YAMAHA

RX-V367

AV Receiver

Owner's Manual

English for North America

CONTENTS

En **2**

INTRODUCTION

Features and capabilities

About this manual

- This manual is printed prior to production. Design and specifications are subject to change in part as a result of improvements, etc. In case of differences between the manual and product, the product has priority.
- "④HDMI1" (example) indicates the name of the parts on the remote control. Refer to the "Part names and functions" (☞ p. 5) for the information about each position of the parts.
- ⁂1 indicates that the reference is in the footnote. Refer to the corresponding numbers on the bottom of the page.
- ☞ indicates the page describing the related information.
- Click on the " ⬛●↵ " at the bottom of the page to display the corresponding page in "Part names and functions."

  ⬛●↵ Front panel
  ⬛●↵ Rear panel
  ⬛●↵ Front panel display
  ⬛●↵ Remote control

Supplied accessories

Check that you received all of the following parts.
- Remote control
- Batteries (AAA, R03, UM-4) x 2
- AM loop antenna
- Indoor FM antenna
- VIDEO AUX input cover

■ Attaching the VIDEO AUX input cover (included)

To protect against dust, attach the supplied VIDEO AUX input cover to the VIDEO AUX jacks when you do not use the jacks. To remove the cover, push the left section of it.

Attach the cover
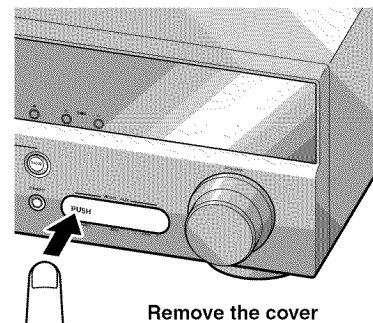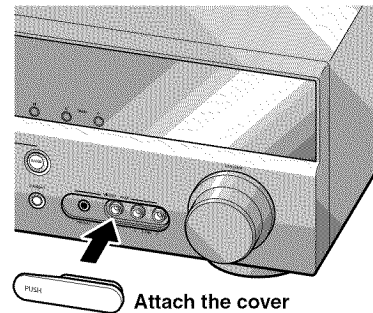
Remove the cover

■ Installing batteries in the remote control

When inserting batteries in the remote control, remove the battery compartment cover from the reverse side of the remote control, and insert two AAA batteries into the battery compartment so that they match with the polarity markings (+ and -).

Battery compartment cover

Battery compartment
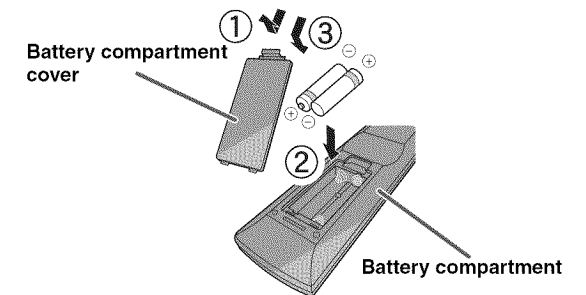
Replace the batteries with new ones if the following symptoms become evident:
- The remote control can only be operated within a narrow range.
- ②TRANSMIT does not light up, or only lights dimly.

NOTE

If there are remote control codes for external components registered to the remote control, removing the batteries for more than two minutes, or leaving exhausted batteries in the remote control, the remote control codes may be cleared. If this should occur, replace the batteries with new ones, and set the remote control codes.

Part names and functions

Front panel

① **⏻ (Power)**
Switches this unit between on and standby modes.

② **INFO**
Changes the information shown on the front panel display (☞p. 7).

③ **MEMORY**
Registers FM/AM stations as preset stations (☞p. 32). ☀1

④ **PRESET ⟨ / ⟩**
Selects an FM/AM preset station (☞p. 32). ☀1

⑤ **FM**
Sets the FM/AM tuner band to FM (☞p. 30). ☀1

⑥ **AM**
Sets the FM/AM tuner band to AM (☞p. 30). ☀1

⑦ **TUNING ⟨⟨ / ⟩⟩**
Changes FM/AM tuner frequencies (☞p. 30). ☀1

⑧ **Front panel display**
Displays information on this unit (☞p. 7).

⑨ **PHONES jack**
For plugging headphones in. Sound effects applied during playback can also be heard through the headphones.

⑩ **INPUT ◁ / ▷**
Selects an input source from which to playback. Press either the left or right key repeatedly to cycle through the input sources in order.

⑪ **SCENE**
Switches the input source and the sound field program with a single button (☞p. 26). Press this key when this unit is in standby mode to switch on the unit.

⑫ **TONE CONTROL**
Adjusts high-frequency/low-frequency output of speakers/headphones (☞p. 25).

⑬ **PROGRAM ◁ / ▷**
Switches between the sound field effect (sound field program) you are using and the surround sound decoder (☞p. 26). Press either the left or right key repeatedly to cycle through the input sources in order.

⑭ **STRAIGHT**
Changes a sound field program to straight decoding mode (☞p. 27).

⑮ **VIDEO AUX jacks**
For connecting video cameras, game consoles, and portable music players to this unit temporarily.
Attach the supplied VIDEO AUX input cover when not using this jack.

⑯ **VOLUME**
Adjusts the volume level.
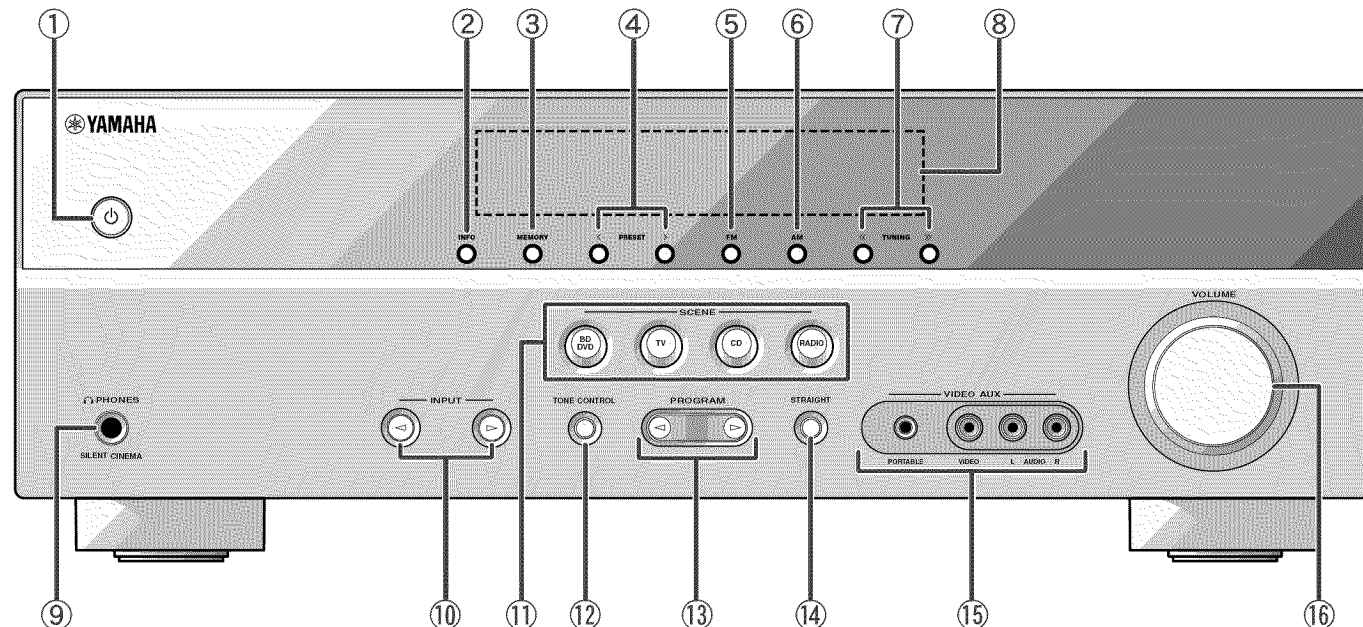
☀1 : Usable when you have selected tuner input.

Rear panel

① **DOCK jack**
For connecting an optional Yamaha iPod universal dock (such as YDS-12) or Bluetooth wireless audio receiver (YBA-10) (☞p. 33, ☞p. 35).

② **HDMI OUT jack**
For connecting an HDMI - compatible TV to output audio/video signals to (☞p. 14).

③ **HDMI1-4 jacks**
For connecting external components equipped with HDMI-compatible outputs to receive audio/video signals from (☞p. 16).

④ **ANTENNA jacks**
For connecting AM and FM antennas (☞p. 21).

⑤ **COMPONENT VIDEO jacks**
For connecting TV that are compatible with component video signals, using three cables to output video signal (☞p. 14).

⑥ **AV1-5 jacks**
For connecting to external devices equipped with audio/video outputs so that this unit can receive audio/video signals (☞p. 17, p. 18).

⑦ **AV OUT jacks**
For outputting audio/video signals received when analog inputs (AV3-5 or AUDIO1-2) are selected (☞p. 20).

⑧ **AUDIO1-2 jacks**
For connecting to external components equipped with analog audio outputs to input sound into this unit (☞p. 19).

⑨ **MONITOR OUT jack**
For connecting a TV capable of receiving video input, and outputting video signals to it (☞p. 15).

⑩ **AUDIO OUT jacks**
For outputting audio signals received when analog inputs such as the AV5 or AUDIO1-2 jacks are selected (☞p. 20).

⑪ **SUBWOOFER jack**
For connecting a subwoofer with a built-in amplifier (☞p. 12).

⑫ **SPEAKER terminals**
For connecting the front, center, and surround speakers (☞p. 12).

⑬ **Power cord**
For connecting this unit to an AC wall outlet.
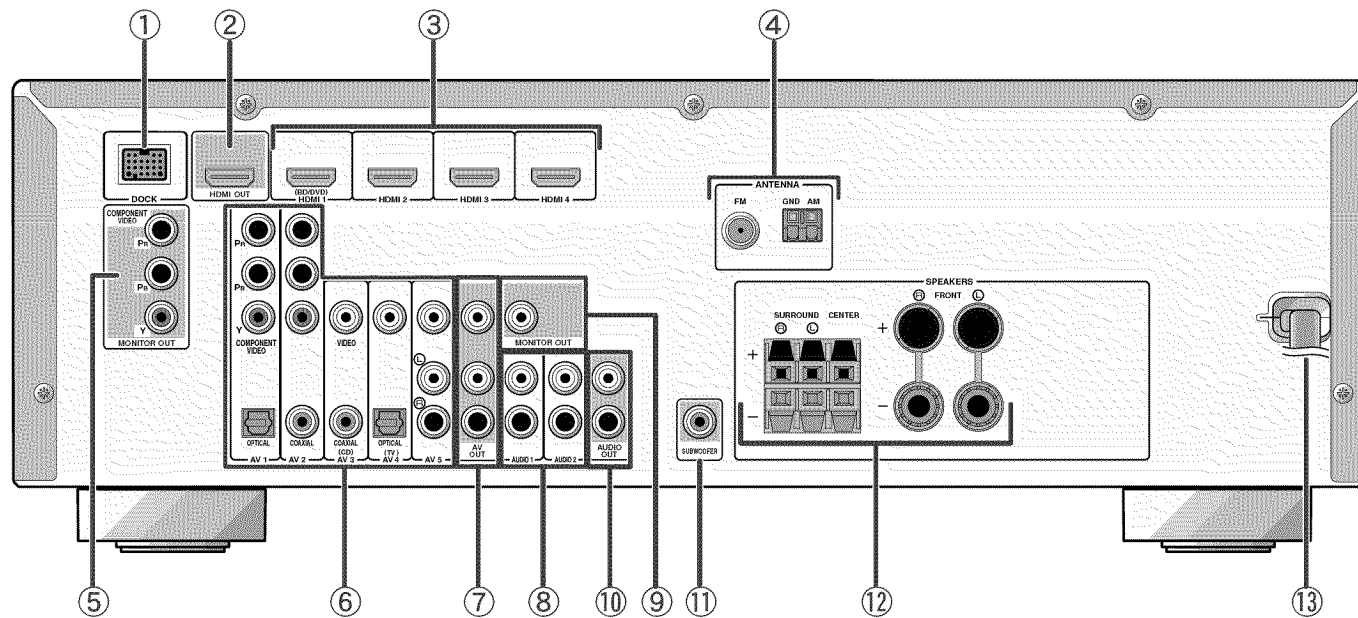
Distinguishing the input and output jacks
The area around the audio/video output jacks is marked in white to prevent connection errors. Use these jacks to output audio/video signals to a TV or other external component.

Output jacks
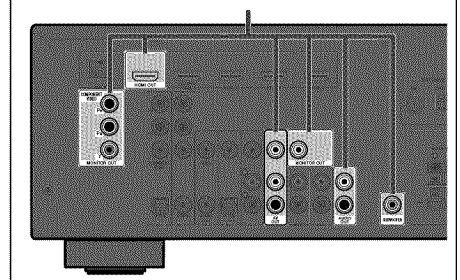
Front panel display

① **HDMI indicator**
Lights up during normal HDMI communication when any of the HDMI 1-4 inputs are selected.

② **CINEMA DSP indicator**
Lights up when a sound field effect that uses CINEMA DSP technology is selected.

③ **Tuner indicator**
Lights up when receiving an FM/AM broadcast.

④ **iPod CHARGE indicator**
Lights up when an iPod/iPhone is connected through an optional Yamaha iPod universal dock (such as YDS-12), and the iPod Standby Charge function is active (☞p. 34).

⑤ **SLEEP indicator**
Lights up when the sleep timer is activated (☞p. 8).

⑥ **MUTE indicator**
Flashes when audio is muted.

⑦ **VOLUME indicator**
Displays the current volume level.

⑧ **Cursor indicators**
Light up if corresponding cursors on the remote control are available for operations.

⑨ **Multi information display**
Displays a range of information on menu items and settings.

⑩ **Speaker indicators**
Indicate speaker terminals from which signals are output.

Subwoofer — SW
Center speaker
Front speaker L — L C R — Front speaker R
Surround speaker L — SL SR — Surround speaker R
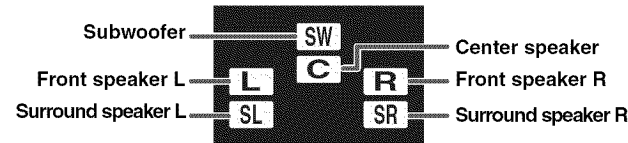
■ **Changing the front panel display**
The front panel can display sound field programs and surround decoder names as well as the active input source.
Press ⑥INFO repeatedly to cycle through input source → sound field program → surround decoder in order. ☀1

Input source name

HDMI 1   VOL_ 18.5
Straight

Sound field program (DSP program)

STEREO
TUNED
CINEMA DSP
iPod CHARGE
VOL. MUTE dB
SW C L R SL SR
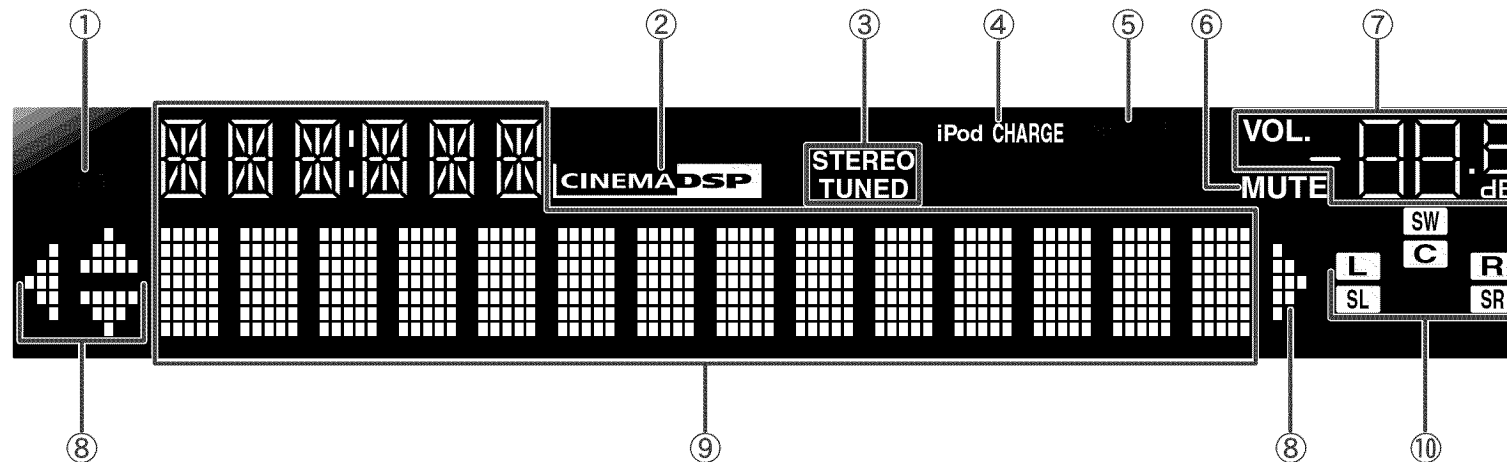
☀1 : While selecting a tuner input, the FM/AM frequency is displayed instead of the input source.

En **7**
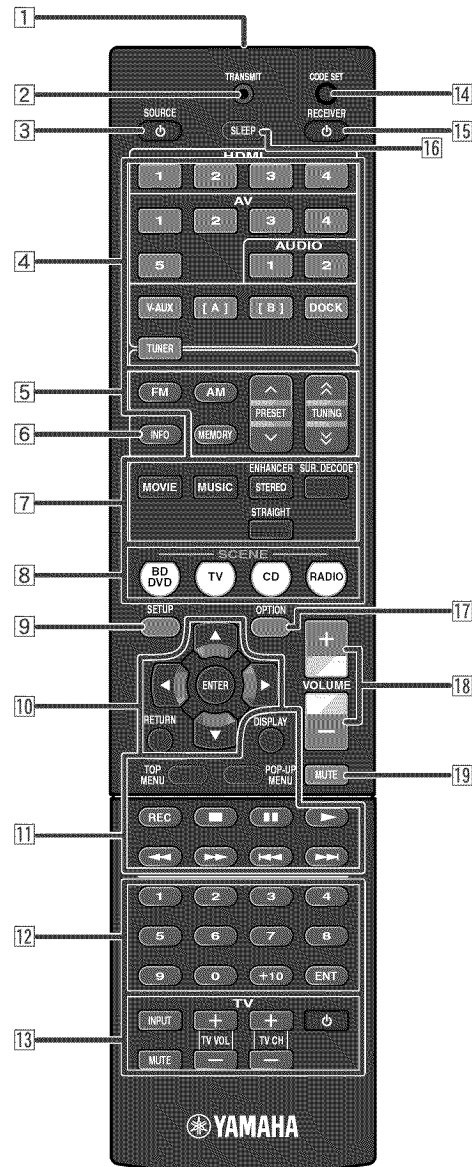
Remote control

1 Remote control signal transmitter
Transmits infrared signals.

2 TRANSMIT
Lights up when a signal is output from the remote control.

3 SOURCE ⏻ (SOURCE Power)
Switches an external component on and off.

4 Input selector
Select an input source on this unit from which to playback.

HDMI1-4	HDMI1-4 jacks
AV1-5	AV1-5 jacks
AUDIO1-2	AUDIO1-2 jacks
V-AUX	Front panel VIDEO AUX jacks
[A]/[B]	Changes the external component you operating with the **11 External component operation keys** without changing inputs. 💡1
DOCK	A Yamaha iPod universal dock or Bluetooth wireless audio receiver connected to the DOCK jack.
TUNER	FM/AM tuner

5 Tuner keys
Operates the FM/AM tuner. These keys are used when using the tuner input.

FM	Sets the FM/AM tuner band to FM.
AM	Sets the FM/AM tuner band to AM.
MEMORY	Presets radio stations.
PRESET ∧ / ∨	Selects a preset station.
TUNING ⋀ / ⋁	Changes tuning frequencies.

6 INFO
Cycles the information displayed on the front panel display (the name of the currently selected input source, the sound field program, the surround decoder, the FM/AM tuner frequency, etc.)(☞p. 7).

7 Sound selection keys
Switch between the sound field effect (sound field program) you are using and the surround decoder (☞p. 26).

8 SCENE
Switches the input source and the sound field program with a single button (☞p. 26). Press this key when this unit is in standby mode to switch on the unit.

9 SETUP
Displays a detailed Setup menu for this unit (☞p. 40).

10 Cursor △ / ▽ / ◁ / ▷, ENTER, RETURN

Cursor △ / ▽ / ◁ / ▷	Select menu items and change settings when settings menus, etc are displayed.
ENTER	Confirms a selected item.
RETURN	Returns to the previous screen when setting menus are displayed, or ends the menu display.

11 External component operation keys
Operate recording, playback, and menu displays etc. for external components. 💡1

12 Numeric keys
Enter numbers.

13 TV control keys
Operate a monitor such as a TV.

14 CODE SET
Sets remote control codes for external component operations (☞p. 50, p. 54).

15 RECEIVER ⏻ (RECEIVER Power)
Switches this unit between on and standby modes.

16 SLEEP
Sets this unit to place itself in standby mode automatically after a specified period of time has elapsed (sleep timer). Press this key repeatedly to set the time for the sleep timer function. The front panel display indicator lights up when the sleep timer is activated.

17 OPTION
Displays the Option menu for each input source (☞p. 37).

18 VOLUME +/-
Adjusts the volume level (☞p. 25).

19 MUTE
Turns the mute function of the sound output on and off (☞p. 25).

💡1 : You can use separate **11 External component operation keys** for each input source to operate registered components. Remote control codes must be registered for each input in advance if you wish to operate external components (☞p. 50).

CONNECTIONS

Connecting speakers

This unit uses acoustic field effects and sound decoders to bring you the impact of a real movie theater or concert hall. These effects will be brought to you with ideal speaker positioning and connections in your listening environment.

Speaker channels and functions

Front left and right speakers

The front speakers are used for the front channel sounds (stereo sound) and effect sounds.

Ex.
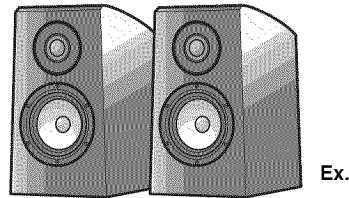
Front speaker layout:
Place these speakers at an equal distance from the ideal listening position in the front of the room.
When using a projector screen, the appropriate top positions of the speakers are about 1/4 of the screen from the bottom.

Center speaker

The center speaker is for the center channel sounds (dialog, vocals, etc.).

Ex.
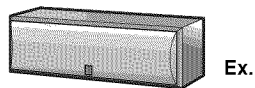
Center speaker layout:
Place it halfway between the left and right speakers. When using a TV, place the speaker just above or just under the center of the TV with the front surfaces of the TV and the speaker aligned.
When using a screen, place it just under the center of the screen.

Surround left and right speakers

The surround speakers are for effect and vocal sounds with the 5.1-channel speakers providing rear-area sounds.

Ex.
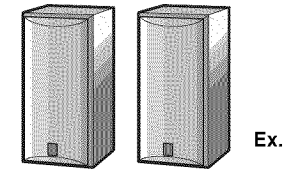
Surround speaker layout:
Place the speakers at the rear of the room on the left and right sides facing the listening position. They should be placed between 60 degrees and 80 degrees from the listening position and with the speaker tops at a height of 1.5 – 1.8 m from the floor.

Subwoofer

The subwoofer speaker is used for bass sounds and low-frequency effect (LFE) sounds included in Dolby Digital and DTS. Use a subwoofer that is equipped with an internal amplifier.

Ex.
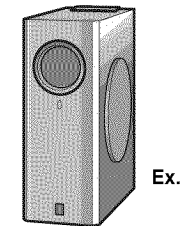
Subwoofer speaker layout:
Place it exterior to the front left and right speakers facing slightly inward to reduce echoes from the wall.

Speaker layout

5.1-channel speaker layout (5 speakers + subwoofer)

Front speaker R

Front speaker L

Subwoofer

Surround speaker R

Center speaker
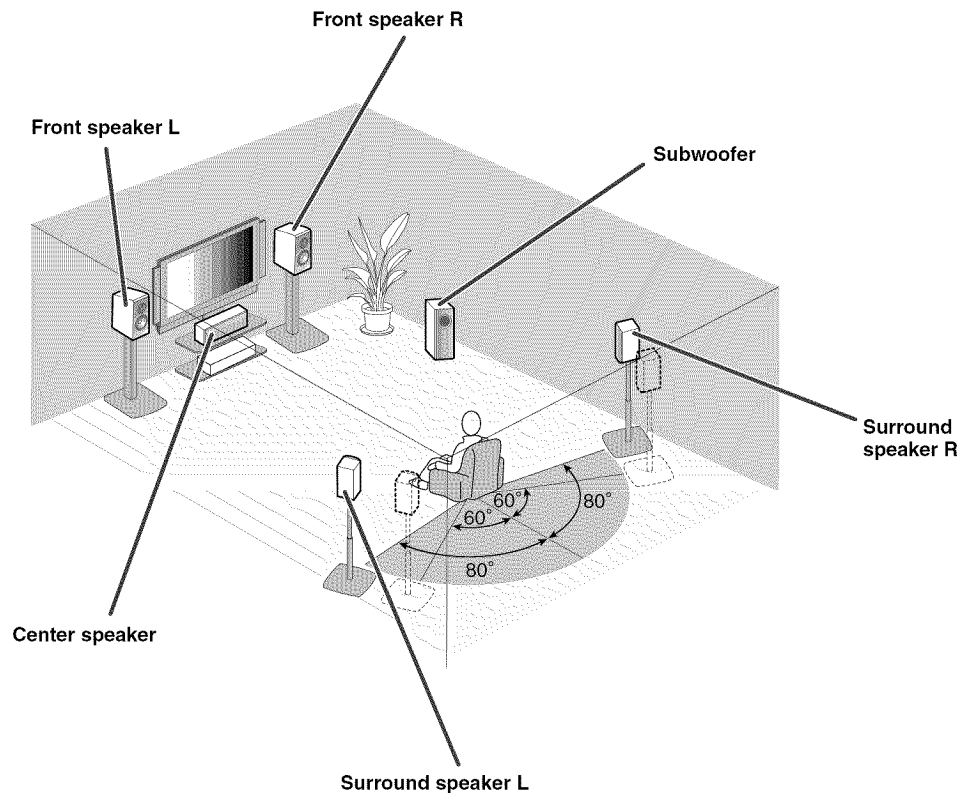
Surround speaker L

- Connect at least two speakers (front left and right).
- If you cannot connect all five speakers, give priority to the surround speakers.
- The surround speakers should be placed between 60 degrees and 80 degrees from the listening position.

■ CRT monitors

We recommend that you use magnetically shielded speakers to avoid video distortion, especially for the front and center speakers near the screen.

If your screen still gets interference from magnetically shielded speakers, move the speakers farther away from your TV.

Connecting speakers

▌ Changing speaker impedance

This unit is configured for 8Ω speakers when it is dispatched from the factory.

When connecting to 6Ω speakers, carry out the following procedure to switch to 6Ω.

1 Set this unit to the standby mode.

2 Press ⏻ while pressing and holding STRAIGHT on the front panel.

Release the keys when "ADVANCED SETUP" is displayed on the front panel display.

After approximately 3 seconds, the top menu items are displayed. ☆1

⏻
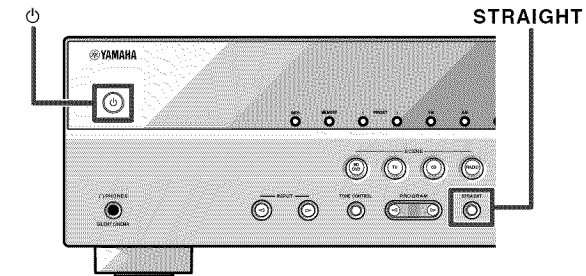
STRAIGHT

3 Check that "SP IMP." is displayed on the front panel.

4 Press STRAIGHT repeatedly to select a "6ΩMIN."

5 Switch this unit to the standby mode, and then switch it on again.

The power turns on, when the settings you made has been configured.

☆ 1 : See the section on "Extended functionality that can be configured as needed (Advanced Setup menu)" for details on the Advanced Setup menu (☞ p. 53).

Connect your speakers to their respective terminals on the rear panel.

Surround speaker

Front speaker

Subwoofer

Center speaker
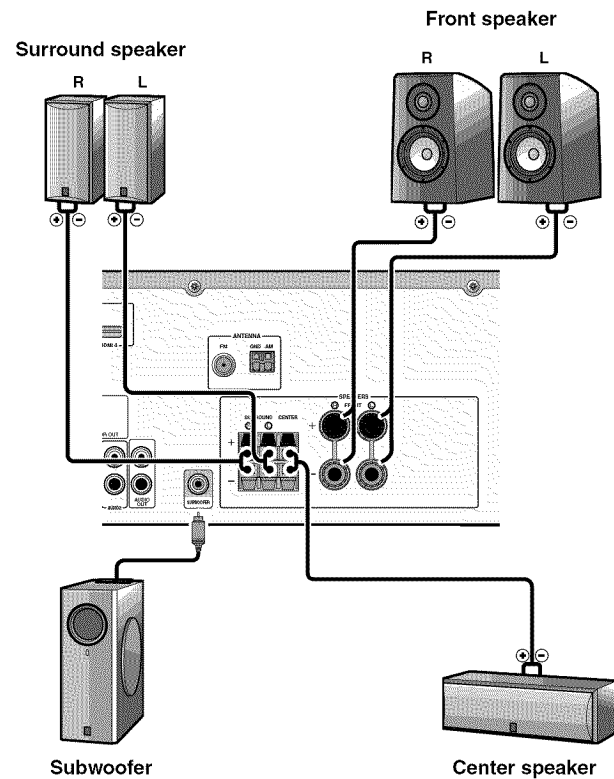
CAUTION

- Remove the AC power cord of this unit from the power outlet before connecting the speakers.
- Generally speaker cables consist of two parallel insulated cables. One of these cables is a different color, or has a line running along it, to indicate different polarity. Insert the different colored (or lined) cable into the "+" (positive, red) terminal on this unit and the speakers, and the other cable into the "-" (minus, black) terminal.
- Be careful that the core of the speaker cable does not touch anything or come into contact with the metal areas of this unit. This may damage this unit or the speakers. If the speaker cables short circuit, "CHECK SP WIRES!" will appear on the front panel display when this unit is switched on.

Connecting front speakers
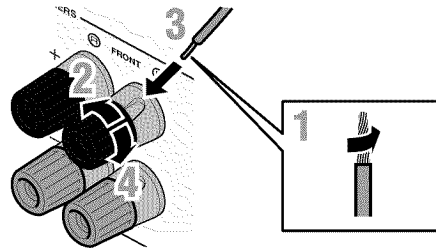
1 Remove approximately 10mm of insulation from the ends of the speaker cables, and twist the bare wires of the cables together firmly so that they will not cause short circuits.

2 Loosen the speaker terminals.

3 Insert the bare wire of the speaker cable into the gap on the side of the terminal.

4 Tighten the terminal.

Connecting the banana plug (Except U.K., Europe, Asia and Korea models)

Tighten the knob, and then insert the banana plug into the end of the terminal.

Banana plug
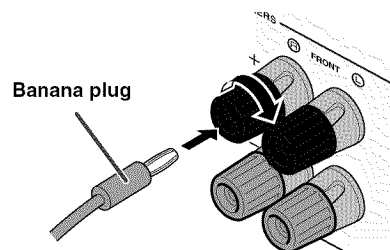
Connecting center speakers / surround speakers
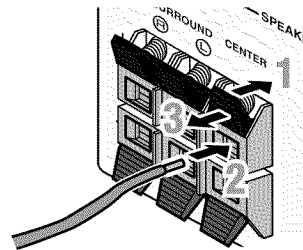
1 Press the tab on the speaker terminal down.

2 Insert the speaker cable end into the terminal.

3 Lift the tab to fix the speaker cable in place.

Connecting the subwoofer
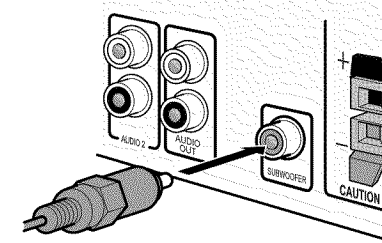
1 Connect the subwoofer input jack to the SUBWOOFER jack on this unit with an audio pin cable.

2 Set the subwoofer volume as follows.

Volume: Set to approximately half volume (or slightly less than half).

Crossover frequency (if available): Set to maximum.
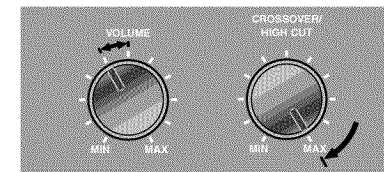
Subwoofer examples

Connecting external devices

Cable plugs and jacks

The main unit is equipped with the following input/output jacks. Use jacks and cables appropriate for components that you are going to connect.

Audio/Video jacks

HDMI jacks

Digital video and digital sound are transmitted through a single jack.
Only use an HDMI cable.
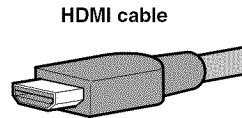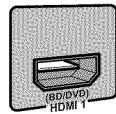
HDMI cable

- Use a 19-pin HDMI cable with the HDMI logo.
- We recommend using a cable less than 5.0 m long to prevent signal quality degradation.

Analog video jacks

COMPONENT VIDEO jacks

The signal is separated into three components: luminance (Y), chrominance blue (PB), and chrominance red (PR).
Use component video pin cables with three plugs.
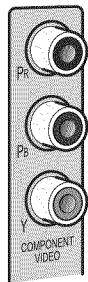
Component video pin cable
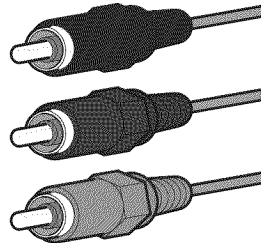
VIDEO jack

This jack transmits conventional analog video signals.
Use video pin cables.
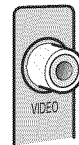
Video pin cable
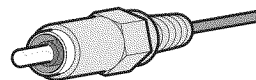
Audio jacks

OPTICAL jacks

These jacks transmit optical digital audio signals. Use fiber-optic cables for optical digital audio signals.

Digital audio fiber-optic cable
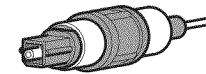
COAXIAL jacks

These jacks transmit coaxial digital audio signals. Use pin cables for digital audio signals.

Digital audio pin cable
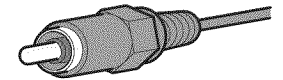
AUDIO jacks

These jacks transmit conventional analog audio signals.
Use stereo pin cables, connecting the red plug to the red R jack, and the white plug to the white L jack.

Stereo audio pin cable
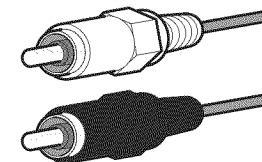
PORTABLE jack

This jack transmits conventional analog audio signals.
Use a stereo mini-plug cable when connecting.
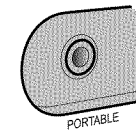
Stereo mini-plug cable
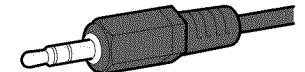
Connecting a TV monitor

This unit is equipped with the following three types of output jack for connection to a TV.
HDMI OUT, COMPONENT VIDEO or VIDEO. Select the proper connection according to the input signal format supported by your TV.

HDMI OUT jack

COMPONENT VIDEO jacks
(MONITOR OUT)

VIDEO jack
(MONITOR OUT)
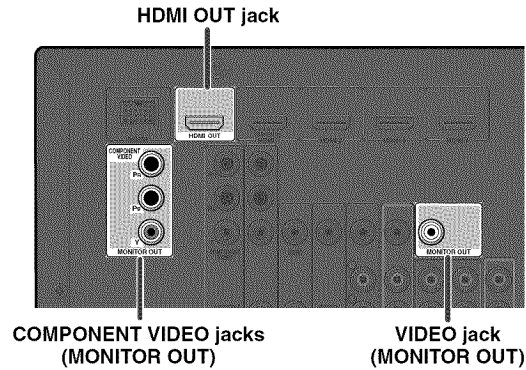
This unit will receive HDMI, component, or video signals in the same format as transmitted by the output devices.
For example, these three output devices must be connected to the monitor by matching input/output jacks and cables, and then you must change the TV's input mode to the proper setting.
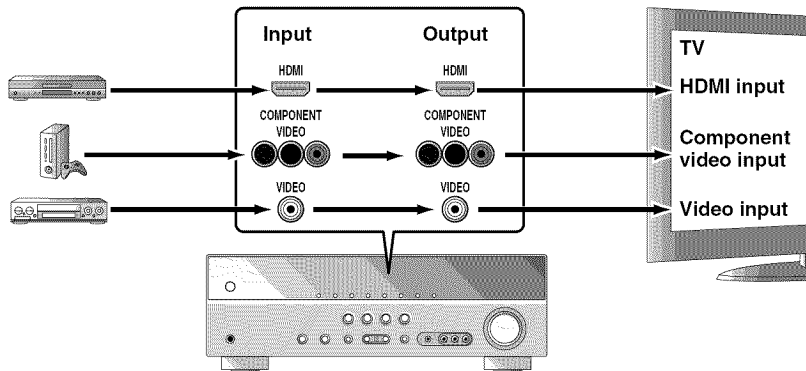
▌ Connecting an HDMI video monitor

Connect the HDMI cable to the HDMI OUT jack.
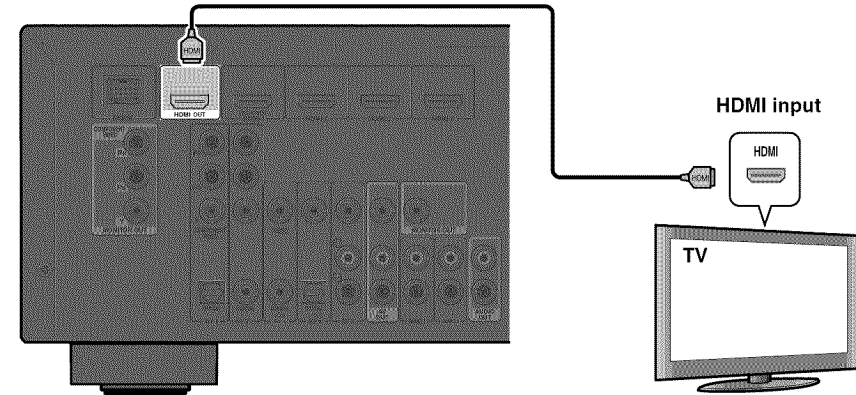
HDMI input

- Use a 19-pin HDMI cable with the HDMI logo.
- We recommend using a cable less than 5.0 m long to prevent signal quality degradation.

▌ Connecting a component video monitor

Connect the component video cable to the COMPONENT VIDEO (MONITOR OUT) jacks.

Component video input
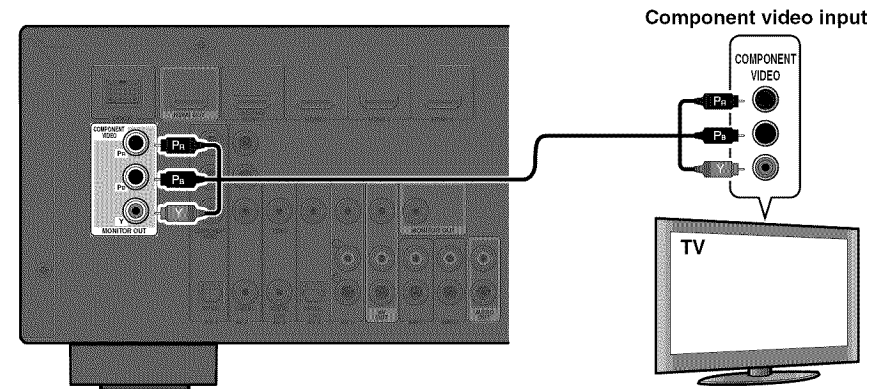
Connecting a video monitor

Connect the video pin cable to the VIDEO (MONITOR OUT) jack.

Video input
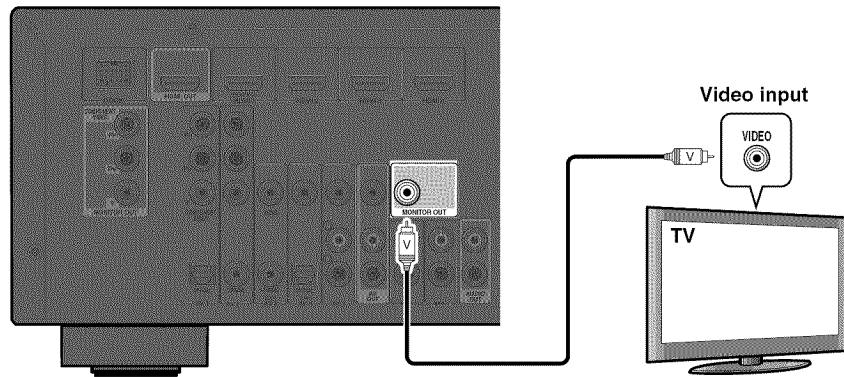
■ Listening to TV audio

To transmit sound from the TV to this unit, connect its AV1-5 or AUDIO1-2 jacks to the TV's AUDIO OUT jacks.

If the TV supports optical digital audio output, we recommend that you connect the TV audio output to the receiver's AV4 jack. Connecting to AV4 allows you to switch the input source to AV4 with just a single key operation using the SCENE function (☞p. 26).

Audio output (Optical)
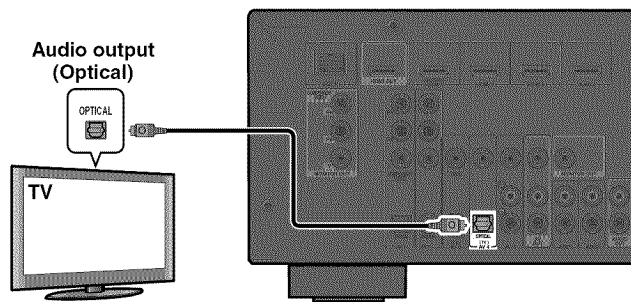
You can control your TV using the receiver's remote control by entering the TV's remote control code (☞p. 50).

Connecting BD/DVD players and other devices

This unit has the following input jacks. Connect them to the appropriate output jacks on the external components.

Input jack	Video input	Audio input
HDMI1	HDMI	HDMI
HDMI2	HDMI	HDMI
HDMI3	HDMI	HDMI
HDMI4	HDMI	HDMI
AV1	Component video	Optical
AV2	Component video	Coaxial digital
AV3	Video	Coaxial digital
AV4	Video	Optical
AV5	Video	Analog (Stereo)
AUDIO1	—	Analog (Stereo)
AUDIO2	—	Analog (Stereo)
VIDEO AUX	Video	Analog (Stereo)

▊ Connecting BD/DVD players and other devices with HDMI

Connect the device with an HDMI cable to one of the HDMI1-4 jacks.
Select the HDMI input (HDMI1-4) that the external device is connected to for playback.
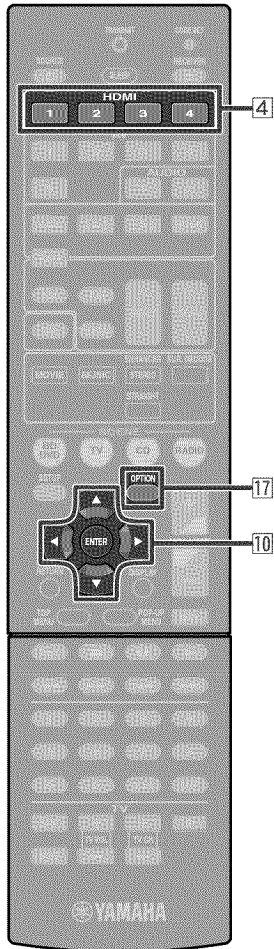
4 Input selector
10 Cursor ▽ / ◁ / ▷
10 ENTER
17 OPTION

HDMI output

BD/DVD player
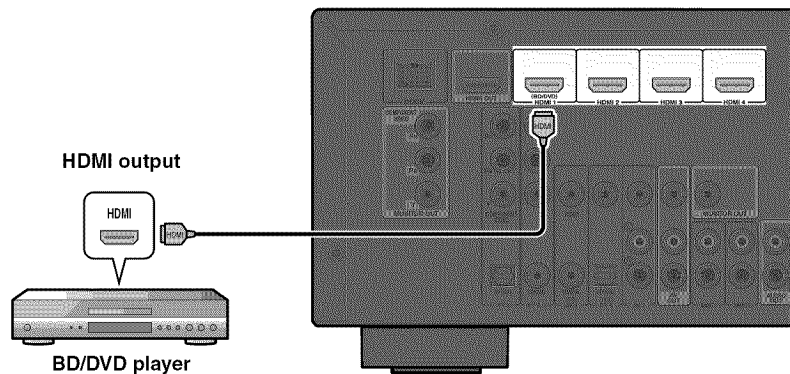
■ Receiving audio from other input sources

This unit can use the AV1-5 or AUDIO1-2 input jacks to receive audio signals from other audio input sources.
For example, if an external device cannot produce audio signals from an HDMI jack, use the following method to change the audio input.

HDMI/Audio (Optical) output

BD/DVD player
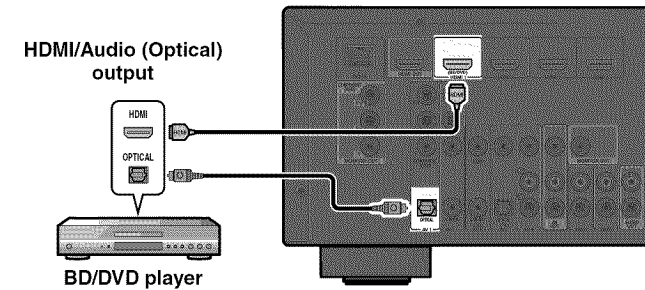
1 Use the 4Input selector to select the desired HDMI input source.

2 Press 17OPTION to display the Option menu. ☞1

3 Press 10Cursor ▽ until "Audio In" is displayed, and then press 10ENTER.

4 Press 10Cursor ◁ / ▷ to select the audio input source.

If you have selected AV1 input audio (optical digital)

5 Once you have completed the setup, press 17OPTION to close the Option menu.

Connecting BD/DVD players and other devices with component cables

Connect the device with a component video cable to one of the AV1-2 input jacks.

Using optical digital audio output sources

Select the AV1 input that the external device is connected to for playback.

Component video / Audio (Optical)
output

BD/DVD player
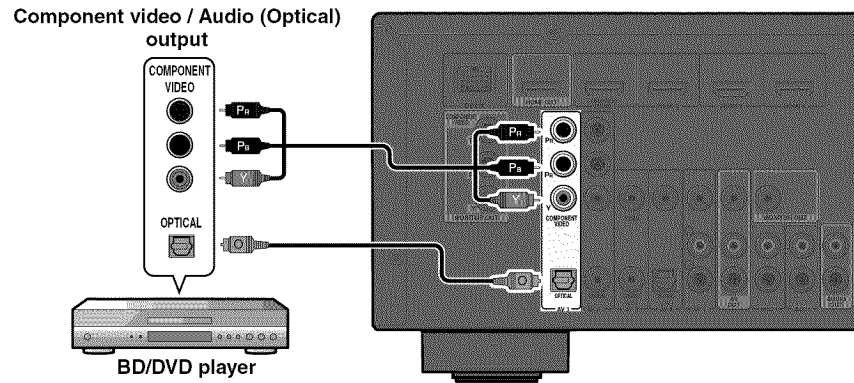
Using coaxial digital audio output sources

Select the AV2 input that the external device is connected to for playback.

Component video / Audio (Coaxial)
output

BD/DVD player

■ Component connections to analog audio output devices

Component video / Audio
output

Game console
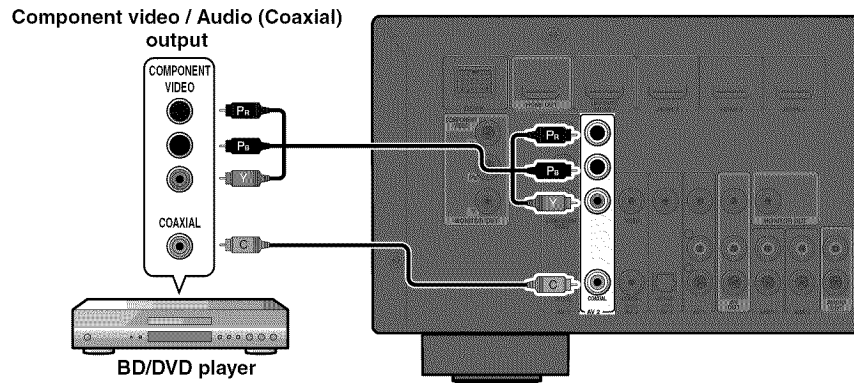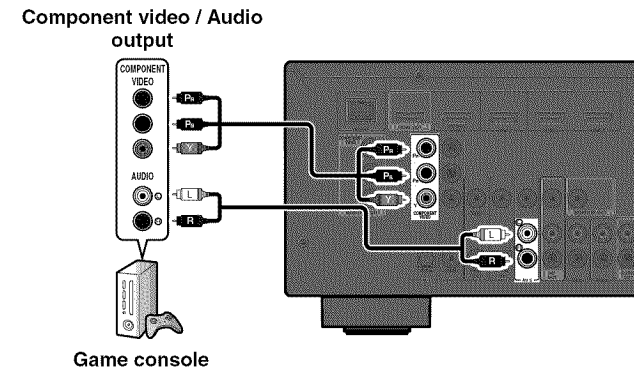
You can use the video input from the AV1-2 jacks in combination with the audio input from other AV inputs or AUDIO1-2.

When connecting these devices, select the AV3-5 or the AUDIO1-2 jacks as the audio input for AV1 or AV2. See "Receiving audio from other input sources" (☞p. 16) for detailed setup guidance.

Select the AV input source (AV1-2) that is connected by component video cable to the external device for playback.

▌ Connecting BD/DVD players and other devices with video cables

Connect the external device with a video pin cable to one of the AV3-5 input jacks.

Using optical digital audio output sources

Select the AV4 input that the external device is connected to for playback.

Video / Audio (Optical)
output

BD/DVD player
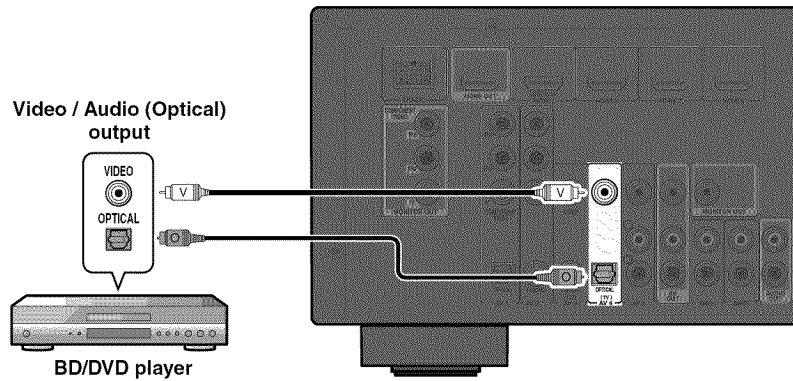
Using coaxial digital audio output sources

Select the AV3 input that the external device is connected to for playback.

Video / Audio (Coaxial)
output

BD/DVD player
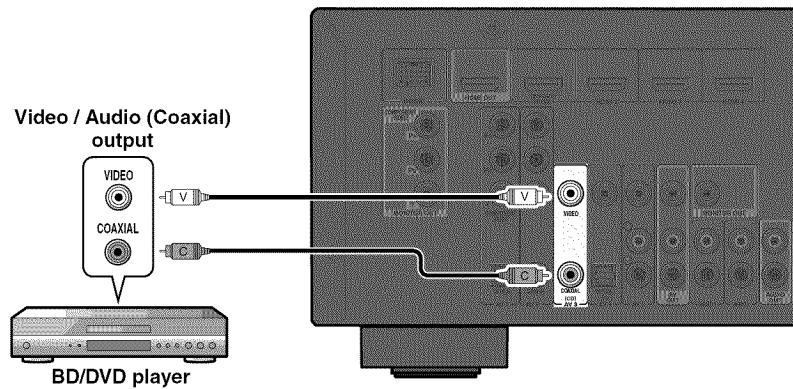
Using analog stereo audio output sources

Select the AV5 input that the external device is connected to for playback.

Video / Audio
output

BD/DVD player
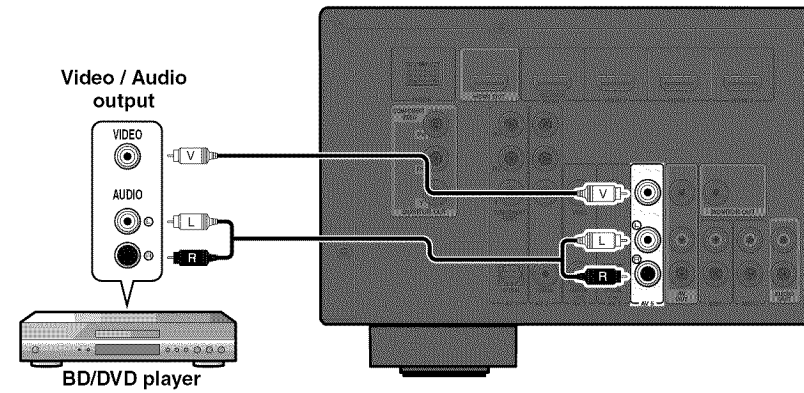
■ Connecting CD players and other audio devices

Using analog stereo output sources

Select the audio input (AUDIO1-2) that the external device is connected to for playback.

Audio output

AUDIO

CD player
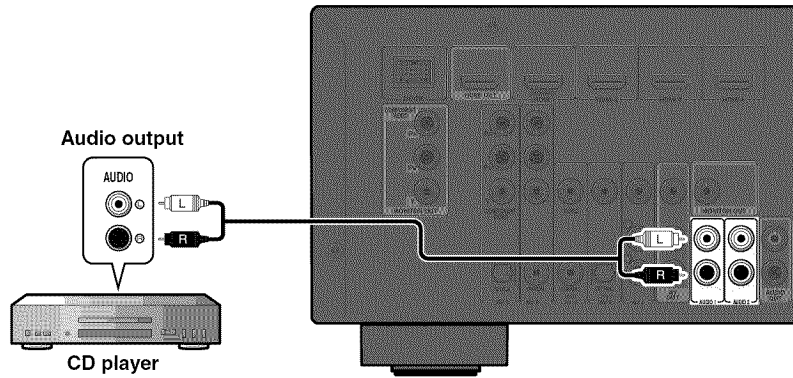
Using optical digital output sources

Select the AV input (AV1 or AV4) that the external device is connected to for playback.

Audio (Optical) output

OPTICAL

CD player
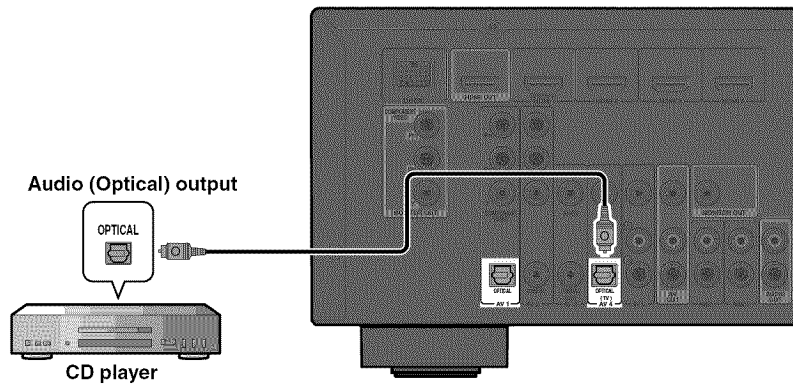
Using coaxial digital output sources

Select the AV input (AV2 or AV3) that the external device is connected to for playback.

Audio (Coaxial) output

COAXIAL

CD player
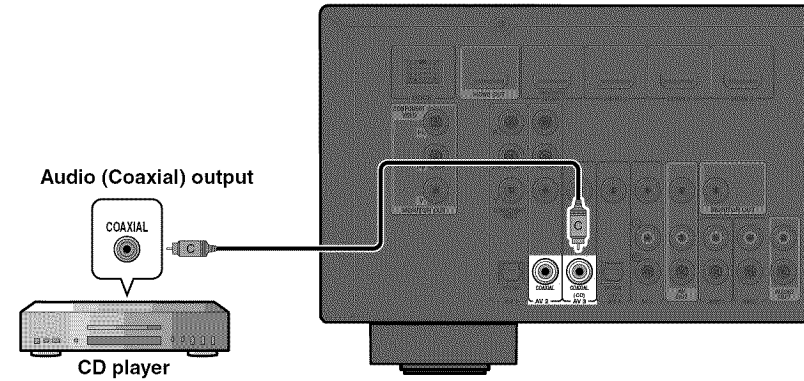
We recommend connecting audio devices with an coaxial digital output to the AV3 coaxial digital jack on this unit. This connection allows you to switch to the AV input 3 just by pressing the "CD" SCENE key (☞p. 26).

Connecting video cameras and portable audio players

Use the VIDEO AUX jacks on the front panel to temporarily connect video cameras, game consoles, or portable audio devices to the receiver.
Select the V-AUX input to use these connected devices.

Audio output

Audio output

Video output

Portable audio player

Video cameras
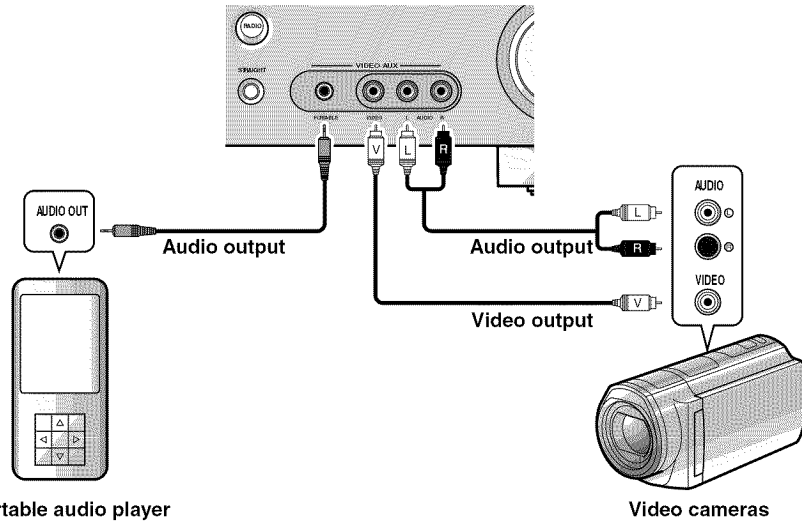
- Be sure to turn down the volume when connecting this unit and the other devices.
- When external components are connected to both the PORTABLE jack and the AUDIO jacks, the sound output from the PORTABLE jack is transmitted.

Transmitting input A/V to external devices

This receiver can transmit selected incoming analog audio/video signals to external devices through the AV OUT and AUDIO OUT jacks. You can record these input audio and video signals to VCRs or similar devices, or send them to other TVs or external devices.

Video / Audio input

VCR

Audio input

Audio recorder
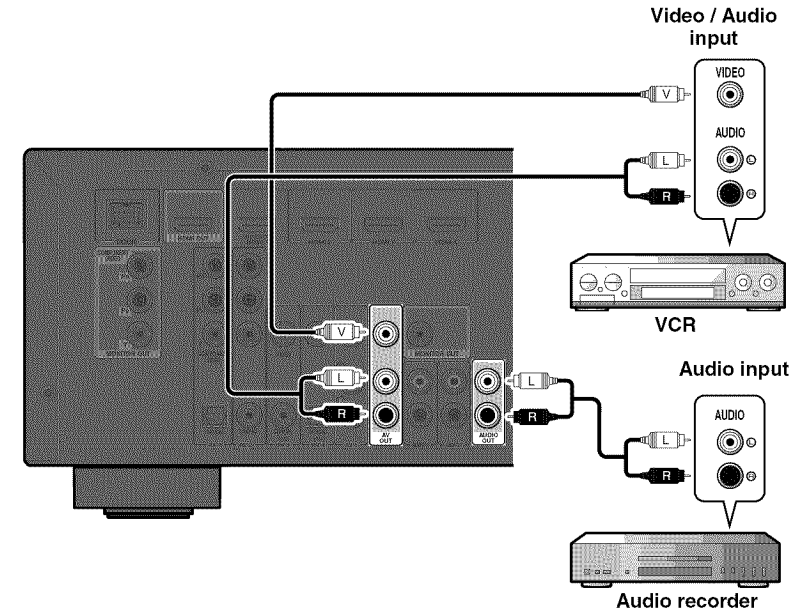
Using the AV OUT jacks
Connect this jacks to the external device's video input jack and analog audio input jacks.

Using the AUDIO OUT jacks
Connect this jack to the external device's analog audio input jacks.

HDMI audio/video signals, component video signals, and digital audio signals cannot be transmitted from these jacks.

Connecting the FM/AM antennas

An indoor FM antenna and an AM loop antenna are included with this receiver. Connect these antennas properly to their respective jacks.

Indoor FM antenna

AM loop antenna
Position the AM antenna away from the receiver. The wires of the AM antenna have no polarity.
You can connect either wire to the AM jack or the GND jack.


```
Connecting the AM loop antenna
Press and hold      Insert       Release
```
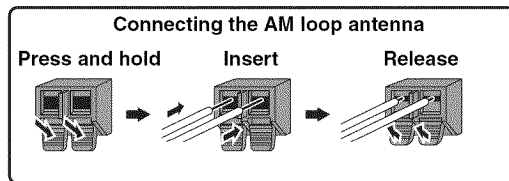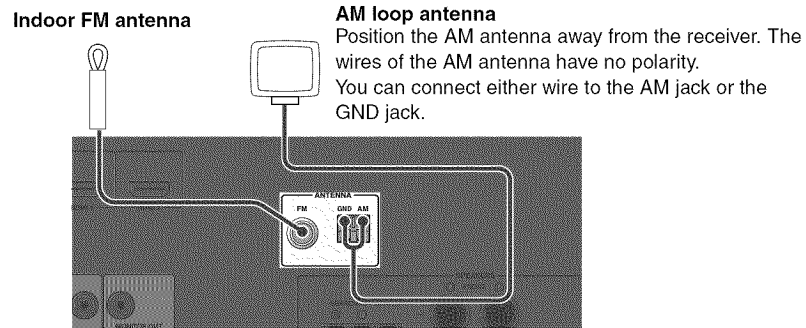
■ Improving FM reception
We recommend using an outdoor antenna. For more information, consult the nearest authorized dealer.

■ Improving AM reception
Connect this unit to an outdoor antenna with a 5-10 m vinyl-coated wire. Make sure the AM loop antenna is still connected.
Connecting the GND jack can reduce noise. Connect the jack to a store-bought ground bar or copper plate with a vinyl-covered wire and bury this new attachment in moist ground.
The GND jack is not to be connected to the ground socket of an electrical outlet.

Setting up speaker parameters
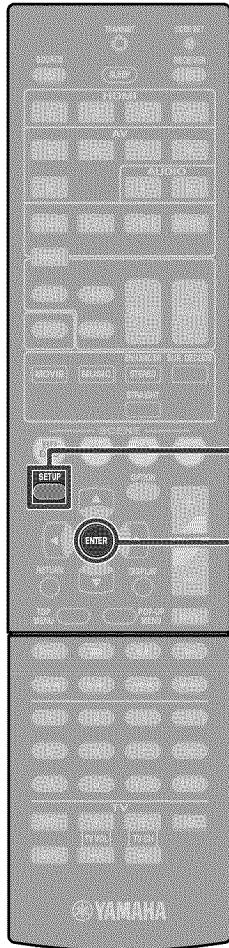
When you have finished connecting your speakers, configure this unit so that they output sound normally. Carry out the following steps to configure this unit.

STEP 1: Display the setting menu
Display the Setup menu from which you can configure all settings for this unit, and then display the menu for speaker settings.

STEP 2: Set the speaker status and size
Set the size and connection status of speakers and subwoofers, and whether to designate a specific speaker (or subwoofer) for low-frequency sound.

STEP 3: Set the distance from the listening point
Set the distance between the speakers and the listening point so that the sound from each speaker reaches the listening point at the appropriate timing.

STEP 4: Playback a test tone
Playback a test tone to allow you to configure sound volumes while listening to the actual effect your settings are having.

STEP 5: Adjust the volume
Adjust the volume for each speaker and configure them so that the sound is balanced.

9 SETUP
10 ENTER

STEP 1: Display the setting menu

1 **Switch this unit on.**

2 **Press 9SETUP on the remote control.**
The Setup menu that allows you to configure all parameters on this unit appears. ☼1

> SETUP
> ⬍Speaker Setup

3 **Check that "Speaker Setup" appears and press 10ENTER.**

> SP SET
> ⬍Config

This completes step 1.

STEP 2: Set the speaker status and size

The settings in step 2 are not necessary with the following speaker configuration:
– Front speaker: woofer diameter is 16 cm or larger
– Center/surround speakers: woofer diameter is 16 cm or smaller
– Subwoofer: connected

4 **Check that "Config" appears and press 10ENTER.**

> CONFIG
> ⬍Subwoofer··Yes

Continues to the next page

☼1 : See the section "Setting various functions (Setup menu)" for details on the Setup menu (☞p. 40).
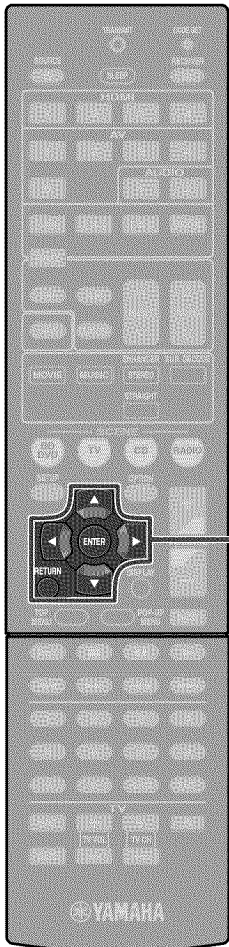
5 Use [10]Cursor △ / ▽ to select the speaker (subwoofer) you want to configure, and then use [10]Cursor ◁ / ▷ to select speaker status and size.

Information	Description	Setting
Subwoofer	Sets the subwoofer status.	Yes/None
Front	Selects the size (sound reproduction capacity) of the front speakers.	Small/Large
Center	Selects the size of the center speakers. Choose "None" if you do not have a center speaker connected.	None/Small/Large
Sur. LR	Selects the size of the surround speakers. Choose "None" if you do not have surround speakers connected.	None/Small/Large
Crossover	Audio with a frequency below this limit will be output from the subwoofer or the front speakers.	40Hz to 200Hz
SWFR Phase	Switches the phase of the subwoofer.	Normal/Reverse
Extra Bass	Selects whether to play front channel low-frequency components through either of the front speakers or the subwoofer (Off), or through both the subwoofer and front speakers (On).	On/Off

[10] Cursor △ / ▽ / ◁ / ▷
[10] ENTER
[10] RETURN

- Whether or not you set "Crossover," "SWFR Phase," and "Extra Bass" is optional. Check how the effects sound and then configure them to your liking.
- Use the following as a guide when setting speaker sizes.
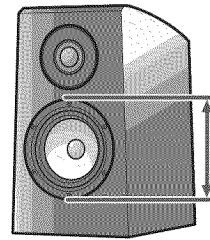
Woofer diameter
- 16 cm or larger → Large
- 16 cm or smaller → Small

When speaker size is set to "Small," low-frequency components of the speakers you configured are produced from the subwoofer (or from the front speakers if there is no subwoofer).

When you have completed the settings for one speaker, repeat the same procedure for all speakers to complete settings.

6 Press [10]RETURN when setting is complete.

Return to the previous menu.

This completes step 2.

STEP 3: Set the distance from the listening point

7 Press [10]Cursor ▽ to display "Distance" and press [10]ENTER.

8 Press [10]Cursor △ / ▽ to select the speaker that you want to configure, and press [10]Cursor ◁ / ▷ to change the distance.

If necessary, you can change the setting units under "Unit."

Information	Description	Setting
Unit	Switches between setting units (feet / meters).	feet (ft) / meters (m)
Front L	Front speaker L	1.0 ft to 80.0 ft (0.30 m to 24.0 m)
Front R	Front speaker R	1.0 ft to 80.0 ft (0.30 m to 24.0 m)
Center	Center speaker	1.0 ft to 80.0 ft (0.30 m to 24.0 m)
Sur. L	Surround speaker L	1.0 ft to 80.0 ft (0.30 m to 24.0 m)
Sur. R	Surround speaker R	1.0 ft to 80.0 ft (0.30 m to 24.0 m)
SWFR	Subwoofer	1.0 ft to 80.0 ft (0.30 m to 24.0 m)

When you have completed the settings for one speaker, repeat the same procedure for all speakers to complete settings.

9 Press [10]RETURN when setting is complete.

Return to the previous menu.

This completes step 3.

En **23**
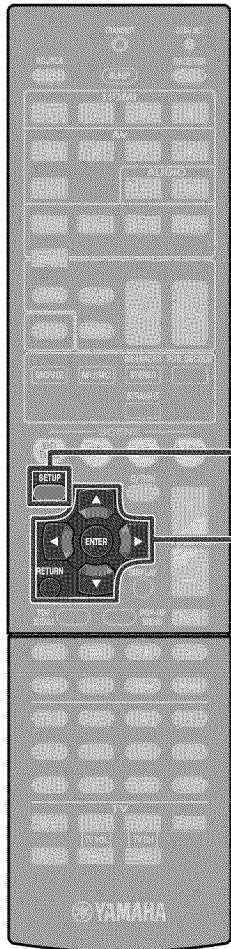
STEP 4: Playback a test tone

10 Press ⑩Cursor ▽ repeatedly to display "Test Tone" and press ⑩ENTER.

```
TEST          VOL. -10.5 dB
◀  )Off  On  ▶
```

11 Use ⑩Cursor ◁ / ▷ to select "On."

A test tone plays back as soon as you select "On." The test tone plays back in a clockwise fashion, as follows.

Front L   Center   Front R

Subwoofer

Surround L   Surround R
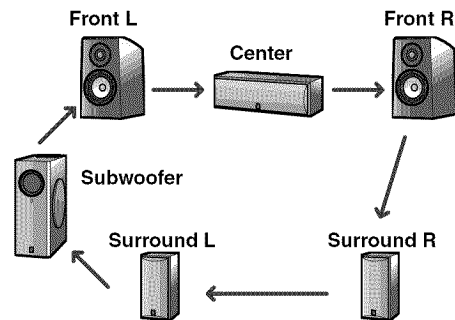
12 Check that the test tone is playing back and press ⑩RETURN.

Return to the previous menu.

This completes step 4.

STEP 5: Adjust the volume

13 Press ⑩Cursor △ repeatedly to display "Level" and press ⑩ENTER.

```
LEVEL          VOL. -10.5 dB
◀≑  FL----┃----  ▶
```

14 Use ⑩Cursor △ / ▽ to switch the speaker that is outputting the test tone, looking for speakers with a different volume level to the others.

The front panel display shows the speaker that is outputting the test tone. ☞1

Information	Speakers
FL	Front speaker L
FR	Front speaker R
C	Center speaker
SL	Surround speaker L
SR	Surround speaker R
SWFR	Subwoofer

15 If you find a speaker with a different volume level to the others, use ⑩Cursor ◁ / ▷ to adjust the volume. Use Front speaker L or R as a default when adjusting volumes.

To raise the volume: Press ⑩Cursor ▷.

To lower the volume: Press ⑩Cursor ◁.

---

16 Repeat steps 14 and 15 to adjust the volume balance for all speakers to your preference.

17 Press ⑩RETURN when setting is complete.

Return to the previous menu.

This completes step 5.

18 Repeat procedures 10-12 (step 4) to stop playback of the test tone.

19 Once you have completed all settings, press ⑨SETUP to close the Setup menu.

---

⑨ SETUP
⑩ Cursor △ / ▽ / ◁ / ▷
⑩ ENTER
⑩ RETURN

☞ 1 : Only speakers configured for use in procedure 5 output the test tone.

PLAYBACK

Basic playback procedure
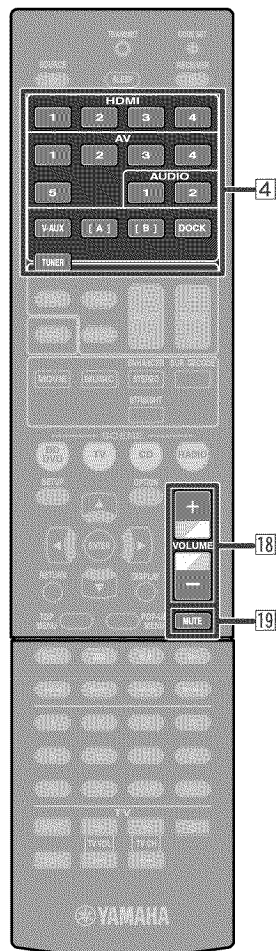
4 Input selector
18 VOLUME +/-
19 MUTE

1 Turn on external components (TV, DVD player, etc.) connected to this unit.

2 Turn on this unit and select the input source using 4 Input selector.

The name of the selected input source is displayed for a few seconds. ☀1

3 Play the external component that you have selected as the source input, or select a radio station on the tuner.

Refer to the instruction manuals provided with the external component for details on playback.

For details on the following operations, refer to the corresponding pages:

- "FM/AM tuning" (☞ p. 30)
- "Playing back tunes from your iPod™/iPhone™" (☞ p. 33)
- "Playing back tunes from Bluetooth™ components" (☞ p. 35)

4 Press 18 VOLUME +/- to adjust the volume.

To mute the output.
Press 19 MUTE to mute the audio output.
Press 19 MUTE again to unmute.

Adjusting high/low-frequency sound (Tone control)

You can adjust the balance of the high-frequency range (Treble) and low-frequency range (Bass) of sounds output from the front left and right speakers to obtain desired tone.

> The tone control of the speakers or headphones can be set separately. Set the headphone tone control with the headphones connected.

1 Press TONE CONTROL on the front panel repeatedly to select "Treble" or "Bass."

TONE CONTROL
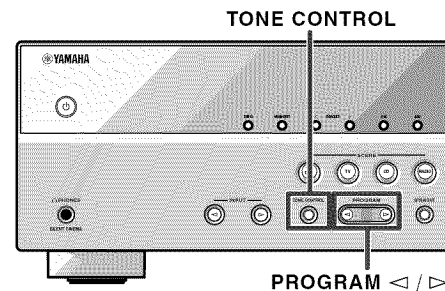
PROGRAM ◁ / ▷

The current setting is displayed on the front panel display.

2 Press PROGRAM ◁ / ▷ to adjust the output level in those frequency ranges.

Adjustable range	-10.0 dB to +10.0 dB
Adjustment increments	2.0 dB

The display returns to the previous display soon after you release the key.

> If you set the balance extremely off, sounds may not match those from other channels well.

☀1 : You can change the input source name displayed on the front panel display as necessary (☞ p. 46).

Changing input settings with a single key (SCENE function)

This unit has a SCENE function that allows you to turn the power on and change input sources and sound field programs with one key.

Four scenes are available for different uses, such as playing movies or music. The following input sources and sound field programs are provided as the initial factory settings.

SCENE	Input	Sound field program
BD/DVD	HDMI1	Straight
TV	AV4	Straight
CD	AV3	Straight
RADIO	TUNER	5ch Enhancer

Registering input sources/sound field program

1 Use [4]Input selector to select the input source you want to register.

2 Use the [7]Sound selection keys to select the sound field program you want to register.

3 **Press the [8]SCENE key until "SET Complete" appears on the front panel display.**

Release the key when "SET Complete" is displayed.

When changing "SCENE," you can also use switch between the external components that the remote control operates (☞p. 50).

Enjoying sound field programs

This unit is also equipped with a Yamaha digital sound field processing (DSP) chip. You can enjoy multi-channel playback for almost any sound source using various sound field programs stored on the chip, and a range of sound decoders.

Selecting sound field programs and sound decoders

This unit offers sound field settings (sound field programs) in many different categories suitable for movies, music and other uses. Choose a sound field program that sounds best with the source you are playing back, rather than relying on the name or explanation of the program.

- Sound field programs are stored for each input source. When you change the input source, the sound field program previously selected for that input source is applied again.
- If the sampling frequency of an input source is higher than 96 kHz, this unit does not apply any sound field programs.

Selects sound field program:
MOVIE category: Press [7]MOVIE repeatedly
MUSIC category: Press [7]MUSIC repeatedly

Selects stereo reproduction:
Press [7]STEREO repeatedly

Selects compressed music enhancer:
Press [7]STEREO repeatedly

Selects surround decoder:
Press [7]SUR. DECODE repeatedly

Switches Straight decoding mode (☞p. 27):
Press [7]STRAIGHT

Sound field program categories

Program

- You can use the speaker indicators on the front panel display to check what speakers are currently outputting sound (☞p. 7).
- You can adjust sound field elements (sound field parameters) for each of the programs.
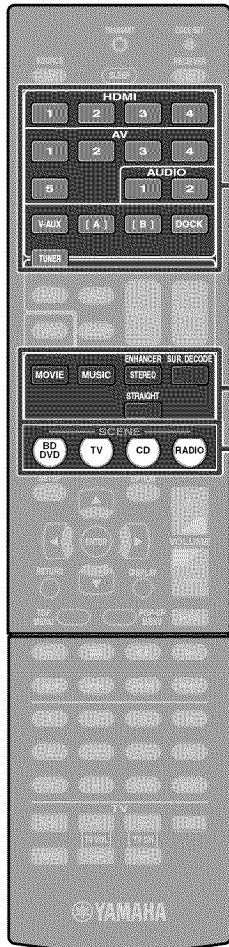
[4] Input selector
[7] Sound selection keys
[7] MOVIE
[7] MUSIC
[7] STEREO
[7] SUR. DECODE
[7] STRAIGHT
[8] SCENE
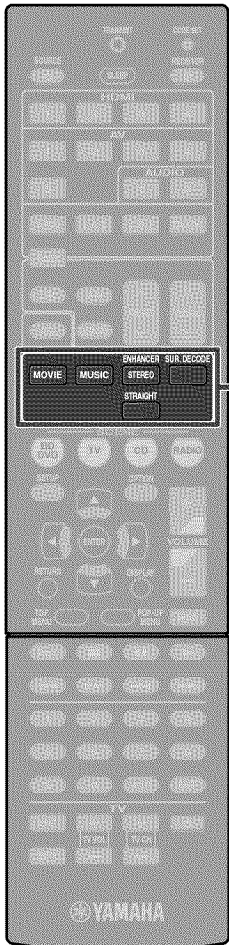
Enjoying unprocessed playback (Straight decoding mode)

Use straight decoding mode when you want to playback sound without sound field processing. You can playback as follows in straight decoding mode.

2-channel sources such as CD

Stereo sound plays through the front left and right speakers.

Multi-channel playback sources such as BD/DVD

Plays back audio from a playback source without applying sound field effects, using an appropriate decoder to split the signal into multiple channels.

1 **Press [7]STRAIGHT to activate the straight decoding mode.**

2 **Press [7]STRAIGHT again to exit straight decoding mode.**

Previously selected program

Enjoying stereo playback

Select "2ch Stereo" from the surround field programs when you want to playback 2-channel stereo sound (from the front speakers only), regardless of the playback source.
Selecting "2ch Stereo" will playback as follows for the playback of CD and BD/DVD sources.

2-channel sources such as CD

Stereo sound plays back through the front speakers.

Multi-channel sources such as BD/DVD

Playback channels other than the front channels in the playback source are mixed with the front channels and played back through the front speakers.

1 **Press [7]STEREO repeatedly to select "2ch Stereo."**

2 **To deactivate stereo playback, press any of the [7]Sound selection keys to select a sound field program other than "2ch Stereo."**

Enjoying sound field programs without surround sound speakers

This unit allows you to use virtual surround speakers to enjoy sound field surround effects, even without any surround speakers (Virtual CINEMA DSP mode). You can even enjoy surround sound presence with just a minimal configuration of the front speakers only.
This unit will switch to Virtual CINEMA DSP mode automatically when surround speakers are unavailable. ✵1

Enjoying sound field programs with headphones

Even when headphones are connected, you can enjoy the reproduction sound field presence with ease (SILENT CINEMA mode). ✵2

[7] Sound selection keys
[7] STRAIGHT
[7] STEREO

✵1 : However, Virtual CINEMA DSP mode is not available in the following conditions:
• When headphones are connected to this unit.
• When a "2ch Stereo" sound field program is selected.
• When straight decoding mode is selected.

✵2 : However, SILENT CINEMA mode is not available in the following conditions:
• When a "2ch Stereo" sound field program is selected.
• When straight decoding mode is selected.
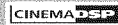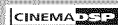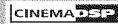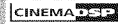
Sound field programs

| CINEMA DSP | in the table indicates the sound field program for CINEMA DSP.

■ Category: MOVIE

Sound field programs optimized for viewing video sources such as movies, TV programs, and games.

Standard CINEMA DSP	This program creates a sound field emphasizing the surround feeling without disturbing the original acoustic positioning of multi-channel audio such as Dolby Digital and DTS. It has been designed with the concept of an ideal movie theater, in which the audience is surrounded by beautiful reverberations from the left, right and rear.
Spectacle CINEMA DSP	This program represents the spectacular feeling of large-scale movie productions. It reproduces a broad theater sound field that matches cinemascope and wider-screen movies with an excellent dynamic range providing everything from very small sound effects to large, impressive sounds.
Sci-Fi CINEMA DSP	This program clearly reproduces the finely elaborated sound design of the latest science fiction and special effects-featuring movies. You can enjoy a variety of cinematographically created virtual spaces reproduced with clear separation between dialog, sound effects and background music.
Adventure CINEMA DSP	This program is ideal for precisely reproducing the sound design of action and adventure movies. The sound field restrains reverberations but puts emphasis on reproducing a powerful space expanded widely to the left and right. The reproduced depth is also restrained relatively to ensure the separation between audio channels and the clarity of the sound.
Drama CINEMA DSP	This sound field features stable reverberations that match a wide range of movie genres from serious dramas to musicals and comedies. The reverberations are modest but offer an optimum 3D feeling, reproducing effects tones and background music softly but cubically around clear words and center positioning in a way that does not fatigue the listener even after long hours of viewing.
Mono Movie CINEMA DSP	This program is provided for reproducing monaural video sources such as a classic movie in an atmosphere of a good old movie theater. The program produces the optimum expansion and reverberation to the original audio to create a comfortable space with a certain sound depth.
Sports CINEMA DSP	This program allows the listeners to enjoy stereo sport broadcasts and studio variety programs with enriched live feeling. In sports broadcasts, the voices of the commentator and sportscaster are positioned clearly at the center while the atmosphere of the stadium expands in an optimal space to offer the listeners a feeling of presence in the stadium.
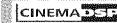
Action Game CINEMA DSP	This sound field is suitable for action games such as car racing and FPS games. It uses reflection data that limits the effects range per channel in order to offer a powerful playing environment that makes the listener feel as if they are right there by enhancing various effects tones while maintaining a clear sense of directions.
Roleplaying Game CINEMA DSP	This sound field is suitable for role-playing and adventure games. It combines the sound field effects for movies and the sound field designs for "Action Game" to represent the depth and 3D feeling of the field during play, while offering movie-like surround effects in the movie scenes in the game.
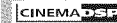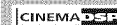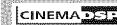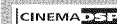
■ Category: MUSIC

This sound field is suitable when listening to music sources such as CDs.

Hall in Munich CINEMA DSP	This sound field simulates a concert hall with approximately 2500 seats in Munich, using stylish wood for the interior finishing as normal standards for European concert halls. Fine, beautiful reverberations spread richly, creating a calming atmosphere. The listener's virtual seat is at the center left of the arena.
Hall in Vienna CINEMA DSP	This is an approximately 1700-seat, middle-sized concert hall with a shoebox shape that is traditional in Vienna. Pillars and ornate carvings create extremely complex reflections from all around the audience, producing a very full, rich sound.
Chamber CINEMA DSP	This program creates a relatively wide space with a high ceiling like an audience hall in a palace. It offers pleasant reverberations that are suitable for courtly music and chamber music.
Cellar Club CINEMA DSP	This program simulates a live house with a low ceiling and homey atmosphere. A realistic, live sound field features powerful sound as if the listener is in a row in front of a small stage.
The Roxy Theatre CINEMA DSP	This is the sound field of a rock music live house in Los Angeles, with approximately 460 seats. The listener's virtual seat is at the center left of the hall.
The Bottom Line CINEMA DSP	This is the sound field at stage front in The Bottom Line, a famous New York jazz club once. The floor can seat 300 people to the left and right in a sound field offering real and vibrant sound.
Music Video CINEMA DSP	This sound field offers an image of a concert hall for live performance of pop, rock and jazz music. The listener can indulge oneself in a hot live space thanks to the presence sound field that emphasizes the vividness of vocals and solo play and the beat of rhythm instruments, and to the surround sound field that reproduces the space of a big live hall.

Category: STEREO

Suitable for listening to stereo sources.

2ch Stereo	Use this program to mix down multi-channel sources to 2 channels. When multi-channel signals are input, they are down mixed to 2 channels and output from the front left and right speakers.
5ch Stereo ᴄɪɴᴇᴍᴀ DSP	Use this program to output sound from all speakers. When you play back multi-channel sources, this unit down-mixes the source to 2 channels, and then outputs the sound from all speakers. This program creates a larger sound field and is ideal for background music at parties, etc.

Category: ENHNCR (Compressed music enhancer)

Suitable for listening to compressed audio, such as MP3.

Straight Enhancer	Use this program to restore the original depth and dynamics of 2-channel or multi-channel to compression audio.
5ch Enhancer	Use this program to play back compression artifacts in 5-channel stereo.

Category: SUR.DEC (Surround decode mode)

Select this program to playback sources with selected decoders. You can playback 2-channel sources as 5.1-channel sound.

ⅅⅅ Pro Logic	A Dolby Pro Logic decoder. Suitable for any source.
ⅅⅅ PLII Movie	A Dolby Pro Logic II decoder. Suitable for viewing any movie.
ⅅⅅ PLII Music	A Dolby Pro Logic II decoder. Suitable for listening to music.
ⅅⅅ PLII Game	A Dolby Pro Logic II decoder. Suitable for playing games.

FM/AM tuning

When using the FM/AM tuner, adjust the direction of the FM/AM antenna connected to this unit to get the best reception.
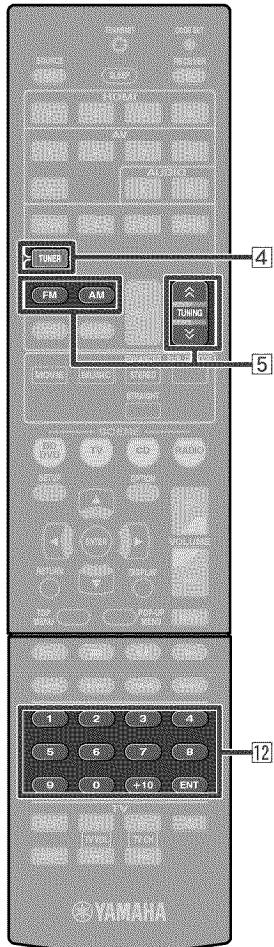
The FM/AM tuner of this unit provides the following two modes for tuning.

Normal tuning

You can tune in to a desired FM/AM station by searching or specifying its frequency.

Preset tuning (☞p. 31)

You can preset the frequencies of FM/AM stations by registering them to specific numbers, and later just select those numbers to tune in.

Selecting a frequency for reception (Normal tuning)

1 **Press ④TUNER to switch to the tuner input.**

2 **Press ⑤FM or ⑤AM to select a band to receive.**

VOL.

FM 87.5 MHz

3 **Use ⑤TUNING ⌃ / ⌄ to set a frequency to receive.**

⑤TUNING ⌃

Increases the frequency. Press and hold this key for longer than a second to search automatically for a station on a higher frequency than the current one. ☼1

⑤TUNING ⌄

Decreases the frequency. Press and hold this key for longer than a second to search automatically for a station on a lower frequency than the current one. ☼1

Lights up when receiving   Lights up when receiving
a broadcast from a station   a stereo broadcast

STEREO   VOL.
TUNED

FM 98.5 MHz

■ Entering a frequency number

In normal tuning mode, use the ⑫Numeric keys on the remote control to enter a frequency. Leave the decimal point out when entering a number. ☼2
For example, enter as follows to select a station on 98.5MHz.

⑨ → ⑧ → ⑤

④TUNER
⑤FM
⑤AM
⑤TUNING ⌃ / ⌄
⑫Numeric keys

☼1 : When searching for a station, release the key once the search has started.

☼2 : "Wrong Station!" appears on the front panel display when you enter a frequency that is out of receivable range. Make sure that the frequency entered is correct.
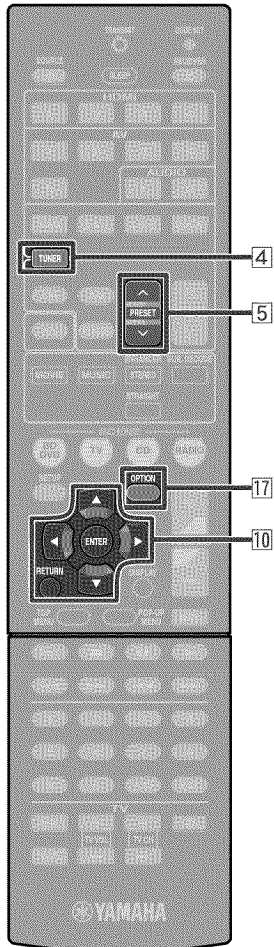
When signal reception is poor

When you are receiving an FM broadcast and cannot obtain a stable stereo broadcast, you can force this unit to receive in a monaural mode.

Press ④TUNER to switch to the tuner input.

Press ⑰OPTION to display the Option menu. ☀1

Use ⑩Cursor △ / ▽ to select "FM Mode."

```
OPTION          VOL. - 18.5
⬍FM Mode
```

Press ⑩ENTER and use the ⑩Cursor ◁ / ▷ to select "Mono."

```
98.5            VOL. - 18.5
◀ FM Mode:Mono
```

When setting is completed, press ⑰OPTION to close the Option menu.

To return this unit to its original settings, use the same procedure to return the settings to "Stereo."

④ TUNER
⑤ PRESET ∧ / ∨
⑩ Cursor △ / ▽ / ◁ / ▷
⑩ ENTER
⑩ RETURN
⑰ OPTION

Registering and recalling a frequency (Preset tuning)

You can register up to 40 FM/AM stations as preset stations. There are two methods of presetting stations, "Auto Preset" and "Manual Preset." Use one of these methods to register stations.

Presetting FM stations automatically (Auto Preset)

The tuner detects FM stations with strong signals and registers up to 40 automatically.

> AM stations cannot be automatically registered. Use manual station preset (☞p. 32).

Press ④TUNER to switch to the tuner input.

Press ⑰OPTION to display the Option menu. ☀1

Use ⑩Cursor △ / ▽ to select "Auto Preset."

```
OPTION          VOL. - 18.5
⬍Auto Preset
```

Press ⑩ENTER, then press ⑤PRESET ∧ / ∨ or ⑩Cursor △ / ▽ to choose the preset number from which to start the Auto Preset function.

Auto Preset will begin approximately 5 seconds after you select a preset number.
If you do not select a preset number, Auto Preset will begin approximately 5 seconds after "READY" is displayed.

Selecting a preset number

Status   Frequency

```
READY           VOL. - 18.5
⬍01:FM 87.5 MHz
```

Preset number
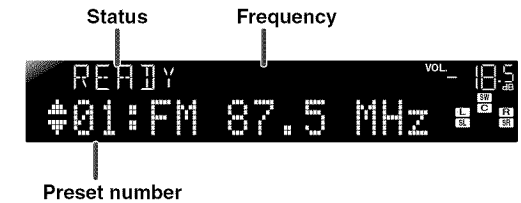
> To cancel registration, press ⑩RETURN.

During Auto Preset

Search   Preset for stations

```
SEARCH
```
⟷
```
MEMORY
```
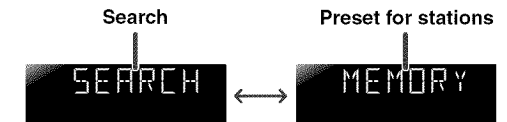
When Auto Preset is complete

```
FINISH          VOL. - 18.5
Auto Preset
```

The Option menu closes automatically when presetting is complete. ☀2

☀1 : See the section on "Configuring the settings specific for each input source (Option menu)" for details on the Option menu (☞p. 37).

☀2 : The preset with the lowest preset number will be selected automatically immediately after presetting.
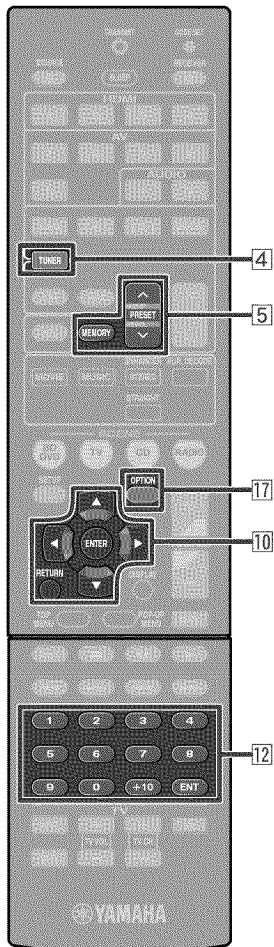
Registering stations manually (Manual Preset)

Select stations by hand and register them as presets individually.

1 Tune in to the station you wish to register, referring to "Selecting a frequency for reception (Normal tuning)" (☞p. 30).

2 Use one of the following methods to register the station you are currently receiving.

■ Registering to a preset number to which no station is registered

Press ⑤MEMORY for 2 seconds or longer.
The station will be registered automatically to the lowest open preset number (or the next number after the one registered most recently).

MEMOR Y STEREO TUNED VOL.
01:FM 98.5 MHz

Registered frequencies

④ TUNER
⑤ MEMORY
⑤ PRESET ∧ / ∨
⑩ Cursor △ / ▽
⑩ ENTER
⑩ RETURN
⑫ Numeric keys
⑰ OPTION

■ Designating a preset number for registration

Press ⑤MEMORY once, to display "Manual Preset" on the front panel display. After a small wait, the preset number that the station has been registered to will appear.

Preset number
The newly registered frequency

98.5 VOL.
01:Empty

Blinks   Empty, or the frequency registered most previously.

Press ⑤PRESET ∧ / ∨ to select the preset to register the station to, and then press ⑤MEMORY to register.

To cancel registration, press ⑩RETURN or do not operate the remote control for about 30 seconds.

Recalling a preset station

You can call preset stations registered by automatic station preset or manual station preset. ⚲1

To select a registered station, press ⑤PRESET ∧ / ∨ to select the preset number of the station. ⚲2

Clearing preset stations

1 Press ④TUNER to switch to the tuner input.

2 Press ⑰OPTION to display the Option menu. ⚲3

3 Use ⑩Cursor △ / ▽ to display "Clear Preset" and press ⑩ENTER.

The number of the preset to be cleared

CLEAR VOL.
01:FM 98.5 MHz

Blinks   Registered frequencies

Press ⑩RETURN to cancel the operation.

4 Use ⑩Cursor △ / ▽ to select the preset number you want to clear, and press ⑩ENTER to clear it.

Repeat this operation to clear the registration of multiple numbers.

5 Press ⑰OPTION to finish this operation.

⚲1 : Preset numbers to which no stations are registered will be skipped. "No Presets" or "No Presets in Memory" is displayed when there are no stations are registered.

⚲2 : To select a station by selecting a preset number, use the ⑫Numeric keys to enter the preset number of the station you wish listen to. When an invalid number is entered, "Wrong Num." appears on the front panel display. Check that you have entered the correct number.

⚲3 : See the section on "Configuring the settings specific for each input source (Option menu)" for details on the Option menu (☞p. 37).

Playing back tunes from your iPod™/iPhone™

Once you have connected a Yamaha iPod universal dock (such as the YDS-12, sold separately) to this unit, you can enjoy playback of your iPod/iPhone using the remote control supplied with this unit. When playing back from an iPod/iPhone, you can also use the compressed music enhancer sound field programs (☞p. 29) to give compressed audio formats such as MP3 a sharper, more dynamic sound.

- iPod touch, iPod (Click and Wheel including iPod classic), iPod nano, iPod mini, iPhone, iPhone 3G, and iPhone 3GS are supported (As of March 2010).
- When connecting an iPhone, please use a YDS-12.
- Some features may not be compatible depending on the model or the software version of your iPod.
- Some functions may not be available for some Yamaha iPod universal dock models. This explanation focuses on the YDS-12.

Connecting the Yamaha iPod universal dock

Use the dedicated cable to connect the dock to the DOCK jack on the rear panel of this unit. Refer to the operating instructions of the iPod universal dock for information on how to connect your iPod/iPhone.

CAUTION
To prevent accidents, place this unit in standby mode before connecting an iPod universal dock.
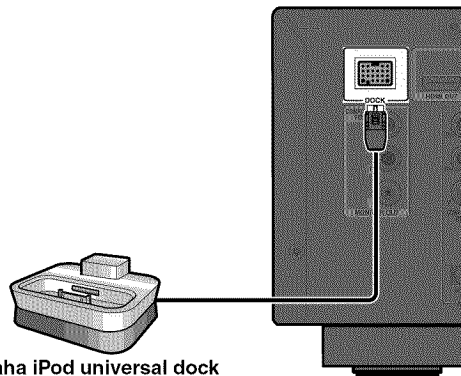
Yamaha iPod universal dock

Switch the power on and place your iPod/iPhone in the dock. The unit is now ready for playback.

Controlling an iPod/iPhone

After setting your iPod/iPhone in your dock, just press 4 DOCK to switch to DOCK input and you can operate your iPod/iPhone.
You can use the remote control of this unit to carry out basic operations (playback, stop, skip etc) on your iPod/iPhone. You can check song information on the iPod/iPhone screen.

4 DOCK	Switches to the DOCK (iPod) input.
10 Cursor △ / ▽	Move the cursor up and down to different fields.
10 Cursor ◁ / ▷	Returns to the previous menu or enter the menu you have selected.
10 ENTER	Enters the selected menu.
11 ◁◁	Searches backwards while held down.
11 ▷▷	Searches forwards while held down.
11 ⊲◁	Skips to the beginning of the currently playing song. Pressing repeatedly skips one song backwards with each press.
11 ▷▷|	Skips to the beginning of the next song.
11 □	Stops playback.
11 □□	Switches between playback and pause.
11 ▷	Switches between playback and pause.
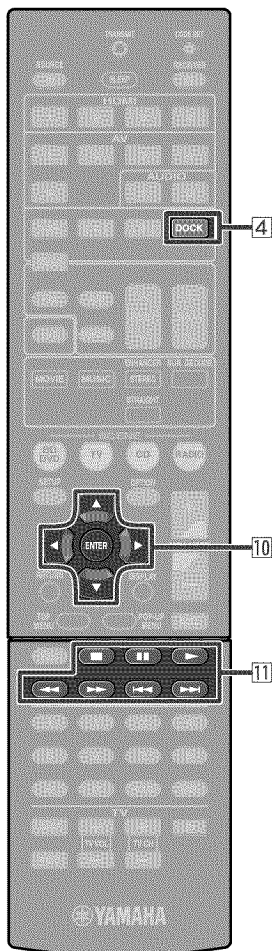
4 DOCK
10 Cursor △ / ▽ / ◁ / ▷
10 ENTER
11 □
11 □□
11 ▷
11 ◁◁
11 ▷▷
11 ⊲◁
11 ▷▷|

■ To charge the iPod/iPhone when this unit is in standby mode

If you connect an iPod/iPhone to the iPod universal dock the iPod/iPhone will always charge when this unit is turned on.

This unit can charge an iPod/iPhone even when in standby mode (iPod Standby Charge function).

Check the iPod CHARGE indicator (**iPod CHARGE**) on the front panel display of this unit to check whether this unit is charging an iPod/iPhone while in standby mode. While charging an iPod/iPhone, the iPod charge indicator lights. The indicator goes out when charging is finished.

If necessary, you can also deactivate the iPod Standby Charge function.

1 **Press ④DOCK to switch to the DOCK input.**

2 **Press ⑰OPTION to display the Option menu.**

3 **Use ⑩Cursor △ / ▽ to display "Standby Charge" and press ⑩ENTER.**

```
DOCK                    VOL  18.5
◄ Charge ····Auto►
```

4 **Use ⑩Cursor ◁ / ▷ to switch the setting to "Off."**

5 **When setting is completed, press ⑰OPTION to close the Option menu.**

To re-activate the Standby Charge function carry out this procedure again and change the "Standby Charge" setting back to "Auto."

④ DOCK
⑩ Cursor △ / ▽ / ◁ / ▷
⑩ ENTER
⑰ OPTION

Playing back tunes from Bluetooth™ components

You can connect a Yamaha Bluetooth wireless audio receiver (such as the YBA-10, sold separately) to this unit and enjoy wireless playback from Bluetooth-compatible portable music players. ☀1

NOTE

When playing back from a Bluetooth component for the first time, you must first pair the devices (register the Bluetooth components). When establishing a wireless connection you must carry out pairing on both this unit and on the Bluetooth component.

Connecting a Yamaha Bluetooth wireless audio receiver

Use the dedicated cable to connect the dock to the DOCK jack on the rear panel of this unit.
The Bluetooth wireless audio receiver connection will be complete when this unit is turned on.

Yamaha Bluetooth
wireless audio receiver

CAUTION
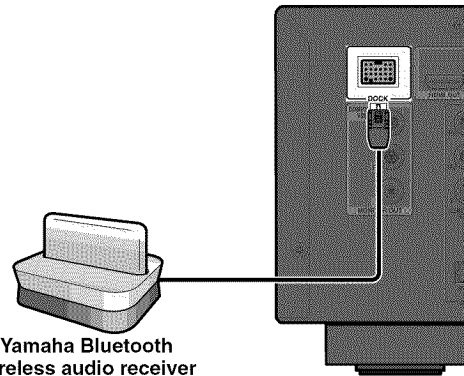
To prevent accidents, place this unit in standby mode before connecting a Bluetooth wireless audio receiver.

Pairing Bluetooth™ components

Be sure to carry out pairing when connecting a Bluetooth component for the first time, or when settings have been deleted.
Refer to the operating instructions of your Bluetooth component as necessary when carrying out pairing.

The Yamaha Bluetooth wireless audio receiver can be paired with up to eight Bluetooth components. When the ninth device is paired, the pairing settings for the device which has not been used for the longest period of time will be deleted.

1 Press ④DOCK to switch to the DOCK input.

2 Turn on the Bluetooth component you want to pair with and set it to pairing mode.

3 Press ⑰OPTION to display the Option menu and use ⑩Cursor △ / ▽ to select "Pairing."

OPTION VOL
‡Pairing

4 Press ⑩ENTER to start pairing.

DOCK VOL
Searching...

- To cancel pairing, press ⑩RETURN.
- You can also press and hold ⑤MEMORY on the front panel to begin pairing.

5 Make sure the Bluetooth component recognizes the Bluetooth wireless audio receiver.

When the device is recognized it will appear in the Bluetooth component list, for example as "YBA-10 YAMAHA."

6 Select the Bluetooth wireless audio receiver from the Bluetooth component list, and enter a pass key "0000" into the Bluetooth component.

When pairing occurs correctly

DOCK VOL
Completed

④ DOCK
⑤ MEMORY
⑩ Cursor △ / ▽
⑩ ENTER
⑩ RETURN
⑰ OPTION

☀1 : This unit supports A2DP (Advanced Audio Distribution Profile) of the Bluetooth profile.

Using Bluetooth™ components

When pairing is complete, carry out the following procedure to achieve a wireless connection between this unit and the Bluetooth component. When the wireless connection is complete, you playback from Bluetooth components.

> Depending on Bluetooth components, a wireless connection is established automatically or by operating the Bluetooth components. In that case, it is not necessary to carry out the following procedure.

1 Press ④DOCK to switch to the DOCK input.

2 Press ⑰OPTION to display the Option menu.

3 Use ⑩Cursor △ / ▽ to select "Connect" and press ⑩ENTER. ☀1

When wireless connection is complete

> "Not found" is displayed when there is an error connecting. Check that the following conditions have been satisfied, and try to establish a wireless connection again.
> • Both this unit and the Bluetooth component are paired.
> • The Bluetooth component is switched on.
> • The Bluetooth component is within 32 feet (10 meters) of the Bluetooth wireless audio receiver.

4 Operate the Bluetooth component for playback.

> To disconnect a wireless connection, repeat the same steps, and in step 3, select "Disconnect."
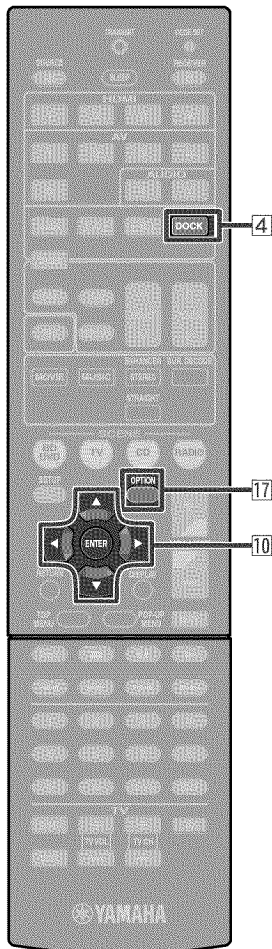
④ DOCK
⑩ Cursor △ / ▽
⑩ ENTER
⑰ OPTION

☀1 : "Disconnect" is displayed when a Bluetooth component has been connected.

SETUP

Configuring the settings specific for each input source (Option menu)

This receiver has a unique option menu specific for each type of input source, such as volume trim for compatible input sources, audio/video data display for signals from external devices, and other frequently used menu items.

Option menu display and setup

1 **Use the** ④**Input selector on the remote control to select the Option menu you wish to display.**

2 **Press** ⑰**OPTION.**

The Option menu appears for the desired input source.

Option menu

3 **Select the desired control/setup item using** ⑩**Cursor △ / ▽ and press** ⑩**ENTER.**

The displayed Option menu items differ depending on the input source.
For details, read the following Option menu items section.

4 **Select the desired menu item (or enable a function) using** ⑩**Cursor △ / ▽ / ◁ / ▷ and** ⑩**ENTER.**

Parameters of the selected item are displayed. The parameters you can set differ depending on the menu items.

- You can also use ⑩**RETURN** to return to the previous screen or close the Option menu.
- Certain selected menu items may automatically close the Option menu when their functions are enabled.

5 **To close the Option menu, press** ⑰**OPTION.**

For a few seconds after closing the Option menu, the remote control keys may not function. If this occurs, reselect the input source.

Option menu items

The following menu items are provided for each input source.

HDMI1-4	Volume Trim	Audio In	Signal Info	
AV1-2	Volume Trim	Audio In	Signal Info	
AV3-4	Volume Trim	Signal Info		
AV5	Volume Trim			
AUDIO1-2	Volume Trim			
V-AUX	Volume Trim			
TUNER	Volume Trim	FM Mode	Auto Preset	Clear Preset
iPod (DOCK)	Volume Trim	Standby Charge		
Bluetooth (DOCK)	Volume Trim	Connect/ Disconnect	Pairing	

■ Adjusting volume between input sources

Volume Trim

Input source: All

Reduces any change in volume when switching between input sources by correcting volume differences in each input source. You can adjust this parameter for each input source.

Adjustable range	-6.0 dB to 0.0 dB to +6.0 dB
Default setting	0.0 dB
Adjustment increments	0.5 dB steps
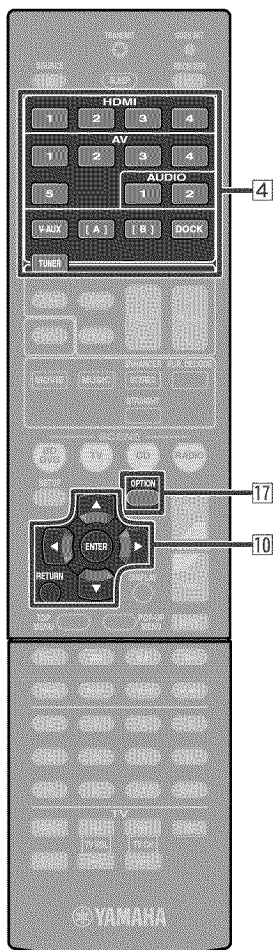
④ Input selector
⑩ Cursor △ / ▽ / ◁ / ▷
⑩ ENTER
⑩ RETURN
⑰ OPTION

Combining HDMI/AV1-2 input source video and audio

Audio In

Input source: HDMI1-4, AV1-2

Combines video from HDMI or AV input sources with analog/digital audio inputs in situations such as:
- an external device is connected with an HDMI cable but cannot transmit audio through HDMI
- an external device with component video output and analog audio output (such as certain game consoles) are connected to the system

Inputs that change the audio source
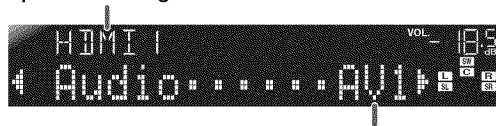
Assignable audio input jacks

To change assignments, select an input source (HDMI1-4 or AV1-2) as the video input first, and then select audio input jacks in this menu.
Set as follows according on the desired combination of audio input jacks.

Audio inputs	Settings method
Optical digital audio input	Select AV1 or AV4. Connect the external component audio cable to the optical jack for the selected input.
Coaxial digital audio input	Select AV2 or AV3. Connect the external component audio cable to the coaxial jack for the selected input.
Analog audio input	Select one of AV5, AUDIO1, or AUDIO2. Connect the external component audio cable to the audio jack for the selected input.

- For details of settings, refer to "Receiving audio from other input sources" (☞p. 16) and "Component connections to analog audio output devices" (☞p. 17).
- To return audio inputs to their previous settings, display this item again, and select the original input jack.

Displaying information on audio/video signals

Signal Info

Input source: HDMI1-4, AV1-4

Displays information on digital audio and video signals on the front panel display. You can display the signal information by pressing ⑩ENTER on the menu item and using ⑩Cursor △ / ▽.

Menu item

Information

Audio information

FORMAT	Format of audio signals.
CHAN	The number of input signal channels (front/surround/LFE). For example, if input signal channels are 3 front channels, 2 surrounds and LFE, "3/2/0.1" is displayed.
SAMPL	The sampling frequency of analog-to-digital conversion.
B RATE	The bit rate of input signal per second.

Video information

V IN	Format and resolution of video input signal.
V OUT	Format and resolution of video output signal.
V.MSG (appears only when an error has occurred)	Error messages about HDMI signals and components. **Error message** HDCP Error HDCP authentication failed. Device Over The number of connected HDMI components is over the limit.

- "No Signal" is displayed when no signals are being received, and "---" is displayed if this unit cannot recognize the incoming signal.
- The bit rate may vary during playback.

▌ Changing FM mode (Stereo/Monaural)

FM Mode

Input source: TUNER

Sets this unit to automatically match FM broadcast frequencies in stereo, or to convert the frequency to monaural (☞p. 31).

▌ Automatically presetting FM radio stations

Auto Preset

Input source: TUNER

Automatically detects radio stations in the FM frequency and registers them as preset stations (☞p. 31).

▌ Clearing preset FM stations

Clear Preset

Input source: TUNER

Clears the preset stations (☞p. 32).

▌ Charging an iPod™/iPhone™ in standby mode

Standby Charge

Input source: iPod (DOCK)

Charges an iPod/iPhone stationed in the iPod universal dock while the receiver is in standby mode (☞p. 34).

▌ Bluetooth™ wireless connections

Connect

Disconnect

Input source: Bluetooth (DOCK)

Enables/disables the Bluetooth wireless connection (☞p. 36).
Select "Connect" to establish the wireless connection. Select "Disconnect" to disable the wireless connection.

▌ Pairing the Bluetooth™ wireless audio receiver and your Bluetooth component

Pairing

Input source: Bluetooth (DOCK)

Pairs your Bluetooth wireless device and this receiver (☞p. 35).

En **39**

Setting various functions (Setup menu)

You can configure various function settings of this unit using the Setup menu.

Setup menu display and settings

1 Press ⑨SETUP on the remote control.

```
SETUP                    VOL ___ |B.5
♦ Speaker Setup  ⊞∎⊞
```

2 Use the ⑩Cursor △ / ▽ to select the desired menu and press ⑩ENTER.

Setup menu categories

Speaker Setup	Manages settings for speakers.
Sound Setup	Manages settings for audio output.
Func. Setup	Manages settings to make receiver operation easier, such as input source labeling and auto-standby functions.
DSP Parameter	Sets parameters for sound field programs.
Memory Guard	Protects settings against accidental alteration.

```
SOUND                    VOL ___ |B.5
♦ Lipsync        ⊞∎⊞
```

Ex: Sound Setup menu

3 Use ⑩Cursor △ / ▽ to navigate the submenus to find the desired setting and press ⑩ENTER.

```
HDMI                     VOL ___ |B.5
◀ Audio・・・・・・Amp▶ ⊞∎⊞
```

4 When multiple items appear, use ⑩Cursor △ / ▽ to select the desired item.

5 Press ⑩Cursor ◁ / ▷ to change the setting.

You can change other items by repeating step 4 and 5.

> You can also use ⑩RETURN to return to the previous screen.

6 Press ⑨SETUP to exit the Setup menu.

> For a few seconds after closing the Setup menu, the remote control keys may not function. If this occurs, reselect the input source.

Setup menu items

Setup menu

Speaker Setup
- Config ── Subwoofer
  - Front
  - Center
  - Sur. LR
  - Crossover
  - SWFR Phase
  - Extra Bass
- Level ── (speakers)
- Distance ── (unit and speakers)
- Equalizer ── (speakers and frequency bands)
- Test Tone

Sound Setup
- Lipsync ── HDMI Auto
  - Auto
  - Manual
- Adaptive DRC
- D.Range
- Max Volume
- Init.Volume
- HDMI Audio Out

Func. Setup
- Input Rename
- AutoPowerDown
- Dimmer

DSP Parameter

Memory Guard

⑨SETUP
⑩Cursor △ / ▽ / ◁ / ▷
⑩ENTER
⑩RETURN

En **40**
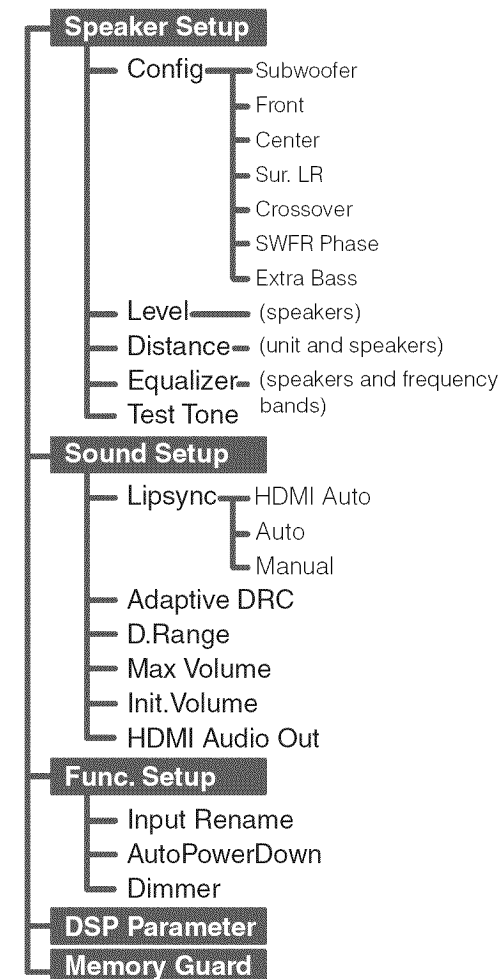
Manages settings for speakers

Speaker Setup submenu

Config	Manually manages speaker configuration, such as speaker size (sound production capacity), and bass audio processing.
Level	Manually adjusts the volume of each speaker.
Distance	Manually adjusts the output of each speaker based on distance to the listening point.
Equalizer	Selects an equalizer to adjust speaker output characteristics.
Test Tone	Generates test tones.

▌ Manual speaker setup

Config

Adjusts the output characteristics of the speakers based on manually set parameters.

In the Config submenu, you can select the speaker size characteristic (Large or Small). Select the size (sound reproduction capacity) that matches your speakers.

Woofer diameter
- 16 cm or larger → Large
- 16 cm or smaller → Small
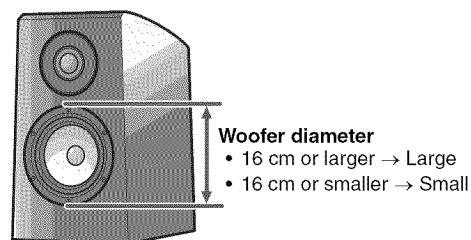
When speaker size is set to "Small," low-frequency components of the speakers that you configured are produced from the subwoofer (or from the front speakers if there is no subwoofer).

Subwoofer

Confirms the subwoofer.

Yes (Default)	Select this when you have a subwoofer connected. During playback, the subwoofer will produce audio from the LFE (low-frequency effect) channel and bass audio from other channels. ☝1
None	Select this when you do not have a subwoofer connected. The front speakers will produce audio from the LFE (low-frequency effect) channel and bass frequency audio from other channels.

Front

Selects the size (sound reproduction capacity) of the front speakers. ☝2

Small (Default)	Select this for small speakers. The subwoofer will produce front channel low-frequency components. ☝3
Large	Select this for large speakers. The front speakers will produce all of the front channel frequency components.

Center

Selects the size of the center speakers.

None	Select this when there is no center speaker. The front speakers will produce center channel audio.
Small (Default)	Select this when a small center speaker is connected.
Large	Select this when a large center speaker is connected.

Sur. LR

Selects the size of the surround speakers.

None	Select this when no surround speakers are connected. The front speakers will produce surround channel audio signals.
Small (Default)	Select this when the surround speakers are small.
Large	Select this when the surround speakers are large.

☝1 : Enabling the "Extra Bass" setting allows both the subwoofer and the front speakers to produce bass audio.

☝2 : When "Subwoofer" is set to "None," you can only choose "Large." If the front speaker setting is "Small" and you change "Subwoofer" to "None," it will automatically change to "Large."

☝3 : Enabling the "Crossover" setting allows you to set the frequency components of audio signals transmitted from the front speakers to the subwoofer.

Crossover

Sets the lower limit of low-frequency component output from speakers set to "Small."

Audio with a frequency below that limit will be produced from the subwoofer or the front speakers. ☀1

40Hz	110Hz
60Hz	120Hz
80Hz (Default)	160Hz
90Hz	200Hz
100Hz	

SWFR Phase

Sets the phase of the subwoofer if the bass audio is lacking or unclear.

NRM (Default)	Does not change the subwoofer phase.
REV	Reverses the subwoofer phase.

Extra Bass

Allows the front channel low-frequency components to be produced exclusively by the subwoofer, or by both the subwoofer and the front speakers.

On	The subwoofer and the front speakers produce the front channel low-frequency components.
Off (Default)	Depending on the size of the front speakers, either the front speakers or the subwoofer produce the front channel low-frequency components.

When the "Subwoofer" is set to "None," the "Extra Bass" setting is disabled.

▌ Controlling the volume of each speaker

Level

Separately adjusts the volume of each speaker. Use 10 Cursor △ / ▽ to select the desired speaker and adjust the volume with 10 Cursor ◁ / ▷.

FL	Front speaker L
FR	Front speaker R
C	Center speaker
SL	Surround speaker L
SR	Surround speaker R
SWFR	Subwoofer

Adjustable range	-10.0 dB to +10.0 dB
Default setting	0 dB (FL / FR / SWFR) -1.0 dB (C / SL / SR)
Adjustment increments	0.5 dB

▌ Manually setting speaker distance

Distance

Adjusts the timing at which the speakers produce audio so that sounds from the speakers reach the listening position at the same time.

Selecting adjustment units

Use 10 Cursor △ / ▽ to display "Unit," and then use 10 Cursor ◁ / ▷ to choose the units of length (feet or meters).

Setting distances for each speaker

Use 10 Cursor △ / ▽ to display the speaker you want to configure, and then use 10 Cursor ◁ / ▷ to set the distance from the speaker to your listening position.

Unit	Selects the distance unit (feet or meters).
Front L	Front speaker L
Front R	Front speaker R
Center	Center speaker
Sur. L	Surround speaker L
Sur. R	Surround speaker R
SWFR	Subwoofer

Adjustable range	1.0 ft to 80.0 ft (0.30 m to 24.0 m)
Default setting	10.0 ft (3.00 m) (Front L/Front R/SWFR) 8.5 ft (2.60 m) (Center) 8.0 ft (2.40 m) (Sur. L/Sur. R)
Adjustment increments	0.5 ft (0.10 m)

☀1 : If your subwoofer has a volume control or a crossover frequency control, set the crossover frequency to maximum and the volume to half (or slightly less).

Adjusting sound quality with the equalizer

Equalizer

Adjusts sound quality and tune with a graphic equalizer.

EQ Select

Turns the graphic equalizer on or off. By selecting GEQ and pressing [10]**ENTER**, you can adjust the characteristics of the graphic equalizer.

GEQ **(Default)**	Uses the graphic equalizer to adjust sound quality.
Off	Does not activate the equalizer.

■ Adjusting the graphic equalizer

1 When "EQ Select" is displayed, use [10]**Cursor** ◁ / ▷ to select "GEQ" and press [10]**ENTER**.

2 Check that "Channel" appears and use [10]**Cursor** ◁ / ▷ to select the speaker for which you want to adjust the equalizer.

The speaker you are adjusting

3 Press [10]**Cursor** ▽ repeatedly to select the frequency you want to adjust, then use [10]**Cursor** ◁ / ▷ to adjust the volume.

Raising volume: Press [10]**Cursor** ▷.
Lowering volume: Press [10]**Cursor** ◁.

Frequency band   Setting the volume level for
                        the selected frequency

Frequency range	63 Hz/160 Hz/400 Hz/1 kHz/2.5 kHz/6.3 kHz/16 kHz
Adjustable range	-6.0 dB to 0 dB to +6.0 dB
Default setting	0 dB
Adjustment increments	0.5 dB

You can use [10]**Cursor** △ / ▽ to select another frequency or return to step 2. Repeat steps 2-3 to adjust the tone to your liking.

4 When you have finished making adjustments, press [9]**SETUP** to close the Setup menu.

Generating test tones

Test Tone

Turns the test tone generator on or off.

Off **(Default)**	Does not generate test tones.
On	Generates test tones. While "On" is selected, test tones are produced constantly.

You can use the test tone in a variety of circumstances. For example, you can adjust the volume balance settings for each speaker, or whenever you adjust the settings on the internal graphic equalizer, you can listen to the actual effect while operating this unit. Turn the test tone off when you have finished making adjustments.

Setting the audio output function of this unit

Sound Setup submenu

Lipsync	Adjusts the delay between video and audio output.
Adaptive DRC	Auto-adjusting the sound level to make even low volumes more audible.
D.Range	Selects the dynamic range adjustment method for digital audio playback.
Max Volume	Sets the maximum volume for this receiver.
Init.Volume	Sets the initial volume for when this receiver is turned on.
HDMI Audio Out	Selects audio signals received through the HDMI input jack.

▌ Synchronizing audio/video output

Lipsync

Adjusts the delay between audio and video output (Lipsync function).

HDMI Auto

When connecting to a TV via HDMI, automatically adjusts output timing if the TV supports an automatic lipsync function.

Off (Default)	Select this when the connected TV does not support the automatic lipsync function or you do not wish to use the automatic lipsync function. Set the correction time in "Manual."
On	Select this when the TV supports the automatic lipsync function. Fine-adjust the correction time in "Auto."

Auto

Fine-adjust the audio output timing by entering the correction time provided when "HDMI Auto" is set to "On."

Adjustable range	0 ms to 240 ms
Adjustment increments	1 ms

Manual

Manually adjusts the correction time. Select this when the TV does not support the automatic lipsync function or "HDMI Auto" is set to "Off."

Adjustable range	0 ms to 240 ms
Adjustment increments	1 ms
Default setting	0 ms

▌ Auto-adjusting the sound level to make even low volumes more audible

Adaptive DRC

Adjusts the dynamic range in conjunction with the volume level (from minimum to maximum). When you play audio at night or at low volumes, it is a good idea to set parameter to "Auto." ☀1

Auto	Adjusts the dynamic range automatically.
Off (Default)	Does not adjust the dynamic range automatically.

When the auto function is enabled, it adjusts the dynamic range as follows.

Input Level	**Input Level**
Volume: low	**Volume: high**
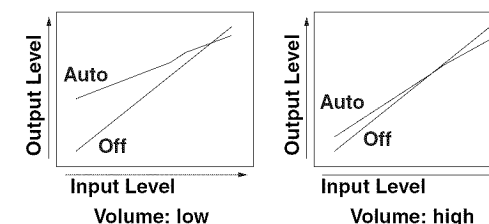
☀1 : The Adaptive DRC setting is also effective when you use headphones.

Auto-adjusting Dolby Digital and DTS dynamic range

`D.Range`

Selects the dynamic range adjustment method for audio bitstream (Dolby Digital and DTS) playback.

Max (Default)	Produces audio without adjusting the dynamic range.
STD	Sets the standard dynamic range suitable for home use.
Min	Sets the dynamic range at the lowest level for playback. This is useful for low-volume audio.

Setting the maximum volume

`Max Volume`

Sets a maximum volume level so that the audio is not played too loudly. The default setting of +16.5 dB produces the highest volume.

Adjustable range	-30.0 dB to +15.0 dB / +16.5 dB (Maximum volume)
Default setting	+16.5 dB
Adjustment increments	5.0 dB

Setting the startup volume

`Init.Volume`

Sets the initial volume for when this receiver is turned on. When this parameter is set to "Off," the volume is set at the level when the receiver last entered standby mode. ☼1

Adjustable range	Off, Mute, -80 dB to +16.5 dB
Default setting	Off
Adjustment increments	0.5 dB

Changing the output destination of HDMI input audio signals

`HDMI Audio Out`

Choose whether to playback audio from an external component such as a BD/DVD player connected via HDMI through this unit or through a TV.

Amp (Default)	Outputs audio through this unit only. When this setting is selected, the external component outputs an audio format compatible with this unit.
TV	Outputs audio through a TV only. When this setting is selected, the external component outputs an audio format compatible with the TV. ☼2
Amp+TV	Outputs audio from the TV and this unit. When this setting is selected, the external component outputs an audio format compatible with this unit and TV.

☼1 : When you set the "Max Volume" at a lower level than "Init.Volume," the "Max Volume" setting has priority.
☼2 : When "TV" is selected, the speakers of this unit do not output sound.

Making the receiver easier to use

Func. Setup submenu

Input Rename	Changes the input source names.
AutoPowerDown	Goes into standby mode.
Dimmer	Sets the Brightness of the front panel display.

■ Changing input source names

Input Rename

Changes the input source names to be shown on the front panel display.

You can change an input source name by choosing from a list of templates, or make one of your own.

■ Selecting a template

1 Select "Input Rename" from the Setup menu and press ⑩ENTER.

Renaming the input source

2 Select the input source that you want to rename using ⑩Cursor △ / ▽.

---

3 Use ⑩Cursor ◁ / ▷ to select a new name from the following templates.

Blu-ray	Satellite
DVD	VCR
SetTopBox	Tape
Game	MD
TV	PC
DVR	iPod
CD	HD DVD
CD-R	(blank)

4 Confirm the new display name by pressing ⑩RETURN. Press ⑨SETUP to exit the Setup menu.

To cancel a name change, select the original name and then press ⑩RETURN to exit renaming.

■ Entering an original name

1 Select "Input Rename" from the Setup menu and press ⑩ENTER.

Renaming the input source

2 Select the input source that you want to rename using ⑩Cursor △ / ▽.

---

3 Press ⑩ENTER.

Cursor

4 Use ⑩Cursor △ / ▽ to select the characters you wish to change, and use ⑩Cursor ◁ / ▷ to enter those characters.

The following characters are available for input source.

- A to Z, a to z
- 0 to 9
- Symbols (#, *, -, +, etc.)
- Space

5 Repeat step 4 until you have entered the new input source name.

6 Confirm the new display name by pressing ⑩ENTER. Press ⑨SETUP to exit the Setup menu.

To cancel a name change, press ⑩RETURN.

---
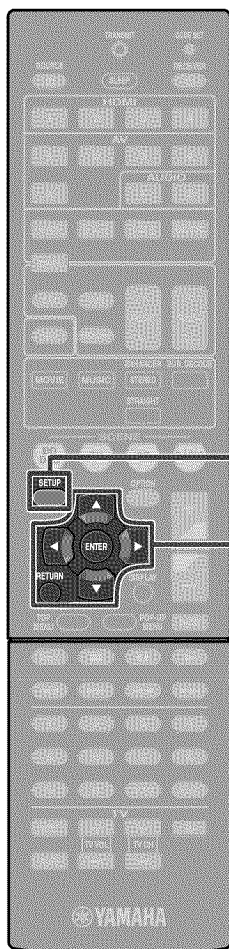
⑨ SETUP
⑩ Cursor △ / ▽ / ◁ / ▷
⑩ ENTER
⑩ RETURN

Goes enter standby mode automatically when you leave it without operating

AutoPowerDown

If you do not operate this unit or use the remote control for an extended period of time, it will automatically go into standby mode (Auto Power Down function). This function's default setting is "Off." When you wish to activate this function, set the amount of time to pass before this unit will enter standby.

Off (Default)	Auto Power Down function is disabled.
4hours	Goes into standby mode, when you have not operated this unit for four hours.
8hours	Goes into standby mode, when you have not operated this unit for eight hours.
12hours	Goes into standby mode, when you have not operated this unit for twelve hours.

This unit starts a countdown of 30 seconds before entering the standby mode. Pressing any key of the remote control during the countdown cancels entering the standby mode and reset the timer.

Setting the brightness of the front panel display

Dimmer

Sets the brightness of the front panel display. Lowering the setting dims the display.

Adjustable range	-4 to 0
Default setting	0

Setting sound field program parameters

You can set the parameters for the sound field programs (☞ p. 48).

Prohibiting setting changes

Prohibits setting changes to prevent careless changes being made to the settings on Setup menu.

Off (Default)	Settings are not protected.
On	Prohibits changes to the settings on Setup menu until it is returned to "Off." While set to "On," the unit displays "Memory Guard!" when an attempt is made to change the settings.

Setting sound field program parameters

Although the sound field programs would satisfy you as they are with the default parameters, you can arrange the effect by setting the sound field elements (parameters). To adjust the sound effects suitable for acoustical conditions of audio/video sources or rooms, perform the following operations.

Setting sound field parameters

1 Press [9]SETUP to display the Setup menu.

2 Use [10]Cursor △ / ▽ to select "DSP Parameter" and press [10]ENTER.

```
SETUP                    VOL._ 18.5
♦ DSP Parameter
```

3 Use [10]Cursor ◁ / ▷ to choose the sound field program you want to edit.

```
DSPPRM CINEMA DSP        VOL._ 18.5
◀♦   Sci-Fi   ▶
```

Sound field program to be edited

4 Press [10]Cursor △ / ▽ to select the parameter that you want to change, and press [10]Cursor ◁ / ▷ to change the parameter.

```
DSPPRM CINEMA DSP        VOL._ 18.5
◀♦DSP Level··0dB▶
```

Sound field parameter   Choices

When there are multiple parameters in the sound field program you are configuring, repeat step 4 as necessary to change other parameters.

5 Once you have completed editing, press [9]SETUP to close the Setup menu.

■ To initialize the sound field parameters

To set the parameters of the sound field program back to default, press [10]Cursor ▽ repeatedly during editing to select "Initialize" and press [10]Cursor ▷. When "Press Again >" is displayed, press [10]Cursor ▷ again to initialize.

```
DSPPRM CINEMA DSP        VOL._ 18.5
♦Initialize   ▶
```

To cancel operations, press [10]Cursor ◁ when "Press Again" appears and return to the original display.

■ CINEMA DSP parameters

DSP Level

Change the effect level (level of the sound field effect to be added). You can adjust the level of the sound field effect while checking the sound effect.

Adjustable range	-6 dB to 0 dB to +3 dB
Default setting	0 dB

Adjust "DSP Level" as follows:
- The effect sound is too soft.
- There are no differences between effects of the sound field programs.
  → Increase the effect level.
- The sound is dull.
- The sound field effect is added too much.
  → Reduce the effect level.
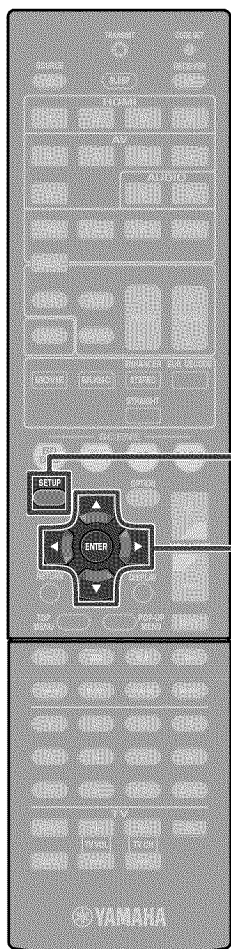
[9]SETUP
[10]Cursor △ / ▽ / ◁ / ▷
[10]ENTER

Parameters usable in certain sound field programs

2ch Stereo only

Direct

Automatically bypasses the DSP circuit and tone control circuit depending on the condition of tone control etc., when an analog sound source is played back. You can enjoy a higher quality sound.

Auto (Default)	Outputs sound by bypassing the DSP circuit and tone control circuit when both tone controls of "Bass" and "Treble" are set to 0dB.
Off	Does not bypass the DSP circuit and tone control circuit.

5ch Stereo only

CT Level

Adjusts the center channel volume. ☀1

Adjustable range	0 to 100%
Default setting	100%

SL Level

Adjusts the volume of the surround L channel. ☀1

Adjustable range	0 to 100%
Default setting	100%

SR Level

Adjusts the volume of the surround R channel. ☀1

Adjustable range	0 to 100%
Default setting	100%

Straight Enhancer/5ch Enhancer only

EFCT LVL

Adjusts the effect level of the compressed music enhancer mode.

High (Default)	Standard effect.
Low	Sets when the high-frequency signals of the source are emphasized excessively.

Parameters usable in surround decoder

ⅅⅅ PLII Music only

Panorama

Adjusts the soundscape of the front sound field. Sends front left/right channels sounds to the surround speakers as well as the front speakers for a wraparound effect.

Off (Default)	Disables the effect.
On	Enables the effect.

CT Width

Spreads the center channel sound to the front left and right speakers to suit your needs or preferences. Set this parameter to 0 for outputting the center sound from the center speaker only, or to 7 for outputting it from the front left/right speaker only.

Adjustable range	0 to 7
Default setting	3

Dimension

Adjusts the difference in level between the front sound field and the surround sound field. You can adjust the difference in level created by the software being played back to obtain the preferred sound balance.
The surround sound gets stronger as you make the value more negative, and the front sound gets stronger as you make the value more positive.

Adjustable range	-3 to STD to +3
Default setting	STD (Standard)

☀1 : Not displayed when speakers are set to be inactive.

Controlling other components with the remote control

You can operate an external component such as TV and DVD player with the remote control of this unit by setting the code for external component (remote control code). The remote control code can be set for each input source. Individual setting allows you to switch external components seamlessly depending on the selected input source.

Selecting input source connected to DVD player
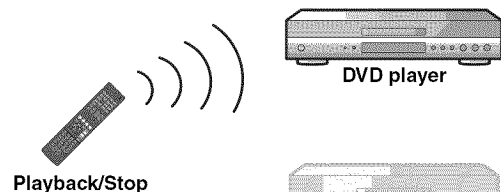
DVD player

Playback/Stop

CD player

Selecting input source connected to CD player

DVD player

Playback/Stop

CD player

If you are unable to operate this unit after operating an external component, press [9]SETUP or [17]OPTION and then try operating the remote control again.

[3] SOURCE ⏻
[4] Input selector
[9] SETUP
[10] Cursor △ / ▽ / ◁ / ▷
[10] ENTER
[10] RETURN
[11] External component operation keys
[11] DISPLAY
[12] Numeric keys
[13] TV control keys
[13] INPUT
[13] MUTE
[13] TV VOL +/-
[13] TV CH +/-
[13] ⏻
[17] OPTION
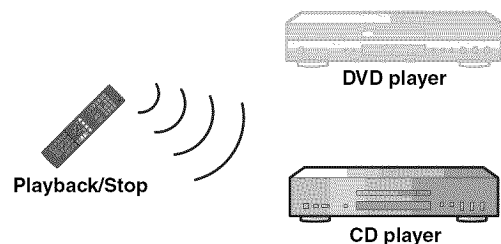
Keys connecting external components

The remote control keys for controlling external components are available only when the external components have corresponding control keys.

[3]SOURCE ⏻
Switches an external component on and off.

[10]Cursor, [10]ENTER, [10]RETURN
Operates the menus of external components.

[11]DISPLAY
Switches an external component display.

[11]External component operation keys
Functions as a recording or playback key of an external component, or a menu display key.

[12]Numeric keys
Functions as numeric keys of an external component.

[13]TV control keys ☀1

[13]INPUT	Switches video inputs of TV.
[13]MUTE	Mutes TV volume temporarily.
[13]TV VOL +/-	Controls the volume of TV.
[13]TV CH +/-	Switches TV channels.
[13]⏻	Turns on and off TV

Default remote control code settings

The following remote control codes are assigned to input sources as factory default settings. For a complete list of available remote control codes, please refer to "Remote Control Code Search" in the CD-ROM.

Input	Category	Manufacturer	Remote control code
HDMI1	Blu-ray player/ recorder	Yamaha	2064
HDMI2	—	—	—
HDMI3	—	—	—
HDMI4	—	—	—
AV1	—	—	—
AV2	—	—	—
AV3	CD player	Yamaha	5095
AV4	—	—	—
AV5	—	—	—
AUDIO1	—	—	—
AUDIO2	—	—	—
V-AUX	—	—	—
A/B ☀2	—	—	—
DOCK	DOCK	Yamaha	5089
TUNER	Tuner	Yamaha	5085

☀1 : You can register remote control codes for external components to [4]Input selector and remote control codes for TVs in [13]⏻ ([13]TV control keys).
To register a TV remote control code to [4]Input selector:
You can use the [10]Cursor, [12]Numeric keys, and [13]TV control keys to control a TV you have registered.

To register a remote control code for a device other than a TV to [4]Input selector:
You can use the [10]Cursor and [12]Numeric keys etc to control external components, and the [13]TV control keys to control TVs registered in [13]⏻.

☀2 : Use A/B for external component operations only. Set these keys to remote control codes if you want to perform external component operations without linking to input source selection of this unit. For example, it may be convenient to assign remote control codes for devices such as TVs.
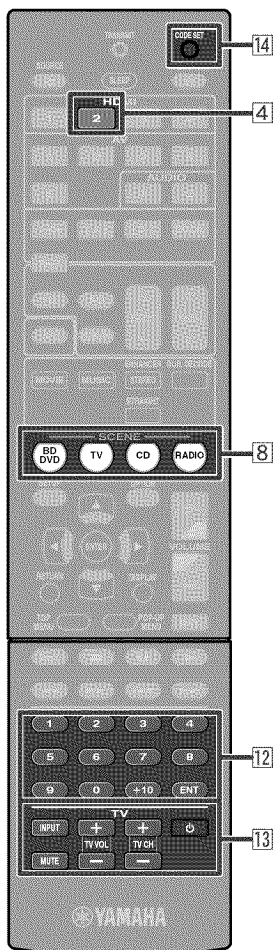
Registering remote control codes for external component operations

The following section describes how to register remote control code using an example of the registration of the remote control codes of a Yamaha BD player connected to HDMI2 jack.

> - Perform each of the following steps within 1 minute. Settings will be automatically stopped if more than 1 minute passes since the last operation. To reset, repeat from step 2.
> - Remote control code of an external component cannot be set from the name or model number of a unit. Use "Remote Control Code Search" in the CD-ROM to search the available remote control codes from the category or manufacturer of external components.
> - If multiple remote control codes exist, first set the first code in the list, if it does not work then try the other codes.

1 Use "Remote Control Code Search" in the CD-ROM to search the available remote control codes from the category or manufacturer of external components.

"2064" can be used for a Yamaha BD player.

2 Press ⑭CODE SET on the remote control using a pointed object such as the tip of a ballpoint pen.

④ HDMI2
⑧ SCENE
⑫ Numeric keys
⑬ TV control keys
⑬ ⏻
⑭ CODE SET

3 Press ④HDMI2 on the remote control to switch the input source to HDMI2. ☀1

Perform the following steps to register the selected input source here to the remote control code.

4 Enter a remote control code "2064" using ⑫Numeric keys. ☀2

2 → 0 → 6 → 4

Once the remote control code is registered successfully the remote control will blink twice.

Registration successful: blinks twice
Registration failed: blinks 6 times
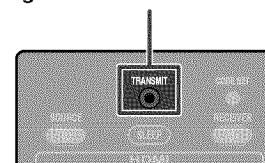
> - If the registration fails, repeat the step 2.
> - In case of an external component with multiple remote control codes, the other remote control codes may be supported. Repeat from step 2 with the other remote control codes.

5 To switch between BD player linked to scene selections, press ⑧SCENE and at the same time press ④HDMI2 and hold it for approximately 3 seconds.

Then you can operate the external components by switching the input source to HDMI2, or selecting HDMI2 in the registered scene.

Same steps for operating other external components, press ⑧SCENE and at the same time press the input source key selected in step 3 and hold it for approximately 3 seconds.

☀1 : When you want to register a remote control code to the ⑬TV control keys, press ⑬⏻ (⑬TV control keys) in step 3.
☀2 : When you want to register a remote control code to the ⑬TV control keys, enter the TV remote control code in step 4.

En 51
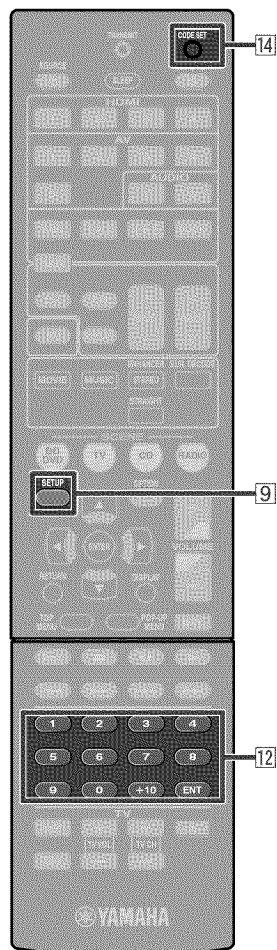
Resetting all remote control codes

Resetting all remote control codes for external components to the initial factory settings.

Perform each of the following steps within 1 minute. Settings will be automatically stopped if more than 1 minute passes since the last operation. To reset, repeat from step 2.

1 **Press ⑭CODE SET on the remote control using a pointed object such as the tip of a ballpoint pen.**
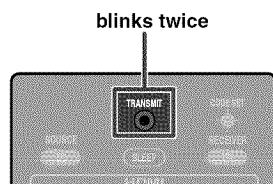
blinks twice

2 **Press ⑨SETUP on the remote control.**

3 **Enter "9981" using ⑫Numeric keys.**

9 → 9 → 8 → 1

Once the remote control code is registered successfully the remote control will blink twice.

Registration successful: blinks twice
Registration failed: blinks 6 times
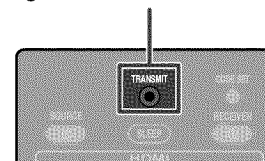
If setup fails, repeat from step 1.

⑨SETUP
⑫Numeric keys
⑭CODE SET

Extended functionality that can be configured as needed (Advanced Setup menu)

The Advanced Setup menu can be used for unit initialization and other useful extended functions. The Advanced Setup menu can be operated as follows.

Displaying/Setting the Advanced Setup menu

1 Set this unit to the standby mode.

2 Press ⏻ while pressing and holding STRAIGHT on the front panel.

Release the keys when "ADVANCED SETUP" is displayed on the front panel display.
After approximately 3 seconds, the top menu items are displayed.

STRAIGHT

PROGRAM ◁ / ▷

SP IMP. -8ΩMIN
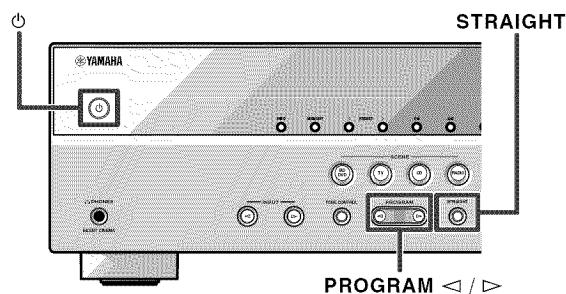
3 Use PROGRAM to select the item to be set from the following items.

In the Advanced Setup menu, you can set the following settings.

SP IMP.	Sets the impedance of speakers.
REMOTE ID	Changes the remote control ID of a receiver.
INIT	Initializes various settings for this unit.

4 Press STRAIGHT a few times to select the value you wish to change.

5 Switch this unit to the standby mode, and then switch it on again.

The settings become effective and the unit is powered on. If initialization is selected, it will be performed when the unit is powered on again.

Setting the impedance of speakers

SP IMP. -8ΩMIN

Changes the unit settings depending on the impedance of the speakers connected. ☀1

6ΩMIN	Select the impedance when 6Ω speakers are connected.
8ΩMIN (Default)	Select the impedance when speakers above 8Ω are connected.

☀1 : For detailed procedures of speaker impedance settings, refer to "Changing speaker impedance" (☞p. 10).

Avoiding crossing remote control signals when using multiple Yamaha receivers

REMOTE ID -ID1

The remote control of the unit can only receive signals from a receiver which has an identical ID (remote control ID). When using multiple Yamaha AV receivers, you can set each remote control with a unique remote control ID for its corresponding receiver.
On the contrary, if you are setting the same remote control ID for all receivers, you can use one remote control to operate 2 receivers.

ID1 (Default)	Receives the remote control signals set in ID1.
ID2	Receives the remote control signals set in ID2.

ID1 is set for both remote control and receiver by default. To avoid crossing remote control, change the remote control ID for both remote control and receiver.

9 SETUP
12 Numeric keys
14 CODE SET

■ To change the remote control ID

Perform each of the following steps within 1 minute. Settings will be automatically stopped if more than 1 minute passes since the last operation. To reset, repeat from step 1.

1 Press 14 CODE SET on the remote control using a pointed object such as the tip of a ballpoint pen.

2 Press 9 SETUP on the remote control.

3 Enter the desired remote control ID code.

To switch to ID1:
Enter "5019" using 12 Numeric keys.

To switch to ID2:
Enter "5020" using 12 Numeric keys.

Once the remote control code is registered successfully the remote control will blink twice.

Registration successful: blinks twice
Registration failed: blinks 6 times

- If setup fails, repeat from step 1.
- Returns to ID1 after the remote control code is initialized (p. 52).

Initializing various settings for this unit

INIT- CANCEL

Initializes various settings stored in this unit and sets it back to default.
Select the items to be initialized from the following.

DSP PARAM	Initializes all parameters for the sound field programs.
ALL	Resets this unit to default factory settings.
CANCEL (Default)	Does not initialize.

APPENDIX

Troubleshooting

Refer to the table below when this unit does not function properly.
If the problem you are experiencing is not listed below, or if the instructions below do not help, turn off this unit, disconnect the power cable, and contact the nearest authorized Yamaha dealer or service center.

General

Problem	Cause	Remedy	See page
The power will not turn on.	The protection circuitry operated three times consecutively.	As a safety precaution, when the protection circuitry operates three times consecutively, the capability to turn on the power is disabled. Please contact your nearest Yamaha dealer or service center to request repair.	—
The unit enters standby mode soon after the power is turned on.	The power cable is not completely inserted.	Connect the power cable properly to an AC wall outlet.	—
	The speaker impedance settings are incorrect.	Set the speaker impedance to match your speakers.	10
	(When this unit is turned back on and "CHECK SP WIRES!" is displayed.) The protection circuitry has been activated because this unit was turned on while a speaker cable was shorted.	Make sure that all speaker cables between this unit and speakers are connected properly.	12
This unit cannot be turned off or does not work properly.	The internal microcomputer is hung-up due to an external electric shock (such as lightning or excessive static electricity) or by a drop in power supply voltage.	Disconnect the power cable from the AC wall outlet, wait about 30 seconds and then plug it in again.	—
	The batteries in the remote control may have lost their charge.	Replace all batteries.	4
The unit enters standby mode.	The protection circuitry has been activated because of a short circuit, etc.	Check that the speaker impedance settings are correct.	10

Problem	Cause	Remedy	See page
After display of a countdown on the front panel, the unit goes into standby mode.	If you do not use take any action, the Auto Power Down function operates.	Turn on the unit, and play the source again.	—
		In the Setup menu "AutoPowerDown" ("Func. Setup" → "AutoPowerDown"), increase the time until switching to standby mode, or turn off the Auto Power Down function.	47
"Internal Error" is displayed on the front panel display.	An internal error has occurred.	Please contact authorized Yamaha dealer or service center to request repair.	—
Sound/images suddenly go off.	The protection circuitry has been activated because of a short circuit, etc.	Check that the speaker impedance settings are correct.	10
		Check that the speaker wires are not touching each other, then turn the unit back on.	—
	The sleep timer has turned off the unit.	Turn on the unit, and play the source again.	—

Problem	Cause	Remedy	See page
No sound.	Incorrect input or output cable connections.	Connect the cables properly. If the problem persists, the cables may be defective.	16
	If a DVI-HDMI cable is used to connect the unit with an external component, then it is necessary to use an audio input jack for a different input to output audio.	Display the HDMI Input Option menu for the connected cable, select "Audio In," and select the jack to use for audio input.	38
	Speaker connections are not secure.	Secure the connections.	12
	The HDMI components connected to the unit do not support the HDCP copy protection standards.	Connect HDMI components that support the HDCP copy protection standards.	38
	The audio input into the device is set to playback through the TV.	In the Setup menu, set the HDMI Audio Out ("Sound Setup" → "HDMI Audio Out") to other than "TV."	45
	No appropriate input source has been selected.	Select an appropriate input source with ④Input selector (on the remote control).	25
	The volume is turned down or muted.	Turn up the volume.	—
	Signals that this unit cannot reproduce are being input from a source component, such as a CD-ROM.	Use an input source that has signals that can be reproduced on this unit.	—
No picture.	A video jack (ex. Video input → HDMI output) type different to the input video is being used to try to display content on the TV.	Use video jacks of the same type (ex. Video input → Video output) to connect to the TV.	14
	An appropriate video input is not selected on the TV.	Select an appropriate video input on the TV.	—

Problem	Cause	Remedy	See page
No sound is output from a specific speaker.	The speaker is malfunctioning. Check the Speaker indicators on the front panel display. If the corresponding indicator lights up, connect another speaker and check if sound is output.	If sound is not output, the unit may be malfunctioning.	7
	The playback component or speakers are not connected properly.	Connect the cables properly. If the problem persists, the cables may be defective.	12, 16
	Output from that speaker is disabled.	Check the Speaker indicators on the front panel display. If the corresponding indicator is turned off, try the following. 1) Change to a different input source. 2) With the selected sound field program, sound is not output from that speaker. Select another sound field program. 3) "None" may have been selected for that speaker on this unit. Display "Speaker Setup" in the Setup menu, and set respective parameters to enable output from that speaker ("Speaker Setup" → "Config").	7, 41
	The volume of that speaker is set to the minimum in "Speaker Setup" in the Setup menu.	Display "Speaker Setup" in the Setup menu and adjust the volume ("Speaker Setup" → "Level").	42
	(If hardly any sound comes from one channel) Speaker output balance is not set correctly.	Balance the volume of each speaker from "Level" in the Setup menu ("Speaker Setup" → "Level").	42
	Sound may not be output from certain channels, depending on the input source or sound field program.	Try another sound field program.	26
Only the center speaker outputs substantial sound.	When a monaural source sound field program is applied, for some surround decoders, sound from all channels is output from the center speaker.	Try another sound field program.	26

Problem	Cause	Remedy	See page
No sound is heard from the surround speakers.	This unit is in straight decoding mode and a monaural source is being played back.	Press [7] **STRAIGHT** (on the remote control) to exit straight decoding mode.	27
	Sound may not be output from certain channels depending on input sources or sound field programs.	Try another sound field program.	26
No sound is heard from the subwoofer.	A subwoofer is not connected, or it is disabled.	Check that a subwoofer is connected correctly, and from the Setup menu "Subwoofer" ("Speaker Setup" → "Config" → "Subwoofer"), set the subwoofer to "On."	41
	The subwoofer is turned off.	Turn the subwoofer power on. If the subwoofer includes an Auto Power Off function, then lower the Auto Power Off sensitivity settings.	—
	The source does not contain LFE (☞ p. 61) or low frequency signals.		—
The right combination of audio / video jacks to connect cannot be found.	Combine input connected to the external component video output with another input audio jack.	Select a desired input source (HDMI1-4 or AV1-2) as a video input and select a audio input source from "Audio In" in the Option menu.	38
The audio input sources cannot be played in the desired digital audio signal format.	The connected component is not set to output the desired digital audio signals.	Set the playback component properly referring to its instruction manual.	—
	This unit does not support playback of HD Audio (TrueHD, Dolby Digital plus, DTS Master Audio, etc.) or DTS 96/24, etc.	Signals, such as HD Audio and DTS 96/24, can be played by standard decoders (Dolby Digital, DTS Digital Surround, etc.).	—
There is noise interference from digital or radio frequency equipment.	This unit is too close to other digital or radio frequency equipment.	Move this unit further away from such equipment.	—

Problem	Cause	Remedy	See page
Noise/hum noise is heard.	Incorrect cable connection.	Connect the audio cables properly. If the problem persists, the cables may be defective.	—
	A DTS-CD is being played back.	If a DTS bitstream signal is not properly input to this unit, only noise is output. Connect the playback component to this unit by digital connection and play back the DTS-CD. If the condition is not resolved, the problem may result from the playback component. Consult the manufacturer of the playback component.	—
The volume cannot be increased, or the sound is distorted.	The component connected to the output jacks of this unit is not turned on.	When the component connected to the output jacks of this unit is not turned on, the sound may be distorted, or the volume may decreased due to the nature of AV receivers. Turn on all components connected to this unit.	—
	"Max Volume" is set to a low value.	Set it to a higher value.	45

HDMI™

Problem	Cause	Remedy	See page
The front panel display HDMI indicator is flashing.	An error with the HDMI connection has occurred.	Try re-inserting the HDMI cable.	—
		Confirm that HDMI video that is not supported by the unit is not being input (HDMI Input → Option menu → "Signal Info").	38
No picture or sound.	The number of components is over the limit.	Disconnect some of the HDMI components.	—
	The connected HDMI component does not support high-bandwidth digital copyright protection (HDCP).	Connect an HDMI component that supports HDCP.	—

FM

Problem	Cause	Remedy	See page
FM stereo reception is noisy.	You are too far from the station transmitter, or the input from the antenna is weak.	Check the antenna connections.	21
		Switch to monaural mode.	31
		Replace the outdoor antenna with a more sensitive multi-element antenna.	—
There is distortion, and clear reception cannot be obtained even with a good FM antenna.	There is multi-path interference.	Adjust the antenna height or orientation, or place it in a different location.	—
The desired station cannot be tuned into with the automatic tuning method.	You are in an area far from a station, or input from the antenna is weak.	Replace the outdoor antenna with a more sensitive multi element antenna.	—
		Use 5 TUNING ⌃ / ⌄ (on the remote control) to manually select the station.	30
"No Presets" is displayed.	No preset stations are registered.	Register stations you wish to listen to as preset stations before operation.	31
"Wrong Station" is displayed.	An invalid FM/AM frequency has been input.	Input a frequency that can be received.	—

AM

Problem	Cause	Remedy	See page
The desired station cannot be tuned into with the automatic tuning method.	The signal is weak, or the antenna connections are loose.	Adjust the AM loop antenna orientation.	21
		Use the manual tuning method.	30
Automatic station preset does not work.	Automatic station preset is not available for AM stations.	Use manual station preset.	32
Continuous crackling and hissing noises are heard.	The supplied AM loop antenna is not connected.	Connect the AM loop antenna correctly even if you use an outdoor antenna.	21
	The noises may be caused by lightning, fluorescent lamps, motors, thermostats, or other electrical equipment.	It is difficult to completely eliminate noise, but it can be reduced by installing and properly grounding an outdoor AM antenna.	21
Buzzing and whining noises are heard.	A TV set is being used nearby.	Move this unit away from the TV set.	—

Remote control

Problem	Cause	Remedy	See page
The remote control does not work or function properly.	Wrong distance or angle.	The remote control will function within a maximum range of 20 ft / 6 m, and no more than 30 degrees off-axis from the front panel.	—
	Direct sunlight or lighting (from an inverter type of fluorescent lamp, strobe light, etc.) is striking the remote control sensor of this unit.	Adjust the lighting angle, or reposition this unit.	—
	The batteries are weak.	Replace all batteries.	4
	The remote control ID of the remote control and this unit do not match.	Match the remote control ID of this unit and the remote control.	54
External components cannot be controlled using the remote control.	The remote control code is not correctly set.	Set the remote control code correctly using "Remote control code search" on the CD-ROM.	—
		Try setting another code for the same manufacturer using "Remote control code search" on the CD-ROM.	—
		If this unit does not work when you press ⑩Cursor △ / ▽ / ◁ / ▷ (on the remote control), do the following. When the key does not work during DVD disc menu operation: press the ④Input selector (on the remote control) again.	—
		When the key does not work during Option menu/Setup menu operation: press the key corresponding to the current menu operation again.	—
		Even if the remote control code is correctly set, there are some models that do not respond to the remote control.	—

iPod™/iPhone™

Display	Cause	Remedy	See page
Loading...	The unit is in the process of recognizing the connection with your iPod/iPhone.		—
	The unit is in the middle of acquiring song lists from your iPod/iPhone.		—
Connect error	There is a problem with the signal path from your iPod/iPhone to the unit.	Turn off the unit and reconnect the Yamaha iPod universal dock to the DOCK jack of the unit.	33
		Remove your iPod/iPhone from the Yamaha iPod universal dock and then place it back in the dock.	33
Unknown iPod	The iPod/iPhone being used is not supported by the unit.	Connect an iPod/iPhone supported by the unit.	—
iPod connected	Your iPod/iPhone is properly placed in the Yamaha iPod universal dock.		—
Disconnected	Your iPod/iPhone is removed from the Yamaha iPod universal dock.		—
Unable to play	The unit cannot play back the songs currently stored on your iPod/iPhone.	Check that songs are currently stored on your iPod/iPhone.	—

Bluetooth™

Display	Cause	Remedy	See page
Searching...	The Yamaha Bluetooth wireless audio receiver and the Bluetooth component are in the process of pairing.		—
	The Yamaha Bluetooth wireless audio receiver and the Bluetooth component are in the process of establishing a connection.		—
Completed	The pairing is completed.		—
Canceled	The pairing is canceled.		—
BT connected	The connection between the Yamaha Bluetooth wireless audio receiver and the Bluetooth component is established.		—
Disconnected	The Bluetooth component is disconnected from the Yamaha Bluetooth wireless audio receiver.		—
Not found	The Bluetooth component is not found.	During pairing: – pairing must be performed on the Bluetooth component and this unit simultaneously. Check if the Bluetooth component is in pairing mode. During connecting: – check if the Bluetooth component is turned on. – check if the Bluetooth component is within 32 feet (10 m) of the Yamaha Bluetooth wireless audio receiver.	—

Glossary

Audio information

Audio and video synchronization (lip sync)

Lip sync, an abbreviation for lip synchronization, is a technical term that involves both a problem, and the capability of maintaining audio and video signals synchronized during post-production and transmission. Whereas the audio and video latency requires complex end-user adjustment, HDMI version 1.3 incorporates an automatic audio and video syncing capability that allows devices to perform this synchronization automatically and accurately without user interaction.

Dolby Digital

Dolby Digital is a digital surround sound system that gives you completely independent multi-channel audio. With 3 front channels (front L/R and center), and 2 surround stereo channels, Dolby Digital provides 5 full-range audio channels. With an additional channel especially for bass effects, referred to as LFE (Low-Frequency Effect), the system has a total of 5.1-channels (LFE is counted as 0.1 channel). By using 2-channel stereo for the surround speakers, more accurate moving sound effects and surround sound environments are possible than with Dolby Surround. The wide dynamic range from maximum to minimum volumes that are reproduced by the 5 full-range channels, and the precise sound orientation generated using digital sound processing provides listeners with unprecedented excitement and realism. With this unit, any sound environment from monaural up to a 5.1-channel configuration can be freely selected for your enjoyment.

Dolby Pro Logic II

Dolby Pro Logic II is an improved technique used to decode vast numbers of existing Dolby Surround sources. This new technology enables a discrete 5-channel playback with 2 front left and right channels, 1 center channel, and 2 surround left and right channels, instead of only 1 surround channel for conventional Pro Logic technology. There are three modes available: "Music mode" for music sources, "Movie mode" for movie sources, and "Game mode" for game sources.

Dolby Surround

Dolby Surround uses a 4-channel analog recording system to reproduce realistic and dynamic sound effects: 2 front left and right channels (stereo), a center channel for dialog (monaural), and a surround channel for special sound effects (monaural). The surround channel reproduces sound within a narrow frequency range. Dolby Surround is widely used with nearly all video tapes and laser discs, as well as in many TV and cable broadcasts. The Dolby Pro Logic decoder built into this unit employs a digital signal processing system that automatically stabilizes the volume on each channel to enhance moving sound effects and directionality.

DTS Digital Surround

DTS Digital Surround was developed to replace the analog soundtracks of movies with a 5.1-channel digital sound track, and is now rapidly gaining popularity in movie theaters around the world. DTS, Inc. has developed a home theater system so that you can enjoy the depth of sound and natural spatial representation of DTS Digital Surround in your home. This system produces practically distortion-free 5.1-channel sound (technically, left, right and center channels, 2 surround channels, plus an LFE 0.1 channel as a subwoofer, for a total of 5.1-channels).

DSD

Direct Stream Digital (DSD) technology stores audio signals on digital storage media, such as Super Audio CDs. Using DSD, signals are stored as single bit values at a high-frequency sampling rate of 2.8224 MHz, while noise shaping and oversampling are used to reduce distortion, a common occurrence with very high quantization of audio signals. Due to the high sampling rate, better audio quality can be achieved than that offered by the PCM format used for normal audio CDs. The frequency is equal to or higher than 100 kHz, with a dynamic range of 120 dB. This unit can transmit or receive DSD signals via the HDMI jack.

LFE 0.1 channel

This channel reproduces low-frequency bass signals, and has a frequency range from 20 Hz to 120 Hz. This channel is counted as 0.1, because it only enforces a low-frequency range compared to the full-range reproduced by the other 5 channels in Dolby Digital or DTS 5.1-channel systems.

PCM (Linear PCM)

Linear PCM is a signal format under which an analog audio signal is digitized, recorded and transmitted without using any compression. This is used as a method of recording CDs and DVD audio. The PCM system uses a technique for sampling the size of the analog signal per very small unit of time. Standing for "Pulse Code Modulation," the analog signal is encoded as pulses and then modulated for recording.

Sampling frequency and number of quantized bits

When digitizing an analog audio signal, the number of times the signal is sampled per second is called the sampling frequency, while the degree of accuracy when converting the sound level into a numeric value is called the number of quantized bits. The range of rates that can be played back is determined based on the sampling rate, whereas the dynamic range representing the sound level difference is determined by the number of quantized bits. In principle, the higher the sampling frequency, the wider the range of frequencies that can be played back, and the higher the number of quantized bits, the more accurately the sound level can be reproduced.

Sound field program information

CINEMA DSP

Since the Dolby Surround and DTS systems were originally designed for use in movie theaters, their effect is best felt in a theater having many speakers designed for acoustic effects. Since home conditions, such as room size, wall material, number of speakers, and so on, can differ so widely, it is inevitable that there are differences in the sound that is heard. Based on a wealth of actually measured data, Yamaha CINEMA DSP uses Yamaha's original DSP technology to combine Dolby Pro Logic, Dolby Digital, and DTS systems to provide the audiovisual experience of a movie theater in the listening room of your own home.

Compressed music enhancer

The Compressed music enhancer feature of this unit enhances your listening experience by regenerating the missing harmonics in compression artifacts. As a result, it compensates for flattened complexity due to the loss of high-frequency fidelity as well as lack of bass due to the loss of low-frequency bass, providing improved performance for the overall sound system.
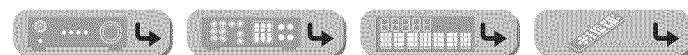
SILENT CINEMA

Yamaha has developed a natural, realistic sound effect DSP algorithm for headphones. Parameters for headphones have been set for each sound field program, so that accurate representations of all the sound field programs can be enjoyed on headphones.

Virtual CINEMA DSP

Yamaha has developed a Virtual CINEMA DSP algorithm that allows you to enjoy DSP surround effects even without any surround speakers, by using virtual surround speakers. It is even possible to enjoy Virtual CINEMA DSP using a minimal two-speaker system that does not include a center speaker.

Video information

Component video signal

With the component video signal system, the video signal is separated into the Y signal for luminance and the P_B and P_R signals for chrominance. Color can be reproduced more faithfully with this system because each of these signals is independent. The component signal is also called the "color difference signal" because the luminance signal is subtracted from the color signal. A monitor with component input jacks is required in order to output component signals.

Composite video signal

With the composite video signal system, the video signal comprises the three basic elements of a video picture: color, brightness and synchronization data. A composite video jack on a video component transmits these three elements combined.

Deep Color

Deep Color refers to the use of various color depths in displays, up from the 24-bit depths in previous versions of the HDMI specification. This extra bit depth allows HDTVs and other displays increase from millions of colors to billions of colors and eliminate on-screen color banding for smooth tonal transitions and subtle gradations between colors. The increased contrast ratio can represent many times more shades of gray between black and white. Additionally, Deep Color increases the number of available colors within the boundaries defined by the RGB or YCbCr color space.

HDMI

HDMI (High-Definition Multimedia Interface) is the first industry supported, uncompressed, all-digital audio/video interface. Providing an interface between any sources (such as set-top boxes or AV receivers) and audio/video monitors (such as digital TV), HDMI supports standard, enhanced or high-definition video as well as multichannel digital audio using a single cable. HDMI transmits all ATSC HDTV standards and supports 8-channel digital audio, with bandwidth to spare to accommodate future enhancements and requirements.

When used in combination with HDCP (High-bandwidth Digital Content Protection), HDMI provides a secure audio/video interface that meets the security requirements of content providers and system operators. For further information on HDMI, visit the HDMI website at "http://www.hdmi.org/."

"x.v.Color"

A color space standard supported by HDMI version 1.3. It is a more extensive color space than sRGB, and allows the expression of colors that were not hitherto possible. While remaining compatible with the color gamut of sRGB standards, "x.v.Color" expands the color space, and can thus produce more vivid, natural images. It is particularly effective for still pictures and computer graphics.

Information on HDMI™

■ HDMI signal compatibility

Audio signals

Audio signal types	Audio signal formats	Compatible media
2ch Linear PCM	2ch, 32-192 kHz, 16/20/24 bit	CD, DVD-Video, DVD-Audio, etc.
Multi-ch Linear PCM	8ch, 32-192 kHz, 16/20/24 bit	DVD-Audio, Blu-ray Disc, HD DVD, etc.
DSD	2/5.1ch, 2.8224 MHz, 1 bit	SACD, etc.
Bitstream	Dolby Digital, DTS	DVD-Video, etc.

- If the input source component can decode the bitstream audio signals of audio commentaries, you can play back the audio sources with the audio commentaries mixed down by using the digital audio input (optical or coaxial) connections.
- Refer to the supplied instruction manuals of the input source component, and set the component appropriately.

NOTES

- When CPPM copy-protected DVD-Audio is played back, video and audio signals may not be output, depending on the type of the DVD player.
- This unit is not compatible with HDCP-incompatible HDMI or DVI components.
- Refer to the supplied instruction manuals for details.
  To decode audio bitstream signals on this unit, set the input source component appropriately so that the component outputs the bitstream audio signals directly (does not decode the bitstream signals on the component).
- This unit is not compatible with the audio commentary features (for example, the special audio contents downloaded via Internet) of Blu-ray Disc or HD DVD. This unit does not play back the audio commentaries of the Blu-ray Disc or HD DVD content.

Video signals

This unit is compatible with the video signals of the following resolutions:

- 480i/60 Hz
- 576i/50 Hz
- 480p/60 Hz
- 576p/50 Hz
- 720p/60 Hz, 50 Hz
- 1080i/60 Hz, 50 Hz
- 1080p/60 Hz, 50 Hz, 24 Hz

About trademarks

▥ DOLBY
DIGITAL

Manufactured under license from Dolby Laboratories.
"Dolby," "Pro Logic," and the double-D symbol are trademarks of Dolby Laboratories.

◉dts
Digital Surround

Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,487,535 & other U.S. and worldwide patents issued & pending. DTS and DTS Digital Surround are registered trademarks and the DTS logos and Symbol are trademarks of DTS, Inc. ©1996-2008 DTS, Inc. All Rights Reserved.

iPod™, iPhone™
"iPod" is a trademark of Apple Inc., registered in the U.S. and other countries. "iPhone" is a trademark of Apple Inc.

Bluetooth™
Bluetooth is a registered trademark of the Bluetooth SIG and is used by Yamaha in accordance with a license agreement.

HDMI

"HDMI," the "HDMI" logo and "High-Definition Multimedia Interface" are trademarks, or registered trademarks of HDMI Licensing LLC.

SILENT ™
CINEMA
"SILENT CINEMA" is a trademark of Yamaha Corporation.

Specifications

■ HDMI specification

• Deep Color

• x.v.Color

• Auto Lip sync

■ INPUT/OUTPUT

Input jacks

• HDMI input x 4

• AV input x 5

    [Audio] Digital input (optical) x 2, digital input (coaxial) x 2, analog input x 1

    [Video] Component video jacks x 2, video jacks x 3

• AUDIO input x 2

    [Audio] Analog jack x 2

• VIDEO AUX input x 1

    [Audio] Analog x 1, stereo mini jack x 1

    [Video] Video jack x 1

• DOCK input x 1

Output jacks

• TV output (monitor output) x 3

    [Audio/Video] HDMI x 1

    [Video] Component video jack x 1, video jack x 1

• AV output x 2

    [Audio] Analog jack x 1

    [Video] Video jack x 1

• AUDIO output x 1

    [Audio] Analog jack x 1

■ AUDIO SECTION

• Surround Decoder

    Dolby Digital, Dolby Pro Logic, Dolby Pro Logic II

    DTS Digital Surround

    DSD

• Minimum RMS Output Power for Front, Center, Surround

    [U.S.A. and Canada models]

    (1 kHz, 0.9% THD, 8 Ω)

    FRONT L/R..100 W/ch

    CENTER ....100 W

    SURROUND L/R..100 W/ch

    [Other models]

    (1 kHz, 0.9% THD, 6 Ω)

    FRONT L/R..100 W/ch

    CENTER ....100 W

    SURROUND L/R..100 W/ch

• Dynamic Power (IHF)

    [U.S.A. and Canada models]

    Front Speakers 8/6/4/2 Ω .... 110/130/160/180 W

    [Other models]

    Front Speakers 6/4/2 Ω .... 105/130/150 W

• Maximum Useful Output Power (JEITA)

    [China, Korea, General and Asia models]

    1 kHz, 10% THD, 6 Ω ....135 W

• Maximum Output Power [U.K., Europe and Asia models]

    1 kHz, 0.7% THD, 4 Ω ....120 W

• IEC Output Power [U.K., Europe and Asia models]

    Front Speakers 1 kHz, 0.9% THD, 8 Ω ....95 W+95 W

• Dynamic Headroom [U.S.A. and Canada models]

    8 Ω...0.23 dB

• Input Sensitivity/Input Impedance

    AV5, etc...200 mV/47 kΩ

• Maximum Input Voltage

    AV5, etc. (1 kHz, 0.5% THD)....................................2.3 V or more

• Rated Output Voltage/Output Impedance

    AUDIO OUT.. 200 mV/1.2 kΩ

    SUBWOOFER (2ch Stereo & Front: Small) .... 1.0 V/1.2 kΩ

• Headphone Jack Rated Output/Impedance

    AV5, etc. (1 kHz, 50 mV, 8 Ω)................................. 100 mV/470 Ω

• Frequency Response

    AV5 to FRONT.................................... 10 Hz to 100 kHz, +0/-3 dB

• Total Harmonic Distortion

    AV5, etc. to FRONT

    [U.S.A. and Canada models] (1 kHz, 50 W, 8 Ω)........ 0.06% or less

    [Other models] (1 kHz, 50 W, 6 Ω) .... 0.06% or less

• Signal to Noise Ratio (IHF-A Network)

    AV5, etc. Input Shorted (250 mV to Front Speakers)

    .... 98 dB or more

• Residual Noise (IHF-A Network)

    Front Speakers .... 150 µV or less

• Channel Separation (1 kHz/10 kHz)

    AV5, etc. (5.1 kΩ shortened) ....60 dB/45 dB or more

• Volume Control .... MUTE / -80 dB to +16.5 dB

• Tone Control (Front Speakers)

    BASS Boost/Cut .... ±10 dB/2 dB at 50 Hz

    BASS Turnover Frequency ....350 Hz

    TREBLE Boost/Cut .... ±10 dB/2 dB at 20 kHz

    TREBLE Turnover Frequency..3.5 kHz

• Filter Characteristics (fc=40/60/80/90/100/110/120/160/200 Hz)

    H.P.F. (Front, Center, Surround) .... 12 dB/oct.

    L.P.F. (Subwoofer) .... 24 dB/oct.

■ VIDEO SECTION

• Video Signal Type

    [U.S.A., Canada, Korea and General models] .... NTSC

    [Other models] .... PAL

• Signal Level

    Composite .... 1 Vp-p/75 Ω

    Component...................... 1 Vp-p/75 Ω (Y), 0.7 Vp-p/75 Ω (PB/PR)

• Maximum Input Level (Video Conversion Off) .... 1.5 Vp-p or more

• Signal to Noise Ratio.. 50 dB or more

• Frequency Response [MONITOR OUT]

    Component (Video Conversion Off)............5 Hz to 60 MHz, ±3 dB
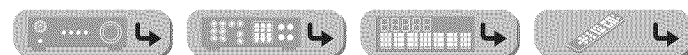
■ FM SECTION

• Tuning Range
  [U.S.A. and Canada models] ....87.5 to 107.9 MHz
  [Asia and General models] .... 87.5/87.50 to 108.0/108.00 MHz
  [Other models]...87.50 to 108.00 MHz

• 50 dB Quieting Sensitivity (IHF)
  Mono.. 3.0 μV (20.8 dBf)

• Signal to Noise Ratio (IHF)
  Mono/Stereo .... 74 dB/69 dB

• Harmonic Distortion (1 kHz)
  Mono/Stereo 0.3/0.3%

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

■ AM SECTION

• Tuning Range
  [U.S.A. and Canada models]...................................530 to 1710 kHz
  [Asia and General models].................... 530/531 to 1710/1611 kHz
  [Other models] ....531 to 1611 kHz

■ GENERAL

• Power Supply
  [U.S.A. and Canada models]................................AC 120 V, 60 Hz
  [General models].........................AC 110-120/220-240 V, 50/60 Hz
  [China model]..AC 220 V, 50 Hz
  [Korea model] ....AC 220 V, 60 Hz
  [Australia model] ....AC 240 V, 50 Hz
  [U.K. and Europe models] ....AC 230 V, 50 Hz
  [Asia models] ....AC 220-240 V, 50/60 Hz

• Power Consumption
  [U.S.A. and Canada models] ....250 W/320 VA
  [Other models]...250 W

• Standby Power Consumption
  [General models] ....1.0 W or less
  [Other models]...0.5 W or less

• Dimensions (W x H x D)
  435 x 151 x 315 mm (17-1/8 x 6 x 12-3/8 in)

• Weight
  7.5 kg (16.5 lbs)

* Specifications are subject to change without notice.

Index

YAMAHA

List of remote control codes
Liste des codes de commande
Lista de códigos de mando a distancia
遙控器代碼列表
리모콘코드목록

TV

Brand	Codes
A.R. Systems	0320
Acme	0342
Acura	0323, 0343
ADC	0337
Admiral	0054, 0178, 0336, 0337, 0339, 0346, 0347
Advent	0158
Adventura	0057
Adyson	0277, 0282, 0342
Agashi	0277, 0282
Agazi	0337
Aiko	0277, 0282, 0320, 0323, 0342, 0343
Aim	0320
Aiwa	0078, 0379
Akai	0050, 0055, 0109, 0159, 0181, 0277, 0282, 0320, 0323, 0340, 0343, 0349, 0350
Akiba	0320, 0340
Akura	0320, 0323, 0337, 0340
Alaron	0277
Alba	0161, 0277, 0320, 0323, 0340, 0342, 0343, 0344, 0349, 0351, 0372, 0382
Albatron	0140
Alcyon	0171
Alleron	0059
Allorgan	0282
Allstar	0320, 0350
America Action	0179
AMOi	0276
Amplivision	0161, 0282, 0321, 0342
Amstrad	0320, 0323, 0337, 0340, 0343
Amtron	0058
Anam	0179, 0343
Anam National	0052, 0058
Anglo	0323, 0343
Anitech	0171, 0320, 0323, 0337, 0343
Ansonic	0161, 0168, 0320, 0323, 0341, 0343
AOC	0008, 0026, 0050, 0053
Apex	0039, 0111, 0217
Arcam	0277, 0282
Arcam Delta	0342
Aristona	0320, 0349, 0350
Arthur Martin	0321
ASA	0339, 0347
Asberg	0171, 0320, 0350
Astra	0343
Asuka	0277, 0282, 0337, 0340, 0342
Atlantic	0277, 0320, 0342, 0349, 0350
Atori	0323, 0343
Auchan	0321
Audiosonic	0161, 0282, 0320, 0340, 0342, 0343, 0349, 0350
AudioTon	0161, 0282, 0342
Audiovox	0058, 0179, 0194
Ausind	0171
Autovox	0171, 0282, 0337, 0339, 0342
Aventura	0051
Awa	0277, 0282
Axion	0156

Brand	Codes
Baird	0282
Bang & Olufsen	0180, 0339
Basic Line	0282, 0320, 0323, 0340, 0343, 0350
Bastide	0282, 0342
Baur	0320, 0349
Bazin	0282
Beko	0161, 0269, 0294, 0302, 0311, 0320, 0328, 0351
Belcor	0008
Bell & Howell	0019, 0054
Benq	0097, 0242, 0361
Beon	0320, 0349, 0350
Best	0161
Bestar	0161, 0320, 0350
Binatone	0282, 0342
Blue Sky	0320, 0340
Blue Star	0348
Boots	0282, 0342
BPL	0320, 0348
Bradford	0058, 0179
Brandt	0322, 0345
Brillian	0182
Brinkmann	0320
Brionvega	0320, 0339, 0349, 0350
Britannia	0277, 0282, 0342
Brockwood	0008
Broksonic	0109, 0179
Bruns	0339
BTC	0340
Bush	0269, 0282, 0283, 0304, 0320, 0323, 0328, 0332, 0340, 0343, 0344, 0346, 0348, 0349, 0350, 0372, 0382, 0463, 0470, 0472
Candle	0008, 0026, 0050, 0057
Capsonic	0337
Carena	0320
Carnivale	0050
Carrefour	0344
Carver	0010
Cascade	0320, 0323, 0343
Casio	0367
Cathay	0320, 0349, 0350
CCE	0183, 0282
Celebrity	0055, 0107
Celera	0039
Centurion	0320, 0349, 0350
Century	0339
CGE	0161, 0171
Changhong	0039
Chimei	0273
Cimline	0323, 0343
Citizen	0007, 0008, 0026, 0050, 0058
City	0323, 0343
Clarion	0179
Clarivox	0349
Clatronic	0161, 0171, 0282, 0320, 0323, 0337, 0340, 0342, 0343, 0350, 0351
CMS	0277
CMS Hightec	0282
Coby	0197
Colortyme	0008, 0026
Commercial Solutions	0021
Concerto	0008, 0026
Concorde	0323, 0343

Brand	Codes
Condor	0161, 0277, 0320, 0323, 0342, 0350, 0351
Contec	0179, 0277, 0323, 0342, 0343, 0344
Contec/Cony	0012, 0058
Continental Edison	0345
Cosmel	0323, 0343
Craig	0058, 0179
Crosley	0010, 0037, 0171, 0339
Crown	0058, 0161, 0171, 0179, 0320, 0323, 0343, 0349, 0350, 0351
CS Electronics	0277, 0340, 0342
CTC Clatronic	0341
CTX	0205
Curtis Mathes	0007, 0008, 0010, 0019, 0021, 0026, 0049, 0050, 0178
CXC	0058, 0179
Cybertron	0340
Cytron	0152
Daewoo	0007, 0008, 0026, 0037, 0053, 0167, 0266, 0275, 0277, 0282, 0315, 0320, 0323, 0331, 0335, 0342, 0343, 0350, 0381, 0465
Dainichi	0277, 0340
Dansai	0277, 0282, 0320, 0337, 0349, 0350
Dantax	0161, 0349
Dawa	0320
Daytron	0007, 0008, 0026, 0323, 0343
De Graaf	0346
Decca	0282, 0320, 0342, 0349, 0350
Dell	0145, 0245
Denver	0358, 0362
Desmet	0320, 0349, 0350
Diamant	0320
Diamond	0277
DiamondVision	0135, 0143
Dimensia	0049
Disney	0219
Dixi	0282, 0320, 0323, 0343, 0349, 0350
Dream Vision	0461, 0498
DTS	0323, 0343
Dual	0282, 0320, 0342
Dual-Tec	0342, 0343
Dumont	0008, 0030, 0062, 0282, 0339, 0341, 0342
Durabrand	0031, 0051, 0179, 0215
Dux	0349
Dwin	0178
Dynatron	0320, 0349, 0350
Dynex	0228, 0231
Elbe	0161, 0168, 0282, 0320
Elcit	0339
Electa	0348
ELECTRO TECH	0343
Electroband	0055, 0107
Electrograph	0176
Electrohome	0008, 0026, 0052, 0055
Element	0230
Elin	0277, 0320, 0323, 0342, 0349, 0350

Brand	Codes
Elite	0320, 0340, 0350
Elman	0341
Elta	0277, 0323, 0343
Emerson	0000, 0007, 0008, 0012, 0013, 0019, 0026, 0031, 0037, 0051, 0058, 0059, 0161, 0179, 0320, 0339
Emprex	0154
Envision	0008, 0026, 0050
Epson	0155, 0206, 0359
Erres	0320, 0349, 0350
ESA	0051
ESC	0282
Etron	0343
Eurofeel	0282
Euro-Feel	0337
Euroline	0349
Euroman	0161, 0277, 0282
Euromann	0320, 0337, 0342, 0350
Europhon	0277, 0282, 0320, 0341, 0342, 0350
Expert	0321
Exquisit	0320
Fenner	0323, 0343
Ferguson	0322, 0345, 0349
Fidelity	0277, 0320, 0342, 0346
Filsai	0282
Finlandia	0346
Finlux	0171, 0282, 0320, 0339, 0341, 0342, 0349, 0350
FIRST LINE	0342, 0343, 0350
Firstline	0277, 0282, 0320, 0323
Fisher	0019, 0161, 0282, 0339, 0342, 0344, 0351
Flint	0320, 0350
Formenti	0171, 0277, 0336, 0339, 0342, 0349
Formenti/Phoenix	0277
Fortress	0336, 0339
Fraba	0161, 0320
Friac	0161
Frontech	0282, 0323, 0337, 0343, 0346, 0347
Fujitsu	0059, 0069, 0074, 0075, 0282
Fujitsu General	0282
Fujitsu Siemens	0504, 0505, 0507, 0510, 0511
Funai	0051, 0058, 0059, 0112, 0113, 0115, 0118, 0119, 0179, 0337
Futuretech	0058, 0179
Galaxi	0320, 0351
Galaxis	0161, 0320
Gateway	0176, 0177, 0241
GBC	0323, 0343, 0344
GE	0008, 0021, 0023, 0026, 0027, 0031, 0034, 0049, 0052, 0056, 0209
Geant Casino	0321
GEC	0282, 0320, 0342, 0347, 0349, 0350
Geloso	0323, 0343, 0346
General Technic	0323, 0343
Genexxa	0320, 0340, 0347, 0350
GFM	0128, 0227
Giant	0282

Gibralter	0008, 0030, 0050, 0062	Ingersol	0323, 0343	Loewe	0161, 0168, 0265, 0320, 0330, 0352	Naonis	0346
		Initial	0153			NEC	0008, 0026, 0050,
GoldHand	0277	Inno Hit	0171, 0282, 0320,	Loewe Opta	0339, 0349, 0350		0052, 0053, 0072,
Goldline	0320		0323, 0340, 0342,	Logik	0054		0103, 0282, 0344
GoldStar	0007, 0008, 0012,		0343, 0349, 0350	Luma	0320, 0323, 0346,	Neckermann	0161, 0282, 0320,
	0026, 0031, 0050,	Innovation	0337, 0343		0349		0339, 0342, 0346,
	0053, 0161, 0277,	Insignia	0131, 0228, 0236,	Lumatron	0282, 0320, 0346,		0349, 0350, 0351
	0282, 0320, 0323,		0238		0349, 0350	NEI	0320, 0349, 0350
	0342, 0343, 0346,	Inteq	0030	Lux May	0350	Net-TV	0176
	0349, 0350	Interactive	0161	Luxman	0008, 0026	Neufunk	0320, 0323
Goodmans	0246, 0272, 0282,	Interbuy	0323, 0343	Luxor	0282, 0342, 0346	New Tech	0343, 0350
	0320, 0323, 0337,	Interfunk	0161, 0320, 0339,	LXI	0010, 0019, 0021,	New World	0340
	0343, 0344, 0349,		0347, 0349, 0350		0026, 0027, 0031,	NewTech	0282, 0320, 0323
	0350, 0462, 0473,	International	0277		0049, 0111	Nicamagic	0277, 0342
	0477	Intervision	0161, 0282, 0320,	M Electronic	0342, 0343, 0345,	Nikkai	0277, 0282, 0320,
Gorenje	0161, 0351		0337, 0341, 0342		0347, 0349, 0350		0323, 0337, 0340,
GPM	0340	Irradio	0171, 0320, 0323,	MAG	0096		0342, 0349, 0350
GPX	0129		0340, 0343, 0349,	Magnadyne	0339, 0341, 0349	Nikko	0026, 0031, 0050
Gradiente	0240		0350	Magnafon	0171, 0277, 0341,	Nobliko	0171, 0277, 0341,
Graetz	0347	Isukai	0320, 0340		0342		0342
Granada	0171, 0282, 0320,	ITC	0282, 0342	Magnavox	0008, 0009, 0010,	Nokia	0347
	0321, 0342, 0344,	ITS	0277, 0320, 0340,		0013, 0026, 0032,	Norcent	0201
	0346, 0349, 0350		0348, 0350		0033, 0048, 0050,	Nordic	0282
Grandin	0340, 0343, 0348,	ITT	0343, 0347		0128, 0211, 0212,	Nordmende	0339, 0345, 0347,
	0349	ITV	0320, 0343, 0349		0224, 0226, 0239		0350
Gronic	0282	Janeil	0057	Magnum	0337, 0343	Nordvision	0349
Grundig	0160, 0161, 0171,	JBL	0010	Majestic	0054	Novatronic	0320
	0310, 0320	JC Penney	0007, 0008, 0026,	Mandor	0337	Oceanic	0321, 0347
Grunpy	0058, 0059, 0179		0027, 0049, 0053,	Manesth	0282, 0320, 0337,	Okano	0161, 0320, 0351
Haier	0157, 0233		0056		0342, 0349, 0350	Olevia	0102, 0199, 0200,
Halifax	0277, 0282, 0337,	JCB	0055, 0107	Marantz	0008, 0010, 0026,		0207, 0222
	0342	Jensen	0008, 0026		0050, 0204, 0320,	ONCEAS	0342
Hallmark	0008, 0026, 0031	JVC	0012, 0014, 0015,		0349, 0350	Onwa	0058, 0179
Hampton	0277, 0282, 0342		0056, 0064, 0065,	Marelli	0339	Opera	0320
Hanseatic	0161, 0168, 0282,		0067, 0169, 0174,	Mark	0277, 0282, 0320,	Oppo	0130
	0320, 0323, 0342,		0297, 0314, 0344,		0323, 0349, 0350	Optimus	0017, 0019
	0343, 0344, 0349,		0350, 0375	Masuda	0282	Optoma	0144
	0350	Kaisui	0277, 0282, 0320,	Matsui	0282, 0320, 0323,	Optonica	0178
Hantarex	0320, 0323, 0343		0323, 0340, 0342,		0342, 0343, 0344,	Orbit	0320, 0350
Hantor	0320		0343, 0348		0346, 0349, 0350,	Orion	0043, 0146, 0283,
Harman/Kardon	0010	Kamosonic	0342		0455		0320, 0323, 0328,
Harvard	0058, 0179	Kamp	0277, 0342	Matsushita	0017		0343, 0349, 0350
Harwood	0320, 0323	Kapsch	0347	Maxent	0147, 0176	Orline	0320
Havermy	0178	Karcher	0161, 0320, 0342,	Mediator	0320, 0349, 0350	Osaki	0282, 0320, 0337,
HCM	0282, 0320, 0323,		0343, 0349	Medion	0320, 0337, 0343		0340, 0342
	0337, 0342, 0343,	Kawasho	0008, 0026, 0055,	Megapower	0140	Oso	0340
	0348		0277	Megatron	0026, 0031	Otto Versand	0282, 0320, 0336,
Hema	0282, 0323	KEC	0179	MElectronic	0277, 0282, 0320,		0342, 0344, 0348,
Hewlett Packard	0192	Kendo	0161, 0320, 0341,		0323		0349, 0350
Higashi	0277		0346	Melvox	0321	Pael	0277, 0342
HiLine	0320	Kenwood	0008, 0026, 0050	Memorex	0019, 0026, 0031,	Palladium	0161, 0282, 0320,
Hinari	0320, 0323, 0340,	KIC	0282		0053, 0054, 0137,		0342, 0351
	0343, 0344, 0349,	Kingsley	0277, 0342		0215, 0323, 0343	Palsonic	0282
	0350	KLH	0039	Memphis	0323, 0343	Panama	0277, 0282, 0320,
Hisawa	0321, 0340, 0348	Kloss Novabeam	0057, 0058	Mercury	0320, 0323		0323, 0337, 0342,
Hisense	0247	Kneissel	0161, 0168, 0320	Metz	0339		0343
Hitachi	0008, 0012, 0026,	Kolster	0320, 0350	MGA	0008, 0026, 0031,	Panasonic	0016, 0017, 0020,
	0066, 0084, 0092,	Konka	0340		0050, 0053		0022, 0023, 0035,
	0093, 0120, 0172,	Korpel	0320, 0349, 0350	Micromaxx	0337, 0343		0052, 0056, 0084,
	0173, 0255, 0270,	Korting	0161, 0339	Microstar	0337, 0343		0085, 0133, 0163,
	0271, 0282, 0320,	Kosmos	0320	Midland	0007, 0021, 0023,		0193, 0284, 0286,
	0335, 0338, 0342,	Koyoda	0343		0027, 0030, 0056,		0290, 0292, 0320,
	0344, 0346, 0347,	KTV	0007, 0050, 0058,		0062		0325, 0347, 0356
	0365, 0382, 0448,		0179, 0183, 0282,	Minerva	0171	Panavision	
	0456, 0467		0342	Minoka	0320, 0350	Pathe Cinema	0161, 0168, 0277,
Hornyphon	0320, 0350	Kyoto	0277, 0282	Mintek	0153		0321, 0342
Hoshai	0340	Lasat	0161	Mitsubishi	0008, 0026, 0031,	Pausa	0323, 0343
Huanyu	0277, 0342	Lenco	0323, 0343		0053, 0066, 0084,	Penney	0021, 0023, 0031,
Hygashi	0277, 0282, 0342	Lenoir	0323, 0342, 0343		0093, 0098, 0150,		0050, 0111
Hyper	0277, 0282, 0323,	Leyco	0320, 0337, 0349,		0178, 0289, 0320,	Perdio	0277, 0320
	0342, 0343		0350		0339, 0344, 0350,	Perfekt	0320
Hypson	0282, 0320, 0321,	LG	0031, 0053, 0066,		0376	Philco	0008, 0009, 0010,
	0337, 0342, 0348,		0116, 0117, 0140,	Mivar	0161, 0168, 0171,		0012, 0026, 0050,
	0349, 0350		0161, 0164, 0175,		0277, 0282, 0342		0052, 0053, 0161,
Hyundai	0141		0195, 0269, 0277,	Monivision	0140		0171, 0320, 0339
Iberia	0320		0282, 0300, 0309,	Montgomery Ward		Philharmonic	0282, 0342
ICE	0277, 0282, 0320,		0317, 0320, 0323,		0054	Philips	0008, 0009, 0010,
	0323, 0337, 0340,		0328, 0342, 0343,	Motion	0171		0011, 0012, 0032,
	0342, 0343, 0350		0346, 0349, 0350,	Motorola	0052, 0178		0048, 0049, 0052,
ICeS	0277		0366, 0368, 0377,	MTC	0008, 0026, 0050,		0122, 0128, 0134,
Ilo	0148, 0153		0466, 0471, 0478		0053, 0161, 0277		0186, 0187, 0213,
IMA	0058	LG/GoldStar	0164	Multi System	0349		0221, 0224, 0226,
Imperial	0161, 0171, 0320,	Liesenk	0349	Multitech	0058, 0161, 0179,		0239, 0256, 0257,
	0347, 0350, 0351	Liesenkotter	0320		0183, 0277, 0282,		0259, 0261, 0263,
Indiana	0320, 0349, 0350	Life	0337, 0343		0320, 0323, 0341,		0267, 0280, 0281,
Infinity	0010	Lifetec	0320, 0323, 0337,		0342, 0343, 0344,		0287, 0296, 0299,
InFocus	0250, 0327, 0363,		0343		0346, 0349		0301, 0303, 0305,
	0479, 0508	Lloyds	0323	Murphy	0277, 0342		0313, 0319, 0320,
Ingelen	0347			NAD	0026, 0031, 0111		0324, 0333, 0339,

Brand	Codes
	0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460
Philips Magnavox	0011, 0032, 0033
Phoenix	0161, 0277, 0320, 0339, 0349, 0350
Phonola	0277, 0320, 0339, 0349, 0350
Pilot	0007, 0008, 0050
Pioneer	0008, 0026, 0094, 0095, 0161, 0320, 0345, 0347, 0349, 0350, 0458
Plantron	0320, 0323, 0337, 0350
Playsonic	0282
Polaroid	0039, 0142, 0202, 0234
Poppy	0323, 0343
Portland	0007, 0008, 0026, 0053
Prandoni-Prince	0171, 0346
Precision	0282, 0342
Prima	0157, 0243, 0323, 0343, 0347
Princeton	0140
Prism	0023, 0056
Profex	0323, 0343
Profi-Tronic	0320, 0350
Proline	0320, 0350
Proscan	0021, 0027, 0049
Prosonic	0161, 0277, 0282, 0320, 0342, 0349
Protech	0282, 0337, 0341, 0342, 0343, 0349, 0350
Proton	0008, 0012, 0026, 0031
Protron	0196
PROVIEW	0096, 0246
Provision	0320, 0349
Pulsar	0008, 0030, 0062
Pye	0256, 0320, 0349, 0350, 0378
Pymi	0323, 0343
Quandra Vision	0321
Quasar	0017, 0023, 0052, 0056
Quelle	0282, 0320, 0337, 0342, 0349, 0350
Questa	0344
Radialva	0320
RadioShack	0019, 0021, 0031, 0050, 0179, 0320
RadioShack/Realistic	0007, 0008, 0012, 0026, 0049, 0058
Radiola	0282, 0320, 0349, 0350
Radiomarelli	0320, 0339
Radiotone	0161, 0320, 0323, 0350
Rank	0344
RCA	0008, 0021, 0024, 0025, 0026, 0027, 0042, 0049, 0052, 0053, 0063, 0136, 0225
Realistic	0019, 0031, 0050, 0179
Recor	0320
Redstar	0320
Reflex	0320
Revox	0161, 0320, 0349, 0350
Rex	0337, 0346, 0347
RFT	0161, 0168, 0339
Rhapsody	0277
R-Line	0320, 0349, 0350
Roadstar	0323, 0337, 0340, 0343
Robotron	0339
Rowa	0277, 0282
Royal Lux	0161
RTF	0339
Runco	0030, 0050, 0062
Saba	0298, 0322, 0339, 0345, 0347
Saisho	0282, 0323, 0337, 0342, 0343
Salora	0346, 0347
Sambers	0171, 0341
Sampo	0007, 0008, 0026, 0050, 0176
Samsung	0004, 0005, 0006, 0007, 0008, 0012, 0026, 0031, 0036, 0050, 0053, 0076, 0077, 0079, 0114, 0124, 0125, 0126, 0127, 0139, 0161, 0183, 0185, 0190, 0191, 0258, 0264, 0277, 0282, 0320, 0323, 0334, 0337, 0342, 0343, 0349, 0350, 0351, 0373, 0453, 0468
Sandra	0277, 0282, 0342
Sansui	0043, 0109, 0320, 0350
Sanyo	0008, 0019, 0068, 0070, 0071, 0099, 0161, 0168, 0223, 0237, 0277, 0282, 0288, 0295, 0323, 0342, 0344, 0369, 0469
SBR	0320, 0349
Sceptre	0235, 0244
Schaub Lorenz	0347
Schneider	0282, 0316, 0318, 0320, 0333, 0340, 0342, 0349, 0350, 0382
Scotch	0026, 0031
Scott	0008, 0012, 0026, 0031, 0058, 0059, 0149, 0179
Sears	0008, 0010, 0019, 0021, 0026, 0027, 0031, 0049, 0051, 0059, 0111
SEG	0277, 0282, 0320, 0323, 0337, 0341, 0342, 0344, 0349, 0382
SEI	0320
SEI-Sinudyne	0339, 0341, 0347
Seleco	0344, 0346, 0347
Sencora	0323, 0343
Sentra	0323
Serino	0277
Sharp	0000, 0001, 0002, 0003, 0007, 0008, 0012, 0026, 0060, 0088, 0089, 0091, 0138, 0165, 0170, 0178, 0198, 0229, 0262, 0278, 0279, 0291, 0308, 0312, 0336, 0344, 0354, 0370, 0449, 0450, 0451, 0464, 0474, 0476
Sheng Chia	0178
Shogun	0008
Siarem	0320, 0339, 0341
Sierra	0320, 0350
Siesta	0161
Signature	0054
Silva	0277
Silver	0344
Singer	0321, 0339, 0341
Sinudyne	0320, 0339, 0341, 0349
Skantic	0347
Solavox	0347
Sonitron	0161, 0282
Sonoko	0282, 0320, 0323, 0337, 0342, 0343, 0349, 0350
Sonolor	0321, 0347
Sontec	0161, 0320, 0349, 0350
Sony	0038, 0044, 0045, 0047, 0055, 0104, 0105, 0107, 0110, 0123, 0184, 0220, 0248, 0249, 0251, 0252, 0254, 0326, 0343, 0344, 0371, 0374, 0457, 0475
Sound & Vision	0340, 0341
Soundesign	0008, 0026, 0031, 0058, 0059, 0179
Soundwave	0320, 0349, 0350
Squareview	0051
SSS	0008, 0058, 0179
Standard	0282, 0320, 0323, 0340, 0342, 0343, 0350
Starlite	0058, 0179, 0320, 0323, 0349
Stenway	0348
Stern	0346, 0347
Strato	0320, 0323
Stylandia	0282
Sunkai	0343
Sunstar	0320, 0323
Sunwood	0320, 0323, 0343, 0350
Superla	0277, 0282, 0342
Superscan	0013, 0178
SuperTech	0277, 0320, 0323
Supra	0323, 0343
Supre-Macy	0057
Supreme	0055, 0107
Susumu	0340
Sutron	0323, 0343
SVA	0151
Sydney	0277, 0282, 0342
Sylvania	0008, 0009, 0010, 0011, 0013, 0026, 0048, 0050, 0051, 0128, 0227, 0253
Symphonic	0051, 0058, 0062, 0128, 0179, 0215
Syntax	0199
Syntax-Brillian	0199
Sysline	0349
Sytong	0277
Tandy	0178, 0282, 0336, 0340, 0342, 0347
Tashiko	0277, 0282, 0342, 0344, 0346
Tatung	0052, 0177, 0282, 0320, 0342, 0349, 0350
TCM	0337, 0343
Teac	0282, 0320
Tec	0282, 0323, 0342, 0343
Technics	0017, 0023, 0056
TechniSat	0274, 0496, 0497, 0499
Techwood	0008, 0023, 0026, 0056
TEDELEX	0282
Teknika	0007, 0008, 0010, 0012, 0026, 0053, 0054, 0058, 0059, 0179
Teleavia	0345
Telecor	0282, 0320
Telefunken	0320, 0322, 0345, 0350
Telegazi	0320
Telemeister	0320
Telesonic	0320
Telestar	0320
Teletech	0320, 0323, 0343, 0349
Teleton	0282, 0342
Televideon	0277
Televiso	0321
Tensai	0282, 0320, 0323, 0340, 0343, 0350
Tesmet	0350
Tevion	0337, 0343
Texet	0277, 0282, 0323, 0342
Thomson	0162, 0188, 0189, 0285, 0320, 0322, 0342, 0345, 0350
Thorn	0320, 0349
TMK	0008, 0026, 0031
TNCi	0030
Tokai	0282, 0320, 0350
Tokyo	0277, 0342
Tomashi	0348
Toshiba	0018, 0019, 0040, 0041, 0046, 0073, 0100, 0103, 0108, 0109, 0111, 0121, 0132, 0166, 0208, 0210, 0214, 0217, 0260, 0268, 0282, 0283, 0293, 0304, 0306, 0307, 0329, 0344, 0355, 0454
Totevision	0007
Towada	0282, 0347
Trakton	0282
Trans Continens	0282, 0320
Transtec	0277
Trident	0282
Triumph	0320
Uher	0161, 0171, 0320, 0347, 0350
Ultravox	0277, 0320, 0339, 0341, 0342
Unic Line	0320
United	0349
Universum	0161, 0171, 0282, 0320, 0337, 0349, 0350, 0351
Univox	0320
Vector Research	0050
Vestel	0282, 0320, 0346, 0347, 0349, 0350, 0351
Vexa	0320, 0323, 0343, 0349
Victor	0015, 0344, 0350
VIDEOLOGIC	0277
Videologique	0277, 0282, 0340, 0342
VideoSystem	0320, 0350
Videotechnic	0277, 0282
Vidikron	0010
Vidtech	0008, 0026, 0031, 0053
Viewsonic	0176, 0203, 0232, 0364
Viking	0057
Viore	0148
Visiola	0277, 0342
Vision	0282, 0320, 0350
Vizio	0008, 0177, 0218, 0242, 0500, 0501, 0502, 0503, 0506
Vortec	0320, 0349, 0350
Voxson	0171, 0320, 0339, 0346, 0347, 0350
Waltham	0282, 0320, 0342
Wards	0008, 0009, 0010, 0026, 0031, 0048, 0049, 0050, 0053, 0054, 0059
Watson	0320, 0349, 0350
Watt Radio	0277, 0341, 0342
Waycon	0111
Wega	0320, 0339, 0344
Wegavox	0323
Weltblick	0282, 0320, 0349, 0350
Westinghouse	0107, 0216, 0220
White Westinghouse	0037, 0090, 0277, 0320, 0341, 0342, 0349
Wincom	0101, 0106
Xrypton	0320
Yamaha	0008, 0026, 0050, 0053, 0080, 0081, 0082, 0083, 0086, 0087
Yamishi	0282, 0320
Yokan	0320

Yoko	0161, 0277, 0282, 0320, 0323, 0337, 0340, 0342, 0343, 0349, 0350					
Yorx	0340					
Zanussi	0282, 0346					
Zenith	0008, 0028, 0029, 0030, 0031, 0054, 0061, 0062					

VCR

Brand	Code		Brand	Code		
ABS	1016		Dumont	1026, 1028		
Adventura	1069		Durabrand	1114		
Adyson	1008		Dynatech	1069		
Aiwa	1024, 1026, 1027, 1069		Echostar	1018		
Akai	1021, 1027		Elbe	1009		
Akiba	1008, 1029		Elcatech	1008		
Akura	1008, 1027, 1029		Electrohome	1071		
Alba	1008, 1009, 1024, 1025, 1029, 1030		Electrophonic	1071		
Alienware	1016		Elsay	1008		
Ambassador	1030		Elta	1008, 1009, 1029		
American High	1068		Emerson	1008, 1020, 1068, 1069, 1071		
Amstrad	1008, 1009, 1026		ESC	1009, 1025		
Anitech	1008, 1029		Etzuko	1008, 1029		
Apex	1088		Expressvu	1018		
ASA	1028, 1031		Ferguson	1027		
Asha	1070		Fidelity	1008, 1026		
Asuka	1008, 1026, 1028, 1029, 1031		Finlandia	1028		
Audio Dynamics	1064		Finlux	1026, 1027, 1028		
Audiosonic	1009		Firstline	1008, 1024, 1029, 1031		
Audiovox	1071		Fisher	1065		
Baird	1009, 1025, 1026, 1027		Flint	1024		
Bang & Olufsen	1017		Formenti/Phoenix	1028		
Basic Line	1008, 1009, 1024, 1025, 1029, 1030		Frontech	1030		
Baur	1028		Fuji	1068		
Beaumark	1070		Fujitsu	1026		
Bell & Howell	1065		Funai	1026, 1069		
Bestar	1009, 1025, 1030		Galaxy	1026		
Black Panther Line	1009, 1025		Garrard	1069		
Blaupunkt	1028		Gateway	1016		
Bondstec	1008, 1030		GBC	1029, 1030		
Broksonic	1100		GE	1068, 1070		
Bush	1008, 1009, 1024, 1025, 1029, 1049, 1051, 1063, 1217		GEC	1028		
Calix	1071		Geloso	1029		
Candle	1070, 1071		General	1030		
Canon	1068		General Technic	1024		
Cathay	1009		GOI	1018		
Catron	1030		GoldHand	1008, 1029		
CGE	1026, 1027		Goldstar	1026, 1031, 1064, 1071		
Cimline	1008, 1024, 1029		Goodmans	1008, 1009, 1025, 1026, 1029, 1030, 1031		
CineVision	1104		Gradiente	1069		
Citizen	1070, 1071		Graetz	1027		
Clatronic	1008, 1030		Granada	1028		
Colortyme	1064		Grandin	1008, 1009, 1025, 1026, 1029, 1030, 1031		
Condor	1009, 1025, 1030		Grundig	1028, 1029		
Craig	1070, 1071		Hanseatic	1009, 1028, 1031		
Crown	1008, 1009, 1025, 1029, 1030		Harley Davidson	1069		
Curtis Mathes	1064, 1068, 1070		Harman/Kardon	1064		
Cybernex	1070		Harwood	1008		
CyberPower	1016		HCM	1008, 1029		
Daewoo	1009, 1025, 1030, 1038, 1069, 1223		Headquarter	1065		
Dansai	1008, 1009, 1029		Hewlett Packard	1016		
Dantax	1024		Hinari	1008, 1009, 1024, 1029		
Daytron	1009, 1025		Hisawa	1024		
DBX	1064		Hitachi	1011, 1026, 1027, 1028, 1046, 1062		
De Graaf	1028		HNS	1110		
Decca	1026, 1027, 1028		Howard Computers	1016		
Dell	1016		HP	1016		
Denko	1008		HTS	1018		
DiamondVision	1096		Hughes	1111, 1113, 1122		
DigiFusion	1014		Hughes Network Systems	1110, 1116		
DIRECTV	1019, 1105, 1110, 1111, 1113, 1116, 1122		Humax	1012, 1110, 1113		
Dish Network	1018		Hush	1016		
Dishpro	1018		Hypson	1008, 1009, 1024, 1029		
Dual	1009, 1027, 1028		iBUYPOWER	1016		
			Impego	1030		
			Imperial	1026		
			Inno Hit	1008, 1009, 1025, 1028, 1029, 1030		
			Innovation	1024		
			Instant Replay	1068		
			Interbuy	1008, 1031		
			Interfunk	1028		
			Intervision	1009, 1026		
			Irradio	1008, 1029, 1031		
			ITT	1027		
			ITV	1009, 1025, 1031		

Brand	Code		Brand	Code
JC Penney	1064, 1065, 1068, 1070, 1071		Panasonic	1000, 1022, 1044, 1055, 1068, 1072, 1085, 1090, 1091, 1120, 1121, 1214
JCL	1068		Pathe Marconi	1027
JVC	1007, 1018, 1027, 1039, 1064, 1065, 1066, 1067, 1078, 1089, 1092, 1093, 1094, 1095, 1113, 1208, 1209, 1212, 1213, 1215, 1218		Perdio	1026
			Philco	1008, 1068
Kaisui	1008, 1029		Philips	1006, 1013, 1028, 1035, 1040, 1045, 1046, 1050, 1058, 1059, 1061, 1068, 1076, 1101, 1110, 1113, 1116, 1117, 1122, 1126, 1210, 1211
Karcher	1028			
Kendo	1008, 1024, 1025, 1030			
Kenwood	1027, 1064, 1065		Philips Magnavox	1076
Kodak	1068, 1071		Phonola	1028
Korpel	1008, 1029		Pilot	1071
Kyoto	1008		Pioneer	1028, 1036
Lenco	1025		Polaroid	1088, 1099
Leyco	1008, 1029		Portland	1009, 1025, 1030
LG	1010, 1026, 1031, 1047, 1054, 1056, 1071, 1103, 1221		Prinz	1026
			Profex	1029
			Proline	1026
Lifetec	1024		Proscan	1019
Linksys	1016		Prosonic	1009, 1024
Lloyd's	1069		Pulsar	1114
Loewe Opta	1028, 1031		Pye	1028, 1102
Logik	1008, 1029		Quarter	1065
Lumatron	1009, 1025		Quartz	1065
Luxor	1008		Quasar	1068
LXI	1071		Quelle	1026, 1028
M Electronic	1026		Radialva	1008
Magnavox	1020, 1068, 1114, 1126		RadioShack	1071
			RadioShack/Realistic	1065, 1068, 1069, 1070, 1071
Magnin	1071			
Manesth	1008, 1029		Radiola	1028
Marantz	1028, 1064, 1065, 1068		Radix	1071
			Randex	1071
Mark	1009		RCA	1019, 1068, 1070, 1075, 1110, 1113, 1122, 1125
Marta	1071			
Matsui	1024, 1031		Realistic	1065, 1068, 1069, 1070, 1071
Matsushita	1068			
Media Center PC	1016		ReplayTV	1022, 1123
Mediator	1028		Rex	1027
Medion	1024		RFT	1008, 1028, 1030
MEI	1068		Ricavision	1016
Memorex	1023, 1026, 1031, 1065, 1068, 1069, 1070, 1071, 1098, 1114		Roadstar	1008, 1009, 1025, 1029, 1031
			Royal	1008
Memphis	1008, 1029		Runco	1114
MGN Technology	1070		Saba	1027
Micromaxx	1024		Saisho	1024, 1029
Microsoft	1016		Samsung	1002, 1034, 1041, 1043, 1057, 1060, 1070, 1084, 1110, 1116, 1122, 1124, 1220, 1222
Microstar	1024			
Migros	1026			
Mind	1016			
Mitsubishi	1026, 1028, 1079		Samurai	1008, 1030
Motorola	1068		Sanky	1114
MTC	1070		Sansui	1023, 1027, 1106, 1115
Multitech	1008, 1026, 1028, 1029, 1030, 1069, 1070		Sanyo	1032, 1065, 1070
			Saville	1009
Murphy	1026		SBR	1028
NEC	1027, 1064, 1065		Schaub Lorenz	1026, 1027
Neckermann	1027, 1028		Schneider	1008, 1009, 1024, 1025, 1026, 1028, 1029, 1030, 1031
NEI	1028			
Nesco	1008, 1029			
Nikkai	1008, 1009, 1030		Sears	1065, 1068, 1071
Nikko	1071		SEG	1008, 1009, 1029
Niveus Media	1016		SEI-Sinudyne	1028
Noblex	1070		Seleco	1027
Nokia	1009, 1027		Sentra	1008, 1030
Nordmende	1027		Sentron	1008, 1029
Northgate	1016		Sharp	1003, 1033, 1077, 1107, 1127, 1219
Oceanic	1026, 1027			
Okano	1008, 1009, 1024		Shintom	1008, 1029
Olympus	1068		Shivaki	1031
Optimus	1071		Shogun	1070
Orion	1023, 1024, 1051, 1115, 1217		Siemens	1031
			Silva	1031
Orson	1026		Silver	1009
Osaki	1008, 1026, 1029, 1031		Singer	1068
			Sinudyne	1028
Otto Versand	1028		Solavox	1030
Palladium	1008, 1027, 1029, 1031		Sonic Blue	1022, 1123

Sonneclair 1008
Sonoko 1009, 1025
Sontec 1031
Sony 1001, 1016, 1048,
1053, 1073, 1074,
1080, 1081, 1082,
1083, 1108, 1118,
1216
Stack 1016
Stack 9 1016
Standard 1009, 1025
Stern 1009
STS 1068
Sunkai 1024
Sunstar 1026
Suntronic 1026
Sunwood 1008, 1029
Superscan 1020
Sylvania 1020, 1068, 1069,
1102, 1126
Symphonic 1008, 1069, 1126
Systemax 1016
Tagar Systems 1016
Taisho 1024
Tandberg 1009
Tandy 1065
Tashiko 1026, 1071
Tatung 1026, 1027, 1028
TCM 1015, 1024, 1042
Teac 1009, 1069
Tec 1008, 1009, 1030
Technics 1068
Teknika 1068, 1069, 1071
Teleavia 1027
Telefunken 1027
Teletech 1008, 1009
Tenosal 1008, 1029
Tensai 1008, 1026, 1029,
1031
Tevion 1024
Thomson 1005, 1027
Thorn 1027
Tivo 1108, 1110, 1111,
1113, 1117, 1118,
1119, 1122
TMK 1070
Tokai 1008, 1029, 1031
Tonsai 1029
Toshiba 1004, 1016, 1027,
1028, 1037, 1049,
1052, 1086, 1087,
1097, 1109, 1112,
1194
Totevision 1070, 1071
Touch 1016
Towada 1008, 1029
Towika 1008, 1029
TVA 1030
Uher 1031
UltimateTV 1019
Ultravox 1009
Unitech 1070
United Quick Star 1009, 1025
Universum 1026, 1028, 1031
Vector Research 1064
Video Concepts 1064
Videon 1024
Videosonic 1070
Viewsonic 1016
Voodoo 1016
Wards 1068, 1069, 1070,
1071
Weltblick 1031
XR-1000 1068, 1069
Yamaha 1064, 1065
Yamishi 1008, 1029
Yokan 1008, 1029
Yoko 1008, 1029, 1030,
1031
Zenith 1114
ZT Group 1016

DVD

4Kus 2051
Accurian 2142
Advent 2155, 2251
AEG 2362

Airis 2364
Aiwa 2322
Akai 2145, 2177, 2179,
2248
Akura 2356
Alba 2064, 2165, 2186,
2337, 2346
Alco 2149
Alize 2361
Allegro 2133
Amitech 2362
Amphion MediaWorks
2195
AMW 2195, 2363
Apex 2030, 2124, 2125,
2126, 2127, 2130,
2131
Apple 2241
Arrgo 2138
Asono 2364
Aspire 2152, 2222
Astar 2240
ATACOM 2364
Audiovox 2061, 2149
Avious 2367
Awa 2363
Axion 2249
Bang & Olufsen 2128
Baze 2367
BBK 2364
Bellagio 2363
Best Buy 2359
Blaupunkt 2131
Blue Parade 2157
Boghe 2382
Brainwave 2362
Brandt 2148, 2188
Broksonic 2145, 2146
Bush 2064, 2110, 2170,
2268, 2290, 2346,
2358, 2367, 2383
California Audio Labs
2151
Cambridge Audio 2354
CAT 2352, 2353
CAVS 2192
Centrum 2353
CGV 2354, 2362
Changhong 2140
Cinetec 2363
CineVision 2133, 2237
Clatronic 2358, 2367
Coby 2031, 2046, 2360
Conia 2383
Continental Edison
2363
Crown 2362
C-Tech 2355
Curtis Mathes 2139
CVG 2377
CyberHome 2022, 2098, 2138,
2187, 2336
Cytron 2244
Daenyx 2363
Daewoo 2001, 2133, 2276,
2298, 2330, 2362,
2363, 2377
Daewoo International
2363
Dalton 2357
Dansai 2362, 2381
Daytek 2184, 2195, 2363
Dayton 2363
DEC 2358
Decca 2362
Denon 2059, 2151, 2193,
2332
Denver 2356, 2358, 2360,
2370
Denzel 2380
Desay 2205
Diamond 2354, 2355
DiamondVision 2225, 2232
Disney 2010, 2028
DK Digital 2339
Dmtech 2176
Dual 2380
Durabrand 2136
DVX 2355

Easy Home 2359
Eclipse 2354
E-Dem 2364
Electrohome 2362
Elin 2362
Elta 2341, 2361, 2362
Emerson 2129, 2137, 2150
Enterprise 2129
Enzer 2380
Epson 2247
ESA 2137
Finlux 2354, 2362, 2367
Fintec 2377
Fisher 2134
Funai 2137
Gateway 2051
GE 2029, 2131, 2156
Gericom 2351
GFM 2226
Giec 2382
Global Solutions 2355
Global Sphere 2355
Go Video 2133, 2213
Goodmans 2165, 2280, 2291,
2358, 2371, 2376,
2382
GPX 2227
Gradiente 2151
Graetz 2380
Greenhill 2131
Grundig 2349
Grunkel 2362, 2366
GVG 2377
H&B 2358
H_her 2364
Haaz 2354, 2355
Haier 2254
Harman/Kardon 2047, 2135
HiMAX 2359
Hitachi 2062, 2090, 2115,
2274, 2282, 2316,
2359, 2380
Hiteker 2130
Home Tech Industries
2364
Hyundai 2366
Ilo 2245
Initial 2131, 2245
Innovation 2182
Insignia 2002, 2137, 2253
Integra 2157
Irradio 2053
iSymphony 2246
JBL 2135
JVC 2020, 2096, 2097,
2099, 2100, 2101,
2102, 2103, 2106,
2107, 2160, 2257,
2260, 2262, 2263,
2321, 2324, 2326,
2327, 2343, 2464,
2465, 2468, 2469,
2471
Jwin 2198
Kansai 2360
Kawasaki 2149
Kennex 2362
Kenwood 2041, 2151, 2348
KeyPlug 2362
Kiiro 2362
Kingavon 2358
Kiss 2380
KLH 2131, 2149
Koda 2358
Koss 2013, 2148, 2158
KXD 2359
Landel 2143
Lasonic 2132
Lawson 2355
Lecson 2381
Lenco 2358, 2362, 2367
Lenoxx 2136, 2153
LG 2002, 2033, 2038,
2057, 2129, 2133,
2189, 2191, 2223,
2238, 2270, 2288,
2335, 2373, 2375
Life 2182
Lifetec 2182

Limit 2355
Liquid Video 2158
Liteon 2043, 2051, 2142
Loewe 2320
LogicLab 2355
Magnavox 2025, 2050, 2137,
2150, 2159, 2224,
2230, 2358
Magnex 2367
Majestic 2360
Marantz 2328
Marquant 2362
Matsui 2148, 2378
McIntosh 2199
Mecotek 2362
Medion 2182
Memorex 2028, 2145, 2234
MiCO 2354, 2382
Micromaxx 2182
Microsoft 2156
Microstar 2182
Minoka 2362
Minowa 2367
Mintek 2131, 2245
Mitsubishi 2003
Mizuda 2358, 2359
Monyka 2380
Mustek 2186
Mx Onda 2354
Mystral 2366
Naiko 2362
Nesa 2131
Neufunk 2380
Nevir 2362
Next Base 2143
Nexxtech 2243
NU-TEC 2383
Onkyo 2159, 2368
Oopla 2051
Oppo 2196, 2255
Optim 2381
Optimus 2180
Orava 2358
Orbit 2363
Orion 2073, 2110
Oritron 2148, 2158
P&B 2358
Pacific 2355
Panasonic 2011, 2024, 2034,
2042, 2058, 2062,
2066, 2067, 2093,
2116, 2117, 2118,
2119, 2120, 2121,
2122, 2123, 2151,
2159, 2164, 2166,
2167, 2172, 2173,
2175, 2209, 2214,
2275, 2277, 2278,
2281, 2282, 2283,
2301, 2374, 2470
Parasound 2197
peeKTON 2364
Philips 2008, 2012, 2025,
2044, 2050, 2051,
2053, 2060, 2072,
2108, 2111, 2147,
2159, 2163, 2169,
2174, 2181, 2185,
2230, 2261, 2266,
2267, 2286, 2287,
2289, 2295, 2300,
2302, 2317, 2328,
2338, 2342, 2350,
2467
Phonotrend 2367
Pioneer 2016, 2017, 2018,
2019, 2035, 2092,
2094, 2095, 2109,
2157, 2180, 2190,
2212, 2269, 2272,
2299, 2304, 2305,
2306, 2307, 2308,
2309, 2310, 2311,
2344, 2345, 2347,
2379
Pointer 2362
Polaroid 2125, 2215, 2235
Portland 2362
Powerpoint 2363

Prima	2252	Teac	2149, 2333, 2355, 2383	Hitachi	2062	HomeChoice	3106

Prima 2252
Proceed 2130
Proscan 2156
Prosonic 2360, 2377
Protron 2202
Provision 2358
Pye 2144
Qwestar 2148
Raite 2380
RCA 2021, 2029, 2104, 2105, 2131, 2149, 2156, 2157, 2229
RedStar 2356, 2360, 2362
Regent 2153
Reoc 2355
Rimax 2361
Rio 2133
Roadstar 2331, 2358
Ronin 2363
Rotel 2203
Rowa 2154, 2383
Rownsonic 2353
Saba 2148, 2188
Sabaki 2355
Saivod 2362
Sampo 2141
Samsung 2000, 2045, 2077, 2112, 2113, 2114, 2115, 2151, 2200, 2216, 2219, 2228, 2264, 2265, 2271, 2279, 2294, 2303, 2329, 2365
Sansui 2073, 2145, 2354, 2355, 2362
Sanyo 2134, 2145, 2217, 2292
ScanMagic 2186
Schaub Lorenz 2362
Schneider 2176
Scientific Labs 2355
Scott 2161, 2357
Seeltech 2364
SEG 2162, 2355, 2363, 2380
Sharp 2006, 2040, 2088, 2091, 2182, 2194, 2220, 2221, 2231, 2236, 2293, 2340
Shinsonic 2245
Sigmatek 2359, 2364
Silva 2356
Singer 2354, 2355
Skymaster 2325, 2355
Skyworth 2356
Slim Art 2362
SM Electronic 2355
Sonic Blue 2133
Sontech 2366
Sony 2004, 2005, 2007, 2009, 2014, 2015, 2023, 2026, 2027, 2052, 2068, 2069, 2070, 2071, 2074, 2075, 2084, 2085, 2087, 2168, 2171, 2208, 2210, 2211, 2258, 2273, 2284, 2285, 2312, 2313, 2314, 2315, 2318, 2319, 2466
Soundmaster 2355
Soundmax 2355
Spectra 2363
Spectroniq 2201
Standard 2355
Star Cluster 2355
Starmedia 2358, 2364
Sungale 2204
Sunkai 2362
Superscan 2150
Supervision 2355
Sylvania 2012, 2137, 2150, 2178, 2230, 2239
Symphonic 2108, 2230
Synn 2355
T.D.E. Systems 2366
Tatung 2001, 2362
TCM 2182, 2297

Teac 2149, 2333, 2355, 2383
Tec 2356
Technics 2151
Technika 2362, 2367
Telefunken 2353
Tensai 2362
Tevion 2182, 2355, 2357
Theta Digital 2157
Thomson 2183, 2188, 2334, 2372
Tokai 2356, 2380
Top Suxess 2364
Toshiba 2032, 2036, 2037, 2039, 2048, 2049, 2054, 2055, 2072, 2073, 2076, 2078, 2079, 2086, 2145, 2159, 2218, 2233, 2256, 2259, 2296, 2369
TRANScontinents 2363, 2367
Transonic 2367
Trio 2362
Trutech 2242
TruVision 2359
TSM 2364
Umax 2361
United 2367
Urban Concepts 2159
US Logic 2245
Venturer 2149
Viewmaster 2364
Vocopro 2206
VocoStar 2207
Waitec 2364
Welltech 2382
Westinghouse 2063, 2250
Wharfedale 2354, 2355
Woxter 2361, 2364
Xbox 2156, 2183
Xlogic 2355, 2362
XMS 2362
Xoro 2382
Yamada 2051, 2361, 2363
Yamaha 2056, 2064, 2065, 2080, 2081, 2082, 2083, 2089, 2118, 2151, 2323
Yamakawa 2363, 2380
Yukai 2186
Zenith 2002, 2129, 2133, 2159, 2223

Blu-ray Disc
LG 2033
Panasonic 2011, 2209, 2214
Pioneer 2212
Samsung 2045, 2113
Sharp 2194, 2220, 2221
Sony 2075
Yamaha 2064

DVR
Bush 2110
Hitachi 2090
Panasonic 2066, 2067, 2093, 2116, 2117, 2119, 2120, 2122, 2123
Philips 2108, 2111
Pioneer 2016, 2017, 2018, 2019, 2092, 2094, 2095, 2109
RCA 2105
Samsung 2113, 2219
Sharp 2088, 2091
Sony 2084, 2085, 2087
Toshiba 2086
Yamaha 2089, 2118

DVD Recorder
Aspire 2222
Astar 2240
Broksonic 2146
Go Video 2213

Hitachi 2062
Insignia 2002
Irradio 2053
JVC 2100, 2101, 2106, 2107
LG 2033, 2057, 2223, 2238
Liteon 2043
Panasonic 2011, 2034, 2058, 2062, 2116, 2117, 2119, 2120, 2121, 2123
Philips 2008, 2044, 2050, 2051, 2147
Pioneer 2017, 2035
Pye 2144
Samsung 2000, 2112, 2216
Sansui 2073
Sanyo 2217
Sony 2004, 2005, 2007, 2052, 2068, 2069, 2074, 2208, 2210, 2211
Sylvania 2239
Toshiba 2032, 2036, 2037, 2039, 2049, 2054, 2055, 2076
Yamaha 2056

Cable
ABC 3002, 3003, 3017, 3066, 3067, 3086, 3093, 3119, 3122
ADB 3020
Adelphia 3081
Alcatel 3016
Americast 3124
Amstrad 3022, 3098
Antronix 3065, 3070
Archer 3070
Arcon 3098
AT&T 3095
Axis 3098
Bell South 3124
Cable Vision 3092
Cabletenna 3065
Cabletime 3104
Cableview 3087
Clearmaster 3127
ClearMax 3127
Clyde Cablevision 3105
Colour Voice 3068
Comcast 3084, 3088, 3117
Comcrypt 3107
Comtronics 3069
Contec 3074
Coolmax 3127
COX 3084
Cryptovision 3110
Director 3084
Eastern 3075
Everquest 3123
Fidelity 3098
Filmnet 3107
Filmnet Cablecrypt 3111
Filmnet Comcrypt 3111
Finlux 3097
Focus 3126
Foxtel 3022
France Telecom 3100, 3101
Freebox 3023
GC Electronics 3070
GE 3066, 3093
GEC 3105
Gemini 3072, 3123
General Instrument 3017, 3025, 3066, 3084, 3090, 3096, 3117
Goldstar 3120
Gooding 3099
Grundig 3098, 3099
Hamlin 3073, 3078
Hirschmann 3097
Hitachi 3066

HomeChoice 3106
Humax 3021, 3080, 3083
ITT Nokia 3097
Jasco 3123
Jerrold 3017, 3018, 3025, 3066, 3072, 3084, 3090, 3096, 3119, 3123
JVC 3099
Kabel Deutschland 3024, 3027, 3121
Macab 3101
Magnavox 3079
Maspro 3099
Matsui 3099
MegaCable 3117
Memorex 3076, 3122
Minerva 3099
Mnet 3107
Motorola 3025, 3026, 3084, 3088, 3090, 3095, 3117
Movie Time 3077, 3109
Mr Zapp 3101
Multichoice 3107
Multitech 3127
NEC 3064
NET Brazil 3085
Nokia 3097
Noos 3101
NSC 3077
Oak 3074
Pace 3006, 3089, 3121
Palladium 3099
Panasonic 3112, 3118, 3122
Paragon 3122
Philips 3068, 3071, 3079, 3099, 3100, 3101, 3103
Pioneer 3001, 3006, 3094, 3098, 3114, 3116, 3120
Popular Mechanics 3126
Proscan 3066, 3093
Pulsar 3122
PVP Stereo Visual Matrix 3018
Quasar 3122
RadioShack 3123, 3127
RCA 3030, 3031, 3087, 3118
Realistic 3070
Recoton 3126
Regal 3078
Regency 3075
Rembrandt 3066
Runco 3122
Sagem 3101
Samsung 3069, 3089, 3114, 3120
SAT 3098
Scientific Atlanta 3000, 3001, 3002, 3003, 3006, 3028, 3029, 3081, 3086, 3089, 3094, 3095, 3108
Signal 3072, 3123
Signature 3066
Sony 3092, 3125
Sprucer 3118
Standard Component 3115
Starcom 3017, 3072, 3119, 3123
Stargate 3072, 3123
Starquest 3072, 3123
Supercable 3090
Supermax 3127
Tele+1 3107, 3111
Telepiu 3107
Thomson 3082, 3091
TIME WARNER 3084
Tocom 3067
Torx 3017
Toshiba 3122
Tristar 3127
Tudi 3102
Tusa 3072, 3123

TV86 3077
Unika 3065, 3070
United Cable 3018, 3119
Universal 3065, 3070
Universum 3097, 3099
V2 3127
Videoway 3019
View Star 3074, 3077, 3079
Viewmaster 3127
Vision 3127
Visiopass 3097, 3100, 3101
Vortex View 3127
Wittenberg 3098
Zenith 3113, 3122, 3124
Zentek 3126

Sattelite

AB Sat 4216, 4217
AccessHD 4104
ADB 4220
AGS 4216
Akai 4053, 4055
Alba 4001, 4004, 4006, 4007, 4062, 4217
Aldes 4005, 4007, 4010
Allsat 4048, 4053, 4055
Allsonic 4005, 4008, 4024
Alltech 4217
Alpha 4053
Alpha Digital 4104
Alphastar 4077
Amitronica 4217
Amstrad 4011, 4035, 4217, 4218
Anglo 4217
Ankaro 4005, 4008, 4024, 4217
Anttron 4001, 4004
Apollo 4001
Armstrong 4011, 4053
Artec 4100
Asat 4053, 4055
ASLF 4217
Astacom 4216
Astra 4009, 4011, 4054, 4217, 4219
Astro 4004, 4008, 4010, 4015, 4024, 4213, 4218, 4219
AudioTon 4004, 4048
Aurora 4222
Austar 4222
Axiel 4216
Axis 4008, 4009, 4024, 4050
Best 4008, 4024
Blaupunkt 4015
Blue Sky 4217
Boca 4011, 4054, 4059, 4217
Boston 4216
Brain Wave 4013
Broadcast 4012
Broco 4217
BSkyB 4035, 4041
BT 4216
Bubu Sat 4217
Bush 4006, 4045
Cambridge 4218
Canal Satellite 4213
Canal+ 4213
CaptiveWorks 4099
Channel Master 4007, 4110
Chaparral 4075
CHEROKEE 4216
Chess 4212, 4217
CityCom 4006, 4215, 4219
Clatronic 4013
CNT 4010
Comag 4080, 4081, 4082, 4083, 4086
Commlink 4005
Comtech 4050
Condor 4008, 4024, 4219
Connexions 4014, 4024
Conrad 4024, 4215, 4218, 4219

Conrad Electronic 4217, 4219
Contec 4050
Coolsat 4096
Cosat 4048
Coship 4109
Crown 4011
Daeryung 4014
Daewoo 4057, 4217
DDC 4007
Delega 4007
Dew 4050
Diamond 4051
Digiality 4219
Digital Stream 4105
DIRECTV 4056, 4064, 4067, 4068, 4070, 4071, 4074, 4107, 4116, 4119, 4121, 4122, 4123, 4127, 4192, 4193, 4194, 4195, 4196, 4197, 4198, 4199, 4200, 4201, 4202, 4203, 4206, 4207, 4221
Discoverer 4212
Discovery 4216
Diseqc 4216
Dish Network 4018, 4065, 4089, 4092, 4094, 4095, 4117
Dishpro 4018, 4117
Distrisat 4053
Ditristrad 4048
DNT 4014, 4053, 4055
Drake 4072
DStv 4222
Dune 4024
Echostar 4014, 4018, 4065, 4089, 4117, 4217
Einhell 4001, 4005, 4011, 4217, 4218
Elap 4216, 4217
Elekta 4010
Elsat 4217
Elta 4001, 4008, 4024, 4048, 4053, 4055
Emanon 4001
Emme Esse 4008, 4024
Engel 4217
Ep Sat 4006
EURIEULT 4031
Eurodec 4052
Europa 4053, 4218, 4219
Europhon 4219
Eurosat 4011
Eurosky 4024, 4011, 4008, 4215, 4218, 4219
Eurostar 4011, 4215, 4219
Eutelsat 4217
Exator 4001, 4004
Expressvu 4117
Fenner 4024, 4212, 4217
Ferguson 4006, 4052, 4214
Fidelity 4218
Finlandia 4006
Finlux 4006
FinnSat 4050, 4052
Flair Mate 4217
Foxtel 4222
Freecom 4001, 4049, 4218
FTEmaximal 4024, 4217
Fuba 4024, 4001, 4008, 4014, 4015, 4055, 4215
Galaxis 4024, 4005, 4008, 4009, 4050, 4048, 4215, 4222
GE 4093, 4066, 4111, 4197
General Instrument 4073, 4019
GMI 4011
GOI 4117
Goldbox 4213
GoldStar 4049
Goodmans 4029, 4002, 4006
Goodmind 4111
Grandin 4031
Grothusen 4001, 4049

Grundig 4006, 4004, 4015, 4035, 4211, 4218, 4222
Hänsel & Gretel 4219
Hantor 4001, 4013
Hanuri 4010
Hauppauge 4044
Heliocom 4219
Helium 4219
Hinari 4007
Hirschmann 4024, 4015, 4210, 4218, 4219, 4216
Hisawa 4013
Hisense 4016
Hitachi 4114, 4006, 4199, 4203
Homecast 4087, 4084, 4085
Houston 4048
HTS 4117
Hughes 4064, 4068, 4194, 4192, 4196, 4202
Hughes Network Systems 4071
Humax 4097, 4025, 4030, 4060
Huth 4005, 4011, 4012, 4013, 4050, 4048, 4219, 4223
Hypson 4031
Ilo 4016
Imex 4031
Innovation 4008
Insignia 4107
Intertronic 4011
Intervision 4048, 4219
ITT Nokia 4006
Jerrold 4019
Johansson 4013
JOK 4216
JSR 4048
JVC 4089, 4065, 4117, 4029
Kamm 4217
Kathrein 4015, 4055, 4053, 4063, 4034, 4042, 4215, 4216, 4217
Kathrein Eurostar 4215
Klap 4216
Konig 4219
Kosmos 4049
KR 4004
Kreiselmeyer 4015
K-SAT 4217
Kyostar 4001
L&S Electronic 4024
Lasat 4024, 4010, 4008, 4054, 4215, 4212, 4219
Lasonic 4108
Lenco 4024, 4001, 4049, 4215, 4219, 4217
Leng 4013
Lennox 4048
Lenson 4218
Lexus 4053
LG 4103, 4107, 4049
Lifesat 4024, 4008, 4212, 4217
Lifetec 4008
Lorenzen 4219
Lorraine 4049
Lupus 4024, 4008
Luxor 4218
Lyonnaise 4052
Macab 4052
Magnavox 4127, 4101
Manata 4031, 4216, 4217
Manhattan 4006, 4010, 4048, 4216
Marantz 4055
Mascom 4010
Maspro 4006, 4217
Matsui 4216
Max 4219
Mediabox 4213
Mediamarkt 4011
Mediasat 4009, 4213, 4218
Medion 4024, 4008, 4217
Medison 4217

Mega 4055, 4053
Memorex 4127
Metronic 4031, 4028, 4001, 4004, 4005, 4010, 4217
Metz 4015
Micro electronic 4218, 4219, 4217
Micro Technology 4217
MicroGem 4106
Micromaxx 4024, 4008
Microstar 4008
Microtec 4217
Minerva 4015
Mitsubishi 4006, 4015, 4202
Mitsumi 4054
Morgan's 4011, 4054, 4055, 4053, 4217
Motorola 4090, 4091, 4088, 4019
Multichoice 4222
Multitec 4212
Muratto 4049
Mysat 4217
Navex 4013
Neuhaus 4009, 4048, 4218, 4219, 4217
Neusat 4217
Next Level 4019
NextWave 4223
Nikko 4011, 4217
Nokia 4006, 4040
Nordmende 4001, 4006, 4007, 4010, 4052
Nova 4222
Novis 4013
Oceanic 4051
Octagon 4001, 4004, 4050
Okano 4011
Optex 4048
Optus 4213, 4222, 4223
Orbitech 4001, 4212, 4213, 4218
OSat 4004
Otto Versand 4015
Pace 4006, 4015, 4035, 4043, 4047, 4216
Pacific 4051
Packsat 4216
Palcom 4007
Palladium 4011, 4218
Palsat 4212, 4218
Panasat 4222
Panasonic 4121, 4126, 4124, 4006, 4035, 4036, 4221, 4198
Panda 4006, 4219
Pansat 4125
Patriot 4216
Paysat 4127
PCT 4110
Philco 4101
Philips 4071, 4068, 4127, 4006, 4055, 4053, 4061, 4033, 4213, 4216, 4196, 4202, 4203, 4201, 4206
Phoenix 4050
Phonotrend 4006, 4005, 4048
Pioneer 4046, 4213
Polsat 4052
Predki 4013
Premiere 4048, 4213
Priesner 4011
Primestar 4076
Profile 4216
Promax 4006
Prosat 4007, 4005
Proscan 4093, 4066, 4122, 4197
Protek 4051
Proton 4016
Provision 4010
Quadral 4024, 4007, 4005, 4008, 4216
Quelle 4015, 4215, 4219
Quiero 4052
RadioShack 4019
Radiola 4055, 4053
Radix 4014, 4037

Rainbow	4004	Telesat	4219			
RCA	4093, 4066, 4112, 4113, 4118, 4119, 4116, 4122, 4197, 4207	Telestar	4212, 4213, 4218			
		Televes	4006, 4218			
		Telewire	4048			
		Tempo	4223			
Realistic	4078	Tevion	4008, 4217			
Redpoint	4009	Thomson	4020, 4006, 4052, 4058, 4208, 4215, 4213, 4219, 4216, 4217			
Redstar	4024, 4008					
RFT	4005, 4055, 4053					
Roadstar	4217	Thorens	4051			
Roch	4031	Thorn	4006			
Rover	4024, 4217	Tivax	4104			
Saba	4010, 4215, 4219, 4216	Tivo	4196			
		Tokai	4053			
Sabre	4006	Tonna	4006, 4012, 4048, 4218, 4217			
Sagem	4023, 4052					
Sakura	4050	Toshiba	4194, 4202, 4203			
Samsung	4064, 4071, 4069, 4123, 4120, 4003, 4000, 4001, 4032, 4196, 4200	Triad	4049			
		Triasat	4218			
		Triax	4015, 4215, 4218, 4217			
SAT	4007, 4218					
Sat Cruiser	4223	Turnsat	4217			
Sat Partner	4001, 4004, 4010, 4013, 4049, 4218	Tvonics	4214			
		Twinner	4031, 4217			
Sat Team	4217	UEC	4222			
Satcom	4012, 4219	Uher	4212			
Satec	4217	UltimateTV	4070			
Satelco	4024	Uniden	4079, 4127			
Satford	4012	Unisat	4011, 4050, 4053			
Satmaster	4012	Unitor	4013			
Satplus	4212	Universum	4015, 4215, 4219			
Schneider	4008, 4212, 4216	US Digital	4016			
Schwaiger	4051, 4212, 4219	Variosat	4015			
SCS	4215	Vega	4024			
Seemann	4011, 4009, 4014	Ventana	4055, 4053			
SEG	4024, 4001, 4008, 4013	Viewsat	4098			
		Visiosat	4013, 4048, 4216, 4217			
Seleco	4048					
Servi Sat	4031, 4217	Voom	4019			
Siemens	4015	Vortec	4001			
Silva	4049	Welltech	4212			
Skantin	4217	WeTeKom	4212, 4218			
Skardin	4009	Wevasat	4006			
Skinsat	4218	Wewa	4006			
SKR	4217	Winersat	4013			
Skymaster	4017, 4022, 4005, 4212, 4217	Wisi	4006, 4014, 4015, 4218, 4219			
Skymax	4055, 4053	Woorisat	4010			
SkySat	4212, 4218, 4219, 4217	Worldsat	4216			
		Xrypton	4024			
Skyvision	4048	XSat	4217			
SM Electronic	4212, 4217	Zehnder	4024, 4010, 4008, 4209, 4215			
Smart	4215, 4217					
Sony	4067, 4070, 4213	Zenith	4102, 4107, 4195			
SR	4011, 4054	Zodiac	4004			
Star Choice	4019					
Starland	4217					
Starring	4013					
Start Trak	4001					
Strong	4024, 4001, 4004, 4008, 4049, 4222					
STS	4115					
STVI	4031					
Sumida	4011					
Sunny Sound	4024					
Sunsat	4217					
Sunstar	4024, 4011, 4054					
Supermax	4223					
Tandberg	4052					
Tandy	4004					
Tantec	4006					
TCM	4008					
Techniland	4012					
TechniSat	4021, 4026, 4027, 4014, 4053, 4038, 4039, 4212, 4213, 4218					
Technology	4222					
Technosat	4223					
Technowelt	4219					
Teco	4011, 4054					
Telanor	4007					
Telasat	4215, 4219					
Telecom	4217					
Telefunken	4017, 4001, 4216					
Teleka	4004, 4011, 4014, 4218, 4219					
Telemaster	4010					

DOCK

Yamaha	5068, 5089

NET

Yamaha	5076, 5079

LD

Yamaha	2080

Amplifier

Yamaha	5019, 5020

CD

Yamaha	5082, 5095

CD Recorder

Yamaha	5083

MD

Yamaha	5080, 5081, 5086

Tape

Yamaha	5084, 5087

Tuner

Yamaha	5066, 5071, 5085, 5088, 5090, 5092, 5094

XM

Yamaha	5091, 5093

SIRIUS

Yamaha	5064, 5067

YAMAHA CORPORATION

YAMAHA

RX-V367

AV Receiver   English

Safety Brochure

IMPORTANT SAFETY INSTRUCTIONS

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

CAUTION: TO REDUCE THE RISK OF
ELECTRIC SHOCK, DO NOT REMOVE
COVER (OR BACK). NO USER-SERVICEABLE
PARTS INSIDE. REFER SERVICING TO
QUALIFIED SERVICE PERSONNEL.
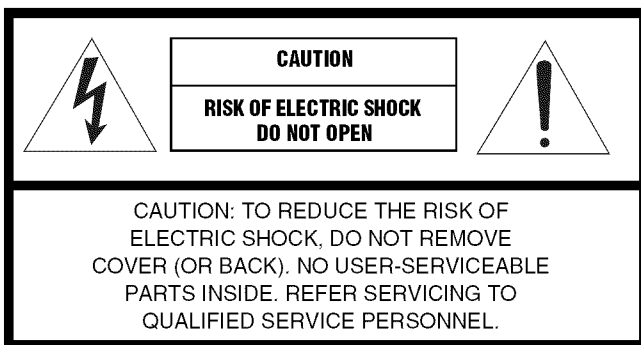
• Explanation of Graphical Symbols
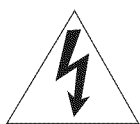
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.
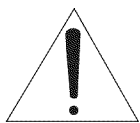
1 Read these instructions.
2 Keep these instructions.
3 Heed all warnings.
4 Follow all instructions.
5 Do not use this apparatus near water.
6 Clean only with dry cloth.

7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11 Only use attachments/accessories specified by the manufacturer.
12 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13 Unplug this apparatus during lightning storms or when unused for long periods of time.
14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

FCC INFORMATION (for US customers)

1 **IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!**
This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2 **IMPORTANT:** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3 **NOTE:** This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices.
This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices.

Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Electronics Corp., U.S.A. 6660 Orangethorpe Ave, Buena Park, CA 90620.

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

⏻ (Power key)
Turns on the power of this unit or sets it to the standby mode.

CAUTION: READ THIS BEFORE OPERATING YOUR UNIT.

1   To assure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.

2   Install this sound system in a well ventilated, cool, dry, clean place - away from direct sunlight, heat sources, vibration, dust, moisture, and/or cold. For proper ventilation, allow the following minimum clearances.
    Top: 30 cm, Rear: 10 cm, Sides: 10 cm

3   Locate this unit away from other electrical appliances, motors, or transformers to avoid humming sounds.

4   Do not expose this unit to sudden temperature changes from cold to hot, and do not locate this unit in an environment with high humidity (i.e. a room with a humidifier) to prevent condensation inside this unit, which may cause an electrical shock, fire, damage to this unit, and/or personal injury.

5   Avoid installing this unit where foreign object may fall onto this unit and/or this unit may be exposed to liquid dripping or splashing. On the top of this unit, do not place:
    – Other components, as they may cause damage and/or discoloration on the surface of this unit.
    – Burning objects (i.e. candles), as they may cause fire, damage to this unit, and/or personal injury.
    – Containers with liquid in them, as they may fall and liquid may cause electrical shock to the user and/or damage to this unit.

6   Do not cover this unit with a newspaper, tablecloth, curtain, etc. in order not to obstruct heat radiation. If the temperature inside this unit rises, it may cause fire, damage to this unit, and/or personal injury.

7   Do not plug in this unit to a wall outlet until all connections are complete.

8   Do not operate this unit upside-down. It may overheat, possibly causing damage.

9   Do not use force on switches, knobs and/or cords.

10 When disconnecting the power cable from the wall outlet, grasp the plug; do not pull the cable.

11 Do not clean this unit with chemical solvents; this might damage the finish. Use a clean, dry cloth.

12 Only voltage specified on this unit must be used. Using this unit with a higher voltage than specified is dangerous and may cause fire, damage to this unit, and/or personal injury. Yamaha will not be held responsible for any damage resulting from use of this unit with a voltage other than specified.

13 To prevent damage by lightning, keep the power cable and outdoor antennas disconnected from a wall outlet or this unit during a lightning storm.

14 Do not attempt to modify or fix this unit. Contact qualified Yamaha service personnel when any service is needed. The cabinet should never be opened for any reasons.

15 When not planning to use this unit for long periods of time (i.e. vacation), disconnect the AC power plug from the wall outlet.

16 Be sure to read the "Troubleshooting" section on common operating errors before concluding that this unit is faulty.

17 Before moving this unit, press ⏻ to set it to standby mode and disconnect the AC power plug from the wall outlet.

18 VOLTAGE SELECTOR (Asia and General models only)
    The VOLTAGE SELECTOR on the rear panel of this unit must be set for your local main voltage BEFORE plugging into the AC wall outlet. Voltages are:
    ....AC 110-120/220-240V, 50/60Hz (General model)
    .... AC 220-240V, 50/60Hz (Asia model)

19 Condensation will form when the surrounding temperature changes suddenly. Disconnect the power cable from the outlet, then leave this unit alone.

20 When using this unit for a long time, this unit may become warm. Turn the power off, then leave this unit alone for cooling.

21 Install this unit near the AC outlet and where the AC power plug can be reached easily.

22 The batteries shall not be exposed to excessive heat such as sunshine, fire or the like. When you dispose of batteries, follow your regional regulations.

23 Excessive sound pressure from earphones and headphones can cause hearing loss.

24 When replacing the batteries, be sure to use batteries of the same type. Danger of explosion may happen if batteries are incorrectly replaced.

This unit is not disconnected from the AC power source as long as it is connected to the wall outlet, even if this unit itself is turned off by ⏻. This state is called the standby mode. In this state, this unit is designed to consume a very small quantity of power.

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

■ Notes on remote controls and batteries

- Do not spill water or other liquids on the remote control.
- Do not drop the remote control.
- Do not leave or store the remote control in the following conditions:
  - places of high humidity, such as near a bath
  - places of high temperatures, such as near a heater or stove
  - places of extremely low temperatures
  - dusty places
- Insert the battery according to the polarity markings (+ and -).
- Change all batteries if you notice the following conditions:
  - the operation range of the remote control narrows
  - the transmit indicator does not flash or is dim
- If the batteries run out, immediately remove them from the remote control to prevent an explosion or acid leak.
- If you find leaking batteries, discard the batteries immediately, taking care not to touch the leaked material. If the leaked material comes into contact with your skin or gets into your eyes or mouth, rinse it away immediately and consult a doctor. Clean the battery compartment thoroughly before installing new batteries.
- Do not use old batteries together with new ones. This may shorten the life of the new batteries or cause old batteries to leak.
- Do not use different types of batteries (such as alkaline and manganese batteries) together. Specification of batteries may be different even though they look the same.
- Before inserting new batteries, wipe the compartment clean.
- If the remote control is without batteries for more than 2 minutes, or if exhausted batteries remain in the remote control, the contents of the memory may be cleared. In such a case, install new batteries and set the remote control code.
- Dispose of batteries according to your regional regulations.

FOR CANADIAN CUSTOMERS
To prevent electric shock, match wide blade of plug to wide slot and fully insert.
This Class B digital apparatus complies with Canadian ICES-003.

POUR LES CONSOMMATEURS CANADIENS
Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

IMPORTANT
Please record the serial number of this unit in the space below.
MODEL:
Serial No.:
The serial number is located on the rear of the unit. Retain this Owner's Manual in a safe place for future reference.

■ For U.K. customers

If the socket outlets in the home are not suitable for the plug supplied with this appliance, it should be cut off and an appropriate 3 pin plug fitted. For details, refer to the instructions described below.

Note

The plug severed from the mains lead must be destroyed, as a plug with bared flexible cord is hazardous if engaged in a live socket outlet.

■ Special Instructions for U.K. Model

IMPORTANT
THE WIRES IN MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

Blue: NEUTRAL
Brown: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
Making sure that neither core is connected to the earth terminal of the three pin plug.

We Want You Listening For A Lifetime

Yamaha and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion – and, most importantly, without affecting your sensitive hearing. Since hearing damage from loud sounds is often undetectable until it is too late, Yamaha and the Electronic Industries Association's Consumer Electronics Group recommend you to avoid prolonged exposure from excessive volume levels.

Limited Guarantee for European Economic Area (EEA) and Switzerland

Thank you for having chosen a Yamaha product. In the unlikely event that your Yamaha product needs guarantee service, please contact the dealer from whom it was purchased. If you experience any difficulty, please contact Yamaha representative office in your country. You can find full details on our website (**http://www.yamaha-hifi.com/** or **http://www.yamaha-uk.com/** for U.K. resident).

The product is guaranteed to be free from defects in workmanship or materials for a period of two years from the date of the original purchase. Yamaha undertakes, subject to the conditions listed below, to have the faulty product or any part(s) repaired, or replaced at Yamaha's discretion, without any charge for parts or labour. Yamaha reserves the right to replace a product with that of a similar kind and/or value and condition, where a model has been discontinued or is considered uneconomic to repair.

Conditions

1 The original invoice or sales receipt (showing date of purchase, product code and dealer's name) MUST accompany the defective product, along with a statement detailing the fault. In the absence of this clear proof of purchase, Yamaha reserves the right to refuse to provide free of charge service and the product may be returned at the customer's expense.
2 The product MUST have been purchased from an AUTHORISED Yamaha dealer within the European Economic Area (EEA) or Switzerland.
3 The product must not have been the subject of any modifications or alterations, unless authorised in writing by Yamaha.
4 The following are excluded from this guarantee:

   a. Periodic maintenance and repair or replacement of parts due to normal wear and tear.
   b. Damage resulting from:

     (1) Repairs performed by the customer himself or by an unauthorised third party.
     (2) Inadequate packaging or mishandling, when the product is in transit from the customer. Please note that it is the customer's responsibility to ensure the product is adequately packaged when returning the product for repair.
     (3) Misuse, including but not limited to (a) failure to use the product for its normal purpose or in accordance with Yamaha's instructions on the proper use, maintenance and storage, and (b) installation or use of the product in a manner inconsistent with the technical or safety standards in force in the country where it is used.
     (4) Accidents, lightning, water, fire, improper ventilation, battery leakage or any cause beyond Yamaha's control.
     (5) Defects of the system into which this product is incorporated and/or incompatibility with third party products.
     (6) Use of a product imported into the EEA and/or Switzerland, not by Yamaha, where that product does not conform to the technical or safety standards of the country of use and/or to the standard specification of a product sold by Yamaha in the EEA and/or Switzerland.
5 Where the guarantee differs between the country of purchase and the country of use of the product, the guarantee of the country of use shall apply.
6 Yamaha may not be held responsible for any losses or damages, whether direct, consequential or otherwise, save for the repair or replacement of the product.
7 Please backup any custom settings or data, as Yamaha may not be held responsible for any alteration or loss to such settings or data.
8 This guarantee does not affect the consumer's statutory rights under applicable national laws in force or the consumer's rights against the dealer arising from their sales/purchase contract.

Information for Users on Collection and Disposal of Old Equipment and Used Batteries

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.
For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

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

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

[Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Pb

YAMAHA