YAMAHA

YSP-5100 / YSP-4100

Digital Sound Projector™

Owner's Manual

English
for Europe, Asia, Africa, Oceania, and Latin America

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About this manual

• Make sure you read precautions in "Safety and Accessory Information" (separate booklet) carefully before using this unit.
• This manual describes how to connect and operate this unit. For details regarding the operation of external components, refer to the supplied owner's manual for each component.
• Operations in this manual use keys on the supplied remote control of this unit unless otherwise specified.
• ☀ indicates a tip for your operation.
• An illustration of the remote control in the left pages of this manual indicates the keys to be used in two facing (left and right) pages.
• This manual is produced prior to production. Designs and specifications are subject to change in part as a result of improvements, etc. In case of differences between the manual and the product, the product has priority.

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INTRODUCTION

Digital Sound Projector

The Digital Sound Projector technology allows one slim unit to control and steer multiple channels of sound to generate multi-channel surround sound, thus eliminates the need for satellite loudspeakers and cabling normally associated with conventional surround sound systems. This unit also employs the beam modes that let you enjoy the surround sound (5 Beam, Stereo+3 Beam, 3 Beam for 5.1-channel audio, 5 Beam plus 2, Stereo + 3 Beam plus 2, 3 Beam for 7.1-channel audio) and 2-channel stereo playback.

HDMI (High-Definition Multimedia Interface)

◆ HDMI input x 4, HDMI output x 1
◆ HDMI interface for standard, enhanced, or high-definition video (including 1080p video signal transmission) as well as multi-channel digital audio based on HDCP
  – Automatic audio and video synchronization (lip sync) information capability
  – Deep Color video signal transmission capability
  – "x.v.Color" video signal transmission capability
  – High definition digital audio format signals capability
  – Multi-channel Linear PCM signal capability
◆ Simple and easy connections with HDMI supported external components
◆ Functional link which enables the remote control of your TV to control this unit (with an HDMI control-compatible TV)
  – Power mode switch capability (on/standby)
  – Volume adjustment capability
  – TV sounds reproduce device selection capability (this unit/TV)

AUTO SETUP (IntelliBeam)

This unit employs the automatic sound beam and acoustic optimization technology with the aid of the supplied IntelliBeam microphone. You can avoid troublesome listening-based speaker setup and achieve highly accurate sound beam adjustments that best match your listening environment.

Cinema DSP

This unit employs the Cinema DSP technology developed by Yamaha Electronics Corp. that lets you experience movies at home with all the original dramatic sound impact.

UniVolume

This unit employs the automatic volume adjustment function. You can limit the volume level of the TV so that it will not increase suddenly when whenever the contents being broadcast change (due to commercials, etc.).

Various digital audio decoders includes newly added HD audio decoder, and sound technologies

◆ Dolby TrueHD, Dolby Digital Plus, Dolby digital Surround EX, Dolby Digital, Dolby Pro Logic, Pro Logic II, Pro Logic IIx
◆ DTS-HD Master Audio, DTS-HD High Resolution Audio, DTS 96/24, DTS-ES, DTS, DTS-ES (discrete and matrix), DTS Neo: 6
◆ Music Enhancer to improve the sound quality of compression artifacts such as the MP3 format
◆ Bass Extension to produce powerful bass sounds

Sophisticated FM tuner

◆ 40-station random and direct preset tuning
◆ Automatic preset tuning

Radio Data System (Europe model only)

This unit employs the Radio Data System that is a data transmission system used by FM stations.

Wireless connection (AirWired)

◆ Wireless connection with iPod/iPhone, using Yamaha wireless transmitter for iPod (PDX-50TX/PDX-50BC)
◆ Wireless connection with subwoofer, using Yamaha wireless subwoofer kit (SWK-W10) (not available in some countries)
◆ iPod/iPhone interlock feature to turn on/off this unit or switch the input source in conjunction with iPod/iPhone operations

Versatile Remote Control

The supplied remote control comes with preset remote control codes used to control external components connected to this unit.

General operation flow

1 Install this unit and connect to other components.

"Installation" (page 10), "Connections" (page 12).

2 Run AUTO SETUP to optimize the beam and sound settings.

"AUTO SETUP (IntelliBeam)" (page 15).

3 Play back a source.

"Playback" (page 21).

4 Change the playback method (surround/stereo), CINEMA DSP and/or beam modes settings.

"Playback mode" (page 22).

5 Configure this unit's settings and/or set remote control codes.

"Customizing this unit (SET MENU)" (page 30), "Controlling external components" (page 39).

Controls and functions

Front panel
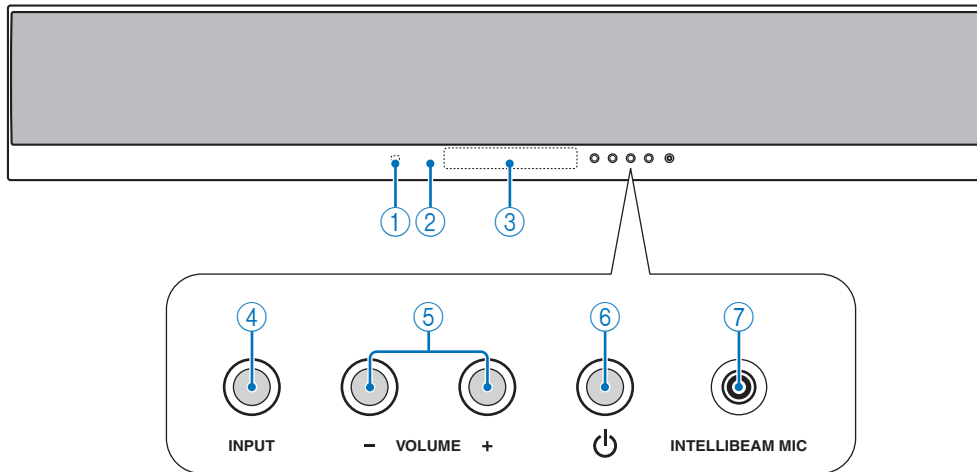
① **Remote control sensor**

Receives infrared signals from the remote control (page 14).

② **Power LED**

Lights up when the power is turned on (page 21).

③ **Front panel display**

Shows information about the operational status of this unit (page 7).

④ **INPUT**

Press repeatedly to switch between input sources.

⑤ **VOLUME +/–**

Controls the volume level of all audio channels.
Control range: MIN (minimum), 01 to 99, MAX (maximum)

⑥ **Power (⏻) key**

Turns on the power of this unit or sets it to the standby mode (page 21).

Note

• In the standby mode, this unit consumes a small amount of power in order to receive infrared signals from the remote control or to search for HDMI signals.

⑦ **INTELLIBEAM MIC jack**

Connect the supplied IntelliBeam microphone for AUTO SETUP (page 15).

Front panel display
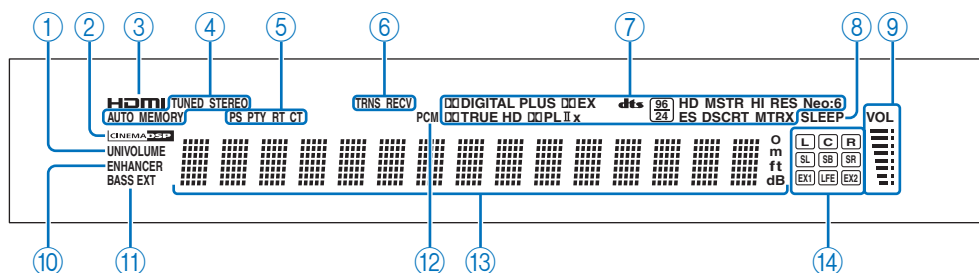
① **UNIVOLUME indicator**

Lights up when the UniVolume function is turned on (page 28).

② **CINEMA DSP indicator**

Lights up when a sound field program is selected (page 22).

③ **HDMI indicator**

Lights up when the signal of the selected input source is input from the HDMI IN jack(s).

④ **Tuner indicators**

Light up when this unit is tuned into an FM station (page 25).

⑤ **Radio Data System indicators (Europe model only)**

Show the current Radio Data System status (page 26).

⑥ **Wireless indicators**

TRNS Lights up when a wireless connection is established between the Yamaha wireless subwoofer kit (SWK-W10) and this unit (page 13).

RECV Lights up when a wireless connection is established between the Yamaha wireless transmitter for iPod (PDX-50TX) and this unit (page 27).

⑦ **Decoder indicators**

Light up when the corresponding decoder operates (page 21).

⑧ **SLEEP indicator**

Lights up when the sleep timer is set (page 28).

⑨ **Volume level indicator**

Displays the current volume level.

⑩ **ENHANCER indicator**

Lights up when the Music Enhancer is selected (page 34).

⑪ **BASS EXT indicator**

Lights up when the bass extension mode is turned on (page 34).

⑫ **PCM indicator**

Lights up when this unit is reproducing PCM (Pulse Code Modulation) digital audio signals.

⑬ **Multi-information display**

Shows information with alphanumeric characters when you adjust the parameters of this unit. Current input source and audio output method are displayed when this unit is turned on.

⑭ **Input channel indicators**

The channel component of the current input signal is displayed (page 21).

Rear panel
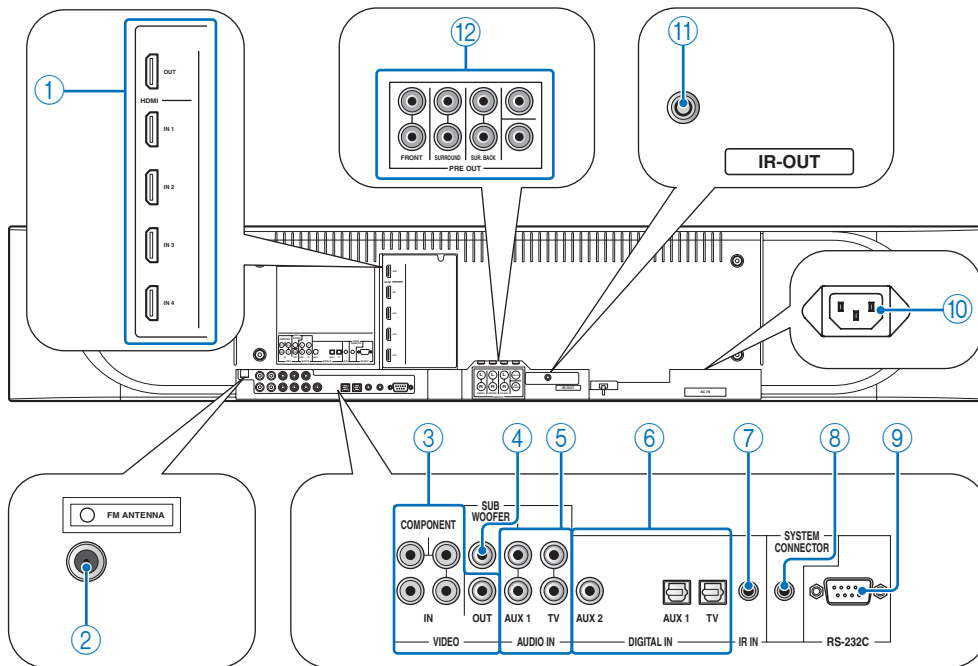
① **HDMI jacks**
Connect your HDMI components (page 12).

② **FM ANTENNA jack**
Connect the FM antenna (page 14).

③ **VIDEO jacks**
Connect to the video jacks of your external components (page 12).

④ **SUBWOOFER jack**
Connect your subwoofer (page 13).

⑤ **AUDIO IN jacks**
Connect to the analog audio output jacks of your external components (page 12).

⑥ **DIGITAL IN jacks**
Connect to the digital audio output jacks of your external components (page 12).

⑦ **IR IN terminal**
This is a control expansion terminal for commercial use only.

⑧ **SYSTEM CONNECTOR terminal**
Use to connect a Yamaha subwoofer equipped with a SYSTEM CONNECTOR terminal to this unit (page 13).

⑨ **RS-232C terminal**
This is a control expansion terminal for commercial use only.

⑩ **AC IN**
Connect the supplied power cable (page 12).

⑪ **IR-OUT terminal**
This is a control expansion terminal for commercial use only.

⑫ **PRE OUT jacks**
Connect your external amplifier (page 38).

Remote control
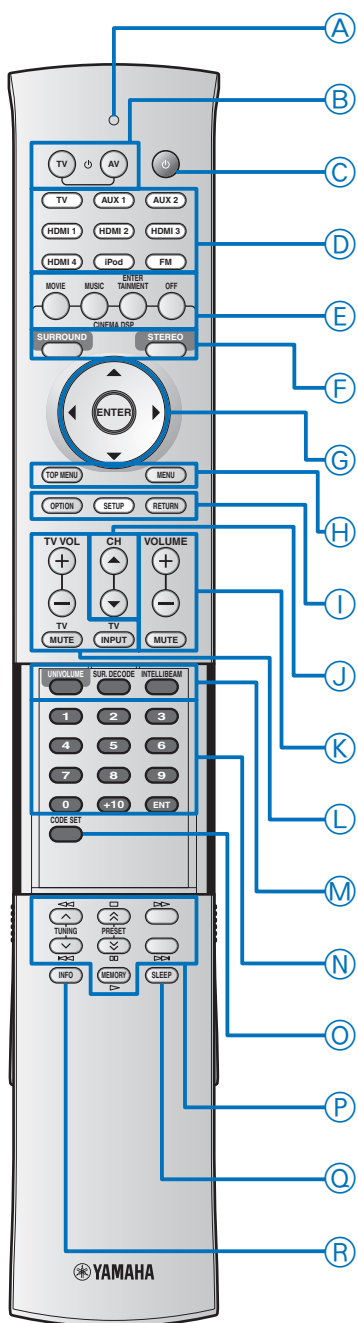
Note

• When operating the keys located on the slide cover (INFO, SLEEP, etc.), close the slide cover completely before operation.

Ⓐ **Transmission indicator**

Lights up when infrared control signals are being output.

Ⓑ **TV (⏻)**

Turns on the power of your TV or set it to the standby mode (page 39).

Ⓑ **AV (⏻)**

Turns on the power of the selected component or set it to the standby mode (page 39).

Ⓒ **Power (⏻) key**

Turns on the power of this unit or set it to the standby mode (page 21).

Ⓓ **Input selector keys**

Use to select an input source (page 21). An input source key currently selected lights up when the remote control is operated.

Ⓔ **CINEMA DSP program keys**

Select the CINEMA DSP programs (page 22).

Ⓕ **SURROUND/STEREO**

Switches between surround and stereo playback (page 22).

Ⓖ **Cursor (△ / ▽ / ◁ / ▷) keys, ENTER**

Select and adjust menu items.

Ⓗ **TOP MENU**

Displays the top menu of a Blu-ray disc or DVD (page 39).

Ⓗ **MENU**

Displays the menu of a Blu-ray disc or DVD (page 39).

Ⓘ **OPTION**

Displays the option menu (page 28). The remote control turns to setting mode (ⒾSETUP lights up).

Ⓘ **SETUP**

Displays the SETUP menu (page 30). Press and hold to directly enter the LANGUAGE SETUP menu (page 15). Lights up when the remote control is turned into the setting mode of the main unit.

Ⓘ **RETURN**

Returns to the previous menu screen (page 31).

Ⓙ **CH △ / ▽**

Changes the channels of your TV/recorder (page 39).

Ⓚ **VOLUME +/–**

Increases or decreases the volume level of this unit (page 21).

Ⓚ **MUTE**

Mutes the sound. (page 21).

Ⓛ **TV operation keys**

Use to control your TV (page 39).

Ⓜ **UNIVOLUME**

Turns on or off the UniVolume function (page 28).

Ⓜ **SUR.DECODE**

Selects a decoder for surround playback (page 24). The remote control turns to setting mode (ⒾSETUP lights up).

Ⓜ **INTELLIBEAM**

Enters the AUTO SETUP menu (page 16). The remote control turns to setting mode (ⒾSETUP lights up).

Ⓝ **Numeric keys**

Use to enter numbers.

Ⓞ **CODE SET**

Sets remote control codes for external component operations (page 39).

Ⓟ **Tuner / external component operation keys**

Use to select or preset an FM station or control playback of your external components (pages 25 and 39).

Ⓠ **SLEEP**

Sets the sleep timer (page 28).

Ⓡ **INFO**

Displays information about signals currently input to this unit (page 29). Select the desired Radio Data System display mode (Europe model only) (page 26).

PREPARATION

Installation

This section describes a suitable installation location to install this unit using a wall mount bracket, a rack, a table top stand or a floor stand. To achieve desired surround sound effects, install this unit where there are no objects such as furniture obstructing the path of sound beams (page 11). Depending on your installation environment, connections with external components (page 12) should be done before installation.

Notes

- Make sure you leave an adequate amount of ventilation space so that heat can escape. We recommend installing this unit using a wall mount bracket, a rack, a table top stand or a floor stand.
- Be sure to install this unit where it will not fall subject to vibrations, such as from an earthquake, and where it is out of the reach of children.
- When using a cathode-ray tube (CRT) TV, do not install this unit directly above your TV.
- If the picture on your TV screen becomes blurred or distorted, we recommend moving this unit away from your TV.

■ Attach the stands

Attach the supplied stands to this unit as shown below. Make sure that you attach the left and right stands correctly. These stands are unnecessary if you use the optional wall mount bracket.

Right stand (supplied)

Screws (for stands, supplied)

Left stand (supplied)
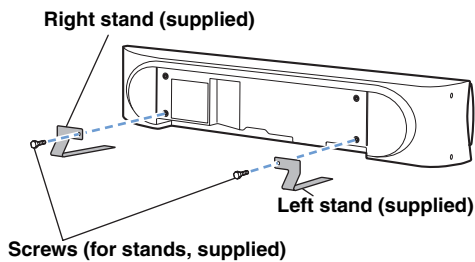
Note

- Depending on a rack, table top stand, or floor stand, the stands may not be necessary.

■ Using a rack

You can install this unit either above or under your TV in a commercially available rack.
It should be large enough to allow adequate ventilation space around this unit and strong enough to support the weight of both this unit and your TV.

When this unit is installed above your TV

TV

This unit

When this unit is installed under your TV
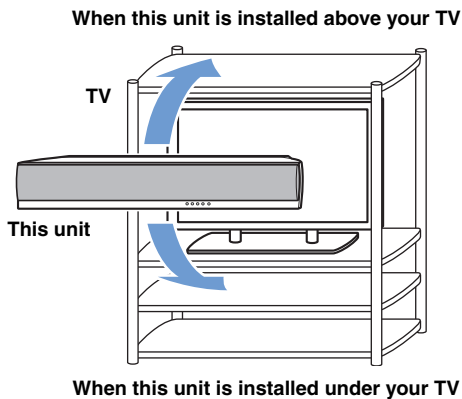
■ Using a wall mount bracket

You can use the optional wall mount bracket (such as SPM-K30) to mount this unit on the wall in your listening room.
Attachment of the wall mount bracket: refer to the owner's manual supplied with the wall mount bracket.

Wall mount bracket

This unit

TV
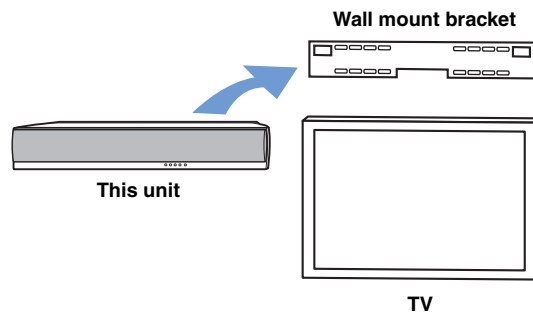
Dimensions when using SPM-K30

YSP-5100

SPM-K30 (Option)

YSP-4100

(mm)
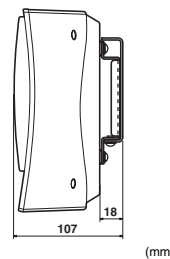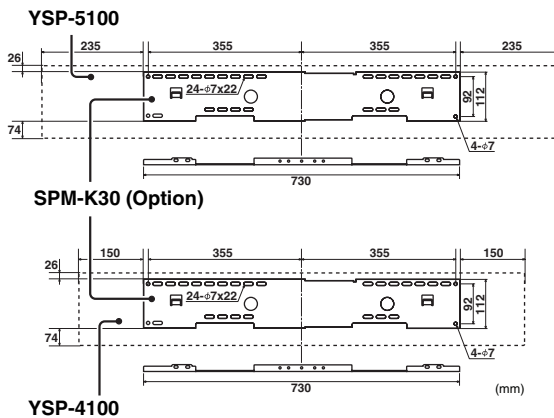
■ Using a table top stand or a floor stand

You can mount both your TV and this unit on a commercially available table top stand or floor stand.

■ Ideal installation condition

▨ **: Object such as furniture**

Parallel installation (with 5 Beam)
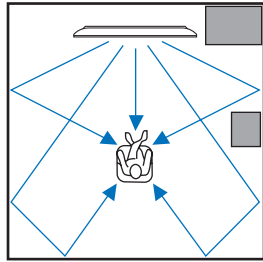
Corner installation (with Stereo+3Beam)

40° to 50°
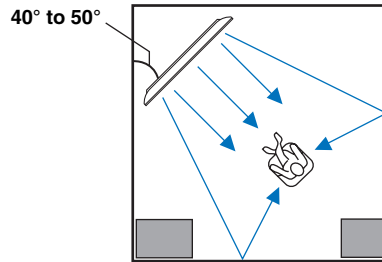
■ For better listening environment

Example 1

Install this unit as close to the exact center of the wall as possible.
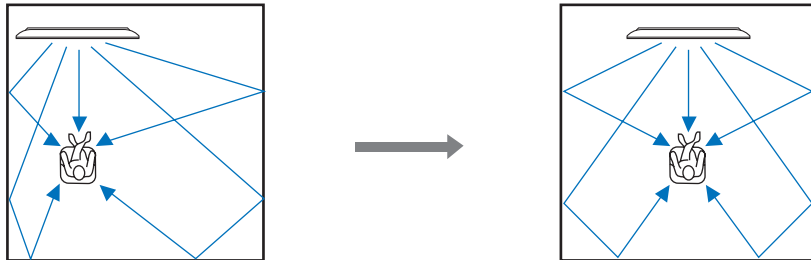
Example 2

Install this unit so that the sound beams can be reflected off the walls.
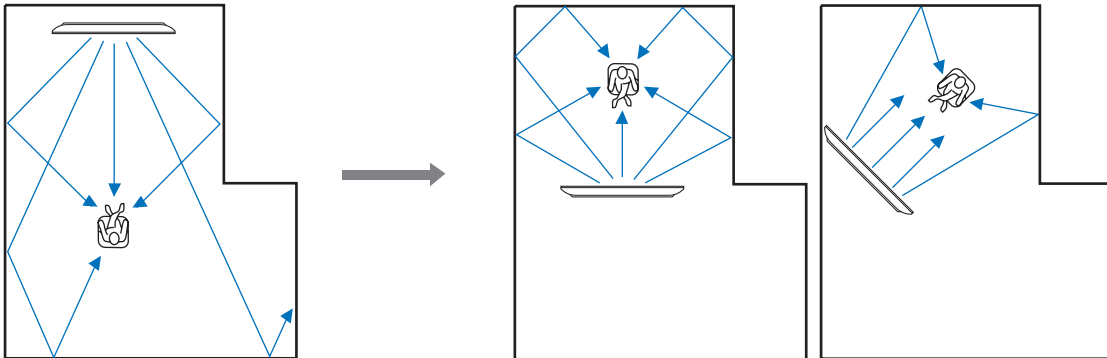
Example 3

Install this unit as close to the exact front of your normal listening position as possible.
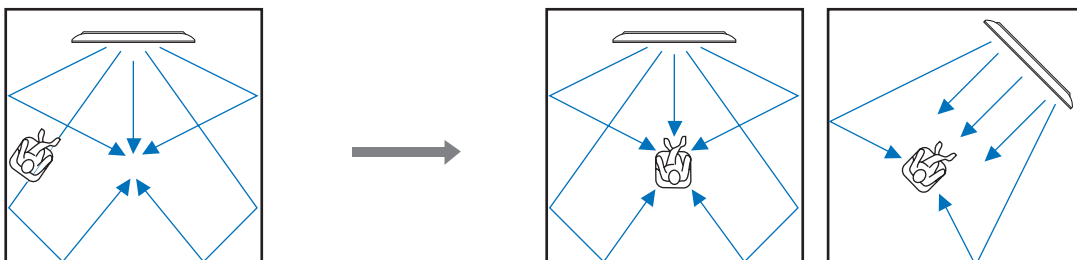
Connections

Before connecting components

■ Cables used for connections

The symbols on the left of cable names (such as ①, ①, and ①) correspond with the symbols described in "Connecting your TV and Blu-ray disc player" (page 12) and "Connecting audio video components" (page 13).

For audio and video

① HDMI cable

For audio

① Audio pin cable (supplied)
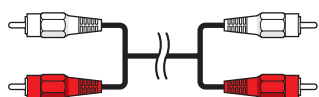
② Optical cable (supplied)
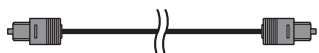
③ Digital audio pin cable (supplied)
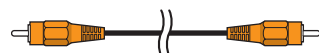
For video

① Video pin cable (supplied)
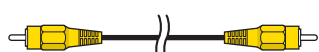
② Component video pin cable
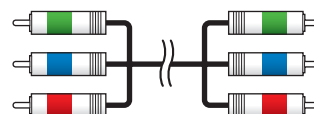
■ Information on HDMI

An HDMI cable can transmit both audio and video signals at the same time. If your TV and other components have HDMI jacks, use HDMI cables for simpler and easier connections.
See also: "Using the HDMI control function" (page 28), "INPUT MENU" (page 35)

Input source	Audio signal type
Blu-ray disc HD DVD	Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD High Resolution Audio, DTS-HD Master Audio, 2-channel PCM, multi-channel PCM
DVD video	Dolby Digital, DTS, 2-channel PCM, multi-channel PCM
DVD audio	2-channel PCM, multi-channel PCM

- This unit automatically converts input video signals and outputs the signals from the HDMI OUT jack.
- The HDMI of this unit supports High-Bandwidth Digital Content Protection (HDCP),
- We recommend that you use an HDMI cable shorter than 5 m (16 ft) with the HDMI logo printed on it.

■ Priority order for audio input signals

When digital and analog audio signals are simultaneously input from a single source component, this unit plays back digital audio signals by priority. For example, if audio signals are input to the DIGITAL IN (AUX 1) and AUDIO IN (AUX 1) jacks simultaneously, this unit plays back audio signals input to the DIGITAL IN (AUX 1) jack when "AUX1" is selected as the input source.

Connecting external components

Connect external components (TV, Blu-ray disc player, etc.) to this unit. Do not plug the power supply cable into an AC wall outlet until all connections are complete.

■ Connecting your TV and Blu-ray disc player

The following connection example shows a way to connect your TV and Blu-ray disc player by using the HDMI jacks. When you connect them by using the other jacks, refer to "Connecting audio and video components" (page 13). The symbols beside the cables correspond with the symbols described in "Cables used for connections" (page 12).
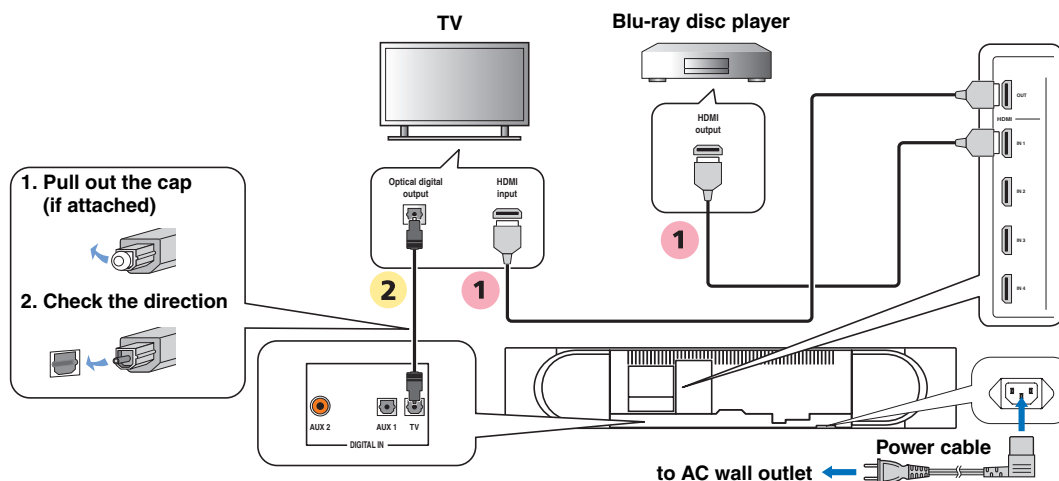
■ Connecting audio and video components

Determine the connection types depending on the jacks available on this unit and your external components. The symbols in the following table correspond with the symbols described in "Cables used for connections" (page 12).

VIDEO IN/OUT jacks   AUDIO IN jacks   DIGITAL IN jacks   HDMI IN jacks
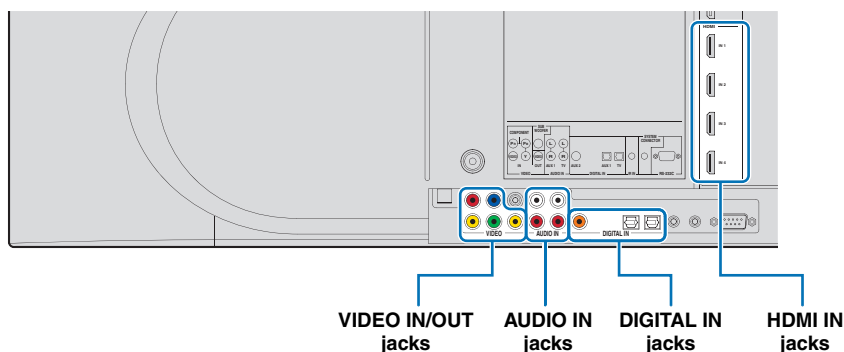
External component	Signal type	Jacks to use		Cable to use	Input selection key
		On external component	On this unit		
TV	Video	Composite video input	VIDEO OUT	1	
	Audio	Analog audio output	AUDIO IN (TV)	1	TV
External component with HDMI output	Audio/video	HDMI output	HDMI IN 1-4	1	HDMI1-4
External component with component video output	Audio	Coaxial digital output	DIGITAL IN (AUX 2)	3	AUX2
	Video	Component video output	VIDEO IN (COMPONENT)	2	
External component with composite video output	Audio	Optical digital output	DIGITAL IN (AUX 1)	2	AUX1
		Analog audio output	AUDIO IN (AUX 1)	1	
	Video	Composite video output	VIDEO IN (VIDEO)	1	

- Video signals input from the VIDEO IN (VIDEO) jack can be output not only to the VIDEO OUT jack but also the HDMI OUT jack. Video signals input from the VIDEO IN (COMPONENT) jacks are output to the HDMI OUT jack.

Connecting a subwoofer

Wireline connection

Connect the monaural input jack on your subwoofer to the SUBWOOFER jack on this unit.

Monaural input   System connector
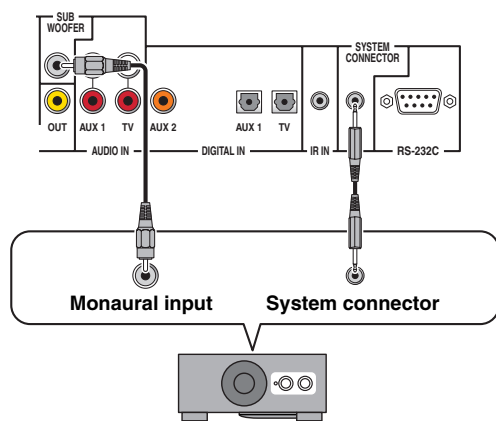
- If the subwoofer is connected by using a system type connection, changing the power mode of this unit controls the power mode of the subwoofer (Yamaha subwoofer).

Wireless connection

You can make a wireless connection of your subwoofer by using the Yamaha wireless subwoofer kit (SWK-W10). About SWK-W10, refer to "Safety and Accessory Information" (separate booklet). See also: "WIRELESS SETUP" (page 36)

Subwoofer
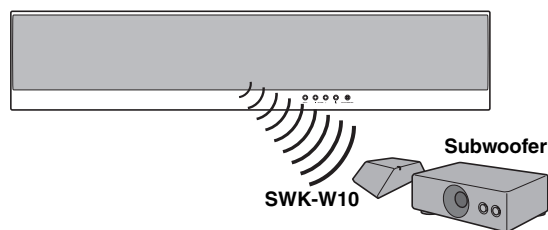
SWK-W10

- For proper transmission, you need to set the group IDs of this unit and SWK-W10 to the same value. For the Group ID settings, refer to "Group ID" (page 36) and "Safety and Accessory Information (separate booklet)".

Note

- Be sure to use the product only in the country in where it was purchased.

13 *En*

Connecting the FM antenna

Connect the supplied FM antenna or your antenna to the FM ANTENNA jack on this unit.

Antenna

FM ANTENNA
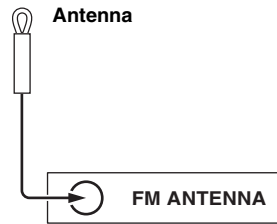
Preparing the remote control

Note

- Before installing batteries or using the remote control, make sure that you read precautions on the remote control and batteries in "Safety and Accessory Information" (separate booklet).

Installing batteries in the remote control

Pull and hold

1 Pull and hold the tab on the battery cover and then open the cover.

2 Insert the two supplied batteries (R03P, UM4, AAA) into the battery compartment.
Make sure you insert the batteries according to the polarity markings (+/–).

3 Close the battery cover.

Operation range of the remote control

The remote control transmits a directional infrared beam. Use the remote control within 6 m (20 ft) of this unit and point it toward the remote control sensor of this unit during operation.

Within 6m (20ft)

30°   30°

GENTER
G△ / ▽
ISETUP

Changing OSD language

You can select an OSD language among English, German, French, Spanish, Italian, Dutch and Russian. Before operating the following steps, select this unit as the video input on your TV.

1 Press and hold ①SETUP until the "LANGUAGE SETUP" menu appears on your TV.

```
3)LANGUAGE SETUP

→ ENGLISH
  DEUTSCH
  Français
  ESPAÑOL
  ITALIANO
  NEDERLANDS
  Русский
  [▲]/[▼]:Up/Down
  [ENTER]:Enter
```

2 Press ⑥△ / ▽ to select the desired language and then press ⑥ENTER.

Choices: ENGLISH (English), DEUTSCH (German), Français (French), ESPAÑOL (Spanish), ITALIANO (Italian), NEDERLANDS (Dutch), Русский (Russian)

Initial setting: ENGLISH (English)

3 To exit from the menu, press ①SETUP.

AUTO SETUP (IntelliBeam)

This unit creates a sound field by reflecting sound beams off the walls of your listening room and by broadening the cohesion of all the channels. Just as you would arrange the speaker position of other audio systems, you need to set the beam angle to enjoy the best possible sound from this unit.

Notes

- After you have completed the AUTO SETUP procedure, be sure to disconnect the IntelliBeam microphone.
- The IntelliBeam microphone is sensitive to heat.
  – Keep the IntelliBeam microphone away from direct sunlight.
  – Do not place the IntelliBeam microphone on top of this unit.
- You cannot use the AUTO SETUP when "PREOUT" is selected in "SOUND OUT" (page 35).
- You cannot run the AUTO SETUP while playing back the iPod/iPhone by using PDX-50TX. To run the AUTO SETUP, stop playback and then disconnect the iPod/iPhone from PDX-50TX. About PDX-50TX, refer to "Safety and Accessory Information" (separate booklet).

Installing the IntelliBeam microphone

Follow the procedure below to connect the IntelliBeam microphone to this unit and place it in a proper location.

1 Connect the supplied IntelliBeam microphone to the INTELLIBEAM MIC jack on the front panel.
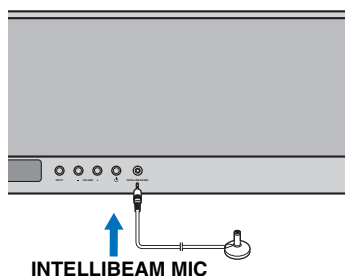
INTELLIBEAM MIC

2 Place the IntelliBeam microphone on a flat level surface at your normal listening position.

Place the IntelliBeam microphone on the extended center line of this unit and 1.8 m (6.0 ft) or more away from it. Also, make sure place the IntelliBeam microphone within 1 m (3.3 ft) upper or lower from the center height of this unit.

- Use the supplied cardboard microphone stand or a tripod to place the IntelliBeam microphone at the same height as your ears would be when you are seated.

IntelliBeam microphone
Upper limit
Center height of this unit
Within 1 m (3.3 ft)
Within 1 m (3.3 ft)
Cardboard microphone stand
1.8 m (6.0 ft) or more
Listening position
Lower limit

Center line
Cardboard microphone stand
IntelliBeam microphone
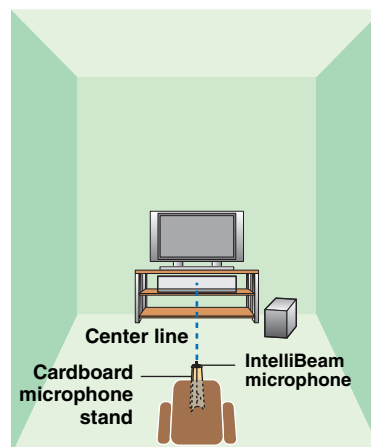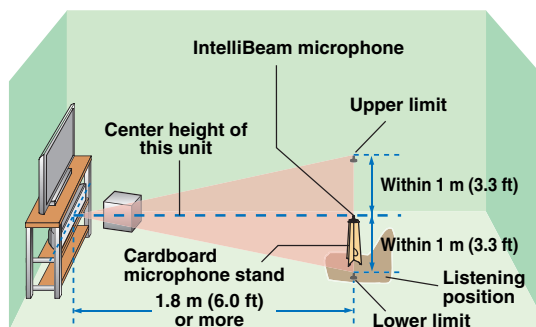
■ Assembling the supplied cardboard microphone stand

1

Remove

2

Fit in

3 Fit in

4 Place horizontally

5

Run through
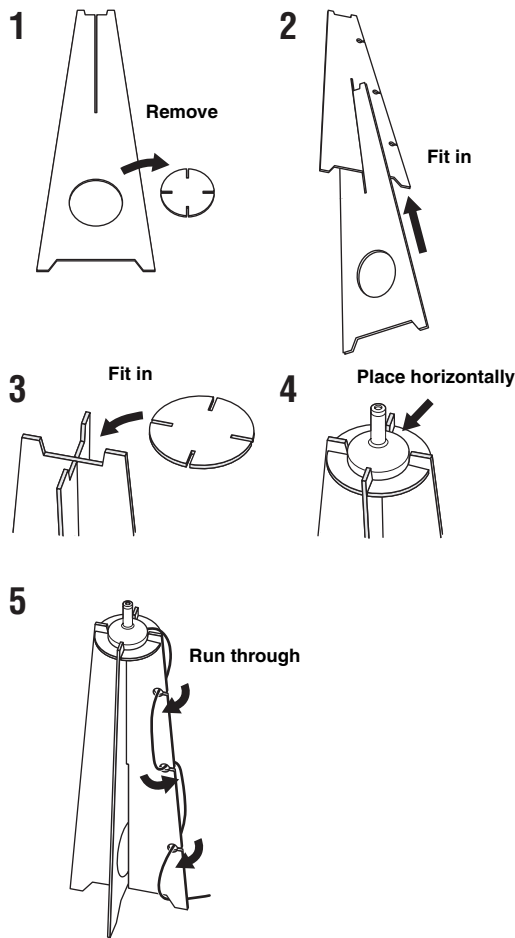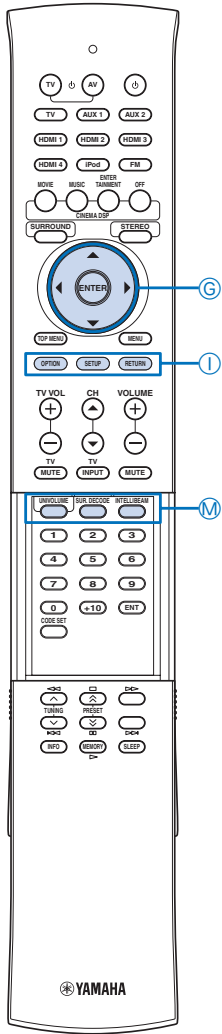
- ☼
- If a subwoofer with adjustable volume and crossover frequency controls is connected to this unit, turn it on, set the volume to about half way and then set the crossover frequency to the maximum as shown below.

VOLUME

CROSSOVER HIGH CUT

MIN   MAX

MIN   MAX

Subwoofer
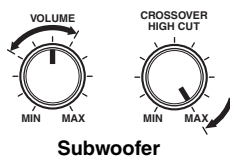
Using AUTO SETUP (IntelliBeam)

You can select one of the following AUTO SETUP types depending on your purpose.

"BEAM+SOUND OPTIMZ"

(Beam optimization and sound optimization)
Use to optimize the beam angle, delay, volume, and quality so that the parameters best match your listening environment. It is recommended that you should select this optimization feature in the following cases:
- If you make settings for the first time
- If the unit has been relocated
- If your listening room has been restructured
- If the objects in your listening room (furniture, etc.) have been rearranged

This menu takes about three minutes.

"BEAM OPTIMZ ONLY"

(Beam optimization only)
Use to optimize the beam angle so that the parameter best matches your listening environment.
This menu takes about one minute.

"SOUND OPTIMZ ONLY"

(Sound optimization only)
Use to optimize the beam delay, volume, and quality so that the parameters best match your listening environment. You must optimize the beam angle with "BEAM OPTIMZ ONLY" before starting "SOUND OPTIMZ ONLY". It is recommended that you should select this optimization feature in the following cases:
- If you have opened or closed the curtains in your listening room before using this unit
- If you have manually set the beam angle.

This menu takes about three minutes.

Notes

- It is normal for loud test tones to be output during the AUTO SETUP procedure. Make sure that there are no children around in the listening room while the AUTO SETUP procedure is in progress.
- Make sure that your listening room is as quiet as possible. For accurate measurement, turn off air conditioner or other devices that make noises.
- To achieve the best results possible, vacate your listening room until the AUTO SETUP procedure is completed so that you may not obstruct the path of sound beams.
- If there are curtains in your listening room, we recommend following the procedure below.
  1. Open the curtains to improve sound reflection.
  2. Run "BEAM OPTIMZ ONLY".
  3. Close the curtains.
  4. Run "SOUND OPTIMZ ONLY".

- ☼
- To return to the previous screen while using SET MENU, press ⒾRETURN.

1 **Press ⒾSETUP.**

The remote control keys to be used and available operations in each step are displayed at the bottom of the screen.

```
SET MENU
→・MEMORY
 ・AUTO SETUP
 ・MANUAL SETUP
 ・SOUND SET MENU
 ・SOUND OUT MENU
 ・INPUT MENU
 ・DISPLAY MENU
 [▲]/[▼]:Up/Down
 [ENTER]:Enter
```

- ☼
- You can also start the "BEAM+SOUND OPTIMZ" procedure simply by holding down ⓂINTELLIBEAM for more than two seconds. In this case, proceed to step 4.

ⒼENTER

Ⓖ△ / ▽

ⒾRETURN

ⒾSETUP

ⓂINTELLIBEAM

2 Press Ⓖ△ / ▽ to select "AUTO SETUP" and then press ⒼENTER.

```
B)AUTO SETUP

1)BEAM+SOUND OPTIMZ
2)BEAM OPTIMZ ONLY
3)SOUND OPTIMZ ONLY




[▲]/[▼]:Up/Down
[ENTER]:Enter
```

3 Press Ⓖ△ / ▽ to select "BEAM+SOUND OPTIMZ", "BEAM OPTIMZ ONLY" or "SOUND OPTIMZ ONLY" and then press ⒼENTER.

```
AUTO SETUP
PREPARATION & CHECK
Please connect the MIC.
Please place the MIC at least
1.8m/6ft away from the unit.
The MIC should be set
at ear level when seated.
Measurement takes about 3min.
After [ENTER] is pressed,
please leave the room.
[ENTER]:Start [RETURN]:Cancel
```

4 Prepare to leave the room.

The best setting may not be done if you are in the room. Prepare to leave the room in 10 seconds after pressing ⒼENTER in step 5.

☀️
- Wait outside the room during the AUTO SETUP procedure.
- The AUTO SETUP procedure takes about 3 minutes.
- To cancel the AUTO SETUP procedure after it is started, press ①RETURN.

5 Press ⒼENTER to start the AUTO SETUP procedure and then leave the room within 10 seconds.

```
AUTO SETUP START

Will begin in 10sec

Please leave the room

*────────
[RETURN]:Cancel
```

The setup screen automatically changes during the AUTO SETUP procedure.

If an error occurs, an error buzzer sounds and an error message is displayed. For details on error messages, see "Error messages for AUTO SETUP" (page 18).

If the AUTO SETUP procedure is complete, this unit rings the chimes.

```
SHOW RESULT

MEASUREMENT COMPLETE

BEAM MODE :5Beam/Plus2
SUBWOOFER :YES

[ENTER]:Save set-up.
[RETURN]:Do not save set-up.
```
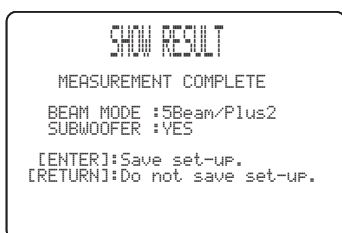
☀️
- If "ENVIRONMENT CHECK [FAILED]" is displayed, refer to "Error messages for AUTO SETUP" (page 18), press ①RETURN, and then run the AUTO SETUP procedure again.
- If "SUBWOOFER :NOT APPLICABLE" is displayed even though a subwoofer is connected to this unit and turned on, check the connection and then increase the volume level of the subwoofer and run the AUTO SETUP procedure again.
- Depending on the environment of your listening room, the beam angles of front right and left and surround left and right may be set to the same value even if "BEAM MODE :5 BEAM" is displayed as a result.

6 Press ⒼENTER to confirm the results.

The menu screen disappears in two seconds.

```
AUTO SETUP COMPLETE

Please remove the MIC from
the unit and the listening
position.
```

☀️
- If you do not want to reflect the results, press ①RETURN.

7 Disconnect the IntelliBeam microphone.
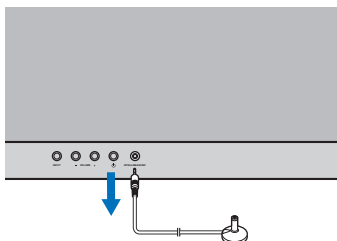
The measurement results are stored in the internal memory of this unit until you run the AUTO SETUP procedure again or configure the settings manually.

■ Error messages for AUTO SETUP

If an error message is displayed on your TV, check the error message list to solve the problem and then follow the procedure below.
[ERROR E-1]: Press ⑥ENTER to run the AUTO SETUP procedure again or ①RETURN to cancel the operation
Other errors: Press ①RETURN to cancel the operation and then run the AUTO SETUP procedure again.

Note

If the problem is difficult to be solved, configure the settings manually in "MANUAL SETUP" (page 31).
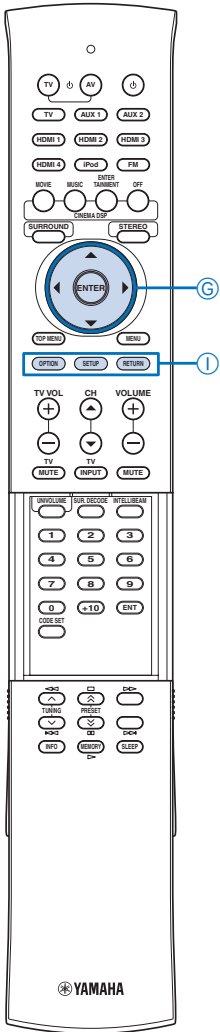
Error message	Cause	Remedy	See page
ERROR E-1 **Please test in quieter environment.**	There is too much unwanted noise in your listening room.	Make sure that your listening room is as quiet as possible. You may want to choose certain hours during the day when there is not much noise coming from outside.	—
ERROR E-2 **No MIC detected. Please check MIC connection and re-try.**	The IntelliBeam microphone is not connected to this unit or disconnected during the AUTO SETUP procedure.	Connect the IntelliBeam microphone to this unit firmly.	15
ERROR E-3 **Unexpected control is detected. Please re-try.**	Some other operations were performed on this unit while the AUTO SETUP procedure was in progress.	Do not perform any other operations while the AUTO SETUP procedure is in progress.	—
ERROR E-4 **Please check MIC position. MIC should be set in front of the unit and re-try.**	The IntelliBeam microphone is not placed in front of this unit.	Make sure that the IntelliBeam microphone is installed in front of this unit.	15
ERROR E-5 **Please check MIC position. MIC should be set above 1.8m/6.0ft and re-try.**	The IntelliBeam microphone is not placed in the right distance from this unit.	Make sure that the IntelliBeam microphone is installed more than 1.8 m (6.0 ft) from the front of this unit and within 1 m (3.3 ft) from the center height of this unit.	15
ERROR E-6 **Volume level is lower than expected. Please check MIC position/connection and re-try.**	The IntelliBeam microphone cannot collect the sound produced by this unit because the sound output level is too low.	Make sure that the IntelliBeam microphone is firmly connected to this unit and placed in a proper location. If the problem persists, contact the nearest authorized Yamaha service center for assistance.	15
ERROR E-7 **Unexpected error happened. Please re-try.**	An internal system error occurred.	Repeat the AUTO SETUP procedure.	—

⑥ENTER
⑥△ / ▽
①RETURN
①SETUP

Using the system memory

You can save the current beam and sound settings in the system memory of this unit. It is handy to save certain settings according to the varying conditions of your listening environment. For example, if there are curtains in the path of sound beams, the effectiveness of the sound beams will vary depending on whether the curtains are open or closed.

☀️
- If there are curtains in your listening room, we recommend following the procedure below.
   1. While the curtains are open, run "BEAM+SOUND OPTIMZ" (page 16) and then save the settings to "MEMORY1".
   2. While the curtains are closed, run "SOUND OPTIMZ ONLY" (page 16) and then save the settings to "MEMORY2".

Saving settings

1   **Press ⓘSETUP.**

```
         SET MENU

   →·MEMORY
    ·AUTO SETUP
    ·MANUAL SETUP
    ·SOUND SET MENU
    ·SOUND OUT MENU
    ·INPUT MENU
    ·DISPLAY MENU
   [▲]/[▼]:Up/Down
   [ENTER]:Enter
```

2   **Press ⒢ENTER.**

```
         A)MEMORY

    1)LOAD
    2)SAVE



   [▲]/[▼]:Up/Down
   [ENTER]:Enter
```
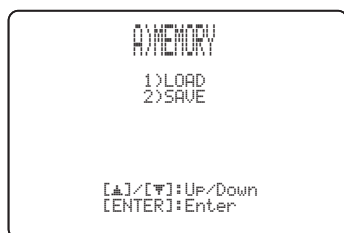
3   **Press ⒢ △ / ▽ to select "SAVE" and then press ⒢ENTER.**

```
        2)MEMORY SAVE

     a)MEMORY1
     b)MEMORY2
     c)MEMORY3


   [▲]/[▼]:Up/Down
   [ENTER]:Enter
```

4   **Press ⒢ △ / ▽ to select the desired memory number and then press ⒢ENTER.**

```
        2)MEMORY SAVE

    MEMORY1 Save Now?



     [ENTER]:Enter
```

☀️
- If system settings are already stored in the selected memory number, this unit overwrites the old settings.

5   **Press ⒢ENTER.**
The current beam and sound settings are saved to the selected memory number.

```
        2)MEMORY SAVE

    MEMORY1 Saving...
```

Loading settings

1   **Press ⓘSETUP.**

```
         SET MENU

   →·MEMORY
    ·AUTO SETUP
    ·MANUAL SETUP
    ·SOUND SET MENU
    ·SOUND OUT MENU
    ·INPUT MENU
    ·DISPLAY MENU
   [▲]/[▼]:Up/Down
   [ENTER]:Enter
```

2   **Press ⒢ENTER.**

```
         A)MEMORY

    1)LOAD
    2)SAVE



   [▲]/[▼]:Up/Down
   [ENTER]:Enter
```

3   **Press ⒢ENTER again.**

```
        1)MEMORY LOAD

     a)MEMORY1
     b)MEMORY2
     c)MEMORY3


   [▲]/[▼]:Up/Down
   [ENTER]:Enter
```

INTRODUCTION

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AUTO SETUP (IntelliBeam)

Using the system memory

4 **Press Ⓖ △ / ▽ to select the memory number to be loaded and then press Ⓖ ENTER.**

```
1)MEMORY LOAD

MEMORY1 Load Now ?



Push [ENTER] to Load
```
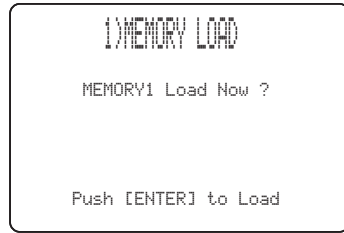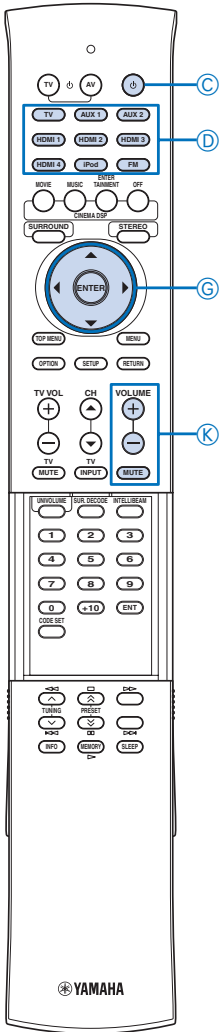
5 **Press Ⓖ ENTER.**

The beam and sound settings saved in the selected memory number are loaded.

```
1)MEMORY LOAD

MEMORY1 Loading...
```
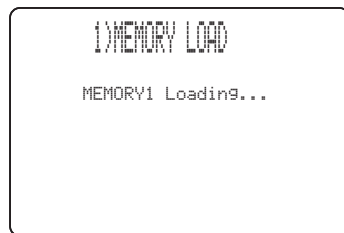
ⒸPower
ⒹAUX1/2
ⒹHDMI1
ⒹHDMI1-4
ⒹInput selector keys
ⒹTV
ⒼENTER
Ⓖ△ / ▽
ⓀMUTE
ⓀVOLUME +/−

PLAYBACK FEATURES

Playback

Playing back sources

This section describes how to playback source input from your external components. For details on your external components, refer to the owner's manual supplied with each component.

1 **Press ⒸPower (⏻) key to turn on this unit.**

2 **Turn on external components (TV, Blu-ray disc player, etc.) connected to this unit.**

3 **Press one of the ⒹInput selector keys to select an external component as an input source.**

Input source name

```
HDMI1
```
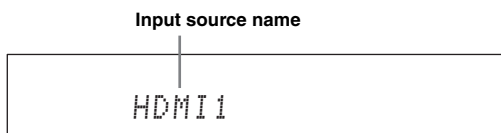
☼
• You can change the input source name displayed on the front panel display (page 35).

4 **Start playback of the external component that you have selected as the input source, or select a radio station on the tuner.**
- • FM tuning (page 25)
- • Playing back iPod/iPhone (page 27)

5 **Press ⓀVOLUME +/– to adjust the volume.**

Volume

```
Volume 40
```
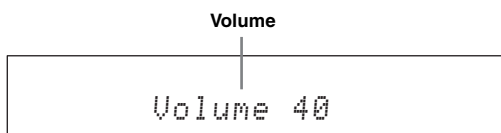
6 **Press ⒸPower (⏻) key to turn this unit to the standby mode.**

Playing back TV sounds

1 **Select the desired TV channel.**

2 **Press ⒹTV to select the TV as the input source.**

3 **Mute the sound output on the TV.**

Playing back a player

1 **Select the player as the video input on the TV.**

2 **Press ⒹHDMI1-4 or ⒹAUX1/2 to select the player as the input source.**
For example, if the player is connected to the HDMI IN 1 jack of this unit, press ⒹHDMI1.

3 **Start playback of the player.**

4 **Mute the sound output on the TV.**

☼
• If your player supports the HD audio, check whether the audio output setting on the player is set to the value which supports HD audio output ("Auto", "Bitstream", etc.).
• If your player does not support the HD audio, check whether the audio output setting on the player is set to multi-channel linear PCM.
• If your player is connected to this unit through the digital connection, check whether the audio output setting on the player is set to digital output ("Bitstream", "Dolby Digital", "DTS", etc.).
• To enhance the surround sound effect, set the audio setting of your player to the multi-channel audio mode.
• You can use the supplied demonstration DVD to check the digital signals being input from the player through the digital connection (HDMI, optical or coaxial). The ▯▯ DIGITAL indicator lights up when this unit detects the digital audio signal input.

Muting audio output

1 **Press ⓀMUTE to mute the audio output.**

2 **Press ⓀMUTE again to resume audio output.**

Decoder and input channel indicators

■ **Decoder indicators**

Depending on the input source and the selected decoder, the indicators in the front panel display light up as follows:
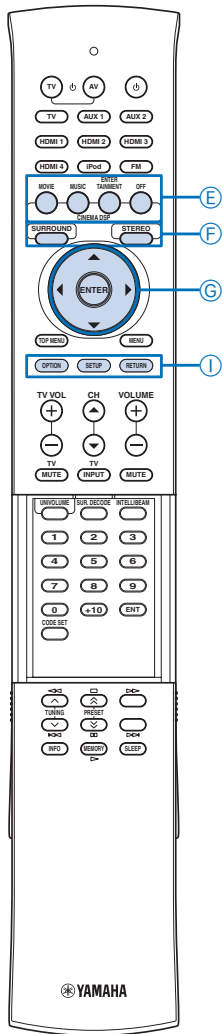
Status	Indicator
When PCM signals are being input	PCM
When Dolby TrueHD signals are being input	⯃⯃ TRUE HD
When Dolby Digital Plus signals are being input	⯃⯃ DIGITAL PLUS
When Dolby Digital signals are being input	⯃⯃ DIGITAL
When Dolby Pro Logic is selected as the surround decoder	⯃⯃ PL
When Dolby Pro Logic II is selected as the surround decoder	⯃⯃ PL II
When Dolby Pro Logic IIx is selected as the surround decoder	⯃⯃ PL II x
When DTS HD Master Audio signals are being input	dts + HD + MSTR
When DTS HD High Resolution signals are being input	dts + HD + HI RES
When DTS digital signals are being input	dts
When DTS 96/24 signals are being input	dts + 96/24
When DTS ES discrete is selected as the surround decoder	dts + ES + DSCRT
When DTS ES matrix is selected as the surround decoder	dts + ES + MTRX
When DTS Neo:6 is selected as the surround decoder	dts + Neo:6

- You can select an audio signal to be played back (Auto or DTS) In "Decoder Mode" (page 29).

■ **Input channel indicators**

Center ── ┌─┬─┐ ── Surround back
Front L ── │L│C│R│ ── Front R
Surround L ── │SL│SB│SR│ ── Surround R
Extra 1 ── │EX1│LFE│EX2│ ── Extra 2
LFE ──
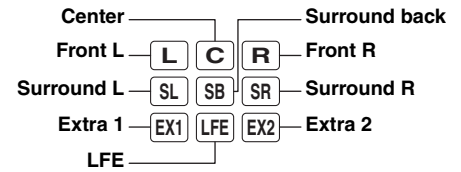
Depending on the channel component of the current digital input signal, the input channel indicators in the front panel display light up as follows:

Input signal	Indicator
2-channel stereo	L R
5.1-channel	L C R / SL SR / LFE
6.1-channel	L C R / SL SB SR / LFE
7.1-channel	L C R / SL SR / EX1 LFE EX2

- Extra (EX1/EX2) indicators light up when 7.1-channnel signals recorded in a Blu-lay disc (etc.) are being input. Normally, surround back channel signals are recorded in the extra channels. This may vary depending on the disc.

Playback mode

You can select the playback method (surround or stereo), desired CINEMA DSP program and decoder to enjoy playback of the input source.

Selecting surround or stereo playback

Use to select the playback method (surround or stereo). See also: " Enjoying CINEMA DSP programs" (page 22), "Changing the audio output method for surround playback" (page 23).

Press F SURROUND or F STEREO.

You can enjoy high realistic sensation with surround playback and hi-fi sound with stereo playback.

- Normal sounds (not sound beams) are output from the front right and front left channels. When you play back multi-channel sources, all signals except those from the front right and left channels are mixed down and output from the front right and left channels.
- When the stereo playback is selected, CINEMA DSP (page 22) and the decoder (page 24) become ineffective.

Enjoying CINEMA DSP programs

This unit is equipped with a Yamaha CINEMA DSP (digital sound field processing) chip containing several sound field programs used to enhance your playback experience. Most of the CINEMA DSP programs are precise digital recreations of actual acoustic environments of famous concert halls, music venues, and movie theaters.

- When you enjoy the CINEMA DSP programs, press F SURROUND to select the surround playback, and then follow the steps below.
- The CINEMA DSP programs are not available in the following conditions.
  – Stereo playback is selected.
  – HD audio signals are being played back.
  – Audio signals with sampling frequency of higher than 96 kHz are being played back.
  – Audio signals are output from the PRE OUT jacks.

E CINEMA DSP
E OFF
F STEREO
F SURROUND
G ENTER
G △ / ▽
G ◁ / ▷
G ▽
I SETUP

1 **Press the desired ECINEMA DSP key.**

The CINEMA DSP category name appears in the front panel display and the CINEMA DSP indicator (page 7) lights up.

2 **While the category name is displayed, press the ECINEMA DSP key repeatedly.**

Each time you press the key, program switches.

☀️
- To turn off the CINEMA DSP program, press EOFF.

■ Movie (MOVIE)

Sci-Fi

This program clearly reproduces dialogs and special sound effects of the latest science fiction films and lets you feel a broad and expansive cinematic space.

Adventure

This program reproduces the thrilling environment of the latest action films and lets you feel the dynamic and excitement of fast-moving scenes.

Spectacle

This program reproduces the wide and grand environment and lets you have added impressions on spectacular scenes with strong visual impacts.

■ Music (MUSIC)

Music Video

This program produces a vibrant environment and lets you feel as if you are at an actual jazz or rock concert.

Concert Hall

This program creates a rich surround effect of a large round concert hall with a great deal of presence, emphasizing the extension of sounds, and lets you feel as if you are seated close to the center of the stage.

Jazz Club

This program recreates the acoustic environment of "The Bottom Line", a famous jazz club in New York once and lets you feel as if you are seated right in front of the stage.

■ Entertainment (ENTERTAINMENT)

Sports

This program reproduces the energetic environment of live sports broadcasting, converging a commentator's voice on the center and broadening the overall atmosphere of the stadium, and lets you feel as if you are seated at an actual stadium or a ball park.

Talk Show

This program reproduces excitement of live talk shows. It enhances the ambience of gaiety while keeping the conversations at a comfortable volume.

Drama

This program stables reverberations that match a wide range of movie genres from serious dramas to musicals and comedies, and offers an optimum 3D feeling, reproducing effects tones and background music softly but cubically around clear words.

Game

This program is suitable for role-playing and adventure games. It utilizes the sound field effects for movies to represent the depth and spatial feeling of the field during play, while offering movie-like surround effects in the movie scenes in the game.

Mch Stereo

This program downmixes multi-channel source to 2 channels and then outputs the sound from all speakers and produces stereo sounds in wide range. It is ideal for background music at parties, etc.

Changing the audio output method for surround playback

You can set the number of beam output channels and audio output method.

1 **Press ①SETUP.**

The "SET MENU" screen appears on the TV.

2 **Use ⑥ △ / ▽ and ⑥ENTER to select "SOUND OUT MENU"- "SOUND BEAM OUT CONFIG" - "CHANNEL OUT".**

3 **Press ⑥ ◁ / ▷ to select the number of output channels.**

Choices: 5.1ch, 7.1ch
Initial setting: 7.1ch

4 **Press ⑥ ▽ to select "BEAM MODE".**

5 **Press ⑥ ▽ to select the desired audio output method.**

6 **To exit from the menu, press ①SETUP.**

■ Beam modes for "5.1ch"

5 Beam
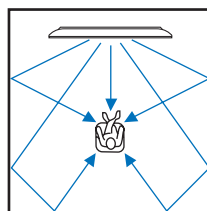
Outputs sound beams from the front right and left, center, and surround right and left channels. This mode is ideal for enjoying surround sound effects to the fullest when you watch 5.1-channel audio discs.

Stereo+3Beam
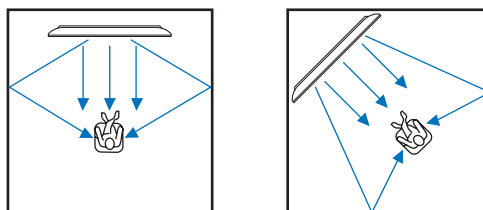
Outputs normal sound from the front right and left channels and sound beams from the center and surround right and left channels. This mode is ideal for watching live recordings on a DVD.
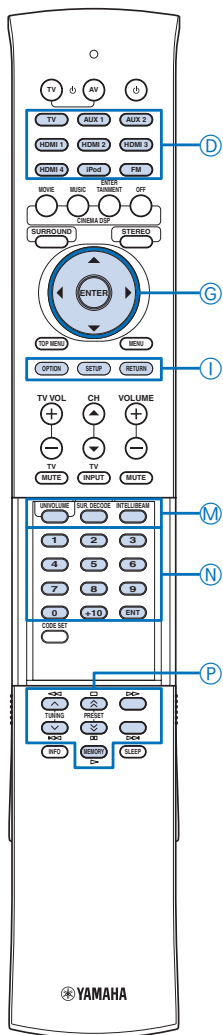
3 Beam
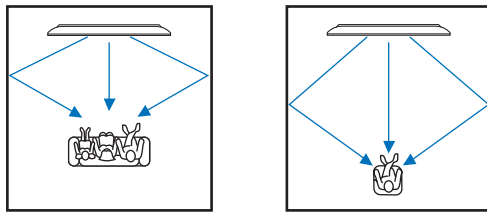
Outputs sound beams from the front right and left and center channels. For playback of multi-channel sources, surround right and left channel sources are mixed into the front right and left channels. This mode is ideal for enjoying movies with the whole family. In addition, you can use this mode when the listening position is close to the backside of the wall.

■ Beam modes for "7.1ch"

5Beam Plus2
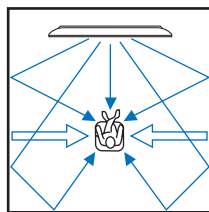
Outputs sound beams from the front right and left, center, and surround back right and left channels. Surround right and left channel sources are mixed into the front right and left and surround back right and left channels. This mode is ideal for enjoying surround sound effects to the fullest when you watch 7.1-channel audio discs.

ST+3BeamPlus2
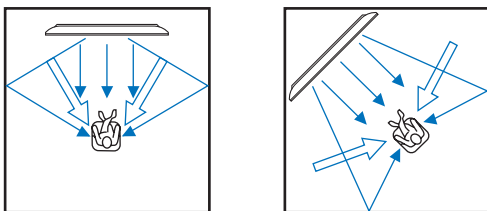
Outputs normal sound from the front right and left channels and sound beams from the center and surround back right and left channels. Surround right and left channel sounds are output by using front right and left channel sound and surround back right and left sound beams. This mode is ideal for watching live recordings on a DVD.
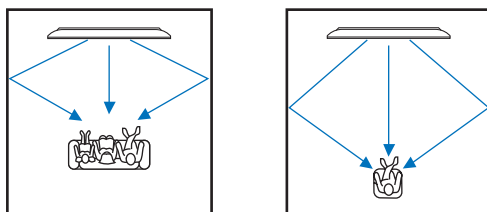
3 Beam

Outputs sound beams from the front right and left and center channels. For playback of multi-channel sources, surround right and left and surround back right and left channel sources are mixed into the front right and left channels. This mode is ideal for enjoying movies with the whole family. In addition, you can use this mode when the listening position is close to the backside of the wall.

Ⓓ RADIO
Ⓖ ENTER
Ⓖ △ / ▽
Ⓘ OPTION
Ⓘ RETURN
Ⓜ SUR.DECODE
Ⓝ Numeric keys
Ⓟ TUNING ∧ / ∨
Ⓟ MEMORY

Enjoying 2-channel sources in surround sound

This unit can decode 2-channel sources for 7.1-channel or 5.1-channel playback so that you can enjoy a variety of surround sound effects by switching the decoder.

☀
• The decoders are available only when surround playback (page 22) is selected.
• Available decoders vary depending on the "CHANNEL OUT" setting (page 23).

Press Ⓜ SUR.DECODE repeatedly to switch between decoders.

2ch → 5ch

Decoder		Recommended source
Pro Logic (Dolby Pro Logic)	—	All sources
PLII (Dolby Pro Logic II)	Movie Music Game	Movies Music Games
Neo:6 (DTS Neo:6)	Cinema Music	Movies Music

2ch → 7ch

Decoder		Recommended source
PLIIx (Dolby Pro Logic IIx)	Movie Music Game	Movies Music Games
Neo:6 (DTS Neo:6)	Cinema Music	Movies Music

Playing back 5.1-channel sources in 7.1-channel surround

This unit decodes 5.1-channel sources and then playback them in up to 7.1-channel surround. One of the following decoders is automatically selected depending on the input signals. Set "CHANNEL OUT" to "7.1ch" (page 23).

5.1ch input source	Decoder
PCM, Dolby Digital, Dolby Digital EX, Dolby TrueHD, Dolby Digital Plus	Dolby Pro Logic IIx Movie/ Music
DTS Digital, DTS ES matrix, DTS HD Master Audio, DTS HD High Resolution Audio	DTS ES matrix
DTS ES discrete	DTS ES discrete

☀
• Press Ⓜ SUR.DECODE to switch between Dolby Pro Logic Movie and Music. To switch to the Dolby Pro Logic IIx Music decoder, select "PLIIxMusic". To switch to the Dolby Pro Logic IIx Movie decoder, select one of the decoders other than "PLIIxMusic".

FM tuning

The FM tuner of this unit provides the following two modes for tuning.

- **Frequency tuning mode**

  You can tune into a desired FM station by searching or specifying its frequency.

- **Preset tuning mode**

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

> **Note**
>
> Adjust the FM antenna connected to this unit for the best reception.

Tuning into the desired FM station (Frequency tuning)

1 **Press ⒟FM to select the FM station as the input source.**

> **Note**
>
> - If you select "FM" with INPUT on the front panel, press ⒟FM on the remote control prior to step 2 so that you can operate the procedures from step 2.

2 **Press ⒫TUNING ⋀ / ⋁ to specify the frequency.**

The TUNED indicator on the front panel display lights up when the tuner is tuned into a station. The STEREO indicator also lights up if the program being broadcasted is in stereo.

See also: "FM Mode" (page 29)

Lights up

```
TUNED STEREO
       FM 88.90MHz
```
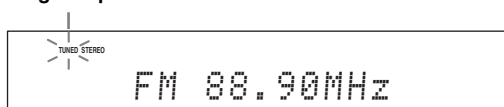
The frequency changes in the following manner according to how you press ⒫TUNING ⋀ / ⋁.

When you press the key more than 1 second

The tuner searches the frequency of a station that is detectable around the current frequency. This is effective when the tuner can receive strong signals without any interference. Once the search starts, release the key. When you keep holding the key, the search continues even when a station is detected. This is useful when you want to tune in to a specific station.

When you press and release the key

The tuner increases or decreases the frequency in steps. Use this method when the tuner cannot receive strong signals and stations are skipped during the search.

3 **To directly specify the frequency, use ⒩Numeric keys to enter the frequency of the station.**

> **Note**
>
> - When you press ⒩Numeric keys during preset tuning, a preset number is selected. Set the tuner to the frequency tuning mode using ⒫TUNING ⋀ / ⋁ prior to the operation.
> - You do not need to enter zero if it comes at the end of a decimal number. For example, enter "889" for "88.90 MHz" or "94" for "94.00 MHz".

> ☼
> - The reception is noisy and the sound is hard to listen, switch to monaural mode to get better reception. In the option menu, select "Mono" in "FM Mode" (page 29).

Registering FM stations and tuning in (Preset tuning)

You can register up to 40 FM stations automatically or manually.

■ Registering stations automatically

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

> **Note**
>
> - Only Radio Data System broadcasting stations are stored automatically by automatic station registration.

1 **Press ⒟FM to select the FM station as the input source.**

2 **Press ①OPTION.**

The option menu (page 28) appears on the front panel display.

3 **Press ⒢ △ / ▽ to select "Auto Preset" and then press ⒢ENTER.**

```
       3.Auto Preset
```
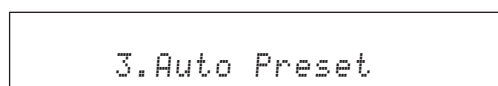
This unit starts to preset FM radio stations in 5 seconds.
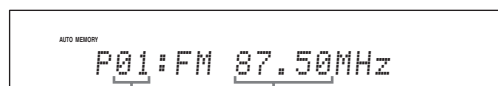
```
AUTO MEMORY
       P01:FM 87.50MHz
```
Preset number   Frequency

> ☼
> - You can select the preset number at which the preset starts by pressing ⒢ △ / ▽ after pressing ⒢ENTER.
> - To cancel the operation, press ①RETURN.

If auto preset is complete, "Preset Complete" appears.

4 **To exit from the menu, press ①OPTION.**

■ Registering stations manually

You can manually register FM stations with weak signals.

1 **Tune into the desired FM station.**

2 **Press ⒫MEMORY.**

Playback

Playback mode

FM tuning

Playing back iPod™

Useful features

"Manual Preset" appears on the front panel display, followed soon by the preset number to which the station will be registered.

☀
- By holding down ⑰MEMORY for more than 2 seconds, you can skip the following steps and automatically register the selected station to an empty preset number (next to the lastly-registered preset number).

3 Press ⑰PRESET ⋀ / ⋁ to select the preset number to which the station will be registered.

When you select a preset number to which no station is registered, "Empty" appears. When you select a preset number to which any station has been already registered, the frequency of the station is displayed.

```
MEMORY
P02:Empty
```
Preset number
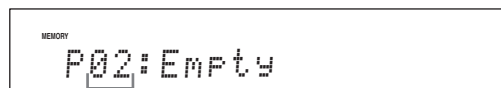
☀
- You can also specify a preset number using the ⓃNumeric keys.

4 Press ⑰MEMORY.

When registration is complete, the front panel display returns to the original state.

☀
- To cancel registration, press ①RETURN or leave this unit without any operations for about 30 seconds.

■ Calling a preset station (Preset tuning)

You can call preset stations registered automatically or manually.

Press ⑰PRESET ⋀ / ⋁ to select the desired preset number.

☀
- Preset numbers to which no stations are registered are skipped.
- "No Presets" is displayed if no stations are registered.
- You can directly select a preset number by pressing the ⓃNumeric keys while calling a preset station.
- When you press ⓃNumeric keys during normal frequency tuning, a frequency is entered. Set the tuner to the preset tuning mode using ⑰TUNING ⋀ / ⋁ prior to the operation.

■ Clearing preset stations

Use to clear the preset FM stations.

1 Press ⒹFM to select the FM station as the input source.

2 Press ①OPTION.

The option menu (page 28) appears on the front panel display.

3 Press Ⓖ △ / ▽ to select "Clear Preset" and then press ⒼENTER.

A preset station is displayed.

```
C01:FM 92.50MHz
```
Preset station
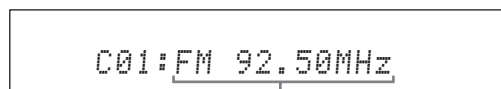
☀
- To cancel the clearing operation, press ①RETURN.

4 Press Ⓖ △ / ▽ to select a preset station to be cleared, and then press ⒼENTER.

The selected preset station is cleared. If the operation is completed, "Cleared" appears. To clear the multiple preset stations, repeat step 4.

5 To exit from the menu, press ①OPTION.

Displaying the Radio Data System information (Europe model only)

Radio Data System is a data transmission system used by FM stations. You can display the four types of the Radio Data System information: PS (program service), PTY (program type), RT (radio text), and CT (clock time). The corresponding indicators light up in the front panel display.

Notes

- You can select the Radio Data System display modes only when the corresponding Radio Data System indicators are lit in the front panel display. It may take a while for this unit to receive all of the Radio Data System data from the station.
- If the signals being received are not strong enough, this unit may not be able to utilize the Radio Data System data. In particular, the "RT" mode requires a large amount of data and may not be available even when the other Radio Data System display modes are available.
- In case of poor reception conditions, tune into the desired station manually (page 25).
- In case the signal strength is weakened by external interference while this unit is receiving the Radio Data System data, the reception may be cut off unexpectedly and "...WAIT" appears in the front panel display.
- If the reception is cut off when the "CT" mode is selected, "CT WAIT" appears in the front panel display.

1 Tune into the desired Radio Data System broadcasting station.

We recommend automatic preset tuning to tune into the Radio Data System broadcasting stations (page 25).

Note

The AUTO PS feature of this unit changes the frequency display to the "PS" mode if the Radio Data System station broadcasts the PS data.

2 Press ⓇINFO repeatedly to select the desired Radio Data System display mode.

```
PS → PTY → RT → CT
         Decoder ←        Frequency
```
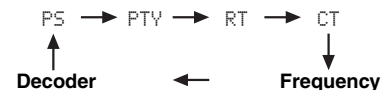
- Select "PS" to display the name of the Radio Data System program.
- Select "PTY" to display the type of Radio Data System program.
- Select "RT" to display the information on the Radio Data System program.
- Select "CT" to display the current time.

Note

In the "RT" mode, this unit can scroll the display with a maximum of 64 alphanumeric characters, including the umlaut symbol. Unavailable characters are displayed with the "_" (underscore).
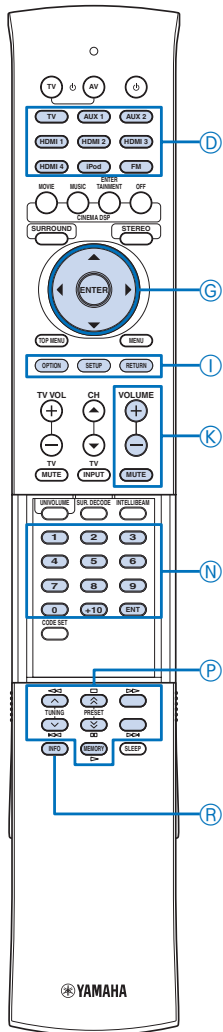
ⒹFM
ⒹiPod
ⒼENTER
Ⓖ △ / ▽
①OPTION
①RETURN
ⓀVOLUME +/−
ⓃNumeric keys
⑰MEMORY
⑰PRESET ⋀ / ⋁
⑰TUNING ⋀ / ⋁
ⓇINFO

Program type	Descriptions
News	News
Current Affairs	Current Affairs
Information	Information
Sport	Sport
Education	Education
Drama	Drama
Cultures	Cultures
Science	Science
Varied Speech	Varied Speech
Pop Music	Pop Music
Rock Music	Rock Music
Easy Listening	Easy Listening Music
Light Classics	Light Classical Music
Serious Classic	Serious Classical Music
Other Music	Other Music

Playing back iPod™/iPhone™

By using the Yamaha wireless transmitter for iPod (PDX-50TX/PDX-50BC), you can use the iPod/iPhone as a remote control and enjoy playback of your iPod/iPhone on this unit. About PDX-50TX/PDX-50BC, refer to "Safety and Accessory Information" (separate booklet).
See also: "iPod Interlock" (page 36)

☀
• This unit supports the following iPod/iPhone models.
  – iPod 5th generation
  – iPod classic
  – iPod touch
  – iPod nano
  – iPhone
  – iPhone 3G

Notes

• Be sure to use the product only in the country in where it was purchased.
• This unit does not support iPod (4th generation or before), iPod without Dock connector, iPod photo and iPod mini.
• You cannot run the AUTO SETUP while playing back the iPod/iPhone by using PDX-50TX. To run the AUTO SETUP, stop playback and then disconnect the iPod/iPhone from PDX-50TX.

Connect your iPod/iPhone and PDX-50TX, and then start playback.
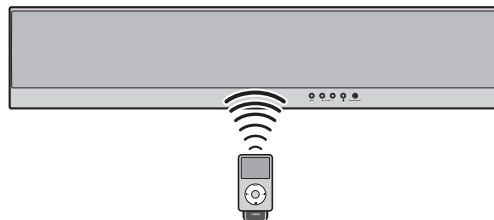
☀
• When you start playback of your iPod/iPhone, this unit automatically operates as follows.
  – When this unit is on, this unit selects "iPod" as the input source.
  – When this unit is in the standby mode, this unit turns on and selects "iPod" as the input source.
• You can also select the input source with Ⓓ iPod.
• To adjust the volume level, use the volume control on the iPod/iPhone or Ⓚ VOLUME +/– on this unit.
• This unit automatically turns to the standby mode in the following conditions.
  – The iPod/iPhone is disconnected from PDX-50TX.
  – The iPod/iPhone is turned into sleep mode.

Playback

Playback mode

FM tuning

Playing back iPod™

Useful features

Useful features

Adjusting volume level automatically (UniVolume)

This function adjusts the volume level of the TV so that it will not increase suddenly when whenever the contents being broadcast change (due to commercials, etc.).

Press ⓂUNIVOLUME.

The UNIVOLUME indicator lights up on the front panel display.

☀️
- To turn off the UniVolume function, press ⓂUNIVOLUME again.
- We recommend turning off the UniVolume function during playback of music.

Using the HDMI™ control function

You can operate the following functions of this unit with the remote control of your TV when the TV (HDMI control function supported) is connected to the HDMI OUT jack of this unit.
- Turning on this unit or to the standby (conjunction with TV)
- Adjusting the volume
- Selecting a device to reproduce TV sounds (this unit or TV)

☀️
- Even if your TV supports the HDMI control function, some functions may not be available. For details, refer to the manual supplied with your TV.
- If you connect this unit and Blu-ray disc player or DVD player (HDMI control function supported) with HDMI, you can also control those devices with the HDMI control function. For details, refer to the manual supplied with each device.
- We suggest that you use products (TV, Blu-ray disc/DVD player, etc.) from the same manufacturer.
- The HDMI control-compatible components include Panasonic VIERA Link compatible TV, DVD player/recorder and Blu-ray disc player.

To use this function, you need to set HDMI control function and register the HDMI components to the TV.

☀️
- For some HDMI components, you only need to set the HDMI control function. Registering HDMI components to TV is not required in this case.

Setting the HDMI control function

1 Turn on all devices connected to this unit with HDMI.

2 Enable the HDMI control function on each device.
For this unit, set "HDMI CONTROL" to "ON" (page 36).
For external devices, refer to the manual supplied with each device.

3 Turn off the TV and then turn on it again.

Registering HDMI components to TV

1 Select this unit as the input source of the TV.

2 Turn on the HDMI control device (Blu-ray disc or DVD player) connected to this unit.

3 Select the HDMI control device (Blu-ray disc or DVD player) as the input source of this unit to check the video input.

Note
- In case the HDMI control function does not work, check the followings. Also, turning off (unplug) and turning on (plug) the TV may be effective.
  – "HDMI CONTROL" is set to "ON" on this unit (page 36).
  – The HDMI control function is enables on the TV.
  – If you changed the connection method or connected components, repeat steps 1-3.

Using the sleep timer

Use this feature to automatically set this unit to the standby mode after a specified period of time.

1 Press ⓆSLEEP repeatedly to set the interval for the sleep timer.
The SLEEP indicator (page 7) flashes in the front panel display while switching the interval for the sleep timer.

```
   ┌→ Sleep  120 min.
   │       ↓
   │    Sleep   90 min.
   │       ↓
   │    Sleep   60 min.
   │       ↓
   │    Sleep   30 min.
   │       ↓
   └── Sleep  Off
```
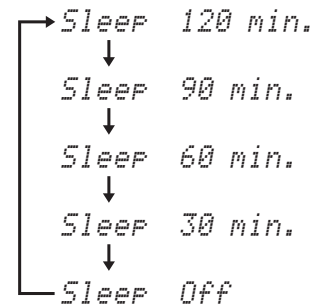
2 Wait for a few seconds without operating this unit to confirm the setting for the sleep timer.
The SLEEP indicator lights up in the front panel display, indicating that the sleep timer is activated.

☀️
- If this unit is set to the standby mode, the sleep timer setting is canceled.

Configuring settings for each input source (Option menu)

You can configure various settings for each input source (TV, AUX1/2, HDMI1-4, iPod, and FM). Available menu items vary depending on the selected input source.

1 Press ⒹInput selector keys to select the desired input source.

2 Press ⒾOPTION.
The first item of the option menu for the selected input source appears on the front panel display.

```
    1.Volume Trim
```
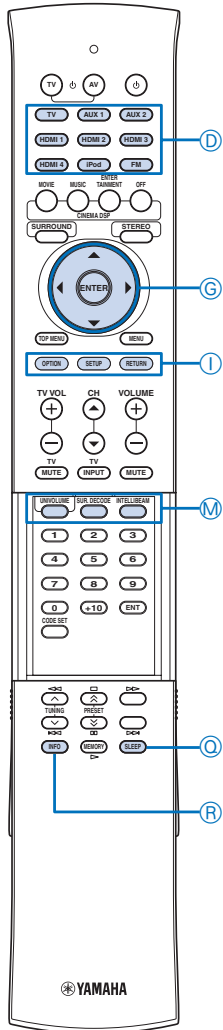
ⒹInput selector keys
ⒼENTER
Ⓖ △ / ▽
Ⓖ ◁ / ▷
ⒾOPTION
ⓂUNIVOLUME
ⓆSLEEP
ⓇINFO

3 Press Ⓖ△ / ▽ to select the desired menu item and then press ⒼENTER.

4 Press Ⓖ◁ / ▷ to select the desired setting and then press ⒼENTER.

5 To exit from the menu, press ⒾOPTION.

■ Option menu items

The following menu items are provided for each input source.

Input source	Menu items			
HDMI1~4	Volume Trim	Decoder Mode		
TV	Volume Trim	Decoder Mode		
AUX1~2	Volume Trim	Decoder Mode		
FM	Volume Trim	FM Mode	Auto Preset	Clear Preset
iPod	Volume Trim			

Details of the menu items are as follows. The configuration will be reflected to the input source currently selected.

☼
• The initial settings are marked with "*".

Volume Trim (Volume trim)
Use to reduce any change in volume when switching input sources by correcting volume differences between input sources.
Adjustable range: –6.0dB to +6.0dB (in 0.5 dB steps)
Initial setting: 0.0dB

Decoder Mode (Decoder mode)
Use to select DTS digital audio signals for reproduction.
Choices: Auto*, DTS
• Select Auto to automatically select audio input signals.
• Select DTS to selects DTS signals only. Other input signals are not reproduced.

FM Mode (FM receiving mode)
Use to set the FM broadcasting receiving mode.
Choices: Stereo*, Mono
• Select Stereo to receive in stereo mode by priority.
• Select Mono to receive in monaural mode.

Auto Preset (Automatic preset)
Use to automatically detect FM radio stations and registers them as preset stations (page 25).

Clear Preset (Clear preset station)
Use to clear the preset FM stations (page 26).

Displaying the input signal information

Use to display information of the sampling frequency, video signal type, and resolution for each input source on the front panel display.

1 Select an input source (TV, AUX1/2, and HDMI1-4) and then press Ⓡan INFO.

```
Audio Sampling
```
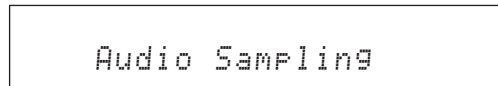
2 Press ⓇINFO repeatedly to change items to be displayed.

Sampling frequency (Audio Sampling)
The sampling frequency per second in analog- to-digital conversion.

Video signal (Video Signal In)
Signal type and resolution of video input signal.

Playback

Playback mode

FM tuning

Playing back iPod™

Useful features

SETTINGS

Customizing this unit (SET MENU)

You can manually configure various settings for this unit in "SET MENU".

SET MENU items

Menu	Sub menu	Features	Page
MEMORY	LOAD	Loads the beam and sound settings saved in the memory.	19
	SAVE	Saves the current beam and sound settings to the memory.	19
AUTO SETUP	BEAM+SOUND OPTIMZ	Optimizes the beam and sound settings automatically.	16
	BEAM OPTIMZ ONLY	Optimizes the beam settings automatically.	16
	SOUND OPTIMZ ONLY	Optimizes the sound settings automatically.	16
MANUAL SETUP	SETTING PARAMETERS	Adjusts the listening room and listening position settings.	31
	BEAM ADJUSTMENT	Adjusts the various sound beam settings.	32
	IMAGE LOCATION	Adjusts the sound position of the front right and left channels.	32
SOUND SET MENU	TONE CONTROL	Adjusts the output level of high-frequency or low-frequency sound.	33
	SUBWOOFER SET	Configures the subwoofer settings.	33
	AUDIO DELAY	Adjusts delay in output timing between video signals and audio signals.	33
	DRC:Dynamic Range Control	Adjusts the dynamic range.	34
	BASS EXTENSION	Selects the bass sound extension.	34
	MUSIC ENHANCER	Selects the compressed audio enhancer.	34
	CHANNEL LEVEL	Adjusts the volume of each channel.	34
SOUND OUT MENU	SOUND BEAM OUT CONFIG	Configures the sound beam output settings.	34
	SOUND OUT	Configures the audio signal output settings.	34
INPUT MENU	INPUT ASSIGNMENT	Assigns jacks according to the component to be used.	35
	INPUT RENAME	Renames the displayed input source.	35
	HDMI SETUP	Configures the HDMI settings.	36
	WIRELESS SETUP	Configures the wireless settings.	36
DISPLAY MENU	F. DISPLAY SETUP	Configures the front panel display settings.	36
	OSD SETUP	Configures the OSD settings.	37
	LANGUAGE SETUP	Changes the language used in the OSD.	37
	UNIT SETUP	Changes the display unit of measurement.	37
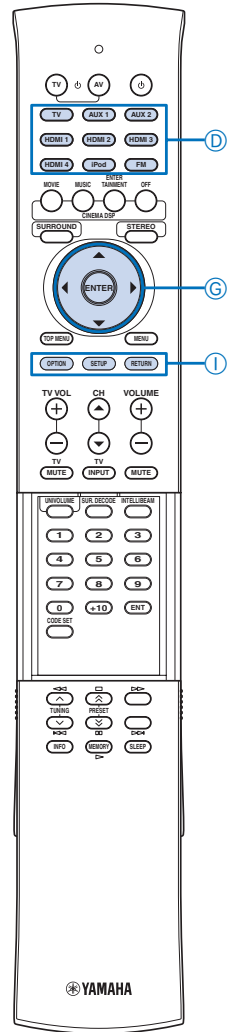
Ⓓ Input selector keys

Ⓖ ENTER

Ⓖ △ / ▽ / ◁ / ▷

Ⓖ △ / ▽

Ⓖ ▽

Ⓘ SETUP

Basic SET MENU operation

1   Press ⓘSETUP.

```
        SET MENU

    →•MEMORY
     •AUTO SETUP
     •MANUAL SETUP
     •SOUND SET MENU
     •SOUND OUT MENU
     •INPUT MENU
     •DISPLAY MENU
     [▲]/[▼]:Up/Down
     [ENTER]:Enter
```

2   Press ⓖ △ / ▽ to select the desired menu and then press ⓖENTER.

```
     C)MANUAL SETUP

    →1)SETTING PARAMETERS
     2)BEAM ADJUSTMENT
     3)IMAGE LOCATION


     [▲]/[▼]:Up/Down
     [ENTER]:Enter
```
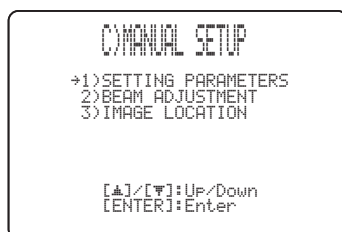
☀️
• To return to the previous menu, press ⓘRETURN.

3   Press ⓖ △ / ▽ / ◁ / ▷ and ⓖENTER to configure each parameter.

☀️
• The initial settings are marked with "*".

> **Note**
> • The menu screen disappears if one of the ⓓInput selector keys is pressed while the SET MENU is being configured.

4   To exit from the menu, press ⓘSETUP.

MANUAL SETUP

Use this menu to manually adjust the parameters related to the sound beam output. To fine-adjust parameters configured by AUTO SETUP, use "BEAM ADJUSTMENT" and "IMAGE LOCATION".

■   SETTING PARAMETERS (Setting parameters)

SET MENU → MANUAL SETUP → SETTING PARAMETERS

Use to set the position of this unit in your listening room and the distance of this unit from the listening position.

☀️
• If you make adjustments in "SETTING PARAMETERS", the "BEAM ADJUSTMENT" parameters are automatically adjusted.

> **Note**
> • If you make adjustments in "SETTING PARAMETERS", the beam optimization settings made in the AUTO SETUP procedure will be lost.

---

1   In "SETTING PARAMETERS 1/3", configure "INSTALLED POSITION".

Select the installed position of this unit.
Choices: FLAT TO WALL* (parallel to wall), ANGLE TO WALL OR CORNER (angle to wall or corner)

FLAT TO WALL

ANGLE TO WALL OR CORNER
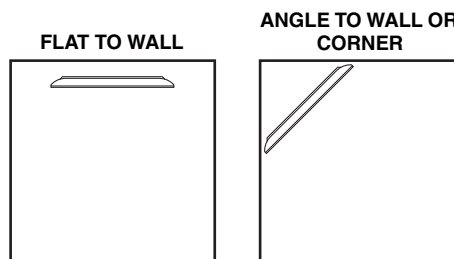
> **Note**
> • If you change this setting, "BEAM MODE" setting changes automatically (page 23).

2   Configure "INSTALLED HEIGHT".

Specify the installed height of this unit.
Control range: 0.0 m to 3.0 m (0.0 ft to 10.0 ft)
Initial setting: 1.0 m (3.5 ft)

**0.0 to 3.0 m
(0.0 ft to 10.0 ft)**
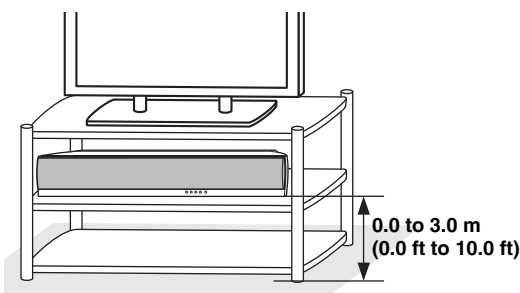
☀️
• Press ⓖ ▽ to proceed to the next page.

3   In "SETTING PARAMETERS 2/3", configure the listening room settings.

Specify the length and width of the listening room.
Control range: 2.0 m to 12.0 m (6.5 ft to 40.0 ft)

When this unit is installed parallel to wall, specify the width of the listening room and the distance between this unit and rear wall.
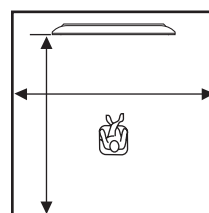
When this unit is installed at the corner of the room, specify the width of length of the listening room.
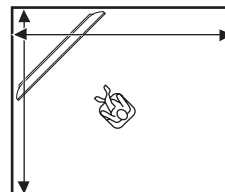
4   In "SETTING PARAMETERS 3/3", configure the distance settings.

Specify the distance between the listening position and this unit. When this unit is installed parallel to wall, you also need to specify the distance between the listening position and left wall.
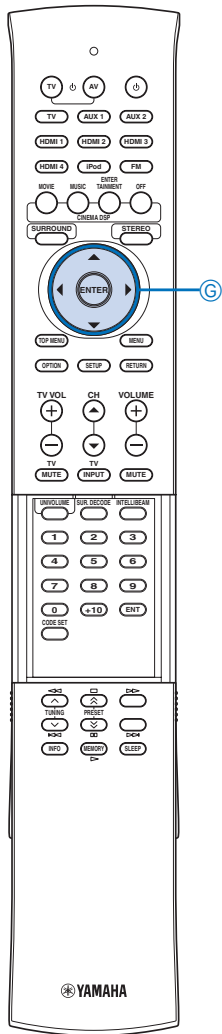
Control range (from this unit): 1.8 m to 9.0 m (6.0 ft to 30.0 ft)
Control range (from left wall): 0.6 m to 11.4 m (2.0 ft to 38.0 ft)

FLAT TO WALL

1.8 to 9.0 m
(6.0 to 30.0 ft)

0.6 to 11.4 m
(2.0 to 38.0 ft)
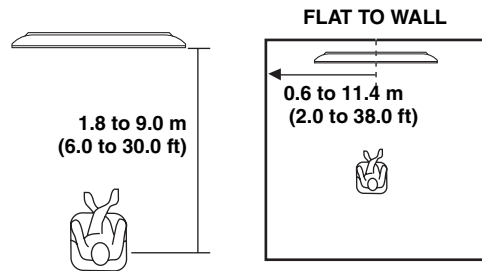
■ BEAM ADJUSTMENT (Beam adjustment)

SET MENU → MANUAL SETUP → BEAM ADJUSTMENT

Use to manually adjust the various sound beam settings.

Notes

• The "BEAM ADJUSTMENT" parameters are automatically adjusted (except "Center" in "FOCAL LENGTH") if you run the AUTO SETUP (page 15) or if you configure "SETTING PARAMETERS" (page 31).
• Depending on the beam mode settings (page 23), some channel positions may not be available for selection. In this case, "– –" is displayed.
• If you change "BEAM ADJUSTMENT" settings while playing back your iPod/iPhone connected to PDX-50TX, the subwoofer connected to SWK-W10 outputs the iPod/iPhone audio. We recommend stopping the iPod/iPhone playback during the beam adjustment.

1 Configure "HORIZONTAL ANGLE".

Adjust the horizontal angle of sound beams for each channel using test tones.
Adjust toward L (left) to move the direction of the output to the left and adjust toward R (right) to move it to the right.
Control range: L90° to R90°

(−)
(+)

(+)
(−)
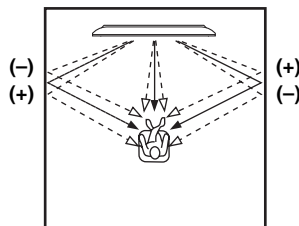
• Press Ⓖ ▽ to switch the channels.

2 Configure "VERTICAL ANGLE".

Adjust the vertical angle of sound beams for each channel using test tones.
Adjust toward – (minus) to move the angle downward and adjust toward + (plus) to move the angle upward.
Control range: –45° to +45°

(+)

0°

(−)
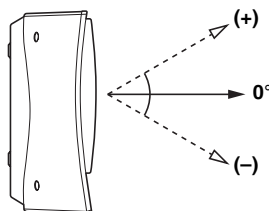
3 Configure "BEAM TRAVEL LENGTH".

Adjust the distance that sound beams travel after being output and reflected off the wall until they arrive at the listening position so that all sounds can arrive at the listening position at the same time.

Note

• Configure this setting only when you have adjusted "HORIZONTAL ANGLE".
Control range: 0.3 m to 24.0 m (1.0 ft to 80.0 ft)

The length of each arrow indicates the beam travel length.
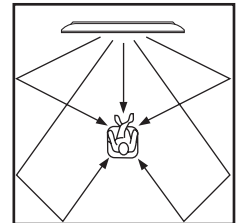
4 Configure "FOCAL LENGTH".

Adjust the distance from the front of this unit to the focal point of output for each channel to achieve an expansive feeling for each channel. Adjust toward - (minus) to move the focus outward (widen the sweet spot) and adjust toward + (plus) to move the focus toward the normal position (narrow the sweet spot).

Focal length
Focal point
Sweet spot
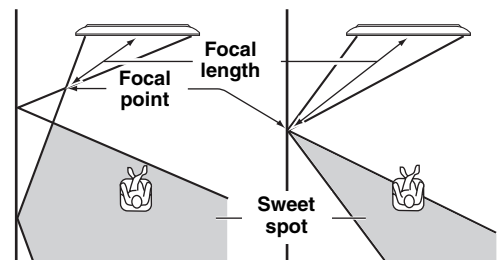
Control range: –1.0 m to +13.0 m (–3.5 ft to +43.5 ft)

• We recommend that you use the initial setting (–0.5 m or –1.5 ft) for "Center".
• The width of the sweet spot becomes slightly wider than the width of this unit if you run the AUTO SETUP (page 15) or if you configure "SETTING PARAMETERS" (page 31).

Example

Front left channel   Center channel

(−)
(+)
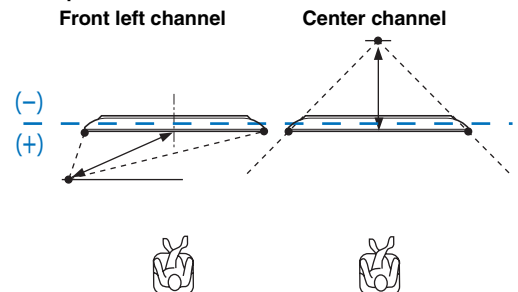
■ IMAGE LOCATION (Image location)

SET MENU → MANUAL SETUP → IMAGE LOCATION

Use to adjust the direction from which the front left and right channel sound is heard so that each sound can be heard closer to the center channel.
Use this feature to redirect audio signals if the sound coming from the front left and right channels seems unnatural.

Ⓖ ▽

You can adjust this parameter only when "5Beam Plus2", "5 Beam" or "3 Beam" is selected in "BEAM MODE" (page 23).

☀️
• To adjust the volume of each channel, see "CHANNEL LEVEL" (page 34)

Choices: OFF*, ON
• Select "ON" to configure the sound direction.

1 Adjust the image location for the front left channel (LEFT).

The higher the percentage, the louder the output from the center

Without adjustment   **With the front left channel adjusted**
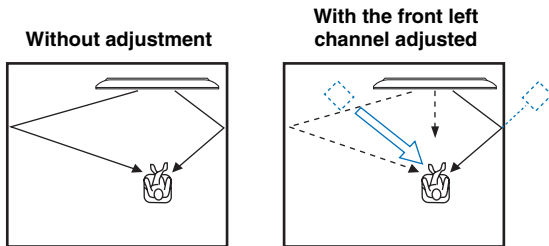
2 Adjust the image location for the front right channel (RIGHT).

The higher the percentage, the louder the output from the center

Without adjustment   **With the front right channel adjusted**
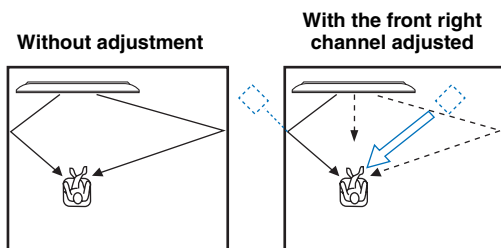
SOUND SET MENU

■ TONE CONTROL (Tone control)

SET MENU → SOUND SET MENU → TONE CONTROL

Use to adjust the tonal quality of sound beams.

TREBLE (Treble)
Use to adjust the high-frequency response.
Choices: –10.0 dB to +10.0 dB
Initial setting: 0.0 dB

BASS (Bass)
Use to adjust the low-frequency response.
Choices: –10.0 dB to +10.0 dB
Initial setting: 0.0 dB

■ SUBWOOFER SET (Subwoofer settings)

SET MENU → SOUND SET MENU → SUBWOOFER SET

Use to configure the subwoofer settings.

BASS OUT (Bass out)
Select where to output low-frequency effect (LFE) and low-frequency (bass) signals.
Choices: SUBWOOFER, FRONT OR AUTO*

• Select SUBWOOFER if you connect a subwoofer with a subwoofer cable. LFE and low-frequency signals from other channels are directed to the subwoofer.
• Select FRONT OR AUTO if you do not use a subwoofer or connect a subwoofer by wireless. LFE and low-frequency signals from other channels are directed to the front right and left channels when you do not use a subwoofer. They are directed to the subwoofer automatically when a wireless connection between a subwoofer and this unit is established properly. If the wireless connection is cut off, they are directed to the front channels automatically.

CROSS OVER (Crossover)
When "BASS OUT" is set to "SUBWOOFER", you can use this feature to select a crossover (cutoff) frequency for all low-frequency signals. All frequencies below the selected frequency will be sent to the subwoofer position.
Choices: 80Hz, 100Hz, 120Hz*

LFE LEVEL (Low-frequency effect level)
Adjust the output level of the low-frequency effect (LFE) channel according to the capacity of your subwoofer. This setting is effective only when this unit decodes Dolby Digital or DTS signals.
Choices: –20 dB to 0 dB*

DISTANCE (Distance)
Adjust the distance of the subwoofer from the listening position.
Choices: 0.3 m to 15.0 m (1.0 ft to 50.0 ft)
Initial setting: 3.0 m (10.0 ft)

■ AUDIO DELAY (Audio delay)

SET MENU → SOUND SET MENU → AUDIO DELAY

Use to adjust delay in output timing between video signals and audio signals.

AUTO LIP SYNC (Automatic lipsync)
Select whether to automatically adjust the audio output delay when a TV that supports the automatic lipsync is connected to the HDMI OUT jack of this unit.
Choices: ON*, OFF
• Select ON if the TV connected to the HDMI OUT jack of this unit supports the automatic lipsync. The audio output delay is automatically adjusted.
• Select OFF if the TV connected to the HDMI OUT jack of this unit does not support the automatic lipsync or you want to disable the automatic lipsync. You can manually adjust the audio output delay in "HDMI".

TV
Adjust the audio output delay applied to signals input from the TV jacks.
Control range: 0 msec* to 400 msec

HDMI
Manually adjust the audio output delay applied to signals input from the HDMI IN jacks. This setting is effective only when "AUTO LIP SYNC" is set to "OFF"
Control range: 0 msec to 400 msec
Initial setting: 30msec

AUX1/2
Adjust the audio output delay applied to signals input from the AUX1/2 jacks.
Control range: 0 msec to 400 msec
Initial setting: 30msec

Customizing this unit (SET MENU)

System configurations (ADVANCED SETUP)

Using an external amplifier

Controlling external components
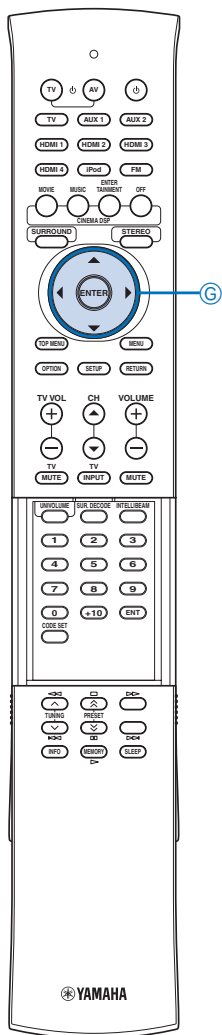
■ DRC:Dynamic Range Control (Dynamic range control)

SET MENU → SOUND SET MENU → DRC:Dynamic Range Control

Use to adjust the dynamic range compression. Dynamic range is the difference between the smallest sound that can be heard above the noise of the equipment and the biggest sound that can be heard without distortion.

Adaptive DRC (Adaptive dynamic range control)

Select whether to automatically adjust the dynamic range in conjunction with the volume level. When this function is enabled, the dynamic range is adjusted as follows.
When the volume level is low: Narrow the dynamic range. Loud sound is played back softer, and soft sound which is hard to be listened to is played back louder.
When the volume level is high: Widen the dynamic range. From soft sound to loud sound, source sound is played back without adjusting volume.
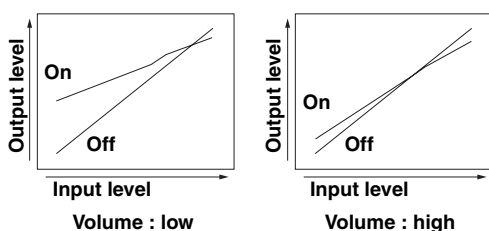
Choices: On*, Off
- Select On to enable the adaptive dynamic range control.
- Select Off to disable the adaptive dynamic range control.

☀
- "Dolby/DTS DRC" is automatically set to "Max" when "Off" is selected.
- This setting is automatically set to "Off" when the UniVolume function is turned on while this setting is automatically set to "On" when the UniVolume function is turned off.

Dolby/DTS DRC (Dynamic range of Dolby Digital and DTS signals)

Select the amount of dynamic range applied when this unit is decoding Dolby Digital and DTS signals
Choices: Max* (Maximum), Standard, Min/Auto (Minimum/Auto)
- Select Max to output sound without adjusting the
- dynamic range of the input signals.
- Select Standard to set the standard dynamic range
- recommended for regular home use.
- Select Min/Auto to set the dynamic range suitable for low volume or a quiet environment, such as at night, for bitstream signals except for Dolby TrueHD signals (Min) or adjust the dynamic range for Dolby TrueHD signals based on input signal information (Auto).

☀
- "Adaptive DRC" is automatically set to "Off" when the settings other than "Max" is selected.

■ BASS EXTENSION (Bass extension)

SET MENU → SOUND SET MENU → BASS EXTENSION

Use to turn on or off the bass sound extension. When this function is enabled, the BASS EXT indicator lights up on the front panel display (page 7).
Choices: OFF, MID*, DEEP
- Select OFF to output bass sounds without change.
- Select MID to output moderately-enhanced bass sounds.
- Select DEEP to output deep bass sounds.

■ MUSIC ENHANCER (Music Enhancer)

SET MENU → SOUND SET MENU → MUSIC ENHANCER

Use to turn on or off the compressed audio enhancer. When this function is enabled, the ENHANCER indicator lights up on the front panel display (page 7).

AUX1/2

Select whether to apply the compressed audio enhancer for playback of AUX1/2 input sources.
Choices: ON, OFF*
- Select ON to enable the compressed audio enhancer for playback of AUX1/2 input sources.
- Select OFF to disable the compressed audio enhancer for playback of AUX1/2 input sources.

iPod

Select whether to apply the compressed audio enhancer to iPod/iPhone playback.
Choices: ON*, OFF
- Select ON to enable the compressed audio enhancer for iPod/iPhone playback.
- Select OFF to disable the compressed audio enhancer for iPod/iPhone playback.

■ CHANNEL LEVEL (Channel level)

SET MENU → SOUND SET MENU → CHANNEL LEVEL

Use to adjust the volume of each channel with test tones.
Control range: –10.0 dB to +10.0 dB

Note
- Adjustable channels vary depending on the "CHANNEL OUT" setting.
- "Surround Back R" and "Surround Back L" are not adjustable when "SOUND OUT" is set to "SPEAKER".

SOUND OUT MENU

■ SOUND BEAM OUT CONFIG (Sound beam output configuration)

SET MENU → SOUND OUT MENU → SOUND BEAM OUT CONFIG

Use to configure the number of output channels or audio output method. For details, see "Changing the audio output method for surround playback" (page 23).

■ SOUND OUT (Sound output)

SET MENU → SOUND OUT MENU → SOUND OUT

Use to configure the audio signal output settings.

Ⓖ △ / ▽

Ⓖ ▽

SOUND OUT (Sound output redirection)

Use to redirect the output of audio signals. Audio output of all the channels switches simultaneously.

Choices: SPEAKER*, PRE OUT

- Select SPEAKER to output sounds from this unit.
- Select PRE OUT to output audio signals from the PRE OUT jacks of this unit. You also need to configure the parameters from "BASS OUT" to "LFE Level" described below.

☆
- The parameters from "BASS OUT" to "LFE Level" are settings for the PRE OUT jacks when they are selected as audio output jacks.

BASS OUT (Bass sound output redirection)

Use to redirect the output of bass sounds. The settings under "BASS OUT" are for the PRE OUT jacks.

Choices: SUBWOOFER, FRONT*

- Select SUBWOOFER to output bass sounds from the subwoofer.
- Select FRONT to output bass sounds from the external front right and left speakers.

Front SP Size (Front speaker size for PRE OUT)

Select the size of external front speakers.

Choices: Small, Large*

- Select Small if the diameter of the front speaker's woofer is smaller than 16 cm. Low-frequency parts of front right and left channel signals are output from the subwoofer.

Center SP Size (Center speaker size for PRE OUT)

Select the size of external center speakers.

Choices: None, Small*

- Select None if no center speaker is used. Center channel signals are mixed into the front right and left speakers.
- Select Small if a center speaker is used. Low-frequency parts of center channel signals are output from the subwoofer (or mixed into the front right and left channel signals if subwoofer is not available).

PRE OUT Volume (PRE OUT volume)

Adjust the output level of the PRE OUT jacks.

Control range: –30.0 dB to 0.0 dB

Initial setting: –18.0 dB

LFE Level (Low-frequency effect level for PRE OUT)

Adjust the low-frequency effect output level of the PRE OUT jacks. This setting is effective only when this unit decodes Dolby Digital or DTS signals.

Control range: –20 dB to + 0 dB*

INPUT MENU

■ INPUT ASSIGNMENT (Input assignment)

SET MENU → INPUT MENU → INPUT ASSIGNMENT

Use to change the key assignments of input jacks on this unit. The parenthetic references displayed in the menu screen indicate the initial settings.

See also: "AUDIO SELECT" (page 36)

☆
- Press Ⓖ ▽ to proceed to the next page.

AUDIO1

Select the key to which the AUDIO IN (TV) jacks are assigned.

Choices: TV*, AUX1, AUX2, HDMI1, HDMI2, HDMI3, HDMI4

Note
- The input already selected in "AUDIO2" is not displayed. To set the input selected in "AUDIO2", change "AUDIO2" parameter, and then reconfigure.

AUDIO2

Select the key to which the AUDIO IN (AUX 1) jacks are assigned.

Choices: AUX1*, AUX2, HDMI1, HDMI2, HDMI3, HDMI4, TV

Note
- The input already selected in "AUDIO1" is not displayed. To set the input selected in "AUDIO1", change "AUDIO1" parameter, and then reconfigure.

OPTICAL1

Select the key to which the DIGITAL IN (TV) jack is assigned.

Choices: TV*, AUX1, AUX2, HDMI1, HDMI2, HDMI3, HDMI4

Note
- The input already selected in "OPTICAL2" or "COAX" is not displayed. To set the input selected in one of these parameters, change the corresponding parameter, and then reconfigure.

OPTICAL2

Select the key to which the DIGITAL IN (AUX 1) jack is assigned.

Choices: AUX1*, AUX2, HDMI1, HDMI2, HDMI3, HDMI4, TV

Note
- The input already selected in "OPTICAL1" or "COAX" is not displayed. To set the input selected in one of these parameters, change the corresponding parameter, and then reconfigure.

COAX

Select the key to which the DIGITAL IN (AUX 2) jack is assigned.

Choices: AUX2*, HDMI1, HDMI2, HDMI3, HDMI4, TV, AUX1

Note
- The input already selected in "OPTICAL1" or "OPTICAL2" is not displayed. To set the input selected in one of these parameters, change the corresponding parameter, and then reconfigure.

■ INPUT RENAME (Input rename)

SET MENU → INPUT MENU → INPUT RENAME

Use to change the name of the input source displayed when the input source is selected. Select a name from templates, or enter an original name.

Selecting a name from templates

1 **Press Ⓖ △ / ▽ to select the input source to be renamed.**

Customizing this unit (SET MENU)

System configurations (ADVANCED SETUP)

Using an external amplifier

Controlling external components
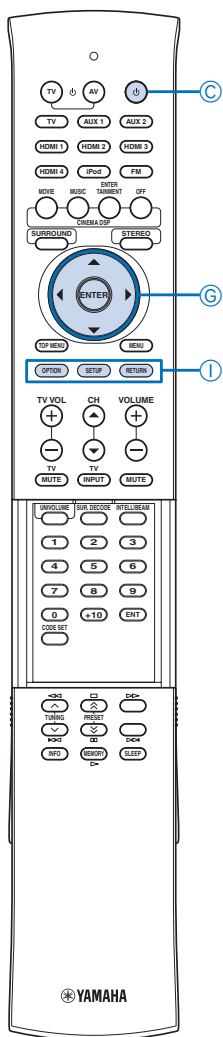
2 Press Ⓖ ◁ / ▷ to select a input source name.

Choices: TV, Blu-ray, DVD, HDDVD, STB, Satelite, Game

3 To exit from the menu, press ①RETURN.

Entering an original name

1 Press Ⓖ △ / ▽ to select the input source to be renamed.

2 Press ⒼENTER.

"▽" appears above the new name display to indicate the position to be entered.

3 Press Ⓖ ◁ / ▷ to place the _ (underscore) under the space or the character you want to edit.

4 Press Ⓖ △ / ▽ to select the desired character.

5 Repeat steps 3 and 4 to edit other characters.

6 To complete the setting, press ⒼENTER.

7 To exit from the menu, press ①RETURN.

☀
• A to Z, 0 to 9, a to z, and symbols (!, ?, <, >, etc.) are available for input.

■ HDMI SETUP (HDMI setup)

SET MENU → INPUT MENU → HDMI SETUP

Use to configure the settings related to HDMI signals and HDMI control function.

SUPPORT AUDIO (Support audio)

Use to select a component to play back HDMI audio signals. This setting is effective only when "HDMI CONTROL" is set to "OFF".

☀
• HDMI video signals input to one of the HDMI IN jacks of this unit are always output from the HDMI OUT jack.

Choices: (Model name of this unit)*, OTHER
• Select this unit to play back HDMI audio signals on this unit.
• Select OTHER to play back HDMI audio signals on the component connected to the HDMI OUT jack.

AUDIO SELECT (Audio select)

Select whether or not to output HDMI audio signals input to each HDMI IN jacks. This function is useful when you want to enjoy another audio input source while watching HDMI video sources. For example, if you set "HDMI1" of "AUDIO SELECT" to "OFF" and "OPTICAL1" of "INPUT ASSIGNMENT" to "HDMI1" (page 35), you can enjoy the audio source input to the DIGITAL IN (AUX 1) jack while watching the HDMI video source input to HDMI IN 1 jack.
Choices: OFF, ON*

HDMI CONTROL (HDMI control)

Use this function to link this unit and an HDMI control-compatible TV via HDMI. For details, see "Using the HDMI control function" (page 28).
Choices: OFF*, ON

• Select OFF to turn off the HDMI control function. The standby consumption power of this unit decreases.
• Select ON to turn off the HDMI control function.

■ WIRELESS SETUP (Wireless setup)

SET MENU → INPUT MENU → WIRELESS SETUP

Use to configure the wireless connection between this unit and PDX-50TX or SWK-W10.

Wireless Function (Wireless function)

Select whether or not to use the wireless function of this unit.
Choices: No, Yes*
• Select No to disable the wireless function of this unit.
• Select Yes to enable the wireless function of this unit.

iPod Interlock (iPod interlock)

Select whether or not to use the iPod/iPhone interlock function. When the iPod/iPhone interlock function is on, this unit automatically turns on if you turn on the iPod/iPhone when this unit is in the standby mode. In addition, this unit is set to the standby mode if the iPod/iPhone is set to the standby mode.
Choices: OFF, ON*
• Select OFF to disable the iPod/iPhone interlock function. The standby consumption power of this unit decreases.
• Select ON to enable the iPod/iPhone interlock function.

Group ID (Group ID)

The group ID is used for wirelessly connecting Yamaha products that support AirWired. To establish a connection among this unit, PDX-50TX and SWK-W10, set the group ID of these products to the same group.
Choices: A1*, A2, A3, B1, B2, B3

☀
• PDX-50TX supports "1" (A1), "2" (A2), and "3" (A3) only.

DISPLAY MENU

■ F.DISPLAY SETUP (Front panel display setup)

SET MENU → DISPLAY MENU → F.DISPLAY SETUP

Use to adjust the brightness and display settings of the front panel display.

STANDARD DIMMER (Standard dimmer)

Use to adjust the brightness of the front panel display when you operate this unit.
Choices: –2, –1, OFF*

AUTO DIMMER (Auto dimmer)

Use to adjust the brightness of the front panel display when you do not operate this unit. The front panel display automatically dims or turns off according to this setting if no operation is performed for a specified period of time.
Choices: DISPLAY OFF, –3 to –1, OFF*
• Select OFF for the same brightness as "STANDARD DIMMER".
• Select –3 to –1 to get dimmer (based on "STANDARD DIMMER").
• Select DISPLAY OFF to turn off the front panel display.

ⒸPower
ⒼENTER
Ⓖ △ / ▽
Ⓖ ◁ / ▷
①RETURN
①SETUP

■ OSD SETUP (OSD setup)

SET MENU → DISPLAY MENU → OSD SETUP
Use to adjust the display position and select the background color of the OSD.

OSD SHIFT (OSD shift)
Use to adjust the vertical position of the OSD. Adjust toward the – (minus) direction to raise the position of the OSD, and adjust toward the + (plus) direction to lower it.
Choices: –5 to +5
Initial setting: ±0

OSD BACK COLOR (OSD background color)
Use to select the background color of the OSD.
Choices: Blue*, Gray, Black, Purple, Red

■ LANGUAGE SETUP (Language setup)

SET MENU → DISPLAY MENU → LANGUAGE SETUP
Use to select the language used in the OSD.

Choices: ENGLISH (English), DEUTSCH (German), Français (French), ESPAÑOL (Spanish), ITALIANO (Italian), NEDERLANDS (Dutch), Русский (Russian)
Initial setting: ENGLISH (English)

■ UNIT SETUP (Unit setup)

SET MENU → DISPLAY MENU → UNIT SETUP
Use this to change the display unit of measurement.
Choices: METERS*, FEET
• Select METERS to enter distances in meters.
• Select FEET to enter distances in feet.

Note
• If you change this setting, the adjusted sound beam settings may change.

System configurations (ADVANCED SETUP)

This unit has additional menus that are displayed in the front panel display. These menus offer additional operations to adjust and customize the way this unit operates.

1 Press ⒸPower ⏻ key to set this unit to the standby mode.

2 While holding down INPUT on the front panel, press ⒸPower ⏻ key on the remote control.
Keep holding down INPUT until "ADVANCED SETUP" appears on the front panel display.
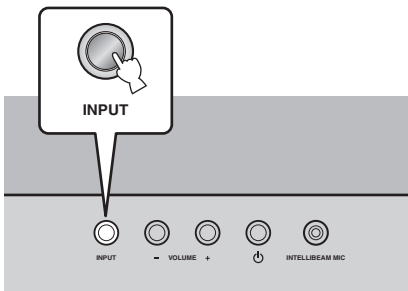
3 Press ⒾSETUP.

4 Press Ⓖ △ / ▽ to select the desired menu and then press ⒼENTER.

Example (when "DEMO MODE" is selected)

```
DEMO MODE                 VOL
```
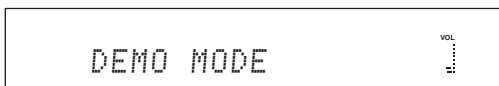
🔅
• To return to the previous screen, press ⒾRETURN.

5 Press Ⓖ ◁ / ▷ to select the desired parameter.

6 Press ⒸPower ⏻ key to set this unit to the standby mode.
The new setting will be reflected when you turn on this unit next time.

🔅
• The initial settings are marked with "*".

TURN ON VOLUME (Volume level at power-on)
Set the initial volume level when the power of this unit is turned on.
Control range: OFF*, 01 to 99, MAX (Maximum)

MAX VOLUME SET (Maximum volume setting)
Set the maximum volume level so that this unit will not output sound beyond the limited volume level.
Control range: 01 to 99, MAX* (Maximum)

PANEL INP.KEY (Front panel input key)
Select whether or not to enable the INPUT key on front panel key. To disable the operations, select "P.INPUT: OFF".
Choices: P.INPUT: ON*, P.INPUT: OFF

F.PANEL KEY (Front panel key)
Select whether or not to enable front panel key operations (except ADVANCED SETUP operations). To disable the operations, select "F.PANEL: OFF".
Choices: F.PANEL: ON*, F.PANEL: OFF

Customizing this unit (SET MENU)

System configurations (ADVANCED SETUP)

Using an external amplifier

Controlling external components

R.INPUT POWER (Power-on by remote control input keys)

Select whether or not to automatically turn on this unit when you select an input source on the remote control. To enable the function, select "R.INPUT PW: ON".
Choices: R.INPUT PW: OFF*, R.INPUT PW: ON

AC ON STANDBY (Standby after AC on)

Set this unit to the standby mode when the AC power is recovered after the power to this unit was lost temporally (disconnect the AC power plug from the wall outlet, power outage, etc.). To enable the function, select "AC STANDBY: ON".
Choices: AC STANDBY: OFF*, AC STANDBY: ON

MEMORY PROTECT (Memory protect)

Protect the settings you have saved in the system memory. To protect the settings, select "PROTECT: ON".
Choices: PROTECT: OFF*, PROTECT: ON

DEMO MODE (Demo mode)

Test the sound beam output from this unit to experience the sound beam. To set this unit to the demo mode, select "BEAM DEMO: ON".
Choices: BEAM DEMO: OFF*, BEAM DEMO: ON
- To move the beam horizontally, turn off this unit and then turn on it again ("DEMO" appears on the front panel display). Playback an input source and then press ⒺOFF.
- To stop the beam movement, press ⒺOFF again.
- To adjust the beam angle manually, press ⒻSURROUND or ⒻSTEREO when the beam is not moving.

💡
- After you checked the sound beam output, set this setting to "BEAM DEMO: OFF".
- If you set "SOUND OUT" to "PRE OUT", "DEMO MODE" does not function.

FACTORY PRESET (Factory preset)

Reset all of the parameters of this unit to the factory presets.
Choices: CANCEL*, RESET

Ⓐ Transmission indicator
Ⓑ AV
Ⓑ TV
Ⓓ Input selector keys
Ⓔ OFF
Ⓕ STEREO
Ⓕ SURROUND
Ⓖ Cursor (△ / ▽ / ◁ / ▷) keys
Ⓖ ENTER
Ⓗ MENU
Ⓗ TOP MENU
Ⓘ RETURN
Ⓘ SETUP
Ⓙ CH △ / ▽
Ⓛ TV operation keys
Ⓝ Numeric keys
Ⓞ CODE SET
Ⓟ External component operation keys

Using an external amplifier

You can connect an external amplifier to the PRE OUT jacks. Set "SOUND OUT" (page 34) to "PRE OUT" and then configure "PRE OUT BASS Management" parameters.
See also: "Changing the audio output method for surround playback" (page 23)
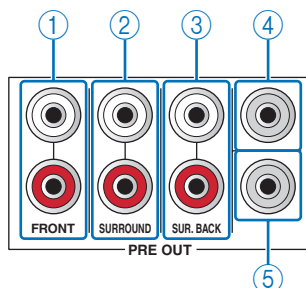
① **FRONT PRE OUT jacks**

Output front right and left channel signals.

② **SURROUND PRE OUT jacks**

Output surround right and left channel signals.

③ **SUR. BACK PRE OUT jacks**

Output surround back right and left channel signals.

④ **CENTER PRE OUT jack**

Outputs center channel signals.

⑤ **SUBWOOFER PRE OUT jack**

Connect a subwoofer with a built-in amplifier.

Note
- The following functions are disabled when an external amplifier is used.
  – AUTO SETUP (page 15)
  – CINEMA DSP programs (page 22)
  – UniVolume (page 28)
  – MUSIC ENHANCER (page 34)
  – BASS EXTENSION (page 34)
  – Adaptive DRC (page 34)

Controlling external components

Note

Depending on the external AV component you are using, you may not be able to operate the component with the remote control, even if a remote control code is set. In this case, operate the component using the supplied remote control.

You can control external components using the following keys on the remote control of this unit by setting the appropriate remote control codes (page 45). Before operating the control keys, press one of the ⒟Input selector keys to select an external component to be controlled.

⒝ TV ⏻

Turns on the power of your TV or set it to the standby mode.

⒝ AV ⏻

Turns on the power of the selected component or set it to the standby mode.

⒢ Cursor (△ / ▽ / ◁ / ▷) keys, ENTER

Use to select menu items.

⒣ TOP MENU

Displays the top menu of a Blu-ray disc or DVD.

⒣ MENU

Displays the menu of a Blu-ray disc or DVD.

⒤ RETURN

Returns to the previous menu screen.

⒥ CH △ / ▽

Switches between available channels for your external component.

⒧ TV operation keys

TV VOL +/−

Adjusts the audio output level of your TV.

TV MUTE

Temporarily mutes audio output from your TV.

TV INPUT

Switched the input source for your TV.

⒩ Numeric keys

Use to enter numeric digits or specify a channel number.

⒪ CODE SET

Sets remote control codes for external component operations (page 39).

⒫ External component operation keys

Use to control playback of your external component.

☼
• The ⒝TV⏻ and ⒧TV operation keys always work regardless of the selected input source.

Notes

• Depending on external components, some or all operations may not work. In this case, operate the component using the supplied remote control.
• If you operate your TV with the remote control of this unit when the HDMI control function is activated, this unit or external component connected to this unit with HDMI works improperly in some cases.

■ Setting remote control codes

1 While holding down ⒪CODE SET, press ⒟Input selector key to which the remote control code is assigned.
ⒶTransmission indicator flashes twice.

2 Release ⒪CODE SET.

3 Press ⒩Numeric keys to enter the remote control code (page 45) for your external component.
Each time you press you press the key, ⒶTransmission indicator flashes once. Once the 5-digit remote control code is entered properly, ⒶTransmission indicator lights up for approximately 2 seconds.

☼
• To clear remote control code set to a selected input source, enter "00010".

Note

• If any key other than ⒩Numeric keys is pressed, ⒶTransmission indicator flashes 5 times and the setting mode is canceled.

4 Perform a test operation using the remote control of this unit.
If the external component functions correctly, the remote control code setup is successful. If it does not function correctly, the remote control code may be incorrect. Check the remote control code for your external component (page 45) and try again.

Note

• If no operation is performed after step 1 or in the middle of step 2 within 30 seconds, ⒶTransmission indicator flashes 5 times and the setting mode is canceled.

■ Resetting all remote control codes

1 While holding down ⒪CODE SET, press ⒤SETUP.
ⒶTransmission indicator flashes twice.

2 Release ⒪CODE SET.

3 Press ⒩Numeric keys to enter "99999".
Each time you press the ⒩Numeric keys, ⒶTransmission indicator flashes once. Once the remote control code is entered properly, ⒶTransmission indicator lights up for approximately 2 seconds and then the initialization is completed.

Note

• If one of the other keys is pressed, ⒶTransmission indicator flashes 5 times and the initialization is canceled.

Customizing this unit (SET MENU)

System configurations (ADVANCED SETUP)

Using an external amplifier

Controlling external components

SETTINGS

APPENDIX

APPENDIX

Troubleshooting

Refer to the chart below when this unit does not function properly. If the problem you are experiencing is not listed below or if the instruction below does not help, set this unit to the standby mode, disconnect the AC power supply cable, and contact the nearest authorized Yamaha dealer or service center.

■ General

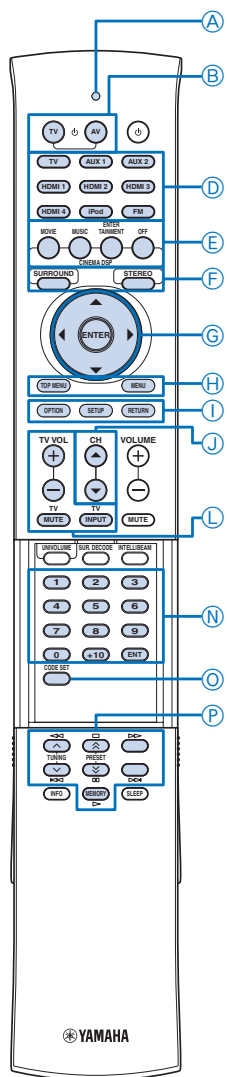| Problem	Cause	Remedy	See page
This unit does not operate properly.	The internal microcomputer has been frozen by an external electric shock (such as lightning or excessive static electricity) or by a power supply with low voltage.	Disconnect the AC power supply cable from the outlet and plug it in again after about 30 seconds.	12
This unit fails to turn on when ©Power (⏻) key is pressed, or enters the standby mode soon after the power has been turned on.	The AC power supply cable is not firmly connected to the AC wall outlet.	Connect the AC power supply cable firmly to the AC wall outlet.	12
	This unit has been exposed to a strong external electric shock (such as lightning and strong static electricity).	Set this unit to the standby mode, disconnect the AC power supply cable, plug it back in after 30 seconds, and use it normally.	12
This unit suddenly enters the standby mode.	The internal temperature becomes too high and the overheat protection circuitry has been activated.	Wait for about one hour for this unit to cool down and turn it back on.	—
	The sleep timer has turned the unit off.	Turn on the power and play back the source again.	21
No sound.	Incorrect input or output cable connections.	Connect the cables properly. If the problem persists, the cables may be defective.	12
	No appropriate input source has been selected.	Select an appropriate input source with INPUT or ⓓInput selector keys.	21
	The volume is turned down.	Turn up the volume.	21
	The sound is muted.	Press ⓚMUTE or ⓚVOLUME +/– to resume audio output and adjust the volume level.	21
	The signals this unit cannot reproduce (such as PCM signals with more than 96 kHz of sampling frequency) are being received from the source component.	Play a source whose signals can be reproduced by this unit.	—
		Change the system settings of the source component.	—
	The HDMI components connected to this unit do not support the HDCP copy protection standards.	Connect the HDMI components that support the HDCP copy protection standards.	12
	"SUPPORT AUDIO" is set to "OTHER" and HDMI audio signals are not being played back on this unit.	Set "SUPPORT AUDIO" to this unit in "SET MENU".	36
No sound or too small sound from a specific channel	The output level of the channel is muted.	Raise the output level of the channel.	34
	The beam setting is inappropriate.	Adjust the beam setting.	32
	You play back the source in the stereo mode.	Start surround playback.	22
	Some audio output methods do not output sound beams for certain channels.	Select another beam mode.	23
No sound from the subwoofer.	"BASS OUT" is set to "FRONT OR AUTO" in "SUBWOOFER SET".	Set "BASS OUT" to "SUBWOOFER" in "SUBWOOFER SET".	33
	The source does not contain low bass signals.		
No sound from the subwoofer connected by wireless.	The group IDs of this unit and SWK-W10 are not set to the same value.	Check whether the group IDs of this unit and SWK-W10 are set to the same value.	36
	"Wireless Function" is set to "No".	Set "Wireless Function" to "Yes".	36
Distorted or too little bass sound.	"CROSS OVER" is set incorrectly in "SUBWOOFER SET".	Set "CROSS OVER" correctly in "SUBWOOFER SET".	33
Surround sound effects are insubstantial.	The listening room is not a regular shape.	Install this unit in a square or rectangular shaped room.	—
	There is no wall in the path of the sound beam.	Try placing a flat object, such as a board, in the path of the sound beam.	—

Problem	Cause	Remedy	See page
Digital audio signals cannot be played back. (⊡⊡ DIGITAL indicator does not light up in the front panel display.)	The playback component is connected to this unit with an analog connection.	Connect them with an HDMI connection or a digital connection.	12
	The external component is not set to output digital audio signals.	Refer to the owner's manual supplied with your component and check the setting.	—
	Bit streaming is disabled on the external component.	Refer to the owner's manual supplied with your component and check the setting.	—
There is noise interference when a subwoofer is not connected to this unit.	The protection circuitry was in operation because a source with strong bass elements was played back.	Turn down the volume level.	21
		Set "BASS OUT" to "SUBWOOFER" in "SUBWOOFER SET".	33
		Connect a subwoofer and adjust settings for "SUBWOOFER SET".	33
On-screen display does not appear.	The cable is not connected to the TV or this unit properly.	Connect the cable properly.	12
The HDMI control function does not work properly.	"HDMI CONTROL" is set to "OFF" in "SET MENU".	Set "HDMI CONTROL" to "ON" in "SET MENU".	36
	The HDMI control function is disabled on your TV.	Refer to the owner's manual supplied with your TV and check the setting.	—
	The number of the connected HDMI components is over the limit.	Disconnect some of the HDMI components.	—
The automatic lipsync is not effective even "AUTO LIP SYNC" is set to "ON".	The TV does not support the automatic lipsync.	Set "AUTO LIP SYNC" to "OFF" and then manually adjust the audio output delay.	33
"Not Available" appears on the front panel display after key operation.	The key is unable to function in the current condition.		—

■ FM tuner

Problem	Cause	Remedy	See page
FM stereo reception is noisy.	The characteristics of FM stereo broadcasts may cause this problem when the transmitter is too far away or the antenna input is poor.	Check the antenna connections.	14
		Try using a high-quality directional FM antenna.	—
		Use the manual tuning method.	25
There is distortion, and clear reception cannot be obtained even with a good FM antenna.	There is multi-path interference.	Adjust the antenna position to eliminate multi-path interference.	—
The desired station cannot be tuned into with the automatic tuning method.	The signal is too weak.	Use a high-quality directional FM antenna.	—
		Use the manual tuning method.	25
Previously preset stations can no longer be tuned into.	This unit has been disconnected for a long period.	Preset the stations again.	25

■ Remote control

Problem	Cause	Remedy	See page
The remote control does not work and/or function properly.	Wrong distance or angle.	The remote control functions within a maximum range of 6 m (20 ft) and no more than 30 degrees off-axis from the front panel.	14
	Direct sunlight or lighting (from an inverter type of fluorescent lamp, etc.) is striking the remote control sensor of this unit.	Reposition this unit.	—
	The batteries are weak.	Replace all batteries.	14

Problem	Cause	Remedy	See page
Cannot operate external components with the remote control of this unit.	The external component you want to operate is not selected as the input source.	Press the desired Ⓓ Input selector key to select the external component you want to operate.	39
	The remote control code was not correctly set.	Set the remote control code correctly or try another code for the same manufacturer using the "List of remote control codes".	39
	Even if the remote control code is correctly set, there are some models that do not respond to the remote control.	Use the remote control supplied with the external component.	—

■ iPod

Problem	Cause	Remedy	See page
No sound.	PDX-50TX is connected to another device.	Select the same group ID as selected on this unit.	—
	PDX-50TX and this unit are not connected since they are set to different groups.	Set both PDX-50TX and this unit to the same group.	36
	"Wireless Function" is set to "No".	Set "Wireless Function" to "Yes".	36
	Distance is too far.	Move PDX-50TX closer to this unit.	—
	There is a device (microwave oven, wireless LAN, etc.) outputting signals in 2.4 GHz frequency band nearby.	Move this unit away from the device. If the device is IEEE802.11n-compliant, change the channel setting of the device so as not to affect the unit.	—
	The iPod or iPhone is not connected to PDX-50TX firmly.	Connect the iPod or iPhone firmly.	—
	The firmware of the iPod or iPhone is not updated.	Download the latest iTunes software to update the firmware of the iPod or iPhone.	—
	The signal from PDX-50TX is blocked by your body or metallic objects, etc.	Change the way of holding, orientation, or position of PDX-50TX to avoid the object blocking the signal.	—
	The battery of iPod or iPhone is low.	Charge the iPod or iPhone.	—
	The iPod or iPhone is in the process of connecting with this unit.	Please wait for a while.	—
	The protection circuitry has been activated by excessive volume.	Turn down the volume.	21
Controlling volume on the iPod or iPhone does not work.	The iPod or iPhone being used is not supported by this unit.	Use an iPod or iPhone supported by this unit.	27
	The iPod or iPhone is not connected to PDX-50TX firmly.	Connect the iPod or iPhone firmly.	—
Suddenly this unit produces sounds even though an iPod or iPhone is not connected.	This unit is connected to another device.	Change the group ID of this unit.	36
The iPod/iPhone interlock function does not work.	"iPod Interlock" is set to "OFF".	Set "iPod Interlock" to "ON".	36

Glossary

■ Dolby Digital

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

■ Dolby Digital Surround EX

Dolby Digital EX creates 6 full-bandwidth output channels from 5.1-channel sources.
For the best results, Dolby Digital EX should be used with movie sound tracks recorded with Dolby Digital Surround EX. With this additional channel, you can experience more dynamic and realistic moving sound especially with scenes with "fly-over" and "fly-around" effects.

■ Dolby Digital Plus

Dolby Digital Plus is an advanced audio technology developed for high-definition programming and media including HD broadcasts, and Blu-ray Disc. Selected as an optional audio standard for Blu-ray Disc, this technology delivers multichannel sound with discrete channel output. Supporting bitrates up to 6.0 Mbps, Dolby Digital Plus can carry up to 7.1 discreet audio channels simultaneously. Supported by HDMI version 1.3 and designed for the optical disc players and AV receivers/amplifiers of the future, Dolby Digital Plus also remains fully compatible with the existing multichannel audio systems that incorporate Dolby Digital.

■ Dolby Pro Logic II

Dolby Pro Logic II is an improved technique used to decode vast numbers of existing Dolby Surround software. This new technology enables a discrete 5-channel playback with 2 front left and right channels, 1 center channel, and 2 surround left and right channels (instead of only 1 surround channel for conventional Pro Logic technology). Music and Game modes are also available for 2-channel sources in addition to the Movie mode.

■ Dolby Pro Logic IIx

Dolby Pro Logic IIx is a new technology enabling discrete multichannel playback from 2-channel or multi-channel sources. There are three modes available: "Music mode" for music sources, "Movie mode" for movie sources (for 2-channel sources only) and "Game mode" for game sources.

■ Dolby Surround

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

■ Dolby TrueHD

Dolby TrueHD is an advanced lossless audio technology developed for high-definition disc-based media including Blu-ray Disc. Selected as an optional audio standard for Blu-ray Disc, this technology delivers sound that is bit-for-bit identical to the studio master, offering a high-definition home theater experience.
Supporting bitrates up to 18.0 Mbps, Dolby TrueHD can carry up to 8 discrete channels of 24-bit/96 kHz audio simultaneously.
Dolby TrueHD also remains fully compatible with the existing multichannel audio systems and retains the metadata capability of Dolby Digital, allowing dialog normalization and dynamic range control.

■ DTS 96/24

DTS 96/24 offers an unprecedented level of audio quality for multi-channel sound on DVD video, and is fully backward-compatible with all DTS decoders. "96" refers to a 96 kHz sampling rate compared to the typical 48 kHz sampling rate. "24" refers to 24-bit word length.
DTS 96/24 offers sound quality transparent to the original 96/24 master, and 96/24 5.1-channel sound with full-quality full-motion video for music programs and motion picture soundtracks on DVD video.

■ DTS Digital Surround

DTS digital surround was developed to replace the analog soundtracks of movies with a 6-channel digital sound track, and is now rapidly gaining popularity in movie theaters around the world. DTS, Inc. has developed a home theater system so that you can enjoy the depth of sound and natural spatial representation of DTS digital surround in your home. This system produces practically distortion-free 6-channel sound (technically, left, right, and center channels, 2 surround channels, plus an LFE 0.1-channel as a subwoofer, for a total of 5.1 channels). The unit incorporates a DTS-ES decoder that enables 6.1-channel reproduction by adding the surround back channel to existing 5.1-channel format.

■ DTS Neo:6

Neo:6 decodes the conventional 2-channel sources for 6-channel playback by the specific decoder. It enables playback with the full-range channels with higher separation just like digital discrete signal playback. Two modes are available: Music mode for playing music sources and Cinema mode for movies.

■ DTS-HD High Resolution Audio

DTS-HD High Resolution Audio is a high resolution audio technology developed for high-definition disc-based media including Blu-ray Disc. Selected as an optional audio standard for Blu-ray Disc, this technology delivers sound that is virtually indistinguishable from the original, offering a high-definition home theater experience. Supporting bitrates up to 6.0 Mbps for Blu-ray Disc, DTS-HD High Resolution Audio can carry up to 7.1 discrete channels of 24-bit/96 kHz audio simultaneously.
DTS-HD High Resolution Audio also remains fully compatible with the existing multichannel audio systems that incorporate DTS Digital Surround.

■ DTS-HD Master Audio

DTS-HD Master Audio is an advanced lossless audio technology developed for high-definition disc-based media including Blu-ray Disc. Selected as an optional audio standard for Blu-ray Disc, this technology delivers sound that is bit-for-bit identical to the studio master, offering a high-definition home theater experience.
Supporting bitrates up to 24.5 Mbps for Blu-ray Disc, DTS-HD Master Audio can carry up to 7.1 discrete channels of 24-bit/96 kHz audio simultaneously. Supported by HDMI version 1.3 and designed

for the optical disc players and AV receivers/amplifiers of the future, DTS-HD Master Audio also remains fully compatible with the existing multichannel audio systems that incorporate DTS Digital Surround.

■ HDMI

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

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

■ LFE 0.1-channel

This channel is for the reproduction of low bass signals. The frequency range for this channel is 20 Hz to 120 Hz. This channel is counted as 0.1 because it only enforces a low-frequency range compared to the full-range reproduction by the other 5/6 channels in Dolby Digital or DTS 5.1/6.1-channel systems.

■ PCM (Linear PCM)

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

■ "x.v.Color"

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

Specifications

AMP SECTION

• Maximum Output Power
  Woofer..20 W/ch (4 Ω, 100 Hz, 10% THD)
  Small dia. speaker ....2 W/ch (4 Ω, 1 kHz, 10% THD)

SPEAKER SECTION

• Speaker type .... 2-way acoustic suspension magnetic

• Driver
  Small dia. speakers.............. 4 cm (1-1/2 in) cone magnetic shielding type × 40
  Woofers .... 11 cm (4-1/2 in) cone × 2
  Tweeters (YSP-5100 only) ....2.5 cm (1 in) balanced dome x 2

• Frequency response
  YSP-5100 .... 70 Hz to 20 kHz (-10dB, Stereo mode)
  YSP-4100 .... 80 Hz to 20 kHz (-10dB, Stereo mode)

CONNECTIONS

• Input Jacks
  TV, AUX 1 AUDIO IN... 2 pairs (Analog)
  TV, AUX 1 DIGITAL IN
    (FS=32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz)
    ....2 (Optical digital)
  AUX 2 DIGITAL IN
    (FS=32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz)
    .... 1 (Coaxial digital)
  AUX 1 VIDEO IN.. 1 (Composite)
    [U.S.A., Canada, Korea, and General models] .... NTSC
    [Other models] .... PAL
  AUX 2 VIDEO IN..1 (Component)
  HDMI IN.. 4

• Output Jacks
  SUBWOOFER 1
  VIDEO OUT (composite input or menu screen) .... 1 (Composite)
    [U.S.A., Canada, Korea, and General models] .... NTSC
    [Other models] .... PAL
  HDMI OUT 1

• System Connector Jack
  INTELLIBEAM MIC .... 1 (Microphone input)
  RS-232C ....1 (System control)
  SYSTEM CONNECTOR .... 1 (for subwoofer power interlock)
  IR IN ....1 (System control)
  IR-OUT ....1 (System control)

FM SECTION

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

Wireless

• Frequency ....2.4 GHz

GENERAL

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

• Power Consumption .... 55 W

• Standby Power Consumption
  HDMI Control OFF/Wireless Power OFF .... 0.5 W or less
  HDMI Control ON/AirWired ON (factory preset).......................... 1.0 W or less

• Dimensions (W x H x D)
  YSP-5100
    Maximum dimension............. 1200 x 212 x 90 mm (47-1/4 x 8-3/8 x 3-1/2 in)
    With stands .... 1200 x 214 x 110.7mm (47-1/4 x 8-3/8 x 4-3/8 in)
  YSP-4100
    Maximum dimension............. 1030 x 212 x 90 mm (40-1/2 x 8-3/8 x 3-1/2 in)
    With stands .... 1030 x 214 x 110.7mm (40-1/2 x 8-3/8 x 4-3/8 in)

• Weight
  YSP-5100 ....11.0 kg (24.2 lbs)
  YSP-4100 ....10.0 kg (22.0 lbs)

* Specifications are subject to change without notice.

HDMI interface of this unit is based on the following standard:
• HDCP (High-bandwidth Digital Content Protection System) licensed by Digital Content Protection, LLC.

List of remote control codes

TV

Brand	Codes
ACCENT	14801, 16201
ACCUPHASE	16201
ACTION	14701, 14801, 15401
ACURA	00101
ADDISON	01201, 01601, 08401
ADMIRAL	01301, 02201, 05801, 14701, 14801, 15001, 15201, 18601
ADVENT	09601
ADYSON	14701, 15401
AEA	15701, 16201
AGB	06801
AIKO	01201, 14801, 15701, 16201
AIM	15701, 16201
AIWA	16901, 17101, 17701, 18301
AKAI	00101, 00301, 02901, 04601, 06801, 08901, 10501, 14701, 14801, 15401, 15701, 16201, 16701
AKIBA	15701, 16201
AKITO	15701, 16201
AKURA	03701, 14701, 14801, 15701, 16201
ALBA	00101, 00401, 04801, 08501, 14701, 14801, 15701, 16201
ALFA	14701
ALLSTAR	14701, 15701, 16201
AMERICA ACTION	02701
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