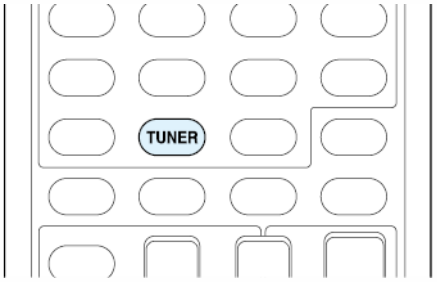
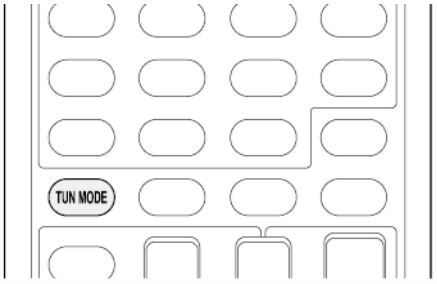
Tuning into a Radio Station

Tuning Automatically

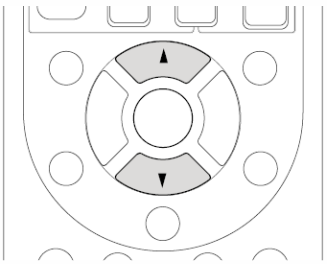
1. Press TUNER on the remote controller several times to select either "AM" or "FM".



2. Press TUN MODE so that the "AUTO" indicator on the display lights.



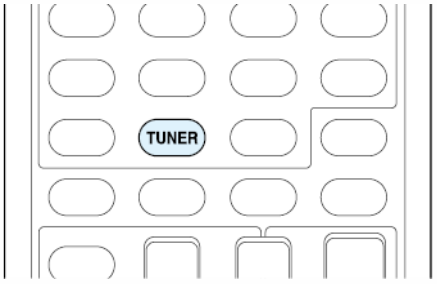
3. Press the cursors ▲/▼ to start automatic tuning.
   - Alternatively you can press ▼TUNING▲ on the main unit to start tuning automatically.
   - Searching automatically stops when a station is found. When tuned into a radio station, the "►TUNED◄" indicator on the display lights. When tuned into an FM radio station, the "FM STEREO" indicator lights.
   - No sound is output while the "►TUNED◄" indicator is off.



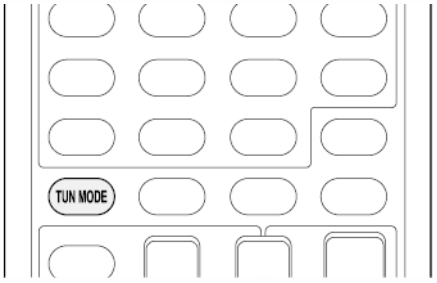
When the signal from an FM radio station is weak: Radio wave may be weak depending on the building structure and environmental conditions. In that case, perform the procedure as explained below in "Tuning Manually" to manually select the desired station.

Tuning Manually

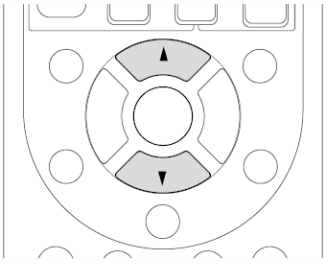
1. Press TUNER on the remote controller several times to select either "AM" or "FM".



2. Press TUN MODE so that the "AUTO" indicator on the display goes off.



3. While pressing the cursors ▲/▼, select the desired radio station.
   - Alternatively you can press ▼TUNING▲ on the main unit.
   - The frequency changes by 1 step each time you press the button. The frequency changes continuously if the button is held down and stops when the button is released. Tune by looking at the display.



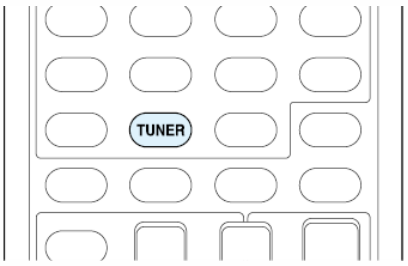
To return to automatic tuning: Press TUN MODE on the remote controller again. The unit tunes automatically into a radio station. Normally "AUTO" should be displayed.

Directly inputting the frequency

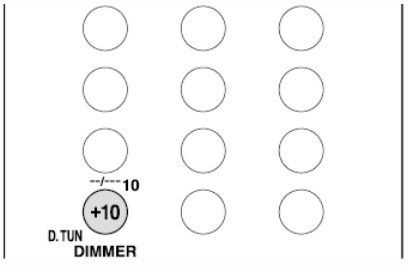
It allows you to directly enter the frequency of the radio station you want to

listen to.

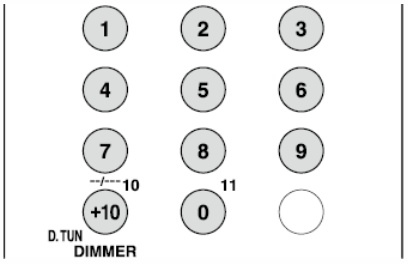
1. Press TUNER on the remote controller several times to select either "AM" or "FM".



2. Press D.TUN.



3. Using the number buttons, enter the frequency of the radio station within 8 seconds.
   - To enter 87.5 (FM), for example, press 8, 7, 5, or 8, 7, 5, 0. If you entered a wrong number, press D.TUN and enter a correct one.

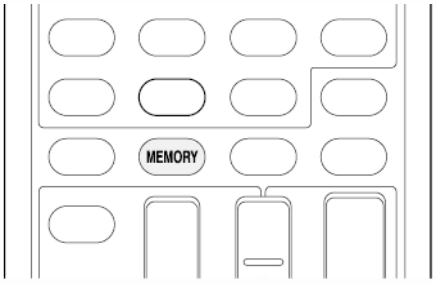


Presetting a Radio Station

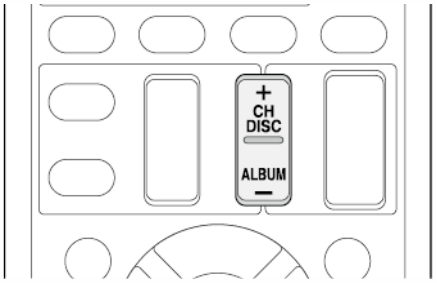
It allows you to register up to 40 of your favorite AM/FM radio stations. Registering radio stations in advance allows you to tune into your radio station of choice directly.

Registration Procedure

1. Tune into the AM/FM radio station you want to register.
2. Press MEMORY on the remote controller so that the preset number on the display flashes.



3. Press CH +/- several times to select a number between 1 and 40 while the preset number is flashing (about 8 seconds).
   - Alternatively you can press ◄PRESET► on the main unit.

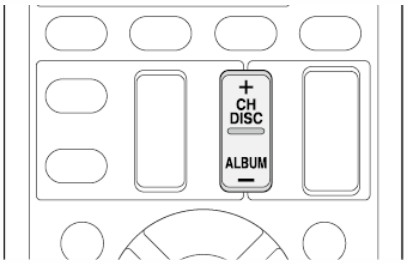


4. Press MEMORY again to register the station.
   - When the station is registered, the preset number stops flashing.
   - Repeat this procedure for all of your favorite AM/FM radio stations.

Selecting a Preset Radio Station

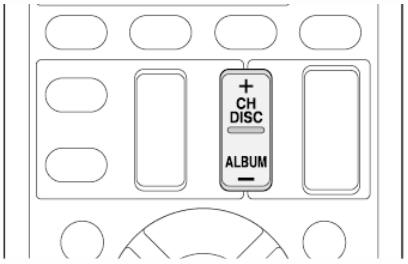
1. Press CH +/- on the remote controller to select a preset number.
   - Alternatively you can press ◄PRESET► on the main unit. You can

also select by directly entering the preset number with the number buttons on the remote controller.

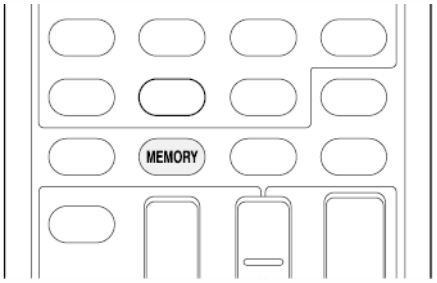


Deleting a Preset Radio Station

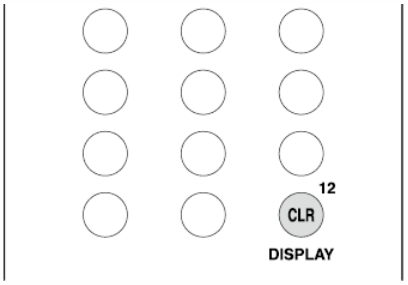
1. Press CH +/- on the remote controller to select the preset number to delete.



2. Press MEMORY so that the preset number on the display flashes.



3. Press CLR while the preset number is flashing (about 8 seconds) to delete the preset number.
   - When deleted, the number on the display goes off.



Using RDS (European, Australian and Asian models)

RDS stands for Radio Data System and is a method of transmitting data in FM radio signals.

- RDS works only in areas where RDS broadcasts are available.
- In some cases, the text information appeared on the display is not identical to the content transmitted by the RDS station. Furthermore, unexpected characters may be displayed when the unit receives unsupported characters. However, this is not a malfunction.
- If the signal from an RDS station is weak, the RDS data may be displayed continuously or not at all.

  PS (Program Service): Tuning into a radio station distributing Program Service information displays the radio station name. Pressing DISPLAY displays the frequency for 3 seconds.

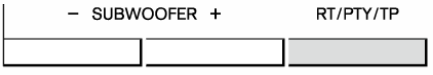
  RT (Radio Text): Tuning into a radio station transmitting Radio Text information displays text on the display of the unit.

  PTY (Program Type): Allows you to search for RDS stations by program type.

  TP (Traffic Program): Allows you to search for radio stations transmitting traffic information.

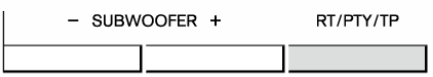
Displaying Radio Text (RT)

1. Press RT/PTY/TP on the main unit once.
   - The Radio Text (RT) is displayed scrolling across the display. "No Text Data" is displayed when no text information is available.

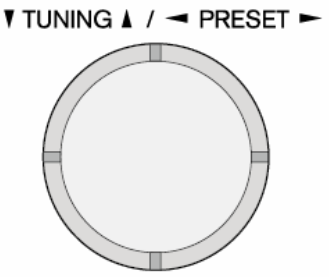


Searching by Type (PTY)

1. Press RT/PTY/TP on the main unit twice.
   - The current program type appears on the display.

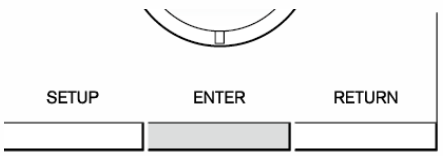


2. Press ◄PRESET► to select the type of program to search for.



- The following RDS station types are displayed:
  None
  News (News reports)
  Affairs (Current affairs)
  Info (Information)
  Sport
  Educate (Education)
  Drama
  Culture
  Science (Science and technology)
  Varied
  Pop M (Pop music)
  Rock M (Rock music)
  Easy M (Middle of the road music)
  Light M (Light classics)
  Classics (Serious classics)
  Other M (Other music)
  Weather
  Finance
  Children (Children's programmes)
  Social (Social affairs)
  Religion
  Phone In
  Travel
  Leisure
  Jazz (Jazz music)
  Country (Country music)
  Nation M (National music)
  Oldies (Oldies music)
  Folk M (Folk music)
  Document (Documentary)

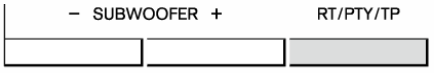
3. Press ENTER to search the radio stations of the selected type.



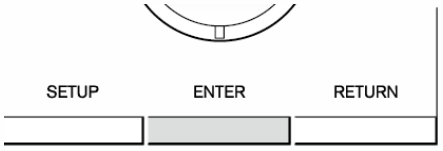
4. When such a radio station is found, the indication on the display flashes. Then, press ENTER again.
   - If no stations are found, the message "Not Found" is displayed.

Listening to Traffic Information (TP)

1. Press RT/PTY/TP on the main unit three times.
   - "[TP]" will be displayed if traffic information is transmitted by the radio station you are tuned in. "TP" only is displayed if no traffic information is available.



2. Press ENTER to search a radio station distributing traffic information.



3. When a radio station is found, searching stops and traffic information starts.
   - "Not Found" is displayed if no radio station distributing traffic information is found.

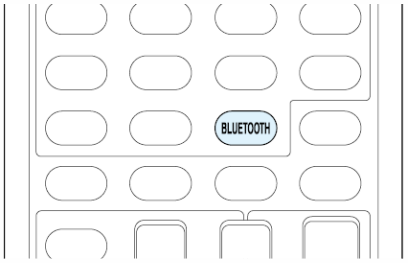
About the Remote Controller

Use the remote controller of this unit to play music files stored on a Bluetooth-enabled device.

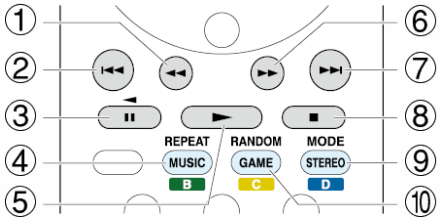
- The Bluetooth-enabled devices must support the AVRCP profile. Some devices may not be operated, even when they support AVRCP profile.

Remote Controller Buttons

1. Press BLUETOOTH on the remote controller.



2. Operate the remote controller by referring to the name and function of each of the buttons.



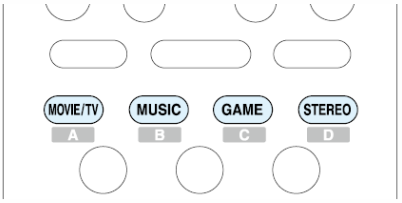
① ◄◄: This button fast-reverses the current track.
② ⏮: This button plays the current track from the beginning. Pressing this button twice plays the previous track.
③ ❚❚: This button pauses the playback.
④ **REPEAT**: This button replays the track (or tracks). Pressing this button repeatedly cycles through the repeat modes.
⑤ ►: This button starts the playback.
⑥ ►►: This button fast-forwards the current track.
⑦ ⏭: This button plays the next track.
⑧ ■: This button stops the playback.
⑨ **MODE**: This button displays the video from the input selected in "Video Select". Each press of the button displays or turns off the video. You can change the display position of the OSD by pressing ENTER while the video is displayed on the screen.
- These buttons are disabled when the OSD language is set to Chinese. (European, Australian, Taiwanese and Asian models)

⑩ **RANDOM**: This button performs random playback.

Selecting Listening Mode

The listening modes allow you to select the best sound effect for your input source.

1. After pressing RECEIVER on the remote controller, press one of the following four buttons.



2. Press the selected button repeatedly to switch the modes displayed on the display of the unit.
   - Set the listening mode of your choice by listening to the actual sound.



For details on the listening modes see "Listening Mode Types". For listening modes selectable with each button, refer to "Selectable Listening Modes".

Listening Mode Types

In alphabetical order

AllCh Stereo

Ideal for background music, this mode fills the entire listening area with stereo sound.

Direct

In this mode, audio from the input source is output as-is. For example, if a 2 ch source from a music CD is input, the output will be stereo, or if Dolby Digital signal is input, the sound field will be controlled in accordance with the number of channels present.

Dolby D (Dolby Digital)

Mode suitable for playing sources recorded in Dolby Digital.

- This listening mode can be selected only if your Blu-ray Disc/DVD player is digitally connected to the unit or the player's output setting is bitstream.

Dolby D+ (Dolby Digital Plus)

Mode suitable for playing sources recorded in Dolby Digital Plus.

- This listening mode can be selected only if your Blu-ray Disc/DVD player is digitally connected to the unit or the player's output setting is bitstream.

Dolby Pro Logic II

This mode expands any 2 ch source for 5.1 ch multichannel surround playback. It provides a very natural and seamless surround-sound experience, keeping the sound clear. As well as music and movies, video games can also benefit from the dramatic spatial effects and vivid imaging.

- **PL II Movie:** Use this mode with any 2 ch movie.
- **PL II Music:** Use this mode with any 2 ch music source.
- **PL II Game:** Use this mode with any 2 ch game source.

Dolby TrueHD

Mode suitable for playing sources recorded in Dolby TrueHD.

- This listening mode can be selected only if your Blu-ray Disc/DVD player is digitally connected to the unit or the player's output setting is bitstream.

DSD

Mode suitable for playing sources recorded in DSD.

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

DTS

Mode suitable for playing sources recorded in DTS.

- This listening mode can be selected only if your Blu-ray Disc/DVD player is digitally connected to the unit or the player's output setting is bitstream.

DTS 96/24

Mode suitable for playing sources recorded in DTS 96/24. With 96 kHz sampling rate and 24-bit resolution, it provides superior fidelity.

- Depending on the settings, this listening mode becomes DTS.
- This listening mode can be selected only if your Blu-ray Disc/DVD player is digitally connected to the unit or the player's output setting is bitstream.

DTS Express

Mode suitable for playing sources recorded in DTS Express.

- This listening mode can be selected only if your Blu-ray Disc/DVD player is digitally connected to the unit or the player's output setting is bitstream.

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

Mode suitable for playing sources recorded in DTS-HD High Resolution Audio.

- This listening mode can be selected only if your Blu-ray Disc/DVD player is digitally connected to the unit or the player's output setting is bitstream.

DTS-HD MSTR (DTS-HD Master Audio)

Mode suitable for playing sources recorded in DTS-HD Master Audio.

- This listening mode can be selected only if your Blu-ray Disc/DVD player is digitally connected to the unit or the player's output setting is bitstream.

DTS Neo:6

This mode expands any 2 ch source for 5.1 ch multichannel surround playback. It offers full-bandwidth on all channels, with great independence between the channels. There are two variants for this mode: one ideal for movies and another ideal for music.

- **Neo:6 Cinema**: Use this mode with any 2 ch movie.
- **Neo:6 Music**: Use this mode with any 2 ch music source.

Full Mono

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

Game-Action

In this mode, sound localization is distinct with emphasis on bass.

Game-Rock

In this mode, sound pressure is emphasized to heighten live feel.

Game-RPG

In this mode, the sound has a dramatic feel with a similar atmosphere to Orchestra mode.

Game-Sports

Suitable for audio source with much reverberation.

Mono

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

Multich (Multichannel)

Mode suitable for playing sources recorded in PCM multichannel.

Orchestra

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

Stereo

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

Studio-Mix

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

T-D (Theater-Dimensional)

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

TV Logic

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

Unplugged

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

Selectable Listening Modes

Listening modes that can be selected with the listening mode buttons will differ depending on the input signal format and actual speaker configuration. Also note that depending on the player settings and content, some listening modes may not be available for selecting.

- Listening modes available when headphones are connected are: Mono, Direct, and Stereo.

MOVIE/TV button

You can select a mode suitable for movies and TV programs.

Analog

Direct
Mono
PL II Movie*1
Neo:6 Cinema*1
TV Logic*2
AllCh Stereo*1
Full Mono*1
T-D

*1 Center speaker or surround speakers need to be installed.
*2 Surround speakers need to be installed.

PCM

Direct
Mono
PL II Movie*1
Neo:6 Cinema*1
TV Logic*2
AllCh Stereo*1
Full Mono*1
T-D

*1 Center speaker or surround speakers need to be installed.
*2 Surround speakers need to be installed.

Multich PCM

Direct
Mono
Multich*1
TV Logic*2
AllCh Stereo*1
Full Mono*1
T-D

*1 Center speaker or surround speakers need to be installed.
*2 Surround speakers need to be installed.

DSD

Direct
Mono
DSD*1 *2
PL II Movie*3
Neo:6 Cinema*3
TV Logic*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

Dolby D

Direct
Mono
Dolby D*1 *2
PL II Movie*3
Neo:6 Cinema*3
TV Logic*4

AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

Dolby D+

Direct
Mono
Dolby D+*1 *2
PL II Movie*3
Neo:6 Cinema*3
TV Logic*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

Dolby TrueHD

Direct
Mono
Dolby TrueHD*1 *2
PL II Movie*3
Neo:6 Cinema*3
TV Logic*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.

*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.

*4 Surround speakers need to be installed.

DTS

Direct
Mono
DTS*1 *2
PL II Movie*3
Neo:6 Cinema*3
TV Logic*4
AllCh Stereo*2
Full Mono*2
T-D

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

*2 Center speaker or surround speakers need to be installed.

*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.

*4 Surround speakers need to be installed.

DTS 96/24

Direct
Mono
DTS 96/24*1 *2
PL II Movie*3
Neo:6 Cinema*3
TV Logic*4
AllCh Stereo*2
Full Mono*2
T-D

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

*2 Center speaker or surround speakers need to be installed.

*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.

*4 Surround speakers need to be installed.

DTS Express

Direct
Mono
DTS Express*1 *2
PL II Movie*3
Neo:6 Cinema*3
TV Logic*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

DTS-HD HR

Direct
Mono
DTS-HD HR*1 *2
PL II Movie*3
Neo:6 Cinema*3
TV Logic*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

DTS-HD MSTR

Direct
Mono
DTS-HD MSTR*1 *2
PL II Movie*3
Neo:6 Cinema*3

TV Logic*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

MUSIC button

You can select a mode suitable for music.

Analog

Direct
Stereo
PL II Music*1
Neo:6 Music*1
Orchestra*2
Unplugged*2
Studio-Mix*2
AllCh Stereo*1
Full Mono*1

*1 Center speaker or surround speakers need to be installed.
*2 Surround speakers need to be installed.

PCM

Direct
Stereo
PL II Music*1
Neo:6 Music*1
Orchestra*2
Unplugged*2
Studio-Mix*2
AllCh Stereo*1
Full Mono*1

*1 Center speaker or surround speakers need to be installed.
*2 Surround speakers need to be installed.

Multich PCM

Direct
Stereo
Multich*1
Orchestra*2
Unplugged*2
Studio-Mix*2
AllCh Stereo*1
Full Mono*1

*1 Center speaker or surround speakers need to be installed.
*2 Surround speakers need to be installed.

DSD

Direct
Stereo
DSD*1 *2
PL II Music*3
Neo:6 Music*3
Orchestra*4
Unplugged*4
Studio-Mix*4
AllCh Stereo*2
Full Mono*2

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

Dolby D

Direct
Stereo
Dolby D*1 *2
PL II Music*3

Neo:6 Music*3
Orchestra*4
Unplugged*4
Studio-Mix*4
AllCh Stereo*2
Full Mono*2

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

Dolby D+

Direct
Stereo
Dolby D+*1 *2
PL II Music*3
Neo:6 Music*3
Orchestra*4
Unplugged*4
Studio-Mix*4
AllCh Stereo*2
Full Mono*2

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

Dolby TrueHD

Direct
Stereo
Dolby TrueHD*1 *2
PL II Music*3
Neo:6 Music*3
Orchestra*4
Unplugged*4

Studio-Mix*4
AllCh Stereo*2
Full Mono*2

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

DTS

Direct
Stereo
DTS*1 *2
PL II Music*3
Neo:6 Music*3
Orchestra*4
Unplugged*4
Studio-Mix*4
AllCh Stereo*2
Full Mono*2

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

DTS 96/24

Direct
Stereo
DTS 96/24*1 *2
PL II Music*3
Neo:6 Music*3
Orchestra*4
Unplugged*4
Studio-Mix*4
AllCh Stereo*2
Full Mono*2

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

DTS Express

Direct
Stereo
DTS Express*1 *2
PL II Music*3
Neo:6 Music*3
Orchestra*4
Unplugged*4
Studio-Mix*4
AllCh Stereo*2
Full Mono*2

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

DTS-HD HR

Direct
Stereo
DTS-HD HR*1 *2
PL II Music*3
Neo:6 Music*3
Orchestra*4
Unplugged*4
Studio-Mix*4
AllCh Stereo*2
Full Mono*2

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center

speaker or surround speakers are installed.

*4 Surround speakers need to be installed.

DTS-HD MSTR

Direct
Stereo
DTS-HD MSTR*1 *2
PL II Music*3
Neo:6 Music*3
Orchestra*4
Unplugged*4
Studio-Mix*4
AllCh Stereo*2
Full Mono*2

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

*2 Center speaker or surround speakers need to be installed.

*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.

*4 Surround speakers need to be installed.

GAME button

You can select a mode suitable for games.

Analog

Direct
PL II Game*1
Game-RPG*2
Game-Action*2
Game-Rock*2
Game-Sports*2
AllCh Stereo*1
Full Mono*1
T-D

*1 Center speaker or surround speakers need to be installed.

*2 Surround speakers need to be installed.

PCM

Direct
PL II Game*1
Game-RPG*2
Game-Action*2
Game-Rock*2
Game-Sports*2
AllCh Stereo*1
Full Mono*1
T-D

*1 Center speaker or surround speakers need to be installed.
*2 Surround speakers need to be installed.

Multich PCM

Direct
Multich*1
Game-RPG*2
Game-Action*2
Game-Rock*2
Game-Sports*2
AllCh Stereo*1
Full Mono*1
T-D

*1 Center speaker or surround speakers need to be installed.
*2 Surround speakers need to be installed.

DSD

Direct
DSD*1 *2
PL II Game*3
Game-RPG*4
Game-Action*4
Game-Rock*4
Game-Sports*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

Dolby D

Direct
Dolby D*1 *2
PL II Game*3
Game-RPG*4
Game-Action*4
Game-Rock*4
Game-Sports*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

Dolby D+

Direct
Dolby D+*1 *2
PL II Game*3
Game-RPG*4
Game-Action*4
Game-Rock*4
Game-Sports*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center

speaker or surround speakers are installed.

*4 Surround speakers need to be installed.

Dolby TrueHD

Direct
Dolby TrueHD*1 *2
PL II Game*3
Game-RPG*4
Game-Action*4
Game-Rock*4
Game-Sports*4
AllCh Stereo*2
Full Mono*2
T-D

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

*2 Center speaker or surround speakers need to be installed.

*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.

*4 Surround speakers need to be installed.

DTS

Direct
DTS*1 *2
PL II Game*3
Game-RPG*4
Game-Action*4
Game-Rock*4
Game-Sports*4
AllCh Stereo*2
Full Mono*2
T-D

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

*2 Center speaker or surround speakers need to be installed.

*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.

*4 Surround speakers need to be installed.

DTS 96/24

Direct
DTS 96/24 *1 *2
PL II Game *3
Game-RPG *4
Game-Action *4
Game-Rock *4
Game-Sports *4
AllCh Stereo *2
Full Mono *2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

DTS Express

Direct
DTS Express *1 *2
PL II Game *3
Game-RPG *4
Game-Action *4
Game-Rock *4
Game-Sports *4
AllCh Stereo *2
Full Mono *2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

DTS-HD HR

Direct

DTS-HD HR*1 *2
PL II Game*3
Game-RPG*4
Game-Action*4
Game-Rock*4
Game-Sports*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

DTS-HD MSTR

Direct
DTS-HD MSTR*1 *2
PL II Game*3
Game-RPG*4
Game-Action*4
Game-Rock*4
Game-Sports*4
AllCh Stereo*2
Full Mono*2
T-D

*1 Cannot be selected when the input format is monaural or 2 ch.
*2 Center speaker or surround speakers need to be installed.
*3 Can only be selected when the input format is 2 ch and a center speaker or surround speakers are installed.
*4 Surround speakers need to be installed.

STEREO button

You can select a listening mode for stereo and all channel stereo sources.

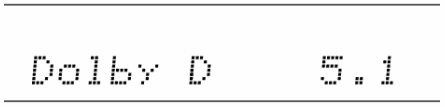
All format

Stereo
AllCh Stereo*1

*1 Center speaker or surround speakers need to be installed.

Checking the Input Format

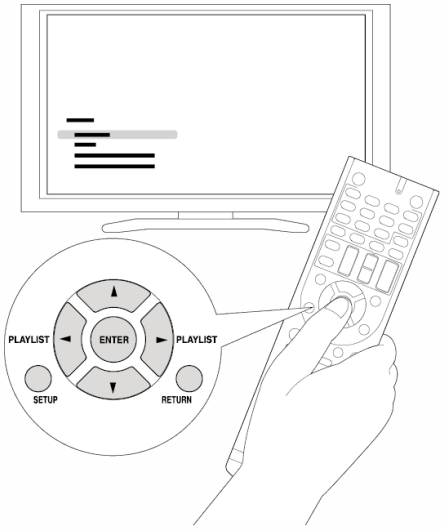
While audio from the player is being input, press DISPLAY on the remote controller several times to switch the information shown on the main unit display. For example, if "Dolby D 5.1" is displayed, the Dolby Digital 5.1 ch signals are being input.



How to Set

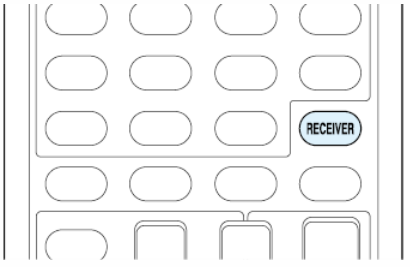
The unit allows you to configure advanced settings in order to provide even better experience.

● **Operation**: You can set up by viewing the guidance displayed on the TV screen. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.

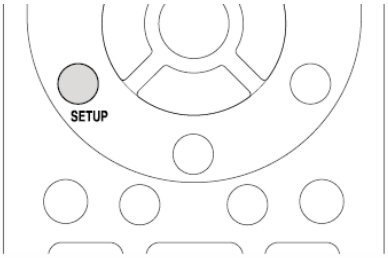


Operation

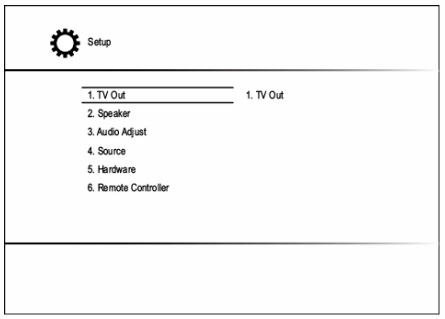
1. Press RECEIVER on the remote controller.
   - Always press RECEIVER first to change the remote controller to RECEIVER mode (the mode to operate this unit) since its mode may be changed to operate another component.



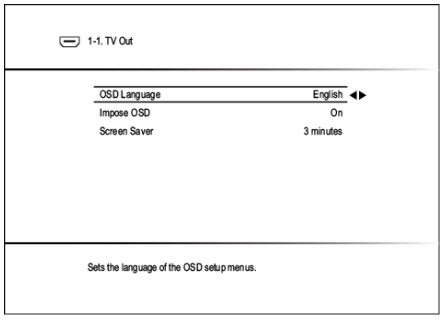
2. Press SETUP to display the Setup menu.



3. Press ▲/▼ to select the desired menu, and then press ENTER.



4. Press ▲/▼ to select the item, and then press ENTER.
5. With the ▲/▼/◄/► cursors, select the item to configure the settings.



To exit setup: Press SETUP.

Overview of the Setup menu

1. TV Out

Make settings for the on-screen display function on the TV when you use the setting menu, for example.

2. Speaker

Make advanced settings for the speakers.

3. Audio Adjust

Make a variety of settings for sound.

4. Source

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

5. Hardware

Make a variety of settings such as for linked operation with connected HDMI equipment and the standby mode for this unit.

6. Remote Controller

Make settings related to the remote controller.

1. TV Out

TV Out

Make settings for the on-screen display function on the TV when you use the setting menu, for example.

OSD Language

Default Value: English

Select the on-screen display language.
Select from English, German, French, Spanish, Italian, Dutch, Swedish, Russian (European, Australian and Asian models), or Chinese (European, Australian, Taiwanese and Asian models).

Impose OSD

Default Value: On

Set whether or not to display the information on the TV when the volume is adjusted or input is changed, for example.
"On": OSD displayed on the TV.
"Off": OSD not displayed on the TV.

- OSD may not be displayed depending on the input signal even if "On" is selected. If the operation screen is not displayed, change the resolution of the connected device.

Screen Saver

Default Value: 3 minutes

Set the time to start the screen saver. Select a value from "3 minutes", "5 minutes", "10 minutes" and "Off".

2. Speaker

Allows you to change the speaker configuration such as presence or not of subwoofer, crossover frequency, and so on.
This setting cannot be selected if headphones are connected or audio is output from the speakers of the TV.

Configuration

Change speaker settings such as the number of channels connected.

Speaker Channels

Default Value: 5.1 ch

Select "2.1 ch", "3.1 ch", "4.1 ch", or "5.1 ch" to suit the number of speaker channels connected.

Subwoofer

Default Value: Yes

Set whether a subwoofer is connected or not.
"Yes": When subwoofer is connected
"No": When subwoofer is not connected

Crossover

Change speaker settings such as the crossover frequency of the speakers. Audio will not be output while you are making this setting.

Front

Default Value: Small

Set the size for each of the speakers. Use the diameter of the cone as a guide.
"Small": When the cone diameter is less than 6-1/2 inches (16 cm)
"Large": When the cone diameter is greater than 6-1/2 inches (16 cm)

- The setting is fixed to "Large" if "Configuration" - "Subwoofer" is set to "No".

Center

Default Value: Small

Set the size for each of the speakers. Use the diameter of the cone as a guide.
"Small": When the cone diameter is less than 6-1/2 inches (16 cm)
"Large": When the cone diameter is greater than 6-1/2 inches (16 cm)

- "Large" can be selected only when "Front" is set to "Large".
- If an item cannot be selected even though connection is correct, check that the settings in "Configuration" - "Speaker Channels" matches the number of connected channels.

☐ Surround

Default Value: Small

Set the size for each of the speakers. Use the diameter of the cone as a guide.
"Small": When the cone diameter is less than 6-1/2 inches (16 cm)
"Large": When the cone diameter is greater than 6-1/2 inches (16 cm)

- "Large" can be selected only when "Front" is set to "Large".
- If an item cannot be selected even though connection is correct, check that the settings in "Configuration" - "Speaker Channels" matches the number of connected channels.

☐ Crossover

Default Value: 100Hz

Set the lowest frequency that each the speakers can output so that frequencies lower than this are output from the subwoofer. Set using the diameter of the speaker with the smallest cone as a guide.
"40Hz", "50Hz", "60Hz": For cone diameters greater than 8 inches (20 cm)
"70Hz", "80Hz", "90Hz": For cone diameters between 6-1/2 inches to 8 inches (16 to 20 cm)
"100Hz": For cone diameters 5-1/4 to 6-1/2 inches (13 to 16 cm)
"120Hz": For cone diameters 3-1/2 to 5-1/4 inches (9 to 13 cm)
"150Hz", "180Hz", "200Hz": For cone diameters less than 3-1/2 inches (9 cm)

☐ Double Bass

Default Value: On

This can be selected only when "Configuration" - "Subwoofer" is set to "Yes" and "Front" is set to "Large".
Boost bass output by feeding bass sounds from the front left and right, and center speakers to the subwoofer.
"On": Bass output will be boosted.
"Off": Bass output will not be boosted.

Distance

Set the distance from each speaker to the listening position.

- Unit

  Default Value: feet/meters

  Specify the unit of distance for configuring settings.
  "feet": When setting in feet (0.1ft to 30.0ft, in increments of 0.1ft)
  "meters": When setting in meters (0.03m to 9.00m, in increments of 0.03m)

- Front Left

  Default Value: 12.0ft/3.60m

  Specify the distance between each speaker and the listening position.

- Center

  Default Value: 12.0ft/3.60m

  Specify the distance between each speaker and the listening position.

- Front Right

  Default Value: 12.0ft/3.60m

  Specify the distance between each speaker and the listening position.

- Surround Right

  Default Value: 7.0ft/2.10m

  Specify the distance between each speaker and the listening position.

- Surround Left

  Default Value: 7.0ft/2.10m

  Specify the distance between each speaker and the listening position.

- Subwoofer

  Default Value: 12.0ft/3.60m

  Specify the distance between each speaker and the listening position.

- Default values vary depending on the regions.
- The speaker "Distance" may be unable to be changed depending on the settings in "Configuration" - "Speaker Channels" / "Subwoofer".

Level Calibration

Adjust the level of each speaker with the built-in test tone.

- Front Left

  Default Value: 0dB

  Select a value between "-12dB" and "+12dB". A test tone will be output each time you change the value. Select the desired level.

- Center

  Default Value: 0dB

  Select a value between "-12dB" and "+12dB". A test tone will be output each time you change the value. Select the desired level.

- Front Right

  Default Value: 0dB

  Select a value between "-12dB" and "+12dB". A test tone will be output each time you change the value. Select the desired level.

- Surround Right

  Default Value: 0dB

  Select a value between "-12dB" and "+12dB". A test tone will be output each time you change the value. Select the desired level.

- Surround Left

  Default Value: 0dB

  Select a value between "-12dB" and "+12dB". A test tone will be output each time you change the value. Select the desired level.

- Subwoofer

  Default Value: 0dB

  Select a value between "-15dB" and "+12dB". A test tone will be output each time you change the value. Select the desired level.

- The speaker "Level Calibration" may be unable to be changed depending on the settings in "Configuration" - "Speaker Channels" / "Subwoofer".
- The settings for "Level Calibration" cannot be changed while MUTING is on.

3. Audio Adjust

Configure various settings related to sound, such as settings for listening to multiplex audio or multilingual TV broadcasts and sound field settings for listening modes.

Multiplex/Mono

Multiplex
Input Channel

Default Value: Main

Set the audio channel or language to be output when playing multiplex audio or multilingual TV broadcasts etc.
"Main": Main channel only
"Sub": Sub channel only
"Main / Sub": Main and sub channels will be output at the same time.

- If multiplex audio is being played, "1+1" will be displayed when DISPLAY is pressed.

Mono
Input Channel

Default Value: Left + Right

Set the input channel to use for playing any 2 ch digital source such as Dolby Digital, or 2-ch analog/PCM source in the Mono listening mode.
"Left": Left channel only
"Right": Right channel only
"Left + Right" : Left and right channels

Dolby

Make the settings for Dolby listening mode.

Panorama

Default Value: Off

Adjust the sound field setting for playing any 2 ch digital source such as Dolby Digital or 2 ch analog/PCM source in the Dolby Pro Logic II Music listening mode. Select the width of sound field.

"On": Width of sound field will be increased.
"Off": Default value

- [ ] Dimension

Default Value: 0

Adjust the sound field setting for playing any 2 ch digital source such as Dolby Digital or 2 ch analog/PCM source in the Dolby Pro Logic II Music listening mode. Select the depth of sound field.
"-3" to "+3": The sound field shifts forward as the set value becomes smaller than "0" and backward if the set value become larger than "0".

- [ ] Center Width

Default Value: 3

Configure the setting to use for playing any 2 ch digital source such as Dolby Digital, or 2-ch analog/PCM source in the Dolby Pro Logic II Music listening mode. Adjust the width of the front sound field.
"0" to "7": The smaller the setting value is, the more concentrated in the center speaker is the sound, while the larger the setting value is, the more distributed to the front left and right speakers is the sound of the center speaker.

- [ ] Loudness Management

Default Value: On

Enable the Late Night function that allows you to enjoy surround sound of Dolby TrueHD playback even in low volume.
"On": Use this function
"Off": Do not use this function

DTS

Make the settings for DTS Neo:6 Music listening mode.

- [ ] Neo:6 Music Center Image

Default Value: 2

Adjust the width of the sound field of the front channel when playing in the DTS Neo:6 Music listening mode.
"0" to "5": Selecting a smaller value brings the sound field of the front channel to the center while selecting a larger value spreads the sound field of the front channel to left and right.

Theater-Dimensional

Make the settings for Theater-Dimensional listening mode.

☐ Listening Angle

Default Value: Wide

To enhance the effect of Theater-Dimensional, select the actual angle of the left and right front speakers as it appears from the listening position.
"Narrow": Less than 30°
"Wide": Greater than 30°

- Position the front speakers 20° to the listening position if you have selected "Narrow" in "Listening Angle" and 40° if you have selected "Wide".

4. Source

Make settings for input sources, such as volume difference adjustments for each input selector for the connected equipment. When you select a desired input to check the audio, start playback of the connected device.

IntelliVolume

IntelliVolume

Default Value: 0dB

Adjust the volume level difference between the devices connected to the unit. Select a value between "-12dB" and "+12dB". Set a negative value if the volume of the target device is larger than the others and a positive value if smaller.

Name Edit

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

Name

Default Value: ---

Select a name registered in the unit and replace the currently selected input selector name with it.

- The same name cannot be used for more than one input selector.

- This cannot be set if the "TUNER" or "BLUETOOTH" input is selected.

Audio Select

Make the audio input setting. The setting can be separately set to each input selector button. Select the input selector to configure.

Audio Select

Default Value: -

Select the priority for input selection when multiple audio sources are

connected to one input selector, such as connections to both the BD/DVD HDMI jack and AUDIO jack. You cannot select a jack that is not associated with the currently selected input.
- The priority is HDMI → DIGITAL AUDIO/OPTICAL → Analog if this setting is not changed.

"ARC": When giving priority to input signal from ARC compatible TV.
- The setting can be selected only when "HDMI" - "Audio Return Channel" is set to "Auto" and also the "TV" input is selected.

"HDMI": When giving priority to input signal from HDMI jacks.
"DIGITAL AUDIO": When giving priority to input signal from DIGITAL AUDIO (COAXIAL) jack.
"OPTICAL": When giving priority to input signal from OPTICAL jacks.
"Analog": When giving priority to input signal from AUDIO jacks.
- The setting cannot be changed when "GAME 1" or "STRM BOX" input is selected.

☐ PCM Fixed Mode

Default Value: Off

Select whether to fix input signals to PCM (except multi-channel PCM) when you have selected "HDMI", "DIGITAL AUDIO", or "OPTICAL" in the "Audio Select" setting. Set this item to "On" if noise is produced or truncation occurs at the beginning of a track when playing PCM sources. Select "Off" normally.
- Changing "Audio Select" changes the setting to "Off".

- The setting cannot be changed when "GAME 2", "VCR", "AUX", "TUNER", or "BLUETOOTH" input is selected.

Video Select

☐ Video Select

Default Value: Last

Select the video input played along with audio output when either "TUNER" or "BLUETOOTH" is selected.
"Last": Select the video input played immediately prior.
"BD/DVD", "CBL/SAT", "GAME 1", "GAME 2", "STRM BOX", "VCR", "AUX": Play the video from the selected input.

- The setting cannot be changed when input other than "TUNER" or "BLUETOOTH" is selected.
- Switch between displaying and not displaying video by pressing MODE on the remote controller during Bluetooth playback.

5. Hardware

Tuner

AM / FM Frequency Step (North American and Taiwanese models)

Default Value: 10 kHz / 0.2 MHz

Select a frequency step depending on your area of residence.
Select "10 kHz / 0.2 MHz" or "9 kHz / 0.05 MHz".

- When this setting is changed, all radio presets are deleted.

AM Frequency Step (European, Australian and Asian models)

Default Value: 9 kHz

Select a frequency step depending on your area of residence.
Select "10 kHz" or "9 kHz".

- When this setting is changed, all radio presets are deleted.

HDMI

HDMI CEC (RIHD)

Default Value: Off

Setting to "On" enables the input selection link and other link functions with HDMI connected CEC compliant device.
"On": Use this function
"Off": Do not use this function
When changing this setting, turn off and then on again the power of all connected components.

- Depending on the TV set, a link may need to be configured on the TV.
- Setting to "On" and closing the on-screen menu displays the name of the CEC-compatible components and "CEC On" on the display.
- Power consumption in standby mode may increase if "On" is set. (Depending on the TV status, the unit will enter the normal standby mode.)
- If you operate the MASTER VOLUME control on the main unit when this setting is "On" and audio is output from the TV speakers, audio will be output also from the speakers connected to the unit. If you

want to output from only either of them, change the unit or TV settings, or reduce the volume of the unit.

- If abnormal operation occurs when you set the setting to "On", set it to "Off".
- When connecting a non-CEC compatible component, or when you are not sure whether it is compatible, set the setting to "Off".

HDMI Standby Through

Default Value: 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. Only "Auto" and "Auto(Eco)" can be selected if "HDMI CEC (RIHD)" is set to "On". If you select anything else, set "HDMI CEC (RIHD)" to "Off."

- Power consumption in standby mode increases if set to anything other than "Off".

"BD/DVD", "CBL/SAT", "GAME 1", "STRM BOX": For example, if you select "BD/DVD", you can play the equipment connected to the "BD/DVD" terminal 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 the video and audio of the input selected immediately prior to the unit being switched to standby on the TV. When "Last" is selected, you can switch the input of the unit even in the standby mode with the remote controller.
"Auto", "Auto (Eco)": Select one of these settings when you have connected equipment that conforms to the CEC standard. You can play the video and audio of the input selected on the TV, irrespective of what input was selected immediately prior to the unit being switched to standby, using the CEC link function.

- To play players on the TV that do not conform to the CEC standard, you will need to turn the unit on and switch to the relevant input.
- When using a TV that conforms to the CEC standard, you can reduce the power consumption in standby mode by selecting "Auto (Eco)".

Audio TV Out

Default Value: Off

You can enjoy audio through the speakers of the HDMI connected TV while this unit is on.
"On": Use this function
"Off": Do not use this function

- If you select "On", set "HDMI CEC (RIHD)" to "Off."
- The setting is fixed to "Auto" if "HDMI CEC (RIHD)" is set to "On".
- Listening mode cannot be changed while "Audio TV Out" is set to "On" and audio is being output through the speakers of the TV.

- Depending on your TV set or input signal of the component, audio may not output through the speakers of the TV even if this setting is set to "On". In such case, audio is output from the speakers of the unit.
- If you operate the MASTER VOLUME control on the main unit when "Audio TV Out" or "HDMI CEC (RIHD)" is "On" and audio is output from the TV speakers, audio will be output from the unit. If you do not want to output audio from the unit, change the unit or TV settings, or reduce the volume of the unit.

☐ Audio Return Channel

Default Value: Auto

You can enjoy sound of the HDMI connected ARC compatible TV through the speakers connected to the unit. To use this function, set "HDMI CEC (RIHD)" to "On" in advance.
"Auto": When enjoying the TV sound through the speakers connected to the unit
"Off": When not using the ARC function

☐ Auto LipSync

Default Value: On

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

Power Management

☐ Sleep Timer

Default Value: Off

Allows the unit to enter standby automatically when the specified time elapses. Select a value between "10 min" to "90 min".
"Off": Does not turn the unit to standby automatically.

☐ Auto Standby

Default Value: On/Off

This setting places the unit on standby automatically after 20 minutes of inactivity without any video or audio input.
"On": The unit will automatically enter standby mode ("ASb" will light).
"Off": The unit will not automatically enter standby mode.

- "Auto Standby" is appeared on the display and TV screen 30

seconds before the Auto Standby comes on.
- Default values vary depending on the regions.

Auto Standby in HDMI Standby Through

Default Value: Off

Enable or disable "Auto Standby" while "HDMI Standby Through" is on.
"On": The setting will be enabled.
"Off": The setting will be disabled.
- This setting cannot be set to "On" if "Auto Standby" is set to "Off".

Power Out at Standby for STRM BOX

Default Value: Off

Devices connected to the USB port are supplied with electricity even when this unit is in standby mode when this function is "On".
- Power consumption in standby mode may increase when this function is being used.

Bluetooth

Bluetooth

Default Value: On

Select whether or not to use the Bluetooth function.
"On": Enables connection with a Bluetooth-enabled device by using the Bluetooth function. Select "On" also when making various Bluetooth settings.
"Off": When not using the Bluetooth function

Auto Input Change

Default Value: On

The input of the unit will automatically be switched to "BLUETOOTH" when connection is made from a Bluetooth-enabled device to the unit.
"On": The input will automatically become "BLUETOOTH" when a Bluetooth-enabled device is connected.
"Off": The function is disabled.
- If the input is not switched automatically, set to "Off" and change the input manually.

Auto Reconnect

Default Value: On

This function automatically reconnects to the Bluetooth-enabled device connected last when you change the input to "BLUETOOTH".
"On": Use this function

"Off": Do not use this function

- This may not work with some Bluetooth-enabled devices.

Pairing Information

Default Value: -

The information of the previous pairing stored in this unit will be initialized.
Pressing ENTER when "Clear" is displayed initializes the pairing information stored in this unit.

- This function does not initialize the pairing information on the Bluetooth-enabled device. When pairing the unit again with the device, be sure to clear the pairing information on the Bluetooth-enabled device in advance. For information on how to clear the pairing information, refer to the Bluetooth-enabled device's instruction manual.

Device

Default Value: -

Displays the name of the Bluetooth-enabled device connected to the unit.

- The name is not displayed when "Status" is "Ready" or "Pairing".

Status

Default Value: -

Displays the status of the Bluetooth-enabled device connected to the unit.
"Ready": Not paired
"Pairing": Pairing
"Connected": Successfully connected

6. Remote Controller

Remote ID

Remote ID

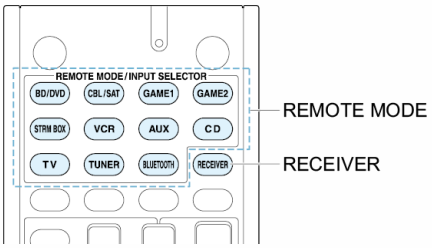
Default Value: 1

Select an ID for the unit's remote controller from "1", "2", and "3" to prevent interference between the unit and other Onkyo components that are installed in the same room. After changing the ID on the main unit, change the ID on the remote controller accordingly with the following procedure.

1. While holding down RECEIVER, press and hold SETUP for about 3 seconds until the remote indicator lights.
2. With the number buttons, press one of 1, 2, and 3. The remote indicator flashes twice.

Functions of REMOTE MODE Buttons

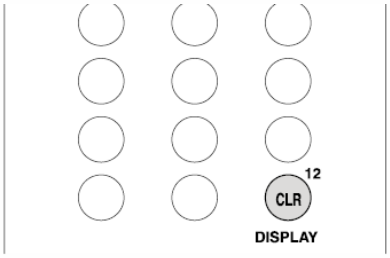
You can control any other device than this unit by programming a specified remote control code to a REMOTE MODE button of the remote controller. Register a remote control code to a desired REMOTE MODE button and press it to enter the remote mode that allows you to operate the corresponding device.



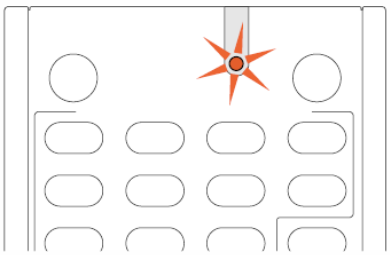
Programming Remote Control Codes

Consulting the Remote Control Code List

1. Look up the Remote Control Codes for the corresponding remote control code.
   - The codes in the Remote Control Code List are those known as of the date of publication and may be changed.
   - The following REMOTE MODE buttons are preprogrammed with remote control codes.
     BD/DVD: Onkyo Blu-ray Disc/DVD player
     CD: Onkyo CD player
     STRM BOX: Apple TV
   - Only TV remote control codes can be entered for TV.
   - Program a remote control code in accordance with the input since each button also works as the input selector. (For example, when the CD player is connected to the CD jack, program the remote control code for the CD player to CD)
2. Press and hold DISPLAY for 3 or more seconds while holding down the REMOTE MODE button to which you want to program the remote control code.

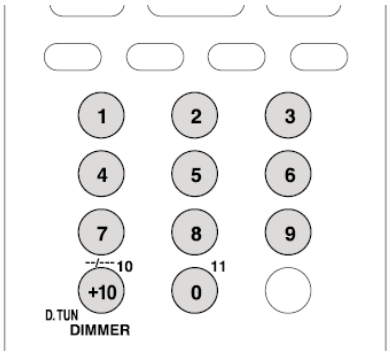


   - The remote indicator lights in the input mode.



3. With the number buttons, enter the 5-digit remote control code within 30 seconds.

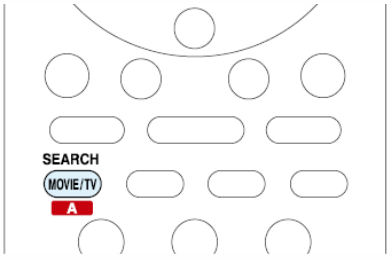
- Programming is complete when the remote indicator flashes twice. The remote indicator flashes once slowly when programming the remote control code fails. Try programming again.



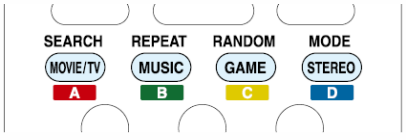
Remapping the Colored Buttons

The colored button assignment on the AV receiver's remote controller can be remapped to match that on the remote controller of the component whose remote control code you programmed to REMOTE MODE.

1. Hold down the REMOTE MODE button to map and A (Red) simultaneously until the remote indicator lights (about 3 seconds).
   - Remapping is possible only for codes included in the categories of the Remote Control Code List (such as DVD player and TV)



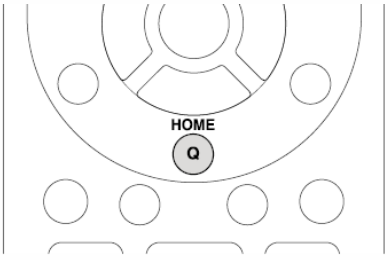
2. Within 30 seconds, press the colored buttons from left to right, in the order you want to remap.
   - For example, if the colored buttons on the remote controller of the other component are yellow, green, blue, and red from left to right, press the buttons on the AV receiver's remote controller in that order.
   - Programming is complete when the remote indicator flashes twice. The remote indicator flashes once slowly when programming the remote control code fails. Try programming again.
   - Pressing any other button than a colored button cancels the remap operation.



Resetting the REMOTE MODE Buttons

You can reset the remote control code registered in the REMOTE MODE button to its default status. This operation can be executed on a single REMOTE MODE button.

1. Press and hold Q for 3 or more seconds while holding down the REMOTE MODE button you want to reset.
   - The remote indicator will light.

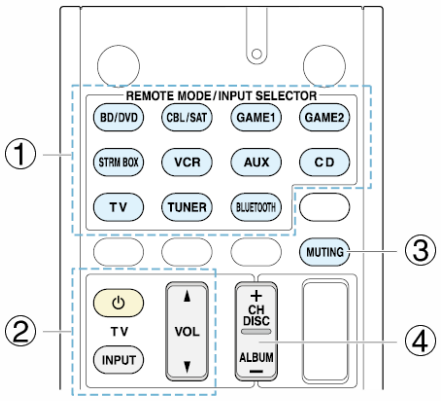


2. Within 30 seconds, press the REMOTE MODE button again.
   - Resetting is complete when the remote indicator flashes twice.

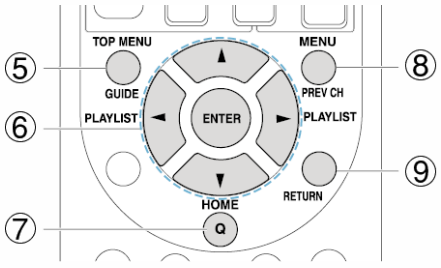
To reset all the remote controller settings: While holding down RECEIVER, press and hold Q for 3 or more seconds until the remote indicator stays lit. Within 30 seconds, press RECEIVER again. Resetting is complete when the remote indicator flashes twice.

TV operation

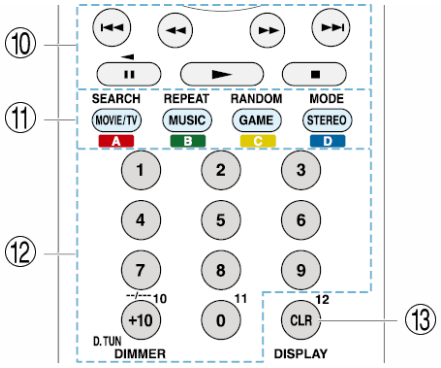
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Operation may be incorrect or impossible depending on the product.



① REMOTE MODE
② ⏻, INPUT, VOL ▲/▼
③ MUTING
④ CH +/–



⑤ GUIDE
⑥ ▲/▼/◄/►, ENTER
⑦ HOME
⑧ PREV CH
⑨ RETURN

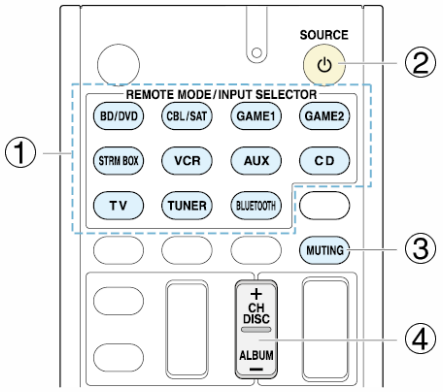


⑩ ►, ❚❚, ■, ◄◄, ►►, I◄◄, ►►I (*)
⑪ A (Red), B (Green), C (Yellow), D (Blue)
⑫ Number 1 to 9, 0, +10
⑬ CLR, DISPLAY

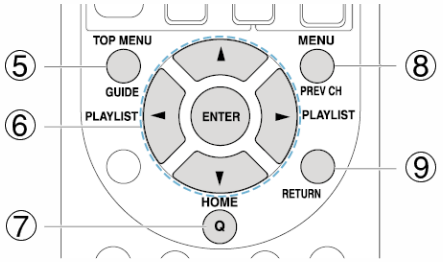
* Not CEC compatible.

Blu-ray Disc player/DVD player/DVD recorder operation

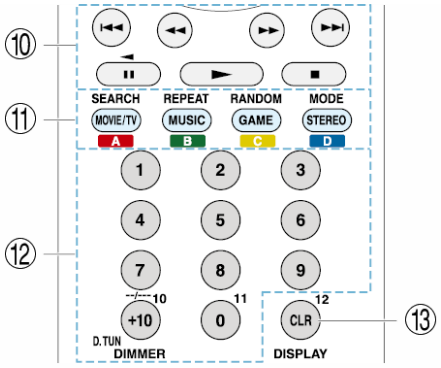
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Operation may be incorrect or impossible depending on the product.



① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ CH +/–, DISC +/–



⑤ TOP MENU
⑥ ▲/▼/◄/►, ENTER
⑦ HOME
⑧ MENU
⑨ RETURN

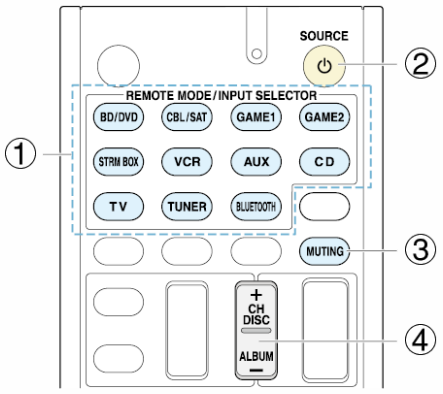


⑩ ►, ❚❚, ■, ◄◄, ►►, |◄◄, ►►|
⑪ A (Red), B (Green), C (Yellow), D (Blue)
⑫ Number 1 to 9, 0, +10 (*)
⑬ CLR, DISPLAY

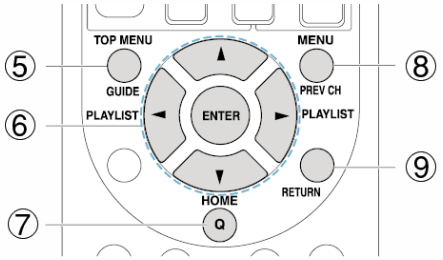
* Not CEC compatible.

VCR/PVR operation

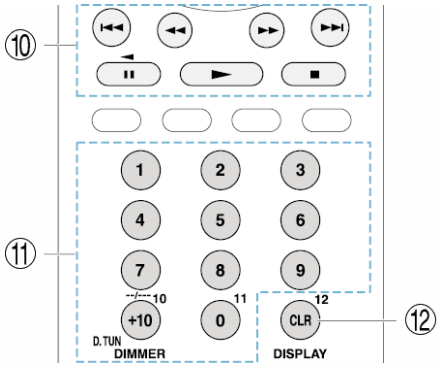
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Operation may be incorrect or impossible depending on the product.



① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ CH +/–



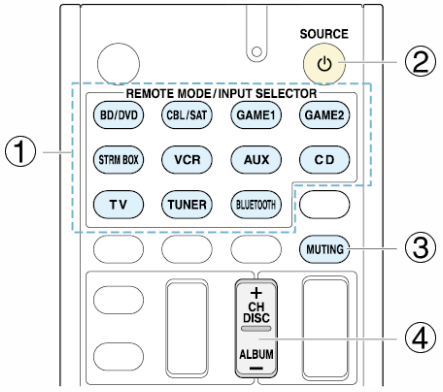
⑤ GUIDE
⑥ ▲/▼/◄/►, ENTER
⑦ HOME
⑧ PREV CH
⑨ RETURN



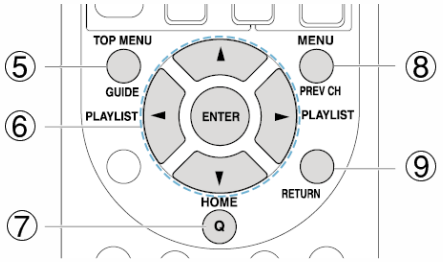
⑩ ►, ❚❚, ■, ◄◄, ►►, I◄◄, ►►I
⑪ Number 1 to 9, 0, +10
⑫ CLR, DISPLAY

Satellite receiver / Cable receiver operation

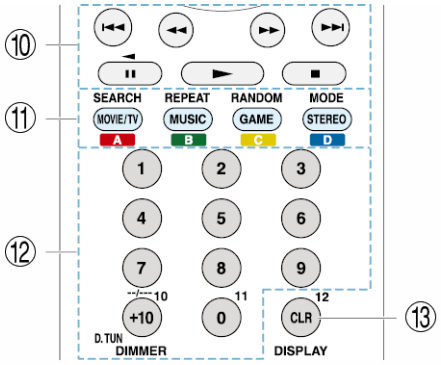
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Operation may be incorrect or impossible depending on the product.



① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ CH +/–



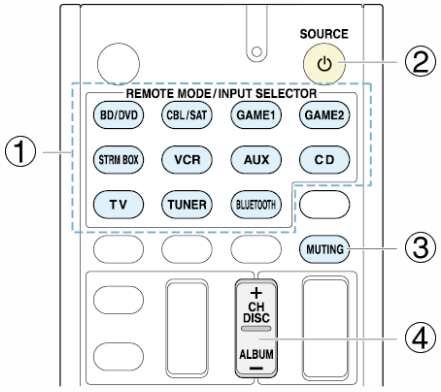
⑤ GUIDE
⑥ ▲/▼/◄/►, ENTER
⑦ HOME
⑧ PREV CH
⑨ RETURN



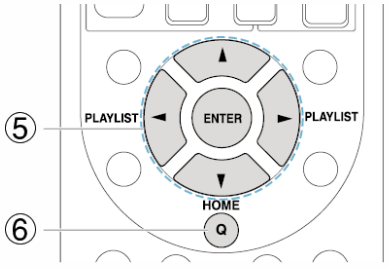
⑩ ►, ❚❚, ■, ◄◄, ►►, I◄◄, ►►I
⑪ A (Red), B (Green), C (Yellow), D (Blue)
⑫ Number 1 to 9, 0, +10
⑬ CLR, DISPLAY

CD player operation

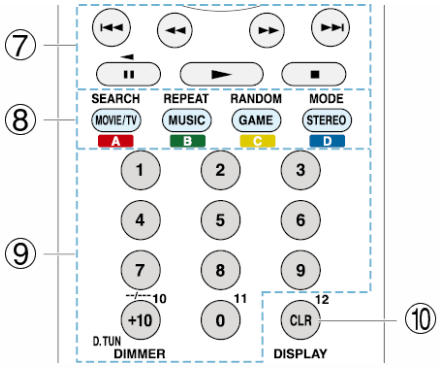
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Operation may be incorrect or impossible depending on the product.



① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ DISC +/–



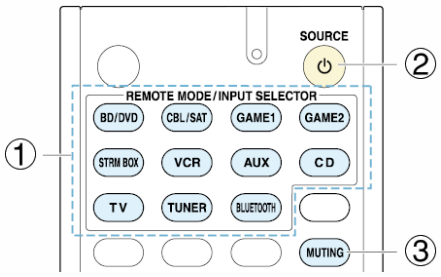
⑤ ▲/▼/◄/►, ENTER
⑥ HOME



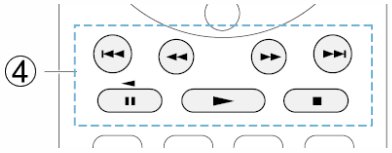
⑦ ►, ❚❚, ■, ◄◄, ►►, I◄◄, ►►I
⑧ SEARCH, REPEAT, RANDOM, MODE
⑨ Number 1 to 9, 0, +10
⑩ CLR, DISPLAY

Cassette tape deck operation

Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Operation may be incorrect or impossible depending on the product.



① REMOTE MODE
② ⏻SOURCE
③ MUTING



④ ►, ◄(Reverse Playback), ■, ◄◄, ►►, I◄◄, ►►I

To operate CEC-compatible components

If this unit is connected via HDMI to a TV or BD/DVD player, you may be able to control the devices using the remote controller of this unit with CEC (Consumer Electronics Control) linked operation.

TV: The TV button on the remote controller is preprogrammed with remote control codes for linked operation of some CEC-compatible TV sets.

- If you cannot operate your CEC-compatible TV, program one of the following remote control codes (11807/13100/13500) to the TV button.

BD/DVD player: By registering a remote control code (32910/33101/33501/31612) in the BD/DVD button, your remote controller will be able to take advantage of linked operation with CEC-compatible BD/DVD players.

About RI Function

Connecting an Onkyo component with RI jack such as the separately sold RI Dock to the unit by using an RI cable and an analog audio cable enables the following RI functions:

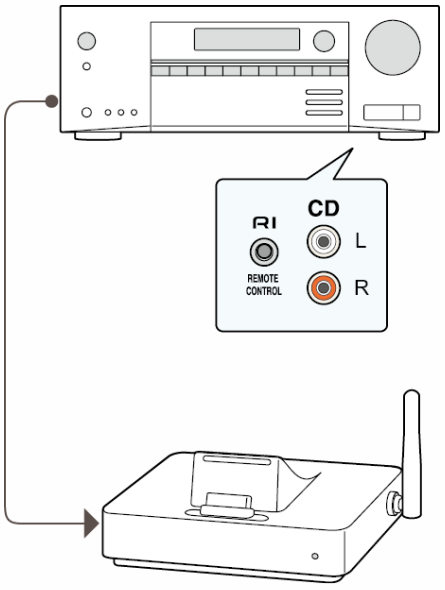
System On / Auto Power On: Starting playback on a component connected via RI when the unit is on standby mode, automatically turns on the unit to select the relevant component as its input source.

Direct Change: When playback is started on a component connected via RI, the unit selects that component as the input source.

Remote Controller Operation: Allows you to operate RI-compatible Onkyo components using the AV receiver's remote controller. Point the remote controller at remote control sensor of the unit. This operation is possible only when the RI remote control code is programmed.

- Some components may not support all RI functions.
- For information on the RI functions, also refer to each component's instruction manual.

RI Connection and Setting



Connect an Onkyo component with RI jack to this unit using an RI cable and an analog audio cable. For details, refer to the instruction manual of the component with RI jack. The RI cable can be connected in any order. When there are two RI jacks, both jacks work in the same way and are interchangeable.
The following settings are necessary to connect the RI Dock or cassette tape deck via RI.

To rename the input selector

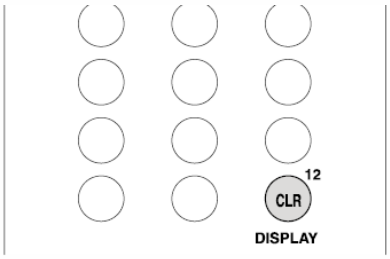
To make the RI functions work, you must rename the input selectors on the unit. After pressing RECEIVER to switch to RECEIVER mode, press SETUP on the remote controller. Use the cursors in the Setup menu to select "4. Source" - "Name Edit" - "Name" and rename the input selector to "DOCK" or "TAPE".

To program the RI remote control code

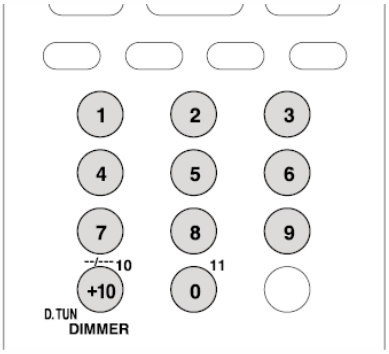
Program the remote control code to any REMOTE MODE button on the remote controller. This will allow you to operate the component by pointing the remote controller at the unit instead of the component.

1. Press and hold DISPLAY for 3 or more seconds while holding down the REMOTE MODE button to which you want to program the remote control code.

- The remote indicator will light.



2. With the number buttons, enter the following 5-digit remote control code within 30 seconds.
   RI Dock: 81993
   Cassette tape deck with RI jack: 42157
   - Programming is complete when the remote indicator flashes twice. The remote indicator flashes once slowly when programming the remote control code fails. Try programming again.



Input selector on the RI Dock: Select "DOCK" or "TAPE". For details, refer to the RI Dock's instruction manual.

To operate Onkyo components directly or Onkyo components that are not connected via RI, use the following remote control codes:
Onkyo DVD player: 30627
Onkyo CD player: 71817
RI Dock: 82990

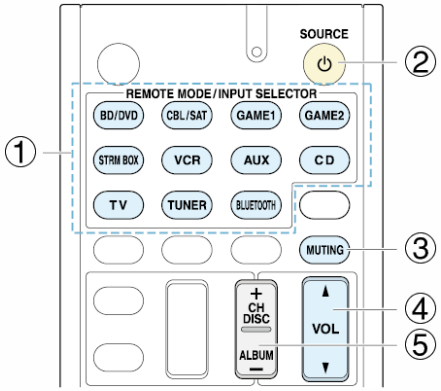
- With some models, operation may be not possible in part or not possible at all.

iPod®/iPhone® Operation

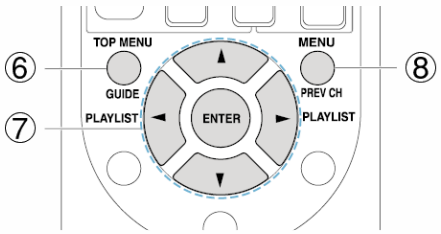
The RI Dock allows you to use the AV receiver's remote controller to operate and play music on your iPod/iPhone. Moreover, it also allows you to view videos on your iPod/iPhone on the screen of your TV, as well as perform RI operations if connected via RI. This operation is possible only when the RI remote control code is programmed.

Before performing any operation: Update the OS on your iPod/iPhone to the latest version. Certain buttons may not work for some iPod/iPhone models and generations, or RI Dock. For details on the operation, refer to the RI Dock's instruction manual.

Switch the remote controller mode by pressing the REMOTE MODE button programmed with the remote control code for the iPod/iPhone, and operate by using the corresponding buttons. Point the remote controller at the unit.

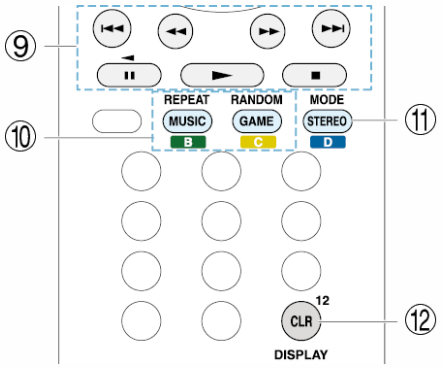


① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ VOL ▲/▼
⑤ ALBUM +/–



⑥ TOP MENU

⑦ ▲/▼/◄/►, ENTER, PLAYLIST◄/►
⑧ MENU



⑨ ►, ❚❚, ■, ◄◄, ►►, ⏮, ⏭
⑩ REPEAT, RANDOM
⑪ MODE
⑫ DISPLAY

- Pressing DISPLAY turns on the backlight for a few seconds.
- MODE allows you to use the Resume function.

Before starting the procedure

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

- The AV receiver contains a microPC for signal processing and control functions. In very rare situations, severe interference, noise from an external source, or static electricity may cause it to lockup. In the unlikely event that this happens, unplug the power cord from the wall outlet, wait at least 5 seconds, and then plug it back in.
- 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.

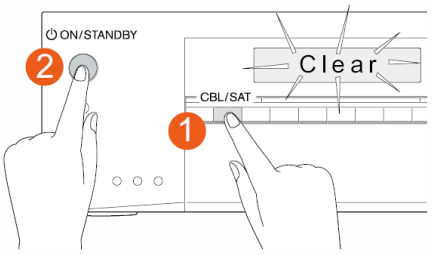
Resetting the unit

Resetting the unit to the status at the time of shipment may solve the problem. If the measures mentioned in the troubleshooting do not solve the problem, reset the unit with the following procedure. If you reset the unit status, your preferences will be reset to the defaults. Note them down before starting reset.

How to reset

1. While holding down CBL/SAT on the main unit (note that step 2 must be performed with this button pressed down)

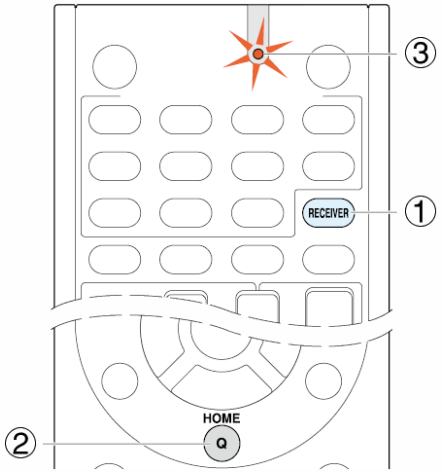
2. Press ⏻ON/STANDBY on the main unit. "Clear" is appeared on the display and the unit will enter standby mode.



How to reset the remote controller

1. While holding down ① RECEIVER on the remote controller (note that step 2 must be performed with this button pressed down)

2. Press and hold ② Q for 3 or more seconds until the ③ remote indicator stays lit. Within 30 seconds, press ① RECEIVER again to reset.



Power

Cannot turn on the unit

- Make sure that the power cord is properly plugged into the wall outlet.
- Unplug the power cord from the wall outlet, wait 5 seconds or more, then plug it in again.

The unit turns off unexpectedly

- The AV receiver will automatically enter standby mode when Auto Standby or Sleep Timer is set and launched.
- The protection circuit may have been activated. If this is the case, when you turn the unit on again, "AMP Diag Mode" will appear on the main unit's display. The unit will then enter a mode that detects abnormal conditions. If no problems are detected, "AMP Diag Mode" will disappear and the unit will return to a normal state. If "CHECK SP WIRE" appears on the display, the speaker cables may be short-circuited. Turn the unit off, and check to see if the cable core of any of the speaker cables is in contact with that of another speaker cable or with the rear panel. After that, turn the unit on again. If "NG" appears, unplug the power cord immediately and contact your Onkyo dealer.

WARNING: If smoke, smell or abnormal noise is produced by the unit, unplug the power cord from the wall outlet immediately and contact the dealer or Onkyo Support.

Audio

- Confirm that the connection between the output jack on the device and the input jack on this unit is correct.
- Make sure that none of the connecting cables are bent, twisted, or damaged.
- If the MUTING indicator on the display flashes, press MUTING on the remote controller to unmute the unit.
- While headphones are connected to the PHONES jack, no sound is output from the speakers.
- Set to "Off" if "Audio Select" - "PCM Fixed Mode" is set to "On".

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

- There is no sound from the TV
- No sound from a connected player
- A speaker produces no sound
- Only the front speakers produce sound
- Only the center speaker produces sound
- The surround speakers produce no sound
- The center speaker produces no sound
- The subwoofer produces no sound
- Volume is low
- Noise can be heard
- The sound changes when I connect my headphones
- About DTS signals
- The beginning of audio received by an HDMI input jack cannot be heard

There is no sound from the TV

- The input selector on this unit needs to be switched to TV.
- If your TV does not support ARC, you need, in addition to the HDMI OUT jack connection, a digital optical cable connection between the digital audio out optical jack of the TV and the TV OPTICAL input jack of the unit, or an analog audio cable connection between the audio output jack of the TV and the analog audio input jack for TV of the unit.

No sound from a connected player

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

A speaker produces no sound

- Make sure that the polarity of the speaker cables (+/-) is correct, and that no bare wires are in contact with the metal part of speaker terminals.
- Make sure that the speaker cables are not shorting.
- Make sure the speakers are configured correctly.

Only the front speakers produce sound

- When the Stereo or Mono listening mode is selected, only the front speakers and subwoofer produce sound.

Only the center speaker produces sound

- If you use the Dolby Pro Logic II listening mode with a mono source, such as an AM radio station or mono TV program, the sound is concentrated in the center speaker.

The surround speakers produce no sound

- When the T-D (Theater-Dimensional), Stereo or Mono listening mode is selected, the surround speakers produce no sound.
- Depending on the source and current listening mode, not much sound may be produced by the surround speakers. Try selecting another listening mode.

The center speaker produces no sound

- When the Stereo or Mono listening mode is selected, the center speaker produces no sound.

The subwoofer produces no sound

- When you play source material that contains no information in the LFE channel, the subwoofer produces no sound.

Volume is low

- Check the volume. The volume level is adjustable between Min, 1 to 79, Max (80). It is normal that the unit volume level is set up to 40 or around.

Noise can be heard

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

The sound changes when I connect my headphones

- When a listening mode other than Direct or Mono is selected, connecting a headphone automatically selects Stereo.

About DTS signals

- When DTS program material ends and the DTS bitstream stops, the unit remains in DTS listening mode and the dts indicator remains on. This is to prevent noise when you use the pause, fast forward, or fast reverse function on your player. If you switch your player from DTS to PCM, you may not hear any sound because the unit does not switch formats immediately. In such case, you should stop your player for about 3 or more seconds and then resume playback.
- With some CD and LD players, you will not be able to playback DTS material properly even though your player is connected to a digital input on the unit. This is usually because the DTS bitstream has been processed (e.g., output level, sampling rate, or frequency response changed) and the unit does not recognize it as a genuine DTS signal. In such cases, you may hear noise.
- Playing DTS program material, using the pause, fast forward, or fast reverse function on your player may produce a short audible noise. This is not a malfunction.

The beginning of audio received by an HDMI input jack 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 Mode

- When listening to Dolby Digital and/or DTS sound, digital connection is necessary.
- Check the digital audio output setting on the connected component. On some game consoles, such as those that support DVD, the default setting is off.
- After pressing RECEIVER on the remote controller, repeatedly press DISPLAY to switch the display on the main unit. You can see the input format.

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

■ Cannot select a desired listening mode

Cannot select a desired listening mode

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

Video

- Confirm that the connection between the output jack on the device and the input jack on this unit is correct.
- Make sure that none of the connecting cables are bent, twisted, or damaged.
- Make sure the switching of input screens is proper at the monitor side such as a TV.

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

- There is no picture from a source connected to an HDMI input terminal
- Images flicker

There is no picture from a source connected to an HDMI input terminal

- Change the input selector on this unit to the position of the terminal to which the player is connected.
- Check if "Resolution Error" is displayed on the main unit display when video input via HDMI input jack is not displayed. In this case, the TV does not support the resolution of the video input from the player. Change the setting on the player.
- Reliable operation with an HDMI-to-DVI adapter is not guaranteed. In addition, video signals from a PC are not supported.
- Turn the Deep Color function off. To turn off the Deep Color function, simultaneously press the STRM BOX and ⏻ON/STANDBY buttons on the main unit. While holding down STRM BOX, press ⏻ON/STANDBY repeatedly until "Deep Color:Off" appears on the display. To reactivate the Deep Color function, repeat the above described step until "Deep Color:On" appears on the display.

Images flicker

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

Linked operation

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

- Set the HDMI CEC (RIHD) setting of the unit to "On". After pressing RECEIVER on the remote controller, press the SETUP button, select "5. Hardware" - "HDMI" - "HDMI CEC (RIHD)" and turn it on.
- It is also necessary to set HDMI linking on the CEC compliant device. Check the instruction manual.

The RI functions do not work

- To use RI, you must make an RI connection and an analog audio connection (RCA) between the component and AV receiver.

Tuner

Reception is noisy, FM stereo reception is noisy, or the "FM STEREO" indicator does not stay lit

- Re-check the antenna connection.
- Relocate your antenna.
- Move the unit away from your TV or PC.
- Passing cars and airplanes can cause interference.
- Concrete walls weaken radio signals.
- Listen to the station in mono.
- When listening to an AM station, operating the remote controller may cause noise.

Bluetooth

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

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

- Cannot connect with this unit
- Music playback is unavailable on the unit even after successful Bluetooth connection
- Sound is interrupted
- The audio quality is poor after connection with a Bluetooth-enabled device
- The Auto Reconnect function of Bluetooth does not work

Cannot connect with this unit

- The Bluetooth function of the Bluetooth-enabled device is not enabled. Refer to the user manual of the Bluetooth-enabled device for how to enable the Bluetooth function.
- When Bluetooth connection fails the first time, select "5.Hardware" - "Bluetooth" - "Pairing Information", select "Clear". Turn your Bluetooth-enabled device off and then on again to clear the device name, and try to connect again.

Music playback is unavailable on the unit even after successful Bluetooth connection

- When the audio volume of your Bluetooth-enabled device is set low, the playback of audio may be unavailable. Increase the volume of the Bluetooth-enabled device.
- Depending on the Bluetooth-enabled device, Send/Receive selector switch may be provided. Select Send mode.
- Depending on the characteristics or specifications of your Bluetooth-enabled device, playback on the unit is not guaranteed.

Sound is interrupted

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

The Auto Reconnect function of Bluetooth does not work

- This may not work with some Bluetooth-enabled devices. In that case, pair the unit and the Bluetooth-enabled device and then play again.

Remote Controller

- Make sure that the batteries are installed with the correct polarity.
- Install new batteries. Do not mix different types of batteries, or old and new batteries.
- Make sure that the remote controller is not too far away from the unit, and that there is no obstruction between the remote controller and the remote control sensor of the unit.
- Make sure that the unit is not subjected to direct sunshine or inverter-type fluorescent lights. Relocate if necessary.
- If the unit is installed in a rack or cabinet with colored-glass doors or if the doors are closed, the remote controller may not work reliably.

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

- The remote controller does not work
- Operating other Onkyo component by using a RI remote control code is not available
- Cannot operate Onkyo components (ones without RI connection) and components of other makers

The remote controller does not work

- Before operating this unit with the remote controller, be sure to first press RECEIVER.

Operating other Onkyo component by using a RI remote control code is not available

- Make sure that the Onkyo component is properly connected with RI cable. When RI cable is used for connection, make sure to connect analog audio cable as well. (Connecting only an RI cable will not be enough.)
- Make sure you have selected the correct remote controller mode.
- When the RI remote control code is input, point the remote controller at remote control sensor of the unit.
- Make sure that the input display is correctly set.
- Input the RI remote control code again.

Cannot operate Onkyo components (ones without RI connection) and components of other makers

- Operate the remote controller by setting toward the light receiving section of each component.
- When using the remote controller to control other manufacturers' AV components, some buttons may not work as expected. Some components may not start the operation.
- Make sure you have selected the correct remote controller mode.
- Make sure you have entered the correct remote control code.
- Make sure to set the same ID on both the unit and remote controller.
- Input a correct remote control code again. If there are several codes, try each code.

Display, OSD

The display does not light

- Make sure that Dimmer function is not working. Press DIMMER button and change the brightness level of the display.

The on-screen menus do not appear

- On your TV, make sure that the video input to which this unit is connected is selected.
- Set "TV Out" - "Impose OSD" to "On".
- The on-screen display are not displayed when the OSD language is set to Chinese if the input selector is "BLUETOOTH". Operate by confirming the display on the main unit. (European, Australian, Taiwanese and Asian models)

RI Dock

- Make sure the unit is turned on, the correct input source is selected, and the volume is turned up.
- Make sure the plugs are pushed in all the way.
- Make sure your iPod/iPhone is properly inserted in the Dock. If your iPod/iPhone is in a case, it may not connect properly to the Dock. Always remove your iPod/iPhone from the case before inserting it into the Dock. Try reconnecting your iPod/iPhone.
- Make sure your iPod/iPhone is actually playing.

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

- There is no sound
- There is no video
- The AV receiver's remote controller does not control your iPod/iPhone
- The unit unexpectedly selects your iPod/iPhone as the input source

There is no sound

- Try resetting your iPod/iPhone.

There is no video

- Make sure the correct input is selected on your TV or the unit.
- Make sure that your iPod/iPhone model's TV OUT setting is set to On.
- Some versions of the iPod/iPhone do not output video.

The AV receiver's remote controller does not control your iPod/iPhone

- The iPod/iPhone cannot be operated while it is displaying the Apple logo.
- Make sure you have selected the correct remote controller mode.
- When you use the AV receiver's remote controller, point it toward this unit.
- Before operating with the remote controller, you may need to play on your iPod/iPhone to make the input selector be recognized.
- Depending on your iPod/iPhone model and generation, some buttons may not work as expected.
- Try resetting your iPod/iPhone.

The unit unexpectedly selects your iPod/iPhone as the input source

- Always pause iPod/iPhone playback before selecting a different input source. If playback is not paused, the Direct Change function may select your iPod/iPhone as the input source by mistake during the transition between tracks.

Others

Strange noises can be heard from the unit

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

The Late Night function does not work

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

The Cinema Filter function does not work

- This function can be used in the following listening modes: Dolby Digital, Dolby Digital Plus, Dolby PLII Movie, Dolby TrueHD, Multichannel, DSD, DTS, DTS Neo:6 Cinema, DTS 96/24, DTS-HD High Resolution Audio, DTS-HD Master Audio, DTS Express.

How do I change the language of a multiplex source

- Select "Main" or "Sub" for "Multiplex Input Channel" in "3. Audio Adjust" - "Multiplex/Mono".

Power consumption in standby mode

- In the following cases, the power consumption in standby mode may reach up to a maximum of 29 W:
  - When "HDMI CEC (RIHD)" is set to "On". (Depending on the TV status, the AV receiver will enter normal standby mode.)
  - The "HDMI Standby Through" setting is set to other than "Off".
  - The "Power Out at Standby for STRM BOX" setting is "On".

Linked Operation with CEC-compatible Components

Link operation with a product conforming to the CEC of the HDMI standard. Note that linked operation is not always guaranteed with all CEC devices.

Operation has been confirmed on the following devices (as of February 2015).
TV (Random order):
- Toshiba TV sets
- Sharp TV sets

Players/Recorders (Random order):
- Onkyo and Integra RIHD-compatible players
- Toshiba players and recorders
- Sharp players and recorders (only when used together with Sharp TV sets)

Caution: For linking functions to work properly, do not connect more RIHD-compatible components than the quantities specified below, to the HDMI jacks. Linking functions are not guaranteed when more RIHD-compatible components than the below mentioned quantities are connected. Furthermore, do not connect the AV receiver to another AV receiver/AV amplifier via HDMI.
- Blu-ray Disc/DVD players: up to 3.
- Blu-ray Disc/DVD recorders: up to 3.
- Cable TV tuner, terrestrial digital tuner, and satellite broadcasting tuner: up to 4 units.

Checking whether the HDMI Linked Operation Settings Are Enabled

1. Turn on the power of all connected components.
2. Turn off the power of the TV, and confirm that the power of the connected components is turned off automatically with the link operation.
3. Turn on the power of the Blu-ray Disc/DVD player/recorder.
4. Start playback on the Blu-ray Disc/DVD player/recorder, and verify the following:
   - The AV receiver automatically turns on, and selects the input to which the Blu-ray Disc/DVD player/recorder is connected.
   - The TV automatically turns on, and selects the input to which the AV receiver is connected.
5. Following the operating instructions of the TV, select "Use the TV speakers" from the menu screen of the TV, and confirm that the audio is output from the speakers of the TV, and not from the speakers connected to the AV receiver.
6. Select "Use the speakers connected from the AV receiver" from the menu screen of the TV, and confirm that the audio is output from the speakers connected to the AV receiver, and not from the TV speakers.

Caution:

- Even if you set to output audio on the TV speakers, audio will be output from the speakers connected to the AV receiver when you adjust the volume or switch the input on the AV receiver. To output audio from the TV speakers, redo the corresponding operations on the TV.
- In case of an RIHD connection with RI and RI EX audio control compatible components, do not connect the RI cable at the same time.
- On the TV, when you select anything other than the HDMI jack to which the AV receiver is connected, the input on the AV receiver will be switched to "TV".
- The AV receiver will automatically power on in conjunction when it determines it to be necessary. Even if the AV receiver is connected to an RIHD compatible TV or player/recorder, it will not power on if it is not necessary. It may not power on in conjunction when the TV is set to output audio from the TV.
- Linked system functions with the AV receiver may not work depending on the component model connected. In such cases, operate the AV receiver directly.
- When the player/recorder cannot be operated with the remote controller

of the AV receiver, the corresponding component may not be programmed to support the remote controller operation of CEC. Program the remote control code of the component maker to the remote controller for using.

About HDMI

HDMI (High-Definition Multimedia Interface) is a digital interface standard for connecting TVs, projectors, Blu-ray Disc/DVD players, set-top boxes, and other video components. Until now, several separate video and audio cables have been required to connect AV components. With HDMI, a single cable can carry control signals, digital video and digital audio (2-channel PCM, multichannel digital audio, and multichannel PCM).
The HDMI video stream (i.e., video signal) is compatible with DVI (Digital Visual Interface) (∗ 1), so TVs and displays with a DVI input can be connected by using an HDMI-to-DVI adapter cable. (This may not work with some TVs and displays, resulting in no picture.)
This unit supports HDCP (High-bandwidth Digital Content Protection) (∗ 2), so it can display picture only on HDCP-compatible components.
HDMI of the unit supports the following functions.
Audio Return Channel, 3D, x.v.Color, Deep Color, LipSync, 4K (Passthrough)

Audio Formats Supported by The Unit:

- 2-channel linear PCM (32 - 192 kHz, 16/20/24 bit)
- Multichannel linear PCM (up to 7.1 ch, 32 - 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

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

About Copyright Protection:
The HDMI jacks on this unit support Revision 1.4 and Revision 2.2 of the HDCP (High-bandwidth Digital Content Protection) (∗ 2), a copy-protection system for digital video signals. Other devices connected to the unit must also support HDCP.

∗ 1 DVI (Digital Visual Interface): The digital display interface standard set by the DDWG (∗ 3) in 1999.

∗ 2 HDCP (High-bandwidth Digital Content Protection): The video encryption technology developed by Intel for HDMI/DVI. It is designed to protect video content and requires a HDCP-compatible HDMI/DVI receiver to display the encrypted video.

∗ 3 DDWG (Digital Display Working Group): Lead by Intel, Compaq, Fujitsu, Hewlett Packard, IBM, NEC, and Silicon Image, this open

industry group's objective is to address the industry's requirements for a digital connectivity specification for high-performance PC and digital displays.

Caution:

- There are some content that can be played only with HDCP Rev. 2.2 compatible devices. To play such content, connect an HDCP Rev.2.2 compatible TV or player to a HDMI jack of the unit.
- The HDMI video stream (i.e., video signal) is compatible with DVI (Digital Visual Interface), so TVs and displays with a DVI input can be connected by using an HDMI-to-DVI adapter cable. (Note that DVI connections only carry video, so you will need to make a separate connection for audio.) However, reliable operation with such an adapter is not guaranteed. In addition, video signals from a PC are not supported.
- The HDMI audio signal (sampling rate, bit length, etc.) may be restricted by the connected source component. If the picture is poor or there is no sound from a component connected via HDMI, check its setup. Refer to the connected component's instruction manual for details.

Remote Control Codes

Television (A to E)

A.R. Systems	10037, 10556
ACCENT	10037
Acoustic Solutions	11667, 11585, 11523, 11037
Action	10650
Adcom	10625
Addison	10653, 11150
Admiral	10093
AEG	12197, 11037, 12239
Affinity	13717, 13870, 13577
Aftron	13478
Aiko	10037
Aim	10037
Akai	12676, 10812, 10037, 10672, 10208, 10714, 11523, 13067, 12414, 13183, 10178, 10556, 12197
Akiba	10037
Akito	10037
Akura	12289, 10037, 11667, 10714, 10668, 11585, 10171, 11037, 11498, 11687, 11983, 12239
Alba	12676, 11037, 10037, 10668, 10714, 11585, 13005, 13067, 13790, 11667, 12104, 12561
Alfide	10672
Alien	11037
Allstar	10037
Amstrad	10037, 10171, 11037
Anam	10037, 10650
Andersson	12676, 11585
Anitech	10037
Ansonic	10668, 10037

AOC	11589, 12769, 11365, 13720, 12014, 12087, 13790, 10093, 10178, 10625, 11150
Apex Digital	12397
Apollo	12239
Ardem	10714, 10037
Arena	10037
Ario	12397
Aristona	10556, 10037
ART	11037
Art Mito	11585, 11667
AS	11667, 11585, 11523, 11037
Asberg	10037
Astra	10037
ATD	10698
Atlantic	10037
Atvio	13636
Audiosonic	10714, 12104, 10037, 13067, 11983
Audio-Technica	10000, 10093, 10150, 11150
Audiovox	11769
Audioworld	10698
Auria	12087, 12014
Autovox	12676
Aventura	10171
Axxon	10714
Azuki	12239
B & O	10620
Baier	12239
Baird	10208
Bang & Olufsen	10620
Barco	10556
Base	10698
Basic Line	10037, 10668, 11037, 10556
Bauer	12197
Baur	10037, 10512, 10195
BBK	12098, 11523
Beaumark	10178
Beijing	10208, 10812

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Cable HK	01374
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First Media	03783
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Frontier Communications	02378
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Fujian Broadcast and TV	04195
Gangwon Broadcasting Network	03407
Gansu Cable	04236
GCI	01376
GCS	03322
GDCATV	02980, 03131, 03132
Gehua	03278, 00476
General Communications	01376
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Great Plains Communications	01376
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Homecast	02977, 02979, 03389
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LG	03340, 02682, 03407, 02979, 03389, 03319
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Meo	02401
MetroCast Cablevision	01376, 01982, 00476
Mi-Connection	01877
Midcontinent Communications	01376, 00476, 01982
Mid-Hudson Cable	00476, 01376
Minerva Networks	03118

MIO	02275, 02802
mio TV	02275, 02802
Mitsubishi Electric	03274
MOD	03647, 01917
Motorola	01376, 00476, 02378, 02437, 01998, 02030, 00858, 01982, 02952, 00276, 01562, 02275, 03916, 01585, 04034, 02401
Movistar	01585, 03288
Moxi	02187
Moyo	03611
MTS	01998, 03611, 01615, 01481, 01898
MyLGTV	02682
NET	01883
NewWave Communications	00476, 01376, 02187
NIB	03322
Ningde Cable TV	04195
Noos	02436
Northland Communications	01376
Novus	01376, 00476
Now TV	02009, 02014
NTL	01060, 00276
NTT	03237, 03274
NTV Plus	02762
NU Telecom	01998, 03028
Numericable	02436

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O2	02586
OCN	03865
Oi TV	03452, 03454, 04165
Olleh TV	02683, 03478
Olleh-Skylife	02683, 03478
Ono	01562
Open IPTV	01615
Optimum	01877
Optimus Clix	02437
Optus	00276, 01060
Orange	02407

Oriental Cable Networks	03865
Pace	01376, 01060, 02620, 01982, 01877, 01998, 00858, 01582, 01883, 03454, 02294, 02401
Panasonic	02703, 02752, 03474, 01760, 01782, 01982
Parasat	03479
Paul Bunyan Communications	02254, 02586
PCCW	02009, 02057
Philips	01582, 02378, 03560, 02294
Pioneer	01782, 01877, 03925, 02700
Pioneer Telephone	02254, 02302
Portugal Telecom	02401
Premiere	02620
Primacom	02889
Primestar	02030
PrimeTel	03611, 02030, 02437
PrimeTV	02030
PT	02401
PTCI	01376
PX	03348
QooK TV	02683, 03478
Qook-Skylife	02683, 03478
Qrix	03465, 02979
QuickLine	02493
Qwerty	01898, 01481, 01615
Qwerty.TV	01898
RCN	01376, 00476, 03560
Reach Broadband	01376, 01877, 01982
Reliance	02556
RIO Media	02030
Rogers	01877, 01376
Rostelecom	03611
Sagem	02407, 02436, 03288
Sagemcom	03514, 02407, 02436, 03007, 03288
Samsung	03322, 02979, 03319, 01877, 02407, 02015, 03340, 03407, 03451, 03442, 03477, 02610, 02955, 01060, 02683, 03514,

	03783, 02589, 02889, 02962, 03265, 03849, 03928, 01982, 01987
SaskTel	01998
SBN	03965
Scientific Atlanta	01877, 00858, 01982, 02401, 02345, 01987, 02047, 02436, 03028, 02378
SCTV	02493
SCV	02950
Seokyung	03340
Service Electric	01376, 00476, 01982
SetaBox	01917
Shaanxi Broadcasting	03965
Shanghai	03865
Shanghai OCN	03865
Shanxi Broadcasting Network	03965
Shaw	01376, 01877, 00476, 02187, 01982
Shenzhen Broadcasting	01991, 04162
Shenzhen Digital TV	01991, 04162
Shijiazhuang Broadcasting	04026
Shimanto CATV	02752
Sichuan Broadcasting	03953
SingTel	02275, 01998, 02802
Siti Digital	03664
SK Broadband	03442, 02681
SK Btv	02681, 03442
Sky Austria	02620, 02447, 02832
Sky Deutschland	02620, 02447, 02832
SkyCable	02950, 03521, 03527, 04177
SkyLife	02683, 03478
Skyworth	03298, 02960, 03278, 01991, 03521, 04177, 03946, 04162
Smartlabs	03611
Smile Content	02437
SMT	03527
SMtronics	03319
Sogetel	01998, 02482

Sonaecom	02437
Sonera	00660
Source Cable	01376, 00476
Starcat	02703, 01782
StarHub	01927, 00276
Stipte	01898
Stofa	02015
Suddenlink	01877, 01376, 01982, 03560, 00476
Supercable	00276
Supercanal	01376, 00476
Suwon Cable	03319
Suzhou Cable Network	04022
SVA	03865
Swisscom	02271
SXBCTV	03965

- Cable Set Top Box (T to Z)

TalkTalk	02994
Tbaytel	03028
Tbroad	03319
TCC	04409, 04408
TCN	03340, 02703
T-Com	02132
TDC	02271
TDS Telecom	03028
Technicolor	01982, 02994, 03288
TechniSat	03316
Tele2	00660, 02447
Telecentro	00476, 01376
TeleColumbus	02889
Telefonica	01585, 03028, 03288, 02586
Telekom Deutschland	02132
Telenet	01920, 03451, 03477
Telewest	01987
Telia	02030
Telmex	01376
TELUS	03028
TFN	03127, 03139
T-Home	02132

Thomson	01582, 01981, 01982, 01983, 03007, 02407
T-Hrvatski Telekom	02132
Tianjin Broadcast & TV Network	04010
Tianjin Broadcasting	04010
Time Warner	01877, 01376, 00476, 02187
TiVo	03560, 03265
ToongTV	03322
Top	03766
TopTV	01991
TP	02407
Trans PX	00276
True Visions	03075, 02762
TVB	01615
TVS Cable	01376, 01877, 01982
U+	02682
U+ tvG	02682
UCATV	02703, 01760
Unitymedia	02955, 02610, 03451, 03477
UPC	01582, 03451, 03477, 00660, 01060
UPC Cablecom	01582, 03451, 03477
US Electronics	00276
U-verse	00858
Vector	02030
VeeTV	03231
Verizon	02378
Viasat	02030
Videotron	01877, 02947
Viken Fibernett	02030, 02437
Virgin Media	01987, 02563, 01060, 03265, 00276
Visionetics	01374
Vivo	03288
Vodafone	02401
Volia	02493
Volia Cable	02493
Voo	02742
VTR	01376

wasu	04034
Wave Broadband	01376, 00476, 02479, 04079
Wavevision	01376, 01877, 01982
Wbox	02832
WEHCO Video	01376
Welho	02832
WellAV	03479
Westman Communications	01376, 00476, 02187
WideOpenWest	01376, 01877, 02187
Windjammer Cable	00476, 01376, 01877
WNC	03118
WOW!	01877, 01376, 00476, 02187, 02479
Xfinity	01376, 01982, 00476, 01877, 03560, 02187
Xuyi Radio & TV	02897
YBN	03322
YCV	02703, 01760
Youview	02994
Yunnan Broadcasting	03961
Yuxing	02014
Zhong Hua Dian Xin	01917
Ziggo	02589, 03607, 02015, 02762, 00660, 02401, 02447
Zinwell	03139
Zito Media	01376, 01982
ZTE	04196

- Satellite Set top Box

@sat	01300
@Sky	01334
1.Sky	03538
Acoustic Solutions	01284
ADB	02553, 00887, 01887
AEG	02738, 02813
Agora	01284
Airis	02813, 03012
Airtel	02248
Akai	02938
Akira	02738

Akta	01986
Akura	01626
Alba	01284, 02034, 02568
Allvision	01334
Altech UEC	02059, 02097, 03517
Amiko	04197
Amstrad	00847, 01662, 01175, 01693, 02467
AMTC	02738, 02813
Ansonic	02418
Aonvision	02279
Apro	01672
Argos	02568
Arion	03374, 04348
Arnion	01300
Arris	00869
AS	01284
ASA	00740
ASCI	01334
ASDA	01284
AssCom	00853
Astrell	01986, 02418
Astro	00173, 01838, 02627, 00658, 03838, 01099, 01100, 02026
Atevio	02928
Atlanta	02418, 03320
Atom	02289
Audiola	03012, 02418
Audioline	01672
Aurora	00879
Austar	00879
Austriasat	01195, 01197, 02957, 03374, 01561, 01631, 02631
Auvisio	02932, 02738, 02813
Avanit	00299, 01631
Awa	02418
Axil	02418, 01413, 01777, 02738, 03424
Axitronic	01626
AZ America	01631

AZBox	02719
B.net	01672
B@ytronic	00740
Beijing	03299
Bell	00775
Bell ExpressVu	00775
Bell Fibe TV	00775
Bell Satellite TV	00775
Belson	02418
BENsat	02957, 02938
Best Buy	02728, 02842
BIG TV	04312
BIOSTEK	02738
BiS Television	01986
Black Diamond	01284
Blaupunkt	00173
Blu:sens	02938
Boca	02026, 02458, 02797, 02308, 02813
Boshmann	01413, 01631
Botech	02738, 03749
Boxer	02443, 01692, 01957, 04024
Brainwave	00658, 01672
BSkyB	01175, 01662, 00847
Bulltech	02738
Bush	01935, 02376, 01284, 02813, 01672, 03346, 03439, 02034, 03652, 01291, 01626, 02418, 02568
Cablecom	01195, 01197
Caiway	02443, 00253
Canal Digitaal	02631, 00853, 02466, 02957
Canal Digital	02553, 01780, 00853, 01334
Canal+	00853, 02657, 01195, 01197, 01986
CanalSat	00853, 02657
Century	03110, 00856
CGV	02034, 01413, 01986
Chess	02026, 01334, 01626

Cignal	02289, 02835, 02836
CityCom	00299, 00658, 02957
Clarke-Tech	03320
Claro	03787, 03790
Classic	01291, 01284, 01672
Clatronic	01413, 02738
Clayton	01626
CME	00173
CMX	02205, 02932
Cobra	02728, 03012
Com Hem	01176, 01915
Comag	02797, 02026, 02458, 02813, 02308, 01413
Comsat	01413
Comwell	01956
Continent	01986
Coship	03787, 03790, 01672, 02525, 03574
Cosmos TV	01545
Croner	02813
Crown	01284
Crypto	03012
Crystal	03012, 01416
Cyfra+	00853, 01409
Cyfrowy Polsat	02262, 02527, 00253, 00853
Dantax	01626
Danystar	02938
DASAN	03321
D-box	01114
DCR	03517
Delta	02443
Denver	02418, 02738
Deutsche Telekabel	01195, 01197
Dgtec	01631, 02418
Dick Smith Electronics	02418, 02813
Dicra	02738, 02842, 03012
Digenius	00299, 00740
Digi	01416, 01195, 01197, 02026
Digi Raum Electronics	02622

Digi Romania	01416
Digiality	01334, 02813
Digihome	02034, 01284, 01935
DigiLogic	01284, 02034
DigiQuest	02278, 02738, 01300, 01631
Digital	02308
DigitAlb	01195, 01197
DigitalBox	02540, 01631, 02289, 01100, 03240
DigitSat-e	02842
Digiturk	03517, 02097
Digiwave	01631
Dikom	02938, 02842
Dilog	01957, 01780
DiPro	02278
DirecTV	01377, 01442, 00099
Dish Mexico	00775
Dish Network	00775
DishHD	04090
Dishpro	00775
DishTV	01300, 02604, 01780
Di-Way	02289
DMT	03321
DMTech	02738
DNA	01780, 01957, 01176, 02144
Donghai	02938
Doro	01672
DragonSat	02928
DRE	02622
Dream	01237
Dream Multimedia	01237, 01652, 01923
Dream Satellite TV	01416, 03374
DSE	02418, 02813
D-Smart	02231
DSTV	00879, 02059, 02060
DTI Electronics	02938
DTK Deutsche Telekabel	01195, 01197
DTV	03572
Dual	02034

Durabrand	01284, 02034
Dyon	02738, 02813
Easy-One	03240
Echostar	00775, 02262, 02527, 00853, 01409
Eco-Star	01413
Edision	01631
Ekotech	03422
Elap	01413
Elbe	02418
Electron	01956
Elisa	01322, 02455
Elless	00740
Elta	02738
Embratel	02796, 03787
Energy Sistem	02418, 01631, 02289, 02813
Engel	03749, 01611, 01672
Etisalat	02443
Europhon	00299, 01334
Europsat	01611, 01413
Eurosky	00740, 00299
Eutra	00740
Evesham Technology	02034
Eycos	03374
F&U	03012
Fagor	01611
FaVal	03422
Ferguson	02638, 01291, 01803, 01935, 02034
Finepass	01780
Finlux	01626, 02034
Finnet	01780, 01957
FinnSat	00740, 01195, 01197, 01351
FMD	01413
Fortec Star	01631
Foxtel	01356, 00879, 01176
Freesat	01692, 02928, 03266, 01986, 02376
Freesat+	02443, 03266

freeview	02982
Fte Maximal	02289
Fuba	02750, 00173, 00299, 03726
Fuji Onkyo	02728, 01631
Funai United	03012
Galaxis	00853, 00879
Galaxy	01956
Galaxy Innovations	02799, 04197
General Instrument	00869
General Satellite	03064, 02622
Gi	02799, 04197
GigaBlue	03663
GigaTV	02738
Globo	02026, 01334, 00740, 01429, 02957, 01626
GMMZ	03538
Go	01780
GoGen	02738
GOI	00775
Gold Box	00853
Gold Vision	01631
Golden Media	04197
GoldMaster	01334, 02928
Goodmans	01284, 02376, 02034, 03652, 02568, 03346, 03439
Gradiente	00887, 03110, 00856
Gran Prix	00740
Grandin	01626
Grocos	01409
Grundig	00173, 00847, 02376, 01291, 02034, 00853, 02813, 01284, 01780, 02738, 03424, 00879, 01672, 02568, 03346
GVT	03789
Haier	02418
Hailo	02289
Hallo	01626
Handan	01780, 01957
Hanseatic	01099, 01100

Hauppauge	01672
HD Box	02928
HD+	02797, 02443, 01429, 02569, 03095
HDT	01416, 01255, 03321
Hirschmann	00173, 00299, 02026, 00740
Hitachi	02034, 01284
Homecast	02525
Hornet	01300
HTS	00775
Huawei	03787
Huaxian Radio and Television Network	04041
Hubei Chutian	04041
Hubei Radio & Television Network	04041
Hughes Network Systems	01442, 01377
Humax	01176, 02443, 01427, 01808, 02736, 01882, 01915, 03140, 02231, 02408, 02144, 02616, 02754, 01377, 03517, 01989, 02289, 03321, 01255
Hyundai	01416
Hyundai Digital Technology	01416, 01255, 03321
ibox	01652
IceCrypt	04197, 02838, 02928
ID Digital	01176
ID Sat	02289, 01334, 01631
i-Joy	02938
Illusion	01631
Imagin	01195, 01197
Imperial	01195, 01197, 01334, 01429, 01672
InDigital	01416
Indovision	01989, 00856, 01887, 02108, 00887, 01255
iNETBOX	01652, 01237
Inno Hit	01626, 02728
Innova	00099
Intv	04348

Inverto	03095
inVion	02418
iotronic	01413
IP Vision	02455
IPM	03567
IQ	02813
IQ Prism	02813
ISkyB	00887
ITT	02418
Jaeger	02797, 01334
Jameson	02813
Jerrold	00869
Jiuzhou	03140
JVC	00775, 01284
Kabel Deutschland	01195, 01197, 01672, 01882, 01915
KabelBW	01882, 01915, 01195, 01197, 01429
KabelNoord	00253, 02443
Kamosonic	02738
Kaon	01300, 02231
Kathrein	01561, 02569, 00658, 00173, 03658, 01416, 02263
Kenwood	00853
Konig	02289, 01631, 00173
Koscom	01956
KPN	01986
Kreiling	00658, 01626
Kreiselmeyer	00173
KT	03321
L&S Electronic	01334
Labgear	03424
LaSAT	00740, 00299
Lava	01631
Lazer	02738
Leiker	02728
Leiko	01626
Lemon	01334
Lenoxx	01611

LG	03321
Lifesat	00299
LinkBox	02957
Linsar	01284, 02842
Listo	01626, 02813
Lodos	01284
Logik	02034, 01284, 01906, 02842, 01803, 03652
LogiSat	02797, 02026, 02813, 02458
Lorenzen	00299
Lowry	02938
Luxor	01935, 02034
M vision	03562
M7	02631
Macab	00853
Magic TV	02982
Majestic	03012, 02738, 02842
Manhattan	01300
Maplin	02034
Marusys	02799, 03543
Mascom	02738
Maspro	00173, 03099
Matsui	01284, 00173, 01626
Maximum	01334, 02813, 01672, 01986
Mediabox	00853
MediaSat	00853
Mediascape	02289, 02835, 02836
Mediaset	02750, 02278, 01427, 02736, 02739
Medion	00299, 00740, 01626, 01334, 02026, 02797
Mega TV	03321
MegaSat	01631, 02034, 02813, 02289, 00740, 02738
Melita	01416
Meo	02466
Mercury	03422
Metronic	01986, 02418, 02738, 01334, 01631, 01413, 01672, 01935,

	02278
Metz	00173
Micro	02797, 02813
Micro electronic	02308, 02813
Micromaxx	00299
Microstar	00299
Miraclebox	02928
Mitsai	02738
Morgan's	02026
Motorola	00869, 03110, 00856, 03469
Movistar	02527, 02262, 02263
MTEX	03539
Multichoice	00879, 02059, 02060
Murphy	02034
Mx Onda	02938
myfreeviewHD	02982
Mysat	02738
MySky Italia	02467
MySky New Zealand	01356, 02211
Nagra	02262
NanoXX	01631
NC+	00853, 01409
NEOTION	01334
NET	02262
Netgem	01322, 02455
Netsat	00099, 00887
Neuf TV	01322
Neuling	02458, 02026
Nevir	02938, 02728
Next	02231
Next Level	00869
Nextvision	01956
NextWave	01956
Nilox	02278
Nokia	00853
Nordmende	01611
Noru	02938
Nova	02475, 00879

NPG	02289, 01413, 01631
NTV Plus	01307, 01692, 02443
Octagon	02928
Olleh TV	03321
Olleh-Skylife	03321
Onn	02034, 01284
Openbox	01956, 02928
Opensat	02957, 01956, 02719
Opentech	02525
Opentel	02525
Optex	01626, 01413, 01611, 03012
Opticum	02957, 02797, 02932
Optus	01356, 00879
Orbis	01334
Orbitech	01195, 01100, 01197, 01099, 01351
Orchid	02289
Orion Express	01986
Orton	02957
P&T Luxembourg	01322, 02455
Pace	00847, 00887, 01356, 02754, 01682, 01175, 01693, 02475, 00853, 02231, 02467, 02631, 02657, 03469, 03790, 01377, 01662, 02097, 02211, 02059, 02060, 02466, 02796, 02160
Pacific	01284
Palcom	01611, 00299, 01409
Palsonic	02813
Panasat	00879
Panasonic	03494, 00847, 03099
Panda	00173
peeKTon	02418
Philips	00099, 00853, 02561, 01499, 01442, 02466, 01114, 01672, 02619, 02211, 03110, 03469, 00173, 00856, 00887, 02631
Phoenix	01956, 02418
Phonotrend	01780
Pino	01334

Pioneer	00853
Pixel Magic	02982
PLDT	02835, 02836, 02289
PMB	01611
Polsat	02262, 02527, 00253, 00853
Portugal Telecom	02466
Premiere	01429, 01114, 01195, 01197
PremiumX	03374
Primacom	01176, 01195, 01197
Pro Basic	00853
ProLine	01284
PSI	03539
PT	02466
QooK TV	03321
Qook-Skylife	03321
Quelle	00299
Qwest	01377
RadioShack	00869
Radix	01255
Raduga TV	01986, 02957
RCA	01291, 01442, 02108
RCS	01416
Rebox	02928
RiksTV	01692
Rimax	02938
RIO Media	01780
Roadstar	00853
Rollmaster	01413
Ross	02540
SAB	01956, 01631, 04197, 01300
Saba	00740, 02205
Sagem	01692, 01690, 01114, 02553, 01307
Sagemcom	01692, 04024, 03789
Saivod	02418
Samart DTH	03576, 03574
Samsung	03063, 00253, 01442, 01377, 02467, 01682, 01989, 03266, 00853, 01662, 02525, 03321,

	03784, 03834, 03838, 01255, 01693
Sansui	01545
Sanyo	01626
Sat Control	01300
Sat Industrie	01611
SAT+	01409
SatCatcher	01956
Satforce	03374
Satplus	01100
SatyCon	01631
Schaub Lorenz	02034, 02418
Schneider	02842
Schwaiger	01672, 01429, 02308, 02458, 01631, 02797, 02813, 00740, 01334, 02957
Schwaiger CS	01631
Scott	02738
SCS	00299, 00740
Sedea	01626
Sedea Electronique	01626
SEG	01626, 01284, 02034
Sencor	02813
Servimat	01611
Set-One	03240, 02728
Shark	01631
Sharp	01935, 02034
Shaw Direct	00869
Sherwood	01409
Shinelco	02738, 02278, 02938
SHOI	02938
Siemens	00173, 01657, 01429, 02418, 01626, 01334, 01672
Sigmatek	02418, 02813, 02738
SignalMAX	01956
Silva	00299
Silva Schneider	00740
SilverCrest	02026, 02308, 02458, 02932
SKY	01662

Sky Austria	02754, 02443, 01429, 01114, 01915, 01195, 01197
Sky Brasil	01377, 03110, 00887, 00856, 00099, 01499, 02619
Sky Deutschland	02754, 02443, 01429, 01114, 01915, 01195, 01197
Sky Ireland	01175, 01662, 00847
Sky Italia	01693, 02467, 00853
Sky Mexico	00856, 02619, 00887, 01377, 03469
Sky New Zealand	02211, 00887, 00856, 01356
SKY PerfecTV!	03099, 02616, 03049
Sky UK	01175, 01662, 00847
SkyCable	01631, 01957
SkyLife	03321, 01255
Skylink	02957, 01545, 02443, 02928, 01195, 01197, 01986
Skymaster	01409, 02205, 01611, 02728, 02932, 01545, 01334
Skymax	01413
Skypex	00740
Skyplus	01334, 02026, 00740, 01175
SkySat	01100
Skytec	02928
Skyvision	02797, 01334
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