

ONKYO

TX-SR333

AV RECEIVER

Advanced Manual

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AM/FM Radio Receiving Function

Choosing the Radio Station

■ Tuning into stations automatically

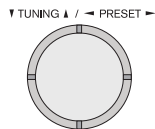
1. Press AM or FM on the unit to select either "AM" or "FM".



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



3. Press ▼TUNING▲. The automatic search for a radio station starts. Searching stops when one is found. When tuned into a radio station, the "▶TUNED◀" lights on the display lights. If FM stereo broadcasting is tuned, the "FM STEREO" indicator lights.
 - No sound is output while the "▶TUNED◀" indicator is off.

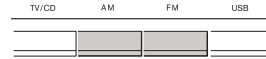


When the signal from an FM radio station is weak:

Depending on the structure of the building and the surrounding environment, the radio wave condition is different and it may be impossible to get good reception. In that case, manually tune into the radio station of your choice by referring to the next section.

■ Tuning into stations manually

1. Press AM or FM on the unit to select either "AM" or "FM".

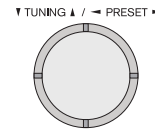


2. Press TUNING MODE, so that the "AUTO" indicator on the display goes off.



3. Press and hold ▼TUNING▲ to select the desired radio station.

- The frequency changes by 1 step each time you press the button. The frequency changes continuously if the button is held down and stops when released. Tune by looking at the display.

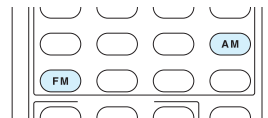


To return to the method for tuning into stations automatically: Press TUNING MODE again on the main unit. FM stereo broadcasting is automatically tuned. Normally, leave the indicator in "AUTO".

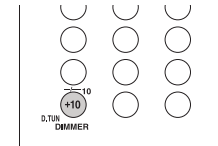
■ Tuning into stations by frequency

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

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

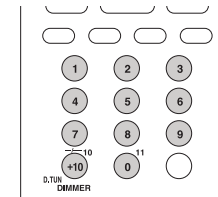


2. Press D.TUN.



3. Using the number buttons, enter the frequency of the radio station within 8 seconds.

- For example, to tune to 87.5 (FM), press 8, 7, 5 or 8, 7, 5, 0.

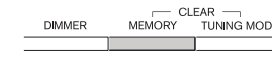


Registering Radio Station

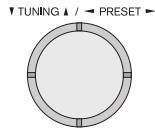
It allows you to register up to 40 of your favorite AM/FM radio stations. Registering radio stations in advance allows you to tune into your radio station of choice directly.

■ Registration

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



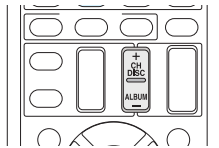
- Repeatedly press ◀PRESET▶ to select a number between 1 and 40 while the preset number is flashing (about 8 seconds).



- Press MEMORY again to register.
 - The preset number stops flashing.
 - Repeat this procedure for all of your favorite AM/FM radio stations.

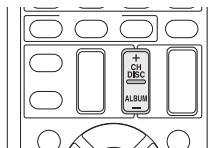
■ Selecting a Preset Radio Station

- Press CH +/- on the remote controller to select a preset number.
 - You can also select by pressing ◀PRESET▶ on the unit. It is also possible to select by directly entering the preset number with the number buttons on the remote controller.

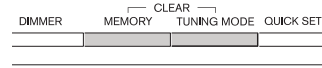


■ Deleting a Preset Radio Station

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



- While holding down MEMORY, press TUNING MODE on the unit to delete the preset number.
 - 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, data may be displayed intermittently or not at all.

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

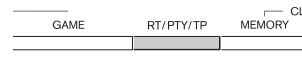
RT (Radio Text): Tuning into a radio station transmitting Radio Text information displays text on the display of the unit.

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)

- Press RT/PTY/TP on the unit once.
 - RT (Radio Text) is displayed scrolling across the unit's display. "No Text Data" is displayed when the radio station is not transmitting text information.

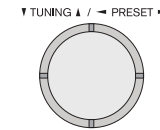


■ Searching by Type (PTY)

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

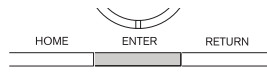


- Press ◀PRESET▶ to select the type of program to search for.



- 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)

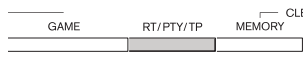
- Press ENTER to search for the selected type of radio station.



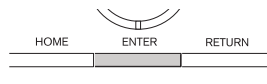
- When the desired radio station is found, the station name on the display flashes. Then, press ENTER again.
 - "Not Found" is displayed if none is found.

■ Listening to Traffic Information (TP)

- Press RT/PTY/TP on the unit thrice.
 - The traffic information "[TP]" transmitted by the radio station you are tuned in is displayed. "TP" is displayed without square brackets when the radio station is not transmitting traffic information.



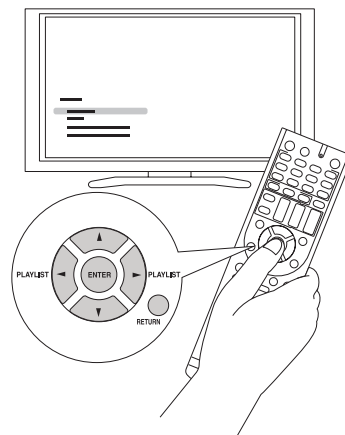
- Press ENTER to search for a radio station transmitting traffic information.



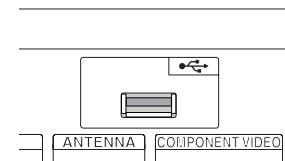
- When such a radio station is found, searching stops and playing traffic information starts.
 - "Not Found" is displayed if none is found.

Playing Content from a USB Storage Device

● **Operation:** You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. 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.



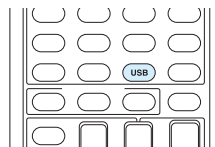
- Plug your USB storage device with the music files into the USB port of the unit, so that the "USB" lights on the display.
 - If the "USB" indicator flashes, check whether the USB storage device is plugged in properly.
 - Do not unplug the USB storage device while "Connecting..." is displayed on the display. This may cause data corruption or malfunction.



- Press ENTER.
 - The list of folders and music files on the USB storage device are displayed. To open a folder, use cursor to select it, and then press ENTER.
- Select the folder and file to play using the cursor buttons, then press ENTER or ► to start playing.

■ Playback

- Press USB on the remote controller to select "USB".



Using Remote Controller for Playing Music Files

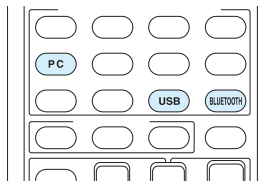
Summary of Operation on Remote Controller

The remote controller of this unit allows you to operate and/or play music files stored on USB storage devices, as well as on Bluetooth-enabled devices.

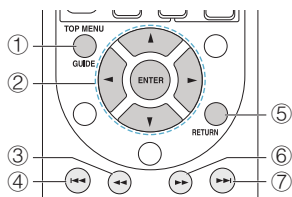
- Available buttons may vary depending on the device to play.
- Some buttons cannot be used with Bluetooth-enabled devices. Furthermore, the Bluetooth-enabled devices must support the AVRCP profile. Some devices may not be operated, even when they support AVRCP profile.

Functions of the Buttons of the Remote Controller

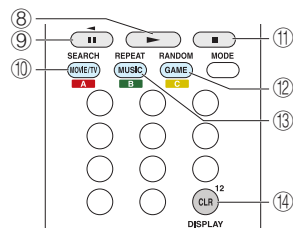
1. Press any of the INPUT SELECTOR button (PC, USB or BLUETOOTH) accordingly to input source.



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



- 1 **TOP MENU**: This button displays the top menu for each media.
- 2 **▲/▼, ENTER**: These buttons navigate through items and activate the selected item.
◀/▶: These buttons cycle through pages.
- 3 **◀◀**: This button fast-reverses the current track. This button is not operable from 10 seconds before the playback ends.
- 4 **▶▶**: This button plays the current track from the beginning. Pressing this button twice plays the previous track.
- 5 **RETURN**: This button returns to the previous screen.
- 6 **▶▶▶**: This button fast-forwards the current track. This button is not operable from 10 seconds before the playback ends.
- 7 **▶▶▶▶**: This button plays the next track.



- 8 **▶**: This button starts the playback.
- 9 **||**: This button pauses the playback.
- 10 **SEARCH**: This button toggles between the playback screen and list screen during playback.
- 11 **■**: This button stops the playback.
- 12 **RANDOM**: This button performs random playback.
- 13 **REPEAT**: This button replays the track (or tracks). Pressing this button repeatedly cycles through the repeat modes.
- 14 **DISPLAY**: This button changes the displayed track information during playback. Pressing this button when the list screen is displayed toggles the screen to playback.
 - Bluetooth-enabled devices: Usable buttons are ▶, ◀◀, ◀, ||, ▶▶, ▶▶▶, and ■.

Using Remote Controller for Playing Music Files

Icons Displayed During Playback

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

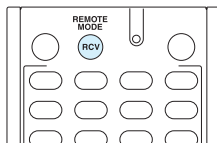
- Folder
- Track
- Play
- Pause
- Fast-forward
- Fast-reverse
- Artist
- Album
- Repeat One Track
- Repeat within a folder
- Repeat
- Shuffle

Using the Listening Modes

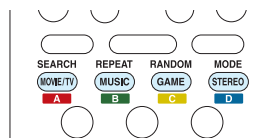
Selecting the Listening Mode

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

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



- Select the desired listening mode.
 - The listening mode changes each time you press one of the buttons below on the remote controller. Set the listening mode of your choice by listening to the actual sound.



■ MOVIE/TV

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

- Selectable listening modes:
 - All Ch Stereo
 - Direct
 - Dolby D
 - Dolby D+
 - Dolby TrueHD

DSD
DTS
DTS 96/24
DTS Express
DTS-HD HR
DTS-HD MSTR
Full Mono
Mono
Multichannel
Neo:6 Cinema
PLII Movie
T-D
TV Logic

■ MUSIC

You can select a listening mode suitable for music.

- Selectable listening modes:
 - All Ch Stereo
 - Direct
 - Dolby D
 - Dolby D+
 - Dolby TrueHD
 - DSD
 - DTS
 - DTS 96/24
 - DTS Express
 - DTS-HD HR
 - DTS-HD MSTR
 - Full Mono
 - Multichannel
 - Neo:6 Music
 - Orchestra
 - PLII Music
 - Stereo
 - Studio-Mix
 - Unplugged

■ GAME

You can select a listening mode suitable for video games.

- Selectable listening modes:
 - All Ch Stereo
 - Direct
 - Dolby D
 - Dolby D+

Dolby TrueHD
DSD
DTS
DTS 96/24
DTS Express
DTS-HD HR
DTS-HD MSTR
Full Mono
Game-Action
Game-Rock
Game-RPG
Game-Sports
Multichannel
PLII Game
T-D

■ STEREO

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

- Selectable listening modes:
 - All Ch Stereo
 - Stereo

Contents of the Listening Modes

Selectable listening modes will differ depending on the number of input source channels and the actual speaker configuration. Listening modes available when headphones are connected are: Mono, Direct, and Stereo.

Lists in alphabetic order (A-Z)

■ All Ch Stereo

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

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch

■ 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 corresponding to the number of channels present.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 2.1 ch, 3.1 ch, 5.1 ch

■ Dolby D (Dolby Digital)

This mode is for use with Dolby Digital sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- 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)

This mode is for use with Dolby Digital Plus sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- 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.

- When playing back 5.1 ch sources from Blu-ray Discs, Dolby Digital is automatically applied.

■ 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.

PLII Movie: Use this mode with any 2 ch movie.

PLII Music: Use this mode with any 2 ch music source.

PLII Game: Use this mode with any 2 ch game source.

- Input source: Stereo
- Speaker configuration: 3.1 ch, 5.1 ch

■ Dolby TrueHD

This mode is for use with Dolby TrueHD sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- 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

This mode is for use with DSD sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- This unit supports DSD signals input through HDMI IN. However, depending on the connected player, better sound is possible when output from the PCM output of the player. In that case, configure the player for PCM output.
- This listening mode can be selected only if your Blu-ray Disc/DVD player's output setting is DSD.

■ DTS

This mode is for use with DTS sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- 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

This mode is for use with DTS 96/24 sources. The audio from the input source is output as-is, without surround sound processing. With 96 kHz sampling rate and 24-bit resolution, it provides superior fidelity.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- 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

This mode is for use with DTS Express sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- 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)

This mode is for use with DTS-HD High Resolution Audio sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- 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)

This mode is for use with DTS-HD Master Audio sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- 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.

- Input source: Stereo
- Speaker configuration: 3.1 ch, 5.1 ch

■ 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.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch

■ Game-Action

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

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ Game-Rock

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

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ Game-RPG

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

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ Game-Sports

Suitable for audio source with much reverberation.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ 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.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 2.1 ch, 3.1 ch, 5.1 ch

■ Multichannel

This mode is for use with PCM multichannel sources.

The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch

■ 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.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ Stereo

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

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 2.1 ch, 3.1 ch, 5.1 ch

■ 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.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ T-D (Theater-Dimensional)

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.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 2.1 ch, 3.1 ch, 5.1 ch
- Good results may not be possible if there is too much reverb, so we recommend that you use this mode in an environment with little or no natural reverb.

■ 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.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ 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.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

Checking the Input Source

You can check the audio format of the input signals. 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. If "Dolby D 5.1" is displayed in Signal format, the Dolby Digital 5.1 ch signals are being input.

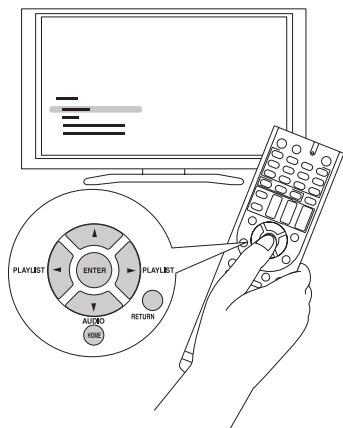
Dolby D 5.1

Advanced Settings

Setup Procedure

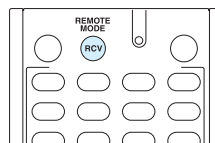
This unit allows you to configure advanced settings, such as to reassign the input jacks and input selector, or configure various speaker settings. To configure advanced settings, select "Setup" in the Home menu.

● **Operation:** You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. 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. To return to the Home menu, press HOME.

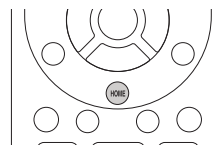


■ Operation

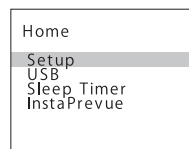
1. Press RCV on the remote controller.
 - Always press RCV first to change the remote controller to RECEIVER mode (the mode to operate this unit) since its mode may be changed to operate another components.



2. Press HOME. The Home menu is displayed on the TV screen.



3. Select "Setup" using the cursor buttons ▲/▼ and press ENTER.



4. Select the target menu using the cursors buttons ▲/▼ and then press ENTER.

Setup	
1.HDMI Input	BD/DVD
2.Component	CBL/SAT
3.Composite	STB/DVR
4.Digital Audio	GAME
5.Sp Config	PC
6.Sp Distance	AUX
7.Level Cal	TV/CD
8.Audio Adjust	
9.Source Setup	
10.Hardware	
11.HDMI Setup	
12.Bluetooth	

5. Press ▲/▼/◀/▶ to select the desired item to configure the settings.

- When "ENTER" is displayed on the setting item, press ENTER.

BD/DVD	<	HDMI 1	>
CBL/SAT		HDMI 2	
STB/DVR		HDMI 3	
GAME		HDMI 4	
PC		HDMI 5	
AUX		-----	
TV/CD		-----	

To save changes and finish the setting: Press HOME to exit.

1. HDMI Input

It is possible to change assignment of input selector buttons and the HDMI IN jacks.

Setting Item	Default Value	Setting Details
BD/DVD	HDMI 1	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to BD/DVD button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
CBL/SAT	HDMI 2	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to CBL/SAT button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
STB/DVR	HDMI 3	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to STB/DVR button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
GAME	HDMI 4	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to GAME button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
PC	HDMI 5	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to PC button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
AUX	-----	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to AUX button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
TV/CD	-----	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to TV/CD button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.

2. Component (Component Video Input)

GAME button is assigned to COMPONENT VIDEO IN jack as factory default setting. This assignment can be changed if necessary. If you do not assign a jack, select "-----".

Setting Item	Default Value	Setting Details
BD/DVD	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to BD/DVD button.
CBL/SAT	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to CBL/SAT button.
STB/DVR	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to STB/DVR button.
GAME	COMPONENT	"COMPONENT": COMPONENT VIDEO IN jack is assigned to GAME button.
PC	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to PC button.
AUX	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to AUX button.
TV/CD	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to TV/CD button.

3. Composite (Composite Video Input)

It is possible to change assignment of input selector buttons and the COMPOSITE VIDEO IN V1 to 3 jacks.

Setting Item	Default Value	Setting Details
BD/DVD	-----	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to BD/DVD button. If you do not assign a jack, select "-----".
CBL/SAT	VIDEO 1	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to CBL/SAT button. If you do not assign a jack, select "-----".
STB/DVR	VIDEO 2	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to STB/DVR button. If you do not assign a jack, select "-----".
GAME	VIDEO 3	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to GAME button. If you do not assign a jack, select "-----".
PC	-----	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to PC button. If you do not assign a jack, select "-----".
AUX	FRONT	You cannot change this setting.
TV/CD	-----	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to TV/CD button. If you do not assign a jack, select "-----".

4. Digital Audio (Digital Audio Input)

It is possible to change assignment of input selector buttons and the DIGITAL IN COAXIAL 1 to 2/OPTICAL jacks.

Setting Item	Default Value	Setting Details
BD/DVD	COAXIAL 1	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to BD/DVD button. If you do not assign a jack, select "-----".
CBL/SAT	COAXIAL 2	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to CBL/SAT button. If you do not assign a jack, select "-----".

Setting Item	Default Value	Setting Details
STB/DVR	-----	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to STB/DVR button. If you do not assign a jack, select "-----".
GAME	-----	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to GAME button. If you do not assign a jack, select "-----".
PC	-----	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to PC button. If you do not assign a jack, select "-----".
AUX	-----	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to AUX button. If you do not assign a jack, select "-----".
TV/CD	OPTICAL	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to TV/CD button. If you do not assign a jack, select "-----".

- Supported sampling rates for PCM signals (stereo, mono) from a digital input (optical and coaxial) are 32/44.1/48/88.2/96 kHz/16, 20, 24 bit.

5. Sp Config (Speaker Configuration)

Allows you to change the speaker configuration such as existence of subwoofer, crossover frequency, and so on.

Setting Item	Default Value	Setting Details
Subwoofer	Yes	Set whether a subwoofer is connected or not. "Yes": When subwoofer is connected "No": When subwoofer is not connected
Front	Small	Allows you to specify the size of the front speakers. Specify the size according to a cone diameter. "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) <ul style="list-style-type: none"> The setting is fixed to "Large" if "Subwoofer" is set to "No".

Setting Item	Default Value	Setting Details
Center	Small	<p>Allows you to specify the size of the center speaker. Specify the size in accordance with the smallest cone diameter in the system.</p> <p>"Small": When the cone diameter is less than 6-1/2 inches (16 cm)</p> <p>"Large": When the cone diameter is greater than 6-1/2 inches (16 cm)</p> <p>"None": When the corresponding speaker is not used.</p> <ul style="list-style-type: none"> The setting cannot be selected "Large" if "Front" is set to "Small".
Surround	Small	<p>Allows you to specify the size of the surround speakers. Specify the size in accordance with the smallest cone diameter in the system.</p> <p>"Small": When the cone diameter is less than 6-1/2 inches (16 cm)</p> <p>"Large": When the cone diameter is greater than 6-1/2 inches (16 cm)</p> <p>"None": When the corresponding speaker is not used.</p> <ul style="list-style-type: none"> The setting cannot be selected "Large" if "Front" is set to "Small".
Crossover	100 Hz	<p>Allows you to set the lowest frequency range for each speaker output, and make the subwoofer output the lower frequency range than the set value. Specify the size in accordance with the smallest cone diameter in the system.</p> <p>"40 Hz", "50 Hz", "60 Hz": For cone diameters greater than 8 inches (20 cm)</p> <p>"70 Hz", "80 Hz" "90 Hz": For cone diameters 6-1/2 to 8 inches (16 to 20 cm)</p> <p>"100 Hz": For cone diameters 5-1/4 to 6-1/2 inches (13 to 16 cm)</p> <p>"120 Hz": For cone diameters 3-1/2 to 5-1/4 inches (9 to 13 cm)</p> <p>"150 Hz", "200 Hz": For cone diameters less than 3-1/2 inches (9 cm)</p>

Setting Item	Default Value	Setting Details
Double Bass	Off	<p>This function boosts bass output by feeding bass sounds from the front left and right, and center speakers to the subwoofer.</p> <p>"On": To boost the bass output</p> <p>"Off": Not to boost the bass output</p> <ul style="list-style-type: none"> The setting is fixed to "Off" if "Subwoofer" is set to "No" and "Front" is set to "Small".

- In the following cases, the settings for "Sp Config" cannot be changed:
 - Headphones are connected.
 - "Audio TV Out" is set to "On".
 - "HDMI CEC (RIHD)" is set to "On" and you're listening through your TV speakers.

6. Sp Distance (Speaker Distance)

Allows you to set the distance from each speaker to the listening position.

Setting Item	Default Value	Setting Details
Unit	feet/meters	<p>Specify the unit of distance for configuring settings.</p> <p>"feet": When setting in feet (0.1 ft to 30.0 ft, in increments of 1.0 ft)</p> <p>"meters": When setting in meters (0.03 m to 9.00 m, in increments of 0.03 m)</p>
Front Left	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.
Center	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.
Front Right	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.
Surround Right	7.0 ft/2.10 m	Specify the distance between each speaker and the listening position.
Surround Left	7.0 ft/2.10 m	Specify the distance between each speaker and the listening position.
Subwoofer	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.

- In the following cases, the settings for "Sp Distance" cannot be changed:
 - Headphones are connected.
 - "Audio TV Out" is set to "On".
 - Speakers for which "Sp Config" are set to "No" or "None".
 - "HDMI CEC (RIHD)" is set to "On" and you're listening through your TV speakers.
- Default values vary depending on the regions.

7. Level Cal (Level Calibration)

Allows you to adjust the level of each speaker with the built-in test tone.

Setting Item	Default Value	Setting Details
Front Left	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Center	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Front Right	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Surround Right	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Surround Left	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Subwoofer	0 dB	Select a value between "-15 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.

- In the following cases, the settings for "Level Cal" cannot be changed:
 - Headphones are connected.
 - "Audio TV Out" is set to "On".
 - Speakers for which "Sp Config" are set to "No" or "None".
 - Mute (MUTING) is set.
 - "HDMI CEC (RIHD)" is set to "On" and you're listening through your TV speakers.

8. Audio Adjust

Allows you to 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.

Setting item	Default Value	Setting Details
Input Ch (Mux) (Multiplex Input Channel)	Main	Set the audio channel or language to output when listening to multiplex audio or multilingual TV broadcasts etc. "Main": When playing primary audio channel. "Sub": When playing secondary audio channel. "Main/Sub": When playing both primary and secondary audio channel.
Input Ch (Mono) (Mono Input Channel)	Left + Right	Allows you to 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": When playing left channel source only. "Right": When playing right channel source only. "Left + Right": When playing both left and right channel source only.
Panorama (PLII Panorama)	Off	Configure the sound field settings 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. Allows you to configure the sound field width of front stereo image. "On": To broaden the width of the front stereo image "Off": Default value.
Dimension (PLII Dimension)	0	Configure the sound field settings 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. Allows you to configure the sound field position forward or backward. "-3" to "3": With "0" at the center, smaller the setting value is, more the sound field moves forward, and larger the setting value is, more the sound field moves backward.

Setting item	Default Value	Setting Details
Center Width (PLII Center Width)	3	Configure the settings 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. Allows you to configure the width of the sound from the center speaker. "0" to "7": Smaller the setting value is, the sound is gathered to the center, and larger the setting value is, the sound is distributed to the front left and right speakers.
Center Image (Neo:6 Center Image)	2	Allows you to configure the width of the front sound field when playing in the DTS Neo:6 Music listening mode. "0" to "5": Smaller the setting value is, the front sound field is gathered to the center, and larger the setting value is, the front sound field is distributed to the front left and right speakers.
Listening Angle	Wide	Set the angle of the front left and right speakers relative to the listening position when playing in the Theater-Dimensional listening mode. "Narrow": Less than 30° "Wide": Greater than 30°

- Values recommended for "Listening Angle" are 20° when "Narrow" is selected, and 40° when "Wide" is selected.

9. Source Setup

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

Setting Item	Default Value	Setting Details
Name	-	Allows you to rename the currently selected input selector for easy identification. <ul style="list-style-type: none"> • Same name cannot be set for multiple input selectors. Moreover, a name cannot be configured for the input selectors "AM", "FM", "USB", and "BLUETOOTH".
Audio Selector	-	Allows you to select prior input source. "ARC": When giving priority to input signal from ARC compatible TV. <ul style="list-style-type: none"> • This setting can be selected when "Audio Return Channel" is set to "Auto" and when "TV/CD" is selected. "HDMI": When giving priority to input signal from HDMI jacks. <ul style="list-style-type: none"> • This setting can be selected only when the input selector to set is assigned to the HDMI IN jack in the "HDMI Input" setting. "COAXIAL" (Coaxial input): When giving priority to input signal from DIGITAL IN COAXIAL jacks. <ul style="list-style-type: none"> • This setting can be selected only when the input selector to set is assigned to the COAXIAL jack in the "Digital Audio (Digital Audio Input)" setting. "OPTICAL" (Optical input): When giving priority to input signal from DIGITAL IN OPTICAL jack. <ul style="list-style-type: none"> • This setting can be selected only when the input selector to set is assigned to the OPTICAL jack in the "Digital Audio (Digital Audio Input)" setting. "Analog": To always output analog audio independently of the input signal.

Setting Item	Default Value	Setting Details
Fixed Mode	Off	Specify an input signal when "HDMI", "COAXIAL", or "OPTICAL" is selected for "Audio Selector". Set this item if noise is produced, or truncation occurs at the beginning of a track that follows a gap when playing PCM or DTS sources. "Off": To play an analog signal when there is no digital signal. "PCM": To fix the input source to PCM. "DTS": To fix the input source to DTS (except for DTS-HD). <ul style="list-style-type: none"> Changing "Audio Selector" setting changes "Fixed Mode" to "Off".

- In the following cases, the settings for "Source Setup" cannot be changed:
 - When selecting the input selectors "AM" "FM" "USB" "BLUETOOTH".

10. Hardware (Hardware Setup)

Setting item	Default Value	Setting Details
Volume OSD	On	This function displays the volume level on the TV screen during volume level adjustment. "On": The volume level is displayed on TV screen. "Off": The volume level is not displayed on TV screen.
Remote ID	1	Select an ID for the remote controller to be used with the unit from "1", "2", and "3", and set it to differentiate this unit's remote controller from those used with other Onkyo components when multiple components are used in the same room. If you change the ID on the unit, set the remote controller ID to the same value accordingly to the procedure below. <ol style="list-style-type: none"> While holding down RCV, press Q SETUP for about 3 seconds until the remote indicator lights. Press either 1, 2, or 3 using the number buttons. The remote indicator flashes twice.

Setting item	Default Value	Setting Details
AM/FM Freq Step (North American and Taiwanese models)	10 kHz/ 200 kHz	Select the frequency step according to your area. Select from "10 kHz/200 kHz" or "9 kHz/50 kHz". <ul style="list-style-type: none"> When the "AM/FM Frequency Step (AM Frequency Step)" setting is changed, all radio presets are deleted.
AM Freq Step (European, Australian and Asian models)	9 kHz	Select the frequency step according to your area. Select from "9 kHz" or "10 kHz". <ul style="list-style-type: none"> When the "AM/FM Frequency Step (AM Frequency Step)" setting is changed, all radio presets are deleted.
Auto Standby	On/Off	This function places the unit on standby automatically after 20 minutes of inactivity without any video and/or audio input. "On": To place the unit on standby automatically. ("ASb" flashes on the display.) "Off": Not to place the unit on standby automatically. <ul style="list-style-type: none"> "Auto Standby" is appeared on the display and menu screen 30 seconds before the Auto Standby comes on. "Auto Standby" does not work when Zone 2 is active. Default values vary depending on the regions.
HDMI Through	Off	Enables/Disables the "Auto Standby" setting when "HDMI Through" setting is on. "On": Enable this function "Off": Disable this function <ul style="list-style-type: none"> This setting is fixed to Off when setting "Auto Standby" to "Off".
Version	-	The current firmware version is displayed.
Update via USB	-	Press ENTER to select when you want to update the firmware via USB. <ul style="list-style-type: none"> You will not be able to select "Update via USB" if a USB storage device is not connected or there is nothing to update in the USB storage device.

11. HDMI Setup

Setting Item	Default Value	Setting Details
HDMI CEC (RIHD)	Off	<p>Setting to "On" enables the input selection link and other link functions with HDMI connected CEC compliant device.</p> <p>"On": To enable this function.</p> <p>"Off": When not using this function.</p> <ul style="list-style-type: none"> Depending on the TV set, a link may need to be configured on the TV. When this setting is set to "On", closing the on-screen menu displays the name of the CEC-compatible devices and "RIHD On" on the display. When this setting is set to "On", power consumption in standby mode may increase. (Depending on the TV status, the unit will enter the normal standby mode.) When this setting is set to "On" and you are listening to the audio through the speakers of your TV, operating the MASTER VOLUME control of the unit outputs audio from the speakers connected to the unit. If you want to output audio from either of the unit or TV, change the unit or TV settings, or reduce the volume of the unit. If misbehavior occurs when this setting is set to "On", set this setting to "Off". When connecting a non-CEC compatible component, or when you are not sure whether it is compatible, set the setting to "Off". When making the change to this setting, turn off and then on again the power of all connected components.

Setting Item	Default Value	Setting Details
HDMI Through	Off	<p>Allows video signals from an AV component connected via HDMI to be output to the TV independently of whether the AV receiver is on standby. This setting is only valid for INPUT SELECTOR buttons assigned to HDMI IN jack. You cannot set this setting to INPUT SELECTOR button which is not assigned to any HDMI IN jack.</p> <p>"Off": To disable this function. The input signal from any HDMI IN jacks cannot be output to TV. "BD/DVD", "CBL/SAT", "STB/DVR", "GAME", "PC", "AUX", "TV/CD": Input signal from components connected to the HDMI IN jack assigned to each input selector is output to TV.</p> <p>"Last": Input signal from the components connected to input selector which was selected just before the unit enters the standby.</p> <p>"Auto": Input signal from all components connected to HDMI IN jacks is displayed on TV.</p> <p>"Auto (Eco)": Input signal from all components connected to HDMI IN jacks is displayed on TV. Selecting this setting when using CEC-compatible TV, the power consumption on standby is reduced. You cannot select this setting, when "HDMI CEC (RIHD)" is set to "Off".</p> <ul style="list-style-type: none"> When "HDMI Through" is set, the power consumption increases even when the unit is on standby. When making the change to this setting, turn off and then on again the power of all connected components.

Setting Item	Default Value	Setting Details
Audio TV Out	Off	<p>This function outputs the audio through the speakers of the TV connected to HDMI with this unit turned on.</p> <p>"On": When using this function "Off": When not using this function.</p> <ul style="list-style-type: none"> When setting this function to "On", set "HDMI CEC (RIHD)" to "Off". This function is fixed to "Auto", when setting "HDMI CEC (RIHD)" 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 "Audio TV Out" is set to "On". In such case, audio is output from the speakers of the unit. Operating the MASTER VOLUME control of the unit when "Audio TV Out" or "HDMI CEC (RIHD)" is set to "On" and you are listening to the audio through the speakers of your TV, outputs audio 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 Ch	-	<p>Connection to the ARC compatible TV using HDMI cable allows to listen to the TV sound from the speakers connected to the unit. To use this function, set "HDMI CEC (RIHD)" to "On" in advance.</p> <p>"Auto": When using this function. "Off": When not using this function.</p>
LipSync	On	<p>This function automatically corrects any desynchronization between the video and audio signals based on data from the HDMI LipSync compatible TV.</p> <p>"On": When using this function. "Off": When not using this function.</p>

Setting Item	Default Value	Setting Details
InstaPrevue	-	<p>This function is related to the preview thumbnails of the video input through HDMI, which will be displayed using "InstaPrevue" in the Home menu.</p> <ul style="list-style-type: none"> Depending on the video source, the preview thumbnails configured in "InstaPrevue" may not be displayed properly.
Sub Window	Multi	<p>Allows you to set how to display preview thumbnails.</p> <p>"Multi": Displays all the thumbnails of HDMI IN 1, 2, 3, 4 and 5 at once. "Single": Displays thumbnails of HDMI IN 1, 2, 3, 4 and 5 individually.</p>
Position	Bottom/LowerR	<p>Allows you to set the display position of preview thumbnails.</p> <p>When setting "Sub Window" to "Multi": Select from "Top", "Bottom", "Left" and "Right". When setting "Sub Window" to "Single": Select from "UpperL", "UpperR", "LowerL" and "LowerR".</p>

12. Bluetooth (Bluetooth Setup)

Setting Item	Default Value	Setting Details
Bluetooth	On	Enables/Disables the unit to pair with Bluetooth-enabled device. "On": Enables the Bluetooth function and allows the unit to pair with Bluetooth-enabled device. Set this function to "On" when configuring the settings related to Bluetooth. "Off": When not using the Bluetooth function.
Direct Change	On	Automatically changes the input selector to "BLUETOOTH" when a Bluetooth-enabled device is connected. "On": To enable this function. "Off": To disable this function. <ul style="list-style-type: none"> When the input selector is not selected automatically, set this function to "Off" and change the input selector manually.
Auto Reconnect	On	Automatically reconnects to the Bluetooth-enabled device connected last when you change the input selector to "BLUETOOTH". "On": To enable this function. "Off": To disable this function. <ul style="list-style-type: none"> This function may not work depending on your Bluetooth-enabled device.
Pairing Info	-	This function initializes the information of a previous pairing information stored in the unit. Pressing ENTER when "Clear" is displayed initializes the pairing information stored in this unit. <ul style="list-style-type: none"> This function does not initialize the pairing information on the Bluetooth-enabled device. When pairing the unit with the device again, 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.

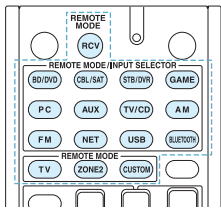
Setting Item	Default Value	Setting Details
Device	-	Displays the name of the Bluetooth-enabled device connected to the unit. <ul style="list-style-type: none"> The name is not displayed when "Status" is "Ready" and "Pairing".
Status	-	Displays the status of the Bluetooth-enabled device connected to the unit. "Ready": Not paired "Pairing": Paired "Connected": Connected successfully

- When you cannot select "Bluetooth", wait until the Bluetooth function is activated.

Operating Other Components Using Remote Controller

Functions of Remote Mode Button

REMOTE MODE button on the remote controller has ability to control your other AV components, including those made by other manufacturers, by programming the specified remote control code. Program the desired REMOTE MODE button with remote control code and then press the programmed button. The remote controller's mode is changed to operate the corresponding component.



* The RCY and ZONE2 buttons cannot be programmed.

Programming Remote Control Codes

For information on the configuration and operation of Onkyo components with RI jack, refer to "Connecting and Operating Onkyo RI Components". Furthermore, the following REMOTE MODE buttons are preprogrammed with remote control codes.

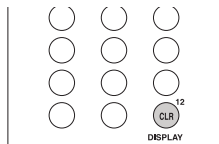
- BD/DVD: Onkyo Blu-ray Disc/DVD player
- TV/CD: Onkyo CD player
- STB/DVR: Apple TV

Registration

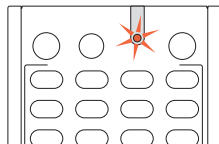
1. Look up the [Remote Control Code List](#) for the corresponding remote control code.

- The codes in the Remote Control Code List are those known as of the date of publication and may be changed.
- 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 TV/CD jack, program the remote control code for the CD player to TV/CD)

2. Press DISPLAY for 3 or more seconds while holding down the REMOTE MODE button to which you want to register the remote control code.

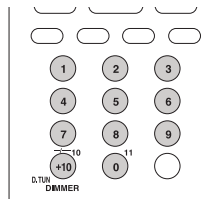


The remote indicator will light.



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

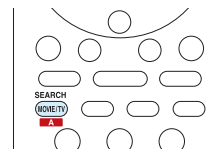
- The registration is complete when the remote indicator flashes twice. The remote indicator flashes once when registration fails. In that case, try the registration again.



Remapping the Colored Buttons

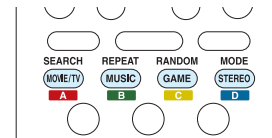
The colored button assignment on the AV receiver's remote controller can be remapped to match that on the remote controller of the component whose remote control code you programmed to REMOTE MODE. However, you will not be able to remap the colored buttons if Zone 2 is selected.

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.

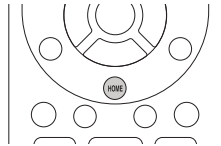
- For example, if the colored buttons on the remote controller of the other component are yellow, green, blue, and red from left to right, press the buttons on the AV receiver's remote controller in that order.
- Programming is complete when the remote indicator flashes twice. The remote indicator flashes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



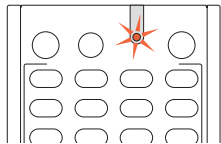
Resetting the REMOTE MODE Buttons

You can reset a REMOTE MODE button to its default remote control code. Note that only one REMOTE MODE button can be reset in this procedure.

1. Press HOME 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.

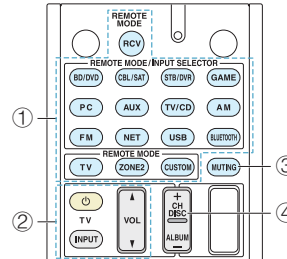


2. Within 30 seconds, press the REMOTE MODE button again.
 - Reset is complete when the remote indicator flashes twice.

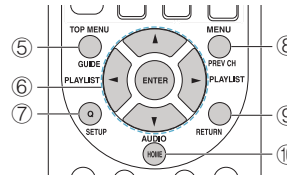
To reset the remote controller to its factory defaults:
While holding down RCV, press and hold down HOME for about 3 seconds until the remote indicator lights. Press RCV again within 30 seconds. Reset is complete if the remote indicator flashes twice.

TV operation

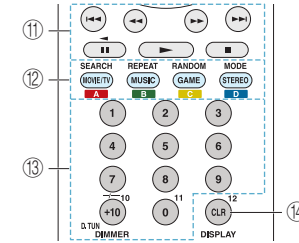
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



- ① REMOTE MODE
- ② ⏻, INPUT, VOL ▲/▼
- ③ MUTE
- ④ CH +/-



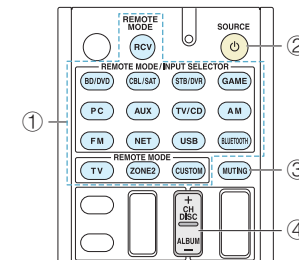
- ⑤ GUIDE
- ⑥ ▲/▼/◀/▶, ENTER
- ⑦ SETUP
- ⑧ PREV CH
- ⑨ RETURN
- ⑩ AUDIO (*)



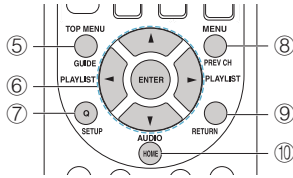
- ⑪ ▶, ⏸, ⏹, ◀, ▶▶, ◀◀, ▶▶▶ (*)
- ⑫ A (Red), B (Green), C (Yellow), D (Blue)
- ⑬ Number 1 to 9, 0, +10
- ⑭ CLR, DISPLAY
* Not CEC-compatible.

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

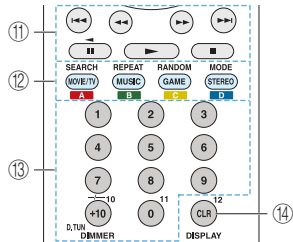
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



- ① REMOTE MODE
- ② ⏻SOURCE
- ③ MUTE
- ④ CH +/-, DISC +/-



- ⑤ TOP MENU
- ⑥ ▲▼/◀▶, ENTER
- ⑦ SETUP
- ⑧ MENU
- ⑨ RETURN
- ⑩ AUDIO (*)

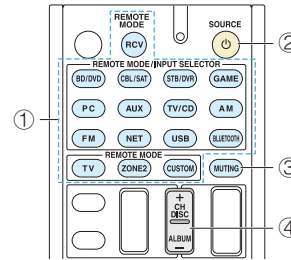


- ⑪ ►, ■, ■, ◀, ►►, ◀◀, ►►►
- ⑫ A (Red), B (Green), C (Yellow), D (Blue)
- ⑬ Number 1 to 9, 0, +10 (*)
- ⑭ CLR, DISPLAY

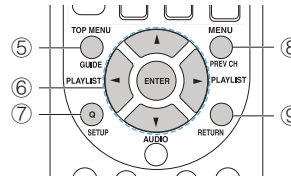
* Not CEC-compatible.

VCR/PVR operation

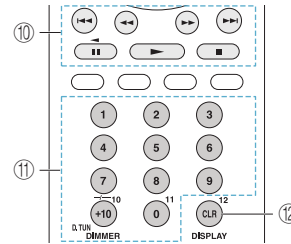
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



- ① REMOTE MODE
- ② SOURCE
- ③ MUTE
- ④ CH +/-



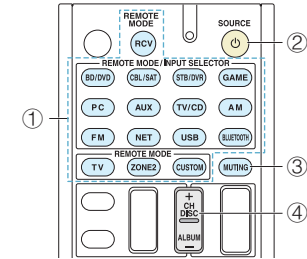
- ⑤ GUIDE
- ⑥ ▲▼/◀▶, ENTER
- ⑦ SETUP
- ⑧ PREV CH
- ⑨ RETURN



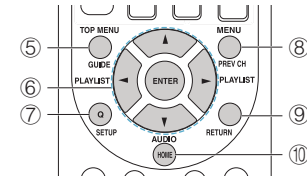
- ⑩ ►, ■, ■, ◀, ►►, ◀◀, ►►►
- ⑪ Number 1 to 9, 0, +10
- ⑫ CLR, DISPLAY

Satellite receiver/Cable receiver operation

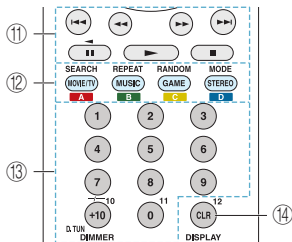
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



- ① REMOTE MODE
- ② SOURCE
- ③ MUTE
- ④ CH +/-



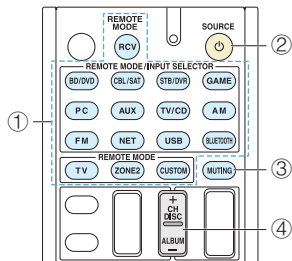
- ⑤ GUIDE
- ⑥ ▲▼/◀▶, ENTER
- ⑦ SETUP
- ⑧ PREV CH
- ⑨ RETURN
- ⑩ AUDIO



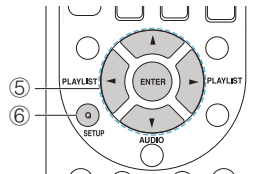
- ⑪ ►, ◼, ◼, ◼, ◀, ►►, ◀◀, ►►►
- ⑫ A (Red), B (Green), C (Yellow), D (Blue)
- ⑬ Number 1 to 9, 0, +10
- ⑭ CLR, DISPLAY

CD player operation

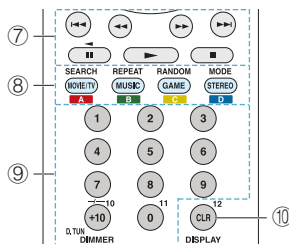
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



- ① REMOTE MODE
- ② SOURCE
- ③ MUTING
- ④ DISC +/-



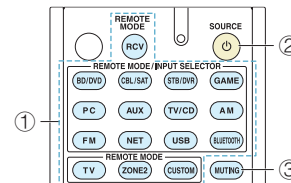
- ⑤ ▲/▼/◀/▶, ENTER
- ⑥ SETUP



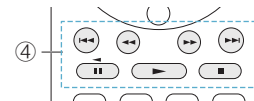
- ⑦ ►, ◼, ◼, ◼, ◀, ►►, ◀◀, ►►►
- ⑧ SEARCH, REPEAT, RANDOM, MODE
- ⑨ Number 1 to 9, 0, +10
- ⑩ CLR, DISPLAY

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. Note that some buttons may not work, or the remote controller may not work at all with some components.



- ① REMOTE MODE
- ② SOURCE
- ③ MUTING



- ④ ►, ◀ (Reverse Playback), ◼, ◀◀, ►►, ◀◀, ►►►

To operate CEC-compatible components

The TV and BD/DVD buttons on the remote controller are preprogrammed with remote control codes for linked operation of some CEC (Consumer Electronics Control)-compatible TV sets and Blu-ray Disk players. By connecting to the unit via HDMI, you may operate them using the AV receiver's remote controller.

- If you cannot operate your CEC-compatible component, program one of the following remote control codes to the TV or BD/DVD button.
 TV button: 11807/13100/13500 (CEC-compatible TV)
 BD/DVD button: 32910/33101/33501/31612 (CEC-compatible BD/DVD player)

Connecting and Operating Onkyo RI Components

Summary of 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 (RCA) cable enables the following RI functions:

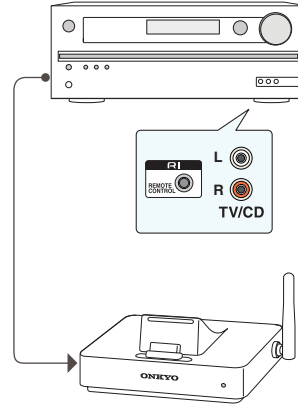
System On/Auto Power On: Starting playback on a component connected via RI when the unit is on standby mode, automatically turns on the unit to select the relevant component as its input source.

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.
- These functions do not work when Zone 2 is turned on.
- For information on the RI functions, also refer to each component's instruction manual.

RI connection and settings



Connect an Onkyo component with RI jack to the unit using an RI cable and an analog audio (RCA) 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, you can connect to either one as both jacks work in the same way.

To connect the RI Dock or cassette tape deck via RI, you must:

■ Renaming the Input Selector

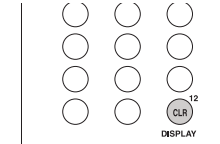
To make the RI functions work, you must rename the input selectors. Press RCV on the remote controller to switch its mode to RECEIVER mode and the press HOME. Select "9. Source Setup" in "Setup" menu and rename the input selector by setting "DOCK" or "TAPE".

■ Program the RI remote control code

Program the remote control code to desired 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.

Connecting and Operating Onkyo RI Components

1. Press 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.
 - The RCV, ZONE2, and TV buttons cannot be programmed.

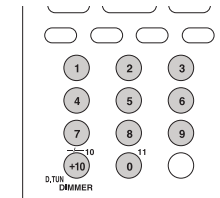


2. With the number buttons, enter the following 5-digit remote control code within 30 seconds.

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 "HDD" or "HDD/DOCK". 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

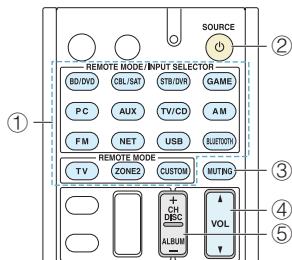
- With some models, operation may not be possible in part or not possible at all.

iPod/iPhone Operation

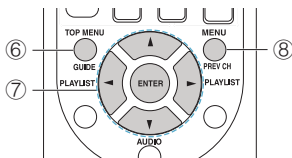
The RI Dock allows you to use the AV receiver's remote controller to operate and play music on your iPod/iPhone. Moreover, it also allows you to view videos on your iPod/iPhone on the screen of your TV, as well as perform RI operations if connected via RI. This operation is possible only when the RI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

Before Operation: Before performing any operation on your iPod/iPhone, make sure to have it updated to the latest version via iTunes. 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. Then, operate by using the corresponding buttons. Point the remote controller at the unit.

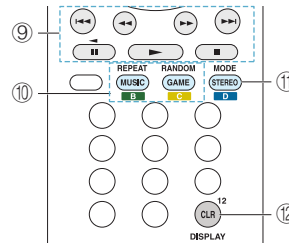


- ① REMOTE MODE
- ② SOURCE
- ③ MUTING
- ④ VOL ▲/▼
- ⑤ ALBUM +/-



- ⑥ TOP MENU

- ⑦ ▲/▼/◀▶, ENTER, PLAYLIST ◀▶
- ⑧ MENU



- ⑨ ▶, II, ■, ◀▶, I◀▶, ▶▶
- 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. You can resume playing from the song that was playing when you removed your iPod/iPhone from the DS-A2 RI Dock.

Firmware Update

Summary of Firmware Update

There is method for updating the firmware: via USB.

- Prepare a 64MB or larger USB storage device.
- For the latest information on updates, visit the Onkyo website.
- During an update, do not
 - Disconnect and reconnect any cable, USB storage device, speaker setup microphone or headphones, or perform any operation on the component such as turn off its power
 - Access to this unit from a PC or smartphone using Android application
- The update may take about 10 minutes to complete for either method, via USB. Furthermore, existing settings are saved regardless of the method used.

Disclaimer: The program and accompanying online documentation are furnished to you for use at your own risk.

Onkyo will not be liable and you will have no remedy for damages for any claim of any kind whatsoever concerning your use of the program or the accompanying online documentation, regardless of legal theory, and whether arising in tort or contract.

In no event will Onkyo be liable to you or any third party for any special, indirect, incidental, or consequential damages of any kind, including, but not limited to, compensation, reimbursement or damages on account of the loss of present or prospective profits, loss of data, or for any other reason whatsoever.

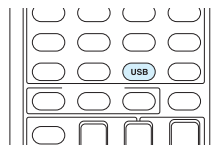
Updating the Firmware via USB

Before Start:

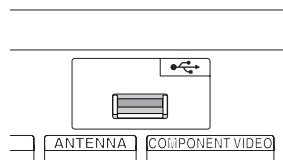
- Media inserted in a USB card reader may not be used for this function.
- USB storage devices with security function are not supported.
- USB hubs and USB devices with hub function are not supported. Do not connect these devices to the unit.
- Delete any data stored on the USB storage device.
- If Zone 2 is active, press OFF on the unit to turn it off.
- If "HDMI CEC (RIHD)" is set to "On", set it to "Off" (default value).
 - After pressing RCV, press HOME on the remote controller. Select "Setup" with the cursors and press ENTER. Then, after selecting "11. HDMI Setup" and pressing ENTER, select "HDMI CEC (RIHD)" to select "Off".
- * Some USB storage devices may take long to load, may not be loaded correctly, or may not be correctly fed depending on the device or their content.
- * Onkyo will not be liable whatsoever for any loss or damage of data, or storage failure arising from the use of the USB storage device with the AV receiver. Thank you for your understanding.
- * The description may differ from the on-screen display but that will not change the way to operate or the function.

Update

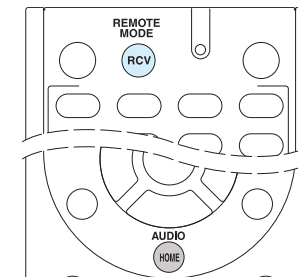
1. Connect the USB storage device to your PC.
2. Download the firmware file from the Onkyo website to your PC and unzip.
Firmware files are named in the following way:
ONKAVR****_*****.zip
Unzip the file on your PC. The number of unzipped files and folders varies depending on the model.
3. Copy all unzipped files and folders to the root folder of the USB storage device.
 - Make sure to copy the unzipped files.
4. Press USB on the remote controller to select "USB".



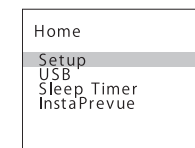
5. Connect the USB storage device to the USB port of the unit.
 - If you connect a USB hard disk drive to the USB port of the unit, we recommend that you use its AC adapter to power it.
 - If the USB storage device has been partitioned, each section will be treated as an independent device.



6. After pressing RCV, press HOME on the remote controller.



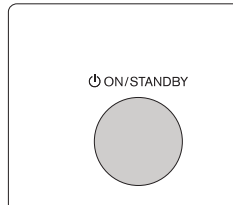
The Home menu is displayed on the TV screen.



7. Select "Setup" - "10. Hardware" - "Update via USB" in order using the cursor buttons, and then press ENTER.
 - If "10. Hardware" is grayed out and cannot be selected, wait for a while until it starts up.
 - You will not be able to select "Update via USB" if there is nothing to update.
8. Select "Update" and press ENTER to start updating.
 - During the update, the TV screen may go black depending on the updated program. In that case, check the progress on the display of the unit. The TV screen will remain black until the update is complete and the power is turned on again.
 - During the update, do not turn off, or disconnect then reconnect the USB storage device.
 - "Completed!" is displayed when the update is complete.
9. Disconnect the USB storage device from the unit.

10. Press **ON/STANDBY** on the unit to place the unit to standby. This is the end of the firmware update and you now have the latest firmware installed.

- Do not use **RECEIVER** on the remote controller.



■ If an Error Message is Displayed

When an error occurs, "*-*-* Error!" is appeared on the display. ("*" refers to the numbers displayed when error occurs.) Check the following:

Error Code

- *-01, *-10:**
USB storage device not found. Check whether the USB storage device or USB cable is correctly inserted to the USB port of the unit.
Connect the USB storage device to an external power source if it has its own power supply.
- *-05, *-13, *-20, *-21:**
The firmware file is not present in the root folder of the USB storage device, or the firmware file is for another model. Retry from the download of the firmware file.
- Others:**
Disconnect then reconnect the AC power cord, from the beginning.

Troubleshooting

Read Before Start

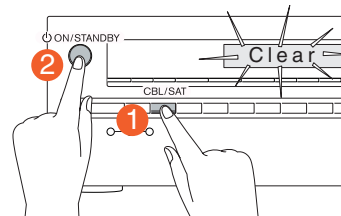
Problem may be solved by turning on and off or reconnecting the power cord, besides rechecking the connection, setting or operation procedure. Try that on both the unit and components connected to the unit. Furthermore, in case of no picture output, no sound or HDMI linked system does not work etc., may be solved if HDMI cable is reconnected. When reconnecting, note that HDMI cable may not be connected properly if it is coiled. After reconnection, turn off and then on again the power of all connected components.

Resetting the unit

Problem may be solved by resetting the unit to initialize all the setting to factory default. If you cannot resolve the issue from the procedure in trouble shooting, try resetting the unit as explained below. If you reset the unit status, your preferences will be reset to the defaults. Note them down before starting reset.

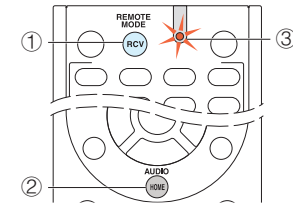
■ Resetting method

- While holding down **CBL/SAT** on the unit (Do not release this button until step 2 is finished.)
- Press **ON/STANDBY** on the unit. "Clear" is appeared on the display and the unit will enter standby mode.



■ Resetting method of the remote controller

- While holding down ① **RCV** (Do not release this button until step 2 is finished.)
- Press and hold ② **HOME** until the ③ remote indicator lights (about 3 seconds). Within 30 seconds, press ① **RCV** again.



Power

■ Can not 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 unit will automatically enter standby mode when Auto Standby has been set and launches.

■ The unit turns off and after restoring the power, it turns off again

- The protection circuit has been activated. Remove the power cord from the wall outlet immediately. Make sure that all speaker cables and input sources are properly connected, and leave the unit with its power cord disconnected for 1 hour. After that, reconnect the power cord and turn the power on. If the unit turns off again, avoid resetting it and unplug the power cord. Then contact your Onkyo dealer.

Caution: If "CHECK SP WIRE" is appeared on the display, the speaker cables may be shorting.

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

Audio

■ There is no sound, or it is very quiet

- Make sure that the proper input source is selected.
- Make sure that connecting plugs are pushed in all the way.
- Make sure that the inputs and outputs of all components are connected properly.
- 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 input source is properly selected.
- Make sure that the speaker cables are not shorting.
- 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.
- 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.
- If there is no sound from a BD/DVD player connected to an HDMI IN, check the BD/DVD player's output settings, and be sure to select a supported audio format.
- 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.
- If your turntable uses an MC cartridge, you must connect an MC head amp, or an MC transformer.
- Make sure that none of the connecting cables are bent, twisted, or damaged.
- Not all listening modes use all speakers.
- Specify the speaker distances and adjust the individual speaker levels.
- If the input signal format is set to "PCM" or "DTS", set it to "Off".

■ Only the front speakers produce sound

- When the Stereo or Mono listening mode is selected, only the front speakers and subwoofer produce sound.
- Make sure the speakers are configured correctly.

■ 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.

- Make sure the speakers are configured correctly.

■ 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.
- Make sure the speakers are configured correctly.

■ The center speaker produces no sound

- When the Stereo or Mono listening mode is selected, the center speaker produces no sound.
- Make sure the speakers are configured correctly.

■ The subwoofer produces no sound

- When you play source material that contains no information in the LFE channel, the subwoofer produces no sound.
- Make sure the speakers are configured correctly.

■ There is no sound with a certain signal format

- When listening to Dolby Digital and/or DTS sound, digital connection is necessary.
- Check the digital input terminal setting. If the connection is different from the default, re-setting 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.

■ Can not select a desired listening mode

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

■ Can not play 5.1ch

- Make sure the speakers are configured correctly.
- Not all listening modes use all speakers.

■ The speaker volume cannot be set as required

- Check to see if a maximum volume has been set.

■ Noise can be heard

- Using cable ties to bundle analog audio (RCA) cables

with power cords, speaker cables, etc. may degrade the audio performance, so refrain from doing it.

- An analog audio (RCA) cable may be picking up interference. Try repositioning your cables.

■ The Late Night function does not work

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

■ 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 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 AV receiver. This is usually because the DTS bitstream has been processed (e.g., output level, sampling rate, or frequency response changed) and the AV receiver 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 IN can not 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.

Video

■ There is no picture

- Make sure that all video connecting plugs are pushed in all the way.
- Make sure that each video component is properly connected.
- If the video source is connected to a component video input, you must assign that input to an input selector,

and your TV must be connected to COMPONENT VIDEO OUT terminal.

- If the video source is connected to a composite video input, your TV must be connected to the MONITOR OUT V terminal.
- If the video source is connected to an HDMI input, you must assign that input to an input selector, and your TV must be connected to the HDMI output(s).
- Make sure the switching of input screens is proper at the monitor side such as a TV.
- Images of a component connected to the composite video input terminal can not be output by converting on the monitor of a TV or other components connected to COMPONENT VIDEO OUT terminal.
- When the TV image is blurry or unclear, power code or connection cables of the unit may have interfered. In that case, keep distance between TV antenna cable and cables of the unit.

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

- Reliable operation with an HDMI-to-DVI adapter is not guaranteed. In addition, video signals from a PC are not guaranteed.

■ The on-screen menus do not appear

- On your TV, make sure that the video input to which this unit is connected is selected.
- When the AV receiver is not connected to a TV via HDMI OUT, on-screen menus are not displayed.

Tuner

■ Reception is noisy, FM stereo reception is noisy, or the "FM STEREO" indicator does not light

- 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.
- If nothing improves the reception, install an outdoor antenna.

Remote Controller

■ The remote controller does not work

- Before operating this unit using remote controller, be sure to press RCV.
- 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, the remote controller may not work reliably when the doors are closed.
- Make sure you have selected the correct remote controller mode.
- When using the remote controller to control other manufacturers' AV components, some buttons may not work as expected.
- Make sure you have entered the correct remote control code.
- Make sure to set the same ID on both the unit and remote controller.

■ 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 (RCA) cable as well. (Connecting only an RI cable is not enough.)
- Make sure you have selected the correct remote controller mode.
- Make sure that the input display is correctly set.
- Input the RI remote control code again.
- When the RI remote control code is input, point the remote controller at remote control sensor of the unit.

■ Can not operate Onkyo components (ones without RI connection) and components of other makers

- Make sure that the connection with other components is correct.
- Input a correct remote control code again. If there are several codes, try each code.
- Make sure that the remote controller mode is correctly selected.
- Operate the remote controller by setting toward the light receiving section of each component.
- Some components may not start the operation.

RI Dock for iPod/iPhone

■ There is no sound

- Make sure your iPod/iPhone is actually playing.
- Make sure your iPod/iPhone is properly inserted in the 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.
- Try resetting your iPod/iPhone.

■ There is no video

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

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

- 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.
- The iPod/iPhone can not 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.

- Try resetting your iPod/iPhone.
- Depending on your iPod/iPhone model and generation, some buttons may not work as expected.

■ **The unit unexpectedly selects my 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.

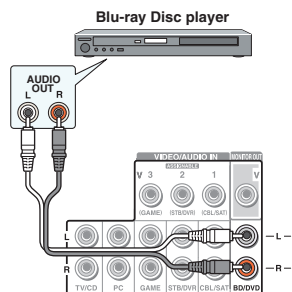
■ **iPod/iPhone does not work properly**

- Try reconnecting your iPod/iPhone.

Zone Function

■ **There is no sound**

- Audio signal from input selector can be output for Zone function. Connect audio components using the analog audio (RCA) cable as audio signal from the components connected using HDMI or digital audio cable cannot be output for one function. Note that connected components may have to be setup to output analog audio signal.



Bluetooth

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

- Depending on the characteristics or specifications of your Bluetooth-enabled device, playback on the unit is not guaranteed.

- When the audio volume of your Bluetooth-enabled device is set low, the playback of audio may be unavailable. Volume up the Bluetooth-enabled device.
- Depending on the Bluetooth-enabled device, Send/Receive selector switch may be provided. Select Send mode.
- Even when a music file is playing on the Bluetooth-enabled device, the sound can not be played if the connection is not established with the unit. Make sure that the unit is connected (this unit is selected as the sound output destination).

■ **Sound is interrupted**

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

■ **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.

■ **Can not connect with this unit**

- 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 device does not support the profiles required for 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 function.
- Near devices 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 the AV receiver.

■ **Bluetooth connection can not be built**

- When building a Bluetooth connection between this unit and your Bluetooth-enabled device for the first time, if the connection fails, clear "Pairing Info" in "12. Bluetooth", turn off and then on again your Bluetooth-enabled device to clear the device name, and build the connection again.
- If there is a metallic object near the unit, Bluetooth connection may not be possible as the metal can effect on the radio wave.

■ **The Bluetooth Auto Reconnect function does not work.**

- This function may not work depending on your Bluetooth-enabled device. In this case, play on your Bluetooth-enabled device after pairing with this unit.

USB Function

■ **USB storage device is not displayed**

- Make sure that USB storage device and USB cable are securely plugged to the USB port of this AV receiver.
- Remove the USB storage device from the AV receiver once, and then try re-connecting.
- Operability of a USB bus powered hard disk that receives power from the unit via the USB port is not guaranteed.
- Depending on the type of format, the playback may not be performed normally. Check the type of the file formats that is supported.
- USB storage device with security functions may not be played.

Others

■ **Power consumption in standby mode**

- In the following cases, the power consumption in standby mode may reach up to a maximum of 55 W:
 - When "HDMI CEC (RIHD)" is set to "On". (Depending on the TV status, the AV receiver will enter normal standby mode.)
 - When "HDMI Through" is set to other than "Off".

■ **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.

■ **How do I change the language of a multiplex source**

- Select "Main" or "Sub" for "Input Ch(Mux)" in "8. Audio Adjust".

■ **The RI functions do not work**

- To use RI, you must make an RI connection and an analog audio (RCA) cable between the component and AV receiver, even if they are connected digitally.
- While Zone 2 is selected, the RI functions do not work.

■ **The functions System On/Auto Power On and Direct Change do not work for components connected via RI**

- These functions do not work when Zone 2 is turned on.

■ **The display is dark**

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

■ **The following settings can be made for the composite video inputs**

- While holding down the input selector button to configure, press HOME once at a time until "Video ATT: On" is appeared on the display. To resume the setup, repeat the above described step until "Video ATT: Off" is appeared on the display.

This setting is possible for input selectors assigned with one of the video inputs "VIDEO 1" to "VIDEO 3" in "3. Composite". If you have a game console connected to the composite video input, and the picture is not very clear, you can attenuate the gain.

Video ATT: Off: (default).

Video ATT: On: (Gain is reduced by 2 dB.)

■ **If the picture on your TV/monitor connected to the HDMI output(s) is unstable, try turning the DeepColor function off.**

- To turn off the DeepColor function, press STB/DVR and \odot ON/STANDBY on the AV receiver simultaneously. While holding down STB/DVR, press \odot ON/STANDBY repeatedly until "Deep Color:Off" is appeared on the display. To reactivate the DeepColor function, repeat the above described step until "Deep Color:On" is appeared on the display.

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.

Before disconnecting the power cord from the wall outlet, set the AV receiver to standby.

Reference Information

Linked Operation with CEC-compatible Components

The AV receiver is compatible with the following components (as of January 2014).

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)

Models other than those mentioned above may have some interoperability if compatible with CEC, which is part of the HDMI Standard, but operation can not be guaranteed.

Note: For RI functions to work properly, do not connect more RIHD-compatible components than the quantities specified below, to the HDMI jack. RI 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.

Note:

- 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 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/CD".
- 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.

The HDMI on this unit supports the following functions: Audio Return Channel, 3D, x.v.Color, DeepColor, Lip Sync, 4K (Passthrough), DTS-HD Master Audio, DTS-HD High Resolution Audio, Dolby TrueHD, Dolby Digital Plus, DSD and Multichannel PCM.

Supported Audio Formats of this 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 (DSD, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD High Resolution Audio, DTS-HD Master Audio)

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

About Copyright Protection:

The AV receiver supports Revision 1.4 of the HDCP (High-bandwidth Digital Content Protection) (*2), a copy-protection system for digital video signals. Other components connected to the AV receiver via HDMI 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): Led 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.

Note:

- 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.

USB Storage Device Requirements

- USB mass storage device class (but not always guaranteed).
- FAT16 or FAT32 file system format.
- If the USB storage device has been partitioned, each section will be treated as an independent device.
- Up to 20,000 folders can be displayed, and folders may be nested up to 16 levels deep.
- USB hubs and USB storage devices with hub functions are not supported. Do not connect these devices to the unit.

Note:

- If the media you connect is not supported, the message "No Storage" will be displayed.
- Sound files that are protected by copyright can not be played.
- When the USB audio player and this unit are connected, the audio player screen and the screen of the unit may be different. In addition, control functions of the audio player (classifying and sorting music files and adding information, etc.) are not available on this unit.
- Do not connect a PC to the USB port of the unit. Inputting sound to the USB port of the unit from a PC is not possible.
- Media inserted to the USB card reader may not be available in this function.
- Some USB storage devices and its contents may require some time to be read.
- Depending on the USB storage device, proper reading of the contents and proper supply of the power supply may not be possible.
- Onkyo accepts no responsibility whatsoever for the loss or damage to data stored on a USB storage device when that device is used with this unit. We recommend that you back up your important music files beforehand.
- Performance of the hard disk that receive power from the USB port of the unit is not guaranteed.
- If you connect a USB hard disk drive to the USB port of the unit, we recommend that you use its AC adapter to power it.
- When an audio player that are operated with batteries is used, make sure that the batteries have enough remaining power.
- USB devices with security functions can not be played.

Supported Audio Formats for USB Playback

- For server playback and playback from a USB storage device, this unit supports the following music file formats.
 - Variable bit-rate (VBR) files are supported. However, playback times may not be displayed correctly.
 - This unit supports the gapless playback of the USB storage device in the following conditions. When WAV, FLAC and Apple Lossless files are continuously played back with the same format, sampling frequency, channels and quantization bit rate.
- **MP3 (.mp3 or .MP3)**
 - Supported formats: MPEG-1/MPEG-2 Audio Layer 3
 - Supported sampling rates: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
 - Supported bitrates: Between 8 kbps and 320 kbps and VBR.

- **WAV (.wav or .WAV)**

WAV files contain uncompressed PCM digital audio.

- Supported sampling rates: 8 kHz, 11.025 kHz, 16 kHz, 22.05 kHz, 32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

- **FLAC (.flac or .FLAC)**

FLAC is a file format for lossless audio data compression.

- Supported sampling rates: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz, 176.4 kHz and 192 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

- **Ogg Vorbis (.ogg or .OGG)**

- Supported sampling rates: 8 kHz, 11.025 kHz, 16 kHz, 22.05 kHz, 32 kHz, 44.1 kHz, 48 kHz
- Supported bitrates: Between 32 kbps and 500 kbps and VBR.
- Incompatible files can not be played.

- **Apple Lossless (.m4a/.mp4/.M4A/.MP4)**

- Supported sampling rates: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz
- Quantization bit: 16 bit, 24 bit

- **DSD (.dsf or .DSF)**

- Supported sampling rates: 2.8224 MHz

Remote Control Code List

■ Television (A to E)

A.R. Systems	10037, 10556
Accent	10037
Acoustic Solutions	11667, 11585, 11037
Action	10650
Addison	10653, 11150
AEG	11037
Aiko	10037
Aim	10037
Akai	10037, 12676, 10208, 10714, 10556, 12414, 13183, 10178
Akiba	10037
Akito	10037
Akura	10037, 10714, 11667, 11585, 10171, 11037
Alba	11037, 12676, 10037, 10714, 11585
Alien	11037
Allstar	10037
Amstrad	10037, 10171, 11037
Anam	10037, 10650
Andersson	11585, 12676
Anitech	10037
Ansonic	10037
AOC	11365, 12769, 10178, 10625, 11150
Apex Digital	12397
Ardem	10714, 10037
Arena	10037
Ario	12397

Aristona	10556, 10037
ART	11037
Art Mito	11585
Asberg	10037
Astra	10037
ATD	10698
Atlantic	10037
Audiosonic	10714, 10037
Audioworld	10698
Autovox	12676
Aventura	10171
Axxon	10714
Baird	10208
Barco	10556
Base	10698
Basic Line	10037, 11037, 10556
Baur	10037, 10195
Beaumarck	10178
Beijing	10208
Beko	10714, 10037
Bell & Howell	10017
Belson	10698
Belstar	11037
Beon	10037
Berthen	10556
Bestar	10037
Bexa	12493
BGH	12414
Black Diamond	11037
Blaupunkt	10195
Blue Sky	10714, 10037, 11037, 10556, 10625
BPL	10208, 10037
Brandt	10625, 11585, 10714
Brinkmann	10037

Brionvega	10037
Britania	12414
Bush	11037, 10037, 10714, 12676, 11667, 10208, 10556, 10698, 11585
Byd:sign	12209
Camper	10037
Carad	11037
Carena	10037
Carrefour	10037
Cascade	10037
Casio	10037
Cathay	10037
CCE	13782, 10037
Celcus	12676, 11585
Celebrity	10000
Centrum	11037
Centurion	10037
Changhong	13434, 12769, 10508
Chimei	12769
Chun Yun	10000, 11150
Chung Hsin	11150
Clarivox	10037
Clatronic	10037, 10714
Clayton	11037
Coby	13478
Commercial Solutions	11447
Condor	10037
Conrowa	10698
Contec	10037
Cosmel	10037
CPTEC	10625
Crown	10037, 10714, 10208, 11037
Crypton	11667

Curtis	12397
Cyberpix	11667
D-Vision	10037, 10556
Daewoo	10037, 10556, 10178, 11150
Dansai	10037, 10208
Dantax	11037, 10714, 12676
Datsura	10208
Dawa	10037
Daytron	10037
De Graaf	10208
Decca	10037
Denver	10037
Desmet	10037
Diamant	10037
Diamond	10698
Digatron	10037
Digihome	11667, 12676
Digiline	10037
Digisonic	11826
Digitor	10698, 10037
Dixi	10037
Drean	10037
DSE	10698
Dual	11667, 10037, 11037, 11585, 12676, 10714
Dumont	10017
Durabrand	10171, 10178, 10714, 11037
Dux	10037
DX Antenna	13817
Dynatron	10037
Dynex	12049
E.S.C.	10037
ECE	10037
Elbe	10037, 10556

Electroband	10000
Electrograph	11755
Elektra	10017
Elfunk	11037
ELG	10037
Elin	10037
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James Cable Partners	01376, 01877, 01982
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Jayroc Cablevision	01376, 01877, 01982
Jefferson County Cable	01376, 01877, 01982
Jefferson Telecom	01376, 01877, 01982
Jeffersonville Cable TV	01376, 01877, 01982
Jet Broadband	01376
Johnston County Cable	01376, 01877, 01982
Journeyvision Cable	01376, 01877, 01982
JP PTT	01615

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K-Communications	01376, 01877, 01982
Kabel Deutschland	02165
Kalida Telephone	01376, 01877, 01982
Kalona Cooperative Telephone	02586
Kaplan Telephone	02586
Karban TV Systems	01376, 01877, 01982
KAS Cable TV	01376, 01877, 01982
Kaslo Cable	01376, 01877, 01982
KBS Cable TV	01376
Keene Valley Video	01376, 01877, 01982
Kelley Communications	01376, 01877, 01982
Kennebec Telephone	01376, 01877, 01982
Kennedy Cablevision	01376, 01877, 01982

Kentucky Ridge Country Communications	01376, 01877, 01982
Keta Cable	01376, 01877, 01982
KFW Communications	01376, 01877, 01982
Kincardine Cable TV	01376
Kings Bay Communications	01376, 01877, 01982
Kiss	02132
KLiP	01376, 01877, 01982
KM Telecom	01481
Knology	01877, 01376
KoolConnect	01481
Koomiut Cooperative	01376, 01877, 01982
KPN	02952, 02437
Kraus Electronic Systems	01376, 01877, 01982
Kudzu Cable TV	01376, 01877, 01982
Kugluktuk Cooperative	01376, 01877, 01982
Kuhn Communications	01376, 01877
L & J Cable	01376, 01877, 01982
La Harpe Communications	01376, 01877, 01982
La Harpe Video and Data Services	01376, 01877
Lafayette Utilities System	01376
Laguna Serrano Cable	01376, 01877, 01982
Lake Cable	01376, 01877, 01982
Lakeland Cablevision	01376, 01481, 01877, 01982, 01998
Lakeland Telecom	01481, 01998, 03028

Lakeview Cable	01376, 01877, 01982
Lamont Digital Systems	01376, 01877, 01982
Lang	01376, 01877, 01982
Laurel Highland	01376, 01877, 01982, 02187
LB Cable	01376, 01877, 01982
Lehigh Valley Cooperative Telephone	01376, 01877, 01982
Lemonweir Valley Telephone	01481, 01998, 03028
Lexcom Cable Services	01376, 01877, 01982
Liberty Cablevision	01376
Liberty Communications	01481, 02586
Limestone Cablevision	01376, 01877, 01982
Lincoln Cable Television	01376
Lincolntown	01376
Lindsey Communications	01376, 01877, 01982
LISCO	01376, 01877, 01982
Litestream Holdings	01376, 01877, 01982
LNE Telco	01376, 01877, 01982
Localtel	01376, 01877, 01982
Lockesburg Cablevision	01376, 01877
Lodgenet Entertainment	01376, 01877, 01982
Lone Pine Cable TV	01376, 01877, 01982
Longview Communications	01376, 01877, 01982
Lonsdale Video Ventures	01481, 01998, 03028

Loretel Cablevision	01376, 01877, 01982
Loretel Systems	01376
Lost Island Cable TV	01376, 01877, 01982
Lumos Networks	01998, 03028
Lycom Communications	01376, 01877, 01982
M-Tek Systems	01376, 01877, 01982
M.T.C. Cable	01376, 01877, 01982
Maddock Cable TV	01376, 01877, 01982
Madison Communications	01376, 01982
Madison County Cable	01376, 01877, 01982
Magio Sat	02132
Magnet	01615
Mahaska Communications	01376, 01877, 01982
Mainstreet Communications	01376, 01877, 01982
Maitland Cable TV	01376, 01877, 01982
Mallard Cable	01376, 01877, 01982
Manawa Telecom	02586
Manning Municipal Utilities	01376, 01877, 01982
Manti Telecom	01481, 01998, 03028
Marco Island Cable	01376, 01877, 01982
Markdale Cable TV	01376
Marne & Elk Horn Telephone	01376, 01877, 01982
Marquette-Adams Telephone	01376, 01877, 01982
Martelle Communications	01376, 01877, 01982
Cooperative	
Mascon Cable	01376

Masset-Haida TV Society	01376, 01877, 01982
Massillon Cable	01376
Matanuska Telephone Association	01481, 02586
Matrix Cablevision	01376, 01877, 01982
Mattawamkeag Cablevision	01376, 01877, 01982
McDonough Telephone Cooperative	01376, 01877, 01982
McKee TV Enterprises	01376, 01877, 01982
McNabb Cable	01376, 01877, 01982
MCV Broadband	01877
Media One	01376, 01877, 01982
Mediacom	01376, 01877, 01982
Mediapolis Telephone	01376, 01982
Mediastream	01376
Megacable	01376
Meo	02401
Merrimac Communications	01376, 01877, 01982
Metlakatla Indian Community TV	01376, 01877
MetroCast Cablevision	01376, 01982, 01877
MetroNet	01877, 0858
Metropolitan Cable	01376, 01877, 01982
MGS Cablevision	01376, 01877, 01982
MHTC	01481, 01998, 03028
Mi-Connection	01877
Microwave Satellite Technologies	01481, 01998, 03028
Mid Century Telecom	01481, 01615
Mid Missouri Broadband & Cable	01376, 01877, 01982

Mid Missouri Telephone	01376, 01877, 01982
Mid-Coast Cablevision	01376, 01877, 01982
Mid-Hudson Cable	01376
Mid-Rivers Communications	01376
Mid-South Cablevision	01376, 01877, 01982
Midamerican Cable Systems	01376, 01877, 01982
Midcontinent Communications	01376, 01877, 01982
Midstate Communications	01376, 01877, 01982
Midtel Cable TV	01376, 01877, 01982
Milcom Cable	01376, 01877, 01982
Milford Cable TV	01376, 01877, 01982
Milk River Cable Club	01376, 01877, 01982
Millennium Telecom	01481, 01998, 03028
Millheim TV Transmission	01376, 01877, 01982
Millington CATV	01376, 01877, 01982
Minburn Communications	01481, 01998, 03028
Minerva Valley Cable	01376, 01877, 01982
MINET	01877
MLGC Cable TV	01376, 01877, 01982
MM&G Enterprises	01481, 01998, 03028
MMDS Wireless East	01376, 01877, 01982
Mobius Communications	01376, 01877, 01982
Monroe Cablevision	01376, 01877, 01982

Monroe Utilities	01376, 01877, 01982
Montana Opticom	01376, 01877, 01982
Moosehead Enterprises	01376, 01877, 01982
Morris Broadband	01376
Morristown Utility Systems	01877
Mosaic Telecom	01376, 02586
Motorola	01376, 02437, 02378, 01998, 00858, 02952, 01562, 01982, 02401
Moultrie Telecommunications	01376, 01877, 01982
Mountain Shadows Cable TV	01376, 01877, 01982
Mountain Telecommunications	01376, 01877, 01982
Mountain Zone TV	01376, 01877, 01982
Movistar	03288
Moxi	02187
Mt. Baker Cable	01376, 01877, 01982
MTC	01376, 01877, 01982
MTC Technologies	01376, 01982
MTS	01998
Multiband Cable	01376, 01877, 01982
Municipality Cable Operator	01376, 01877, 01982
Murphy Cable	01376, 01877
Murray Electric System	01376, 01877, 01982
Muscatine Power & Water	01376
N.W. Communications	01376, 01877, 01982
National Cable	01376, 01877, 01982

Naujat Cooperative	01376, 01877, 01982
NDTC	01481, 01998, 03028
Nebraska Central Telecom	01376, 01877, 01982
NEIT	01376, 01877, 01982
Nelson County Cablevision	01376, 01877, 01982
Nelsonville TV Cable	01376, 01877, 01982
Nemont Communications	01376, 01877
NET	01883
New Century Communication	01376, 01877, 01982
New Day Broadband	01376, 01877, 01982
New England Cable	01376, 01877, 01982
New Jersey Broadband	01376, 01877, 01982
New Knoxville Cable Systems	01376, 01877, 01982
New North Networks	01376, 01877, 01982
New Paris Quality Cablevision	01376, 01877, 01982
New Visions Communications	01376, 01877, 01982
New Windsor Cable TV	01376, 01877, 01982
Newcastle Cablevision	01376, 01877, 01982
Newpath Communications	01877, 01982
NewWave Communications	01376, 02187
NexHorizon Communications	01376, 01877, 01982
Nexicom Communications	01376, 01877, 01982

Nextgen Communications	01376, 01877
Niagara Community TV Cooperative	01376, 01877, 01982
Nimpkish Valley Communcations	01376, 01877, 01982
Nittany Media	01376
Nor-Cal Cable Systems	01376, 01877, 01982
Nortex Communications	01376, 01877, 01982
North American Communications	01376, 01877, 01982
North Central Telephone	02345
North Crossroads Communications	01376, 01877, 01982
North Dakota Telephone	02586
North Star Cablevision	01376, 01877, 01982
North State Communications	00858
North Texas Broadband	01376, 01877, 01982
North Yellowstone Cable TV	01376, 01877, 01982
Northern Cable Holdings	01376, 01877, 01982
Northern Lakes Cable TV	01376, 01877, 01982
Northland Communications	01376
Northside TV	01376, 01877, 01982
Northstar Broadband	01376, 01982
Northwest Communications	01376, 01877, 01982
Northwest Community	01877
Northwest Iowa Telephone	01877
Northwest Telephone Cooperative	01376, 01877, 01982
NorthwesTel	01376

Norvado	02586
Norwood Light Broadband	01376
Nova Cable Management	01376, 01877, 01982
Nova Cablevision	01376, 01877, 01982
Novus	01376, 01877
NPG Cable	01376
Nsight	02345, 02586
NTC Cable Services	01376, 01877, 01982
nTelos	01998
NTL	01060
NTS Communications	01376, 01877, 01982
NU Telecom	01998, 03028
NuLink	01877, 01376, 01982
Numericable	02436
Nushagak Cooperative	01376, 01877, 01982

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Oak Hill Cablevision	01376, 01877, 01982
Oasis Communications	01376, 01877, 01982
Oi TV	03452, 03454
Omni III Cable TV	01376, 01877, 01982
Oneida Cablevision	01376, 01877, 01982
OneLink	01376, 01877, 01982
OneSource Communications	01376
Ono	01562
Open IPTV	01615
Opp Cablevision	01376, 01877, 01982

Optimum	01877
Optimus Clix	02437
Optus	01060
Orange	02407
Orbital Communications	01376
Oregon Cable Group	01376, 01877, 01982
Orion Cablesystems	01376, 01877, 01982
OTEC Communications	02586
Our Cable	01376, 01877, 01982
Overton County Cable	01376, 01877, 01982
Oxford Networks	01376, 01877, 01982
Pace	01877, 01060, 02620, 01982, 01582, 01376, 01883, 02401, 03454
Packerland Broadband	01376
Paleajook Cooperative	01376, 01877, 01982
Palmer Mutual Telephone	01376, 01877, 01982
Palmetto Rural Telephone Cooperative	00858
Panasonic	01982
Pangnirtung Cooperative	01376, 01877, 01982
Panhandle Telephone	01376
Panora Telecommunications	01481
Paragould Light & Water	01376, 01877, 01982
Parish Communications	01376, 01877, 01982
Park Region Mutual Telephone	01481, 01998, 02345, 03028
Park TV & Electronics	01376, 01877, 01982

Partner Communications	01376, 01877, 01982
Pathway Com-Tel	01376, 01877, 01982
Patterson Cable TV	01376, 01877, 01982
Paul Bunyan Communications	02586
PBT Cable Services	01376, 01877, 01982
PC One Cable	01376, 01877, 01982
PDQ Cable TV	01376, 01877, 01982
PEC Cablevision	01376, 01877, 01982
Pegasus Communications	01376, 01877, 01982
Peoples CATV	01376, 01877, 01982
Persona Communications	01376, 01877, 01982
Philippi Communications	01376, 01877, 01982
Philips	01582, 02294
Phoenix	01376
Phoenix Cable	01376, 01877, 01982
Phonoscope Communications	01376, 01877, 01982
Pickwick Cablevision	01376, 01877, 01982
Piedmont Cable Services	01376, 01877, 01982
Pine Bluff Cable	01376
Pine Island Telephone	01481, 01998, 03028
Pine River Cable	01376, 01877, 01982
Pine Tree Cablevision	01376, 01877, 01982
Pineland Telephone Cooperative	01481, 01615, 01898, 02586

Pinpoint Communications	01376, 01877, 01982
Pioneer	01877
Pioneer Cable	01376, 01877, 01982
Pioneer Communications	01376, 01877, 01982
Pioneer Long Distance	01898, 01615
Pitcairn Community Cable TV	01376, 01877, 01982
Plantation Cable System	01376, 01877, 01982
Pleasant Vision	01376, 01877, 01982
Polar Communications	02586
Polaris Cable	01376, 01877, 01982
Ponderosa Cablevision	01376, 01877, 01982
Poplar Bluff Municipal Utilities	01481, 01998, 03028
Portal Cablevision	01376, 01877, 01982
Portugal Telecom	02401
Post Cablevision	01376, 01877, 01982
Premier Communications	01376
Premiere	02620
Price County Telephone	01481, 01998, 03028
Prime Cable Corporation	01376, 01877, 01982
Prime Time Cable	01376, 01877, 01982
Princetown Cable	01376, 01877, 01982
Private Cable Systems	01376, 01877, 01982
Private Network Cable Systems	01376, 01877, 01982
Project Mutual Telephone	01481, 01998, 03028

Project Services	01376, 01877, 01982
PSC	01481, 01998, 03028
PTCI	01376
PVT Networks	01376, 01877, 01982
Quality Cable TV	01376, 01877, 01982
Quality One Technologies	01481, 01998, 03028
Quinter Cable	01376, 01877, 01982
Qwerty.TV	01898
R & R Cable	01376
Raftview Communications	01376, 01877, 01982
Rainbow Cable	01376, 01877, 01982
Rainbow Communications	01376, 01877, 01982
Rainbow Lake Cable TV	01376, 01877, 01982
Rainier Connect	01376, 01877, 01982
Ramapo Cable	01376, 01877, 01982
Rancho Murieta Association	01376
Randolph Telephone	02586
Rapid Communications	01376, 01877, 01982
RC Communications	01376, 01877, 01982
RCN	01376
Reach Broadband	01376, 01877, 01982
Readlyn Telephone	02586
Rebeltec Communications	01376, 01877, 01982
Red River Cable	01376, 01877, 01982
Reds Cable TV	01376, 01877, 01982

Regional Cable TV	01376, 01877, 01982
Reinbeck Telecommunications	01376, 01877, 01982
Reservation Telephone	01376, 01998, 02345
Reserve Long Distance	01376, 01877, 01982
Resnet Communications	01376, 01877, 01982
Resort Cable	01376
Reveille Broadband	01376, 01877, 01982
Reynolds Cable	01376, 01877, 01982
RGA Cable	01376, 01877, 01982
Ridgewood Cablevision	01376, 01877, 01982
Ringgold Telephone	01376, 01877, 01982
Rio Virgin Telephone	01376, 01877, 01982
Riondel Community Cable Society	01376, 01877, 01982
Ripley Video Cable	01376, 01877, 01982
Ritter Cable	01376, 01877, 01982
River Road Cable	01376, 01877, 01982
River Valley Cable TV	01376, 01877, 01982
River Valley Telecommunications	01481, 01998, 03028
Riverside Cablevision	01376, 01877, 01982
Riviera Cable TV	01376, 01877, 01982
Robins Cable TV	01376, 01877, 01982
Rock Port Cablevision	01376, 01877, 01982

Rocky Mountain Cable Systems	01376, 01877, 01982
Rogers Roome Telecommunications	01877, 01376 01376, 01877, 01982
Royal Telephone	01376, 01877, 01982
RTC	01376, 01877, 01982
RTEC Communications	01376, 01877, 01982
Runestone Telcom	01376, 01877, 01982
Rural Route Video	01376, 01877, 01982
Rural Telephone Company	01376
RuralWest	01376, 01877, 01982
Russellville Electric Plant Board	02586
S & K TV Systems	01376, 01877, 01982
S & T Communications	01376, 01877, 01982
S-GO Video	01877, 01982
S.Bryer Cable TV	01376, 01877, 01982
Sagem	02407, 02436, 03288
Sagemcom	02407, 02436, 03007
Sallisaw Municipal Authority	01376, 01877, 01982
Samsung	02407, 02015, 01877, 03477, 01060, 01987, 02589, 03265
San Bruno Municipal Cable TV	01376, 01877, 01982
San Carlos Cablevision	01376, 01877, 01982
San Juan Cable	01376, 01877, 01982

San Simeon Community Cable	01376, 01877, 01982
Santel Comm Cooperative	01376, 01877, 01982
Sasktel	01998
Satellite Cable Services	01376, 01877, 01982
Satview Broadband	01376, 01877, 01982
Saugeen Telecable	01376, 01877, 01982
Savage Communications	01376, 01877, 01982
Sayward Valley Communications	01376, 01877, 01982
Schindler Cable TV	01376, 01877, 01982
SCI Cable	01376, 01877, 01982
Scientific Atlanta	01877, 01982, 00858, 01987, 02401, 02436, 02345, 03028
Scio Cablevision	01376, 01877, 01982
Scott Telecom And Electronics	01376, 01877, 01982
Scottsboro Cable TV	01376, 01877, 01982
Sea Island	01877
Seaside Cable TV	01376, 01877, 01982
Seaview Communications	01376, 01877, 01982
SecureVision	01376, 01877, 01982
Semo Communications	01376, 01877, 01982
Senior TV	01376, 01877, 01982
Service Electric	01376, 01877, 01982
Service One Cable	01376, 01877, 01982

Shannon Vision	01376, 01877, 01982
Shaw	01376, 01877, 02187
Shawano Municipal Utilities	01376, 01877, 01982
Shellsburg Cablevision	01376, 01877, 01982
Shen-Heights TV	01376, 01877, 01982
Shenandoah Cable	01376, 01877, 01982
Shenandoah Telecommunications	01376, 01877, 01982
Shentel	01376, 01877, 01982
Sherburne Cable	01376, 01877, 01982
Sherman Cablevision	01376, 01877, 01982
Shrewsbury Electric & Cable	01376, 01877
Silver Star Communications	01481, 01998, 03028
Simpson Country Cable TV	01376, 01877, 01982
SingTel	01998
Siskiyou Cablevision	01376, 01877, 01982
Sister Lakes Cable	01376, 01877, 01982
Sjoberg's Cable TV	01376
Skisat	01376, 01877, 01982
SKT	01376, 01877, 01982
SKY	02620
Sky Angel	01376, 01877, 01982
Sky Cablevision	01376, 01877, 01982
SKY Deutschland	02620
Skyline Cable	02586

SkyPix	01481, 01998, 03028
Sleepy Eye Telephone	02345
Small Town Cable	01376, 01877, 01982
Smile Content	02437
Smithville	02586
Sogetel	01998
Somerfield Cable TV	01376, 01877, 01982
Source Cable	01376
South Benton Cablevision	01376, 01877, 01982
South Central Communications	01376, 01877, 01982
South Holt Cablevision	01376, 01877, 01982
South Slope Communications	01376, 01877, 01982
Southeast Cable TV	01376, 01877, 01982
Southern Cayuga County Cable	01376, 01877, 01982
Southern Coastal Cable	01376, 01877, 01982
Southern Kansas Telephone	01376
Southern Plains Cable	01376, 01877, 01982
Southern Vermont Cable	01376, 01982
Southey Cable	01376, 01877, 01982
Southside TV	01376, 01877, 01982
Southwest MN Broadband	01376, 01877, 01982
Southwestern Bell Video Services	01376, 01877, 01982
Spanish Fork	01376, 01877, 01982
Spencer Municipal Utilities	01376, 01877, 01982

Spillway Cablevision	01376, 01877, 01982
Spirit Broadband	01376, 01877, 01982
Spring Creek Cable	01376, 01877, 01982
Springcom	01376, 01877, 01982
Springfield Cablevision	01376, 01877, 01982
Springville Cable	01376, 01877, 01982
St. George Island Cable	01376, 01877, 01982
St. John Cable	01376, 01877, 01982
Stanley Cablevision	01376, 01877, 01982
Stanton Telecom	01376, 01877, 01982
Star Cablevision	01376, 01877, 01982
Starkville Cablevision	01376, 01877, 01982
Starlight Communications	01376, 01877, 01982
Starview Cable of Delaware	01376, 01877, 01982
Starvision	01376, 01877, 01982
Starwest	01376, 01877, 01982
Stellar Communications	01376, 01877, 01982
Stellar Private Cable Systems	01376, 01877, 01982
Stofa	02015
Stowe Cablevision	01376, 01877, 01982
Strategic Technologies	01376, 01877, 01982
Stubbs Communications	01376, 01877, 01982
Suddenlink	01877, 01376

Summit Broadband	01376, 01877, 01982
Summit Communications	01376, 01877, 01982
Summer Cable TV	01376, 01877, 01982
Sun Country Cable	01376
Sunrise Communications	01376, 01877, 01982
Supercanal	01376
Superior Cable & Data	01376, 01877, 01982
Supervision Cable TV	01376, 01877, 01982
SureWest	01481, 01998, 02586
Surry Telephone	02586
SWAT Cooperative	01481, 01998, 03028
Sweetwater Cable TV	01376, 01877, 01982
Swisher Telephone	02345

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Taloga Cable	01376, 01877, 01982
TAT Cablevision	01376, 01877, 01982
Tbaytel	03028
TCSI Huntsville	01376, 01877, 01982
TCT	01376, 01877, 01982
TDS	01376, 01877, 01982
TDS Telecom	03028
Technicolor	01982
Tekstar Cablevision	01376, 01877, 01982

Tel-Star Cablevision	01376, 01877, 01982
Tele-Media	01376, 01877, 01982
Tele-Services	01376, 01877, 01982
Tele2	00660
Telecentro	01376
Telecom Cable	01376, 01877, 01982
Teledistribution Amos Telefonica	01376 03288, 03028
Telenet	01920, 03477
Telepak Networks	01376, 01877, 01982
TelePartners	01376, 01877, 01982
Telerent Leasing Corporation	01376, 01877, 01982
Telestar Systems	01376, 01877, 01982
Telewest	01987
Telmex	01376
Telsat Systems	01376, 01877, 01982
Telus	03028
Templeton Telephone	01376, 01877, 01982
TeNeT	01898
Tesco Cable TV	01376, 01877, 01982
Texas Mid-Gulf Cablevision	01376
Thames Valley Communications	01376, 01877, 01982
The Community Agency	01376
The Town of Mountain Village Cable	01376, 01877, 01982
Thomson	01582, 01982, 03007, 02407
Three River Digital Cable	01376, 01877, 01982

Throckmorton Cablevision	01376, 01877, 01982
TiftNet	01376, 01877, 01982
Time Warner	01877, 01376, 02187
Tip-Top Communications	01376, 01877, 01982
TiVo	03265
Tobacco Valley Communications	01376, 01877, 01982
Tongue River Cable TV	01376, 01877, 01982
Total Cable Service	01376
Touchet Valley Television	01376, 01877, 01982
TP	02407
Trans-Video	01376, 01877, 01982
Trappers Loop Communications	01376, 01877, 01982
Trenton Cable	01376, 01877, 01982
Tri-County Cable TV	01376
TrioTel Communications	01376, 01877, 01982
Troy Cablevision	01376
Trust Cable TV	01376, 01877, 01982
TruVista	01376, 01877, 01982
Tudjaat Cooperative	01376, 01877, 01982
Tulalip Broadband	01376, 01877, 01982
Tullahoma Utilities	02586
Tulugak Cooperative	01376, 01877, 01982
Turquoise Turtle TV	01376, 01877, 01982
TV Cable	01376
TV Cable Company of Andalusia	01376

TV Cable of Winamac	01376, 01877, 01982
TV Northeast	01481, 01998, 03028
TV Service	01376, 01877, 01982
TVB	01615
TVC	01376, 01877, 01982
TVision	01376, 01877, 01982
TVMAX	01376, 01877, 01982
TVS Cable	01376, 01877, 01982
Twin Valley Communications	02586
Two Creeks Cable	01376, 01877, 01982
Ucluelet Video	01376, 01877, 01982
Uintah Basin Electronic Telecom	01376, 01877, 01982
UMBC	01376, 01877, 01982
Union Telephone	01376, 01877, 01982
Unitah-Strata Networks	01376
United Communications Association	01376
United States Gypsum	01376, 01877, 01982
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Westphalia Broadband	02586
Wilkes Telecommunications	01481, 01998
Yadkin Valley Telecom	02345

■ IPTV PVR Combination

ADB	02437
Altibox	02437
Amino	01615, 01898
AT&T	00858
ATMC	03028
Beeline	03028
Belgacom TV	02132
Bell	01998
Bell Aliant	01998
Bell Fibe TV	01998
Bouygues Telecom	03007
BT	02294
Cabovis	02436

CenturyLink	01998
Cisco	00858, 03028, 02132, 02345, 02378
ClubInternet	02132
Deutsche Telekom	02132
Du	02401
Echostar	03452
Freebox	01976
i-CAN	02437
Innovative Systems	01898
InviTV	02437
Kiss	02132
KPN	02952, 02437
Lumos Networks	01998
Magio Sat	02132
Magnet	01615
Meo	02401
Motorola	02437, 02378, 00858, 01998, 02952, 02401
MTS	01998
Numericable	02436
Oi TV	03452, 03454
Orange	02407
Pace	02401, 03454
Philips	02294
Portugal Telecom	02401
Sagem	02407, 03288
Sagemcom	02436, 02407, 03007
Samsung	02407
Sasktel	01998
Scientific Atlanta	00858, 02345, 02401, 03028
SKY Deutschland	02620
SureWest	01998
T-Home	02132
Telefonica	03028, 03288
Telus	03028
Thomson	03007
Verizon	02378

Vodafone	02401
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■ PVR

DirecTV	20739
Humax	20739
Panasonic	20616
Philips	20739
RCN	20739
ReplayTV	20616
Sonic Blue	20616
Sony	20636
TiVo	20739, 20636

ONKYO

Onkyo Corporation

Kitahama Chuo Bldg, 2-2-22 Kitahama, Chuo-ku, OSAKA 541-0041, JAPAN

<http://www.onkyo.com/>

The Americas

Onkyo U.S.A. Corporation

18 Park Way, Upper Saddle River, N.J. 07458, U.S.A.

For Dealer, Service, Order and all other Business Inquiries:

Tel: 201-785-2600 Fax: 201-785-2650

<http://www.us.onkyo.com/>

For Product Support Team Only:

1-800-229-1687

Europe

Onkyo Europe Electronics GmbH

Liegnitzerstrasse 6, 82194 Groebenzell, GERMANY

Tel: +49-8142-4401-0 Fax: +49-8142-4208-213

<http://www.eu.onkyo.com/>

Onkyo Europe Electronics GmbH (UK Branch)

Meridien House, Ground floor, 69 - 71 Clarendon Road, Watford, Hertfordshire, WD17 1DS, United Kingdom

Tel: +44 (0)8712-00-19-96 Fax: +44 (0)8712-00-19-95

China

Onkyo China Limited (Hong Kong)

Unit 1033, 10/F, Star House, No 3, Salisbury Road, Tsim Sha Tsui Kowloon, Hong Kong.

Tel: 852-2429-3118 Fax: 852-2428-9039

<http://www.hk.onkyo.com/>

Onkyo China PRC (Mainland)

1301, 555 Tower, No.555 West NanJing Road, Jing'an District, Shanghai, China 200041,

Tel: 86-21-52131366 Fax: 86-21-52130396

<http://www.cn.onkyo.com/>

Asia, Oceania, Middle East, Africa

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