



UAB

AV Receiver

RX-V375

Easy Setup Guide

English

This document explains how to set up a 5.1-channel system and play back surround sound from a BD/DVD on the unit.



To reduce the impact on natural resources, the Owner's Manual for this product is supplied on CD-ROM. For more information about this product, refer to the Owner's Manual on the supplied CD-ROM.



PDF versions of this guide and "Owner's Manual" can be downloaded from the following website.

<http://download.yamaha.com/>

[For U.S. customers only]

Visit the following website for additional information, FAQ's, downloads such as "Owner's Manual" and product updates.

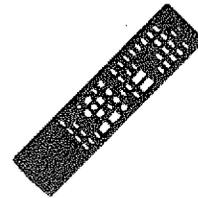
<http://usa.yamaha.com/support/>

1 Preparation

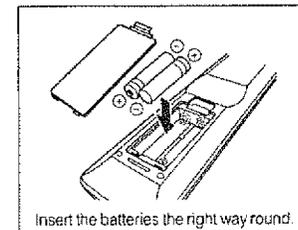
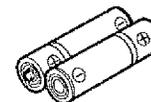
Accessories

Check that the following accessories are supplied with the product.

Remote control



Batteries
(AAA, R03, UM-4) (x2)

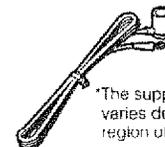


Insert the batteries the right way round.

AM antenna

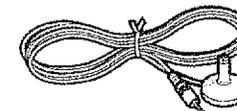


FM antenna



*The supplied FM antenna varies depending on the region of purchase.

YPAO microphone



CD-ROM
(Owner's Manual)



Safety Brochure



Easy Setup Guide



- The illustrations of the remote control used in this guide are of the U.S.A. model.
- (Australia model only)
For information on how to control external devices with the remote control, refer to "Supplement for Remote Control" on the supplied CD-ROM.

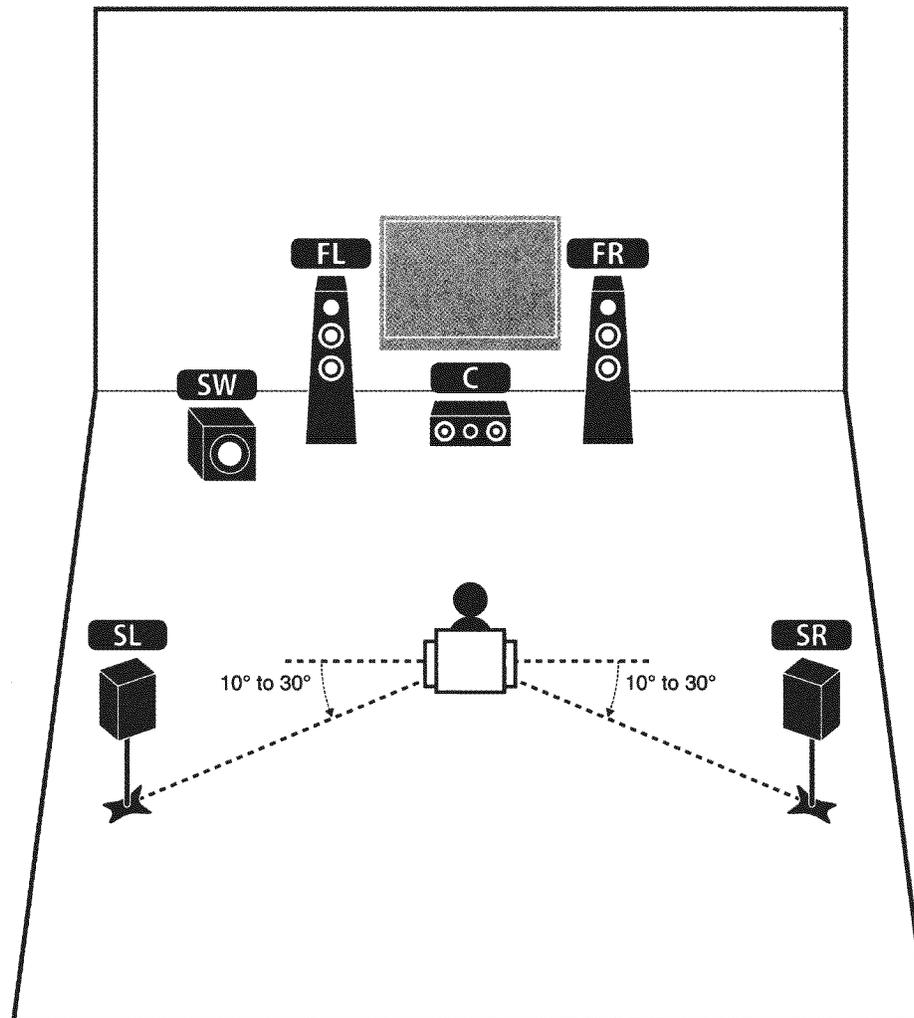
Cables required for connections

The following cables (not supplied) are required to build the system described in this document.

- Speaker cables (x5)
- HDMI cable (x2)
- Audio pin cable (x1)
- Digital optical cable (x1) (not required if your TV supports ARC [Audio Return Channel])

2 Placing speakers

Set up the speakers in the room using the following diagram as a reference.
For information on other speaker systems, refer to "Owner's Manual".



3 Connecting speakers/subwoofer

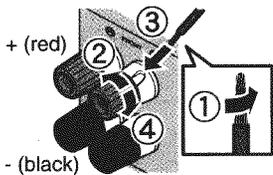
- (U.S.A. and Canada models only)
Under its default settings, the unit is configured for 8-ohm speakers. When connecting 6-ohm speakers, set the unit's speaker impedance to "6 Ω MIN". For details, see "Setting the speaker impedance" in "Owner's Manual".
- Use a subwoofer equipped with built-in amplifier.
- Before connecting the speakers, remove the unit's power cable from the AC wall outlet and turn off the subwoofer.
- Ensure that the core wires of the speaker cable do not touch each other or come into contact with the unit's metal areas. This may damage the unit or the speakers. If the speaker cables short circuit, "Check SP Wires" will appear on the front display when the unit is turned on.

■ Connecting speaker cables

Speaker cables have two wires. One is for connecting the negative (-) terminals of the unit and the speaker, and the other is for the positive (+) terminals. If the wires are colored to prevent confusion, connect the black wire to the negative and the other wire to the positive terminals.

(Connecting front speakers)

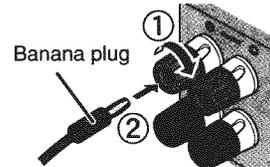
- ① Remove approximately 10 mm (3/8") of insulation from the ends of the speaker cable and twist the bare wires of the cable firmly together.
- ② Loosen the speaker terminal.
- ③ Insert the bare wires of the cable into the gap on the side (upper right or bottom left) of the terminal.
- ④ Tighten the terminal.



Using a banana plug

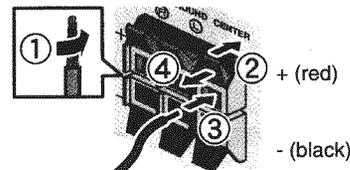
(U.S.A., Canada, Australia and General models only)

- ① Tighten the speaker terminal.
- ② Insert a banana plug into the end of the terminal.

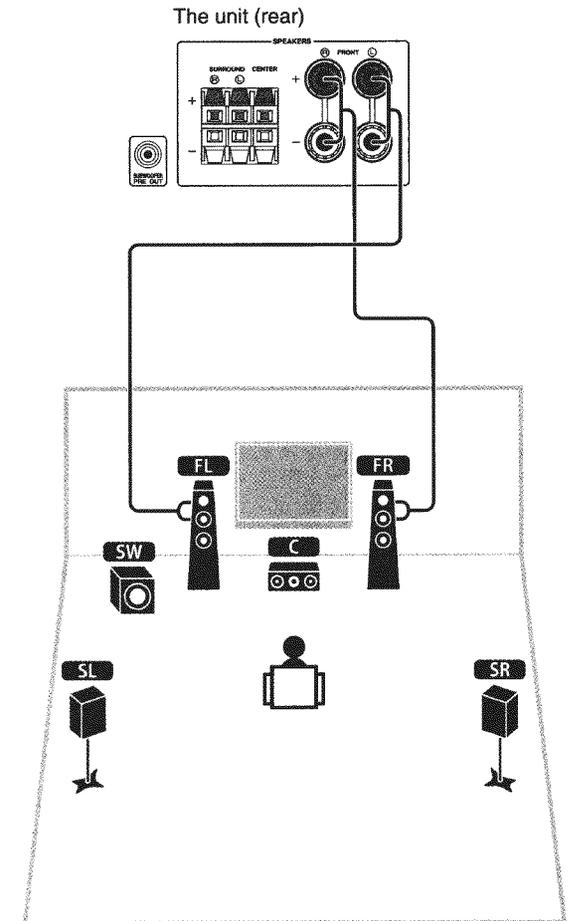


(Connecting center/surround speakers)

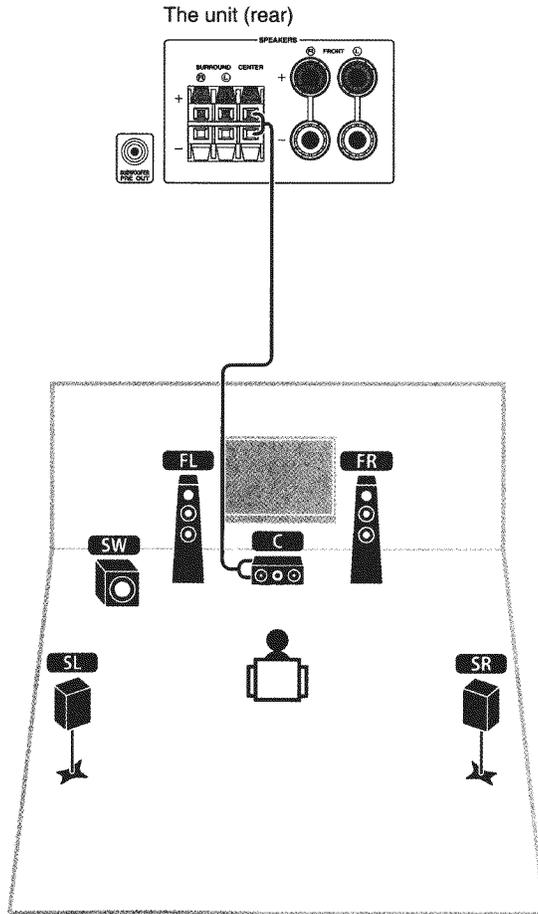
- ① Remove approximately 10 mm (3/8") of insulation from the ends of the speaker cable and twist the bare wires of the cable firmly together.
- ② Press down the tab.
- ③ Insert the bare wires of the cable into the hole in the terminal.
- ④ Release the tab.



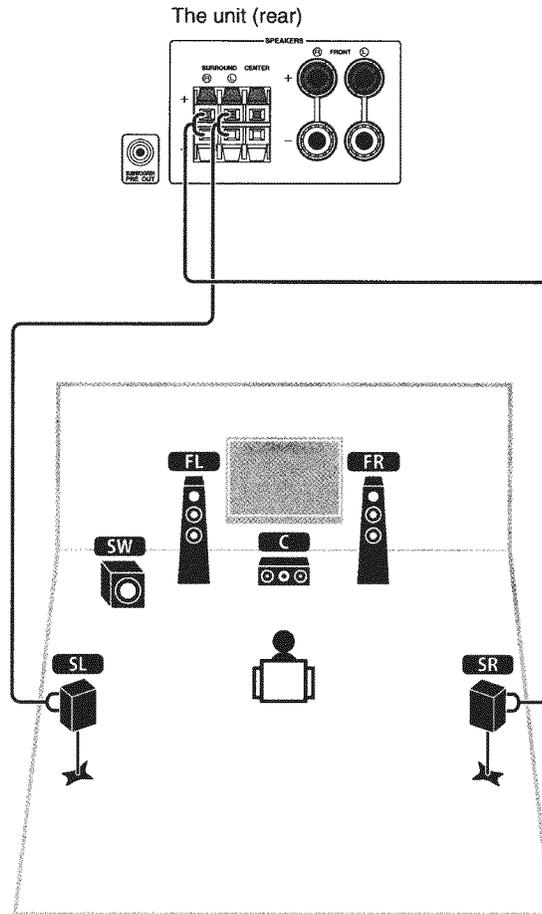
- 1 Connect the front speakers (FL / FR) to the FRONT (L/R) terminals.



2 Connect the center speaker (**C**) to the CENTER terminal.



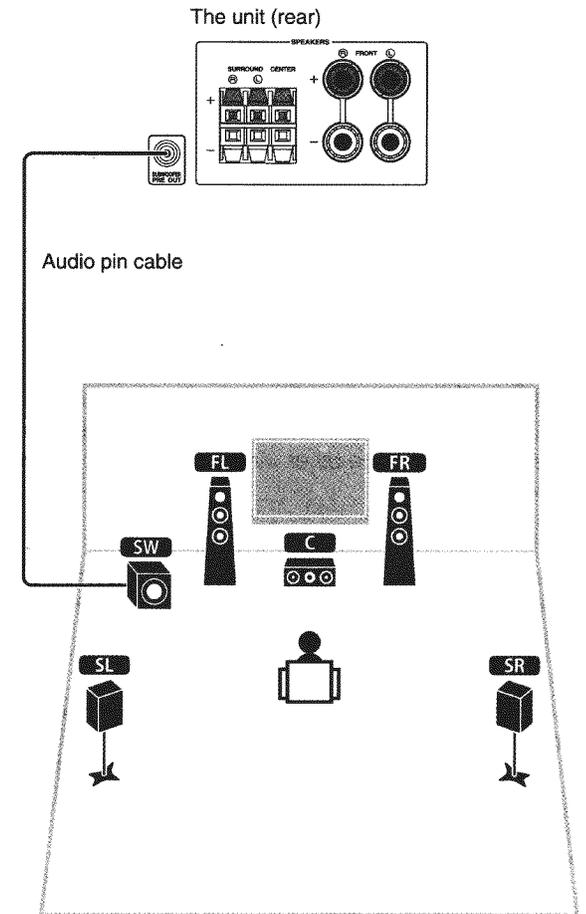
3 Connect the surround speakers (**SL** / **SR**) to the SURROUND (L/R) terminals.



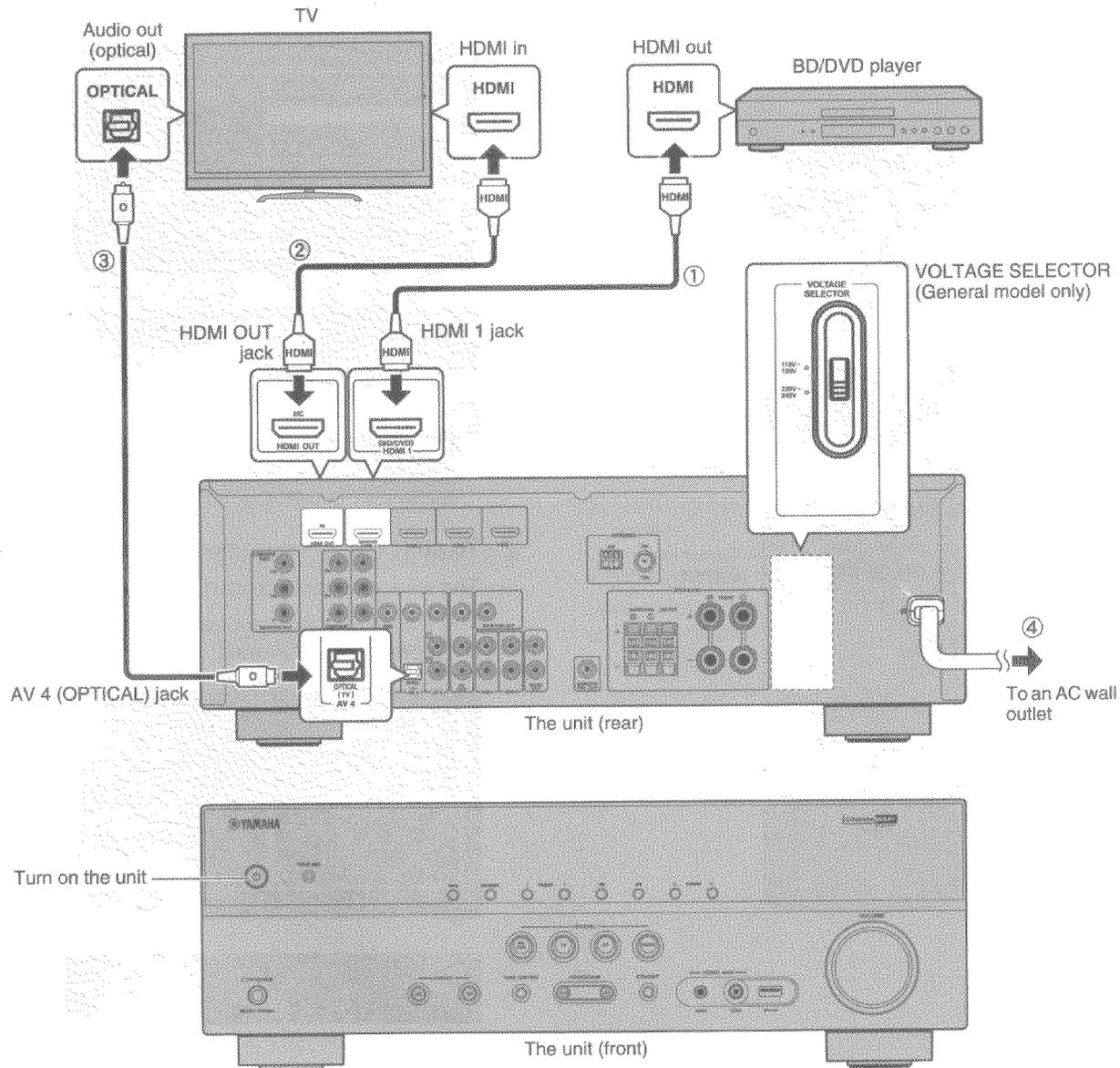
4 Connect the subwoofer (**SW**) to the SUBWOOFER PRE OUT jack.



• Use a subwoofer equipped with built-in amplifier.



4 Connecting external devices



Before connecting the power cable (General model only)

Make sure you set the switch position of VOLTAGE SELECTOR according to your local voltage. Voltages are AC 110-120/220-240 V, 50/60 Hz.

1 Connect external devices to the unit.

- ① Connect a BD/DVD player to the unit with an HDMI cable.
If the BD/DVD player is currently connected to the TV directly with an HDMI cable, disconnect the cable from the TV and connect it to this unit.
- ② Connect a TV to the unit with the other HDMI cable.
- ③ Connect a TV to the unit with a digital optical cable.
This connection is required to play back TV audio on the unit. This connection is not required if your TV supports ARC (Audio Return Channel).
- ④ Connect the power cable to an AC wall outlet.



- For information on how to connect radio antennas or other external devices, see "PREPARATIONS" in "Owner's Manual".

2 Turn on the unit, the TV and the BD/DVD player.

3 Use the TV remote control to change the TV input to video from the unit.

The connections are complete. Proceed to the next page to optimize the speaker settings.



- By connecting a TV to the unit with an HDMI cable, you can configure the unit's settings with the menu displayed on the TV. In addition, you can select the on-screen menu language from English (default), Japanese, French, German, Spanish, Russian, Italian and Chinese. For details, refer to "Owner's Manual". In this guide, illustrations of English menu screens are used as examples.

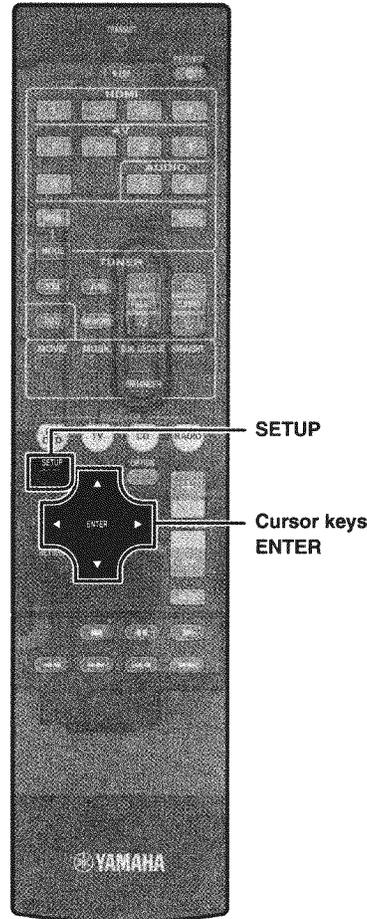
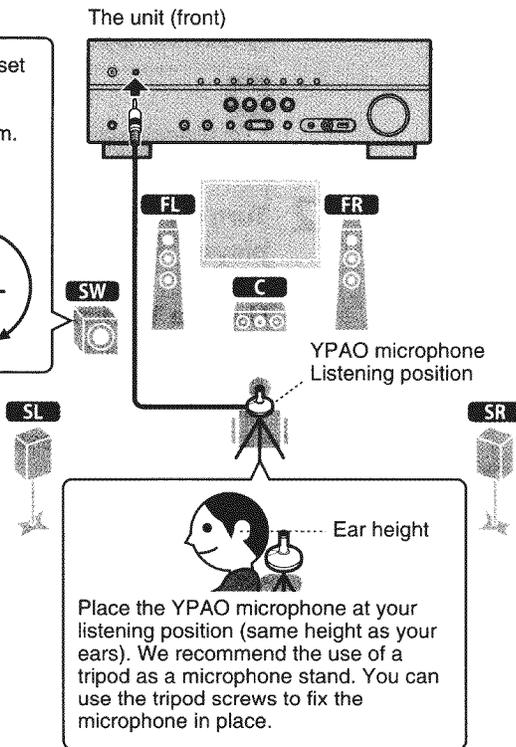
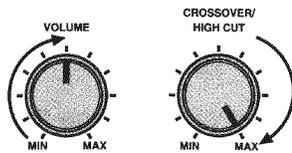
5 Optimizing the speaker settings automatically (YPAO)

The Yamaha Parametric room Acoustic Optimizer (YPAO) function detects speaker connections, measures the distances from them to your listening position(s), and then automatically optimizes the speaker settings, such as volume balance and acoustic parameters, to suit your room.

- During the measuring process, test tones are output at high volume. Ensure that the test tones do not frighten small children. Also, refrain from using this function at night when it may be a nuisance to others.
- During the measuring process, you cannot adjust the volume.
- During the measuring process, keep the room as quiet as possible.
- Do not connect headphones.
- Do not stand between the speakers and the YPAO microphone during the measurement process (about 3 minutes).
- Move to the corner of the room or leave the room.

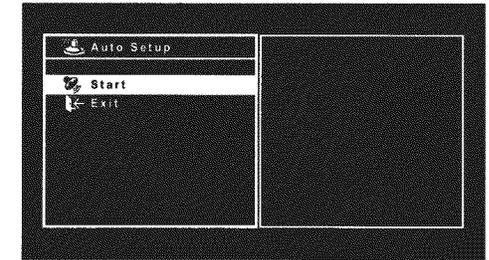
Preparing for YPAO

Turn on the subwoofer and set the volume to half. If the cross-over frequency is adjustable, set it to maximum.



1 Connect the YPAO microphone to the YPAO MIC jack on the front panel.

The following screen appears.

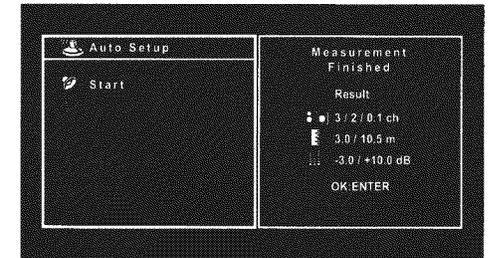


- To cancel the operation, disconnect the YPAO microphone, or use the cursor keys to select "Exit" and press ENTER, before starting the measurement.

2 To start the measurement, press SETUP.

The measurement will start in 10 seconds.

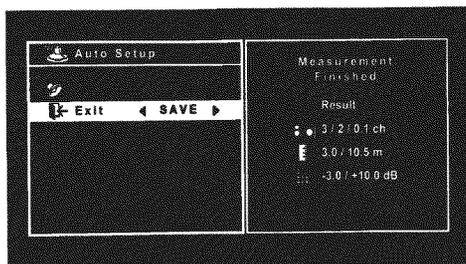
The following screen appears on the TV when the measurement finishes.





- If any error message (such as E-1) or warning message (such as W-2) appears, see “Error messages” or “Warning messages” in “Owner’s Manual”.
- If the warning message “W-1:Out of Phase” appears, see “If “W-1:Out of Phase” appears”.

3 Use the cursor keys (</>) to select “SAVE” (Save) and press ENTER.



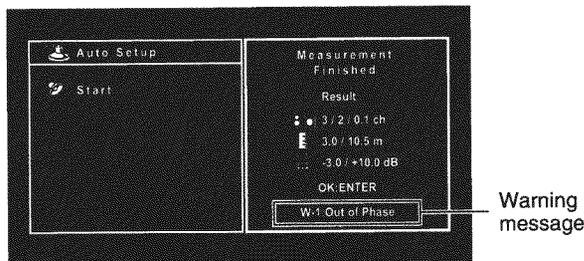
4 Disconnect the YPAO microphone from the unit.

This completes optimization of the speaker settings.

- The YPAO microphone is sensitive to heat, so should not be placed anywhere where it could be exposed to direct sunlight or high temperatures (such as on top of AV equipment).



Follow the procedure below to check the speaker connections.



- ① Check for the blinking of the front display’s indicator to identify the problem speaker.

Problem speaker (blinks)



- ② Check the cable connections (+/-) of the problem speaker.

If the speaker is connected correctly:

Depending on the type of speakers or room environment, this message may appear even if the speakers are connected correctly.

Proceed to step 3.

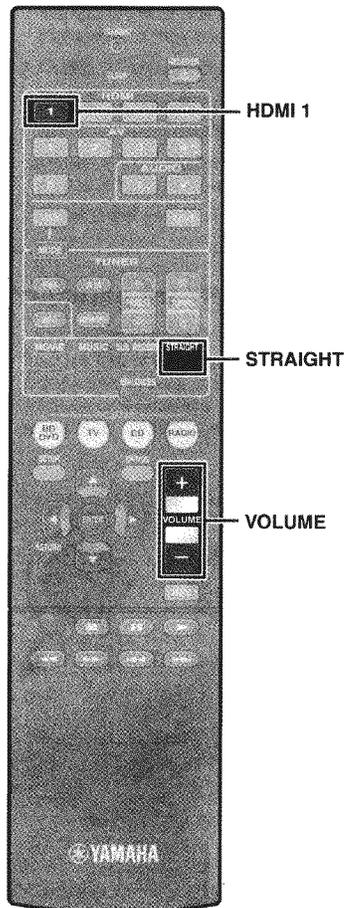
If the speaker is connected incorrectly:

Turn off the unit, reconnect the speaker cable, and then try YPAO measurement again.

6 Playing back a BD/DVD

Now let's play back a BD/DVD.

We recommend playing back multichannel audio (5.1-channel or more) to feel surround sound produced by the unit.



- 1 Press **HDMI 1** to select “HDMI 1” as the input source.



- 2 Start playback on the BD/DVD player.

- 3 Press **STRAIGHT** repeatedly to select “STRAIGHT”.



- When “STRAIGHT” (straight decode) is enabled, each speaker produces each channel audio signal directly (without sound field processing).

- 4 Press **VOLUME** to adjust the volume.



This completes the basic setup procedure.

If surround sound is not working

Sound is only being output from the front speakers during multichannel audio playback

Check the digital audio output setting on the BD/DVD player.

It may be set to 2-channel output (such as PCM).

No sound is coming from a specific speaker

See “Troubleshooting” in “Owner’s Manual”.

Many more features!

The unit has various other functions.

Please refer to “Owner’s Manual” on the supplied CD-ROM to help you get the most out of the unit.

Connecting other playback devices

Connect audio devices (such as CD player), game consoles, camcorders, and many others.

Selecting the sound mode

Select the desired sound program (CINEMA DSP) or surround decoder suitable for movies, music, games, sports programs, and other uses.

Playing back from iPod

By using a USB cable supplied with iPod, you can enjoy iPod music on the unit.

■ Listening to FM/AM radio

■ Playing back music stored on a USB storage device

For more information, see “What you can do with the unit”.



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AV Receiver

RX-V375

Owner's Manual

Read the supplied booklet "Safety Brochure" before using the unit.

English

CONTENTS

Accessories	4
-------------------	---

FEATURES 5

What you can do with the unit	5
-------------------------------------	---

Part names and functions	7
--------------------------------	---

Front panel	7
Front display (indicators)	8
Rear panel	9
Remote control	10

PREPARATIONS 11

General setup procedure	11
-------------------------------	----

1 Placing speakers	12
--------------------------	----

2 Connecting speakers	15
-----------------------------	----

Input/output jacks and cables	17
-------------------------------------	----

3 Connecting a TV	18
-------------------------	----

4 Connecting playback devices	23
-------------------------------------	----

Connecting video devices (such as BD/DVD players)	23
Connecting audio devices (such as CD players)	25
Connecting to the jacks on the front panel	26

5 Connecting the FM/AM antennas	26
---------------------------------------	----

6 Connecting recording devices	27
--------------------------------------	----

7 Connecting the power cable	27
------------------------------------	----

8 Selecting an on-screen menu language	28
--	----

9 Optimizing the speaker settings automatically (YPAO)	29
--	----

Error messages	31
Warning messages	32

PLAYBACK 33

Basic playback procedure	33
--------------------------------	----

Switching information on the front display	33
--	----

Selecting the input source and favorite settings with one touch	
---	--

(SCENE)	34
---------------	----

Configuring scene assignments	34
-------------------------------------	----

Selecting the sound mode	35
--------------------------------	----

Enjoying sound field effects (CINEMA DSP)	36
Enjoying unprocessed playback	38
Enjoying compressed music with enhanced sound (Compressed Music Enhancer)	39
Enjoying surround sound with headphones (SILENT CINEMA)	39

Listening to FM/AM radio	40
--------------------------------	----

Setting the frequency steps	40
Selecting a frequency for reception	40
Registering favorite radio stations (presets)	41
Radio Data System tuning	43

Playing back iPod music	44
-------------------------------	----

Connecting an iPod	44
Playback of iPod content	45

Playing back music stored on a USB storage device	48
---	----

Connecting a USB storage device	48
Playback of USB storage device contents	48

Configuring playback settings for different playback sources	
--	--

(Option menu)	51
---------------------	----

Option menu items	51
-------------------------	----

CONFIGURATIONS 54

Configuring various functions (Setup menu)	54
Setup menu items	55
Speaker	57
HDMI	59
Sound	61
ECO	62
Function	63
Language	64
Configuring the system settings (ADVANCED SETUP menu)	65
ADVANCED SETUP menu items	65
Changing the speaker impedance setting (SP IMP.)	65
Selecting the remote control ID (REMOTE ID)	65
Changing the FM/AM tuning frequency setting (TU)	66
Switching the video signal type (TV FORMAT)	66
Restoring the default settings (INIT)	66
Updating the firmware (UPDATE)	66
Checking the firmware version (VERSION)	66

APPENDIX 67

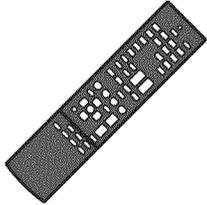
Frequently asked questions	67
Troubleshooting	68
Power, system and remote control	68
Audio	69
Video	70
FM/AM radio	71
USB	71
Error indications on the front display	72
Glossary	73
Audio information	73
HDMI and video information	74

Yamaha technologies	74
Video signal flow	75
Information on HDMI	75
HDMI Control	75
HDMI signal compatibility	76
Reference diagram (rear panel)	77
Trademarks	78
Specifications	79
Index	81

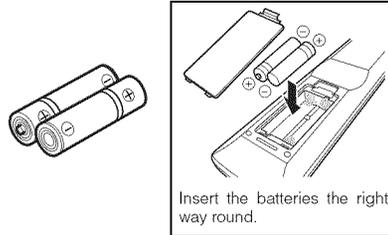
Accessories

Check that the following accessories are supplied with the product.

Remote control



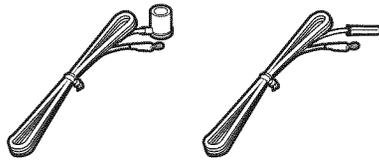
Batteries (AAA, R03, UM-4) (x2)



AM antenna

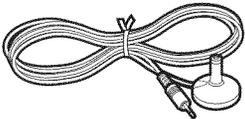


FM antenna

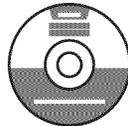


*One of the above is supplied depending on the region of purchase.

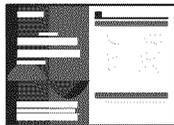
YPAO microphone



CD-ROM (Owner's Manual)



Easy Setup Guide

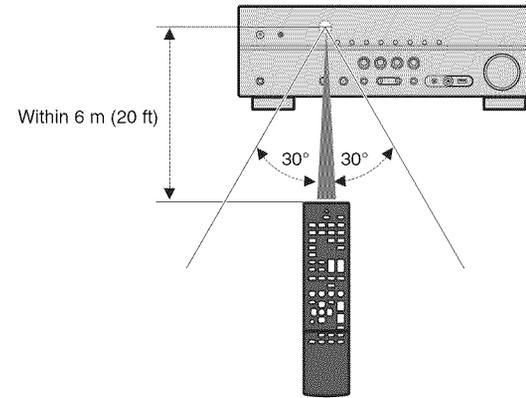


Safety Brochure



Operating range of the remote control

- Point the remote control at the remote control sensor on the unit and remain within the operating range shown below.



- The illustrations of the remote control used in this manual are of the U.S.A. model.

- (Australia model only)
For information on how to control external devices with the remote control, refer to "Supplement for Remote Control" on the supplied CD-ROM.

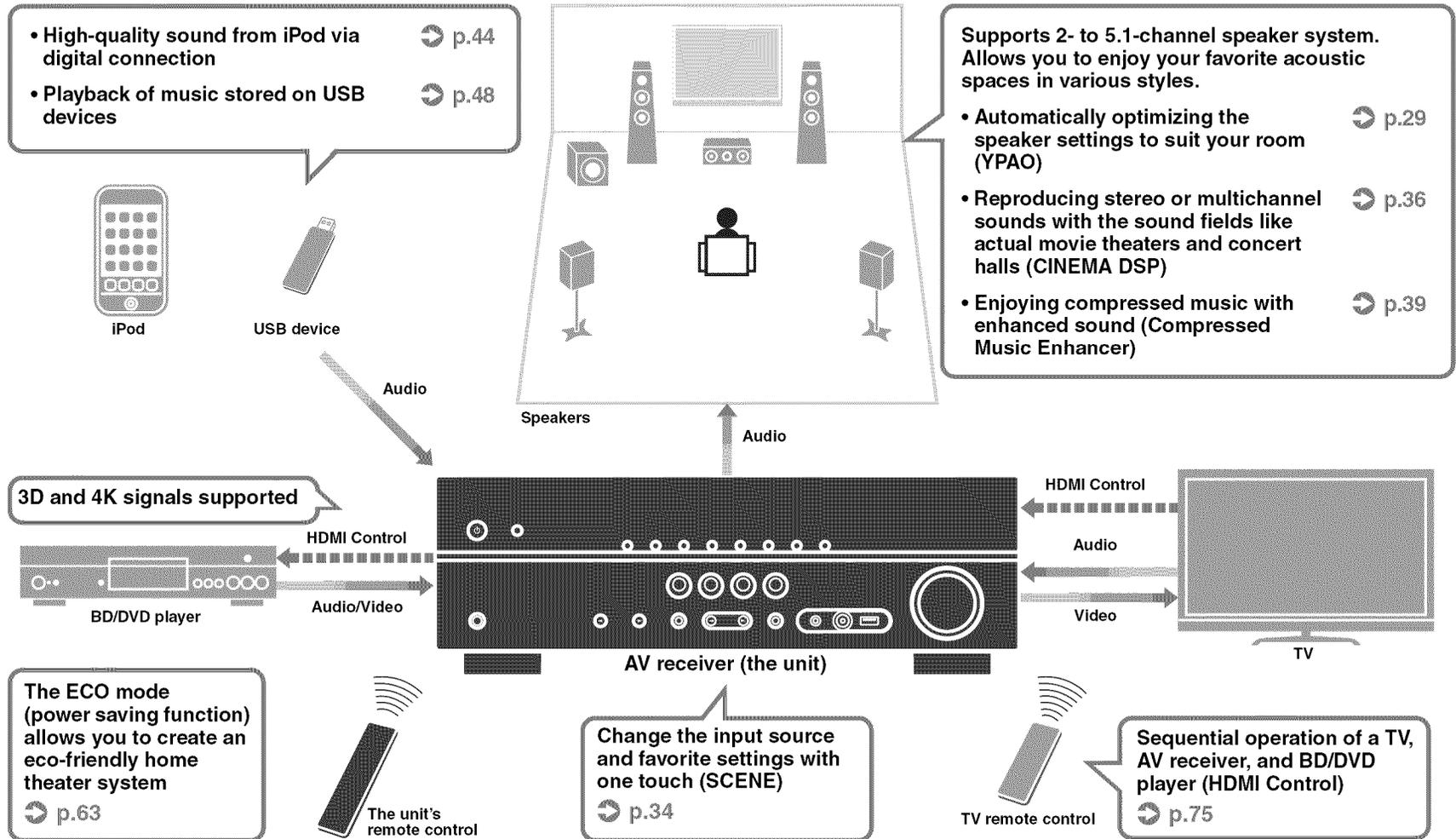
- Some features are not available in certain regions.
- Due to product improvements, specifications and appearance are subject to change without notice.
- This manual explains operations using the supplied remote control.
- This manual describes both the "iPod" and "iPhone" as the "iPod". "iPod" refers to both "iPod" and "iPhone", unless otherwise specified.

 indicates precautions for use of the unit and its feature limitations.

 indicates supplementary explanations for better use.

FEATURES

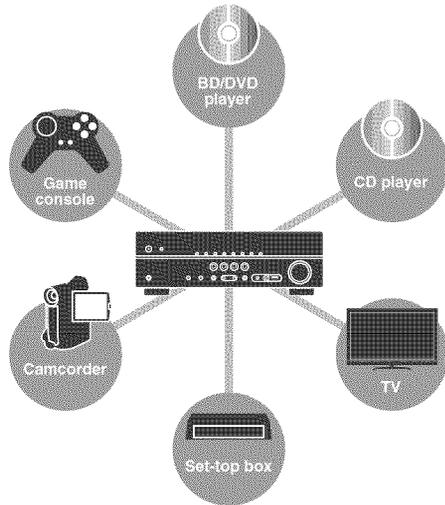
What you can do with the unit



Full of useful functions!

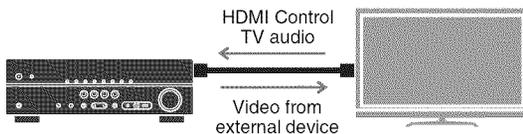
❑ Connecting various devices (p.23)

A number of HDMI jacks and various input/output jacks on the unit allow you to connect video devices (such as BD/DVD players), audio devices (such as CD players), game consoles, camcorders, and other devices.



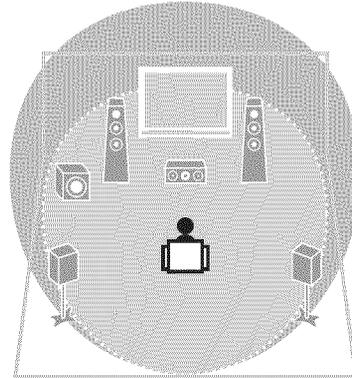
❑ Playing back TV audio in surround sound with a single HDMI cable connection (Audio Return Channel: ARC) (p.18)

When using an ARC-compatible TV, you only need one HDMI cable to enable video output to the TV, audio input from the TV, and the transmission of HDMI Control signals.



❑ Creating high-realistic sound fields (p.36)

CINEMA DSP allows you to create a natural and realistic sound field in your own room.



❑ Listening to FM/AM radio (p.40)

The unit is equipped with a built-in FM/AM tuner. You can register up to 40 favorite radio stations as presets.

❑ Easy operation with a TV screen

You can operate the iPod or USB storage device, view information, or easily configure the settings using the on-screen menu.

Useful tips

The combination of video/audio input jacks does not match an external device...

Use "Audio In" in the "Option" menu to change the combination of video/audio input jacks so that it matches the output jack(s) of your external device (p.24).

Video and audio are not synchronized...

Use "Lipsync" in the "Setup" menu to adjust the delay between video and audio output (p.61).

I want to hear audio from the TV speakers...

Use "Audio Output" in the "Setup" menu to select the output destination of signals input into the unit (p.59). Your TV speakers may be selected as an output destination.

I want to change the on-screen menu language...

Use "Language" in the "Setup" menu to select a language from English, Japanese, French, German, Spanish, Russian, Italian and Chinese (p.28).

I want to update the firmware...

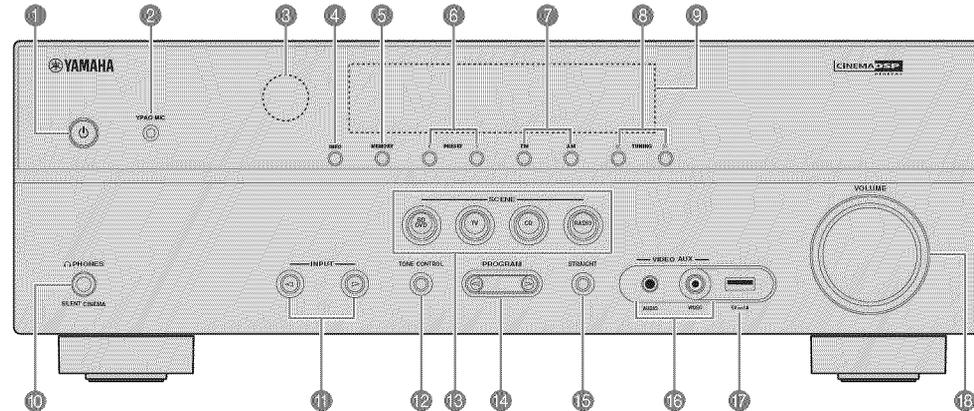
Use "UPDATE" in the "ADVANCED SETUP" menu to update the unit's firmware (p.66).

Many other settings are available that let you to customize the unit. For details, see the following pages.

- SCENE settings (p.34)
- Sound/video settings and signal information for each source (p.51)
- Various function settings (p.55)
- System settings (p.65)

Part names and functions

Front panel



1 **⏻ (power) key**

Turns on/off (standby) the unit.

2 **YPAO MIC jack**

For connecting the supplied YPAO microphone (p.29).

3 **Remote control sensor**

Receives remote control signals (p.4).

4 **INFO key**

Selects the information displayed on the front display (p.33).

5 **MEMORY key**

Registers FM/AM radio stations as preset stations (p.41).

6 **PRESET keys**

Select a preset FM/AM radio station (p.42).

7 **FM and AM keys**

Switch between FM and AM (p.40).

8 **TUNING keys**

Select the radio frequency (p.40).

9 **Front display**

Displays information (p.8).

10 **PHONES jack**

For connecting headphones.

11 **INPUT keys**

Select an input source.

12 **TONE CONTROL key**

Adjusts the high-frequency range and low-frequency range of output sounds (p.52).

13 **SCENE keys**

Select the registered input source and sound program with one touch. Also, turns on the unit when it is in standby mode (p.34).

14 **PROGRAM keys**

Select a sound program or a surround decoder (p.35).

13 **STRAIGHT key**

Enables/disables the straight decode mode (p.38).

16 **VIDEO AUX jacks**

For connecting devices, such as camcorders and game consoles (p.26).

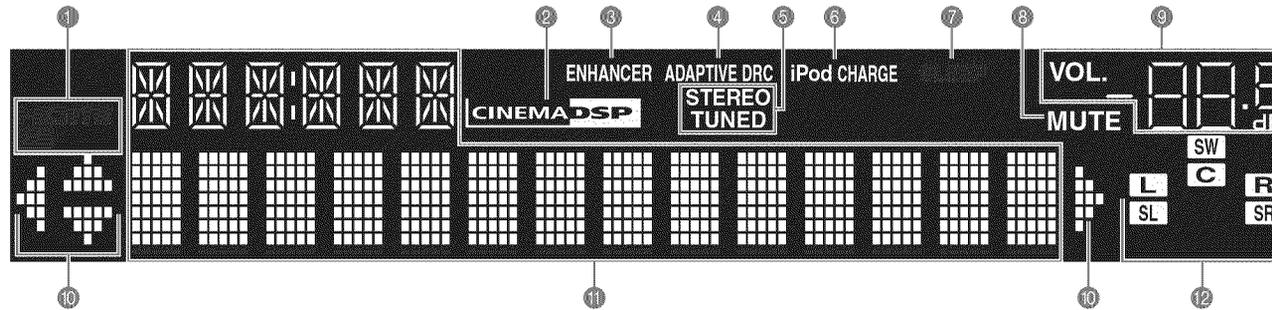
17 **USB jack**

For connecting a USB storage device (p.48) or an iPod (p.44).

18 **VOLUME knob**

Adjusts the volume.

Front display (indicators)



① HDMI

Lights up when HDMI signals are being input or output.

OUT

Lights up when HDMI signals are being output.

② CINEMA DSP

Lights up when CINEMA DSP (p.36) is working.

③ ENHANCER

Lights up when Compressed Music Enhancer (p.39) is working.

④ ADAPTIVE DRC

Lights up when Adaptive DRC (p.52) is working.

⑤ STEREO

Lights up when the unit is receiving a stereo FM radio signal.

TUNED

Lights up when the unit is receiving an FM/AM radio station signal.

⑥ iPod CHARGE

Lights up when the iPod is being charged while the unit is in standby mode (p.44).

⑦ SLEEP

Lights up when the sleep timer is on.

⑧ MUTE

Blinks when audio is muted.

⑨ Volume indicator

Indicates the current volume.

⑩ Cursor indicators

Indicate the remote control cursor keys currently operational.

⑪ Information display

Displays the current status (such as input name and sound mode name). You can switch the information by pressing INFO (p.33).

⑫ Speaker indicators

Indicate speaker terminals from which signals are output.

L Front speaker (L)

R Front speaker (R)

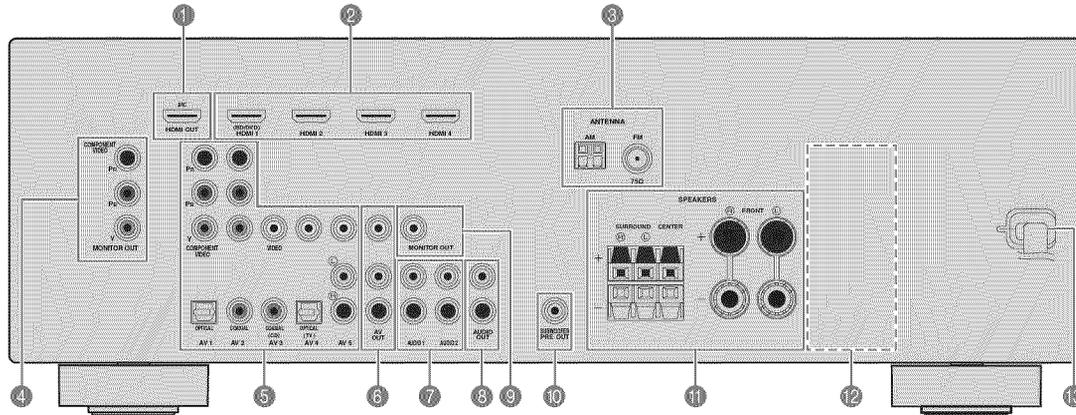
C Center speaker

SL Surround speaker (L)

SR Surround speaker (R)

SW Subwoofer

Rear panel



* The area around the video/audio output jacks is marked in white on the actual product to prevent improper connections.

1 HDMI OUT jack

For connecting to an HDMI-compatible TV and outputting video/audio signals (p. 18). When using ARC, TV audio signal can also be input through the HDMI OUT jack.

2 HDMI 1-4 jacks

For connecting to HDMI-compatible playback devices and inputting video/audio signals (p.23).

3 ANTENNA jacks

For connecting to FM and AM antennas (p.26).

4 MONITOR OUT (component video) jacks

For connecting to a TV that supports component video and outputting video signals (p.22).

5 AV 1-5 jacks

For connecting to video/audio playback devices and inputting video/audio signals (p.23).

6 AV OUT jacks

For outputting video/audio to a recording device (such as a VCR) (p.27).

7 AUDIO 1-2 jacks

For connecting to audio playback devices and inputting audio signals (p.25).

8 AUDIO OUT jacks

For outputting audio to a recording device (such as tape deck) (p.27).

9 MONITOR OUT (composite video) jack

For connecting to a TV that supports composite video and outputting video signals (p.22).

10 SUBWOOFER PRE OUT jack

For connecting to a subwoofer (with built-in amplifier) (p.15).

11 SPEAKERS terminals

For connecting to speakers (p.15).

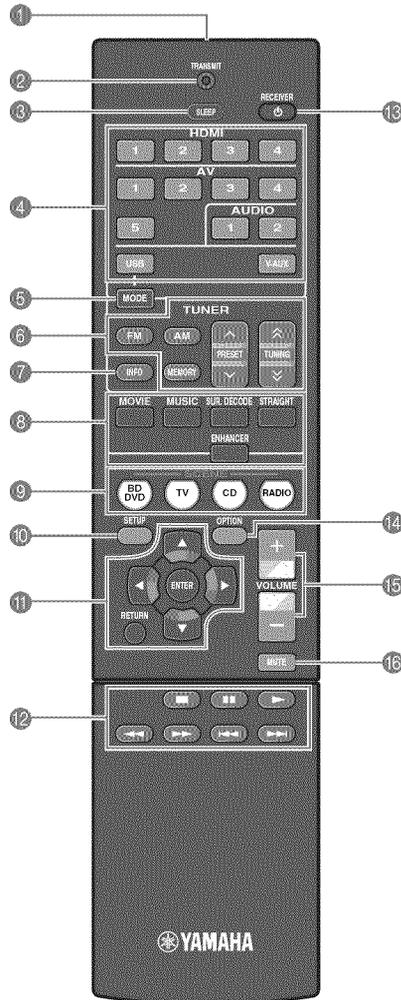
12 VOLTAGE SELECTOR

(General model only)
Selects the switch position according to your local voltage (p.27).

13 Power cable

For connecting to an AC wall outlet (p.27).

Remote control



① Remote control signal transmitter

Transmits infrared signals.

② TRANSMIT indicator

Lights up when remote control signals are transmitted.

③ SLEEP key

Switches the unit to standby mode automatically after a specified period of time has elapsed (sleep timer). Press repeatedly to set the time (120 min, 90 min, 60 min, 30 min, off).

④ Input selection keys

Select an input source for playback.

- HDMI 1-4** HDMI 1-4 jacks
- AV 1-5** AV 1-5 jacks
- AUDIO 1-2** AUDIO 1-2 jacks
- USB** USB jack (on the front panel)
- V-AUX** VIDEO AUX jacks (on the front panel)

⑤ MODE key

Switches between "Stereo" and "Mono" for FM radio reception (p.40).
Switches the iPod operation modes (p.46).

⑥ Radio keys

Operate the FM/AM radio (p.40).

- FM** Switches to FM radio.
- AM** Switches to AM radio.
- MEMORY** Registers FM/AM radio stations as presets.
- PRESET** Select a preset station.
- TUNING** Select the radio frequency.

⑦ INFO key

Selects the information displayed on the front display (p.33).

⑧ Sound mode keys

Select a sound mode (p.35).

⑨ SCENE keys

Select the registered input source and sound program with one touch. Also, turns on the unit when it is in standby mode (p.34).

⑩ SETUP key

Displays the setup menu (p.54).

⑪ Menu operation keys

- Cursor keys** Select a menu or a parameter.
- ENTER** Confirms a selected item.
- RETURN** Returns to the previous screen.

⑫ External device operation keys

Control playback of the iPod (p.45) or USB storage device (p.48).

⑬ RECEIVER key

Turns on/off (standby) the unit.

⑭ OPTION key

Displays the option menu (p.51).

⑮ VOLUME keys

Adjust the volume.

⑯ MUTE key

Mutes the audio output.



• (Australia model only)

For information on the keys other than those above, refer to "Supplement for Remote Control" on the supplied CD-ROM.

PREPARATIONS

General setup procedure

- 1 Placing speakers (p.12)** Select the speaker layout for the number of speakers that you are using and place them in your room.
- 2 Connecting speakers (p.15)** Connect the speakers to the unit.
- 3 Connecting a TV (p.18)** Connect a TV to the unit.
- 4 Connecting playback devices (p.23)** Connect video devices (such as BD/DVD players) and audio devices (such as CD players) to the unit.
- 5 Connecting the FM/AM antennas (p.26)** Connect the supplied FM/AM antennas to the unit.
- 6 Connecting recording devices (p.27)** Connect recording devices to the unit.
- 7 Connecting the power cable (p.27)** After all the connections are complete, plug in the power cable.
- 8 Selecting an on-screen menu language (p.28)** Select the desired on-screen menu language (default: English).
- 9 Optimizing the speaker settings automatically (YPAO) (p.29)** Optimize the speaker settings, such as volume balance and acoustic parameters, to suit your room (YPAO).

This completes all the preparations. Enjoy playing movies, music, radio and other content with the unit!

1 Placing speakers

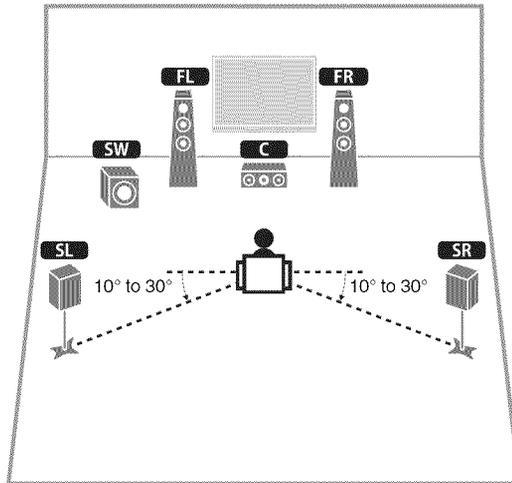
Select the speaker layout for the number of speakers that you are using and place the speakers and subwoofer (with built-in amplifier) in your room. This section describes the representative speaker layout examples.

Caution

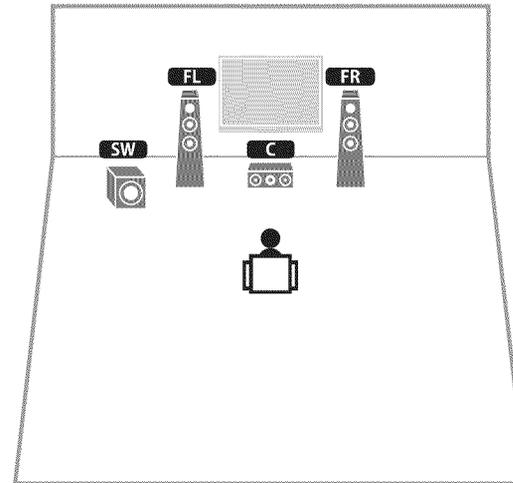
- (U.S.A. and Canada models only)
Under its default settings, the unit is configured for 8-ohm speakers. When connecting 6-ohm speakers, set the unit's speaker impedance to "6 Ω MIN". In this case, you can also use 4-ohm speakers as the front speakers. For details, see "Setting the speaker impedance" (p.14).
- (Except for U.S.A. and Canada models)
Use speakers with an impedance of at least 6 Ω.

Speaker type	Abbr.	Function	Speaker system (the number of channels)			
			5.1	4.1	3.1	2.1
Front (L)	FL	Produce front right/left channel sounds (stereo sounds).	●	●	●	●
Front (R)	FR		●	●	●	●
Center	C	Produces center channel sounds (such as movie dialogue and vocals).	●		●	
Surround (L)	SL	Produce surround right/left channel sounds.	●	●		
Surround (R)	SR		●	●		
Subwoofer	SW	Produces LFE (low-frequency effect) channel sounds and reinforces the bass parts of other channels. This channel is counted as "0.1".	●	●	●	●

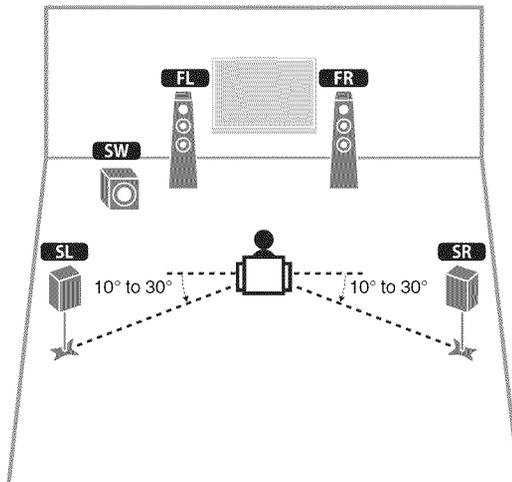
5.1-channel system



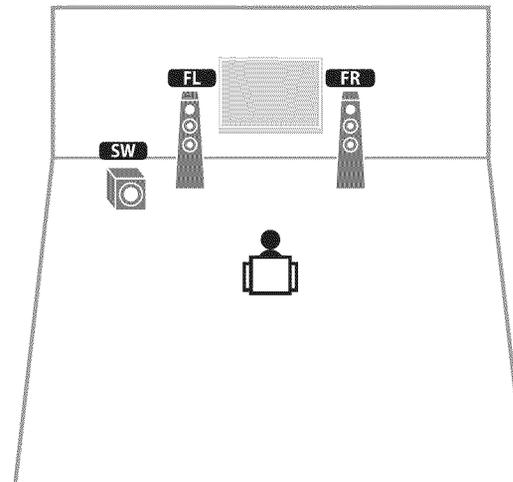
3.1-channel system



4.1-channel system



2.1-channel system



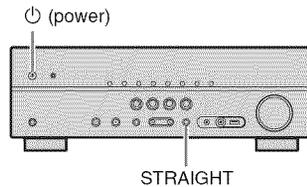
■ Setting the speaker impedance

(U.S.A. and Canada models only)

Under its default settings, the unit is configured for 8-ohm speakers. When connecting 6-ohm speakers, set the speaker impedance to “6 Ω MIN”. In this case, you can also use 4-ohm speakers as the front speakers.

1 Before connecting speakers, connect the power cable to an AC wall outlet.

2 While holding down STRAIGHT on the front panel, press $\text{\textcircled{P}}$ (power).



3 Check that “SP IMP.” is displayed on the front display.



4 Press STRAIGHT to select “6 Ω MIN”.

5 Press $\text{\textcircled{P}}$ (power) to set the unit to standby mode and remove the power cable from the AC wall outlet.

You are now ready to connect the speakers.

2 Connecting speakers

Connect the speakers placed in your room to the unit. The following diagrams provide connections for a 5.1-channel system as an example. For other systems, connect speakers while referring to the connection diagram for the 5.1-channel system.

Caution

- Remove the unit's power cable from an AC wall outlet and turn off the subwoofer before connecting the speakers.
- Ensure that the core wires of the speaker cable do not touch one another or come into contact with the unit's metal parts. Doing so may damage the unit or the speakers. If the speaker cables short circuit, "Check SP Wires" will appear on the front display when the unit is turned on.

Cables required for connection (commercially available)

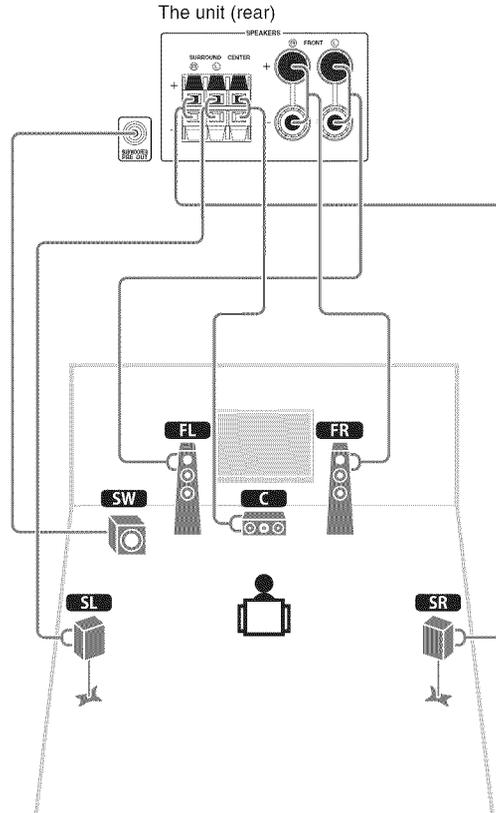
Speaker cables (x the number of speakers)



Audio pin cable (x1: for connecting a subwoofer)



5.1-channel system

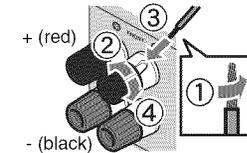


■ Connecting speaker cables

Speaker cables have two wires. One is for connecting the negative (-) terminal of the unit and the speaker, and the other is for the positive (+) terminal. If the wires are colored to prevent confusion, connect the black wire to the negative and the other wire to the positive terminal.

(Connecting front speakers)

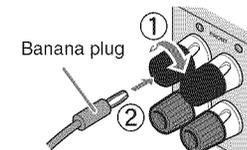
- Remove approximately 10 mm (3/8") of insulation from the ends of the speaker cable and twist the bare wires of the cable firmly together.
- Loosen the speaker terminal.
- Insert the bare wires of the cable into the gap on the side (upper right or bottom left) of the terminal.
- Tighten the terminal.



Using a banana plug

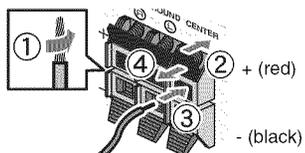
(U.S.A., Canada, Australia and General models only)

- Tighten the speaker terminal.
- Insert a banana plug into the end of the terminal.



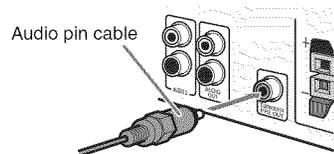
(Connecting center/surround speakers)

- ① Remove approximately 10 mm (3/8") of insulation from the ends of the speaker cable, and twist the bare wires of the cable firmly together.
- ② Press down the tab.
- ③ Insert the bare wires of the cable into the hole in the terminal.
- ④ Release the tab.



■ Connecting the subwoofer

Use an audio pin cable to connect the subwoofer.



Input/output jacks and cables

■ Video/audio jacks

□ HDMI jacks

Transmit digital video and digital sound through a single jack. Use an HDMI cable.



- Use a 19-pin HDMI cable with the HDMI logo. We recommend using a cable less than 5.0 m (16.4 ft) long to prevent signal quality degradation.

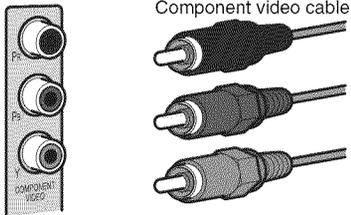


- The unit's HDMI jacks support the HDMI Control, Audio Return Channel (ARC), and 3D and 4K video transmission (through output) features.
- Use high speed HDMI cables to enjoy 3D or 4K videos.

■ Video jacks

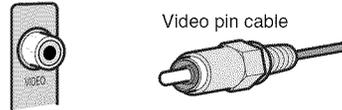
□ COMPONENT VIDEO jacks

Transmit video signals separated into three components: luminance (Y), chrominance blue (PB), and chrominance red (PR). Use a component video cable with three plugs.



□ VIDEO jacks

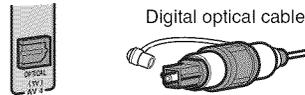
Transmit analog video signals. Use a video pin cable.



■ Audio jacks

□ OPTICAL jacks

Transmit digital audio signals. Use a digital optical cable. Remove the tip protector (if available) before using the cable.



□ COAXIAL jacks

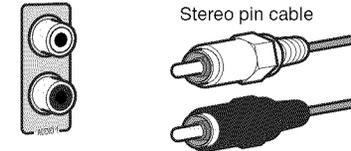
Transmit digital audio signals. Use a digital coaxial cable.



□ AUDIO jacks

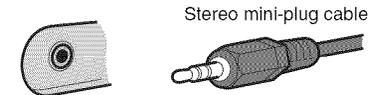
(Stereo L/R jacks)

Transmit analog stereo audio signals. Use a stereo pin cable (RCA cable).



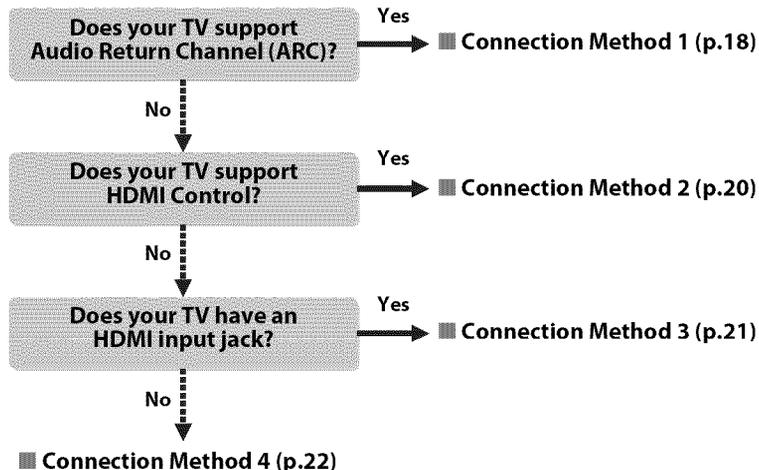
(Stereo mini jack)

Transmits analog stereo audio signals. Use a stereo mini-plug cable.



3 Connecting a TV

Connect a TV to the unit so that video input to the unit can be output to the TV.
 You can also enjoy playback of TV audio on the unit.
 The connection method varies depending on the functions and video input jacks available on your TV.
 Refer to the instruction manual of the TV and choose a connection method.



When connecting a video device with an analog video output

- If you will connect any video device to the AV 1–2 (COMPONENT VIDEO) jacks of the unit, you also need to connect the TV to the MONITOR OUT (COMPONENT VIDEO) jacks.
- If you will connect any video device to the AV 3–5 (VIDEO) jacks or the VIDEO AUX (VIDEO) of the unit, you also need to connect the TV to the MONITOR OUT (VIDEO) jack.

When using a set-top box to watch TV

- Connect the set-top box to the unit in the same way as playback devices (p.23). If you will receive TV broadcasts only from the set-top box, you do not need to make an audio cable connection between the TV and the unit or configure the ARC setting.

About HDMI Control
 HDMI Control allows you to operate external devices via HDMI. If you connect a TV that supports HDMI Control to the unit with an HDMI cable, you can control the unit's power and volume with the TV's remote control. You can also control playback devices (such as an HDMI Control-compatible BD/DVD player) connected to the unit with an HDMI cable. For details, see "HDMI Control" (p.75).

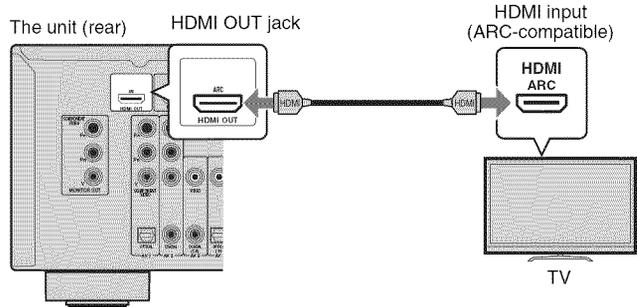
About Audio Return Channel (ARC)
 ARC allows audio signals to travel both ways under HDMI Control. If you connect a TV that supports HDMI Control and ARC to the unit with a single HDMI cable, you can output video/audio to the TV or input TV audio to the unit.

■ Connection Method 1 (HDMI Control/ARC-compatible TV)

Connect the TV to the unit with an HDMI cable.



- The following explanation is based on the assumption that you have not changed the "HDMI" parameters (p.59) in the "Setup" menu.
- Use an HDMI cable that supports ARC.



- By connecting a TV to the unit with an HDMI cable, you can control your iPod or USB storage device, or configure the settings of the unit with the menu displayed on the TV.

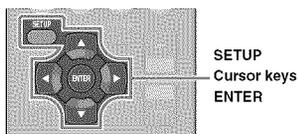
□ Necessary settings

To use HDMI Control and ARC, you need to configure the following settings.
For details on settings and operating your TV, refer to the instruction manual for the TV.

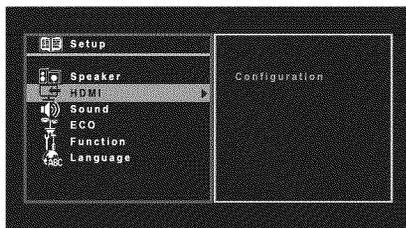
1 After connecting external devices (such as a TV and playback devices) and the power cable to the unit, turn on the unit, TV, and playback devices.

2 Configure the settings of the unit.

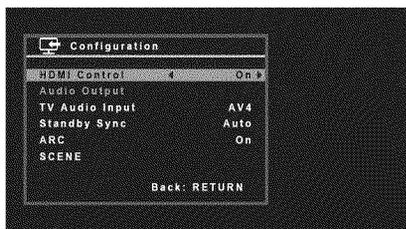
- ① Check that ARC is enabled on the TV.
- ② Switch the TV input to display video from the unit.
- ③ Press SETUP.



- ④ Use the cursor keys to select “HDMI” and press ENTER.



- ⑤ Press ENTER again.
- ⑥ Use the cursor keys (Δ/▽) to select “HDMI Control” and the cursor keys (◀/▶) to select “On” as shown below.



- ⑦ Press SETUP.

3 Configure the settings for HDMI Control.

- ① Enable HDMI Control on the TV and playback devices (such as HDMI Control-compatible BD/DVD player).
- ② Turn off the TV's main power and then turn off the unit and playback devices.
- ③ Turn on the unit and playback devices and then turn on the TV's main power.
- ④ Switch the TV input to display video from the unit.
- ⑤ Check the following.

On the unit: The input to which the playback device is connected is selected. If not, select the input source manually.

On the TV: The video from the playback device is displayed.

- ⑥ Check that the unit is properly synchronized with the TV by turning off the TV or adjusting the TV volume with the TV remote control.

This completes the necessary settings.

If you select a TV program with the TV remote control, the input source of the unit will be automatically switched to “AV 4” and the TV audio will be played back on the unit. If you cannot hear the TV's audio, check that “ARC” (p.60) in the “Setup” menu is set to “On”.



- If HDMI Control does not work properly, try turning off and on (or unplugging and then plugging in again) the devices. It may solve the problem.
- If the unit is not synchronized to the TV's power operations, check the priority of the audio output setting on the TV
- If the audio is interrupted while using ARC, set “ARC” (p.60) in the “Setup” menu to “Off” and use a digital optical cable to input TV audio to the unit (p.20).



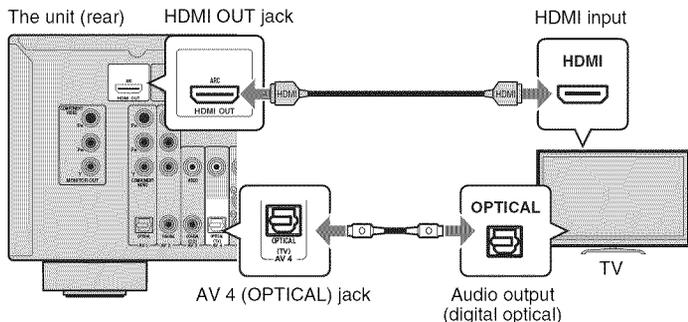
- “AV 4” is set as TV audio input at the factory. If you have connected any external device to the AV 4 jacks, use “TV Audio Input” (p.60) in the “Setup” menu to change the TV audio input assignment. To use the SCENE function (p.34), you also need to change the input assignment for SCENE(TV).

■ Connection Method 2 (HDMI Control-compatible TV)

Connect the TV to the unit with an HDMI cable and a digital optical cable.



- The following explanation is based on the assumption that you have not changed the “HDMI” parameters (p.59) in the “Setup” menu.



- By connecting a TV to the unit with an HDMI cable, you can control your iPod or USB storage device, or configure the settings of the unit with the menu displayed on the TV.

□ Necessary settings

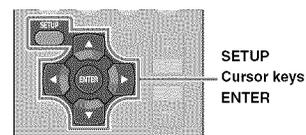
To use HDMI Control, you need to configure the following settings.

For details on settings and operating your TV, refer to the instruction manual for the TV.

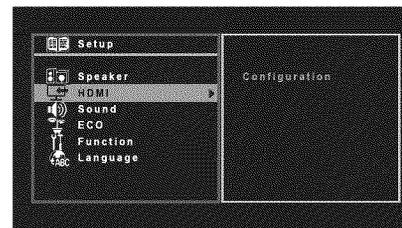
1 After connecting external devices (such as a TV and playback devices) and power cable of the unit, turn on the unit, TV, and playback devices.

2 Configure the settings of the unit.

- Switch the TV input to display video from the unit.
- Press SETUP.



- Use the cursor keys to select “HDMI” and press ENTER.



- Press ENTER again.
- Use the cursor keys (Δ/∇) to select “HDMI Control” and the cursor keys (\leftarrow/\rightarrow) to select “On” as shown below.



- Press SETUP.

3 Configure the settings for HDMI Control.

- ① Enable HDMI Control on the TV and playback devices (such as a HDMI Control-compatible BD/DVD player).
- ② Turn off the TV's main power and then turn off the unit and playback devices.
- ③ Turn on the unit and playback devices and then turn on the TV.
- ④ Switch the TV input to display video from the unit.
- ⑤ Check the following.

On the unit: The input to which the playback device is connected is selected. If not, select the input source manually.

On the TV: The video from the playback device is displayed.

- ⑥ Check that the unit is properly synchronized with the TV by turning off the TV or adjusting the TV volume with the TV remote control.

This completes the necessary settings.

If you select a TV program with the TV remote control, the input source of the unit will be automatically switched to "AV 4" and the TV audio will be played back on the unit.



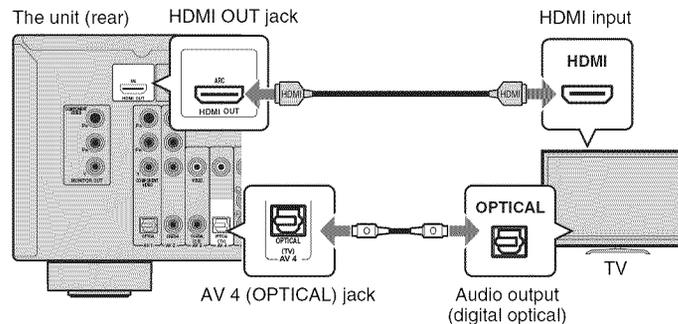
- If HDMI Control does not work properly, try turning off and on (or unplugging and then plugging in again) the devices. It may solve the problem.
- If the unit is not synchronized to the TV's power operations, check the priority of the audio output setting on the TV



- "AV 4" is set as TV audio input at the factory. If you have connected any external device to the AV 4 jacks or if you want to use another input jack (other than OPTICAL) for connecting the TV, use "TV Audio Input" (p.60) in the "Setup" menu to change the TV audio input assignment. To use the SCENE function (p.34), you also need to change the input assignment for SCENE(TV).

■ Connection Method 3 (TV with HDMI input jacks)

Connect the TV to the unit with an HDMI cable and a digital optical cable.



If you switch the input source of the unit to "AV 4" using the AV 4 or SCENE(TV) keys, the TV audio will be played back on the unit.



- By connecting a TV to the unit with an HDMI cable, you can control your iPod or USB storage device, or configure the settings of the unit with the menu displayed on the TV.
- If you have connected any external device to the AV 4 jacks or if you want to use another input jack (other than OPTICAL) for connecting the TV, connect the TV to one of the AV 1–5 and AUDIO 1–2 jacks. To use the SCENE function (p.34), you also need to change the input assignment for SCENE(TV).

■ Connection Method 4 (TV without HDMI input jacks)

When connecting any video device to the AV 1-2 (COMPONENT VIDEO) jacks of the unit, connect the TV to the MONITOR OUT (COMPONENT VIDEO) jacks.

When connecting any video device to the AV 3-5 (VIDEO) jacks or the VIDEO AUX (VIDEO) of the unit, connect the TV to the MONITOR OUT (VIDEO) jack.

If you select "AV 4" as the input source by pressing AV 4 or SCENE(TV), the TV audio will be played back on the unit.

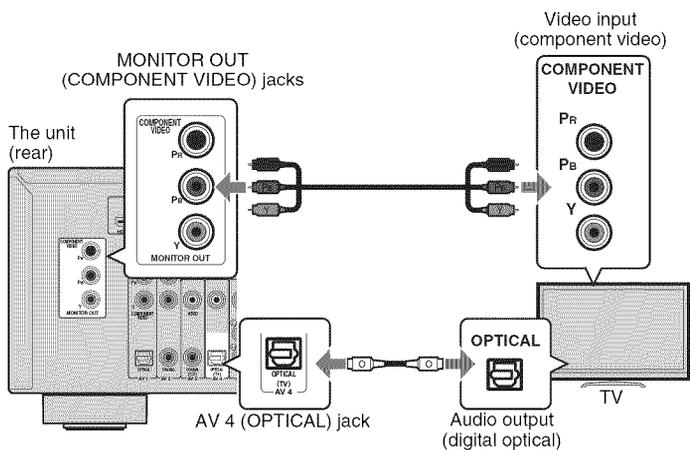


- If you connect your TV to the unit with a cable other than HDMI, video input to the unit via HDMI cannot be output to the TV.

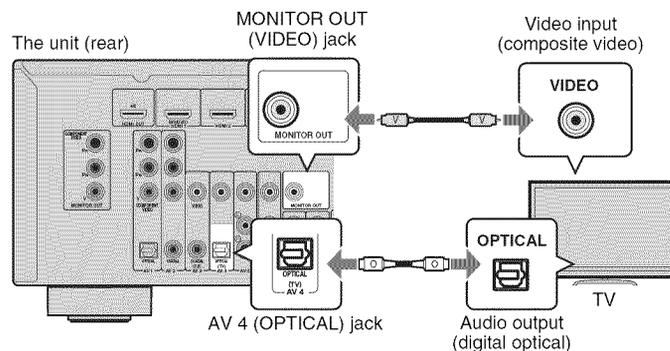


- If you have connected any external device to the AV 4 jacks or if you want to use another input jack (other than OPTICAL) for connecting the TV, connect the TV to one of the AV 1-5 and AUDIO 1-2 jacks. To use the SCENE function (p.34), you also need to change the input assignment for SCENE(TV).

□ COMPONENT VIDEO connection (with a component video cable)



□ VIDEO (composite video) connection (with a video pin cable)



4 Connecting playback devices

The unit is equipped with a variety of input jacks including HDMI input jacks to allow you to connect different types of playback devices. For information on how to connect an iPod or a USB storage device, see the following pages.

- Connecting an iPod (p.44)
- Connecting a USB storage device (p.48)

Connecting video devices (such as BD/DVD players)

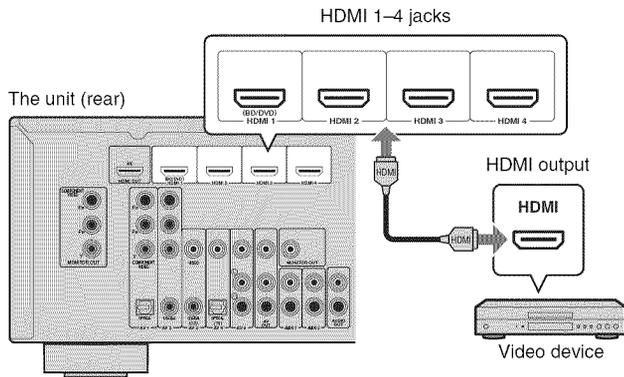
Connect video devices such as BD/DVD players, set-top boxes (STBs) and game consoles to the unit. Depending on the video/audio output jacks available on your video device, choose one of the following connections. We recommend using an HDMI connection if the video device has an HDMI output jack.



- If the combination of video/audio input jacks available on the unit does not match your video device, change its combination according to the output jacks of your device (p.24).

HDMI connection

Connect a video device to the unit with an HDMI cable.



If you select the input source by pressing HDMI 1–4, the video/audio played back on the video device will be output from the unit.

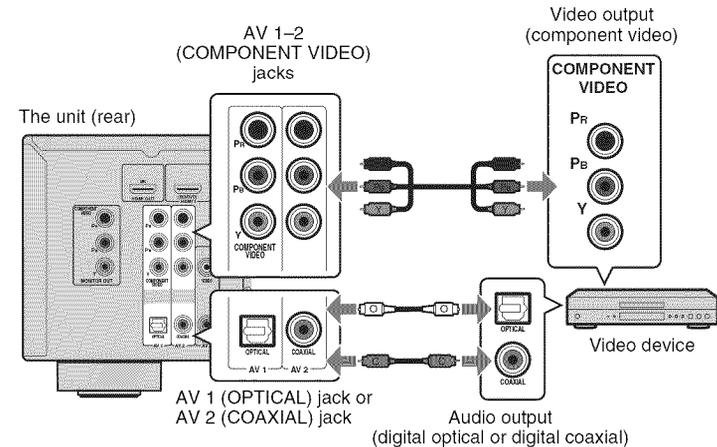


- To watch videos input to the HDMI 1–4 jacks, you need to connect your TV to the HDMI OUT jack of the unit (p.18 to 21).

Component video connection

Connect a video device to the unit with a component video cable and an audio cable (digital optical or digital coaxial). Choose a set of input jacks (on the unit) depending on the audio output jacks available on your video device.

Output jacks on video device		Input jacks on the unit
Video	Audio	
Component video	Digital optical	AV 1 (COMPONENT VIDEO + OPTICAL)
	Digital coaxial	AV 2 (COMPONENT VIDEO + COAXIAL)



If you select the input source by pressing AV 1–2, the video/audio played back on the video device will be output from the unit.

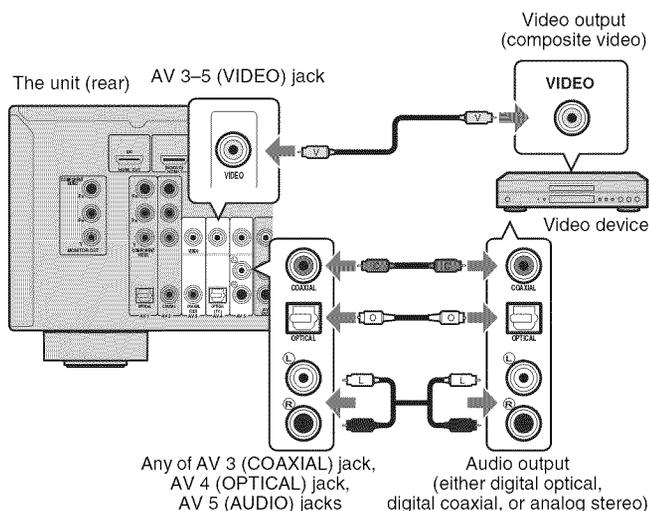


- To watch videos input to the AV 1–2 (COMPONENT VIDEO) jacks, you need to connect your TV to the MONITOR OUT (COMPONENT VIDEO) jacks of the unit (p.22).

Composite video connection

Connect a video device to the unit with a video pin cable and an audio cable (digital coaxial, digital optical, or stereo pin cable). Choose a set of input jacks (on the unit) depending on the audio output jacks available on your video device.

Output jacks on video device		Input jacks on the unit
Video	Audio	
Composite video	Digital coaxial	AV 3 (VIDEO + COAXIAL)
	Digital optical	AV 4 (VIDEO + OPTICAL)
	Analog stereo	AV 5 (VIDEO + AUDIO)



If you select the input source by pressing AV 3-5, the video/audio played back on the video device will be output from the unit.



- To watch videos input to the AV 3-5 (VIDEO) jacks, you need to connect your TV to the MONITOR OUT (VIDEO) jack of the unit (p.22).

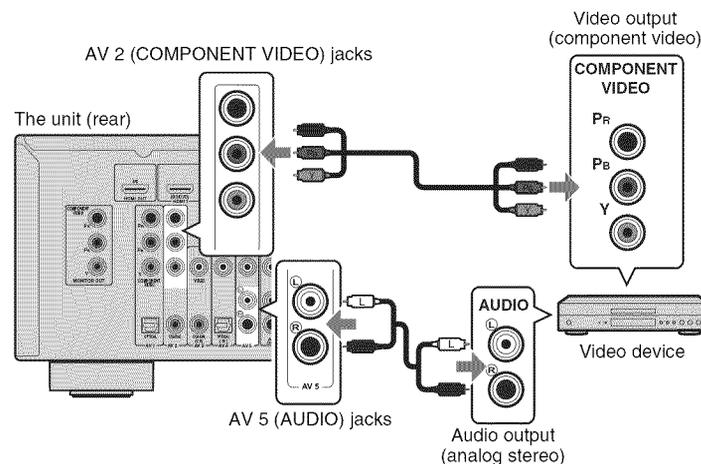
Changing the combination of video/audio input jacks

If the combination of video/audio input jacks available on the unit does not match your video device, change its combination according to the output jacks of your device. You can connect a video device that has the following video/audio output jacks.

Output jacks on video device		Input jacks on the unit	
Video	Audio	Video	Audio
HDMI	Digital optical	HDMI 1-4	AV 1 (OPTICAL) AV 4 (OPTICAL)
	Digital coaxial	HDMI 1-4	AV 2-3 (COAXIAL)
	Analog stereo	HDMI 1-4	AV 5 (AUDIO) AUDIO 1-2
Component video	Analog stereo	AV 1-2 (COMPONENT VIDEO)	AV 5 (AUDIO) AUDIO 1-2

Necessary setting

For example, if you have connected a video device to AV 2 (COMPONENT VIDEO) and AV 5 (AUDIO) jacks of the unit, change the combination setting as follows.



- 1 After connecting external devices (such as a TV and playback devices) and power cable of the unit, turn on the unit.
- 2 Press AV 2 to select “AV 2” (video input jack to be used) as the input source.
- 3 Press OPTION.
- 4 Use the cursor keys (Δ/∇) to select “Audio In” and press ENTER.



- 5 Use the cursor keys (\leftarrow/\rightarrow) to select “AV 5” (audio input jack to be used).



- 6 Press OPTION.

This completes the necessary settings.

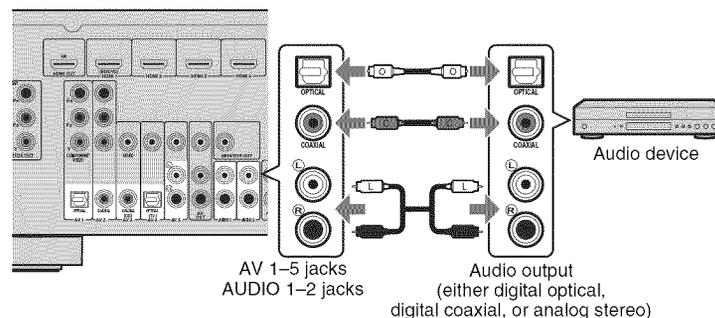
If you select “AV 2” as the input source by pressing AV 2, the video/audio played back on the video device will be output from the unit.

Connecting audio devices (such as CD players)

Connect audio devices such as CD players and MD players to the unit. Depending on the audio output jacks available on your audio device, choose one of the following connections.

Audio output jacks on audio device	Audio output jacks on the unit
Digital optical	AV 1 (OPTICAL) AV 4 (OPTICAL)
Digital coaxial	AV 2-3 (COAXIAL)
Analog stereo	AV 5 (AUDIO) AUDIO 1-2

The unit (rear)

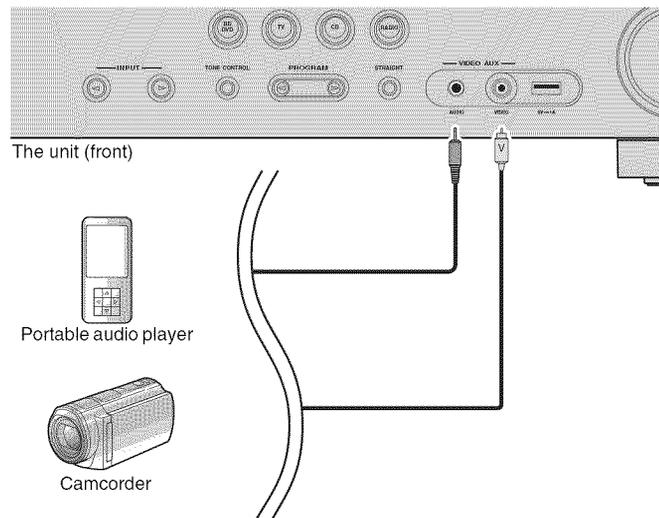


If you select the input source by pressing AV 1-5 or AUDIO 1-2, the audio played back on the audio device will be output from the unit.

Connecting to the jacks on the front panel

Use the VIDEO AUX jacks on the front panel to temporarily connect devices such as camcorders and portable audio players to the unit.

Before making a connection, stop playback on the device and turn down the volume on the unit.



If you select "V-AUX" as the input source by pressing V-AUX, the video/audio played back on the device will be output from the unit.



- To watch videos input to the VIDEO AUX (VIDEO) jack, you need to connect your TV to the MONITOR OUT (VIDEO) jack of the unit (p.22).
- You need to prepare the video/audio cables that match the output jacks on your device.

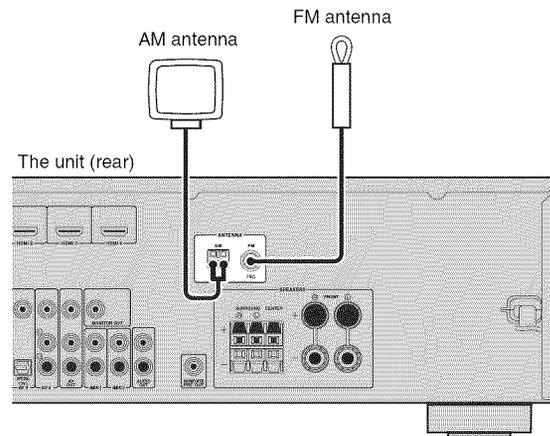


- For details on how to connect an iPod or a USB storage device, see "Connecting an iPod" (p.44) or "Connecting a USB storage device" (p.48).
- When "USB" is selected as the input source, video signals input to the VIDEO AUX (VIDEO) jack are output from the MONITOR OUT (VIDEO) jack.

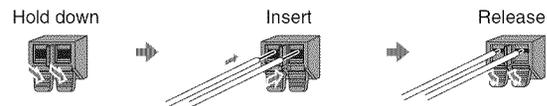
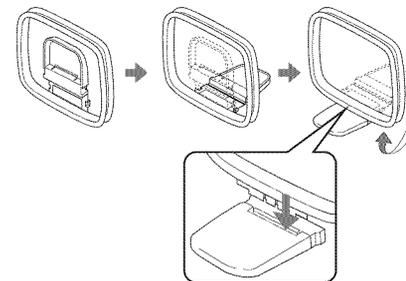
5 Connecting the FM/AM antennas

Connect the supplied FM/AM antennas to the unit.

Fix the end of the FM antenna to a wall, and place the AM antenna on a flat surface.



Assembling and connecting the AM antenna



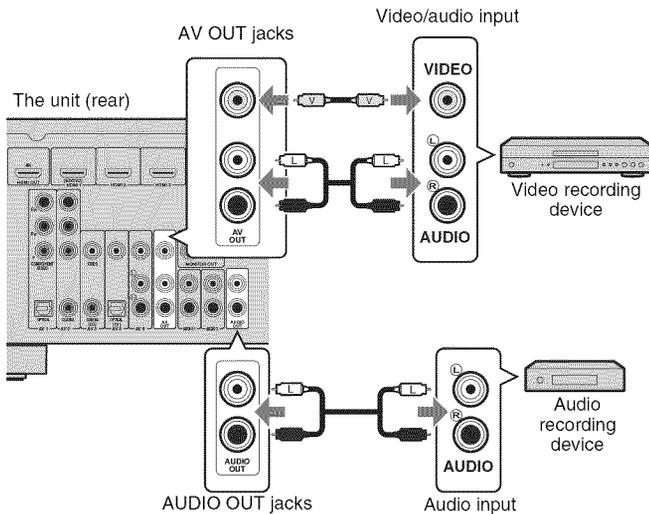
- Unwind only the length of cable needed from the AM antenna unit.
- The wires of the AM antenna have no polarity.

6 Connecting recording devices

You can connect video/audio recording devices to the AV OUT and AUDIO OUT jacks. These jacks output analog video/audio signals selected as the input.



- To copy video/audio from a video device, connect the video device to the AV 5 jacks or VIDEO AUX (VIDEO/AUDIO) jacks of the unit.
- To copy audio from an audio device, connect the audio device to the AV 5 jacks, AUDIO 1–2 jacks, or VIDEO AUX (AUDIO) jacks of the unit.
- Be sure to use the AV OUT and AUDIO OUT jacks only for connecting recording devices.



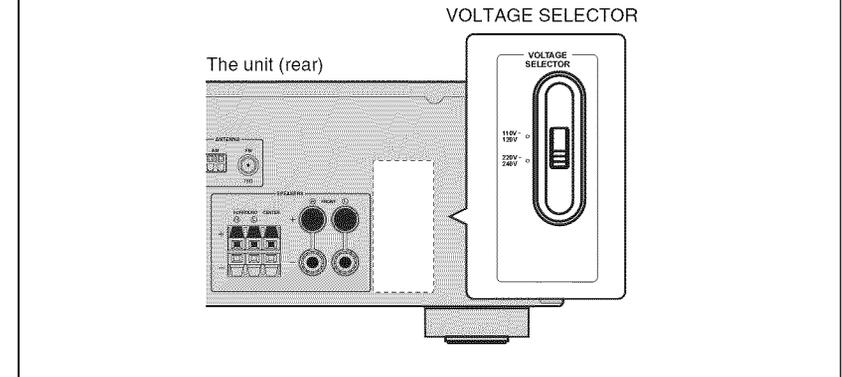
7 Connecting the power cable

Before connecting the power cable (General model only)

Set the switch position of VOLTAGE SELECTOR according to your local voltage. Voltages are AC 110–120/220–240 V, 50/60 Hz.

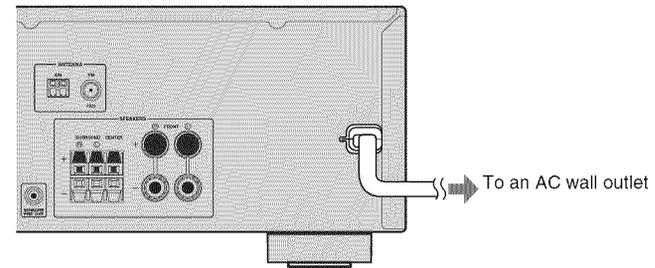


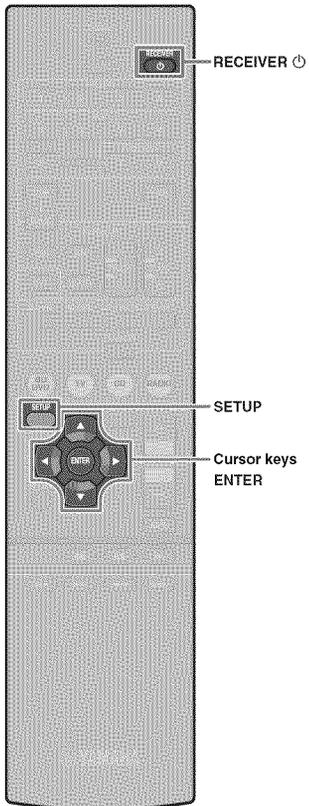
- Make sure you set VOLTAGE SELECTOR of the unit BEFORE plugging the power cable into an AC wall outlet. Improper setting of VOLTAGE SELECTOR may cause damage to the unit and create a potential fire hazard.



After all the connections are complete, plug in the power cable.

The unit (rear)





8 Selecting an on-screen menu language

Select the desired on-screen menu language from English (default), Japanese, French, German, Spanish, Russian, Italian and Chinese.

1 Press **RECEIVER** to turn on the unit.

2 Turn on the TV and switch the TV input to display video from the unit (HDMI OUT jack).



• Operations with TV screen are available only when your TV is connected to the unit via HDMI. If not, carry out operations while viewing the front display.

3 Press **SETUP**.

4 Use the cursor keys to select “Language” and press **ENTER**.



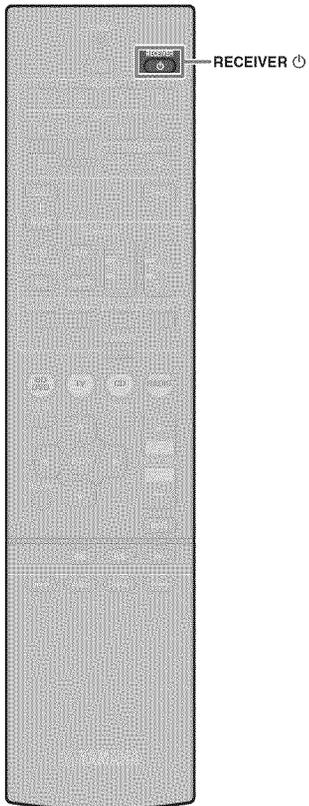
5 Use the cursor keys to select the desired language.



6 To exit from the menu, press **SETUP**.



• The information on the front display is provided in English only.



9 Optimizing the speaker settings automatically (YPAO)

The Yamaha Parametric room Acoustic Optimizer (YPAO) function detects speaker connections, measures the distances from them to your listening position(s), and then automatically optimizes the speaker settings, such as volume balance and acoustic parameters, to suit your room.



- Please note the following when using YPAO.
 - Use YPAO after connecting a TV and speakers to the unit.
 - During the measuring process, test tones are output at high volume. Ensure that the test tones do not frighten small children. Also, refrain from using this function at night when it may be a nuisance to others.
 - During the measuring process, you cannot adjust the volume.
 - During the measuring process, keep the room as quiet as possible.
 - Do not connect headphones.

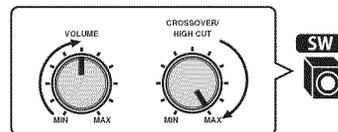
1 Press **RECEIVER** ⏻ to turn on the unit.

2 Turn on the TV and switch the TV input to display video from the unit (HDMI OUT jack).

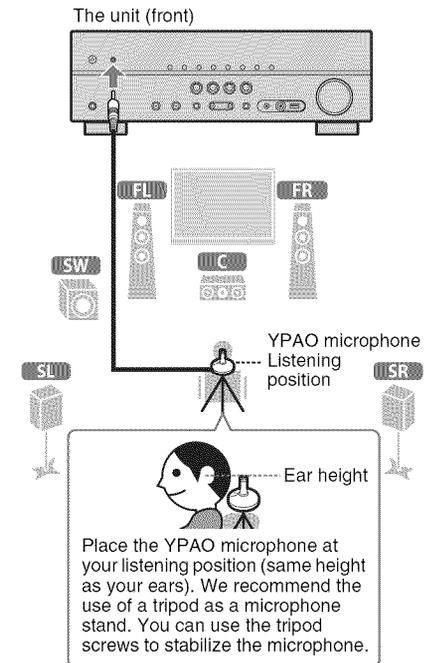


- Operations with TV screen are available only when your TV is connected to the unit via HDMI. If not, carry out operations while viewing the front display.

3 Turn on the subwoofer and set the volume to half. If the cross-over frequency is adjustable, set it to maximum.

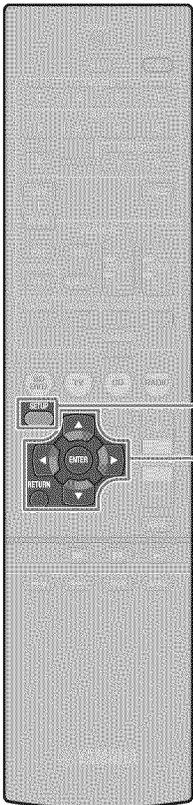


4 Place the YPAO microphone at your listening position (same height as your ears) and connect it to the YPAO MIC jack on the front panel.



The following screen appears on the TV.





SETUP
Cursor keys
ENTER
RETURN



- To cancel the operation, disconnect the YPAO microphone, or use the cursor keys to select “Exit” and press ENTER, before starting the measurement.



- Do not stand between the speakers and the YPAO microphone during the measurement process (about 3 minutes).
- Move to the corner of the room or leave the room.

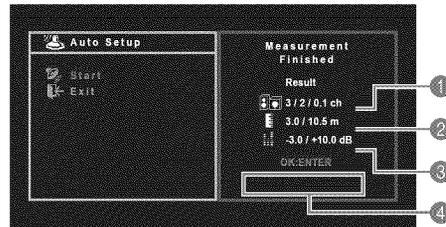
5 To start the measurement, use the cursor keys to select “Start” and press SETUP.

The measurement will start in 10 seconds. Press ENTER to start the measurement immediately.



- To stop the measurement temporarily, press RETURN and follow the procedure in “Error messages” (p.31).

The following screen appears on the TV when the measurement finishes.



- 1 The number of speakers (front side/rear side/subwoofer)
- 2 Speaker distance (nearest/farthest)
- 3 Adjustment range of speaker output level
- 4 Warning message (if available)

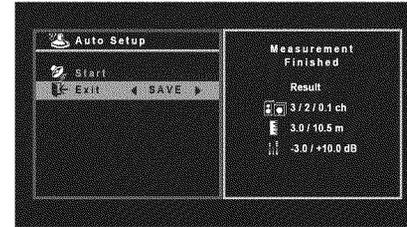


- If any error message (such as E-1) or warning message (such as W-1) appears, see “Error messages” (p.31) or “Warning messages” (p.32).



- A speaker with a problem is indicated by blinking of the speaker indicators in the front display.
- If multiple warnings are given (when operating with the front display), use the cursor keys (Δ/∇) to check the other warning messages.

6 To save the measurement results, use the cursor keys ($\triangleleft/\triangleright$) to select “SAVE” and press ENTER.



The adjusted speaker settings are applied.



- To finish the measurement without saving the result, select “CANCEL”.

7 Disconnect the YPAO microphone from the unit.

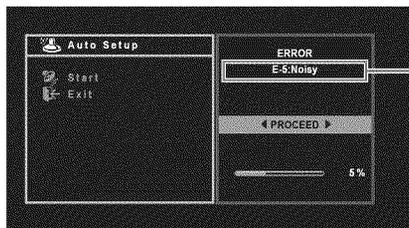
This completes optimization of the speaker settings.

Caution

- The YPAO microphone is sensitive to heat, so should not be placed anywhere where it could be exposed to direct sunlight or high temperatures (such as on top of AV equipment).

Error messages

If any error message is displayed during the measurement, resolve the problem and perform YPAO again.



TV screen



Front display

Procedure to handle errors

1 Check the content of error message and press ENTER.

2 Use the cursor keys (◀/▶) to select the desired operation.

To exit the YPAO measurement:

- ① Select "EXIT" and press ENTER.
- ② Use the cursor keys (△/▽) to select "Exit" and press ENTER.
- ③ Disconnect the YPAO microphone from the unit.

To retry the YPAO measurement from beginning:

Select "RETRY" and press ENTER.

To proceed with the current YPAO measurement (for E-5 and E-9 only):

Select "PROCEED" and press ENTER.

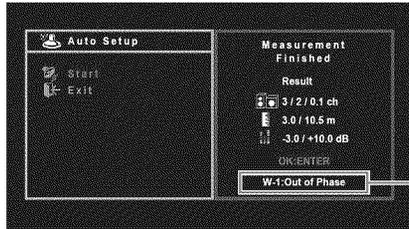
Error message	Cause	Remedy
E-1:No Front SP (E-1:NO FRNT SP)	Front speakers are not detected.	Exit YPAO, turn off the unit, and then check the speaker connections.
E-2:No Sur. SP (E-2:NO SUR SP)	One of the surround speakers cannot be detected.	
E-5:Noisy (E-5:NOISY)	The noise is too loud.	Keep the room quiet and retry YPAO. If you select "PROCEED", YPAO takes the measurement again and ignores any noise detected.
E-7:No MIC (E-7:NO MIC)	The YPAO microphone has been removed.	Connect the YPAO microphone to the YPAO MIC jack firmly and retry YPAO.
E-8:No Signal (E-8:NO SIGNAL)	The YPAO microphone cannot detect test tones.	Connect the YPAO microphone to the YPAO MIC jack firmly and retry YPAO. If this error occurs repeatedly, contact the nearest authorized Yamaha dealer or service center.
E-9:User Cancel (E-9:CANCEL)	The measurement has been canceled.	Retry or exit YPAO as necessary.
E-10:Internal Err. (E-10:INTERNAL)	An internal error has occurred.	Exit YPAO, and turn off and on the unit. If this error occurs repeatedly, contact the nearest authorized Yamaha dealer or service center.



- Texts in parentheses denote indicators on the front display.

Warning messages

If a warning message is displayed after the measurement, you can still save the measurement results by following on-screen instructions. However, we recommend you perform YPAO again in order to use the unit with the optimal speaker settings.



Warning message

TV screen

Problem speaker (blinks)



Front display

Warning message	Cause	Remedy
W-1: Out of Phase (W-1:PHASE)	A speaker cable may be connected with the reverse polarity (+/-).	Check the cable connections (+/-) of the problem speaker. If the speaker is connected incorrectly, exit YPAO, turn off the unit, and then reconnect the speaker cable. Depending on the type of speakers or room environment, this message may appear even if the speakers are connected correctly. In this case, you can ignore the message.
W-2: Over Distance (W-2:DISTANCE)	A speaker is placed more than 24 m (80 ft) from the listening position.	Exit YPAO, turn off the unit, and place the problem speaker within 24 m (80 ft) of the listening position.
W-3: Level Error (W-3:LEVEL)	There are significant volume differences between the speakers.	Check the usage environment and cable connections (+/-) of each speaker, and the volume of the subwoofer. If there is any problem, exit YPAO, turn off the unit, and then reconnect speaker cable or correct the speaker positions. We recommend using the same speakers or speakers with specifications that are as similar as possible.



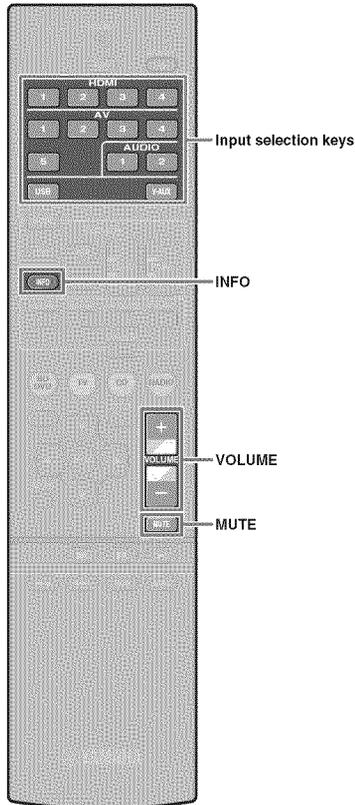
- Texts in parentheses denote indicators on the front display.

■ Procedure to handle warnings

- 1 Check the content of warning message and press ENTER.**
- 2 Use the cursor keys (◀/▶) to select the desired operation.**
 - To save the measurement results:**
Select "SAVE" and press ENTER.
 - To discard the measurement result:**
Select "CANCEL" and press ENTER.
- 3 Disconnect the YPAO microphone from the unit.**

PLAYBACK

Basic playback procedure



- 1 Turn on the external devices (such as a TV or BD/DVD player) connected to the unit.
- 2 Use the input selection keys to select an input source.
- 3 Start playback on the external device or select a radio station.

Refer to the instruction manual for the external device.

For details on the following operations, see the corresponding pages.

- Listening to FM/AM radio (p.40)
- Playing back iPod music (p.44)
- Playing back music stored on a USB storage device (p.48)

- 4 Press **VOLUME** to adjust the volume.



- To mute the audio output, press MUTE. Press MUTE again to unmute.
- To adjust the treble/bass settings, use the "Option" menu or TONE CONTROL on the front panel (p.52).

Switching information on the front display

- 1 Press **INFO**.

Each time you press the key, the displayed item changes.



Item name

About 3 seconds later, the corresponding information for the displayed item appears.



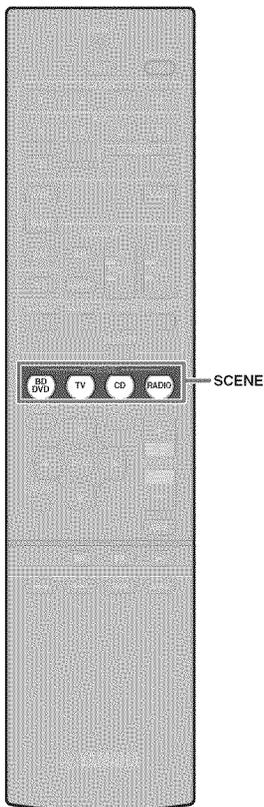
Information



- Available items vary depending on the selected input source. The displayed item can also be applied separately to each input source group.

Input source group	Item
HDMI 1-4	
AV 1-5	Input (input source name), DSP Program (sound mode name), Audio Decoder (decoder name*)
AUDIO 1-2	
V-AUX	
	Song (song title), Artist (artist name), Album (album name), DSP Program (sound mode name), Audio Decoder (decoder name*)
USB	* During simple playback of iPod: Input (input source name), DSP Program (sound mode name), Audio Decoder (decoder name)
	Frequency (frequency), DSP Program (sound mode name), Audio Decoder (decoder name*)
TUNER	* (U.K. and Europe models only) Radio Data System data is also available when the unit is tuned into a Radio Data System broadcasting station (p.43).

* The name of the audio decoder currently activated is displayed. If no audio decoder is activated, "Decoder Off" appears.



Selecting the input source and favorite settings with one touch (SCENE)

The SCENE function allows you to select the assigned input source, sound program, and Compressed Music Enhancer on/off with just one touch.

1 Press SCENE.

The input source and settings registered to the corresponding scene are selected. The unit turns on automatically when it is in standby mode.

By default, the following settings are registered for each scene.

SCENE	Input	Sound program	Compressed Music Enhancer	SCENE link playback
BD/DVD	HDMI 1	MOVIE (Sci-Fi)	Off	On
TV	AV 4	STRAIGHT	On	On
CD	AV 3	STRAIGHT	Off	Off
RADIO	TUNER	MUSIC (5ch Stereo)	On	Off



- The SCENE link playback function allows you to automatically turn on the TV or start playback of an external device connected to the unit via HDMI, in conjunction with a scene selection. To enable SCENE link playback, set "SCENE" (p.60) in the "Setup" menu to "On".

Configuring scene assignments

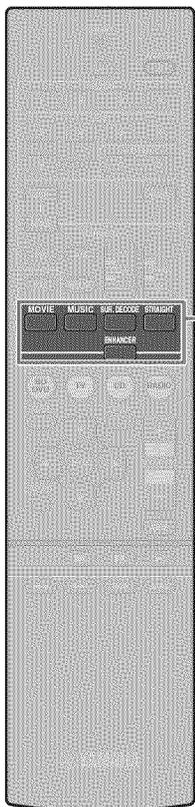
1 Perform the following operations to prepare the settings you want to assign to a scene.

- Select an input source (p.33)
- Select a sound program (p.35)
- Enable/disable Compressed Music Enhancer (p.39)

2 Hold down the desired SCENE key until "SET Complete" appears on the front display.



- (For Australia model only)
To control your playback device after selecting a scene with the remote control of the unit, change the external device assigned to the SCENE keys. Refer to "Supplement for Remote Control" in the supplied CD-ROM.



MOVIE
MUSIC
SUR.DECODE
STRAIGHT
ENHANCER

Selecting the sound mode

The unit is equipped with a variety of sound programs and surround decoders that allow you to enjoy playback sources with your favorite sound mode (such as sound field effect or stereo playback).

Selecting a sound program suitable for movies

- Press MOVIE repeatedly.

This mode lets you enjoy sound field effects optimized for viewing video sources, such as movies, TV programs, and games (p.36).

Selecting a sound program suitable for music or stereo playback

- Press MUSIC repeatedly.

This mode lets you enjoy sound field effects optimized for listening music sources or stereo playback (p.37).

Selecting a surround decoder

- Press SUR.DECODE repeatedly.

This mode lets you enjoy unprocessed multichannel playback from 2-channel sources (p.39).

Switching to the straight decode mode

- Press STRAIGHT.

This mode lets you enjoy unprocessed sounds in original channels (p.38).

Enabling Compressed Music Enhancer

- Press ENHANCER.

This mode lets you enjoy compressed music with additional depth and breadth (p.39).



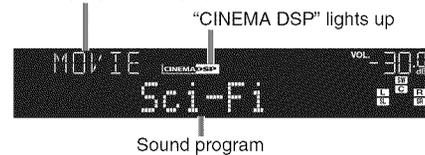
- You can also switch the sound programs and surround decoder by pressing PROGRAM on the front panel.
- The sound mode can be applied separately to each input source.
- When you play back audio signals with a sampling rate of higher than 96 kHz or playing back DTS Express, the straight decode mode (p.38) is automatically selected.
- You can check which speakers are currently outputting sound by looking at the speaker indicators on the unit's front panel (p.8).

Enjoying sound field effects (CINEMA DSP)

CINEMA DSP

The unit is equipped with a variety of sound programs that utilize Yamaha's original DSP technology (CINEMA DSP). It allows you to easily create sound fields like actual movie theaters or concert halls in your room.

Sound program category



- When you play back DTS-HD sources, the DTS decoder is automatically selected.



- You can adjust the sound field effect level in "DSP Level" (p.52) in the "Option" menu.

■ Sound programs suitable for movies (MOVIE)

The following sound programs are optimized for viewing video sources, such as movies, TV programs, and games.

Standard	This program creates a sound field that emphasizes the surround feeling without disturbing the original acoustic positioning of multichannel audio, such as Dolby Digital and DTS. Its design is based on the concept of the ideal movie theater, in which the audience is surrounded by beautiful reverberations from the left, right, and rear.
Spectacle	This program delivers the scale and grandeur of spectacular movie productions. It delivers an expansive sound space to match the cinemascope wide-screen, and boasts a broad dynamic range, providing everything from small delicate sounds to powerful loud booms.
Sci-Fi	This program clearly reproduces the finely elaborated sound design of the latest Sci-Fi and SFX movies. You can enjoy a variety of cinematographically created virtual spaces reproduced with clear separation between dialogue, sound effects, and background music.
Adventure	This program is ideal for reproducing the sound design of action and adventure movies precisely. The sound field restrains reverberations, but puts emphasis on reproducing a sensation of expansiveness on both sides, powerful space expanded widely to the left and right. The restrained depth creates a clear and powerful space, while also maintaining the articulation of the sounds and the separation of the channels.

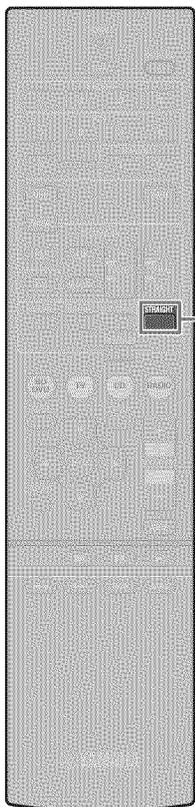
Drama	This program features stable reverberations that match a wide range of movie genres, from serious dramas to musicals and comedies. The reverberations are modest, but suitably stereophonic. The sound effects and background music are reproduced with a gentle echo that does not impinge on the articulation of the dialogue. You'll never get tired listening for long periods.
Mono Movie	This program reproduces monaural video sources, such as classic movies, in an atmosphere of a good old movie theater. The program creates a pleasant space with depth, by adding breadth and the appropriate reverberation to the original audio.
Sports	This program allows listeners to enjoy the rich vividness of sport broadcasts and light entertainment programs. In sports broadcasts, the commentators' voices are positioned clearly at the center, while the atmosphere inside the stadium is realistically conveyed by the peripheral delivery of the sounds of the fans in a suitable space.
Action Game	This program is suitable for action games, such as car racing and fighting games. The reality of, and emphasis on, various effects makes the player feel like they are right in the middle of the action, allowing for greater concentration. Use this program in combination with Compressed Music Enhancer for a more dynamic and strong sound field.
Roleplaying Game	This program is suitable for role-playing and adventure games. This program adds depth to the sound field for natural and realistic reproduction of background music, special effects, and dialogue from a wide variety of scenes. Use this program in combination with Compressed Music Enhancer for a clearer and more spatial sound field.

■ Sound programs suitable for music/stereo playback (MUSIC)

The following sound programs are optimized for listening to music sources.

You can also select stereo playback.

Hall in Munich	This program simulates a Munich concert hall with approximately 2,500 seats that uses stylish wood for the interior finishing. 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	This program simulates a 1700-seat, middle-sized concert hall with a shoebox shape that is traditional in Vienna. Pillars and ornate carvings create extremely complex reverberations from all around the audience, producing a very full, rich sound.
Chamber	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	This program simulates an intimate concert venue with a low ceiling and homey atmosphere. A realistic, live sound field delivers powerful sounds that make you feel as if you are sitting in the front row in front of a small stage.
The Roxy Theatre	This program creates the sound field of a 460-seat rock music concert venue in Los Angeles. The listener's virtual seat is at the center left of the hall.
The Bottom Line	This program creates 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	This program allows you to enjoy videos of pop, rock, and jazz concerts, as if you were there yourself. Immerse yourself in the hot concert atmosphere thanks to the vividness of the singers and solos on stage, a presence sound field that emphasizes the beat of rhythm instruments, and a surround sound field that reproduces the space of a big live hall.
2ch Stereo	Use this program to mix down multichannel sources to 2 channels. When multichannel signals are input, they are down mixed to 2 channels and output from the front speakers (this program does not utilize CINEMA DSP).
5ch Stereo	Use this program to output sound from all speakers. When you play back multichannel sources, the unit mixes down 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.



■ Enjoying sound field effects without surround speakers (Virtual CINEMA DSP)

If you select one of the sound programs (except 2ch Stereo and 5ch Stereo) when no surround speakers are connected, the unit automatically creates the surround sound field using the front-side speakers.

Enjoying unprocessed playback

You can play back input sources without any sound field effect processing.

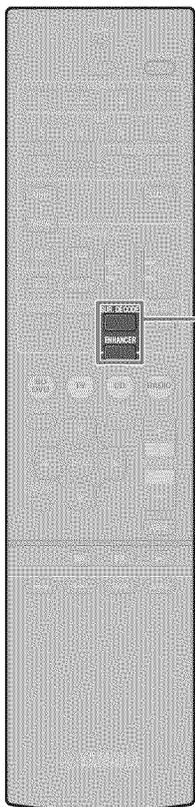
■ Enjoying unprocessed sounds in original channels (straight decode)

When the straight decode mode is enabled, each speaker produces its own channel audio signal (without sound field processing). When you play back 2-channel sources, such as a CD player, stereo sound is heard from the front speakers. When you play back multichannel sources, the unit produces unprocessed multichannel sounds.

1 Press STRAIGHT.

Each time you press the key, the straight decode mode is enabled or disabled.





■ Enjoying unprocessed multichannel sounds (surround decoder)

The surround decoder enables unprocessed multichannel playback from 2-channel sources. When a multichannel source is input, it works the same way as the straight decode mode.

For details on each decoder see “Glossary” (p.73).

1 Press SUR.DECODE to select a surround decoder.

Each time you press the key, the surround decoder changes.



<input checked="" type="checkbox"/> Pro Logic	Uses the Dolby Pro Logic decoder suitable for all sources.
<input checked="" type="checkbox"/> PLII Movie	Uses the Dolby Pro Logic II decoder suitable for movies.
<input checked="" type="checkbox"/> PLII Music	Uses the Dolby Pro Logic II decoder suitable for music.
<input checked="" type="checkbox"/> PLII Game	Uses the Dolby Pro Logic II decoder suitable for games.
Neo: 6 Cinema	Uses the DTS Neo: 6 decoder suitable for movies.
Neo: 6 Music	Uses the DTS Neo: 6 decoder suitable for music.



- You can adjust the surround decoder parameters in “DSP Parameter” (p.61) in the “Setup” menu.

Enjoying compressed music with enhanced sound (Compressed Music Enhancer)

compressed music **ENHANCER**

Compressed Music Enhancer adds depth and breadth to the sound, allowing you to enjoy a dynamic sound close to the original sound before it was compressed. This function can be used along with any other sound modes.

1 Press ENHANCER.

Each time you press the key, Compressed Music Enhancer is enabled or disabled.

“ENHANCER” lights up



- Compressed Music Enhancer does not work on the following audio sources.
 - Signals whose sampling rate is over 48 kHz
 - High-definition streaming audio

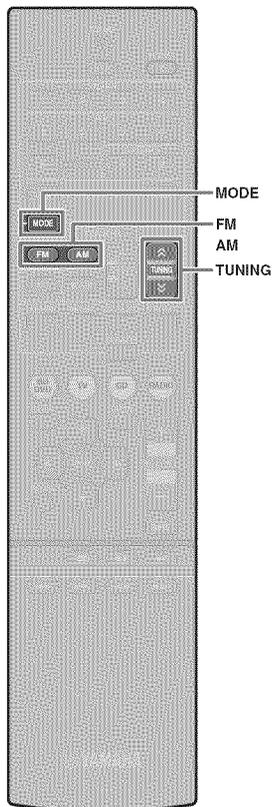


- You can also use “Enhancer” (p.52) in the “Option” menu to enable/disable Compressed Music Enhancer.

Enjoying surround sound with headphones (SILENT CINEMA)



You can enjoy surround or sound field effects, like a multichannel speaker system, with stereo headphones by connecting the headphones to the PHONES jack and selecting a sound program or a surround decoder.



Listening to FM/AM radio

You can tune into a radio station by specifying its frequency or selecting from registered radio stations.



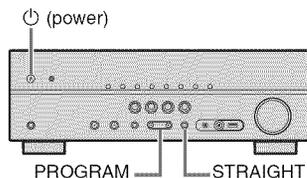
- The radio frequencies differ depending on the country or region where the unit is being used. The explanation of this section uses a display with frequencies used in U.K. and Europe models.
- If you cannot obtain good reception on the radio, adjust the direction of the FM/AM antennas.

Setting the frequency steps

(Asia and General models only)

At the factory, the frequency step setting is set to 50 kHz for FM and 9 kHz for AM. Depending on your listening environment, set the frequency steps to 100 kHz for FM and 10 kHz for AM.

- 1 Set the unit to standby mode.
- 2 When holding down **STRAIGHT** on the front panel, press **⏻** (power).



- 3 Press **PROGRAM** repeatedly to select “TU”.



- 4 Press **STRAIGHT** to select “FM100/AM10”.
- 5 Press **⏻** (power) to set the unit to standby mode and turn it on again.

Selecting a frequency for reception

- 1 Press **FM** or **AM** to select a band.

“TUNER” is selected as the input source and then the frequency currently selected is displayed.



- 2 Press **TUNING** repeatedly to set a frequency.

Hold down the key for about a second to search stations automatically.

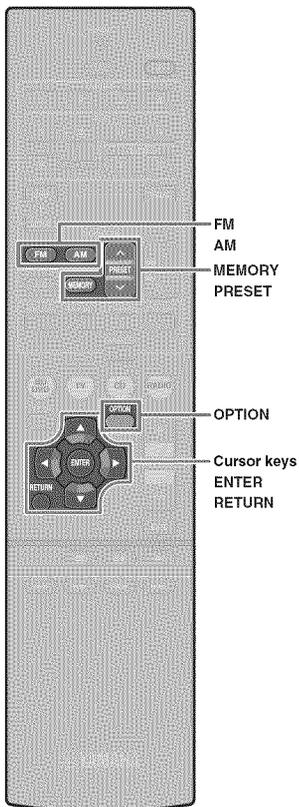


“TUNED” lights up when a signal is received from a radio station.

“STEREO” also lights up when a stereo signal is received.



- You can switch between “Stereo” (stereo) and “Mono” (monaural) for FM radio reception by pressing **MODE**. When the signal reception for an FM radio station is unstable, switching to monaural may improve it.
- You can watch videos input from external devices while listening to radio by selecting the video input jack in “Video Out” (p.53) in the “Option” menu.



Registering favorite radio stations (presets)

You can register up to 40 radio stations as presets. Once you have registered stations, you can easily tune into them by selecting their preset numbers.

■ Registering radio stations automatically (Auto Preset)

Automatically register FM radio stations with strong signals (up to 40 stations).



- To register AM radio stations, follow "Registering a radio station manually".
- (U.K. and Europe models only)
Only Radio Data System broadcasting stations are stored automatically by the Auto Preset function.

- 1 Press **FM** or **AM** to select "TUNER" as the input source.
- 2 Press **OPTION**.
- 3 Use the cursor keys to select "Auto Preset".



- 4 To start the Auto Preset process, press **ENTER**.

The registration will start in 5 seconds. Press **ENTER** again to start the registration immediately.

"SEARCH" appears during Auto Preset



Preset number from which to start the registration



- To specify the preset number from which to start the registration, press **PRESET** or cursor keys (Δ/∇) to select a preset number within 5 seconds after step 4 (while "READY" is displayed) and then press **ENTER** (or just wait for 5 seconds).
- To cancel the Auto Preset process, press **RETURN**.

When the Auto Preset process finishes, "FINISH" appears and the "Option" menu closes automatically.



■ Registering a radio station manually

Select a radio station manually and register it to a preset number.

- 1 Follow "Selecting a frequency for reception" (p.40) to tune into the desired radio station.
- 2 Hold down **MEMORY** for more than 2 seconds.

The first time that you do register a station, the selected radio station will be registered to the preset number "01". Thereafter, each radio station you select will be registered to the next empty (unused) preset number after the most recently registered number.



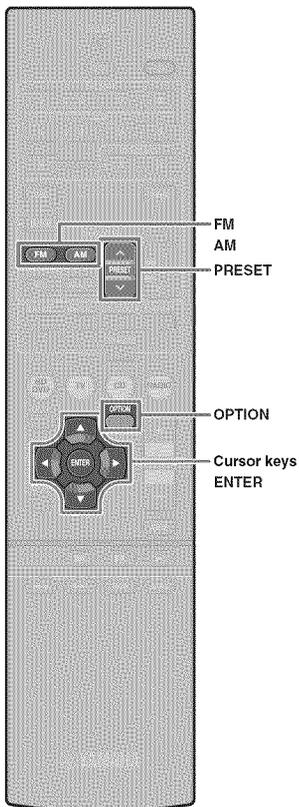
Preset number



- To select a preset number for registering, press **MEMORY** once after tuning into the desired radio station, press **PRESET** to select a preset number, and then press **MEMORY** again.



"Empty" (not in use) or the frequency currently registered



■ Selecting a preset station

Tune into a registered radio station by selecting its preset number.

- 1 Press FM or AM to select “TUNER” as the input source.
- 2 Press PRESET repeatedly to select the desired radio station.



• “No Presets” appears when no radio stations are registered.

■ Clearing preset stations

Clear radio stations registered to the preset numbers.

- 1 Press FM or AM to select “TUNER” as the input source.
- 2 Press OPTION.
- 3 Use the cursor keys to select “Clear Preset” and press ENTER.



- 4 Use the cursor keys (Δ/∇) to select a preset station to be cleared and press ENTER.

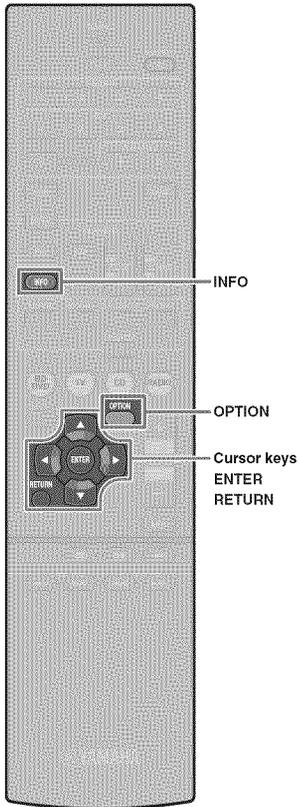


Preset station to be cleared

If the preset station is cleared, “Cleared” appears and then the next in-use preset number is displayed.



- 5 Repeat step 4 until all desired preset stations are cleared.
- 6 To exit from the menu, press OPTION.



Radio Data System tuning

(U.K. and Europe models only)

Radio Data System is a data transmission system used by FM stations in many countries. The unit can receive various types of Radio Data System data, such as “Program Service”, “Program Type”, “Radio Text” and “Clock Time”, when it is tuned into a Radio Data System broadcasting station.

■ Displaying the Radio Data System information

1 Tune into the desired Radio Data System broadcasting station.



- We recommend using “Auto Preset” to tune into the Radio Data System broadcasting stations (p.41).

2 Press INFO.

Each time you press the key, the displayed item changes.



Item name

About 3 seconds later, the corresponding information for the displayed item appears.



Information

Program Service	Program service name
Program Type	Current program type
Radio Text	Information on the current program
Clock Time	Current time
DSP Program	Sound mode name
Audio Decoder	Decoder name
Frequency	Frequency



- “Program Service”, “Program Type”, “Radio Text”, and “Clock Time” are not displayed if the radio station does not provide the Radio Data System service.

■ Receiving traffic information automatically

When “TUNER” is selected as the input source, the unit automatically receives traffic information. To enable this function, follow the procedure below to set the traffic information station.

1 When “TUNER” is selected as the input source, press OPTION.

2 Use the cursor keys to select “Traffic Program” (TrafficProgram) and press ENTER.

The traffic information station search will start in 5 seconds. Press ENTER again to start the search immediately.



- To search upward/downward from the current frequency, press the cursor keys (Δ/▽) while “READY” is displayed.
- To cancel the search, press RETURN.
- Texts in parentheses denote indicators on the front display.

The following screen appears for about 3 seconds when the search finishes.



Traffic information station (frequency)



- “TP Not Found” appears for about 3 seconds when no traffic information stations are found.

Playing back iPod music

You can play back iPod music on the unit using a USB cable supplied with the iPod.



- An iPod may not be detected by the unit or some features may not be compatible, depending on the model or software version of the iPod.
- To play back iPod videos on the unit, an Apple Composite AV Cable (not supplied) is required. Connect the USB and composite video plugs of the Apple Composite AV cable to the USB jack and VIDEO AUX (VIDEO) jack of the unit, and connect your TV and the unit with a video pin cable (p.22).

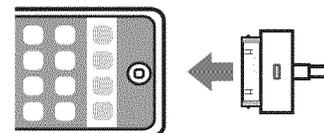
Supported iPod (as of December 2012)

- iPod touch (1st, 2nd, 3rd and 4th generation)
- iPod classic
- iPod nano (2nd, 3rd, 4th, 5th and 6th generation)
- iPhone 4S, iPhone 4, iPhone 3GS, iPhone 3G, iPhone

Connecting an iPod

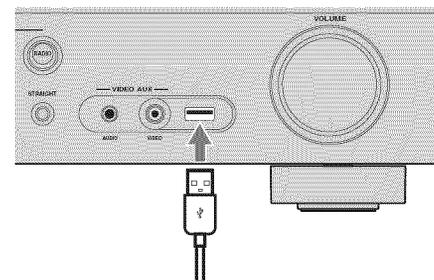
Connect your iPod to the unit with the USB cable supplied with the iPod.

1 Connect the USB cable to the iPod.



2 Connect the USB cable to the USB jack.

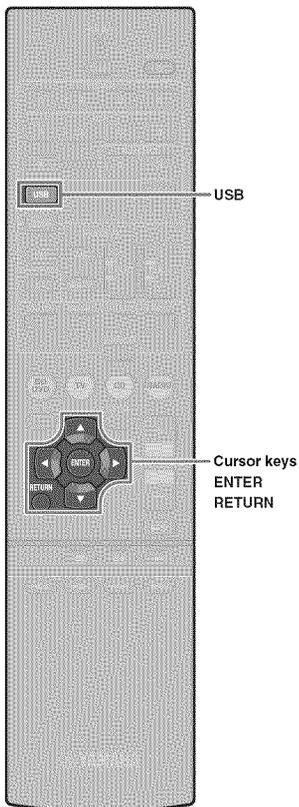
The unit (front)



- The iPod charges while it is connected to the unit. If you set the unit to standby mode while the iPod is connected, the iPod continues to charge (up to 4 hours).



- Disconnect the iPod from the USB jack when it is not in use.



Playback of iPod content

Follow the procedure below to operate the iPod contents and start playback.

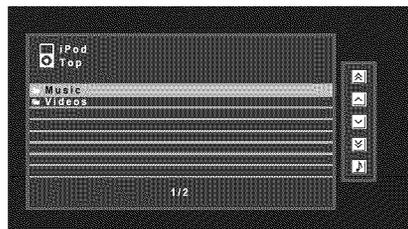
You can control the iPod with the menu displayed on the TV screen.



- Operations with TV screen are available only when your TV is connected to the unit via HDMI. If not, carry out operations while viewing the front display, or directly operate the iPod itself in the simple play mode (p.46).
- “_” (underscore) will be displayed for characters not supported by the unit.

1 Press USB to select “USB” as the input source.

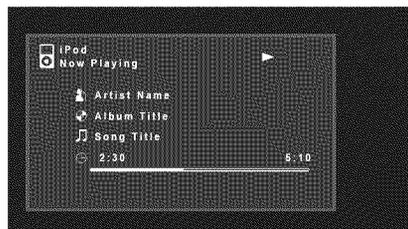
The browse screen is displayed on the TV.



- If playback is ongoing on your iPod, the playback screen is displayed.

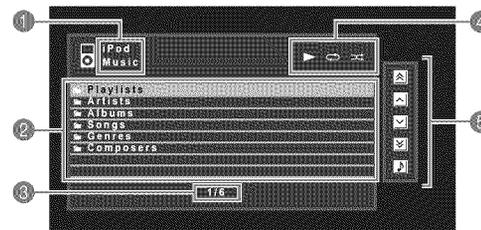
2 Use the cursor keys to select an item and press ENTER.

If a song is selected, playback starts and the playback screen is displayed.



- To return to the previous screen, press RETURN.
- To switch the display to the browse screen during playback, press the cursor key (<:).
- To operate the iPod manually to select content or control playback, switch to the simple play mode (p.46).

■ Browse screen



1 List name

2 Contents list

Displays the list of iPod content. Use the cursor keys to select an item and press ENTER to confirm the selection.

3 Item number/total

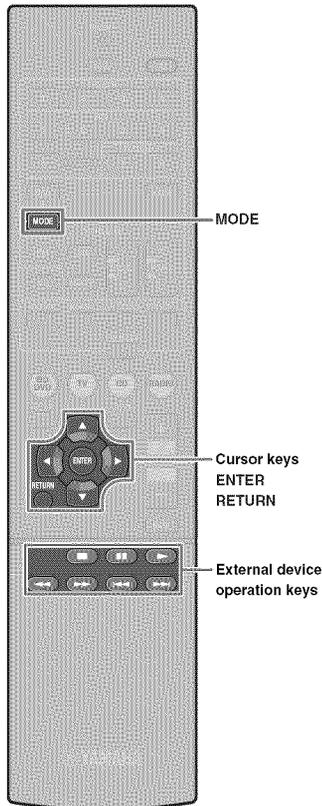
4 Status indicators

Display the current shuffle/repeat settings (p.47) and playback status (such as play/pause).

5 Operation menu

Press the cursor key (▷) and then use the cursor keys (△/▽) to select an item. Press ENTER to confirm the selection.

Icon	Function
	Moves 10 pages backward.
	Moves to the previous page of the list.
	Moves to the next page of the list.
	Moves 10 pages forward.
	Moves to the playback screen.



■ Playback screen



① Status indicators

Display the current shuffle/repeat settings (p.47) and playback status (such as play/pause).

② Playback information

Displays the artist name, album name, song title, and elapsed time/song length.

Use the following remote control keys to control playback.

External device operation keys	Function
	Resumes playback from pause.
	Stops playback.
	Stops playback temporarily.
	Skips forward/backward.
	Skips forward/backward.
	Searches forward/backward (by holding down).
	Searches forward/backward (by holding down).

■ Operating the iPod itself or remote control (simple play)

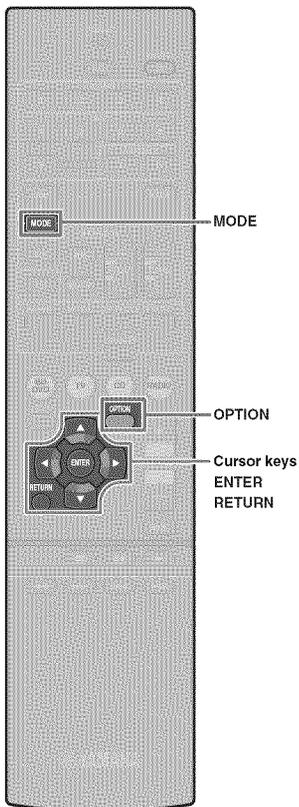
1 Press MODE to switch to the simple play mode.

The TV menu screen turns off and iPod operations are enabled.

To display the TV menu screen, press MODE again.

2 Operate your iPod itself or the remote control to start playback.

Operational remote control keys	Function
Cursor keys	Select an item.
ENTER	Confirms the selection.
RETURN	Returns to the previous screen.
	Starts playback or stops playback temporarily.
	Stops playback.
External device operation keys	
	Skips forward/backward.
	Skips forward/backward.
	Searches forward/backward (by holding down).
	Searches forward/backward (by holding down).



■ Shuffle/repeat settings

You can configure the shuffle/repeat settings of your iPod.



- During simple play, configure the shuffle/repeat settings directly on your iPod or press MODE to display the TV menu screen and then follow the procedure below.

1 When “USB” is selected as the input source, press **OPTION**.

2 Use the cursor keys to select “Shuffle” (Shuffle) or “Repeat” (Repeat) and press **ENTER**.

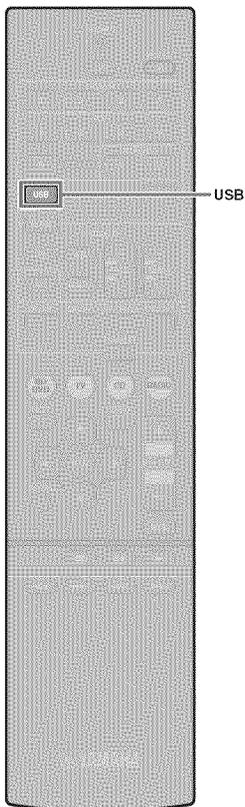


- To return to the previous screen during menu operations, press RETURN.
- Texts in parentheses denote indicators on the front display.

3 Use the cursor keys (</>) to select a setting.

Item	Setting	Function
Shuffle (Shuffle)	Off (Off)	Turns off the shuffle function.
	Songs (Songs)	Plays back songs in random order. “☞” appears in the TV screen.
	Albums (Albums)	Plays back albums in random order. “☞” appears in the TV screen.
Repeat (Repeat)	Off (Off)	Turns off the repeat function.
	One (One)	Plays back the current song repeatedly. “☞” appears in the TV screen.
	All (All)	Plays back all songs repeatedly. “☞” appears in the TV screen.

4 To exit from the menu, press **OPTION**.



Playing back music stored on a USB storage device

You can play back music files stored on a USB storage device on the unit. Refer to the instruction manuals for the USB storage device for more information.

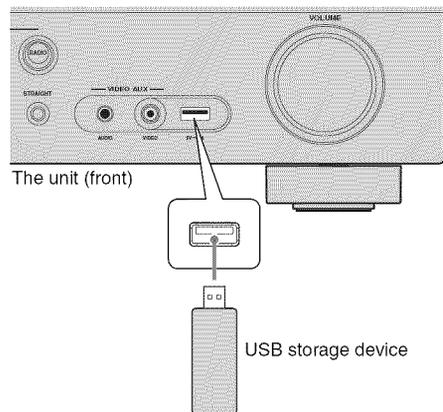
The unit supports USB mass storage class devices (FAT 16 or FAT 32 format, except USB HDDs).



- The unit supports WAV (PCM format only), MP3, WMA and MPEG-4 AAC files (1- or 2-channel audio only).
- The unit is compatible with sampling rate of up to 48 kHz.
- Some features may not be compatible, depending on the model or manufacturer of the USB storage device.
- Digital Rights Management (DRM) contents cannot be played back.

Connecting a USB storage device

1 Connect the USB storage device to the USB jack.



- If the USB storage device contains many files, it may take time to load the them. In this case, "Loading..." appears in the front display.



- Stop playback of the USB storage device before disconnect it from the USB jack.
- Disconnect the USB storage device from the USB jack when it is not in use.
- You cannot connect the PC to the USB jack of the unit.

Playback of USB storage device contents

Follow the procedure below to operate the USB storage device contents and start playback.

You can control the USB memory device with the menu displayed on the TV screen.



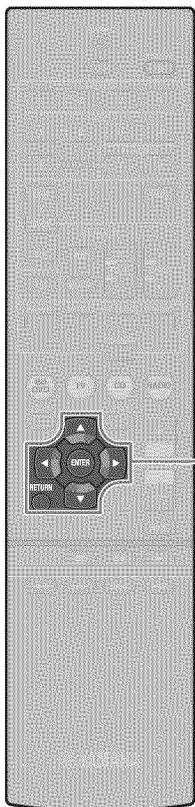
- Operations with TV screen are available only when your TV is connected to the unit via HDMI. If not, carry out operations while viewing the front display.
- "_" (underscore) will be displayed for characters not supported by the unit.

1 Press USB to select "USB" as the input source.

The browse screen is displayed on the TV.



- If playback is ongoing on your USB storage device, the playback screen is displayed.



Cursor keys
ENTER
RETURN

2 Use the cursor keys to select an item and press ENTER.

If a song is selected, playback starts and the playback screen is displayed.



- To return to the previous screen, press RETURN.
- To switch the display to the browse screen during playback, press the cursor key (<).)
- Files not supported by the unit cannot be selected.

■ Browse screen



1 List name

2 Contents list

Displays the list of USB storage device contents. Use the cursor keys to select an item and press ENTER to confirm the selection.

3 Item number/total

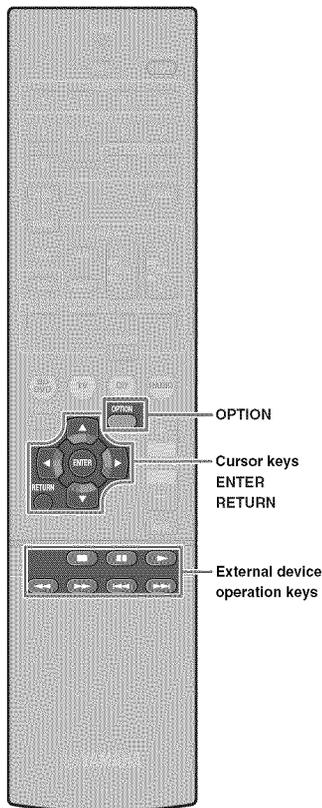
4 Status indicators

Display the current repeat/random settings (p.50) and playback status (such as play/pause).

5 Operation menu

Press the cursor key (>) and then use the cursor keys (Δ/▽) to select an item. Press ENTER to confirm the selection.

Icon	Function
	Moves 10 pages backward.
	Moves to the previous page of the list.
	Moves to the next page of the list.
	Moves 10 pages forward.
	Moves to the playback screen.



■ Playback screen



① Status indicators

Display the current repeat/random settings (p.50) and playback status (such as play/pause).

② Playback information

Displays the artist name, album name, song title, and elapsed time.

Use the following remote control keys to control playback.

External device operation keys	Function
	Resumes playback from pause or starts playback of the previously selected song.
	Stops playback.
	Stops playback temporarily.
	Skips forward/backward.
	Searches forward/backward (by holding down).

■ Repeat/random settings

You can configure the repeat/random settings for playback of USB storage device contents.

1 When “USB” is selected as the input source, press **OPTION**.

2 Use the cursor keys to select “Repeat” (Repeat) and press **ENTER**.



- To return to the previous screen during menu operations, press **RETURN**.
- Texts in parentheses denote indicators on the front display.

3 Use the cursor keys (<|/>) to select a setting.

Setting	Function
Off (Off)	Turns off the repeat function.
One (One)	Plays back the current song repeatedly. “” appears on the TV screen.
All (All)	Plays back all songs in the current album (folder) repeatedly. “” appears on the TV screen.
Random (Random)	Plays back songs in random order. “” appears on the TV screen.

4 To exit from the menu, press **OPTION**.

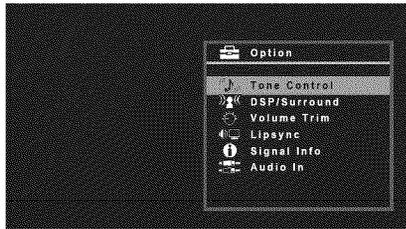
Configuring playback settings for different playback sources (Option menu)

You can configure separate playback settings for different playback sources. This menu is available on the front panel (or on the TV screen), allowing you to easily configure settings during playback.

1 Press OPTION.



Front display



TV screen

2 Use the cursor keys to select an item and press ENTER.



To return to the previous screen during menu operations, press RETURN.

3 Use the cursor keys (◀/▶) to select a setting.

4 To exit from the menu, press OPTION.

Option menu items



- Available items vary depending on the selected input source.
- Text in parentheses denotes indicators on the front display.

Item	Function	Page
Tone Control (Tone Control)	Adjusts the high-frequency range and low-frequency range of sounds.	52
	DSP Level (DSP Level)	52
DSP/Surround (DSP/Surround)	Adaptive DRC (A.DRC)	Sets whether the dynamic range (from maximum to minimum) is automatically adjusted when the volume is adjusted. 52
	Enhancer (Enhancer)	Enables/disables Compressed Music Enhancer. 52
Volume Trim (Volume Trim)	Input Trim (In.Trim)	Corrects volume differences between input sources. 52
	Subwoofer Trim (SW.Trim)	Fine-adjusts the subwoofer volume during playback. 53
Lipsync (Lipsync)	Enables/disables the "Lipsync" setting in the "Setup" menu. 53	
Signal Info (Signal Info)	Displays information about the video/audio signal. 53	
Audio In (Audio In)	Combines the video jack of the selected input source with an audio jack of others. 53	
Video Out (Video Out)	Selects a video to be output with radio sounds. 53	
Auto Preset (Auto Preset)	Automatically registers FM radio stations with strong signals as presets. 41	
Clear Preset (Clear Preset)	Clear radio stations registered to preset numbers. 42	
Traffic Program (TrafficProgram)	(U.K. and Europe models only) Automatically searches for a traffic information station. 43	
Repeat (Repeat)	Configures the repeat setting for the iPod (p.47) or USB storage device (p.50). —	
Shuffle (Shuffle)	Configures the shuffle setting for the iPod. 47	

■ Tone Control (Tone Control)

Adjusts the high-frequency range (Treble) and low-frequency range (Bass) of sounds.

Choices

Treble (Treble), Bass (Bass)

Setting range

-6.0 dB to Bypass (Bypass) to +6.0 dB (0.5 dB increments)

Default

Bypass (Bypass)



- If you set an extreme value, sounds may not match those from other channels.

Adjusting with the front panel controls

- ① Press TONE CONTROL to select “Treble” or “Bass”.
- ② Press PROGRAM to make an adjustment.

■ DSP/Surround (DSP/Surround)

Configures the sound field program and surround settings.

□ DSP Level (DSP Level)

Adjusts the sound field effect level.

Setting range

-6 dB to +3 dB (1 dB increments)

Default

0 dB

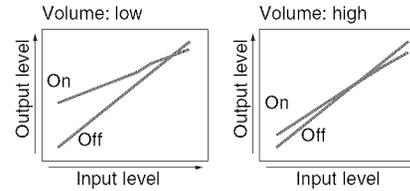
□ Adaptive DRC (A.DRC)

Sets whether the dynamic range (from maximum to minimum) is automatically adjusted when the volume level is adjusted. When it is set to “On”, it is useful for listening to playback at a low volume at night.

Settings

On (On)	Automatically adjusts the dynamic range.
Off (Off) (default)	The dynamic range is not automatically adjusted.

If “On” is selected, the dynamic range becomes narrow at a low volume and wide at a high volume.



□ Enhancer (Enhancer)

Enables/disables Compressed Music Enhancer (p.39).



- This setting is applied separately to each input source.
- You can also use ENHANCER on the remote control to enable/disable Compressed Music Enhancer (p.39).

Settings

Off (Off)	Disables Compressed Music Enhancer.
On (On)	Enables Compressed Music Enhancer.

Default

USB, TUNER: On (On)
Others: Off (Off)

■ Volume Trim (Volume Trim)

Fine-adjusts volume difference between input sources or subwoofer volume.

□ Input Trim (In.Trim)

Corrects volume differences between input sources. If you are bothered by volume differences when switching between input sources, use this function to correct it.



- This setting is applied separately to each input source.

Setting range

-6.0 dB to +6.0 dB (0.5 dB increments)

Default

0.0 dB

□ Subwoofer Trim (SW.Trim)

Fine-adjusts the subwoofer volume during playback.

Setting range

-6.0 dB to +6.0 dB (0.5 dB increments)

Default

0.0 dB

■ Lipsync (Lipsync)

Enables/disables the adjustment configured in “Lipsync” (p.61) in the “Setup” menu.



- This setting is applied separately to each input source.

Settings

Off (Off)	Disables the “Lipsync” adjustment.
On (On) (default)	Enables the “Lipsync” adjustment.

■ Signal Info (Signal Info)

Displays information about the video/audio signal.

Choices

Format (FORMAT)	Audio format of the input signal
Channel (CHAN)	The number of source channels in the input signal (front/surround/LFE) For example, “3/2/0.1” means 3 front channels, 2 surround channels, and LFE.
Sampling (SAMPL)	The number of samples per second of the input digital signal
Bitrate (B RATE)	The amount of data per second of the input bitstream signal
Input (V IN)	Type and resolution of input signal
Output (V OUT)	Type and resolution of output signal



- To switch the information on the front display, press the cursor keys (△/▽) repeatedly.

■ Audio In (Audio In)

Combines the video jack of the selected input source (HDMI 1–4 or AV 1–2) with an audio jack of others. For example, use this function in the following cases.

- Connecting a playback device that supports HDMI video output, but not HDMI audio output
- Connecting a playback device that has component video jacks and analog stereo jacks (such as game consoles)

Input sources

HDMI 1–4, AV 1–2

■ Setup procedure

(To input audio through a digital optical jack)

Select “AV 1” or “AV 4” and connect the device to the unit’s corresponding audio jacks with a digital optical cable.

(To input audio through a digital coaxial jack)

Select “AV 2” or “AV 3” and connect the device to the unit’s corresponding audio jacks with a digital coaxial cable.

(To input audio through analog audio jacks)

Select “AV 5”, “AUDIO 1”, or “AUDIO 2”, and connect the device to the unit’s corresponding audio jacks with a stereo pin cable.

■ Video Out (Video Out)

Selects a video to be output with radio sounds.

Settings

Off (Off) (default)	Does not output video.
HDMI 1–4, AV 1–5, V-AUX	Outputs video input through the corresponding video input jacks.

CONFIGURATIONS

Configuring various functions (Setup menu)

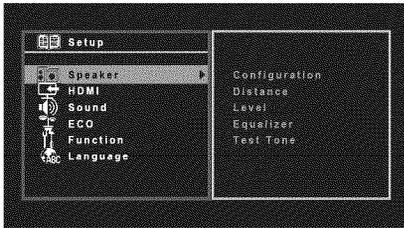
You can configure the unit's various function with the menu displayed on the TV screen.



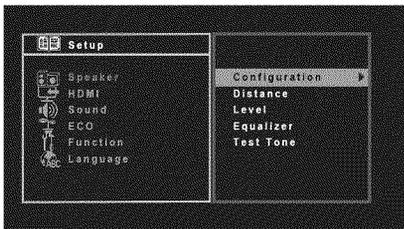
- Operations with TV screen are available only when your TV is connected to the unit via HDMI. If not, carry out operations while viewing the front display.

1 Press **SETUP**.

2 Use the cursor keys to select a menu and press **ENTER**.



3 Use the cursor keys to select an item and press **ENTER**.



- To return to the previous screen during menu operations, press **RETURN**.

4 Use the cursor keys (**◀/▶**) to select a setting and press **ENTER**.

5 To exit from the menu, press **SETUP**.

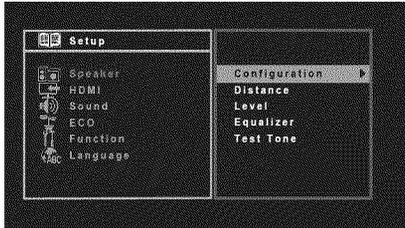
Setup menu items

Menu	Item	Function	Page	
Speaker	Configuration	Subwoofer	Selects whether or not a subwoofer is connected.	57
		Front	Selects the size of the front speakers.	57
		Center	Selects whether or not a center speaker is connected and its size.	57
		Surround	Selects whether or not surround speakers are connected and their size.	57
		Crossover	Sets the lower limit of the low-frequency component that can be output from speakers whose size is set to "Small".	57
		Subwoofer Phase	Sets the phase of the subwoofer.	58
		Extra Bass	Sets the speakers to produce the front channel low-frequency components.	58
	Distance	Sets the distance between each speaker and listening position.	58	
	Level	Adjusts the volume of each speaker.	58	
	Equalizer	Adjusts the tone with an equalizer.	58	
	Test Tone	Enables/disables the test tone output.	59	
HDMI	Configuration	HDMI Control	Enables/disables HDMI Control.	59
		Audio Output	Selects a device to output audio.	59
		TV Audio Input	Selects an audio input jack of the unit to be used for TV audio input.	60
		Standby Sync	Selects whether to use HDMI control to link the standby behavior of the TV and the unit.	60
		ARC	Enables/disables ARC.	60
		SCENE	Enables/disables SCENE link playback.	60
Sound	DSP Parameter	Panorama	Enables/disables the broadening effect of the front sound field.	61
		Center Width	Adjusts the broadening effect of the center sound field.	61
		Dimension	Adjusts the difference in level between the front and surround sound fields.	61
		Center Image	Adjusts the center orientation level (broadening effect) of the front sound field.	61
	Lipsync	Select	Selects the method to adjust the delay between video and audio output.	61
		Adjustment	Adjusts the delay between video and audio output manually.	62
	Volume	Dynamic Range	Selects the dynamic range adjustment method for bitstream audio (Dolby Digital and DTS signals) playback.	62
		Max Volume	Sets the maximum volume to prevent excessive loudness.	62
		Initial Volume	Sets the initial volume for when this receiver is turned on.	62
	ECO	Auto Power Standby	Sets the amount of time for the auto-standby function.	62
ECO Mode		Enables/disables the eco mode (power saving mode).	63	

Menu	Item	Function	Page
	Input Rename	Changes the input source name displayed on the front display.	63
Function	Dimmer	Adjusts the brightness of the front display.	64
	Memory Guard	Prevents accidental changes to the settings.	64
Language		Select an on-screen menu language.	64

Speaker

Configures the speaker settings manually.



■ Configuration

Configures the output characteristics of the speakers.



- When you configure the speaker size, select “Large” if the woofer diameter of your speaker is 16 cm (6-1/4”) or larger or “Small” if it is smaller than 16 cm (6-1/4”).

Subwoofer

Selects whether or not a subwoofer is connected.

Settings

Use (default)	Select this option when a subwoofer is connected. The subwoofer will produce LFE (low-frequency effect) channel audio and low-frequency components from other channels.
None	Select this option when no subwoofer is connected. The front speakers will produce LFE (low-frequency effect) channel audio and low-frequency components from other channels.

Front

Selects the size of the front speakers.

Settings

Small (default)	Select this option for small speakers. The subwoofer will produce front channel low-frequency components (configurable in “Crossover”).
Large	Select this option for large speakers. The front speakers will produce all of the front channel frequency components.



- “Front” is automatically set to “Large” when “Subwoofer” is set to “None”.

Center

Selects whether or not a center speaker is connected and its size.

Settings

Small (default)	Select this option for small speakers. The subwoofer or front speakers will produce center channel low-frequency components (configurable in “Crossover”).
Large	Select this option for large speakers. The center speaker will produce all of the center channel frequency components.
None	Select this option when no center speaker is connected. The front speakers will produce center channel audio.

Surround

Selects whether or not surround speakers are connected and their sizes.

Settings

Small (default)	Select this option for small speakers. The subwoofer or front speakers will produce surround channel low-frequency components (configurable in “Crossover”).
Large	Select this option for large speakers. The surround speakers will produce all of the surround channel frequency components.
None	Select this option when no surround speakers are connected. The front speakers will produce surround channel audio. Virtual CINEMA DSP works when you select a sound program.

Crossover

Sets the lower limit of the low-frequency components that can be output from a speaker whose size is set to “Small”. A frequency sound lower than the specified value will be produced from the subwoofer or front speakers

Settings

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



- If the volume and crossover frequency are adjustable on your subwoofer, set the volume to half and crossover frequency to maximum.

❑ Subwoofer Phase

Sets the phase of the subwoofer. When the bass sound is lacking or unclear, switch the subwoofer phase.

Settings

Normal (default)	Does not reverse the subwoofer phase.
Reverse	Reverses the subwoofer phase.

❑ Extra Bass

Sets the speakers to produce the front channel low-frequency components.

Settings

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



- This setting is not available when "Subwoofer" is set to "None", or when "Front" is set to "Small".

■ Distance

Sets the distance between each speaker and listening position so that sounds from the speakers reach the listening position at the same time. First, select the unit of distance from "Meter" or "Feet".

Choices

Front L, Front R, Center, Surround L, Surround R, Subwoofer

Setting range

0.30 m to 24.00 m (1.0 ft to 80.0 ft), *0.05 m (0.2 ft) increments

Default

Front L, Front R, Subwoofer: 3.00 m (10.0 ft)

Center: 2.60 m (8.6 ft)

Surround L, Surround R: 2.40 m (8.0 ft)

■ Level

Adjusts the volume of each speaker.

Choices

Front L, Front R, Center, Surround L, Surround R, Subwoofer

Setting range

-10.0 dB to +10.0 dB (0.5 dB increments)

Default

Front L, Front R, Subwoofer: 0.0 dB

Others: -1.0 dB

■ Equalizer

Adjusts the tone with an equalizer.

❑ EQ Select

Selects the type of equalizer to be used.

Settings

PEQ	Applies the parametric equalizer values obtained by the YPAO measurement (p.29).
GEQ (default)	Select this option when you want to adjust the equalizer manually. For details, see "Manual equalizer adjustment".
Off	Does not use the equalizer.



- "PEQ" is available only when the YPAO has been performed (p.29).

■ Manual equalizer adjustment

- 1 Set "EQ Select" to "GEQ".
- 2 Use the cursor keys (Δ/∇) to select "Channel" and the cursor keys (\leftarrow/\rightarrow) to select the desired speaker channel.

- 3 Use the cursor keys (Δ/∇) to select the desired band (frequency) and the cursor keys (\leftarrow/\rightarrow) to adjust the gain.

Setting range

-6.0 dB to +6.0 dB



- 4 To exit from the menu, press **SETUP**.

■ Test Tone

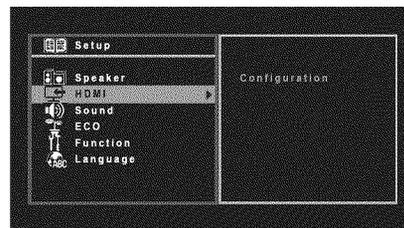
Enables/disables the test tone output. Test tone output helps you to adjust the speaker balance or equalizer while confirming its effect.

Settings

Off (default)	Does not output test tones.
On	Outputs test tones automatically when you adjust the speaker balance or equalizer.

HDMI

Configures the HDMI settings.



■ Configuration

HDMI Control

Enables/disables HDMI Control (p.75).

Settings

Off (default)	Disables HDMI Control.
On	Enables HDMI Control. Configure the settings in "TV Audio Input", "Standby Sync", "ARC", and "SCENE".



- To use HDMI control, you need to perform the HDMI Control link setup (p.75) after connecting HDMI Control-compatible devices.

Audio Output

Selects a device to output audio.



- This setting is available only when "HDMI Control" is set to "Off".

Amp

Enables/disables the audio output from the speakers connected to the unit.

Settings

Off	Disables the audio output from the speakers.
On (default)	Enables the audio output from the speakers.

HDMI OUT (TV)

Enables/disables the audio output from a TV connected to the HDMI OUT jack.

Settings

Off (default)	Disables the audio output from the TV.
On	Enables the audio output from the TV.

TV Audio Input

Selects an audio input jack of the unit to be used for TV audio input when “HDMI Control” is set to “On”. The unit’s input source automatically switches to TV audio when the TV input is switched to its built-in tuner.

Settings

AV 1–5, AUDIO 1–2

Default

AV 4



- When using ARC to input TV audio to the unit, you cannot use the input jacks selected here for connecting an external device because the input will be used for TV audio input.

Standby Sync

Select whether to use HDMI control to link the standby behavior of the TV and the unit when “HDMI Control” is set to “On”.

Settings

Off	Does not set the unit to standby mode when the TV is turned off.
On	Sets the unit to standby mode when the TV is turned off.
Auto (default)	Sets the unit to standby mode when the TV is turned off only when the unit is receiving TV audio or HDMI signals.

ARC

Enables/disables ARC (p.18) when “HDMI Control” is set to “On”.

Settings

Off	Disables ARC.
On (default)	Enables ARC.



- You do not need to change this setting normally. In case noises are produced from the speakers connected to the unit because TV audio signals input to the unit via ARC are not supported by the unit, set “ARC” to “Off” and use the TV’s speakers.

SCENE

Enables/disable SCENE link playback when “HDMI Control” is set to “On”.

When SCENE link playback is enabled, HDMI Control-compatible devices connected to the unit via HDMI automatically works as follows, with a scene selection.

- TV: turning on and displaying video from the playback device
- Playback device: starting playback

Choices (SCENE keys)

BD/DVD, TV, CD, RADIO

Settings

Off	Disables SCENE link playback for the selected SCENE key.
On	Enables SCENE link playback for the selected SCENE key.

Default

BD/DVD, TV: On

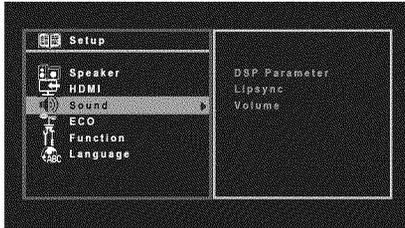
CD, RADIO: Off



- SCENE link playback may not work properly due to the compatibility between devices. We recommend using TV and playback devices from the same manufacturer so that HDMI Control works more effectively.

Sound

Configures the audio output settings.



■ DSP Parameter

Configures the surround decoder settings.

□ Panorama

Enables/disables the broadening effect of the front sound field. When this function is enabled, you can wrap front right/left channel sounds around the field and generate a spacious sound field in combination with the surround sound field. This setting is effective when “**PLII Music**” is selected.

Settings

Off (default)	Disables the broadening effect of the front sound field.
On	Enables the broadening effect of the front sound field.

□ Center Width

Adjusts the broadening effect of the center sound field. Higher to enhance the broadening effect, and lower to reduce it (closer to center). This setting is effective when “**PLII Music**” is selected.

Setting range

0 to 7

Default

3

□ Dimension

Adjusts the difference in level between the front and surround sound fields. Higher to strengthen the front sound field and lower to strengthen the surround sound field. This setting is effective when “**PLII Music**” is selected.

Setting range

-3 to +3

Default

0

□ Center Image

Adjusts the center orientation level (broadening effect) of the front sound field. Higher to strengthen the center orientation level (less broadening effect) and lower to weaken (more broadening effect). This setting is effective when “**Neo:6 Music**” is selected.

Setting range

0.0 to 1.0

Default

0.3

■ Lipsync

Adjusts the delay between video and audio output.



- You can enable/disable the Lipsync function by input sources in “Lipsync” (p.53) in the “Option” menu.

□ Select

Selects the method to adjust the delay between video and audio output.

Setting range

Manual	Select this option when you want to adjust the delay between video and audio output manually. Adjust the audio output timing in “Adjustment”.
Auto (default)	Adjusts the delay between video and audio output automatically when a TV that supports an automatic lipsync function is connected to the unit via HDMI. If necessary, you can fine-adjust the audio output timing in “Adjustment”.



- “Select” is automatically set to “Manual” depending on the TV connected to the unit.

□ Adjustment

Adjusts the delay between video and audio output manually when “Select” is set to “Manual”. You can fine-adjust the audio output timing when “Select” is set to “Auto”.

Setting range

0 ms to 250 ms (1 ms increments)

Default

0 ms

■ Volume

Configures the volume settings.

□ Dynamic Range

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

Settings

Maximum (default)	Produces audio without adjusting the dynamic range.
Standard	Optimizes the dynamic range for regular home use.
Min/Auto	Sets the dynamic range for clear sound even at night or at low volumes. When playing back Dolby TrueHD signals, the dynamic range is automatically adjusted based on the input signal information.

□ Max Volume

Sets the maximum volume to prevent excessive loudness.

Setting range

-30.0 dB to +15.0 dB (5.0 dB increments), +16.5 dB

Default

+16.5 dB

□ Initial Volume

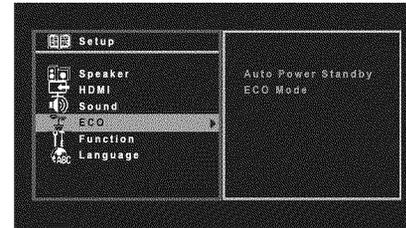
Sets the initial volume when the receiver is turned on.

Settings

Off (default)	Sets the level to the volume level of the unit when it last entered standby mode.
Mute	Sets the unit to mute the audio output.
-80.0 dB to +16.5 dB (0.5 dB increments)	Sets the level to the specified volume level.

ECO

Configures the power supply settings.



■ Auto Power Standby

Sets the amount of time for the auto-standby function. If you do not operate the unit for the specified time, the unit will automatically go into standby mode.

Settings

Off	Does not set the unit to standby mode automatically.
2 hours, 4 hours, 8 hours, 12 hours	Sets the unit to standby mode when you have not operated the unit for the specified time. For example, when “2 hours” is selected, the unit will switch to standby mode if you do not operate it for 2 hours.

Default

U.K. and Europe models: 8 hours

Other models: Off



- Just before the unit enters standby mode, “AutoPowerStdby” appears and then countdown starts in the front display.

ECO Mode

Enables/disables the eco (power saving) mode.

When the eco mode is enabled, you can reduce the unit's power consumption by keeping the maximum volume, maximum output power, or front display's brightness low.

Settings

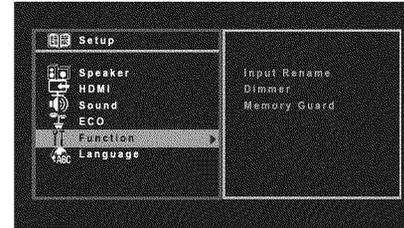
Off (default)	Disables the eco mode.
On	Enables the eco mode.



- Be sure to press ENTER to restart the unit after selecting a setting. The new setting will take effect after the unit is restarted.

Function

Configures the functions that make the unit easier to use.



Input Rename

Changes the input source name displayed on the front display.

Input sources

HDMI 1-4, AV 1-5, AUDIO 1-2, USB, V-AUX

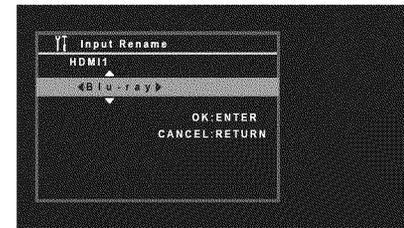
Procedure

- 1 Use the cursor keys (Δ/∇) to select an input source to be renamed and press ENTER.



- To select a name from the presets, use the cursor keys (Δ/∇) to select an input source and the cursor keys (\leftarrow/\rightarrow) to select a preset name.

- 2 Use the cursor keys (\leftarrow/\rightarrow) to move the edit position and the cursor keys (Δ/∇) to select a character.



- 3 To confirm the new name, press ENTER.



- To cancel the entry, press RETURN.

4 To change another input source name, repeat steps 1 to 3.

5 To exit from the menu, press **SETUP**.

■ Dimmer

Adjusts the brightness of the front display.

Setting range

-4 to 0 (higher to brighten)

Default

0



- The front display may become dark when "ECO Mode" (p.63) is set to "On".

■ Memory Guard

Prevents accidental changes to the settings.

Settings

Off (default)	Does not protect the settings.
On	Protects the settings until "Off" is selected.



- When "Memory Guard" is set to "On", the following icon (🔒) is displayed on the menu screen.



Language

Select an on-screen menu language.



Settings

English (default)	English
日本語	Japanese
Français	French
Deutsch	German
Español	Spanish
Русский	Russian
Italiano	Italian
中文	Chinese

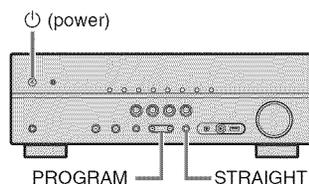


- Japanese and Chinese characters used in content information (such as song titles) cannot be displayed.
- The information on the front display is provided in English only.

Configuring the system settings (ADVANCED SETUP menu)

Configure the system settings of the unit while viewing the front display.

- 1 Set the unit to standby mode.
- 2 While holding down STRAIGHT on the front panel, press $\text{\textcircled{P}}$ (power).



- 3 Press PROGRAM to select an item.
- 4 Press STRAIGHT to select a setting.
- 5 Press $\text{\textcircled{P}}$ (power) to set the unit to standby mode and turn it on again.
The new settings take effect.

ADVANCED SETUP menu items

Item	Function	Page
SP IMP.	(U.S.A. and Canada models only) Changes the speaker impedance setting.	65
REMOTE ID	Selects the unit's remote control ID.	65
TU	(Asia and General models only) Changes the FM/AM tuning frequency setting.	66
TV FORMAT	Switches the video signal type of HDMI output.	66
INIT	Restores the default settings.	66
UPDATE	Updates the firmware.	66
VERSION	Checks the version of firmware currently installed on the unit.	66

Changing the speaker impedance setting (SP IMP.)

(U.S.A. and Canada models only)



Change the unit's speaker impedance settings depending on the impedance of the speakers connected.

Settings

6 Ω MIN	Select this option when you connect 6-ohm speakers to the unit. You can also use 4-ohm speakers as the front speakers.
8 Ω MIN (default)	Select this option when you connect 8-ohm or higher speakers to the unit.

Selecting the remote control ID (REMOTE ID)



Change the unit's remote control ID so that it matches the remote control's ID (default: ID1). When using multiple Yamaha AV receivers, you can set each remote control with a unique remote control ID for its corresponding receiver.

Settings

ID1 (default), ID2

Changing the remote control ID of the remote control



- (Australia model only)
For information on how to change the remote control ID of the remote control, refer to "Supplement for Remote Control" on the supplied CD-ROM.

- 1 To select ID1, hold down the cursor key (\leftarrow) and SCENE (BD/DVD) together for 3 seconds.
To select ID2, hold down the cursor key (\leftarrow) and SCENE (TV) together for 3 seconds.

Changing the FM/AM tuning frequency setting (TU)

(Asia and General models only)



Change the FM/AM tuning frequency setting of the unit depending on your listening environment.

Settings

FM100/AM10	Select this when you want to adjust the FM frequency by 100-kHz steps and AM by 10-kHz steps.
FM50/AM9 (default)	Select this when you want to adjust the FM frequency by 50-kHz steps and AM by 9-kHz steps.

Switching the video signal type (TV FORMAT)



Switch the video signal type of HDMI output so that it matches to the format of your TV. Since the unit automatically selects the video signal type so that it matches to the TV, it is unnecessary to change the setting normally. Change the setting only when images on the TV screen do not appear correctly.

Settings

NTSC, PAL

Default

U.S.A., Canada, Korea and General models: NTSC
Other models: PAL

Restoring the default settings (INIT)



Restores the default settings for the unit.

Choices

ALL	Restores the default settings for the unit.
CANCEL	Does not perform an initialization.

Updating the firmware (UPDATE)



New firmware that provides additional features or product improvements will be released as needed. Updates can be downloaded from our website. For details, refer to the information supplied with updates.

Firmware update procedure

Do not perform this procedure unless firmware update is necessary. Also, make sure you read the information supplied with updates before updating the firmware.

- 1 Save the downloaded firmware to the root folder of a USB memory device.
- 2 Press **PROGRAM** on the front panel to select "UPDATE".
- 3 Connect the USB memory device to the USB jack.
- 4 To start firmware update, press **INFO** on the front panel.

Checking the firmware version (VERSION)



Check the version of firmware currently installed on the unit.

APPENDIX

Frequently asked questions

The new speaker system does not provide an ideal sound balance...

If you have changed speakers or have a new speaker system, use YPAO to optimize the speaker settings again (p.29). If you want to adjust the speaker settings manually, use “Speaker” in the “Setup” menu (p.57).

Since we have small children, we want to set limitations on the volume control...

If a small child accidentally operates the controls on the main unit or remote control, the volume may suddenly increase. This may also cause injury or damage the unit or speakers. We recommend using “Max Volume” in the “Setup” menu to set the maximum volume level for the unit in advance (p.62).

I am occasionally startled by a sudden loud sound when turning on the unit...

By default, the volume level when the unit last entered standby mode is automatically applied. If you want to fix the volume, use “Initial Volume” in the “Setup” menu to set the volume to be applied when the receiver is turned on (p.62).

We are bothered by volume differences when switching between input sources...

You can correct volume differences between input sources by utilizing “Input Trim” in the “Option” menu (p.52).

I made HDMI connections but HDMI Control does not work at all...

To use HDMI Control, you need to perform the HDMI Control link setup (p.75). After connecting HDMI Control-compatible devices (such as BD/DVD players) to the unit, enable HDMI Control on each device and perform the HDMI Control link setup. This setup is required every time you add a new HDMI Control-compatible device to your system. For information on how HDMI Control works between your TV and playback devices, refer to the instruction manuals for each device.

I want to display a device name or a manufacture name on the front display when selecting an input source...

By default, input source names (such as “HDMI 1” and “AV 1”) are displayed on the front display when an input source is selected. If you want to rename them as you like, use “Input Rename” (p.63) in the “Setup” menu. You can also select a name from the presets (such as “Blu-ray” and “DVD”).

I want to prevent accidental changes to the settings...

You can protect the settings configured on the unit (such as speaker settings) by utilizing “Memory Guard” in the “Setup” menu (p.64).

The unit’s remote control is simultaneously controlling another Yamaha product as well as the unit...

When using multiple Yamaha products, the remote control may work on another Yamaha product or another remote control may work on the unit. If this happens, register different remote control IDs for the devices that you want to control with each remote control (p.65).

Troubleshooting

Refer to the table below when the 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 the unit, disconnect the power cable, and contact the nearest authorized Yamaha dealer or service center.

First, check the following:

- ① **The power cables of the unit, TV and playback devices (such as BD/DVD players) are connected to AC wall outlets securely.**
- ② **The unit, subwoofer, TV and playback devices (such as BD/DVD players) are turned on.**
- ③ **The connectors of each cable are securely inserted in to jacks on each device.**

Power, system and remote control

Problem	Cause	Remedy
The power does not turn on.	The protection circuitry has been activated three times consecutively.	As a safety precaution, capability to turn on the power is disabled. Contact your nearest Yamaha dealer or service center to request repair.
The power does not turn off.	The internal microcomputer has frozen, due to an external electric shock (such as lightning or excessive static electricity) or to a drop in the power supply voltage.	Hold down \odot (power) on the front panel for more than 10 seconds to reboot the unit. (If the problem persists, disconnect the power cable from the AC wall outlet and plug it again.)
The power turns off (standby mode) immediately.	The unit was turned on while a speaker cable was shorted.	Twist the bare wires of each speaker cable firmly and reconnect to the unit and speakers (p.15).
The unit enters standby mode automatically.	The sleep timer worked.	Turn on the unit and start playback again.
	The auto-standby function kicked in because the unit was not used for the specified time.	To disable the auto-standby function, set "Auto Power Standby" in the "Setup" menu to "Off" (p.62).
	The speaker impedance setting is incorrect.	Set the speaker impedance to match your speakers (p.65).
The unit is not reacting.	The protection circuitry has been activated because of a short circuit.	Twist the bare wires of each speaker cable firmly and reconnect to the unit and speakers (p.15).
	The internal microcomputer is frozen, due to an external electric shock (such as lightning or excessive static electricity) or to a drop in the power supply voltage.	Hold down \odot (power) on the front panel for more than 10 seconds to reboot the unit. (If the problem persists, disconnect the power cable from the AC wall outlet and plug it again.)
The unit cannot be controlled using the remote control.	The unit is out of the operating range.	Use the remote control within the operating range (p.4).
	The batteries are weak.	Replace with new batteries.
	The unit's remote control sensor is exposed to direct sunlight or strong lighting.	Adjust the lighting angle, or reposition the unit.
	The remote control IDs of the unit and the remote control are not identical.	Change the remote control ID of the unit or the remote control (p.65).

Audio

Problem	Cause	Remedy
No sound.	Another input source is selected.	Select an appropriate input source with the input selection keys.
	Signals that the unit cannot reproduce are being input.	Some digital audio formats cannot be played back on the unit. To check the audio format of the input signal, use "Signal Info" in the "Option" menu (p.53).
	The cable connecting the unit and playback device is defective.	If there is no problem with the connection, replace with another cable.
The volume cannot be increased.	The maximum volume is set.	Use "Max Volume" in the "Setup" menu to adjust the maximum volume (p.62).
	A device connected to the output jacks of the unit is not turned on.	Turn on all devices connected to the output jacks of the unit.
No sound is coming from a specific speaker.	The playback source does not contain a signal for the channel.	To check it, use "Signal Info" in the "Option" menu (p.53).
	The currently selected sound program/decoder does not use the speaker.	To check it, select "5ch Stereo" (p.35).
	Audio output of the speaker is disabled.	Perform YPAO (p.29) or use "Configuration" in the "Setup" menu to change the speaker settings (p.57).
	The volume of the speaker is set too low.	Perform YPAO (p.29) or use "Level" in the "Setup" menu to adjust the speaker volume (p.58).
	The speaker cable connecting the unit and the speaker is defective.	If there is no problem with the connection, replace with another speaker cable.
	The speaker is malfunctioning.	To check it, replace with another speaker. If the problem persists, the unit may be malfunctioning.
No sound is coming from the subwoofer.	The playback source does not contain LFE or low-frequency signals.	To check it, set "Extra Bass" in the "Setup" menu to "On", in order to output the front channel low-frequency components from the subwoofer (p.58).
	Subwoofer output is disabled.	Perform YPAO (p.29) or set "Subwoofer" in the "Setup" menu to "Use" (p.57).
	The volume of the subwoofer is too low.	Adjust the volume on the subwoofer.
	The subwoofer has been turned off by its auto-standby function.	Disable the auto-standby function of the subwoofer or adjust its sensitivity level.
No sound from the playback device (connected to the unit with HDMI).	The TV does not support HDCP (High-bandwidth Digital Content Protection).	Refer to the instruction manuals for the TV and check the TV's specifications.
	The unit is set not to output audio input through HDMI jacks from the SPEAKERS terminals.	In "Audio Output" in the "Setup" menu, set "Amp" to "On" (p.59).
	The number of devices connected to the HDMI OUT jack exceeds the limit.	Disconnect some of the HDMI devices.
No sound from the TV (when HDMI Control is used).	The TV is set to output audio from the TV speakers.	Change the audio output setting on your TV so that the TV audio is output from the speakers connected to the unit.
	A TV that does not support ARC is connected to the unit only with an HDMI cable.	Use a digital optical cable to make an audio connection (p.20).
	(If the TV is connected to the unit with an audio cable) The TV audio input setting does not match the actual connection.	Use "TV Audio Input" in the "Setup" menu to select the correct audio input jack (p.60).
	(If you are trying to use ARC) ARC is disabled on the unit or TV.	Set "ARC" in the "Setup" menu to "On" (p.60). Also, enable ARC on the TV.

Problem	Cause	Remedy
Only the front speakers work on multichannel audio.	The playback device is set to output 2-channel audio (such as PCM) only.	To check it, use "Signal Info" in the "Option" menu (p.53). If necessary, change the digital audio output setting on the playback device.
Noise/hum is heard.	The unit is too close to another digital or radio frequency device.	Move the unit further away from the device.
	The cable connecting the unit and playback device is defective.	If there is no problem with the connection, replace with another cable.
The sound is distorted.	A device connected to the unit's output jacks is not turned on.	Turn on all devices connected to the unit's output jacks.
	The volume of the unit is too high.	Turn down the volume. If "ECO Mode" in the "Setup" menu is set to "On", set it to "Off" (p.63).

Video

Problem	Cause	Remedy
No video.	Another input source is selected on the unit.	Select an appropriate input source with the input selection keys.
	Another input source is selected on the TV.	Switch the TV input to display the video from the unit.
	The video signal output from the unit is not supported by the TV.	Check the video output setting of the playback device. For information about video signals supported by the TV, refer to the instruction manuals for the TV.
	The cable connecting the unit and TV (or playback device) is defective.	If there is no problem with the connection, replace with another cable.
No video from the playback device (connected to the unit with HDMI).	The input video signal (resolution) is not supported by the unit.	To check the information about the current video signal (resolution), use "Signal Info" in the "Option" menu (p.53). For information about video signals supported by the unit, see "HDMI signal compatibility" (p.76).
	The TV does not support HDCP (High-bandwidth Digital Content Protection).	Refer to the instruction manuals for the TV and check the TV's specifications.
	The number of devices connected to the HDMI OUT jack is over the limit.	Disconnect some of the HDMI devices.
The menu of the unit is not displayed on the TV.	The TV is not connected to the unit via HDMI.	You can display the menu of the unit on the TV only when they are connected with an HDMI cable. If necessary, use an HDMI cable to connect them (p.18 to 21).
	Another input source is selected on the TV.	Switch the TV input to display the video from the unit (HDMI OUT jack).

FM/AM radio

Problem	Cause	Remedy
FM radio reception is weak or noisy.	There is multi-path interference.	Adjust the FM antenna height or orientation, or place it in a different location.
	Your area is too far from the FM station transmitter.	Press MODE to select monaural FM radio reception (p.40). Use an outdoor FM antenna. We recommend using a sensitive multi-element antenna.
AM radio reception is weak or noisy.	The noises may be caused by fluorescent lamps, motors, thermostats, or other electrical equipment.	It is difficult to completely eliminate noise. It may be reduced by using an outdoor AM antenna.
Radio stations cannot be selected automatically.	Your area is too far from the FM station transmitter.	Select the station manually (p.40). Use an outdoor antenna. We recommend using a sensitive multi-element antenna.
	The AM radio signal is weak.	Adjust the AM antenna orientation. Select the station manually (p.40). Use an outdoor AM antenna. Connect it to the ANTENNA (AM) jack together with the supplied AM antenna.
AM radio stations cannot be registered as presets.	Auto Preset has been used.	Auto Preset is for registering FM radio stations only. Register AM radio stations manually (p.41).

USB

Problem	Cause	Remedy
The unit does not detect the USB device.	The USB device is not connected to the USB jack securely.	Turn off the unit, reconnect your USB device, and turn the unit on again.
	The file system of the USB device is not FAT 16 or FAT 32.	Use a USB device with FAT 16 or FAT 32 format, except USB HDDs.
Folders and files in the USB device cannot be viewed.	The folder structure not supported by the unit is applied.	The unit supports folder hierarchies of up to eight levels and up to 65,000 files per level. If necessary, modify the folder structure on your USB device.

Error indications on the front display

Message	Cause	Remedy
Access error	The unit cannot access the USB device.	Turn off the unit and reconnect your USB device. If the problem persists, try another USB device.
	The unit cannot access the iPod.	Turn off the iPod and turn it on again.
Check SP Wires	The speaker cables short circuit.	Twist the bare wires of the cables firmly and connect to the unit and speakers properly.
Connect error	The unit has detected the iPod, but cannot access it.	Turn off the iPod and then turn it on again.
Internal Error	An internal error has occurred.	Contact the nearest authorized Yamaha dealer or service center.
No content	There are no playable files in the selected folder.	Select a folder that contains files supported by the unit.
RemID Mismatch	The remote control IDs of the unit and the remote control are not identical.	Change the remote control ID of the unit or the remote control (p.65).
Unable to play	The unit cannot play back the songs stored on the iPod for some reason.	Check the song data. If it cannot be played on the iPod itself, the song data or storage area may be defective.
Unknown iPod	The connected iPod is not supported by the unit.	Use an iPod supported by the unit (p.44).
USB Overloaded	An overcurrent is flowing through the USB device.	Turn off the unit and reconnect your USB device. If the problem persists, try another USB device.

Audio information

■ Audio decoding format

Dolby Digital

Dolby Digital is a compressed digital audio format developed by Dolby Laboratories, Inc. that supports 5.1-channel audio. This technology is used for audio on most DVD discs.

Dolby Pro Logic II

Dolby Pro Logic II enables 5-channel playback from 2-channel sources. There are three modes available: "Music mode" for music sources, "Movie mode" for movie sources, and "Game mode" for game sources.

Dolby TrueHD

Dolby TrueHD is an advanced lossless audio format developed by Dolby Laboratories, Inc. to offer a high-definition home theater experience with the quality of the studio master. Dolby TrueHD can carry up to eight channels of 96 kHz/24-bit audio (up to six channels of 192 kHz/24-bit audio) simultaneously. This technology is used for audio on BD (Blu-ray discs).

DTS 96/24

DTS 96/24 is a compressed digital audio format that supports 5.1-channel and 96 kHz/24-bit audio. This format remains fully compatible with the existing multichannel audio systems that support DTS Digital Surround. This technology is used for music DVDs, etc.

DTS Digital Surround

DTS Digital Surround is a compressed digital audio format developed by DTS, Inc. that supports 5.1-channel audio. This technology is used for audio on most DVD discs.

DTS-ES

DTS-ES creates total 6.1-channel audio from 5.1-channel sources that are recorded with DTS-ES. This decoder adds a surround back sound to the original 5.1-channel sound. In the DTS-ES Matrix 6.1 format, a surround back sound is recorded in the surround channels, and in the DTS-ES Discrete 6.1 format, a discrete surround back channel is recorded.

DTS Express

DTS Express is a compressed digital audio format that supports 5.1-channel audio and allows a higher compression rate than the DTS Digital Surround format developed by DTS, Inc. This technology is developed for audio streaming services on the Internet and secondary audio on BD (Blu-ray discs).

DTS-HD High Resolution Audio

DTS-HD High Resolution Audio is a compressed digital audio format developed by DTS, Inc. that supports 7.1-channel and 96 kHz/24-bit audio. DTS-HD High Resolution Audio remains fully compatible with the existing multichannel audio systems that support DTS Digital Surround. This technology is used for audio on most BD (Blu-ray discs).

DTS-HD Master Audio

DTS-HD Master Audio is an advanced lossless audio format developed to offer a high-definition home theater experience with the quality of the studio master by DTS, Inc. DTS-HD Master Audio can carry up to

eight channels of 96 kHz/24-bit audio (up to six channels of 192 kHz/24-bit audio) simultaneously. This technology is used for audio on BD (Blu-ray discs).

DTS Neo:6

DTS Neo:6 enables 6-channel playback from 2-channel sources. There are two modes available: "Music mode" for music sources and "Cinema mode" for movie sources. This technology provides discrete full-bandwidth matrix channels of surround sound.

DSD (Direct Stream Digital)

DSD (Direct Stream Digital) technology stores audio signals on digital storage media, such as SACD (Super Audio CDs). The signals are stored at a high-frequency sampling rate of 2.8224 MHz. The highest frequency response is equal to or higher than 100 kHz, with a dynamic range of 120 dB. This technology offers better audio quality than that used for CDs.

MP3

One of the compressed digital audio format used by MPEG. With psychoacoustic technologies, this compression method achieves a high compression rate. Reportedly, it is capable of compressing data quantity by about 1/10 maintaining a certain level of audio quality.

MPEG-4 AAC

An MPEG-4 audio standard. It is used for mobile telephones, portable audio players, and audio streaming services on Internet because it allows a high compression rate of data while maintaining better audio quality than MP3.

PCM (Pulse Code Modulation)

PCM is a signal format under which an analog audio signal is digitized, recorded, and transmitted. This technology is the basis of all other audio format. This technology is used as a lossless audio format called Linear PCM for audio on a variety of media, including CDs and Blu-ray discs.

Sampling frequency/Quantization bit

Sampling frequency and quantization bits indicate the quantity of information when an analog audio signal is digitized. These values are noted as in the following example: "48 kHz/24-bit".

- Sampling frequency
Sampling frequency (the number of times the signal is sampled per second) is called the sampling rate. When the sampling frequency is higher, the range of frequencies that can be played back are wider.
- Quantization bit
The number of quantization bits indicate the degree of accuracy when converting the sound level into a numeric value. When the number of quantized bits is higher, the expression of the sound level is more accurate.

WAV

Windows standard audio file format, which defines the method of recording the digital data obtained by converting audio signals. By default, the PCM method (no compression) is used, but you can also use other compression methods.

WMA (Windows Media Audio)

One of the compressed digital audio formats developed by Microsoft Corporation. With psychoacoustic technologies, this compression method achieves a high compression rate. Reportedly, it is capable of compressing data quantity by about 1/20 maintaining a certain level of audio quality.

Others

LFE (Low Frequency Effects) 0.1 channel

This channel reproduces low-frequency bass signals and has a frequency range from 20 Hz to 120 Hz. This channel is added to the channels for all bands with Dolby Digital or DTS to enhance low frequency audio effects. This channel is labeled 0.1 because it is limited to only low frequency audio.

Lip sync

Video output sometimes lags behind audio output due to the complexity of signal processing caused by an increase in video signal capacity. Lip sync is a technique for automatically correcting the timing lag between audio and video output.

HDMI and video information

Component video signal

With the component video signal system, the video signal is separated into the Y signal for luminance and the Pb and Pr signals for chrominance. Color can be reproduced more faithfully with this system because each of these signals is independent.

Composite video signal

With the composite video signal system, color, brightness, and synchronization data signals are combined and transmitted with a single cable.

Deep Color

Deep Color is a technology that HDMI specification supports. Deep Color increases the number of available colors within the boundaries defined by the RGB or YCbCr color space. Conventional color systems process the color using 8 bits. Deep Color processes the color with 10, 12, or 16 bits. This technology allows HDTVs and other displays to increase from millions of colors to billions of colors and eliminate on-screen color banding for smooth tonal transitions and subtle gradations between colors.

HDMI

HDMI (High-Definition Multimedia Interface) is the world-wide standard interface for digital audio/video signal transmission. This interface transmits both digital audio and digital video signals using a single cable without any loss. HDMI complies with HDCP (High-bandwidth Digital Content Protection) and provides a secure audio/video interface. For further information on HDMI, visit the HDMI website at "<http://www.hdmi.org/>".

x.v.Color

"x.v.Color" is a technology that the HDMI specification supports. 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 thus can produce more vivid, natural images.

Yamaha technologies

CINEMA DSP (Digital Sound Field Processor)

Since the Dolby Surround and DTS systems were originally designed for use in movie theaters, their effect is best experienced in a theater that has many speakers designed for acoustic effects. Since home conditions (such as room size, wall material, and number of speakers) can differ so widely, it is inevitable that there are differences in the sound that you hear. Based on a wealth of actually measured data, CINEMA DSP, Yamaha's original DSP technology provides the audiovisual experience of a movie theater in your own home.

Compressed Music Enhancer

The Compressed Music Enhancer feature compensates for missing harmonics in compression music formats (such as MP3). As a result, this technology provides improved performance for the overall sound system.

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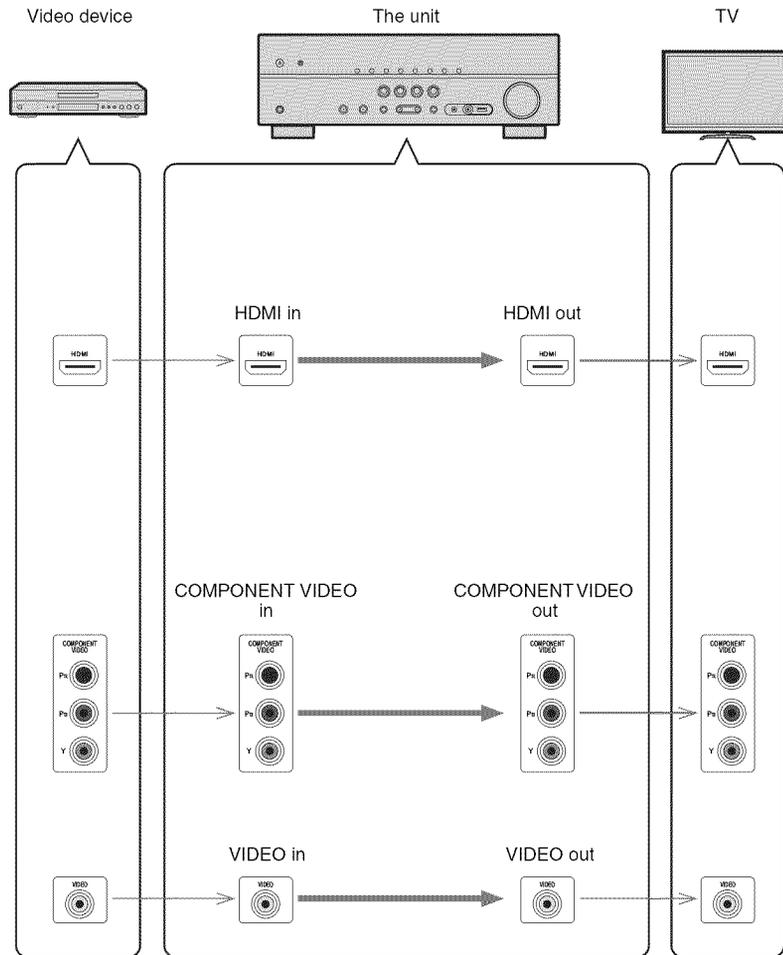
Yamaha has developed a natural, realistic sound effect DSP algorithm for headphones. Parameters for headphones have been set for each sound program, so that accurate representations of all the sound programs can be enjoyed on headphones.

Virtual CINEMA DSP

Virtual CINEMA DSP allows the system to virtually reproduce the sound field of the surround speakers with front left and right speakers. Even if the surround speakers are not connected, the unit creates the realistic sound field in a listening room.

Video signal flow

Video signals input from a video device to the unit are output to a TV as shown below.



Information on HDMI

HDMI Control

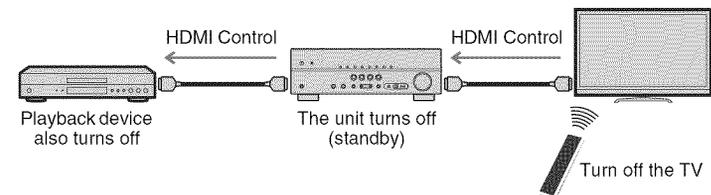
HDMI Control allows you to operate external devices via HDMI. If you connect a TV that supports HDMI Control to the unit with an HDMI cable, you can control the unit (such as power and volume) with TV remote control operations. You can also control playback devices (such as HDMI Control-compatible BD/DVD players) connected to the unit with an HDMI cable.

For details on connections, see “Connecting a TV” (p.18) and “Connecting video devices (such as BD/DVD players)” (p.23).

Operations available from the TV's remote control

- Standby synchronization
- Volume control including mute
- Switching to input audio from the TV when the TV input is switched to its built-in tuner
- Switching to input video/audio from the selected playback device
- Switching between audio output devices (the unit or TV speaker)

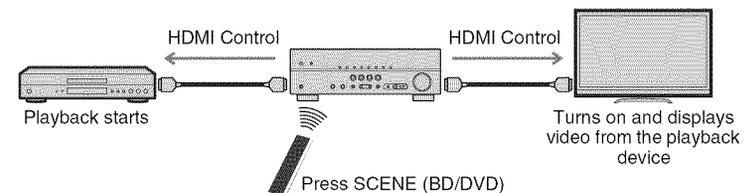
(Example)



Operations available from the unit's remote control

- Starting playback on the playback device and turning on the TV with a scene selection (p.34)
- Switching the TV input to display the “Setup” menu (when SETUP is pressed)

(Example)



To use HDMI Control, you need to perform the following HDMI Control link setup after connecting the TV and playback devices.



- This setup is required every time you add a new HDMI Control-compatible device to your system.

- 1 Turn on the unit, TV, and playback devices.**
- 2 Enable HDMI Control on the unit, TV, and playback devices (such as HDMI Control-compatible BD/DVD players).**

To enable HDMI Control on the unit, set “HDMI Control” (p.59) in the “Setup” menu to “On” and configure the related items (“TV Audio Input”, “Standby Sync”, “ARC”, and “SCENE”).

- 3 Turn off the main power of the TV and then turn off the unit and playback devices.**

- 4 Turn on the unit and playback devices and then turn on the TV.**

- 5 Switch the TV input to display the video from the unit.**

- 6 Check the followings.**

On the unit: The input to which the playback device is connected is selected.
If not, select the input source manually.

On the TV: The video from the playback device is displayed.

- 7 Check that the unit is properly synchronized with the TV by turning off the TV or adjusting the TV volume with the TV remote control.**



- If HDMI Control does not work properly, try unplugging the TV in Step 2 and plugging in the TV again in Step 3. It may solve the problem. Also, HDMI Control may not work if the number of connected devices exceeds the limit. In this case, disable HDMI Control on the devices not in use.
- If the unit is not synchronized to the TV's power operations, check the priority of the audio output setting on the TV.
- We recommend using TV and playback devices from the same manufacturer so that HDMI Control works more effectively.

HDMI signal compatibility

Audio signals

Audio signal type	Audio signal format	Compatible media (example)
2ch Linear PCM	2ch, 32 to 192 kHz, 16/20/24 bit	CD, DVD-Video, DVD-Audio
Multichannel Linear PCM	8ch, 32 to 192 kHz, 16/20/24 bit	DVD-Audio, BD (Blu-ray disc), HD DVD
DSD	2 to 5.1ch, 2.8224 MHz, 1 bit	SACD
Bitstream	Dolby Digital, DTS	DVD-Video
Bitstream (High definition audio)	Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio, DTS-HD High Resolution Audio, DTS Express	BD (Blu-ray disc), HD DVD

Video signals

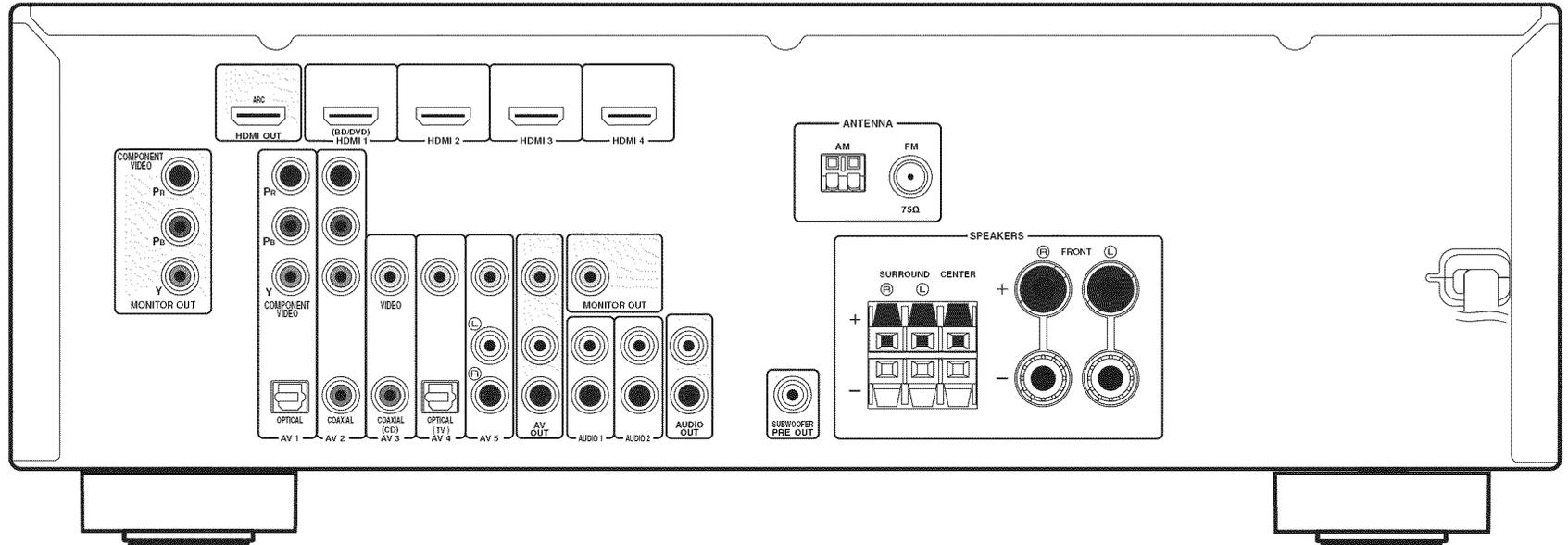
The unit is compatible with the video signals of the following resolutions:

- 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
- 4K/30 Hz, 25 Hz, 24 Hz



- When CPPM copy-protected DVD-Audio is played back, video/audio signals may not be output, depending on the type of the DVD player.
- The unit is not compatible with HDCP-incompatible HDMI or DVI devices. For details, refer to the instruction manual for each device.
- To decode audio bitstream signals on the unit, set the input source device appropriately so that the device outputs the bitstream audio signals directly (does not decode the bitstream signals on the playback device). For details, refer to the instruction manual for the playback device.

Reference diagram (rear panel)



- The area around the video/audio output jacks is marked in white on the actual product to prevent improper connections.

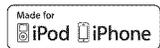
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x.v.Color™

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Specifications

Input jacks

- Analog Audio
Audio x 4 (AV 5, AUDIO 1–2, V-AUX [Mini Jack])
- Digital Audio (Supported frequencies: 32 kHz to 96 kHz)
Optical x 2 (AV 1, AV 4)
Coaxial x 2 (AV 2–3)
- Video
Composite x 4 (AV 3–5, V-AUX)
Component x 2 (AV 1–2)
- HDMI Input
HDMI x 4 (HDMI 1–4)

Output jacks

- Analog Audio
Speaker out x 5 (FRONT L/R, CENTER, SURROUND L/R)
Subwoofer Out x 1
AV OUT x 1
AUDIO OUT x 1
Headphone x 1
- Video
MONITOR OUT
- Component x 1
- Composite x 1
AV OUT
- Composite x 1
- HDMI Output
HDMI OUT x 1

Other jacks

- USB x 1 (USB2.0)

HDMI

- HDMI Specification: Deep Color, "x.v.Color," Auto Lip Sync, ARC (Audio Return Channel), 3D, 4K

- Video Format (Repeater Mode)
 - VGA
 - 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
 - 4K/30 Hz, 25 Hz, 24 Hz
- Audio Format
 - Dolby Digital
 - DTS
 - DSD 6ch
 - Dolby Digital Plus
 - Dolby TrueHD
 - DTS-HD High Resolution Audio
 - DTS-HD Master Audio
 - DTS Express
 - PCM 2ch to 8ch (Max 192 kHz/24 bit)
- Content Protection: HDCP compatible
- Link Function: CEC supported

TUNER

- Analog Tuner
[U.K. and Europe models]
FM/AM with Radio Data System x 1 (TUNER)
[Other models]
FM/AM x 1 (TUNER)

USB

- Capable of iPod, Mass Storage Class USB Memory
- Current Supply Capacity: 1 A

Compatible Decoding Formats

- Decoding Format
 - Dolby TrueHD, Dolby Digital Plus
 - Dolby Digital
 - DTS-HD Master Audio, DTS-HD High Resolution Audio, DTS Express
 - DTS, DTS 96/24, DTS-ES Matrix 6.1, DTS-ES Discrete 6.1
- Post Decoding Format
 - Dolby Pro Logic
 - Dolby Pro Logic II Music, Dolby Pro Logic II Movie, Dolby Pro Logic II Game
 - DTS Neo:6 Music, DTS Neo:6 Cinema

Audio Section

- Rated Output Power (2-channel driven)
[U.S.A. and Canada models] (20 Hz to 20 kHz, 0.09% THD, 8 Ω)
[Other models] (20 Hz to 20 kHz, 0.09% THD, 6 Ω)
Front L/R..... 70 W+70 W
[U.S.A. and Canada models] (1 kHz, 0.9% THD, 8 Ω)
Front L/R..... 85 W+85 W
Center 85 W
Surround L/R 85 W+85 W
- Rated Output Power (1-channel driven)
[U.S.A. and Canada models] (1 kHz, 0.9% THD, 8 Ω)
[Other models] (1 kHz, 0.9% THD, 6 Ω)
Front L/R..... 100 W/ch
Center 100 W/ch
Surround L/R 100 W/ch
- Maximum Effective Output Power (1-channel driven)
(JEITA, 1 kHz, 10% THD, 6 Ω)
[Korea, Asia and General models]
Front L/R..... 135 W/ch
Center 135 W/ch
Surround L/R 135 W/ch

- Dynamic Power (1-channel driven) (IHF)
[U.S.A. and Canada models]
Front L/R (8/6/4/2 Ω) 110/130/160/180 W
[Other models]
Front L/R (6/4/2 Ω) 110/130/150 W
- Dynamic Headroom [U.S.A. and Canada models]
8 Ω 0.23 dB
- Damping Factor
Front L/R, 20 Hz to 20 kHz, 8 Ω 120 or more
- Input Sensitivity / Input Impedance
AV 5 etc. (1 kHz, 100 W/6 Ω) 200 mV/47 kΩ
- Maximum Input Signal
AV 5 etc. (1 kHz, 0.5% THD, Effect On) 2.3 V
- Output Level / Output Impedance
AV OUT 200 mV/1.2 kΩ
SUBWOOFER 1 V/1.2 kΩ
- Headphone Jack Rated Output / Impedance
AV 5 etc. (1 kHz, 50 mV, 8 Ω) 100 mV/470 Ω
- Frequency Response
AV 5 etc. to Front (10 Hz to 100 kHz) +0/-3 dB
- Signal to Noise Ratio (IHF-A Network)
AV 5 etc. (Input Shorted 250 mV, Speaker Out)
..... 100 dB or more
- Residual Noise (IHF-A Network)
Front L/R (Speaker Out) 150 μV or less
- Channel Separation
AV 5 etc. (Input 5.1 kΩ Shorted, 1 kHz/10 kHz)
..... 60 dB/45 dB or more
- Volume Control
Range MUTE, -80 dB to +16.5 dB
Step 0.5 dB
- Tone Control Characteristics (Front L/R)
Bass Boost/Cut ±6 dB/0.5 dB Step at 50 Hz
Bass Turnover 350 Hz
Treble Boost/Cut ±6 dB/0.5 dB Step at 20 kHz
Treble Turnover 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
- Video Signal Level
Composite 1 Vp-p/75 Ω
Component
Y 1 Vp-p/75 Ω
Pb/Pr 0.7 Vp-p/75 Ω
- Video Maximum Input Level (Video Conversion Off)
..... 1.5 Vp-p
- Video Signal to Noise Ratio 50 dB or more
- Monitor Out Frequency Response (Video Conversion Off)
Component 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 MHz to 108.0/108.00 MHz
[Other models] 87.50 MHz to 108.00 MHz
- 50 dB Quiet Sensitivity (IHF, 1 kHz, 100% MOD.)
Mono 2 μV (17.3 dBf)
- Signal to Noise Ratio (IHF)
Mono 71 dB
Stereo 70 dB
- Harmonic Distortion (IHF, 1 kHz)
Mono 0.5%
Stereo 0.6%
- Antenna Input 75 Ω unbalanced

AM section

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

General

- Power Supply
[U.S.A. and Canada models] AC 120 V, 60 Hz
[General model] AC 110 to 120/220 to 240 V, 50/60 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 model] AC 220 to 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 model] 0.5 W or less
[Other models] 0.3 W or less
- Maximum Power Consumption
[Asia and General models] 470 W
- Dimensions (W x H x D)
..... 435 x 151 x 315 mm (17-1/8" x 6" x 12-3/8")
* Including legs and protrusions
- Weight 7.4 kg (16.3 lbs)

* Specifications are subject to change without notice.

Index

Symbols

Lock icon (🔒) 64

Numerics

2.1-channel system 13
2ch Stereo (sound program) 37
3.1-channel system 13
4.1-channel system 13
4K signal (video signal resolution) 76
5.1-channel system 13, 15
5ch Stereo (sound program) 37

A

A.DRC (DSP/Surround, Option menu) 52
Access error (error indication) 72
Action Game (sound program) 36
Adaptive DRC (DSP/Surround, Option menu) 52
Adjustment (Lipsync, Setup menu) 62
ADVANCED SETUP menu 65
Adventure (sound program) 36
AM antenna connection 26
AM radio listening 40
Amp (Audio Output, Setup menu) 59
ARC (Audio Return Channel) 18
ARC (HDMI, Setup menu) 60
Audio Decoder (front display information) 33
Audio device connection 25
Audio file format (USB storage device) 48
Audio In (Option menu) 53
AUDIO jack 17
AUDIO OUT jack 9
Audio Output (HDMI, Setup menu) 59
Audio Return Channel (ARC) 18
Auto Power Standby (ECO, Setup menu) 62
Auto Preset (FM radio, Option menu) 41
Automatic speaker setting optimization 29
Automatic station preset (FM radio) 41
AutoPowerStdby (ECO, Setup menu) 62

AV OUT jack 9

B

B RATE (Signal Info, Option menu) 53
Banana plug 15
Basic playback operation 33
Bass (Tone Control, Option menu) 52
Bitrate (Signal Info, Option menu) 53
Bitstream 76

C

Cellar Club (sound program) 37
Center (Speaker, Setup menu) 57
Center Image (DSP Parameter, Setup menu) 61
Center Width (DSP Parameter, Setup menu) 61
Chamber (sound program) 37
CHAN (Signal Info, Option menu) 53
Channel (Signal Info, Option menu) 53
Check SP Wires (error indication) 72
CINEMA DSP 36
Clear Preset (FM/AM radio, Option menu) 42
Clock Time (Radio Data System) 43
COAXIAL jack 17
Component video cable 17
Component video connection (video device) 23
COMPONENT VIDEO jack 17
Composite video connection (video device) 24
Compressed Music Enhancer 39
Configuration (HDMI, Setup menu) 59
Configuration (Speaker, Setup menu) 57
Connect error (error indication) 72
Crossover (Speaker, Setup Menu) 57
Crossover frequency setting 57
Crossover frequency setting (subwoofer) 29

D

Decoder Off (front display information) 33
Default setting restoration 66
Digital coaxial cable 17

Digital optical cable 17
Dimension (DSP Parameter, Setup menu) 61
Dimmer (Function, Setup menu) 64
Direct Stream Digital (DSD) 73
Distance (Speaker, Setup menu) 58
Dolby Pro Logic (surround decoder) 39
Dolby Pro Logic II Game (surround decoder) 39
Dolby Pro Logic II Movie (surround decoder) 39
Dolby Pro Logic II Music (surround decoder) 39
Drama (sound program) 36
DSD (Direct Stream Digital) 73
DSP Level (DSP/Surround, Option menu) 52
DSP Parameter (Sound, Setup menu) 61
DSP Program (front display information) 33
DSP/Surround (Option menu) 52
DTS Neo:6 Cinema (surround decoder) 39
DTS Neo:6 Music (surround decoder) 39
Dynamic Range (Volume, Setup menu) 62

E

ECO (Setup menu) 62
ECO Mode (ECO, Setup menu) 63
Enhancer (DSP/Surround, Option menu) 52
ENHANCER (sound mode) 39
EQ Select (Equalizer, Setup menu) 58
Equalizer (Speaker, Setup menu) 58
Error indication (front display) 72
Extra Bass (Speaker, Setup menu) 58

F

Firmware update 66
Firmware version check 66
FM antenna connection 26
FM radio listening 40
FM/AM radio tuning 40
FORMAT (Signal Info, Option menu) 53
Format (Signal Info, Option menu) 53
Frequency (FM/AM radio) 40

Frequency step setting 40, 66
Front (Speaker, Setup menu) 57
Front display (part names and functions) 8
Front display brightness 64
Front display information 33
Front panel (part names and functions) 7
Front panel jack connection 26
Function (Setup menu) 63

G

GEQ (Equalizer, Setup menu) 58

H

Hall in Munich (sound program) 37
Hall in Vienna (sound program) 37
HDMI (Setup menu) 59
HDMI cable 17
HDMI connection (video device) 23
HDMI Control (HDMI, Setup menu) 59
HDMI jack 17
HDMI OUT (TV) (Audio Output, Setup menu) 60
HDMI signal compatibility 76
Headphones 39
High definition audio 76
High speed HDMI cable 17

I

In.Trim (Volume Trim, Option menu) 52
Indicator (part names and functions) 8
INFO key 7, 10
Information display (front display) 8
Information switching (front display) 33
INIT (ADVANCED SETUP menu) 66
Initial Volume (Volume, Setup menu) 62
Input (front display information) 33
Input (Signal Info, Option menu) 53
Input Rename (Function, Setup menu) 63
Input selection key (remote control) 10
Input Trim (Volume Trim, Option menu) 52
Internal Err. (YPAO error message) 31
Internal Error (error indication) 72

iPod charge 44
iPod connection 44
iPod content playback 45

L

Language (Setup menu) 64
Level (Speaker, Setup menu) 58
Level Error (YPAO warning message) 32
LFE (Low Frequency Effects) 74
Lipsync 74
Lipsync (Option menu) 53
Lipsync (Sound, Setup menu) 61
Low Frequency Effects (LFE) 74

M

Manual station preset (FM/AM radio) 41
Max Volume (Volume, Setup menu) 62
Memory Guard (Function, Setup menu) 64
Menu language selection 28
Menu operation key (remote control) 10
MODE key 10
Monaural reception (FM radio) 40
Mono Movie (sound program) 36
MOVIE (sound program category) 36
MUSIC (sound program category) 37
Music Video (sound program) 37
MUTE key 10
Muting 33

N

No content (error indication) 72
No Front SP (YPAO error message) 31
No MIC (YPAO error message) 31
No Signal (YPAO error message) 31
No Sur. SP (YPAO error message) 31
Noisy (YPAO error message) 31
NTSC (TV FORMAT, ADVANCED SETUP menu) 66

O

OPTICAL jack 17
OPTION key 10
Option menu 51

Out of Phase (YPAO warning message) 32
Output (Signal Info, Option menu) 53
Over Distance (YPAO warning message) 32

P

PAL (TV FORMAT, ADVANCED SETUP menu) 66
Panorama (DSP Parameter, Setup menu) 61
PEQ (Equalizer, Setup menu) 58
PHONES jack 7
Playback device connection 23
Power cable connection 27
Power management 62
Preset station selection (FM/AM radio) 42
Program Service (Radio Data System) 43
Program Type (Radio Data System) 43

R

Radio Data System (FM radio) 43
Radio Data System information 43
Radio Data System tuning 43
Radio Text (Radio Data System) 43
Rear panel (part names and functions) 9
Recording device connection 27
RemID Mismatch (error indication) 72
Remote control (part names and functions) 10
Remote control ID setting 65
Remote control ID setting (remote control) 65
Remote control sensor 7
Remote control signal transmitter (remote control) 10
REMOTE ID (ADVANCED SETUP menu) 65
Rename (input name) 63
Repeat (iPod, Option menu) 47
Repeat (USB storage device, Option menu) 50
Roleplaying Game (sound program) 36

S

SAMPL (Signal Info, Option menu) 53
Sampling (Signal Info, Option menu) 53
SCENE (HDMI, Setup menu) 60
Scene configuration 34
SCENE function 34

SCENE link playback 34
 Sci-Fi (sound program) 36
 Select (Lipsync, Setup menu) 61
 SETUP key 10
 Setup menu 54
 Shuffle (iPod, Option menu) 47
 Signal Info (Option menu) 53
 Signal information 53
 SILENT CINEMA 39
 Simple play (iPod) 46
 SLEEP key 10
 Sleep timer 10
 Sound (Setup menu) 61
 Sound field effect 36
 Sound mode selection 35
 Sound program 36
 SP IMP. (ADVANCED SETUP menu) 65
 Speaker (Setup menu) 57
 Speaker cable connection 15
 Speaker connection 15
 Speaker impedance 12
 Speaker impedance setting 14, 65
 Speaker indicator (front display) 8
 Speaker placement 12
 Spectacle (sound program) 36
 Sports (sound program) 36
 Standard (sound program) 36
 Standby Sync (HDMI, Setup menu) 60
 Station preset (FM/AM radio) 41
 Stereo mini jack 17
 Stereo mini-plug cable 17
 Stereo pin cable (RCA cable) 17
 Stereo reception (FM radio) 40
 STRAIGHT (sound mode) 38
 Straight decode 38
 Subwoofer (Speaker, Setup menu) 57
 Subwoofer connection 16
 Subwoofer Phase (Speaker, Setup menu) 58
 Subwoofer Trim (Volume Trim, Option menu) 53
 SUR.DECODE (sound mode) 39

Surround (Speaker, Setup menu) 57
 Surround decoder 39
 SW.Trim (Volume Trim, Option menu) 53

T

Test Tone (Speaker, Setup menu) 59
 The Bottom Line (sound program) 37
 The Roxy Theatre (sound program) 37
 Tone Control (Option menu) 52
 TONE CONTROL key 7
 TP (Traffic Program) 43
 Traffic information (Radio Data System) 43
 Traffic Program (FM radio, Option menu) 43
 Treble (Tone Control, Option menu) 52
 TU (ADVANCED SETUP menu) 66
 TV Audio Input (HDMI, Setup menu) 60
 TV connection 18
 TV connection (ARC-compatible TV) 18
 TV connection (HDMI Control-compatible TV) 20
 TV connection (TV with HDMI input jacks) 21
 TV connection (TV without HDMI input jacks) 22
 TV FORMAT (ADVANCED SETUP menu) 66

U

Unable to play (error indication) 72
 Unknown iPod (error indication) 72
 UPDATE (ADVANCED SETUP menu) 66
 USB jack 7
 USB mass storage class device 48
 USB Overloaded (error indication) 72
 USB storage device connection 48
 USB storage device content playback 48
 User Cancel (YPAO error message) 31

V

V IN (Signal Info, Option menu) 53
 V OUT (Signal Info, Option menu) 53
 VERSION (ADVANCED SETUP menu) 66
 VIDEO AUX jack 7
 Video device connection 23
 VIDEO jack 17

Video Out (Option menu) 53
 Video pin cable 17
 Video signal flow 75
 Video signal type setting 66
 Video/audio input jack combination 24
 Virtual CINEMA DSP 38
 Voltage selection 27
 VOLTAGE SELECTOR 9
 Volume (Sound, Setup menu) 62
 Volume Trim (Option menu) 52

Y

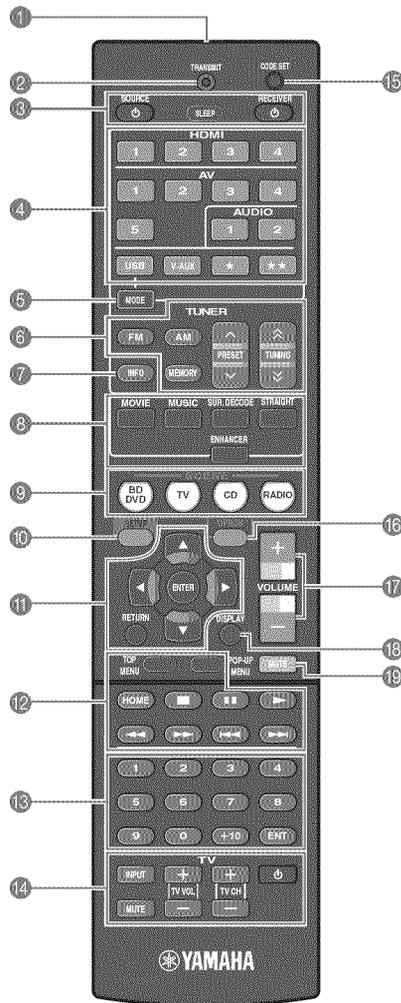
Yamaha Parametric room
 Acoustic Optimizer (YPAO) 29
 YPAO
 (Yamaha Parametric room Acoustic Optimizer) 29
 YPAO error message 31
 YPAO MIC jack 7
 YPAO microphone 29
 YPAO warning message 32



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Remote control functions



1 TRANSMIT indicator

Transmits infrared signals.

2 TRANSMIT indicator

Lights up when remote control signals are transmitted.

3 SOURCE key

Turns on/off an external device (p.3).

SLEEP key

Switches the unit to standby mode automatically after a specified period of time has elapsed (sleep timer). Press repeatedly to set the time (120 min, 90 min, 60 min, 30 min, off).

RECEIVER key

Turns on/off (standby) the unit.

4 Input selection keys

Select an input source for playback.

- HDMI 1-4** HDMI 1-4 jacks
- AV 1-5** AV 1-5 jacks
- AUDIO 1-2** AUDIO 1 2 jacks
- USB** USB jack (on the front panel)
- V-AUX** VIDEO AUX jacks (on the front panel)
- ★/★ ★** Change the external device to be controlled without switching the input source.

5 MODE key

Switches between "Stereo" and "Mono" for FM radio reception.
Switches the iPod operation modes.

6 Radio keys

Operate the FM/AM radio.

- FM** Switches to FM radio.
- AM** Switches to AM radio.
- MEMORY** Registers FM/AM radio stations as presets.
- PRESET** Select a preset station.
- TUNING** Select the radio frequency.

7 INFO key

Selects the information displayed on the front display.

8 Sound mode keys

Select a sound mode.

9 SCENE keys

Select the registered input source and sound program with one touch. Also, turns on the unit when it is in standby mode.

10 SETUP key

Displays the setup menu.

11 Menu operation keys

- Cursor keys** Select a menu or a parameter.
- ENTER** Confirms a selected item.
- RETURN** Returns to the previous screen.

12 External device operation keys

Let you play back and select menus and perform other operations for external devices (p.3).

13 Numeric keys

Let you enter numerical values (p.3).

14 TV operation keys

Let you select TV input and volume and perform other TV operations (p.2).

15 CODE SET button

Registers remote control codes of external devices on the remote control (p.2).

16 OPTION key

Displays the option menu.

17 VOLUME keys

Adjust the volume.

18 DISPLAY key

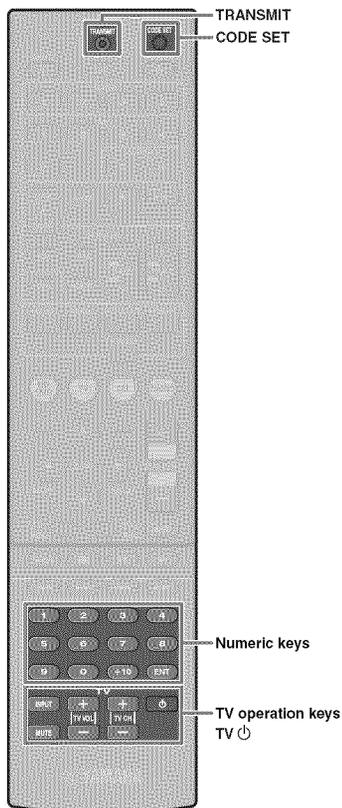
Switches between the browser and playback screens during playback of the iPod or USB storage device.
Switches the display information for the external device (p.3).

19 MUTE key

Mutes the audio output.



- To operate external devices with the remote control, register a remote control code for each device before using (p.2).



Controlling external devices with the remote control

You can use the unit's remote control to operate external devices (such as BD/DVD players) if you have registered the remote control code of the external device.



- You cannot control an external device that does not have a remote control sensor.
- Ensure that the remote control ID of the external device is set to "ID1". If any other ID is selected, the remote control operations may not work properly.
- If the unit's remote control is without batteries for more than 2 minutes, the registered codes may be cleared. If this happens, insert new batteries and register the codes again.



- Under the unit's default settings, the amplifier code (Yamaha: 5098) is set for all the input selection keys. With this setting, you can control HDMI Control-compatible devices connected to the unit with the remote control. (This function may not work depending on the specification of the external device.)

Registering the remote control code for a TV

You can use the unit's remote control to operate a TV if you have registered its remote control code.



- You can also register your TV's remote control code to the unit's input selection keys (p.3). This would allow you to use the cursor keys or numeric keys to operate the TV (this function may not be available on some TV models).

1 See "List of remote control codes" (p.6) to find your TV's remote control code.



- If there are multiple remote control codes, register the first code in the list. If that does not work, try the other codes.

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

The TRANSMIT indicator blinks twice.

Perform each of the following steps within 1 minute. Otherwise, the setting will be canceled. If this happens, repeat from Step 2.

3 Press TV ⏻.

4 Use the numeric keys to enter the 4-digit remote control code.

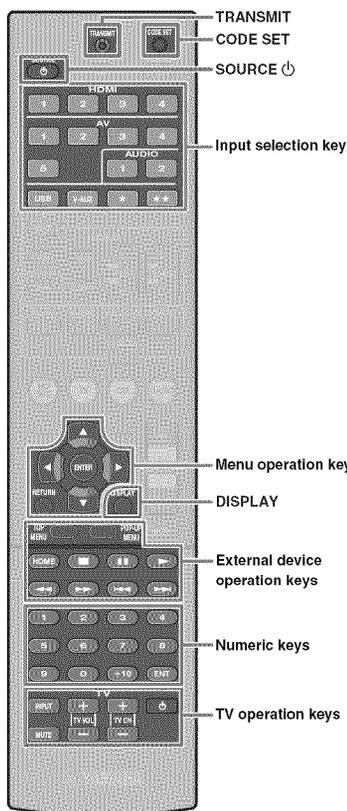
Once the remote control code is successfully registered, the TRANSMIT indicator blinks twice.

If it blinks six times, registration has failed. Repeat from Step 2.

TV operations

Once you have registered the remote control code for your TV, you can control it using the TV operation keys, regardless of the input source selected on the unit.

	INPUT	Switches the video inputs of the TV.
	MUTE	Mutes the audio output of the TV.
TV operation keys	TV VOL	Adjust the volume of the TV.
	TV CH	Switch the channels of the TV
	TV ⏻	Turns on/off the TV.



Registering the remote control codes for playback devices

You can use the unit's remote control to operate playback devices if you have registered their remote control codes. You can also use the input selection keys to change the playback devices that are controlled by the remote control, because their remote control codes are assigned to the input selection keys.



- If you assign the remote control code for an external device to the star (★ or ★★) key, you can operate the device with the remote control without switching the input source after pressing the star key.

1 See “List of remote control codes” (p.6) to find the remote control code for your playback device.



- If there are multiple remote control codes, register the first code in the list. If that does not work, try the other codes.

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

The TRANSMIT indicator blinks twice.

Perform each of the following steps within 1 minute. Otherwise, the setting will be canceled. If this happens, repeat from Step 2.

3 Press the input selection key.

For example, press HDMI 1 to set the remote control code for the playback device connected to the HDMI 1 jack.

4 Use the numeric keys to enter the 4-digit remote control code.

Once the remote control code is registered successfully, the TRANSMIT indicator blinks twice.

If it blinks six times, registration has failed. Repeat from Step 2.



- For details on how to register a remote control code to a SCENE key, see “Changing the external device assigned to the SCENE keys” (p.4)

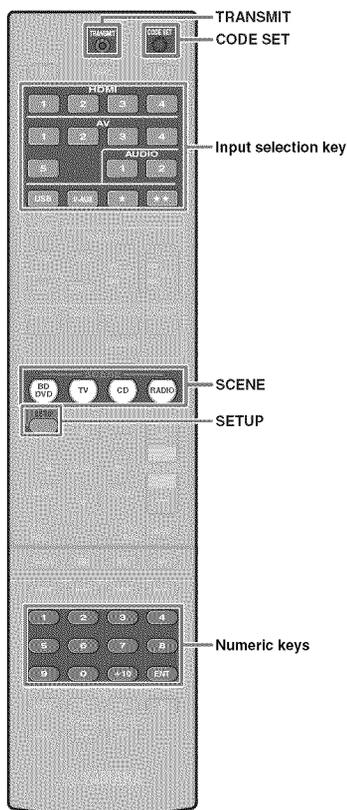
Playback device operations

Once you have registered the remote control code for your playback device, you can control it using the following keys after selecting the input source or scene.

SOURCE	Turns on/off the playback device.	
Menu operation keys	Cursor keys	Select an item.
	ENTER	Confirms a selected item.
	RETURN	Returns to the previous screen.
DISPLAY	Switches information on the display.	
External device operation keys	TOP MENU	Displays the top menu.
	POP-UP MENU	Displays the pop-up menu.
	HOME	Displays the home menu.
	■	Stops playback.
	■	Stops playback temporarily.
	▶	Starts playback of the selected song/video.
	◀◀	Searches forward/backward (by holding down).
	▶▶	Searches forward/backward (by holding down).
	▶▶▶	Skips forward/backward.
Numeric keys	Enter numerical values.	
TV operation keys	Control the TV (p.2).	



- These keys work only if the corresponding function is available on your playback device and if the device can be operated with an infrared remote control.



Changing the external device assigned to the SCENE keys

If you want to control your playback device after selecting a scene, follow the procedure below.

- 1 If you have not registered the remote control code for the device yet, follow “Registering the remote control codes for playback device” (p.3).**
- 2 Hold down the corresponding SCENE key and input selection key together for more than 3 seconds.**

Once the setting is successfully completed, the TRANSMIT indicator blinks twice.

If it blinks six times, the setting has failed. Repeat step 2.

Resetting remote control codes

You can reset a remote control code registered to each input selection key.

- 1 Press CODE SET using a pointed object such as the tip of a ballpoint pen.**

The TRANSMIT indicator blinks twice.

Perform each of the following steps within 1 minute. Otherwise, the setting will be canceled. If this happens, repeat from Step 1.

- 2 Press the input selection key.**

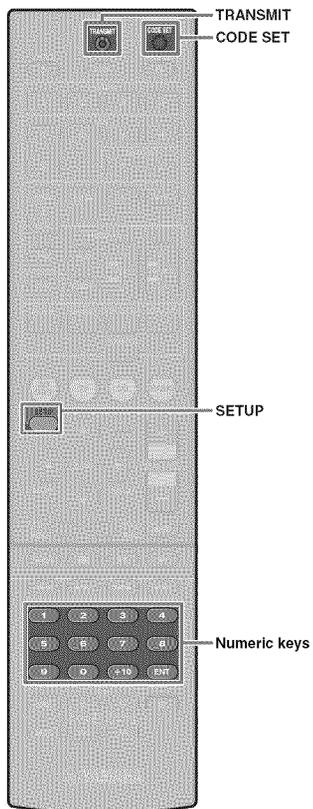
- 3 Use the numeric keys to enter “5098”.**

Once the remote control code is reset successfully, the TRANSMIT indicator blinks twice.

If it blinks six times, resetting has failed. Repeat from Step 1.

To reset the remote control to factory default settings

- ① Press CODE SET using a pointed object such as the tip of a ballpoint pen.
- ② Press SETUP.
- ③ Use the numeric keys to enter “9981”.



Changing the remote control ID of the remote control

Change the remote control's ID so that it matches the unit's remote control ID.



- Perform each of the following steps within 1 minute. Otherwise, the setting will be automatically canceled.

- 1 Press CODE SET on the remote control using a pointed object, such as the tip of a ballpoint pen.**
- 2 Press SETUP.**
- 3 Use the numeric keys to enter “5019” (ID1) or “5020” (ID2).**

Once the remote control ID is registered successfully, the TRANSMIT indicator blinks twice.

If it blinks six times, registration failed. Repeat from Step 1.



- The registered remote control codes are not cleared even if you change the remote control ID.
- You can change the unit's remote control ID in the “ADVANCED SETUP” menu. For details, refer to “Owner's Manual”.

List of remote control codes

TV

A.R. Systems	0320	Arthur Martin	0321	Bush	0269, 0282, 0283, 0304, 0320, 0323, 0328, 0332, 0340, 0343, 0344, 0346, 0348, 0349, 0350, 0372, 0382, 0463, 0470, 0472	Crown	0058, 0161, 0171, 0179, 0320, 0323, 0343, 0349, 0350, 0351
Acme	0342	ASA	0339, 0347	by:sign	0093	CS Electronics	0277, 0340, 0342
Acura	0323, 0343	Asberg	0171, 0320, 0350	Candle	0008, 0026, 0050, 0057	CTC Clatronic	0341
ADC	0337	Astra	0343	Capsonic	0337	CTX	0205
Admiral	0054, 0178, 0336, 0337, 0339, 0346, 0347	Asuka	0277, 0282, 0337, 0340, 0342	Carena	0320	Curtis Mathes	0007, 0008, 0010, 0019, 0021, 0026, 0049, 0050, 0178
Advent	0158	Atlantic	0277, 0320, 0342, 0349, 0350	Carnivale	0050	CXC	0058, 0179
Adventura	0057	Atori	0323, 0343	Carrefour	0344	Cybertron	0340
Adyson	0277, 0282, 0342	Auchan	0321	Carver	0010	Cytron	0152
Agashi	0277, 0282	Audiosonic	0161, 0282, 0320, 0340, 0342, 0343, 0349, 0350	Cascade	0320, 0323, 0343	Daewoo	0007, 0008, 0026, 0037, 0053, 0167, 0266, 0275, 0277, 0282, 0315, 0320, 0323, 0331, 0335, 0342, 0343, 0350, 0381, 0465
Agazi	0337	AudioTon	0161, 0282, 0342	Casio	0367	Dainichi	0277, 0340
Aiko	0277, 0282, 0320, 0323, 0342, 0343	Ausind	0171	Cathay	0320, 0349, 0350	Dansai	0277, 0282, 0320, 0337, 0349, 0350
Aim	0320	Autovox	0171, 0282, 0337, 0339, 0342	CCE	0183, 0282	Dantax	0161, 0349
Aiwa	0078, 0379	Aventura	0051	Celebrity	0055, 0107	Dawa	0320
Akai	0050, 0055, 0109, 0159, 0181, 0277, 0282, 0320, 0323, 0340, 0343, 0349, 0350	Awa	0277, 0282	Celera	0039	Daytron	0007, 0008, 0026, 0323, 0343
Akiba	0320, 0340	Axion	0156	Centurion	0320, 0349, 0350	De Graaf	0346
Akura	0320, 0323, 0337, 0340	Baird	0282	Century	0339	Decca	0282, 0320, 0342, 0349, 0350
Alaron	0277	Bang & Olufsen	0180, 0339	CGE	0161, 0171	Dell	0145, 0245
Alba	0161, 0277, 0320, 0323, 0340, 0342, 0343, 0344, 0349, 0351, 0372, 0382	Basic Line	0282, 0320, 0323, 0340, 0343, 0350	Changhong	0039	Denver	0358, 0362
Albatron	0140	Bastide	0282, 0342	Chimei	0273	Desmet	0320, 0349, 0350
Aleyon	0171	Baur	0320, 0349	Cimline	0323, 0343	Diamant	0320
Alleron	0059	Bazin	0282	Citizen	0007, 0008, 0026, 0050, 0058	Diamond	0277
Allorgan	0282	Beko	0161, 0269, 0294, 0302, 0311, 0320, 0328, 0351	City	0323, 0343	DiamondVision	0135, 0143
Allstar	0320, 0350	Belcor	0008	Clarion	0179	Dimensia	0049
America Action	0179	Bell & Howell	0019, 0054	Clarivox	0349	Disney	0219
AMOi	0276	Benq	0097, 0242, 0361	Clatronic	0161, 0171, 0282, 0320, 0323, 0337, 0340, 0342, 0343, 0350, 0351	Dixi	0282, 0320, 0323, 0343, 0349, 0350
Amplivision	0161, 0282, 0321, 0342	Beon	0320, 0349, 0350	CMS	0277	Dream Vision	0461, 0498
Amstrad	0320, 0323, 0337, 0340, 0343	Best	0161	CMS Hightec	0282	DTS	0323, 0343
Amtron	0058	Bestar	0161, 0320, 0350	Coby	0197	Dual	0282, 0320, 0342
Anam	0179, 0343	BGH	0400	Colortyme	0008, 0026	Dual-Tec	0342, 0343
Anam National	0052, 0058	Binatone	0282, 0342	Commercial Solutions	0021	Dumont	0008, 0030, 0062, 0282, 0339, 0341, 0342
Anglo	0323, 0343	Blue Sky	0320, 0340	Concerto	0008, 0026	Durabrand	0031, 0051, 0179, 0215
Anitech	0171, 0320, 0323, 0337, 0343	Blue Star	0348	Concorde	0323, 0343	Dux	0349
Ansonic	0161, 0168, 0320, 0323, 0341, 0343	Boots	0282, 0342	Condor	0161, 0277, 0320, 0323, 0342, 0350, 0351	Dwin	0178
AOC	0008, 0026, 0050, 0053	BPL	0320, 0348	Contec	0179, 0277, 0323, 0342, 0343, 0344	Dynatron	0320, 0349, 0350
Apex	0039, 0111, 0217	Bradford	0058, 0179	Contec/Cony	0012, 0058	Dynex	0228, 0231
Arcam	0277, 0282	Brandt	0322, 0345	Continental Edison	0345	EIZO	0509
Arcam Delta	0342	Brilliant	0182	Cosmel	0323, 0343	Elbe	0161, 0168, 0282, 0320
Aristona	0320, 0349, 0350	Brinkmann	0320	Craig	0058, 0179	Electa	0348
		Brionvega	0320, 0339, 0349, 0350	Crosley	0010, 0037, 0171, 0339	ELECTRO TECH	0343
		Britannia	0277, 0282, 0342				
		Brockwood	0008				
		Broksonic	0109, 0179				
		Bruns	0339				
		BTC	0340				

Electroband	0055, 0107	Fujitsu Siemens	0504, 0505, 0507, 0510, 0511	Harwood	0320, 0323	Intervision	0161, 0282, 0320, 0337, 0341, 0342
Electrograph	0176	Funai	0051, 0058, 0059, 0112, 0113, 0115, 0118, 0119, 0179, 0337, 0488, 0489	Havermy	0178	Irradio	0171, 0320, 0323, 0340, 0343, 0349, 0350
Electrohomb	0008, 0026, 0052, 0055			HCM	0282, 0320, 0323, 0337, 0342, 0343, 0348	Isukai	0320, 0340
Element	0230			Hema	0282, 0323	ITC	0282, 0342
Elin	0277, 0320, 0323, 0342, 0349, 0350	Futuretech	0058, 0179	Hewlett Packard	0192	ITS	0277, 0320, 0340, 0348, 0350
Elite	0320, 0340, 0350	Galaxi	0320, 0351	Higashi	0277	ITT	0343, 0347
Elman	0341	Galaxis	0161, 0320	HiLine	0320	ITV	0320, 0343, 0349
Elta	0277, 0323, 0343	Gateway	0176, 0177, 0241	Hinari	0320, 0323, 0340, 0343, 0344, 0349, 0350	Janeil	0057
Emerson	0000, 0007, 0008, 0012, 0013, 0019, 0026, 0031, 0037, 0051, 0058, 0059, 0161, 0179, 0320, 0339	GBC	0323, 0343, 0344	Hisawa	0321, 0340, 0348	JBL	0010
		GE	0008, 0021, 0023, 0026, 0027, 0031, 0034, 0049, 0052, 0056, 0209	Hisense	0247	JC Penney	0007, 0008, 0026, 0027, 0049, 0053, 0056
Emprex	0154	Geant Casino	0321	Hitachi	0008, 0012, 0026, 0066, 0084, 0092, 0093, 0120, 0172, 0173, 0255, 0270, 0271, 0282, 0320, 0335, 0338, 0342, 0344, 0346, 0347, 0365, 0382, 0448, 0456, 0467, 0482, 0484, 0487	JCB	0055, 0107
Envision	0008, 0026, 0050	GEC	0282, 0320, 0342, 0347, 0349, 0350	Hornlyphon	0320, 0350	Jensen	0008, 0026
Epson	0155, 0206, 0359	Geloso	0323, 0343, 0346	Hoshai	0340	JVC	0012, 0014, 0015, 0056, 0064, 0065, 0067, 0169, 0174, 0297, 0314, 0344, 0350, 0375
Eres	0320, 0349, 0350	General Technic	0323, 0343	Huanyu	0277, 0342	Kaisui	0277, 0282, 0320, 0323, 0340, 0342, 0343, 0348
ESA	0051	Genexxa	0320, 0340, 0347, 0350	Hygashi	0277, 0282, 0342	Kamosonic	0342
ESC	0282	GFM	0128, 0227	Hyper	0277, 0282, 0323, 0342, 0343	Kamp	0277, 0342
Etron	0343	Giant	0282	Hypson	0282, 0320, 0321, 0337, 0342, 0348, 0349, 0350	Kapsch	0347
Eurofeel	0282	Gibraltar	0008, 0030, 0050, 0062	Hyundai	0141	Karcher	0161, 0320, 0342, 0343, 0349
Euro-Feel	0337	GoldHand	0277	Iberia	0320	Kawasho	0008, 0026, 0055, 0277
Euroline	0349	Goldline	0320	ICE	0277, 0282, 0320, 0323, 0337, 0340, 0342, 0343, 0350	KEC	0179
Euroman	0161, 0277, 0282	GoldStar	0007, 0008, 0012, 0026, 0031, 0050, 0053, 0161, 0277, 0282, 0320, 0323, 0342, 0343, 0346, 0349, 0350	ICeS	0277	Kendo	0161, 0320, 0341, 0346
Euromann	0320, 0337, 0342, 0350	Goodmans	0246, 0272, 0282, 0320, 0323, 0337, 0343, 0344, 0349, 0350, 0462, 0473, 0477	Ilo	0148, 0153	Kenwood	0008, 0026, 0050
Europhon	0277, 0282, 0320, 0341, 0342, 0350	Gorenje	0161, 0351	IMA	0058	KIC	0282
Expert	0321	GPM	0340	Imperial	0161, 0171, 0320, 0347, 0350, 0351	Kingsley	0277, 0342
Exquisit	0320	GPX	0129	Indiana	0320, 0349, 0350	KLH	0039
Fenner	0323, 0343	Gradiente	0240	Infinity	0010	Kloss Novabeam	0057, 0058
Ferguson	0322, 0345, 0349	Graetz	0347	InFocus	0250, 0327, 0363, 0479, 0508	Kneissel	0161, 0168, 0320
Fidelity	0277, 0320, 0342, 0346	Granada	0171, 0282, 0320, 0321, 0342, 0344, 0346, 0349, 0350	Ingelen	0347	Kolster	0320, 0350
Filsai	0282	Grandin	0340, 0343, 0348, 0349	Ingersol	0323, 0343	Konka	0340
Finlandia	0346	Gronic	0282	Initial	0153	Korpel	0320, 0349, 0350
Finlux	0171, 0282, 0320, 0339, 0341, 0342, 0349, 0350	Grundig	0160, 0161, 0171, 0310, 0320	Inno Hit	0171, 0282, 0320, 0323, 0340, 0342, 0343, 0349, 0350	Korting	0161, 0339
FIRST LINE	0342, 0343, 0350	Grunpy	0058, 0059, 0179	Innovation	0337, 0343	Kosmos	0320
Firstline	0277, 0282, 0320, 0323	Haier	0157, 0233	Insignia	0131, 0228, 0236, 0238	Koyoda	0343
Fisher	0019, 0161, 0282, 0339, 0342, 0344, 0351	Halifax	0277, 0282, 0337, 0342	Inteq	0030	KTV	0007, 0050, 0058, 0179, 0183, 0282, 0342
Flint	0320, 0350	Hallmark	0008, 0026, 0031	Interactive	0161	Kyoto	0277, 0282
Formenti	0171, 0277, 0336, 0339, 0342, 0349	Hampton	0277, 0282, 0342	Interbuy	0323, 0343	Lasat	0161
		Hanseatic	0161, 0168, 0282, 0320, 0323, 0342, 0343, 0344, 0349, 0350	Interfunk	0161, 0320, 0339, 0347, 0349, 0350	Lenco	0323, 0343
Formenti/Phoenix	0277	Hantarex	0320, 0323, 0343	International	0277	Lenoir	0323, 0342, 0343
Fortress	0336, 0339	Hantor	0320			Leyco	0320, 0337, 0349, 0350
Fraba	0161, 0320	Harman/Kardon	0010			LG	0031, 0053, 0066, 0116, 0117, 0140, 0161, 0164, 0175, 0195, 0269, 0277, 0282, 0300, 0309,
Friac	0161	Harvard	0058, 0179				
Frontech	0282, 0323, 0337, 0343, 0346, 0347						
Fujitsu	0059, 0069, 0074, 0075, 0282						
Fujitsu General	0282						

	0317, 0320, 0323, 0328, 0342, 0343, 0346, 0349, 0350, 0366, 0368, 0377, 0466, 0471, 0478	Memphis	0323, 0343	Novatronic	0320	Phoenix	0161, 0277, 0320, 0339, 0349, 0350
LG/GoldStar	0164	Mercury	0320, 0323	Oceanic	0321, 0347	Phonola	0277, 0320, 0339, 0349, 0350
Liesenk	0349	Metz	0339	Okano	0161, 0320, 0351	Pilot	0007, 0008, 0050
Liesenkotter	0320	MGA	0008, 0026, 0031, 0050, 0053	Olevia	0102, 0199, 0200, 0207, 0222	Pioneer	0008, 0026, 0094, 0095, 0161, 0320, 0345, 0347, 0349, 0350, 0458, 0480
Life	0337, 0343	Micromaxx	0337, 0343	ONCEAS	0342	Plantron	0320, 0323, 0337, 0350
Lifetec	0320, 0323, 0337, 0343	Microstar	0337, 0343	Onwa	0058, 0179	Playsonic	0282
Lloyds	0323	Midland	0007, 0021, 0023, 0027, 0030, 0056, 0062	Opera	0320	Polaroid	0039, 0142, 0202, 0234
Loewe	0161, 0168, 0265, 0320, 0330, 0352	Minerva	0171	Oppo	0130	Poppy	0323, 0343
Loewe Opta	0339, 0349, 0350	Minoka	0320, 0350	Optimus	0017, 0019	Portland	0007, 0008, 0026, 0053
Logik	0054	Mintek	0153	Optoma	0144	Prandoni-Prince	0171, 0346
Luma	0320, 0323, 0346, 0349	Mitsubishi	0008, 0026, 0031, 0053, 0066, 0084, 0093, 0098, 0150, 0178, 0289, 0320, 0339, 0344, 0350, 0376	Optonica	0178	Precision	0282, 0342
Lumatron	0282, 0320, 0346, 0349, 0350			Orbit	0320, 0350	Prima	0157, 0243, 0323, 0343, 0347
Lux May	0350	Mivar	0161, 0168, 0171, 0277, 0282, 0342	Orion	0043, 0146, 0283, 0320, 0323, 0328, 0343, 0349, 0350	Princeton	0140
Luxman	0008, 0026			Orline	0320	Prism	0023, 0056
Luxor	0282, 0342, 0346	Monivision	0140	Osaki	0282, 0320, 0337, 0340, 0342	Profex	0323, 0343
LXI	0010, 0019, 0021, 0026, 0027, 0031, 0049, 0111	Montgomery Ward	0054	Oso	0340	Profi-Tronic	0320, 0350
M Electronic	0342, 0343, 0345, 0347, 0349, 0350	Motion	0171	Otto Versand	0282, 0320, 0336, 0342, 0344, 0348, 0349, 0350	Proline	0320, 0350
MAG	0096	Motorola	0052, 0178	Pael	0277, 0342	Proscan	0021, 0027, 0049
Magnadyne	0339, 0341, 0349	MTC	0008, 0026, 0050, 0053, 0161, 0277	Palladium	0161, 0282, 0320, 0342, 0351	Prosonic	0161, 0277, 0282, 0320, 0342, 0349
Magnafon	0171, 0277, 0341, 0342	Multi System	0349	Palsonic	0282	Protech	0282, 0337, 0341, 0342, 0343, 0349, 0350
Magnavox	0008, 0009, 0010, 0013, 0026, 0032, 0033, 0048, 0050, 0128, 0211, 0212, 0224, 0226, 0239	Multitech	0058, 0161, 0179, 0183, 0277, 0282, 0320, 0323, 0341, 0342, 0343, 0344, 0346, 0349	Panama	0277, 0282, 0320, 0323, 0337, 0342, 0343	Proton	0008, 0012, 0026, 0031
Magnum	0337, 0343	Murphy	0277, 0342	Panasonic	0016, 0017, 0020, 0022, 0023, 0035, 0052, 0056, 0084, 0085, 0133, 0163, 0193, 0284, 0286, 0290, 0292, 0320, 0325, 0347, 0356, 0483, 0485, 0490	Prottron	0196
Majestic	0054	NAD	0026, 0031, 0111	Panavision	0320	PROVIEW	0096, 0246
Mandor	0337	Naonis	0346	Pathe Cinema	0161, 0168, 0277, 0321, 0342	Provision	0320, 0349
Manesth	0282, 0320, 0337, 0342, 0349, 0350	NEC	0008, 0026, 0050, 0052, 0053, 0072, 0103, 0282, 0344	Pausa	0323, 0343	Pulsar	0008, 0030, 0062
Marantz	0008, 0010, 0026, 0050, 0204, 0320, 0349, 0350	NEC	0072, 0103, 0282, 0344	Penney	0021, 0023, 0031, 0050, 0111	Pye	0256, 0320, 0349, 0350, 0378
Marelli	0339	Neckermann	0161, 0282, 0320, 0339, 0342, 0346, 0349, 0350, 0351	Perdio	0277, 0320	Pymi	0323, 0343
Mark	0277, 0282, 0320, 0323, 0349, 0350	NEI	0320, 0349, 0350	Perfekt	0320	Quandra Vision	0321
Masuda	0282	Net-TV	0176	Philco	0008, 0009, 0010, 0012, 0026, 0050, 0052, 0053, 0161, 0171, 0320, 0339	Quasar	0017, 0023, 0052, 0056
Matsui	0282, 0320, 0323, 0342, 0343, 0344, 0346, 0349, 0350, 0455	Neufunk	0320, 0323	Philharmonic	0282, 0342	Quelle	0282, 0320, 0337, 0342, 0349, 0350
Matsushita	0017	New Tech	0343, 0350	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	Questa	0344
Maxent	0147, 0176	New World	0340	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	Radiolva	0320
Mediator	0320, 0349, 0350	NewTech	0282, 0320, 0323	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	RadioShack	0019, 0021, 0031, 0050, 0179, 0320
Medion	0320, 0337, 0343	Nicamagic	0277, 0342	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	RadioShack/Realistic	0007, 0008, 0012, 0026, 0049, 0058
Megapower	0140	Nikkai	0277, 0282, 0320, 0323, 0337, 0340, 0342, 0349, 0350	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	Radiola	0282, 0320, 0349, 0350
Megatron	0026, 0031	Nikko	0026, 0031, 0050	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	Radiomarelli	0320, 0339
MElectronic	0277, 0282, 0320, 0323	Noblisko	0171, 0277, 0341, 0342	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	Radiotone	0161, 0320, 0323, 0350
Melvox	0321	Nokia	0347	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	Rank	0344
Memorex	0019, 0026, 0031, 0053, 0054, 0137, 0215, 0323, 0343	Norcent	0201	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	RCA	0008, 0021, 0024, 0025, 0026, 0027, 0042, 0049, 0052, 0053, 0063, 0136, 0225
		Nordic	0282	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460	Realistic	0019, 0031, 0050, 0179
		Nordmende	0339, 0345, 0347, 0350	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460		
		Nordvision	0349	Philips	0008, 0009, 0010, 0011, 0012, 0032, 0048, 0049, 0052, 0122, 0128, 0134, 0186, 0187, 0213, 0221, 0224, 0226, 0239, 0256, 0257, 0259, 0261, 0263, 0267, 0280, 0281, 0287, 0296, 0299, 0301, 0303, 0305, 0313, 0319, 0320, 0324, 0333, 0339, 0342, 0349, 0350, 0353, 0357, 0360, 0380, 0383, 0452, 0459, 0460		

Recor	0320	Sencora	0323, 0343	Superscan	0013, 0178	Thorn	0320, 0349
Redstar	0320	Sentra	0323	SuperTech	0277, 0320, 0323	TMK	0008, 0026, 0031
Reflex	0320	Serino	0277	Supra	0323, 0343	TNCi	0030
Revox	0161, 0320, 0349, 0350	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, 0481	Supre-Macy	0057	Tokai	0282, 0320, 0350
Rex	0337, 0346, 0347			Supreme	0055, 0107	Tokyo	0277, 0342
RFT	0161, 0168, 0339			Susumu	0340	Tomashi	0348
Rhapsody	0277			Sutron	0323, 0343	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, 0491
R-Line	0320, 0349, 0350	Sheng Chia	0178	SVA	0151		
Roadstar	0323, 0337, 0340, 0343	Shogun	0008	Sydney	0277, 0282, 0342		
Robotron	0339	Siarem	0320, 0339, 0341	Sylvania	0008, 0009, 0010, 0011, 0013, 0026, 0048, 0050, 0051, 0128, 0227, 0253		
Rowa	0277, 0282, 0400, 0403, 0494	Sierra	0320, 0350	Symphonic	0051, 0058, 0062, 0128, 0179, 0215	Totevision	0007
Royal Lux	0161	Siesta	0161	Syntax	0199	Towada	0282, 0347
RTF	0339	Signature	0054	Syntax-Brilliant	0199	Trakton	0282
Runco	0030, 0050, 0062	Silva	0277	Sysline	0349	Trans Contines	0282, 0320
Saba	0298, 0322, 0339, 0345, 0347	Silver	0344	Sytong	0277	Tranotec	0277
Saisho	0282, 0323, 0337, 0342, 0343	Singer	0321, 0339, 0341	Tandy	0178, 0282, 0336, 0340, 0342, 0347	Trident	0282
Salora	0346, 0347	Sinudyne	0320, 0339, 0341, 0349			Triumph	0320
Sambers	0171, 0341	Skantic	0347	Tashiko	0277, 0282, 0342, 0344, 0346	Uher	0161, 0171, 0320, 0347, 0350
Sampo	0007, 0008, 0026, 0050, 0176, 0400	Skyworth	0402, 0492, 0493, 0495	Tatung	0052, 0177, 0282, 0320, 0342, 0349, 0350	Ultravox	0277, 0320, 0339, 0341, 0342
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	Solavox	0347	TCM	0337, 0343	Unic Line	0320
Sandra	0277, 0282, 0342	Sonitron	0161, 0282	TCL	0400, 0401, 0403, 0406, 0494	United	0349
Sansui	0043, 0109, 0320, 0350, 0400	Sonoko	0282, 0320, 0323, 0337, 0342, 0343, 0349, 0350	Teac	0282, 0320, 0400	Universum	0161, 0171, 0282, 0320, 0337, 0349, 0350, 0351
Sanyo	0008, 0019, 0068, 0070, 0071, 0099, 0161, 0168, 0223, 0237, 0277, 0282, 0288, 0295, 0323, 0342, 0344, 0369, 0469	Sonolor	0321, 0347	Tec	0282, 0323, 0342, 0343	Univox	0320
SBR	0320, 0349	Sontec	0161, 0320, 0349, 0350	Technics	0017, 0023, 0056	Vector Research	0050
Sceptre	0235, 0244	Sony	0038, 0044, 0045, 0047, 0055, 0090, 0104, 0105, 0107, 0110, 0123, 0184, 0220, 0248, 0249, 0251, 0252, 0254, 0326, 0343, 0344, 0371, 0374, 0457, 0475, 0486	TechniSat	0274, 0496, 0497, 0499	Vestel	0282, 0320, 0346, 0347, 0349, 0350, 0351
Schaub Lorenz	0347	Sound & Vision	0340, 0341	Techwood	0008, 0023, 0026, 0056	Vexa	0320, 0323, 0343, 0349
Schneider	0282, 0316, 0318, 0320, 0333, 0340, 0342, 0349, 0350, 0382	Soundesign	0008, 0026, 0031, 0058, 0059, 0179	TEDELEX	0282	Victor	0015, 0344, 0350
Scotch	0026, 0031	Soundwave	0320, 0349, 0350	Teknika	0007, 0008, 0010, 0012, 0026, 0053, 0054, 0058, 0059, 0179	VIDEOLOGIC	0277
Scott	0008, 0012, 0026, 0031, 0058, 0059, 0149, 0179	Squareview	0051	Teleavia	0345	Videologique	0277, 0282, 0340, 0342
Sears	0008, 0010, 0019, 0021, 0026, 0027, 0031, 0049, 0051, 0059, 0111	SSS	0008, 0058, 0179	Telecor	0282, 0320	VideoSystem	0320, 0350
SEG	0277, 0282, 0320, 0323, 0337, 0341, 0342, 0344, 0349, 0382	Standard	0282, 0320, 0323, 0340, 0342, 0343, 0350	Telefunken	0320, 0322, 0345, 0350	Videotechnic	0277, 0282
SEI	0320	Starlite	0058, 0179, 0320, 0323, 0349	Telegazi	0320	Vidikron	0010
SEI-Sinudyne	0339, 0341, 0347	Stenway	0348	Telemeister	0320	Vidtech	0008, 0026, 0031, 0053
Seleco	0344, 0346, 0347	Stern	0346, 0347	Telesonic	0320	Viewsonic	0176, 0203, 0232, 0364
		Strato	0320, 0323	Telestar	0320	Viking	0057
		Stylandia	0282	Teletech	0320, 0323, 0343, 0349	Viore	0148
		Sunkai	0343	Teleton	0282, 0342	Visiola	0277, 0342
		Sunstar	0320, 0323	Televideon	0277	Vision	0282, 0320, 0350
		Sunwood	0320, 0323, 0343, 0350	Televiso	0321	Vizio	0008, 0177, 0218, 0242, 0500, 0501, 0502, 0503, 0506
		Superla	0277, 0282, 0342	Tensai	0282, 0320, 0323, 0340, 0343, 0350	Vortec	0320, 0349, 0350
				Tesmet	0350	Voxsson	0171, 0320, 0339, 0346, 0347, 0350
				Tevion	0337, 0343	Waltham	0282, 0320, 0342
				Textet	0277, 0282, 0323, 0342		
				Thomson	0162, 0188, 0189, 0285, 0320, 0322, 0342, 0345, 0350		

Wards	0008, 0009, 0010, 0026, 0031, 0048, 0049, 0050, 0053, 0054, 0059	Baird	1009, 1025, 1026, 1027	Dynatech	1069	Hinari	1008, 1009, 1024, 1029
Watson	0320, 0349, 0350	Bang & Olufsen	1017	EchoStar	1018	Hisawa	1024
Watt Radio	0277, 0341, 0342	Basic Line	1008, 1009, 1024, 1025, 1029, 1030	Elbe	1009	Hitachi	1011, 1026, 1027, 1028, 1046, 1062
Waycon	0111	Baur	1028	Elcatech	1008	HNS	1110
Wega	0320, 0339, 0344	Beaumarck	1070	Electrohome	1071	Howard Computers	
Wegavox	0323	Bell & Howell	1065	Elsay	1008		1016
Weltblick	0282, 0320, 0349, 0350	Bestar	1009, 1025, 1030	Elta	1008, 1009, 1029	HP	1016
Westinghouse	0107, 0216, 0220	Black Panther Line		Emerson	1008, 1020, 1068, 1069, 1071	HTS	1018
White Westinghouse			1009, 1025	ESC	1009, 1025	Hughes	1111, 1113, 1122
	0037, 0090, 0277, 0320, 0341, 0342, 0349	Blaupunkt	1028	Etzuko	1008, 1029	Hughes Network Systems	
Wincom	0101, 0106	Bondstec	1008, 1030	Expressvu	1018		1110, 1116
Xrypton	0320	Broksonic	1100	Ferguson	1027	Humax	1012, 1110, 1113
Yamaha	0008, 0026, 0050, 0053, 0080, 0081, 0082, 0083, 0086, 0087	Bush	1008, 1009, 1024, 1025, 1029, 1049, 1051, 1063, 1217	Fidelity	1008, 1026	Hush	1016
Yamishi	0282, 0320	Calix	1071	Finlandia	1028	Hypson	1008, 1009, 1024, 1029
Yokan	0320	Candle	1070, 1071	Finlux	1026, 1027, 1028	iBUYPOWER	1016
Yoko	0161, 0277, 0282, 0320, 0323, 0337, 0340, 0342, 0343, 0349, 0350	Canon	1068	Firstline	1008, 1024, 1029, 1031	Impego	1030
Yorx	0340	Cathay	1009	Fisher	1065	Imperial	1026
Zanussi	0282, 0346	Catron	1030	Flint	1024	Inno Hit	1008, 1009, 1025, 1028, 1029, 1030
Zenith	0008, 0028, 0029, 0030, 0031, 0054, 0061, 0062	CGE	1026, 1027	Formenti/Phoenix	1028	Innovation	1024
		Cimline	1008, 1024, 1029	Frontech	1030	Instant Replay	1068
		CineVision	1104	Fuji	1068	Interbuy	1008, 1031
		Citizen	1070, 1071	Fujitsu	1026	Interfunk	1028
		Clatronic	1008, 1030	Funai	1026, 1069	Intervision	1009, 1026
		Colortyme	1064	Galaxy	1026	Irradio	1008, 1029, 1031
		Condor	1009, 1025, 1030	Garrard	1069	ITT	1027
		Craig	1070, 1071	Gateway	1016	ITV	1009, 1025, 1031
		Crown	1008, 1009, 1025, 1029, 1030	GBC	1029, 1030	JC Penney	1064, 1065, 1068, 1070, 1071
		Curtis Mathes	1064, 1068, 1070	GE	1068, 1070	JCL	1068
		Cybernex	1070	GEC	1028	JVC	1007, 1018, 1027, 1039, 1064, 1065, 1066, 1067, 1078, 1089, 1092, 1093, 1094, 1095, 1113, 1208, 1209, 1212, 1213, 1215, 1218
		CyberPower	1016	Geloso	1029		1008, 1029
		Daewoo	1009, 1025, 1030, 1038, 1069, 1223	General	1030	Karcher	1028
				General Technic	1024	Kendo	1008, 1024, 1025, 1030
		Dansai	1008, 1009, 1029	GOI	1018	Kenwood	1027, 1064, 1065
		Dantax	1024	GoldHand	1008, 1029	Kodak	1068, 1071
		Daytron	1009, 1025	Goldstar	1026, 1031, 1064, 1071	Korpel	1008, 1029
		DBX	1064	Goodmans	1008, 1009, 1025, 1026, 1029, 1030, 1031	Kyoto	1008
		De Graaf	1028			Lenco	1025
		Decca	1026, 1027, 1028	Gradiente	1069	Leyco	1008, 1029
		Dell	1016	Graetz	1027	LG	1010, 1026, 1031, 1047, 1054, 1056, 1071, 1103, 1221
		Denko	1008	Granada	1028		1024
		DiamondVision	1096	Grandin	1008, 1009, 1025, 1026, 1029, 1030, 1031	Lifetec	1016
		DigiFusion	1014			Linksys	1069
		DIRECTV	1019, 1105, 1110, 1111, 1113, 1116, 1122	Grundig	1028, 1029	Lloyd's	1069
		Dish Network	1018	Hanseatic	1009, 1028, 1031	Loewe Opta	1028, 1031
		Dishpro	1018	Harley Davidson	1069	Logik	1008, 1029
		Dual	1009, 1027, 1028	Harman/Kardon	1064		
		Dumont	1026, 1028	Harwood	1008		
		Durabrand	1114	HCM	1008, 1029		
				Headquarter	1065		
				Hewlett Packard	1016		

VCR

ABS	1016
Adventura	1069
Adyson	1008
Aiwa	1024, 1026, 1027, 1069
Akai	1021, 1027
Akiba	1008, 1029
Akura	1008, 1027, 1029
Alba	1008, 1009, 1024, 1025, 1029, 1030
Alienware	1016
Ambassador	1030
American High	1068
Amstrad	1008, 1009, 1026
Anitech	1008, 1029
Apex	1088
ASA	1028, 1031
Asha	1070
Asuka	1008, 1026, 1028, 1029, 1031
Audio Dynamics	1064
Audiosonic	1009
Audiovox	1071

Lumatron	1009, 1025	Panasonic	1000, 1022, 1044, 1055, 1068, 1072, 1085, 1090, 1091, 1120, 1121, 1214	Sanky	1114	TCM	1015, 1024, 1042
Luxor	1008			Sansui	1023, 1027, 1106, 1115	Teac	1009, 1069
LXI	1071			Sanyo	1032, 1065, 1070	Tec	1008, 1009, 1030
M Electronic	1026	Pathe Marconi	1027	Saville	1009	Technics	1068
Magnavox	1020, 1068, 1114, 1126	Perdio	1026	SBR	1028	Teknika	1068, 1069, 1071
Magnin	1071	Philco	1008, 1068	Schaub Lorenz	1026, 1027	Teleavia	1027
Manesth	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	Schneider	1008, 1009, 1024, 1025, 1026, 1028, 1029, 1030, 1031	Telefunken	1027
Marantz	1028, 1064, 1065, 1068			Sears	1065, 1068, 1071	Teletech	1008, 1009
Mark	1009			SEG	1008, 1009, 1029	Tenosal	1008, 1029
Marta	1071			SEI-Sinudyne	1028	Tensai	1008, 1026, 1029, 1031
Matsui	1024, 1031			Seleco	1027	Tevion	1024
Matsushita	1068	Philips Magnavox	1076	Sentra	1008, 1030	Thomson	1005, 1027
Media Center PC	1016	Phonola	1028	Sentron	1008, 1029	Thorn	1027
Mediator	1028	Pilot	1071	Sharp	1003, 1033, 1077, 1107, 1127, 1219	Tivo	1108, 1110, 1111, 1113, 1117, 1118, 1119, 1122
Medion	1024	Pioneer	1028, 1036			TMK	1070
MEI	1068	Polaroid	1088, 1099	Shintom	1008, 1029	Tokai	1008, 1029, 1031
Memorex	1023, 1026, 1031, 1065, 1068, 1069, 1070, 1071, 1098, 1114	Portland	1009, 1025, 1030	Shivaki	1031	Tonsai	1029
Memphis	1008, 1029	Prinz	1026	Shogun	1070	Toshiba	1004, 1016, 1027, 1028, 1037, 1049, 1052, 1086, 1087, 1097, 1109, 1112, 1194
MGN Technology	1070	Profex	1029	Siemens	1031	Totevision	1070, 1071
Micromaxx	1024	Proline	1026	Silva	1031	Touch	1016
Microsoft	1016	Proscan	1019	Silver	1009	Towada	1008, 1029
Microstar	1024	Prosonic	1009, 1024	Singer	1068	Towika	1008, 1029
Migros	1026	Pulsar	1114	Sinudyne	1028	TVA	1030
Mind	1016	Pye	1028, 1102	Solavox	1030	Uher	1031
Mitsubishi	1026, 1028, 1079	Quarter	1065	Sonic Blue	1022, 1123	UltimateTV	1019
Motorola	1068	Quartz	1065	Sonneclair	1008	Ultravox	1009
Motorola	1068	Quasar	1068	Sonoko	1009, 1025	Unitech	1070
MTC	1070	Quelle	1026, 1028	Sontec	1031	United Quick Star	1009, 1025
Multitech	1008, 1026, 1028, 1029, 1030, 1069, 1070	Radialva	1008	Sony	1001, 1016, 1048, 1053, 1073, 1074, 1080, 1081, 1082, 1083, 1108, 1118, 1216	Universum	1026, 1028, 1031
Murphy	1026	RadioShack	1071	Stack	1016	Vector Research	1064
NEC	1027, 1064, 1065	RadioShack/Realistic	1065, 1068, 1069, 1070, 1071	Stack 9	1016	Video Concepts	1064
Neckermann	1027, 1028	Radiola	1028	Standard	1009, 1025	Videon	1024
NEI	1028	Radix	1071	Stern	1009	Videosonic	1070
Nesco	1008, 1029	Randex	1071	STS	1068	Viewsonic	1016
Nikkai	1008, 1009, 1030	RCA	1019, 1068, 1070, 1075, 1110, 1113, 1122, 1125	Sunkai	1024	Voodoo	1016
Nikko	1071	Realistic	1065, 1068, 1069, 1070, 1071	Sunstar	1026	Wards	1068, 1069, 1070, 1071
Niveus Media	1016	ReplayTV	1022, 1123	Suntronic	1026	Weltblick	1031
Noblex	1070	Rex	1027	Sunwood	1008, 1029	XR-1000	1068, 1069
Nokia	1009, 1027	RFT	1008, 1028, 1030	Superscan	1020	Yamaha	1064, 1065
Nordmende	1027	Ricavision	1016	Sylvania	1020, 1068, 1069, 1102, 1126	Yamishi	1008, 1029
Northgate	1016	Roadstar	1008, 1009, 1025, 1029, 1031	Symphonic	1008, 1069, 1126	Yokan	1008, 1029
Oceanic	1026, 1027	Royal	1008	Systemax	1016	Yoko	1008, 1029, 1030, 1031
Okano	1008, 1009, 1024	Runco	1114	Tagar Systems	1016	Zenith	1114
Olympus	1068	Saba	1027	Taisho	1024	ZT Group	1016
Optimus	1071	Saisho	1024, 1029	Tandberg	1009		
Orion	1023, 1024, 1051, 1115, 1217	Samsung	1002, 1034, 1041, 1043, 1057, 1060, 1070, 1084, 1110, 1116, 1122, 1124, 1220, 1222	Tandy	1065		
Orson	1026			Tashiko	1026, 1071		
Osaki	1008, 1026, 1029, 1031	Samurai	1008, 1030	Tatung	1026, 1027, 1028		
Otto Versand	1028						
Palladium	1008, 1027, 1029, 1031						

DVD

4Kus	2051	Cinetec	2363	Funai	2137	Kiss	2380
Accurian	2142	CineVision	2133, 2237	Gateway	2051	KLH	2131, 2149
Advent	2155, 2251	Clatronic	2358, 2367	GE	2029, 2131, 2156	Koda	2358
AEG	2362	Coby	2031, 2046, 2360	Gericom	2351	Koss	2013, 2148, 2158
Airis	2364	Conia	2383	GFM	2226	KXD	2359
Aiwa	2322	Continental Edison	2363	Giec	2382	Landel	2143
Akai	2145, 2177, 2179, 2248	Crown	2362	Global Solutions	2355	Lasonic	2132
Akura	2356	C-Tech	2355	Global Sphere	2355	Lawson	2355
Alba	2064, 2165, 2186, 2337, 2346	Curtis Mathes	2139	Go Video	2133, 2213	Lecson	2381
Alco	2149	CVG	2377	Goodmans	2165, 2280, 2291, 2358, 2371, 2376, 2382	Lenco	2358, 2362, 2367
Alize	2361	CyberHome	2022, 2098, 2138, 2187, 2336	GPX	2227	Lenoxx	2136, 2153
Allegro	2133	Cytron	2244	Gradiente	2151	LG	2002, 2033, 2038, 2057, 2129, 2133, 2189, 2191, 2223, 2238, 2270, 2288, 2335, 2373, 2375
Amitech	2362	Daenyx	2363	Graetz	2380	Life	2182
Amphion MediaWorks	2195	Daewoo	2001, 2133, 2276, 2298, 2330, 2362, 2363, 2377	Greenhill	2131	Lifetec	2182
AMW	2195, 2363	Daewoo International	2363	Grundig	2349	Limit	2355
Apex	2030, 2124, 2125, 2126, 2127, 2130, 2131	Dalton	2357	Grunkel	2362, 2366	Liquid Video	2158
Apple	2241	Dansai	2362, 2381	GVG	2377	Liteon	2043, 2051, 2142
Argo	2138	Daytek	2184, 2195, 2363	H&B	2358	Loewe	2320
Asono	2364	Dayton	2363	H_her	2364	LogicLab	2355
Aspire	2152, 2222	DEC	2358	Haaz	2354, 2355	Magnavox	2025, 2050, 2137, 2150, 2159, 2224, 2230, 2358
Astar	2240	Decca	2362	Haier	2254	Magnex	2367
ATACOM	2364	Denon	2059, 2151, 2193, 2332	Harman/Kardon	2047, 2135	Majestic	2360
Audiovox	2061, 2149	Denver	2356, 2358, 2360, 2370	HiMAX	2359	Marantz	2328
Avioius	2367	Denzel	2380	Hitachi	2062, 2090, 2115, 2274, 2316, 2359, 2380	Marquant	2362
Awa	2363	Desay	2205	Hiteker	2130	Matsui	2148, 2378
Axion	2249	Diamond	2354, 2355	Home Tech Industries	2364	McIntosh	2199
Bang & Olufsen	2128	DiamondVision	2225, 2232	Hyundai	2366	Mecotek	2362
Baze	2367	Disney	2010, 2028	Ilo	2245	Medion	2182
BBK	2364	DK Digital	2339	Initial	2131, 2245	Memorex	2028, 2145, 2234
Bellagio	2363	Dmtech	2176	Innovation	2182	MiCO	2354, 2382
Best Buy	2359	Dual	2380	Insignia	2002, 2137, 2253	Micromaxx	2182
Blaupunkt	2131	DUNE	2473	Integra	2157	Microsoft	2156
Blue Parade	2157	Durabrand	2136	Irradio	2053	Microstar	2182
Boghe	2382	DVX	2355	iSymphony	2246	Minoka	2362
Brainwave	2362	Easy Home	2359	JBL	2135	Minowa	2367
Brandt	2148, 2188	Eclipse	2354	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	Mintek	2131, 2245
Broksonic	2145, 2146	E-Dem	2364	Jwin	2198	Mitsubishi	2003
Bush	2064, 2110, 2170, 2268, 2290, 2346, 2358, 2367, 2383	Electrohome	2362	Kansai	2360	Mizuda	2358, 2359
California Audio Labs	2151	Elin	2362	Kawasaki	2149	Monyka	2380
Cambridge Audio	2354	Elta	2341, 2361, 2362	Kennex	2362	Mustek	2186
CAT	2352, 2353	Emerson	2129, 2137, 2150	Kenwood	2041, 2151, 2348	Mx Onda	2354
CAVS	2192	Enterprise	2129	KeyPlug	2362	Mystral	2366
Centrum	2353	Enzer	2380	Kiiri	2362	Naiko	2362
CGV	2354, 2362	Epson	2247	Kingavon	2358	Nesa	2131
Changhong	2140	ESA	2137			Neufunk	2380
		Finlux	2354, 2362, 2367			Nevir	2362
		Fintec	2377			Next Base	2143
		Fisher	2134			Nexstech	2243

NU-TEC	2383	RedStar	2356, 2360, 2362	Standard	2355	XMS	2362
Onkyo	2159, 2368	Regent	2153	Star Cluster	2355	Xoro	2382
Oopla	2051	Reoc	2355	Starmedia	2358, 2364	Yamada	2051, 2361, 2363
Oppo	2196, 2255	Rimax	2361	Sungale	2204	Yamaha	2056, 2064, 2065, 2080, 2081, 2082, 2083, 2089, 2118, 2151, 2323
Optim	2381	Rio	2133	Sunkai	2362	Yamakawa	2363, 2380
Optimus	2180	Roadstar	2331, 2358	Superscan	2150	Yukai	2186
Orava	2358	Ronin	2363	Supervision	2355	Zenith	2002, 2129, 2133, 2159, 2223
Orbit	2363	Rotel	2203	Sylvania	2012, 2137, 2150, 2178, 2230, 2239		
Orion	2073, 2110	Rowa	2154, 2383	Symphonic	2108, 2230		
Oritron	2148, 2158	Rowsonic	2353	Synn	2355		
P&B	2358	Saba	2148, 2188	T.D.E. Systems	2366		
Pacific	2355	Sabaki	2355	Tatung	2001, 2362		
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	Saivod	2362	TCM	2182, 2297		
Parasound	2197	Sampo	2141	Teac	2149, 2333, 2355, 2383		
peeKTON	2364	Samsung	2000, 2045, 2077, 2112, 2113, 2114, 2115, 2151, 2200, 2216, 2219, 2228, 2264, 2265, 2271, 2279, 2294, 2303, 2329, 2365	Tec	2356		
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	Sansui	2073, 2145, 2354, 2355, 2362	Technics	2151		
Phonotrend	2367	Sanyo	2134, 2145, 2217, 2292	Technika	2362, 2367	LG	2033, 2456, 2457
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	ScanMagic	2186	Telefunken	2353	Marantz (US)	2454, 2455
Pointer	2362	Schaub Lorenz	2362	Tensai	2362	Mitsubishi	2450, 2451
Polaroid	2125, 2215, 2235	Schneider	2176	Tevion	2182, 2355, 2357	Onkyo	2504
Portland	2362	Scientific Labs	2355	Theta Digital	2157	Panasonic	2011, 2209, 2214, 2476, 2477, 2479
Powerpoint	2363	Scott	2161, 2357	Thomson	2183, 2188, 2334, 2372	Philips	2510
Prima	2252	Seeltech	2364	Tokai	2356, 2380	Pioneer	2212, 2506
Proceed	2130	SEG	2161, 2355, 2363, 2380	Top Sucess	2364	Samsung	2045, 2113, 2498
Proscan	2156	Sharp	2006, 2040, 2088, 2091, 2182, 2194, 2220, 2221, 2231, 2236, 2293, 2340	Toshiba	2032, 2036, 2037, 2039, 2048, 2049, 2054, 2055, 2072, 2073, 2076, 2078, 2079, 2086, 2145, 2159, 2218, 2233, 2256, 2259, 2296, 2369, 2472	Sharp	2194, 2220, 2221, 2497, 2502, 2503
Prosonic	2360, 2377	Shinsonic	2245	TRANScontinents	2363, 2367	Sony	2075, 2453, 2458, 2459, 2507
Protron	2202	Sigmatek	2359, 2364	Transonic	2367	Toshiba	2462
Provision	2358	Silva	2356	Trio	2362	Yamaha	2064, 2448, 2449, 2474, 2505
Pye	2144	Singer	2354, 2355	Trutech	2242		
Qwestar	2148	Skymaster	2325, 2355	TruVision	2359		
Raite	2380	Skyworth	2356	TSM	2364		
RCA	2021, 2029, 2104, 2105, 2131, 2149, 2156, 2157, 2229	Slim Art	2362	Umax	2361		
		SM Electronic	2355	United	2367		
		Sonic Blue	2133	Urban Concepts	2159		
		Sontech	2366	US Logic	2245		
		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	Venturer	2149		
		Soundmaster	2355	Viewmaster	2364		
		Soundmax	2355	Vocopro	2206		
		Spectra	2363	VocoStar	2207		
		Spectronic	2201	Waitec	2364		
				Welltech	2382		
				Westinghouse	2063, 2250		
				Wharfedale	2354, 2355		
				Woxter	2361, 2364		
				Xbox	2156, 2183		
				Xlogic	2355, 2362		

Blu-ray Disc

Denon	2452, 2500, 2501
Hitachi	2460, 2461, 2463
JVC	2472, 2473, 2475, 2478, 2496, 2499, 2511
LG	2033, 2456, 2457
Marantz (US)	2454, 2455
Mitsubishi	2450, 2451
Onkyo	2504
Panasonic	2011, 2209, 2214, 2476, 2477, 2479
Philips	2510
Pioneer	2212, 2506
Samsung	2045, 2113, 2498
Sharp	2194, 2220, 2221, 2497, 2502, 2503
Sony	2075, 2453, 2458, 2459, 2507
Toshiba	2462
Yamaha	2064, 2448, 2449, 2474, 2505

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, 2218
Victor	2475
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, 2239
Sylvania	
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 Comercrypt	
	3111
Finlux	3097
FIOS	3004
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
TELENET	3007
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

Satellite

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	Daewoo	4057, 4217	Finlandia	4006	Intertronic	4011
Armstrong	4011, 4053	DDC	4007	Finlux	4006	Intervision	4048, 4219
Artec	4100	Delega	4007	FinnSat	4050, 4052	ITT Nokia	4006
Asat	4053, 4055	Dew	4050	Flair Mate	4217	Jerrold	4019
ASLF	4217	Diamond	4051	Foxtel	4222, 4244, 4245, 4246, 4247	Johansson	4013
Astacom	4216	Digitality	4219	Freecom	4001, 4049, 4218	JOK	4216
Astra	4009, 4011, 4054, 4217, 4219	Digital Stream	4105	FTEmaximal	4024, 4217	JSR	4048
Astro	4004, 4008, 4010, 4015, 4024, 4213, 4218, 4219	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	Fuba	4001, 4008, 4014, 4015, 4024, 4055, 4215	JVC	4029, 4065, 4089, 4117
AudioTon	4004, 4048	Discoverer	4212	Galaxis	4005, 4008, 4009, 4024, 4048, 4050, 4215, 4222, 4246	Kamm	4217
Aurora	4222, 4246	Discovery	4216	GE	4066, 4093, 4111, 4197	Kathrein	4015, 4034, 4042, 4053, 4055, 4063, 4215, 4216, 4217
Austar	4222, 4246	Diseqc	4216	General Instrument	4019, 4073	Kathrein Eurostar	4215
Axiel	4216	Dish Network	4018, 4065, 4089, 4092, 4094, 4095, 4117	GMI	4011	Klap	4216
Axis	4008, 4009, 4024, 4050	Dishpro	4018, 4117	GOI	4117	Konig	4219
BBK	4205	Distrisat	4053	Goldbox	4213	Kosmos	4049
Best	4008, 4024	Ditristrad	4048	GoldStar	4049	KR	4004
Blaupunkt	4015	DNT	4014, 4053, 4055	Goodmans	4002, 4006, 4029	Kreiselmeier	4015
Blue Sky	4217	Drake	4072	Goodmind	4111	K-SAT	4217
Boca	4011, 4054, 4059, 4217	DStv	4222, 4246	Grandin	4031	Kyostar	4001
Boston	4216	Dune	4024, 4240, 4242	Grothusen	4001, 4049	L&S Electronic	4024
Brain Wave	4013	Echostar	4014, 4018, 4065, 4089, 4117, 4217	Grundig	4004, 4006, 4015, 4035, 4211, 4218, 4222, 4246	Lasat	4008, 4010, 4024, 4054, 4212, 4215, 4219
Broadcast	4012	Einhell	4001, 4005, 4011, 4217, 4218	Hänsel & Gretel	4219	Lasonic	4108
Broco	4217	Elap	4216, 4217	Hantor	4001, 4013	Lenco	4001, 4024, 4049, 4215, 4217, 4219
BSkyB	4035, 4041	Elekta	4010	Hanuri	4010	Leng	4013
BT	4216	Elsat	4217	Hauppauge	4044	Lennox	4048
Bubu Sat	4217	Elta	4001, 4008, 4024, 4048, 4053, 4055	Heliocom	4219	Lenson	4218
Bush	4006, 4045	Emanon	4001	Helium	4219	Lexus	4053
Cambridge	4218	Emme Esse	4008, 4024	Hinari	4007	LG	4049, 4103, 4107
Canal Satellite	4213	Engel	4217	Hirschmann	4015, 4024, 4210, 4216, 4218, 4219	Lifesat	4008, 4024, 4212, 4217
Canal+	4213	Ep Sat	4006	Hisawa	4013	Lifetec	4008
CaptiveWorks	4099	EURIEULT	4031	Hisense	4016	Lorenzen	4219
Channel Master	4007, 4110	Eurodec	4052	Hitachi	4006, 4114, 4199, 4203	Lorraine	4049
Chaparral	4075	Europa	4053, 4218, 4219	Homecast	4084, 4085, 4087	Lupus	4008, 4024
CHEROKEE	4216	Europhon	4219	Houston	4048	Luxor	4218
Chess	4212, 4217	Eurosat	4011	HTS	4117	Lyonnaise	4052
CityCom	4006, 4215, 4219	Eurosky	4008, 4011, 4215, 4218, 4219, 4024	Hughes	4064, 4068, 4192, 4194, 4196, 4202	Macab	4052
Clatronic	4013	Eurostar	4011, 4215, 4219	Hughes Network Systems	4202	Magnavox	4127, 4101
CNT	4010	Eutelsat	4217	Humax	4025, 4030, 4060, 4097	Manata	4031, 4216, 4217
Comag	4080, 4081, 4082, 4083, 4086	Exator	4001, 4004	Huth	4005, 4011, 4012, 4013, 4048, 4050, 4219, 4223	Manhattan	4006, 4010, 4048, 4216
Commlink	4005	Expressvu	4117	Hypson	4031	Marantz	4055
Comtech	4050	Fenner	4024, 4212, 4217	Ilo	4016	Mascom	4010
Condor	4008, 4024, 4219	Ferguson	4006, 4052, 4214	Imex	4031	Maspro	4006, 4217
Connexions	4014, 4024	Fidelity	4218	Innovation	4008	Matsui	4216
Conrad	4024, 4215, 4218, 4219			Insighia	4107	Max	4219
Conrad Electronic	4217, 4219					Mediabox	4213
Contec	4050					Mediamarkt	4011
Coolsat	4096					Mediasat	4009, 4213, 4218
Cosat	4048					Medion	4008, 4024, 4217
Coship	4109					Medison	4217
Crown	4011						
Daeryung	4014						

Mega	4053, 4055	Paysat	4127	Satelco	4024	Telecom	4217
Memorex	4127	PCT	4110	Satford	4012	Telefunken	4001, 4017, 4216
Metronic	4001, 4004, 4005, 4010, 4028, 4031, 4217	Philco	4101	Satmaster	4012	Teleka	4004, 4011, 4014, 4218, 4219
Metz	4015	Philips	4006, 4033, 4053, 4055, 4061, 4068, 4071, 4127, 4196, 4201, 4202, 4203, 4206, 4213, 4216	Satplus	4212	Telemaster	4010
Micro electronic	4217, 4218, 4219	Phoenix	4050	Schneider	4008, 4212, 4216	TELENET	4241
Micro Technology	4217	Phonotrend	4006, 4005, 4048	Schwaiger	4051, 4212, 4219	Telesat	4219
MicroGem	4106	Pioneer	4046, 4213	SCS	4215	Telestar	4212, 4213, 4218
Micromaxx	4008, 4024	Polsat	4052	Seemann	4009, 4011, 4014	Televés	4006, 4218
Microstar	4008	Predki	4013	SEG	4001, 4008, 4013, 4024	Telewire	4048
Microtec	4217	Premiere	4048, 4213	Seleco	4048	Tempo	4223
Minerva	4015	Priesner	4011	Servi Sat	4031, 4217	Tevion	4008, 4217
Mitsubishi	4006, 4015, 4202	Primestar	4076	Siemens	4015	Thomson	4006, 4020, 4052, 4058, 4208, 4213, 4215, 4216, 4217, 4219
Mitsumi	4054	Profile	4216	Silva	4049	Thorens	4051
Morgan's	4011, 4053, 4054, 4055, 4217	Promax	4006	Skantin	4217	Thorn	4006
Motorola	4019, 4088, 4090, 4091	Proscan	4066, 4093, 4122, 4197	Skardin	4009	Tivax	4104
Multichoice	4222, 4246	Protek	4051	Skinsat	4218	Tivo	4196
Multitec	4212	Proton	4016	SKR	4217	Tokai	4053
Muratto	4049	Provision	4010	Skymaster	4005, 4017, 4022, 4212, 4217	Tonna	4006, 4012, 4048, 4217, 4218
Mysat	4217	Quadral	4005, 4007, 4008, 4216, 4024	Skymax	4053, 4055	Toshiba	4194, 4202, 4203
Navax	4013	Quelle	4015, 4215, 4219	SkySat	4212, 4217, 4218, 4219	Triad	4049
Neuhaus	4009, 4048, 4217, 4218, 4219	Quiero	4052	Skyvision	4048	Triasat	4218
Neusat	4217	RadioShack	4019	SM Electronic	4212, 4217	Triax	4015, 4215, 4217, 4218
Next Level	4019	Radiola	4053, 4055	Smart	4215, 4217	Turnsat	4217
NextWave	4223	Radix	4014, 4037	Sony	4067, 4070, 4213	Tvonic	4214
Nikko	4011, 4217	Rainbow	4004	SR	4011, 4054	Twiner	4031, 4217
Nokia	4006, 4040	RCA	4066, 4093, 4112, 4113, 4116, 4118, 4119, 4197, 4122, 4207	Star Choice	4019	UEC	4222, 4246
Nordmende	4001, 4006, 4007, 4010, 4052	Realistic	4078	Starland	4217	Uher	4212
Nova	4222	Redpoint	4009	Starring	4013	UltimateTV	4070
Novis	4013	Redstar	4008, 4024	Start Trak	4001	Uniden	4079, 4127
Oceanic	4051	RFT	4005, 4053, 4055	Strong	4001, 4004, 4008, 4024, 4049, 4222, 4246	Unisat	4011, 4050, 4053
Octagon	4001, 4004, 4050	Roadstar	4217	STS	4115	Unitor	4013
Okano	4011	Roch	4031	STVI	4031	Universum	4015, 4215, 4219
Optex	4048	Rover	4024, 4217	Sumida	4011	US Digital	4016
Optus	4213, 4222, 4223, 4246	Saba	4010, 4215, 4216, 4219	Sunny Sound	4024	Variosat	4015
Orbitech	4001, 4212, 4213, 4218	Sabre	4006	Sunsat	4217	Vega	4024
OSat	4004	Sagem	4023, 4052	Sunstar	4011, 4024, 4054	Ventana	4053, 4055
Otto Versand	4015	Sakura	4050	Supermax	4223	Viewsat	4098
Pace	4006, 4015, 4035, 4043, 4047, 4204, 4216, 4243	Samsung	4000, 4001, 4003, 4032, 4064, 4069, 4071, 4120, 4123, 4196, 4200	Tandberg	4052	Visiosat	4013, 4048, 4216, 4217
Pacific	4051	SAT	4007, 4218	Tandy	4004	Voom	4019
Packsat	4216	Sat Cruiser	4223	Tantec	4006	Vortec	4001
Palcom	4007	Sat Partner	4001, 4004, 4010, 4013, 4049, 4218	TCM	4008	Welltech	4212
Palladium	4011, 4218	Sat Team	4217	Techniland	4012	WeTeKom	4212, 4218
Palsat	4212, 4218	Satcom	4012, 4219	TechniSat	4014, 4021, 4026, 4027, 4038, 4039, 4053, 4212, 4213, 4218	Wevasat	4006
Panasat	4222, 4246	Satec	4217	Technology	4222	Wewa	4006
Panasonic	4006, 4035, 4036, 4121, 4124, 4126, 4198, 4221			Technosat	4223	Winersat	4013
Panda	4006, 4219			Technowelt	4219	Wisi	4006, 4014, 4015, 4218, 4219
Pansat	4125			Teco	4011, 4054	Woorisat	4010
Patriot	4216			Telador	4007	Worldsat	4216
				Telasat	4215, 4219	Xrypton	4024
						XSat	4217

Zehnder	4008, 4209, 4010, 4215, 4024
Zenith	4102, 4107, 4195
Zodiac	4004

CD

Yamaha	5082, 5095, 5114
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CD Recorder

Yamaha	5083
--------	------

MD

Yamaha	5080, 5081, 5086
--------	------------------

Tape

Yamaha	5084, 5087
--------	------------

Tuner

Yamaha	5066, 5085, 5088, 5090, 5092
--------	------------------------------

LD

Yamaha	2080
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Amplifier

Yamaha	5019, 5020, 5098
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Apple TV

Apple	2241
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YAMAHA

AV Receiver

Safety Brochure

⏻ (Power key)

Turns on the power of this unit or sets it to the standby mode.

For more detailed information, refer to the Owner's Manual on the CD-ROM. To view the Owner's Manual, click on "English" in the screen displayed automatically when you insert the CD-ROM into your PC, or click on the model name if the screen to select models is displayed, and then click on "English" in the next screen. Then, follow the onscreen instructions.

If the screen is not displayed automatically, open the "index.html" in the CD-ROM.

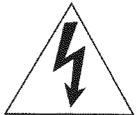
Caution: Do not attempt to play this CD-ROM in an audio player.

The Owner's Manual contained in the CD-ROM can be downloaded from the following website.
<http://download.yamaha.com/>

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.



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.

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 Corporation of America A/V Division, USA. 6660 Orangethorpe Ave., Buena Park, CA 90620.

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

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.

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 refer to the "Troubleshooting" section of the Owner's Manual on the CD-ROM for common operating errors before concluding that this unit is faulty.
- 17 Before moving this unit, press ϕ to set it to standby mode and disconnect the AC power plug from the wall outlet.
- 18 **VOLTAGE SELECTOR (General model)**
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
- 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 ϕ . 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.
- Keep batteries away from children. If a battery is accidentally swallowed, contact your doctor immediately.
- When not planning to use the remote control for long periods of time, remove the batteries from the remote control.
- Do not charge or disassemble the supplied batteries.

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.

Pb

[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.

Important Notice: Guarantee Information for customers in EEA* and Switzerland

English

For detailed guarantee information about this Yamaha product, and Pan-EEA* and Switzerland warranty service, please either visit the website address below (Printable file is available at our website) or contact the Yamaha representative office for your country. *EEA: European Economic Area

<http://europe.yamaha.com/warranty/>



Register Your New Yamaha Product

Thank you for purchasing a new product from Yamaha Electronics. We would like to continue providing you with high quality products and better service. Please take a few minutes to visit our website and complete the product registration process at www.yamaha.com/YEC/registration/

Yamaha is committed to doing it's part in protecting the environment and reducing the impact on our natural resources. As a result, this product is supplied with an electronic copy of the **manual on the enclosed disc** for use on your computer.

We appreciate your business and look forward to hearing from you soon.

Register online at www.yamaha.com/YEC/registration/

Product registration applies to USA customers only.

Failure to complete the registration form does not diminish your warranty rights in any way.





Yamaha Worldwide Representative Offices

For details of products, please contact your nearest Yamaha representative or the authorized distributor listed below.

Pour plus de détails sur les produits, contactez votre représentant Yamaha le plus proche de chez vous ou le distributeur agréé indiqué ci-dessous.

NORTH AMERICA

CANADA

Yamaha Canada Music Ltd.
135 Milner Avenue, Tronto ON M1S 3R1, Canada

U.S.A.

Yamaha Corporation of America
6600 Orangethorpe Ave., Buena Park, Calif. 90620,
U.S.A.

CENTRAL & SOUTH AMERICA

MEXICO

Yamaha de México S.A. de C.V.
Avenida Insurgentes número 1647,
Col. San José Insurgentes, C.P. 03900,
Deleg. Benito Juárez, México, D.F.

BRAZIL

Yamaha Musical do Brasil Ltda.
Rua Joaquim Floriano, 913 - 4' andar, Itaim Bibi,
CEP 04534-013 Sao Paulo, SP. BRAZIL

ARGENTINA

Yamaha Music Latin America, S.A.
Sucursal de Argentina
Olga Cossettini 1553, Piso 4 Norte
Madero Este-C1107CEK
Buenos Aires, Argentina

PANAMA AND OTHER LATIN AMERICAN COUNTRIES / CARIBBEAN COUNTRIES

Yamaha Music Latin America, S.A.
Torre Banco General, Piso 7, Urbanización Marbella,
Calle 47 y Aquilino de la Guardia,
Ciudad de Panamá, Panamá

EUROPE

EUROPEAN COUNTRIES

Yamaha Music Europe GmbH
Siemensstrasse 22-34, 25462 Rellingen, Germany

RUSSIA

Yamaha Music (Russia)
Room 37, bld. 7, Kievskaya street, Moscow,
121059, Russia

AFRICA

REPUBLIC OF SOUTH AFRICA

Tuning Fork Pty Ltd T/A Balanced Audio
19 Eastern Service Road, Eastgate, Sandton,
Gauteng, 2054, South Africa

OTHER COUNTRIES

Yamaha Music Gulf FZE
LOB 16-513, P.O.Box 17328, Jubel Ali, Dubai,
United Arab Emirates

As of September 2012
AVRO1201A

ZF73310

Yamaha Corporation, AV Products Division
Nakazawa-cho 10-1, Naka-ku, Hamamatsu, Japan 430-8650
ヤマハ株式会社
〒430-8650 静岡県浜松市中区中沢町 10-1



MIDDLE EAST

TURKEY / CYPRUS

Yamaha Music Europe GmbH
Siemensstrasse 22-34, 25462 Rellingen, Germany

OTHER COUNTRIES

Yamaha Music Gulf FZE
LOB 16-513, P.O.Box 17328, Jubel Ali,
Dubai, United Arab Emirates

ASIA

THE PEOPLE'S REPUBLIC OF CHINA

Yamaha Music & Electronics (China) Co., Ltd.
2F, Yunhedasha, 1818 Xinzha-lu, Jingan-qu,
Shanghai, China

INDIA

Yamaha Music India Pvt. Ltd.
Spazedge building, Ground Floor, Tower A, Sector
47, Gurgaon- Sohna Road, Gurgaon, Haryana, India

INDONESIA

PT. Yamaha Musik Indonesia (Distributor)
PT. Nusantik
Gedung Yamaha Music Center, Jalan Jend. Gatot
Subroto Kav. 4, Jakarta 12930, Indonesia

REPUBLIC OF KOREA

Yamaha Music Korea Ltd.
8F, 9F, Dongsung Bldg. 158-9 Samsung-Dong,
Kangnam-Gu, Seoul, Korea

MALAYSIA

Yamaha Music (Malaysia) Sdn., Bhd.
Lot 8, Jalan Perbandaran, 47301 Kelana Jaya,
Petaling Jaya, Selangor, Malaysia

SINGAPORE

Yamaha Music (Asia) PRIVATE LIMITED
Blk 202 Hougang Street 21, #02-00,
Singapore 530202, Singapore

THAILAND

Siam Music Yamaha Co., Ltd.
4, 6, 15 and 16th floor, Siam Motors Building,
891/1 Rama 1 Road, Wangmai,
Pathumwan, Bangkok 10330, Thailand

OTHER COUNTRIES

Yamaha Corporation,
Asia-Pacific Sales & Marketing Group
Nakazawa-cho 10-1, Naka-ku, Hamamatsu,
Japan 430-8650

OCEANIA

AUSTRALIA / NEW ZEALAND

Yamaha Music Australia Pty. Ltd.
Level 1, 99 Queensbridge Street, Southbank,
Victoria 3006, Australia



LIMITED WARRANTY ON HOME AUDIO PRODUCTS

Thank you for selecting a YAMAHA product. YAMAHA products are designed and manufactured to provide a high level of defect-free performance. Yamaha Corporation of America ("YAMAHA") is proud of the experience and craftsmanship that goes into each and every YAMAHA product. YAMAHA sells its products through a network of reputable, specially authorized dealers and is pleased to offer you, the Original Owner, the following Limited Warranty, which applies only to products that have been (1) directly purchased from YAMAHA's authorized dealers in the USA, including Puerto Rico (the "Warranted Area") and (2) used exclusively in the Warranted Area. YAMAHA suggests that you read the Limited Warranty thoroughly, and invites you to contact your authorized YAMAHA dealer or YAMAHA Customer Service if you have any questions.

THIS WARRANTY COVERS THE LISTED PRODUCTS AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP FOR THE NUMBER OF YEARS IDENTIFIED BELOW.

Warranty Term

Type of Product

Duration of Warranty from Date of Purchase by or for the Original Owner

A/V and Stereo Receivers, Processor and Integrated Amplifiers, Separate Amplifiers and Preamplifiers, Tuners, CD Players and Changers, HDD Players and Recorders, Network Players, Powered Loudspeakers, Media Controllers and Speaker Systems purchased individually, as a pair, or as part of an Integrated or Packaged System.

..... 2 years

Cassette Decks, Blu-ray Disc Players, DVD Players and Changers, Integrated Systems (Receiver or Amplifier combined or on same chassis with CD, DVD or Blu-ray Disc Player), Desktop Audio Systems (i.e. TSX and PDX Series), Multimedia Speakers, Headphones, Earphones and Accessories.

..... 1 year

Coverage: YAMAHA will, at its option, repair or replace the product covered by this warranty if it becomes defective, malfunctions or otherwise fails to conform with this warranty under normal use and service during the term of this warranty, without charge for labor or materials. Repairs may be performed using new or refurbished parts that meet or exceed YAMAHA specifications for new parts. If YAMAHA elects to replace the product, the replacement may be a reconditioned unit. You will be responsible for any installation or removal charges and for any initial shipping charges if the product(s) must be shipped for warranty service. However, YAMAHA will pay the return shipping charges to any destination within the USA if the repairs are covered by the warranty. This warranty does not cover (a) damage, deterioration or malfunction resulting from accident, negligence, misuse, abuse, improper installation or operation or failure to follow instructions according to the Owner's Manual for this product; any shipment of the product (claims must be presented to the carrier); repair or attempted repair by anyone other than YAMAHA or an authorized YAMAHA Service Center; (b) any unit which has been altered or on which the serial number has been defaced, modified or removed; (c) normal wear, battery or battery replacement and any periodic maintenance; (d) deterioration due to perspiration, corrosive atmosphere or other external causes such as extremes in temperature or humidity; (e) damages attributable to power line surge or related electrical abnormalities, lightning damage or acts of God; (f) RFI/EMI (Interference/noise) caused by improper grounding or the improper use of either certified or uncertified equipment, if applicable; or (g) interference arising from the use of wireless communication devices (e.g. 2.4 GHz cordless telephones), or other radio frequency emitting products such as microwave ovens, whether such interference impairs the operation of the product or vice-versa. Consult the Owner's Manual for guidance on set-up procedures for minimizing the risks of interference. Any evidence of alteration, erasing or forgery of proof-of-purchase documents will cause this warranty to be void. This warranty covers only the Original Owner and is not transferable.

In Order to Obtain Warranty Service: Warranty service will only be provided for defective products within the Warranted Area. Contact your local authorized YAMAHA dealer who will advise you of the procedures to be followed. If this is not successful, contact YAMAHA at the address, telephone number or website shown below. YAMAHA may request that you send the defective product to a local authorized YAMAHA Servicer or authorize return of the defective product to YAMAHA for repair. For products requiring in-home service, contact your local authorized Yamaha dealer to arrange for service. If you are uncertain as to whether a dealer has been authorized by YAMAHA, please contact YAMAHA's Service Department at the number shown below, or check Yamaha's website at <http://usa.yamaha.com>. Product(s) shipped for service should be packed securely and must be accompanied by a detailed explanation of the problem(s) requiring service, together with the original or a machine reproduction of the bill of sale or other dated, proof-of-purchase document describing the product, as evidence of warranty coverage. Should any product submitted for warranty service be found ineligible therefore, an estimate of repair cost will be furnished and the repair will be accomplished only if requested by you and upon receipt of payment or acceptable arrangement for payment.

Limitation of Implied Warranties and Exclusion of Damages: ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE APPLICABLE PERIOD OF TIME SET FORTH ABOVE. YAMAHA SHALL NOT BE RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE, DAMAGE TO ANY OTHER EQUIPMENT OR OTHER ITEMS AT THE SITE OF USE OR INTERRUPTION OF PERFORMANCES OR ANY CONSEQUENCES. YAMAHA'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, AT YAMAHA'S OPTION. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This is the only express warranty applicable to the product specified herein; Yamaha neither assumes nor authorizes anyone to assume for it any other express warranty.

If you have any questions about service received or if you need assistance in locating an authorized YAMAHA Servicer, please contact:



CUSTOMER SERVICE

Yamaha Corporation of America
6600 Orangethorpe Avenue, Buena Park, California 90620-1373
Telephone: 800-292-2982
<http://usa.yamaha.com>

Do not return any product to the above address without a written Return Authorization issued by YAMAHA.