audio cables, set-up for analog audio input is required (see [The Input Assign menu](#), [on page 28](#)).

Tip

- In order to enjoy the picture and/or sound from devices connected to each terminal, select the input by doing the following.



Playing a USB device

It is possible to listen to two-channel audio using the USB interface on the front of this receiver.

Important

- Onkyo cannot guarantee compatibility (operation and/or bus power) with all USB mass storage devices and assumes no responsibility for any loss of data that may occur when connected to this receiver.

Note

- This includes playback of WMA/MP3/MPEG-4 AAC files (except files with copy-protection or restricted playback).
- Compatible USB devices include external magnetic hard drives, portable flash memory (particularly keydrives) and digital audio players (MP3 players) of format FAT16/32. It is not possible to connect this receiver to a computer for USB playback.
- With large amounts of data, it may take longer for the receiver to read the contents of a USB device.
- If the file selected cannot be played back, this receiver automatically skips to the next file playable.
- When the file currently being played back has no title assigned to it, the file name is displayed in the OSD instead; when neither the album name nor the artist name is present, the row is displayed as a blank space.
- Note that non-roman characters in the playlist are displayed as '*'.
- Make sure the receiver is in standby when disconnecting the USB device.

1 Switch on the receiver and your TV.

See [Connecting a USB device on page 17](#).

2 Switch the TV input so that it connects to the receiver.

- Switch the TV input to the input that connects this receiver to the TV through the corresponding HDMI cable.

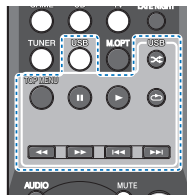
3 Press USB on the remote control to switch the receiver to the USB input.

Loading appears in the OSD as this receiver starts recognizing the USB device connected. After the recognition, a playback screen appears in the OSD and playback starts automatically.

Basic playback controls

This receiver's remote control buttons can be used for basic playback of files stored on USB devices.

- Press **USB** to switch the remote control to the USB operation mode.



Important

If a **USB Error** message lights in the display, try following the points below:

- Switch the receiver off, then on again.
- Reconnect the USB device with the receiver switched off.
- Select another input source (like **BD**), then switch back to **USB**.
- Use a dedicated AC adapter (supplied with the device) for USB power.

For more information on error messages, see [USB messages on page 31](#).

If this doesn't remedy the problem, it is likely your USB device is incompatible.

Compressed audio compatibility

Note that although most standard bit/sampling rate combinations for compressed audio are compatible, some irregularly encoded files may not play back. The list below shows compatible formats for compressed audio files:

- MP3** (MPEG-1/2/2.5 Audio Layer 3) – Sampling rates: 32 kHz/44.1 kHz/48 kHz; Bit rates: 32 kbps to 320 kbps (128 kbps or higher recommended); File extension: **.mp3**
- WMA** (Windows Media Audio) – Sampling rates: 32 kHz/44.1 kHz/48 kHz; Bit rates: 48 kbps to 192 kbps (128 kbps or higher recommended); File extension: **.wma**; WMA9 Pro and WMA lossless encoding: No
- AAC** (MPEG-4 Advanced Audio Coding) – Sampling rates: 32 kHz/44.1 kHz/48 kHz; Bit rates: 16 kbps to 320 kbps (128 kbps or higher recommended); File extension: **.m4a**; Apple lossless encoding: No

Other compatibility information

- VBR (variable bit rate) MP3/WMA/MPEG-4 AAC playback: Yes (Note that in some cases playback time will not be displayed correctly.)
- Copyrighted audio files cannot be played back on this receiver.
- DRM-protected audio files cannot be played back on this receiver.

About MPEG-4 AAC

Advanced Audio Coding (AAC) is at the core of the MPEG-4 AAC standard, which incorporates MPEG-2 AAC, forming the basis of the MPEG-4 audio compression technology. The file format and extension used depend on the application used to encode the AAC file. This receiver plays back AAC files encoded by iTunes® bearing the extension **.m4a**. DRM-protected files will not play, and files encoded with some versions of iTunes® may not play.

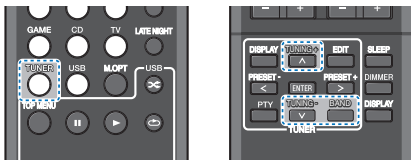
Apple and iTunes are trademarks of Apple Inc., registered in the U.S. and other countries.

About WMA

WMA is an acronym for Windows Media Audio and refers to an audio compression technology developed by Microsoft Corporation. This receiver plays back WMA files encoded using Windows Media® Player bearing the extension **.wma**. Note that DRM-protected files will not play, and files encoded with some versions of Windows Media® Player may not play.

Listening to the radio

The following steps show you how to tune in to FM and AM radio broadcasts using the automatic (search) and manual (step) tuning functions. Once you are tuned to a station you can memorize the frequency for recall later—see [Saving station presets below](#) for more on how to do this.



- 1 Press **TUNER** to select the tuner.
- 2 Use **BAND** to change the band (FM or AM), if necessary.
Each press switches the band between FM (stereo or mono) and AM.
- 3 Tune to a station.

There are three ways to do this:

❖ Automatic tuning

To search for stations in the currently selected band, press and hold **TUNING +/-** for about a second. The receiver will start searching for the next station, stopping when it has found one. Repeat to search for other stations.

❖ Manual tuning

To change the frequency one step at a time, press **TUNING +/-**.

❖ High speed tuning

Press and hold **TUNING +/-** for high speed tuning.

Improving FM sound

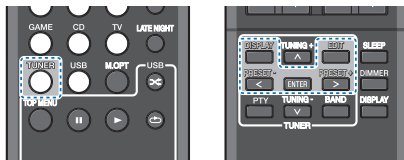
If the **TUNE** or **ST** indicators don't light when tuning to an FM station because the signal is weak, set the receiver to the mono reception mode.

- ▶ Press **BAND** to select FM MONO.

This should improve the sound quality and allow you to enjoy the broadcast.

Saving station presets

If you often listen to a particular radio station, it's convenient to have the receiver store the frequency for easy recall whenever you want to listen to that station. This saves the effort of manually tuning in each time. This unit can memorize up to 30 stations.



- 1 Tune to a station you want to memorize.
See [Listening to the radio above](#) for more on this.
- 2 Press **EDIT**.
The display shows **PRESET**, then a blinking **MEM** and station preset.
- 3 Press **PRESET +/-** to select the station preset you want.
You can also use the number buttons.
- 4 Press **ENTER**.
The preset number stop blinking and the receiver stores the station.

🔧 Note

- If the receiver is left disconnected from the AC power outlet for over a month, the station memories will be lost and will have to be reprogrammed.
- Stations are stored in stereo. When the station is stored in the FM MONO mode, it shows as **ST** when recalled.

Listening to station presets

You will need to have some presets stored to do this. See [Saving station presets above](#) if you haven't done this already.

- ▶ Press **PRESET +/-** to select the station preset you want.
 - You can also use the number buttons on the remote control to recall the station preset.

Naming preset stations

For easier identification, you can name all of your preset stations.

- 1 Choose the station preset you want to name.
See [Listening to station presets above](#) for how to do this.
- 2 Press **EDIT** twice.
The cursor at the first character position is blinking on the display.
- 3 Input the name you want.
Choose a name up to eight characters long.
 - Use **PRESET +/-** to select character position.
 - Use **TUNING +/-** to select characters.
 - The name is stored when **ENTER** is pressed.

🔧 Tip

- To erase a station name, follow steps 1 and 2, and press **ENTER** while the display is blank. Press **EDIT** while the display is blank, to keep the previous name.
- Once you have named a station preset, Press **DISPLAY** to show the name. When you want to return to the frequency display, press **DISPLAY** several times to show the frequency.

An introduction to RDS (For Europe)

Radio Data System (RDS) is a system used by most FM radio stations to provide listeners with various kinds of information—the name of the station and the kind of show they're broadcasting, for example.

One feature of RDS is that you can search by type of program. For example, you can search for a station that's broadcasting a show with the program type, **JAZZ**.

You can search the following program types:

NEWS – News

AFFAIRS – Current Affairs

INFO – General Information

SPORT – Sport

EDUCATE – Educational

DRAMA – Radio plays, etc.

CULTURE – National or regional culture, theater, etc.

SCIENCE – Science and technology

VARIED – Usually talk-based material, such as quiz shows or interviews.

POP M – Pop music

ROCK M – Rock music

EASY M – Easy listening

LIGHT M – 'Light' classical music

CLASSICS – 'Serious' classical music

OTHER M – Music not fitting above categories

WEATHER – Weather reports

FINANCE – Stock market reports, commerce, trading, etc.

CHILDREN – Programs for children

SOCIAL – Social affairs

RELIGION – Programs concerning religion

PHONE IN – Public expressing their views by phone

TRAVEL – Holiday-type travel rather than traffic announcements

LEISURE – Leisure interests and hobbies

JAZZ – Jazz

COUNTRY – Country music

NATION M – Popular music in a language other than English

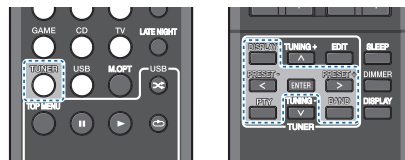
OLDIES – Popular music from the '50s and '60s

FOLK M – Folk music

DOCUMENT – Documentary

Note

- In addition, there are three other program types, **ALARM**, **ALARMTEST**, and **NO TYPE**. **ALARM** and **ALARMTEST** are used for emergency announcements. **NO TYPE** appears when a program type cannot be found.



Searching for RDS programs

You can search for a program type listed above.

- Press TUNER then press BAND to select the FM band.**
 - RDS is only possible in the FM band.
- Press PTY.**
SEARCH shows in the display.
- Press PRESET +/- to select the program type you want to hear.**
- Press ENTER to search for the program type.**

The system starts searching through the station presets for a match, stopping when it was found one. Repeat to search for other stations.

If **NO PTY** is displayed it means the tuner couldn't find that program type at the time of the search.

RDS searches station presets only. If no stations have been preset, or if the program type could not be found among the station presets **NO PTY** is displayed.

FINISH means the search is complete.

Displaying RDS information

Use the **DISPLAY** button to display the different types of RDS information available.

Press DISPLAY for RDS information.

Each press changes the display as follows:

- 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**)

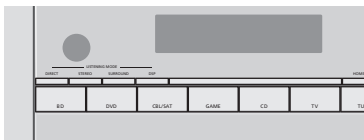
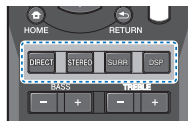
Note

- If any noise is picked up while displaying the RT scroll, some characters may be displayed incorrectly.
- If you see **NO TEXT** in the RT display, it means no RT data is sent from the broadcast station. The display will automatically switch to the PS data display (if no PS data, **NO NAME** is displayed).
- In the PTY display, **NO PTY** may be shown.

Choosing the listening mode

This receiver offers a variety of listening modes to accommodate playback of various audio formats. Choose one according to your speaker environment or the source.

- While listening to a source, press the listening mode button repeatedly to select a listening mode you want.



- The listening mode is shown on the display on the front panel.

Important

- The listening modes and many features described in this section may not be available depending on the current source, settings and status of the receiver.

Listening in surround sound



Using this receiver, you can listen to any source in surround sound. However, the options available will depend on your speaker setup and the type of source you're listening to.

- If the source is Dolby Digital, DTS, or Dolby Surround encoded, the proper decoding format will automatically be selected and shows in the display.

The following modes provide basic surround sound for stereo and multichannel sources.

Explanatory notes

No: No connected / Yes: Connected / Two: Two speakers are connected / —: Whether connected or no

Type of surround modes	Suitable sources
Two channel sources	
DOLBY PLII MOVIE	Movie
DOLBY PLII MUSIC^a	Music
DOLBY PLII GAME	Video games
NEO:6 CINEMA^b	Movie
NEO:6 MUSIC^b	Music
Multichannel sources	
Straight Decode	No additional effects

- You can also adjust the **C.WIDTH**, **DIMEN.**, and **PNRM.** effect (see [Setting the Audio options on page 24](#)).
- You can also adjust the **C.IMG** effect (see [Setting the Audio options on page 24](#)).

Playing back in the STEREO mode



When you select **STEREO**, you will hear the source through just the front left and right speakers (and possibly your subwoofer depending on your speaker settings). Dolby Digital and DTS multichannel sources are downmixed to stereo. When the headphones are connected, **STEREO** can only be selected.

Using the DSP



The DSP feature creates a variety of surround effects. Try different modes with various soundtracks to see which you like.

All Ch Stereo	Gives multichannel sound to a stereo source, using all of your speakers.
TV Logic	Designed for movies with lots of dialog.
Game-Action	Designed for action movies with dynamic soundtracks.
Game-RPG	Suitable for video games.
Game-Sports	Suitable for sports programs.
Game-Rock	Creates a live concert sound for rock and/or pop music.
Orchestra	Gives a large concert hall-type sound.

Using Direct



Use the Direct modes when you want to hear the truest possible reproduction of a source. All unnecessary signal processing is bypassed.

DIRECT	Sources are heard according to the settings made in the Manual SP Setup (speaker setting, channel level, speaker distance), as well as with dual mono settings. You will hear sources according to the number of channels in the signal. A/V SYNC, Auto Delay, and Center image functions are available.
---------------	---

Using the Music Optimizer



When audio data is removed during the compression process, sound quality often suffers from an uneven sound image. The Music Optimizer feature employs new DSP technology that helps bring CD quality sound back to compressed 2-channel audio by restoring sound pressure and smoothing jagged artifacts left over after compression.

- Press **M.OPT** to switch the **M.OPT (Music Optimizer) ON** or **OFF**.

Note

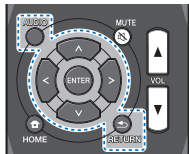
- The Music Optimizer is only applicable to 2-channel sources.

Setting the Audio options

There are a number of additional sound settings you can make using the **AUDIO ADJUST** menu. The defaults, if not stated, are listed in bold.

Important

- Note that if a setting doesn't appear in the **AUDIO ADJUST** menu, it is unavailable due to the current source, settings and status of the receiver.



1 Press AUDIO button.

2 Use ↑/↓ to select the setting you want to adjust.

Depending on the current status/mode of the receiver, certain options may not be able to be selected. Check the table below for notes on this.

3 Use ←/→ to set it as necessary.

See the table below for the options available for each setting.

4 Press RETURN to confirm and exit the menu.

Setting/What it does	Option(s)
A/V SYNC Some monitors have a slight delay when showing video, so the soundtrack will be slightly out of sync with the picture. By adding a bit of delay, you can adjust the sound to match the presentation of the video.	0 ms to 500 ms (1 step : 5 ms) Default: 0
M.OPT (Music Optimizer) ^a When audio data is removed during the compression process, sound quality often suffers from an uneven sound image. The Music Optimizer feature employs new DSP technology that helps bring CD quality sound back to compressed 2-channel audio by restoring sound pressure and smoothing jagged artifacts left over after compression.	ON^b OFF

Setting/What it does	Option(s)
DUAL MONO^c Specifies how dual mono encoded Dolby Digital soundtracks should be played.	CH1 – Channel 1 is heard only CH2 – Channel 2 is heard only CH1 CH2 – Both channels heard from front speakers
F.PCM (Fixed PCM) This is useful if you find there is a slight delay before OFF recognizes the PCM signal on a CD, for instance. When ON is selected, noise may be output during playback of non-PCM sources. Please select another input signal if this is a problem.	OFF ON
LATE NIGHT Adjusts the level of dynamic range for movie soundtracks optimized for Dolby Digital, DTS, Dolby Digital Plus, Dolby TrueHD, DTS-HD and DTS-HD Master Audio (you may need to use this feature when listening to surround sound at low volumes).	AUTO^d OFF MID MAX
HDMI (HDMI Audio) Specifies the routing of the HDMI audio signal out of this receiver (AMP) or through to a TV (THRU). When THRU is selected, no sound is output from this receiver.	AMP THRU
A.DLY (Auto Delay) ^e This feature automatically corrects the audio-to-video delay between components connected with an HDMI cable. The audio delay time is set depending on the operational status of the display connected with an HDMI cable. The video delay time is automatically adjusted according to the audio delay time.	OFF ON
C.WIDTH (Center Width) ^f (Applicable only when using a center speaker) Spreads the center channel between the front right and left speakers, making it sound wider (higher settings) or narrower (lower settings).	0 to 7 Default: 3

Setting/What it does	Option(s)
DIMEN (Dimension) ^f Adjusts the surround sound balance from front to back, making the sound more distant (minus settings), or more forward (positive settings).	–3 to +3 Default: 0
PNRM (Panorama) ^f Extends the front stereo image to include surround speakers for a 'wraparound' effect.	OFF ON
C.IMG (Center Image) ^g (Applicable only when using a center speaker) Adjust the center image to create a wider stereo effect with vocals. Adjust the effect from 0 (all center channel sent to front right and left speakers) to 10 (center channel sent to the center speaker only).	0 to 10 Default: 3 (NEO:6 MUSIC), 10 (NEO:6 CINEMA)
<p>a. You can change the Music Optimizer feature at any time by using M.OPT button.</p> <p>b. The default setting when the USB input is selected is ON.</p> <p>c. This setting works only with dual mono encoded Dolby Digital and DTS soundtracks.</p> <p>d. The initial set AUTO is only available for Dolby TrueHD signals. Select MAX or MID for signals other than Dolby TrueHD.</p> <p>e. This feature is only available when the connected display supports the automatic audio/video synchronizing capability ('lip-sync') for HDMI. If you find the automatically set delay time unsuitable, set A.DLY to OFF and adjust the delay time manually. For more details about the lip-sync feature of your display, contact the manufacturer directly.</p> <p>f. Only available with 2-channel sources in DOLBY PLII MUSIC mode.</p> <p>g. Only when listening to 2-channel sources in NEO:6 CINEMA and NEO:6 MUSIC mode.</p>	

- The functions that can be set differ depending on the input signal or speaker settings.

	DIRECT		STEREO	SURR	DSP	Using the headphones
	Analog signal	Other signals				
Speaker Setting	X	✓	✓	✓	✓	X
Channel Level	✓	✓	✓	✓	✓	X
Speaker Distance	X	✓	✓	✓	✓	X
Bass/Treble	X	X	✓	✓	✓	✓
A/V SYNC	X	✓	✓	✓	✓	✓
Music Optimizer	X	X	✓	✓	✓	✓
DUAL MONO	X	✓	✓	✓	✓	✓
Fixed PCM	X	✓	✓	✓	✓	✓
LATE NIGHT	X	X	✓	✓	✓	✓
HDMI Audio	X	✓	✓	✓	✓	✓
Auto Delay	X	✓	✓	✓	✓	✓
Center Image (NEO:6 only)	X	X	X	✓	X	X

Changing the TV format setting of Graphical User Interface

If the Graphical User Interface screen is not displayed correctly, it may be that the TV system is set incorrectly for your country or region.

- 1 Switch the receiver into standby.
- 2 While holding down TUNE ↑ on the front panel, press **ON/STANDBY**.
Each press switches between **PAL** and **NTSC**.
• Default: **PAL**

Changing the frequency step of AM Radio

If you find that you can't tune into stations successfully, the frequency step may not be suitable for your country/region. Here's how to switch the setting:

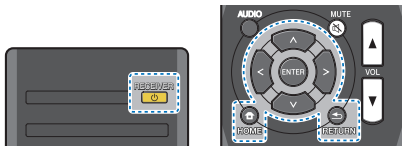
- 1 Switch the receiver into standby.
- 2 While holding down TUNE ↓ on the front panel, press **ON/STANDBY**.
Each press switches between **9K STEP** and **10K STEP**.
• Default: **9K STEP**

Using the Home Menu

The following section shows you how to make detailed settings to specify how you're using the receiver, and also explains how to fine-tune individual speaker system settings to your liking.

Important

- The OSD will not appear if you have connected using the composite output to your TV. Use HDMI connections for Home Menu.
- If headphones are connected to the receiver, disconnect them.
- You can't use the Home Menu when the **USB** input is selected.



1 Switch on the receiver and your TV.

Press **RECEIVER** to switch on.

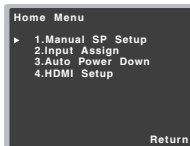
2 Switch the TV input to the input that connects this receiver to the TV through the corresponding HDMI cable.

3 Press HOME.

The Home Menu appears on your TV. Use **↑/↓/←/→** and **ENTER** on the remote control to navigate through the screens and select menu items. Press **RETURN** to exit the current menu.

- Press **HOME** at any time to exit the Home Menu.

4 Select the setting you want to adjust.



Manual SP Setup

- **Speaker Setting** – Specify the size and number of speakers you've connected (see below).
- **X.Over** – Specify which frequencies will be sent to the subwoofer ([page 27](#)).
- **Channel Level** – Adjust the overall balance of your speaker system ([page 27](#)).
- **Speaker Distance** – Specify the distance of your speakers from the listening position ([page 28](#)).

Input Assign

- Specify what you've connected to the **(CD)** audio input (see [The Input Assign menu on page 28](#)).

Auto Power Down

- Sets to automatically turn off the power when the receiver has not operated for several hours (see [The Auto Power Down menu on page 28](#)).

HDMI Setup

- Set the HDMI return channel function and set the HDMI input signal to Standby Through output or not during standby (see [The HDMI Setup menu on page 29](#)).

Manual speaker setup

This receiver allows you to make detailed settings to optimize the surround sound performance. You only need to make these settings once (unless you change the placement of your current speaker system or add new speakers).

Speaker Setting

Use this setting to specify your speaker configuration (size, number of speakers).

1 Select 'Manual SP Setup' from the Home Menu.

2 Select 'Speaker Setting' from the Manual SP Setup menu.



3 Choose the set of speakers that you want to set then select a speaker size.

Use **←/→** to select the size (and number) of each of the following speakers:

- **Front** – Select **LARGE** if your front speakers reproduce bass frequencies effectively, or if you didn't connect a subwoofer. Select **SMALL** to send the bass frequencies to the subwoofer.
- **Center** – Select **LARGE** if your center speaker reproduces bass frequencies effectively, or select **SMALL** to send bass frequencies to the other speakers or subwoofer. If you didn't connect a center speaker, choose **NO** (the center channel is sent to the other speakers).
- **Surr** – Select **LARGE** if your surround speakers reproduce bass frequencies effectively. Select **SMALL** to send bass frequencies to the other speakers or subwoofer. If you didn't connect surround speakers choose **NO** (the sound of the surround channels is sent to the other speakers).

- **Subwoofer** – LFE signals and bass frequencies of channels set to **SMALL** are output from the subwoofer when **YES** is selected (see notes below). Choose the **PLUS** setting if you want the subwoofer to output bass sound continuously or you want deeper bass (the bass frequencies that would normally come out the front and center speakers are also routed to the subwoofer). If you did not connect a subwoofer choose **NO** (the bass frequencies are output from other speakers).

4 When you're finished, press RETURN.

You return to the Manual SP Setup menu.

Note

- If you select **SMALL** for the front speakers, the subwoofer will automatically be fixed to **YES**. Also, the center, surround can't be set to **LARGE** if the front speakers are set to **SMALL**. In this case, all bass frequencies are sent to the subwoofer.
- If you have a subwoofer and like lots of bass, it may seem logical to select **LARGE** for your front speakers and **PLUS** for the subwoofer. This may not, however, yield the best bass results. Depending on the speaker placement of your room you may actually experience a decrease in the amount of bass due to low frequency cancellations. In this case, try changing the position or direction of speakers. If you can't get good results, listen to the bass response with it set to **PLUS** and **YES** or the front speakers set to **LARGE** and **SMALL** alternatively and let your ears judge which sounds best. If you're having problems, the easiest option is to route all the bass sounds to the subwoofer by selecting **SMALL** for the front speakers.

X.Over

- Default setting: **100Hz**

This setting decides the cutoff between bass sounds playing back from the speakers selected as **LARGE**, or the subwoofer, and bass sounds playing back from those selected as **SMALL**. It also decides where the cutoff will be for bass sounds in the LFE channel.

- For more on selecting the speaker sizes, see [Speaker Setting on page 26](#).

1 Select 'Manual SP Setup' from the Home Menu.

2 Select 'X.Over' from the Manual SP Setup menu.



3 Choose the frequency cutoff point.

Frequencies below the cutoff point will be sent to the subwoofer (or **LARGE** speakers).

4 When you're finished, press RETURN.

You return to the Manual SP Setup menu.

Channel Level

Using the channel level settings, you can adjust the overall balance of your speaker system, an important factor when setting up a home theater system.

CAUTION

- The test tones used in the Channel Level settings are output at high volume.

1 Select 'Manual SP Setup' from the Home Menu.

2 Select 'Channel Level' from the Manual SP Setup menu.

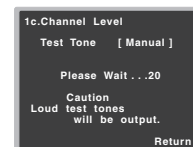


3 Select a setup option.

- **Manual** – Move the test tone manually from speaker to speaker and adjust individual channel levels.
- **Auto** – Adjust channel levels as the test tone moves from speaker to speaker automatically.

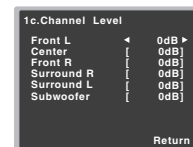
4 Confirm your selected setup option.

The test tones will start after you press **ENTER**. After the volume increases to the reference level, test tones will be output.



5 Adjust the level of each channel using ←/→.

If you selected **Manual**, use **↑/↓** to switch speakers. The **Auto** setup will output test tones in the order shown on-screen:



Adjust the level of each speaker as the test tone is emitted.

Note

- If you are using a Sound Pressure Level (SPL) meter, take the readings from your main listening position and adjust the level of each speaker to 75 dB SPL (C-weighting/slow reading).
- The subwoofer test tone is output at low volumes. You may need to adjust the level after testing with an actual soundtrack.

6 When you're finished, press RETURN.

You return to the Manual SP Setup menu.

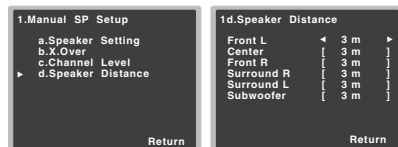
Speaker Distance

For good sound depth from your system, you need to specify the distance of your speakers from the listening position. The receiver can then add the proper delay needed for effective surround sound.

- For the assignment of the digital signal inputs, see [Selecting the audio input signal on page 18](#).

1 Select 'Manual SP Setup' from the Home Menu.

2 Select 'Speaker Distance' from the Manual SP Setup menu.



3 Adjust the distance of each speaker using ←/→.

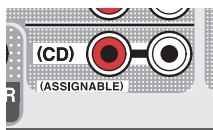
You can adjust the distance of each speaker in 0.03 m increments.

4 When you're finished, press RETURN.

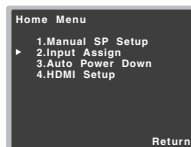
You return to the Manual SP Setup menu.

The Input Assign menu

(CD) audio input terminal is assigned to **CD** under factory settings, but this can be changed to **TV** input.



1 Select 'Input Assign' from the Home Menu.



2 Select 'Analog Input' from the Input Assign menu.



3 Select the desired input option for the (CD) audio input terminal.

4 When you're finished, press RETURN.

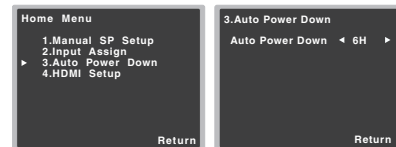
You return to the Input Assign menu.

The Auto Power Down menu

Set to automatically turn off the receiver after a specified time has passed (when the power has been on with no operation for several hours).

- Default setting: **6H**

1 Select 'Auto Power Down' from the Home Menu.



2 Specify the amount of time to allow before the power is turned off (when there has been no operation).

- You can select 2, 4 or 6 hours, or **OFF** (if no automatic shutoff is desired).

3 When you're finished, press RETURN.

You return to the Home Menu.

The HDMI Setup menu

If your TV supports an audio return channel (ARC) function, connect your TV and this unit with an HDMI cable and the TV audio will be inputted into this unit via the HDMI terminal without the need for an audio cable to be connected.

It is possible to transfer signals from an HDMI connected player to the TV even when this receiver's power is on standby.

Important

- Use a High Speed HDMI®/™ Cable when using the ARC function. The ARC function may not operate properly with other HDMI cables.

1 Select 'HDMI Setup' from the Home Menu.



2 Choose the 'ARC' setting you want.

When a TV supporting the HDMI Audio Return Channel function is connected to the receiver, the sound of the TV can be input via the HDMI terminal.

- **ON** – The TV's sound is input via the HDMI terminal.
- **OFF** – The TV's sound is input from the audio input terminals other than HDMI inputs.

3 Choose the 'Standby Through' setting you want.

When the receiver is in standby, the HDMI input signal selected here will be output to the TV by HDMI.

- **LAST** – The HDMI input signal selected previously will be output.
- **BD, DVD, SAT/CBL, GAME** – The HDMI input signal selected here will be output.
- **OFF** – Signal will not be output during standby.
 - If the **Standby Through** setting is not set to **OFF**, the power consumption during standby will increase.

4 Choose the '4k60p Setting' setting you want.

If the TV to be connected using HDMI supports 4K/60p, you can switch the 4k60p setting in accordance with TV performance.

1. Select an input terminal that you wish to change settings using **◀▶**.
2. Use **↑/↓** to select '4k60p'.
3. Use **◀▶** to select the signal to set.
 - **4:4:4** – Select this setting when connecting to a 4K/60p 4:4:4 24 bit compatible TV using HDMI. More high quality video images can be enjoyed.
 - When the HDMI cable does not support 4K/60p 4:4:4 24 bit (18 Gbps transmission), video image may not be output properly.
 - In that case, select 4:2:0 to watch a 4K/60p 4:2:0 24 bit video image.
 - **4:2:0** – Select this setting when connecting to a 4K/60p 4:2:0 24 bit compatible TV using HDMI.

If certain source devices that do not support 4K/60p 4:4:4 24 bit are used and the HDMI terminal is set to 4:4:4, video output from the source device may turn red, no audio may be output by the source device, or a 3D signal may not be output by some of the devices. In these cases, set the HDMI terminal to 4:2:0.

5 When you're finished, press RETURN.

You return to the Home Menu.

Before starting ARC operation

When starting ARC operation, put the TV and this unit in STANDBY mode after connecting this unit with the TV. Next, turn ON the power of this unit and then the TV, in this order. In order to start ARC operation, after connecting this unit to a TV with an HDMI cable, you will need to switch the input on the TV to the input mode required to connect to this unit.

Then, you can select a TV program.

Important

- The ARC function may not operate even if the above conditions are met. If this is the case, listen to the TV audio after connecting this unit and the TV with an audio cable.

- The CEC (Consumer Electronic Control) function may activate when the ARC function is turned ON, causing power to turn ON and OFF and the input to switch from one to another. Since this unit does not guarantee synchronized operation based on the CEC function, we recommend that you turn OFF the HDMI CONTROL setting on the connected player. This unit may not operate properly if the HDMI CONTROL on the player is ON. Refer to the relevant device's instruction manual for details. If this does not work, turn OFF the ARC function.

If this is the case, listen to the TV audio after connecting this unit and the TV with an audio cable.

In addition, this unit does not guarantee synchronized operation that allows the TV remote control to operate the volume (including mute). Use this unit to operate the volume (including mute).

- Turn OFF the power and remove the power cord from the wall socket when connecting other devices or making connection changes to this unit. After all connections are completed, insert the power cord into the wall socket.



Troubleshooting

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Take a look at the other components and electrical appliances being used, because sometimes the problem may lie there. If the trouble isn't sorted out even after going through the checks below, ask your nearest Onkyo authorized independent service company to carry out repair work.

- If the unit does not operate normally due to external effects such as static electricity disconnect the power plug from the outlet and insert again to return to normal operating conditions.

General

❖ The power does not turn on.

- Disconnect the power plug from the outlet, and insert again.

❖ The receiver suddenly switches off.

- When the Auto Power Down function is working, the power will automatically turn off if the receiver has not operated for several hours. Check the setting for the Auto Power Down function (see [The Auto Power Down menu on page 28](#)).
- Make sure there are no loose strands of speaker wire touching the rear panel. This could cause the receiver to shut off automatically.
- After about a minute (you won't be able to switch the unit on during this time), switch the receiver back on. If the message persists, call a Onkyo authorized independent service company.
- If there is very little low frequency information in the source material, change your speaker settings to Front: SMALL / Subwoofer: YES, or Front: LARGE / Subwoofer: PLUS ([page 26](#)).

❖ Power automatically turns ON/OFF and the input switches from one to another. (When the ARC function is ON)

- The CEC (Consumer Electronic Control) function may activate when the ARC function is turned ON, causing power to turn ON and OFF and the input to switch from one to another. Since this unit does not guarantee synchronized operation based on the CEC function, turn OFF the HDMI CONTROL setting on the connected player. Refer to the relevant device's instruction manual for details.

If this does not work, turn OFF the ARC function. If this is the case, listen to the TV audio after connecting this unit and the TV with an audio cable.

❖ OVERHEAT shows in the display and the power turns off.

- The temperature within the unit has exceeded the allowable value. Try moving the unit for better ventilation ([page 2](#)).
- Lower the volume level.

❖ TEMP shows 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 ([page 2](#)).
- Lower the volume level.

❖ No sound is output when an input function is selected.

- Use **VOLUME +/-** to turn up the volume.
- Press **MUTE** on the remote control to turn muting off.
- Set the **AUDIO SEL** to **H** (HDMI), **C1/O1** (digital) or **A** (analog) according to the type of connections made ([page 18](#)).
- Make sure the component is connected correctly (see [Connecting your equipment on page 10](#)).
- Check the audio output settings of the source component.
- Refer to the instruction manual supplied with the source component.

❖ No image is output when an input function is selected.

- Make sure the component is connected correctly (see [Connecting your equipment on page 10](#)).
- Use the same type of video cables for the source component and TV to connect to this receiver (see [About video outputs, connection on page 13](#)).
- The video input selected on the TV monitor is incorrect. Refer to the instruction manual supplied with the TV.

❖ No sound from subwoofer.

- Make sure the subwoofer is switched on.
- If the subwoofer has a volume knob, make sure it's turned up.
- The Dolby Digital or DTS source you are listening to may not have an LFE channel.
- Switch the subwoofer setting in [Speaker Setting on page 26](#) to **YES** or **PLUS**.

❖ No sound from surround or center speakers.

- Connect the speakers properly ([page 11](#)).
- Refer to [Speaker Setting on page 26](#) to check the speaker settings.
- Refer to [Channel Level on page 27](#) to check the speaker levels.

❖ No sound from a specific speaker.

- Make sure the speaker cable is connected correctly. (Ensure that the connection terminal is correct, that the speaker wire is firmly inserted, and that no speaker wire is touching the rear panel.)

❖ Considerable noise in radio broadcasts.

- Connect the antenna ([page 16](#)) and adjust the position for best reception.
- Route any loose cables away from the antenna terminals and wires.
- Fully extend the FM wire antenna, position for best reception, and secure to a wall (or connect an outdoor FM antenna).
- Connect an additional internal or external AM antenna ([page 16](#)).
- Turn off equipment causing interference or move it away from the receiver (or move antennas farther away from equipment causing noise).

❖ Broadcast stations cannot be selected automatically.

- Connect an outdoor antenna ([page 16](#)).

❖ Noise during playback of a cassette deck.

- Move the cassette deck away from your receiver, until the noise disappears.

❖ No sound is output or a noise is output when software with DTS is played back.

- Make sure the player's settings are correct and/or the DTS signal out is on. Refer to the instruction manual supplied with the DVD player.

❖ Can't operate the remote control.

- Replace the batteries ([page 9](#)).
- Operate within 7 m, 30° of the remote sensor ([page 9](#)).
- Remove the obstacle or operate from another position.
- Avoid exposing the remote sensor on the front panel to direct light.
- In order to operate TUNER and USB functions, first press the TUNER or USB button before operating.

❖ The display is dark.

- Press **DIMMER** on the remote control repeatedly to return to the default.

❖ Display flashes and cannot be operated.

- Depending on the input signal or listening mode, there may be functions that cannot be selected.



HDMI

❖ No picture or sound.

→ If the problem still persists when connecting your HDMI component directly to your monitor, please consult the component or monitor manual or contact the manufacturer for support.

❖ No picture.

→ Video signals that are input from the analog video terminal will not output from the HDMI terminal. Signals that are input from the HDMI terminal will not output from the analog video terminal. Be consistent with the type of cable between input and output.

→ Depending on the output settings of the source component, it may be outputting a video format that can't be displayed. Change the output settings of the source, or connect using the composite video jacks.

→ This receiver is HDCP-compatible. Check that the components you are connecting are also HDCP-compatible. If they are not, please connect them using the composite video jacks.

→ Depending on the connected source component, it's possible that it will not work with this receiver (even if it is HDCP-compatible). In this case, connect using the composite video jacks between source and receiver.

→ If video images do not appear on your TV, try adjusting the resolution, Deep Color or other setting for your component.

→ To output signals in Deep Color, use an HDMI cable (High Speed HDMI®/™ Cable) to connect this receiver to a component or TV with the Deep Color feature.

❖ The OSD screen (Home Menu, etc.) isn't displayed.

→ The OSD will not appear if you have connected using the composite output to your TV. Use HDMI connections when setting up the system.

❖ No sound, or sound suddenly ceases.

→ Check that the **HDMI** setting is set to **AMP** (page 24).

→ If the component is a DVI device, use a separate connection for the audio.

→ HDMI format digital audio transmissions require a longer time to be recognized. Due to this, interruption in the audio may occur when switching between audio formats or beginning playback.

→ Turning on/off the device connected to this unit's HDMI OUT terminal during playback, or disconnecting/connecting the HDMI cable during playback, may cause noise or interrupted audio.

Important information regarding the HDMI connection

There are cases where you may not be able to route HDMI signals through this receiver (this depends on the HDMI equipped component you are connecting-check with the manufacturer for HDMI compatibility information).

If you aren't receiving HDMI signals properly through this receiver (from your component), please try the following configuration when connecting up.

Configuration

Connect your HDMI-equipped component directly to the display using an HDMI cable. Then use the most convenient connection (digital is recommended) for sending audio to the receiver. See the operating instructions for more on audio connections. Set the display volume to minimum when using this configuration.

Note

- Depending on the component, audio output may be limited to the number of channels available from the connected display unit (for example audio output is reduced to 2 channels for a monitor with stereo audio limitations).
- If you want to switch the input source, you'll have to switch functions on both the receiver and your display unit.
- Since the sound is muted on the display when using the HDMI connection, you must adjust the volume on the display every time you switch input sources.

USB messages

❖ 'USB Error 1 (I/U ERR1)'

→ There is a problem with the signal path from the USB to the receiver. Switch off the receiver and reconnect the USB to the receiver.

❖ 'USB Error 3 (I/U ERR3)'

→ When there is no response from the USB. Switch off the receiver and reconnect the USB to the receiver.

❖ 'USB Error 4 (I/U ERR4)'

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

Resetting the main unit

Use this procedure to reset all the receiver's settings to the factory default. Use the front panel controls to do this.

1 Switch the receiver into standby.

2 While holding down **DIRECT**, press and hold **ON/STANDBY** for about two seconds.

3 When you see **RESET?** appear in the display, press **STEREO**.

OK? shows in the display.

4 Press **SURROUND** to confirm.

OK appears in the display to indicate that the receiver has been reset to the factory default settings.

Important

- If the **Standby Through** is not set to **OFF**, you may not be able to initialize the unit.

Cleaning the unit

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surface is dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleansers.
- Never use thinners, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode the surface.

Specifications

Audio section

Rated power output

Front, Center, Surround

..... 105 W per channel (1 kHz, 6 Ω , 1 %)

..... 100 W per channel (1 kHz, 6 Ω , 0.7 %)

For Oceania model

Maximum power output (Front, Center, Surround)

..... 120 W per channel (1 kHz, 6 Ω , 10 %)

Total Harmonic Distortion

..... 0.06 % (20 Hz to 20 kHz, 8 Ω , 50 W/ch)

Frequency response (LINE Pure Direct mode)

..... 10 Hz to 70 kHz ± 3 dB

Guaranteed speaker impedance..... 6 Ω to 16 Ω

Input (Sensitivity/Impedance)

LINE..... .250 mV/47 k Ω

Signal-to-Noise Ratio (IHF, short circuited, A network)

LINE..... .98 dB

Video Section

Signal level

Composite..... 1 Vp-p (75 Ω)

Tuner Section

Frequency Range (FM)..... 87.5 MHz to 108 MHz

Antenna Input (FM)..... 75 Ω unbalanced

Frequency Range (AM)..... 531 kHz to 1602 kHz

Antenna (AM)..... Loop antenna

Digital In/Out Section

HDMI terminal..... Type A (19-pin)

HDMI output type..... 5 V, 55 mA

USB terminal..... USB2.0 Full Speed (Type A) 5 V, 0.5 A

Miscellaneous

Power Requirements..... AC 220 V to 240 V, 50 Hz/60 Hz

Power Consumption..... 165 W

In standby..... .0.45 W

Dimensions..... 435 mm (W) x 168 mm (H) x 326.5 mm (D)

Weight (without package)..... 7.3 kg

Furnished Parts

Remote control..... 1

Dry cell batteries (AAA size IEC R03)..... 2

AM loop antenna..... 1

FM wire antenna..... 1

Quick start guide

Safety Brochure

Note

- Specifications and the design are subject to possible modifications without notice, due to improvements.



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Version 2, June 1991

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