SONY®

Home Theatre System

Operating Instructions

HT-DDW8600
HT-DDW7600

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To reduce the risk of fire, do not cover the ventilation opening of the apparatus with newspapers, tablecloths, curtains, etc. Do not place the naked flame sources such as lighted candles on the apparatus.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

To reduce the risk of fire or electric shock, do not expose this apparatus to dripping or splashing, and do not place objects filled with liquids, such as vases, on the apparatus.

As the main plug is used to disconnect the unit from the mains, connect the unit to an easily accessible AC outlet. Should you notice an abnormality in the unit, disconnect the main plug from the AC outlet immediately.

Do not expose batteries or apparatus with battery-installed to excessive heat such as sunshine, fire or the like.

The unit is not disconnected from the mains as long as it is connected to the AC outlet, even if the unit itself has been turned off.

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

For customers in Australia

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

About This Manual

- The instructions in this manual are for model HT-DDW8600 and HT-DDW7600. Check your model number by looking at the lower right corner of the front panel. In this manual, models of area code AU1 is used for illustration purposes unless stated otherwise. Any difference in operation is clearly indicated in the text, for example, "Models of area code E51 only".
- The instructions in this manual describe the controls on the supplied remote. You can also use the controls on the receiver if they have the same or similar names as those on the remote.

The HT-DDW7600 consists of:
• Receiver	STR-KM7600
• Power amplifier	TA-KMSW500 (1)
• Speaker system	
– Front speaker	SS-MSP7500 (2)
– Center speaker	SS-CNP7500 (1)
– Surround/Surround back speaker	
	SS-SRP7500 (4)
– Subwoofer	SS-WP7500 (2)

The HT-DDW8600 consists of:
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– Surround/Surround back speaker	
	SS-SRP7500 (4)
– Subwoofer	SS-WP7500 (4)

About area codes
The area code of the receiver you purchased is shown on the lower right portion of the rear panel (see the illustration below).

4-XXX-XXX-XX **AA**
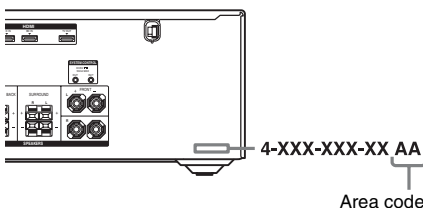
Area code

Any differences in operation, according to the area code, are clearly indicated in the text, for example, "Models of area code AA only".

On Copyright

This receiver incorporates Dolby* Digital and Pro Logic Surround and the DTS** Digital Surround System.

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

** Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,003,467; 7,212,872 & other U.S. and worldwide patents issued & pending. DTS, DTS Digital Surround, ES, and Neo:6 are registered trademarks and the DTS logos, Symbol and DTS 96/24 are trademarks of DTS, Inc. © 1996-2008 DTS, Inc. All Rights Reserved.

This receiver incorporates High-Definition Multimedia Interface (HDMI™) technology. HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

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"BRAVIA" is a trademark of Sony Corporation.

"PlayStation" is a registered trademark of Sony Computer Entertainment Inc.

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Using the Remote

Additional Information

Description and location of parts

Front panel

Receiver
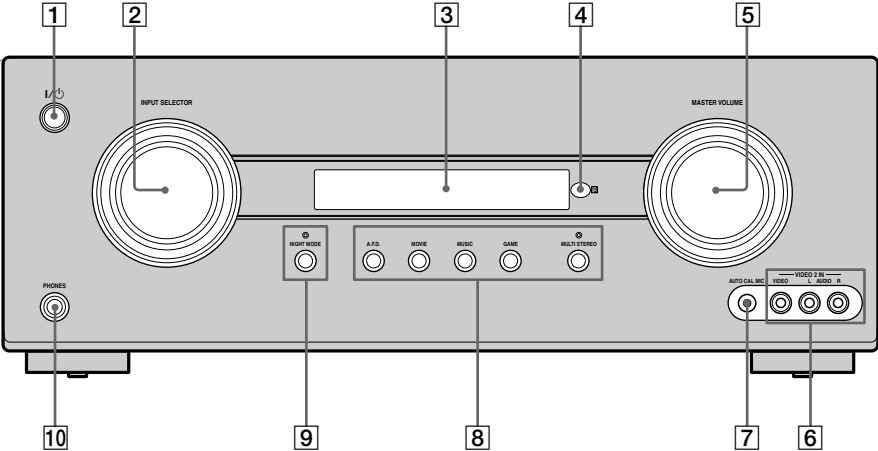
Power amplifier
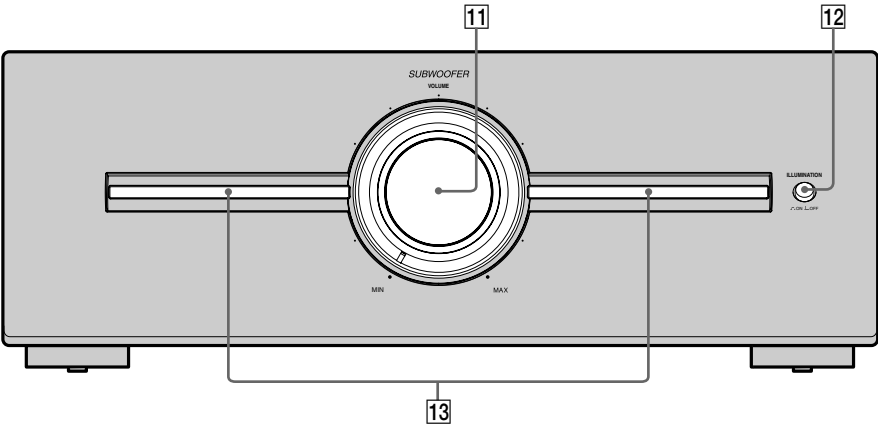
Name	Function
1 **I/⏻ (on/standby)**	Press to turn the receiver on or off (page 30, 38, 39, 56, 61).
2 **INPUT SELECTOR**	Turn to select the input source to play back (page 36, 38, 59, 60).
3 **Display**	The current status of the selected component or a list of selectable items appears here (page 8).
4 **Remote sensor**	Receives signals from remote commander.
5 **MASTER VOLUME**	Turn to adjust the volume level of all speakers at the same time (page 36, 37, 38, 39).
6 **VIDEO 2 IN jacks**	Connect to a portable audio/video component such as a camcorder or video game (page 28, 34).
7 **AUTO CAL MIC jack**	Connects to the supplied optimizer microphone for the Auto Calibration function (page 32).
8 **A.F.D.** **MOVIE** **MUSIC** **GAME** **MULTI STEREO**	Press to select a sound field (page 51).
MULTI STEREO lamp	Lights up when multi stereo sound field is activated.
9 **NIGHT MODE**	Press to enjoy sound effects for watching movie at night (page 42, 47, 56).
NIGHT MODE lamp	Lights up when NIGHT MODE is activated.
10 **PHONES jack**	Connects to headphones (page 75).
11 **SUBWOOFER VOLUME**	Turn to adjust the volume level of the subwoofers.

Name	Function
12 **ILLUMINATION**	⊓ ON The illumination is on (initial setting). ⊓ OFF The illumination is off.
13 **Illumination indicator**	Lights up to indicate the subwoofer output level.

About the indicators on the display
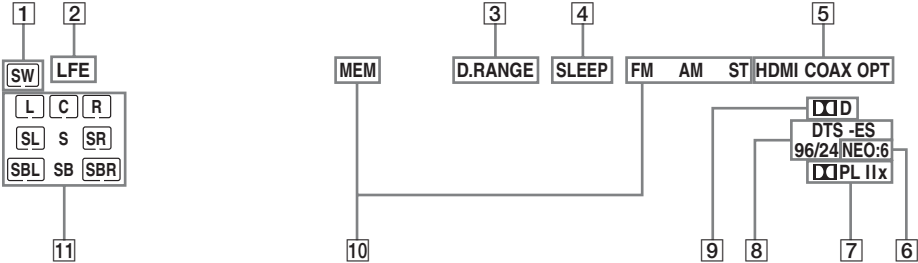
Name	Function
1 **SW**	Lights up when the audio signal is output from the SUBWOOFER jack.
2 **LFE**	Lights up when the disc being played back contains an LFE (Low Frequency Effect) channel and the LFE channel signal is actually being reproduced.
3 **D.RANGE**	Lights up when dynamic range compression is activated (page 43).
4 **SLEEP**	Lights up when the sleep timer is activated.

| Name	Function
5 **Input indicators**	Light up to indicate the current input.
HDMI	Lights up when the receiver recognizes a component connected via an HDMI IN jack.
COAX	Lights up when INPUT MODE is set to "AUTO" and the source signal is a digital signal is input through the COAXIAL jack or when INPUT MODE is set to "COAX". However, "NO INPUT" appears on the display when INPUT MODE is set to "COAX" and no digital signal is input through the COAXIAL jack (page 65).
OPT	Lights up when INPUT MODE is set to "AUTO" and the source signal is a digital signal is input through the OPTICAL jack or when INPUT MODE is set to "OPT". However, "NO INPUT" appears on the display when INPUT MODE is set to "OPT" and no digital signal is input through the OPTICAL jack (page 65).
6 **NEO:6**	Lights up when DTS Neo:6 Cinema/Music decoder is activated (page 52).

Name	Function
7 **Dolby Pro Logic indicators**	Lights up one of the respective indicators when the receiver applies Dolby Pro Logic processing to 2 channel signals in order to output the center and surround channel signals.
▯▮ PL	Dolby Pro Logic
▯▮ PLII	Dolby Pro Logic II
▯▮ PLIIx	Dolby Pro Logic IIx **Note** Dolby Pro Logic IIx decoding does not function for DTS format signals or for signals with a sampling frequency of more than 48 kHz.
8 **DTS(-ES) indicators**	Light up when DTS or DTS-ES signals are input.
DTS	Lights up when the receiver is decoding DTS signals.
DTS-ES	Lights up when the receiver is decoding DTS-ES signals.
DTS 96/24	Lights up when the receiver is decoding DTS 96/24 (96 kHz/ 24 bit) signals. **Note** When playing a DTS format disc, be sure that you have made digital connections and that INPUT MODE is not set to "ANALOG" (page 65).
9 **▯▮ D**	Lights up when the receiver is decoding Dolby Digital signals. **Note** When playing a Dolby Digital format disc, be sure that you have made digital connections and that INPUT MODE is not set to "ANALOG" (page 65).

Name	Function
10 **Tuning indicators**	Lights up when the receiver tunes in radio stations.
MEM	Lights up when a memory function, such as Preset Memory (page 59), etc., is activated.
FM	Lights up when FM band is selected.
AM	Lights up when AM band is selected.
ST	Lights up when stereo broadcast is selected.
11 **Playback channel indicators**	The letters (L, C, R, etc.) indicate the channels being played back. The boxes around the letters vary to show how the receiver downmixes the source sound.
L	Front Left
R	Front Right
C	Center (monaural)
SL	Surround Left
SR	Surround Right
S	Surround (monaural or the surround components obtained by Pro Logic processing)
SBL	Surround Back Left
SBR	Surround Back Right
SB	Surround Back (the surround back components obtained by 6.1 channel decoding)

Example:
Recording format (Front/ Surround): 3/2.1
Sound Field: A.F.D. AUTO

Rear panel

Receiver
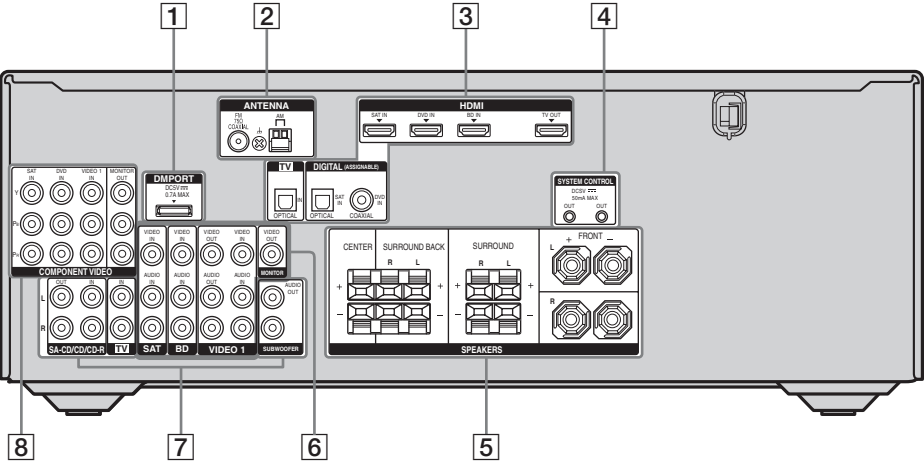
Power amplifier
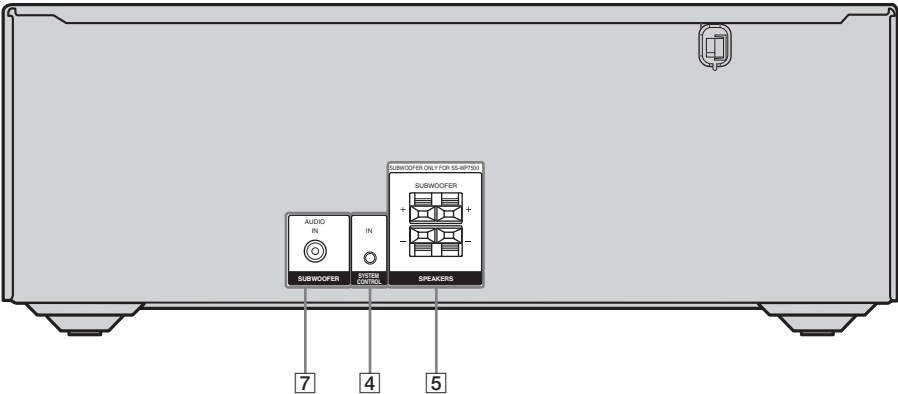
<table>
<tr><td colspan="2">1 DMPORT</td></tr>
<tr><td>DMPORT jack</td><td>Connects to a DIGITAL MEDIA PORT adapter (page 67).</td></tr>
</table>

<table>
<tr><td colspan="2">2 ANTENNA section</td></tr>
<tr><td>FM ANTENNA jack</td><td>Connects to the supplied FM wire antenna (aerial) (page 29).</td></tr>
<tr><td>AM ANTENNA terminals</td><td>Connects to the supplied AM loop antenna (aerial) (page 29).</td></tr>
</table>
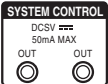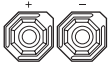
3 DIGITAL INPUT/OUTPUT section

⬚	OPTICAL IN jacks	Connects to a DVD player, etc. The COAXIAL jack provides a better sound quality (page 26, 27).
◎	COAXIAL IN jack	
⬚	HDMI IN/OUT* jacks	Connects to a DVD player, satellite tuner, or a Blu-ray disc player. The image is output to a TV or projector while the sound can be output from a TV or/and speakers connected to this receiver (page 24).

4 SYSTEM CONTROL INPUT/OUTPUT section

SYSTEM CONTROL DCSV 50mA MAX OUT OUT	SYSTEM CONTROL OUT jacks	Connects to the power amplifier (page 19).
IN SYSTEM CONTROL	SYSTEM CONTROL IN jack	Connects to the receiver (page 19).

5 SPEAKERS section

+ −	Connects to the speakers (page 17).
+ −	

6 VIDEO/AUDIO INPUT/OUTPUT section

White (L) Red (R)	AUDIO IN/OUT jacks	Connects to a VCR, Blu-ray disc player, etc. (page 21–28).
Yellow	VIDEO IN/OUT* jacks	

7 AUDIO INPUT/OUTPUT section

White (L) Red (R)	AUDIO IN/OUT jacks	Connects to a Super Audio CD player, CD recorder, etc. (page 22).
Black	AUDIO OUT jack	Connects to the power amplifier (page 17).
Black	AUDIO IN jack	Connects to the receiver.

8 COMPONENT VIDEO INPUT/OUTPUT section

Green (Y) Blue (PB) Red (PR)	Y, PB, PR IN/OUT* jacks	Connects to a DVD player, TV, satellite tuner, etc. You can enjoy high quality image (page 21–28).

* You can watch the selected input image when you connect the MONITOR OUT or HDMI TV OUT jack to a TV or projector (page 21).

Remote commander

You can use the supplied remote to operate the receiver and to control the Sony audio/video components that the remote is assigned to operate (page 71).

RM-AAU027

Name	Function
1 **TV I/**⏻ **(on/standby)**	Press TV I/⏻ and TV (14) at the same time to turn the TV on or off.
AV I/⏻ **(on/standby)**	Press to turn on or off the Sony audio/video components that the remote is assigned to operate (page 71). If you press I/⏻ (2) at the same time, it will turn off the receiver and other Sony components (SYSTEM STANDBY). **Note** The function of the AV I/⏻ switch changes automatically each time you press the input buttons (3).
2 **I/**⏻ **(on/standby)**	Press to turn the receiver on or off. To turn off all Sony components, press I/⏻ and AV I/⏻ (1) at the same time (SYSTEM STANDBY).
3 **Input buttons**	Press one of the buttons to select the component you want to use. When you press any of the input buttons, the receiver turns on. The buttons are factory assigned to control Sony components. You can change the button assignments following the steps in "Changing button assignments" on page 71.
4 **2CH**	Press to select a sound field.
A.F.D.	
MOVIE	
MUSIC	
5 **DVD/BD MENU**	Press to display the menu of the DVD or Blu-ray disc on the TV screen. Then, use ▲, ▼, ◄, ► and ⊕ (16) to perform menu operations.
6 **AUTO CAL**	Press to activate the Auto Calibration function (page 32).
7 **D.TUNING**	Press to enter direct tuning mode.
D.SKIP	Press to skip a disc when using a multi-disc changer.

Name	Function
8 **AMP MENU**	Press to display the menu of the receiver. Then, use ↑, ↓, ←, → and ⊕ (16) to perform menu operations.
9 **ENTER**	Press to enter the value after selecting a channel, disc or track using the numeric buttons of the TV, VCR or satellite tuner.
MEMORY	Press to store a station.
10 **MUTING**	Press to turn off the sound temporarily. Press MUTING again to restore the sound. Press MUTING and TV (14) at the same time to activate the TV's muting function.
11 **TV VOL +a)/–**	Press TV VOL +/– and TV (14) at the same time to adjust the volume level of the TV.
MASTER VOL +a)/–	Press to adjust the volume level of all speakers at the same time.
12 **MENU/HOME**	Press to display the menu of the VCR, DVD player, satellite tuner or Blu-ray disc player on the TV screen. Press MENU/HOME and TV (14) at the same time to display the TV's menu. Then, use ↑, ↓, ←, → and ⊕ (16) to perform menu operations.
13 **I◄◄/►►Ib)**	Press to skip a track of the CD player, DVD player or Blu-ray disc player.
REPLAY ←·/ ADVANCE ·→	Press to replay the previous scene or fast forward the current scene of the VCR, DVD player or Blu-ray disc player.
◄◄/►►b)	Press to – search tracks in the forward/ reverse direction of the DVD player. – start fast forward/rewind of the VCR, CD player or Blu-ray disc player.

Name	Function
▷a)b)	Press to start playback of the VCR, CD player, DVD player or Blu-ray disc player.
IIb)	Press to pause playback or recording of the VCR, CD player, DVD player or Blu-ray disc player. (Also starts recording with components in recording standby.)
■b)	Press to stop playback of the VCR, CD player, DVD player or Blu-ray disc player.
TV CH +/–	Press TV CH +/– and TV (14) at the same time to select preset TV channels.
PRESET +/–	Press to select – preset stations. – preset channels of the VCR or satellite tuner.
TUNING +/–	Press to scan a station.
FM MODE	Press to select the FM monaural or stereo reception.
14 **TV**	Press TV and the button with orange printing at the same time to enable TV operation.
15 **RETURN/ EXIT ᵒ⌐**	Press to – return to the previous menu. – exit the menu while the menu or on-screen guide of the VCR, DVD player, satellite tuner or Blu-ray disc player is displayed on the TV screen. Press RETURN/EXIT ᵒ⌐ and TV (14) at the same time to return to the previous menu or exit the TV's menu while the menu is displayed on the TV screen.

Name	Function
16 (+), ▲/▼/◄/►	After pressing DVD/BD MENU (5), AMP MENU (8), or MENU/HOME (12), press ▲, ▼, ◄ or ► to select the settings. Then, press (+) to enter the selection if you have pressed DVD/BD MENU or MENU/HOME previously. Press (+) also to enter the selection of the receiver, VCR, satellite tuner, CD player, DVD player or Blu-ray disc player.
17 DISPLAY	Press to select information displayed on the TV screen of the VCR, satellite tuner, CD player, DVD player or Blu-ray disc player. Press DISPLAY and TV (14) at the same time to display TV's information on the TV screen.
18 TOOLS/ OPTIONS	Press to display and select the options of the DVD player or Blu-ray disc player. Press TOOLS/OPTIONS and TV (14) at the same time to display the options applicable to the Sony TV.
19 -/--	Press to select the channel entry mode, either one or two digits of the VCR. Press -/-- and TV (14) at the same time to select the channel entry mode, either one or two digits of the TV.
>10/•	Press to select – track numbers over 10 of the VCR, satellite tuner or CD player. – channel numbers of the Digital CATV terminal.
CLEAR	Press to clear a mistake when you press the incorrect numeric button.

Name	Function
20 Numeric buttons (number 5a))	Press to – preset/tune to preset stations. – select track numbers of the CD player, DVD player or Blu-ray disc player. Press 0/10 to select track number 10. – select channel numbers of the VCR or satellite tuner. Press the numeric buttons and TV (14) at the same time to select the TV channels.
21 TV INPUT	Press TV INPUT and TV (14) at the same time to select the input signal (TV input or video input).
SLEEP	Press to activate the Sleep Timer function and the duration which the receiver turns off automatically.

a)The number 5, TV VOL +, MASTER VOL + and ▷ buttons have tactile dots. Use the tactile dots as references when operating the receiver.

b)This button is also available for DIGITAL MEDIA PORT adapter operation. For details on the function of the button, refer to the operating instructions supplied with the DIGITAL MEDIA PORT adapter.

Notes

- Some functions explained in this section may not work depending on the model.
- The above explanation is intended to serve as an example only. Therefore, depending on the component, the above operation may not be possible or may operate differently than described.

1: Installing the speakers

HT-DDW7600 only

This receiver allows you to use a 7 channel speaker with 2 subwoofer system.

Example of a 7 channel speaker with 2 subwoofer system configuration
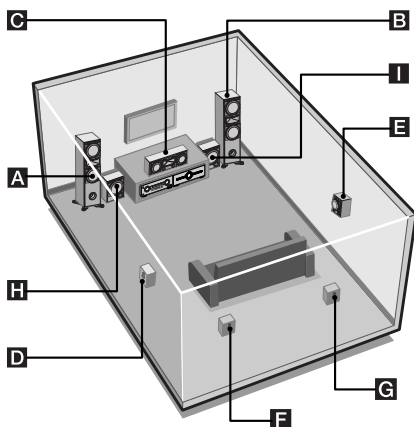
A Front speaker (left)
B Front speaker (right)
C Center speaker
D Surround speaker (left)
E Surround speaker (right)
F Surround back speaker (left)
G Surround back speaker (right)
H Subwoofer
I Subwoofer

HT-DDW8600 only

This receiver allows you to use a 7 channel speaker with 4 subwoofer system.

Example of a 7 channel speaker with 4 subwoofer system configuration
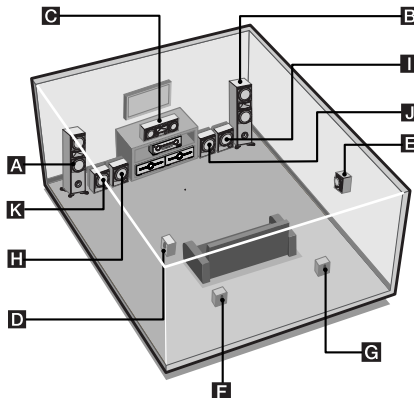
A Front speaker (left)
B Front speaker (right)
C Center speaker
D Surround speaker (left)
E Surround speaker (right)
F Surround back speaker (left)
G Surround back speaker (right)
H Subwoofer
I Subwoofer
J Subwoofer
K Subwoofer

Installing the speakers on a flat surface

Before you install the center speaker, surround speakers, surround back speaker and subwoofers, be sure to attach the supplied foot pads to prevent vibration or movement as shown in the illustration below.
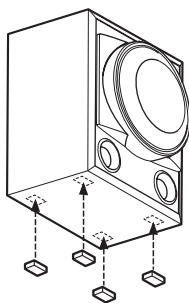
Installing the speakers on the wall

You can install your surround and surround back speakers on the wall.

1 **Prepare screws (not supplied) that are suitable for the hook on the back of each speaker as shown in the illustrations below.**

4 mm

more than 25 mm

4.6 mm

10 mm
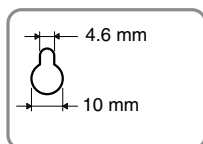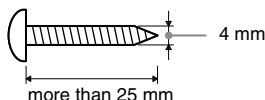
Hook on the back of the speaker

2 **Fasten the screws to the wall. The screws should protrude 5 to 7 mm.**

5 to 7 mm
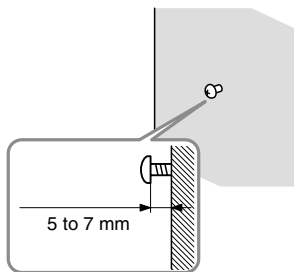
3 **Hang the speakers on the screws.**

Hook on the back of the speaker

4.6 mm

10 mm
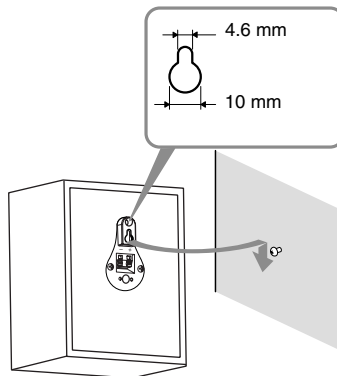
Notes

- Use screws that are suitable for the wall material and strength. As a plaster board wall is especially fragile, attach the screws securely to a beam and fasten them to the wall. Install the speakers on a vertical and flat wall where reinforcement is applied.
- Contact a screw shop or installer regarding the wall material or screws to be used.
- Sony is not responsible for accident or damage caused by improper installation, insufficient wall strength or improper screw installation, natural calamity, etc.

2: Connecting the speakers and subwoofers

Before connecting the cords, be sure to disconnect the AC power cord.

Connecting the speakers

The following illustration shows how to connect to the speakers.
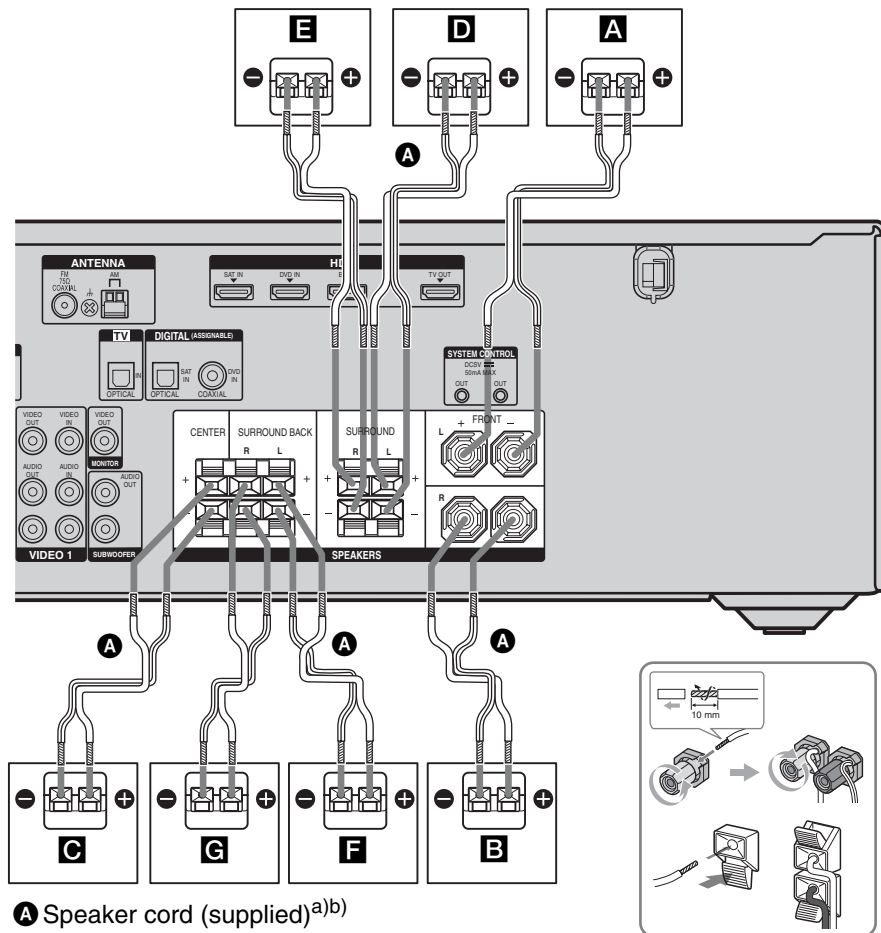
A Speaker cord (supplied)[a)b)]

A Front speaker (left)
B Front speaker (right)
C Center speaker
D Surround speaker (left)
E Surround speaker (right)
F Surround back speaker (left)

G Surround back speaker (right)

[a)] Use the long speaker cords to connect the surround and surround back speakers and the short speaker cords to connect the front speakers.
[b)] Connect the cord attached with the "CENTER" label to the center speaker.

17GB

To connect the speakers correctly

Check the speaker type by referring to the speaker label* on the rear panel of the speakers.

Character on speaker label	Speaker type
L	Front left
R	Front right
SL	Surround left
SR	Surround right
SBL	Surround back left
SBR	Surround back right

*The center speaker and subwoofers do not have any character on the speaker label. For details on the speaker type, see page 2.

Tip

Use the supplied speakers to optimize the system's performance.

N

Connecting the subwoofers

The following illustration shows how to connect to the subwoofers.

Note
To adjust the volume of all the speakers and the subwoofers at the same time, press MASTER VOL +/− on the remote. You can also use MASTER VOLUME on the receiver.

HT-DDW7600

Ⓐ Monaural audio cord (supplied)
Ⓑ System control cable (supplied)
Ⓒ Speaker cord (supplied)[a]

Ⓐ Subwoofer
Ⓑ Subwoofer

[a] Use the red and black speaker cords to connect the subwoofers.
Red wire is positive (+) in polarity and should be connected to the positive (+) speaker terminal. Connect black wire to the negative (−) speaker terminal.

HT-DDW8600
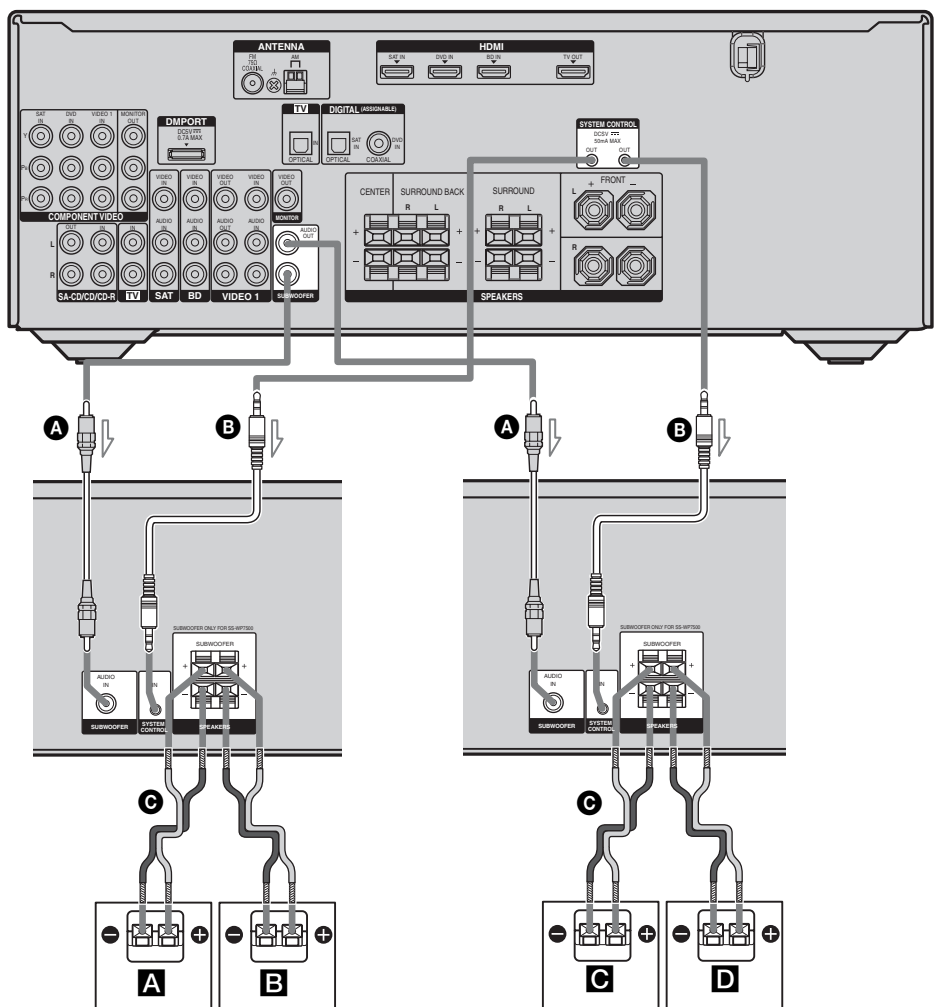
Ⓐ Monaural audio cord (supplied)
Ⓑ System control cable (supplied)
Ⓒ Speaker cord (supplied)[a]

Ⓐ Subwoofer
Ⓑ Subwoofer
Ⓒ Subwoofer
Ⓓ Subwoofer

[a] Use the red and black speaker cords to connect the subwoofers.
Red wire is positive (+) in polarity and should be connected to the positive (+) speaker terminal. Connect black wire to the negative (−) speaker terminal.

3: Connecting the TV

You can watch the selected input image when you connect the HDMI TV OUT or MONITOR OUT jack to a TV.
It is not necessary to connect all the cords. Connect audio and video cords according to the jacks of your components.

Before connecting the cords, be sure to disconnect the AC power cord (mains lead).
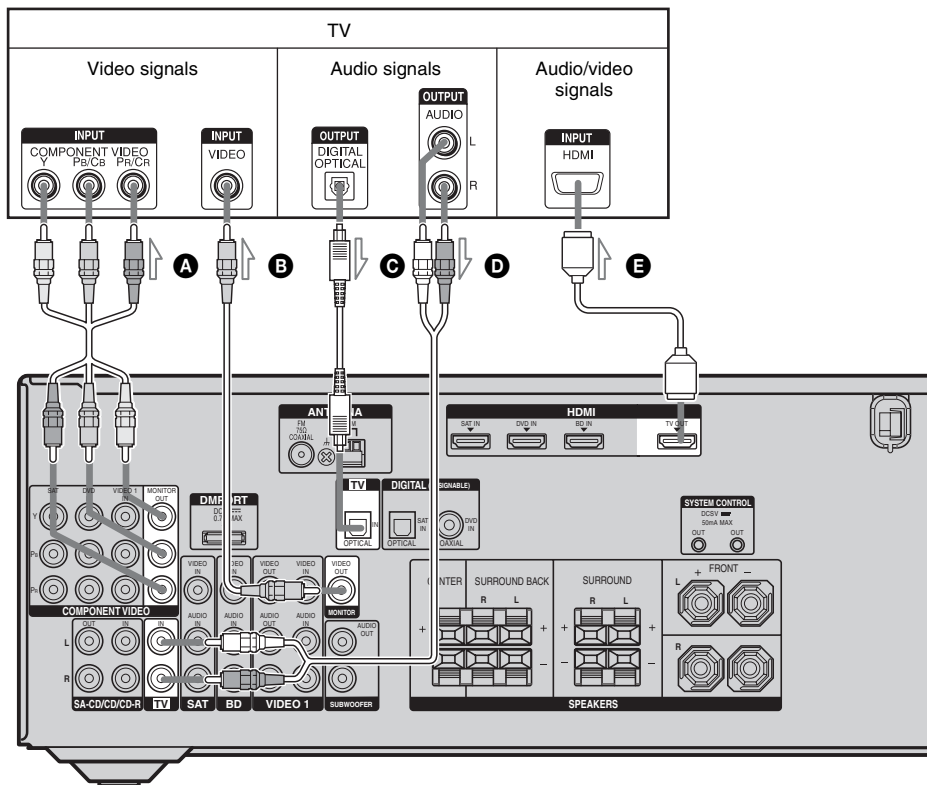
Ⓐ Component video cord (not supplied)
Ⓑ Video cord (not supplied)
Ⓒ Optical digital cord (not supplied)
Ⓓ Audio cord (not supplied)
Ⓔ HDMI cable (not supplied)
　　We recommend that you use a Sony HDMI cable.

Notes

- Be sure to turn on the receiver when the video and audio signals of a playback component are being output to a TV via the receiver. Unless the power is turned on, neither video nor audio signals will be transmitted.
- When connecting optical digital cords, insert the plugs straight in until they click into place.
- Do not bend or tie optical digital cords.

Tips

- To output the sound of the TV from the speakers connected to the receiver, be sure to
  – connect the audio output jacks of the TV to the TV IN jacks of the receiver.
  – turn off the TV's volume or activate the TV's muting function.
- All the digital audio jacks are compatible with 32 kHz, 44.1 kHz, 48 kHz, and 96 kHz sampling frequencies.

4a: Connecting the audio components

Connecting a Super Audio CD player, CD player or CD recorder

The following illustration shows how to connect a Super Audio CD player, CD player or CD recorder.

Before connecting the cords, be sure to disconnect the AC power cord (mains lead). After connecting your audio component, proceed to "4b: Connecting the video components" (page 23).
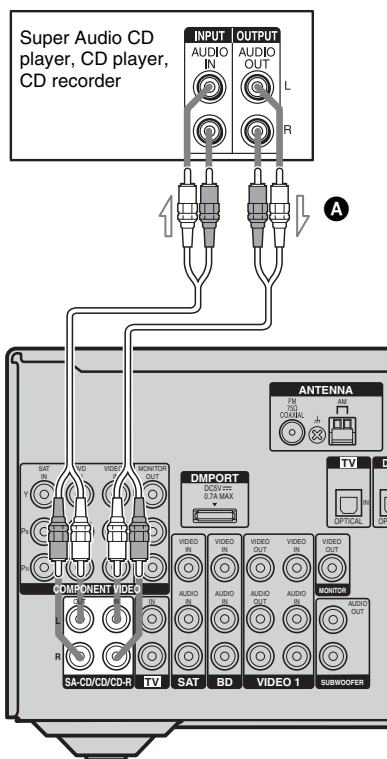
A Audio cord (not supplied)

4b: Connecting the video components

How to connect your components

This section describes how to connect your video components to this receiver. Before you begin, refer to "Component to be connected" below for the pages which describe how to connect each component.

Before connecting the cords, be sure to disconnect the AC power cord (mains lead).

After connecting all your components, proceed to "5: Connecting the antennas (aerials)" (page 29).

Component to be connected

Component	Page
TV	21
With HDMI jack	24
"PlayStation 3"	24
DVD player, Blu-ray disc player	26
Satellite tuner, Set-top box	27
DVD recorder, VCR	28
Camcorder, video game, etc.	28

If you want to connect several digital components, but cannot find an unused input

See "Listening to digital sound from other inputs (DIGITAL ASSIGN)" (page 66).

Video input/output jacks to be connected

The image quality depends on the connecting jack. Refer to the illustration that follows. Select the connection according to the jacks on your components.
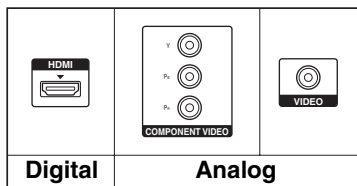
High quality image

Note

Be sure to turn on the receiver when the video and audio signals of a playback component are being output to a TV via the receiver. Unless the power is turned on, neither video nor audio signals will be transmitted.

Connecting components with HDMI jacks

HDMI is the abbreviated name for High-Definition Multimedia Interface. It is an interface which transmits video and audio signals in digital format.

Notes
- You can also rename the DVD input so that it can be displayed on the receiver's display. For details, see "Naming inputs" (page 37).
- Connect a "PlayStation 3", etc., to any available HDMI jack. All the HDMI jacks on the receiver function in the same way.
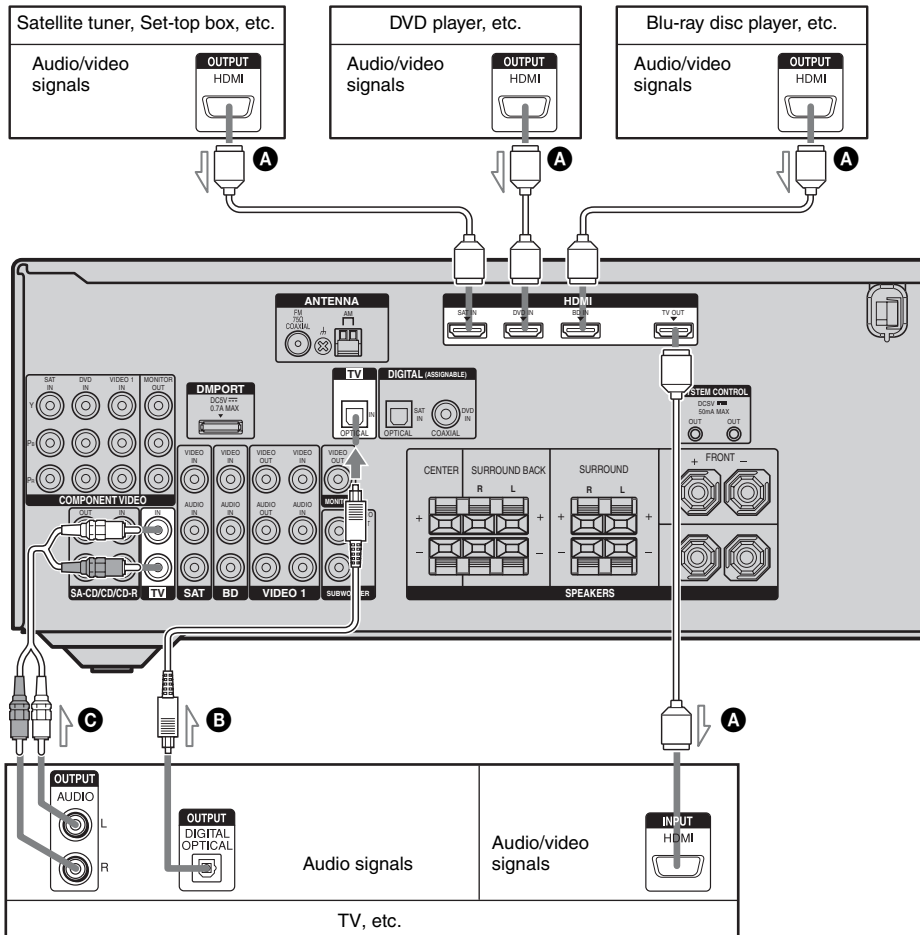
A HDMI cable (not supplied)
  We recommend that you use a Sony HDMI cable.
B Optical digital cord (not supplied)*
C Audio cord (not supplied)*

* Connect at least one of the audio cords (**B** or **C**).

To enjoy TV multi channel surround sound broadcasting

You can listen to TV multi channel surround sound broadcasting from the speakers connected to the receiver.

Connect the OPTICAL output jack of the TV to the OPTICAL IN jack of the receiver.

HDMI features

- A digital audio signal transmitted by HDMI can be output from the speakers connect to this receiver. This signal supports Dolby Digital, DTS, and Linear PCM.
- This receiver supports Deep Colour, x.v.Colour and 3D transmission.
- This receiver supports the Control for HDMI function. For details, see ""BRAVIA" Sync Features" (page 60).

Notes on HDMI connections

- An audio signal input to the HDMI IN jack is output from the speaker output jack and HDMI TV OUT jack. It is not output from any other audio jacks.
- Video signals input to the HDMI IN jack can only be output from the HDMI TV OUT jack. The video input signals cannot be output from the VIDEO OUT jacks or MONITOR OUT jacks.
- When you want to listen to the sound from the TV speaker, set "AUDIO OUT" to "TV+AMP" in the HDMI menu (page 42). If you cannot play back multi channel software, set to "AMP". However, the sound will not output from the TV speaker.
- The multi/stereo area audio signals of a Super Audio CD are not output.
- Audio signals (sampling frequency, bit length, etc.) transmitted from an HDMI jack may be suppressed by the connected component. Check the setup of the connected component if an image is poor or the sound does not come out of a component connected via the HDMI cable.

- Sound may be interrupted when the sampling frequency, the number of channels or the audio format of the audio output signals from the playback component is switched.
- When the connected component is not compatible with copyright protection technology (HDCP), the image and/or the sound from the HDMI TV OUT jack may be distorted or may not be output.
  In this case, check the specification of the connected component.
- You can enjoy multi channel Linear PCM only with an HDMI connection.
- Set the image resolution of the playback component to 720p, 1080i or 1080p when you output 96 kHz multi-channel sound over an HDMI connection.
- You may need to make certain settings on the image resolution of the player before you can enjoy multi channel Linear PCM. Refer to the operating instructions of the player.
- To enjoy 3D images, connect 3D-compatible TV and video components (Blu-ray disc player, Blu-ray disc recorder, "PlayStation 3", etc.) to the receiver using High Speed HDMI cables, put on 3D glasses, and then play back a 3D-compatible content.
- Depending on the TV or the video component, 3D images may not be displayed. Check the 3D image formats supported by the receiver (page 81).
- Refer to the operating instructions of each component connected for details.
- Use a High Speed HDMI cable. If you use a Standard HDMI cable, 1080p, Deep Colour or 3D images may not be displayed properly.
- We do not recommend using an HDMI-DVI conversion cable. When you connect an HDMI-DVI conversion cable to a DVI-D component, the sound and/or the image may not be output.

Connecting a DVD player, Blu-ray disc player

The following illustration shows how to connect a DVD player or a Blu-ray disc player. It is not necessary to connect all the cords. Connect audio and video cords according to the jacks of your components.

Note

To input multi channel digital audio from the DVD player, set the digital audio output setting on the DVD player. Refer to the operating instructions supplied with the DVD player.

Tip

All the digital audio jacks are compatible with 32 kHz, 44.1 kHz, 48 kHz, and 96 kHz sampling frequencies.

Ⓐ Component video cord (not supplied)
Ⓑ Coaxial digital cord (not supplied)
Ⓒ Video cord (not supplied)
Ⓓ Audio cord (not supplied)

Connecting a Satellite tuner, Set-top box

The following illustration shows how to connect a satellite tuner or a set-top box. It is not necessary to connect all the cords. Connect audio and video cords according to the jacks of your components.

Notes

• When connecting optical digital cords, insert the plugs straight in until they click into place.
• Do not bend or tie optical digital cords.

Tip

All the digital audio jacks are compatible with 32 kHz, 44.1 kHz, 48 kHz, and 96 kHz sampling frequencies.
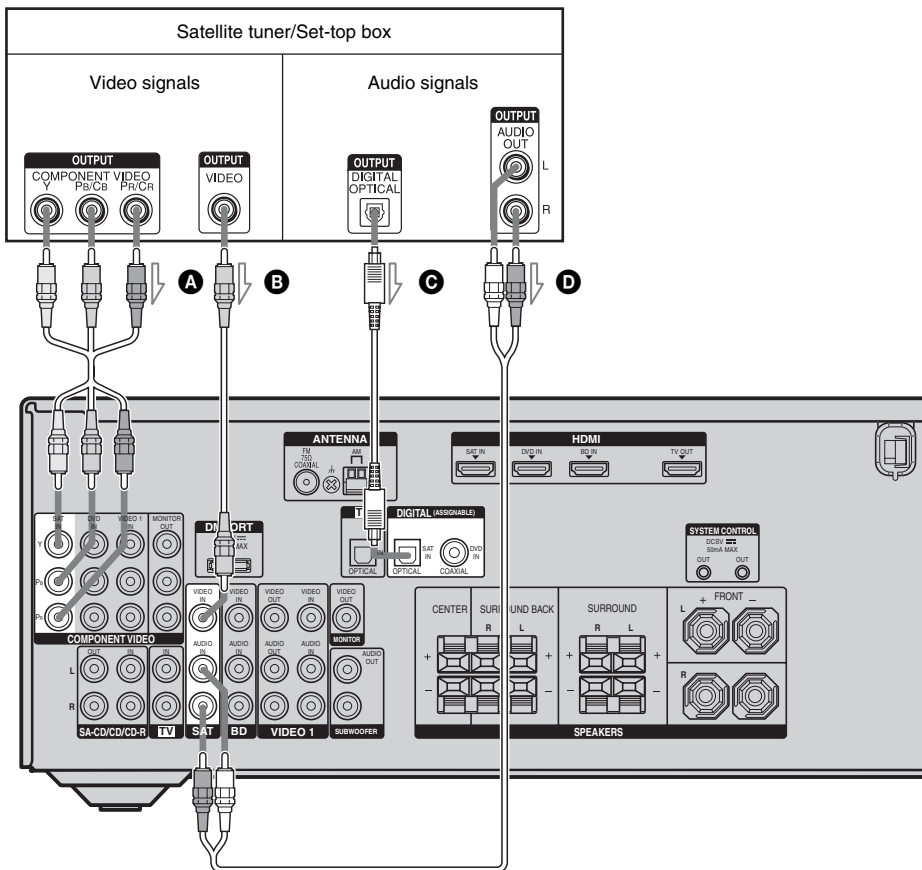
A Component video cord (not supplied)
B Video cord (not supplied)
C Optical digital cord (not supplied)
D Audio cord (not supplied)

Connecting components with analog video and audio jack

The following illustration shows how to connect a component which has analog jacks such as a DVD recorder, VCR, etc.

It is not necessary to connect all the cords. Connect audio and video cords according to the jacks of your components.

Ⓐ Component video cord (not supplied)
Ⓑ Video cord (not supplied)
Ⓒ Audio cord (not supplied)
Ⓓ Audio/video cord (not supplied)

Notes
- Be sure to change the factory setting of the VIDEO 1 input button on the remote so that you can use the button to control your DVD recorder. For details, see "Changing button assignments" (page 71).
- You can also rename the VIDEO 1 input so that it can be displayed on the receiver's display. For details, see "Naming inputs" (page 37).

5: Connecting the antennas (aerials)

Connect the supplied AM loop antenna (aerial) and FM wire antenna (aerial). Before connecting the antennas, be sure to disconnect the AC power cord (mains lead).

FM wire antenna (aerial) (supplied)

AM loop antenna (aerial) (supplied)
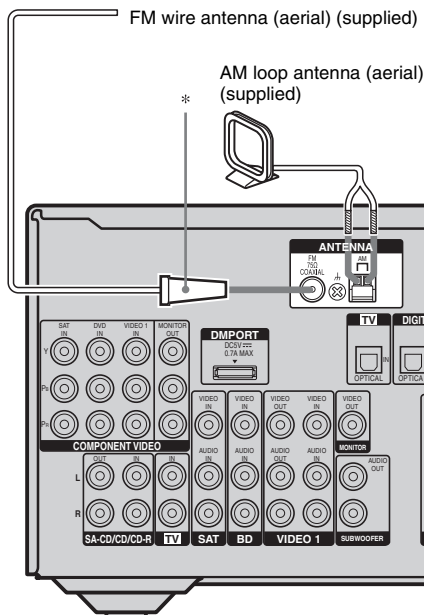
* The shape of the connector varies depending on the area code of this receiver.

Notes
- To prevent noise pickup, keep the AM loop antenna (aerial) away from the receiver and other components.
- Be sure to fully extend the FM wire antenna (aerial).
- After connecting the FM wire antenna (aerial), keep it as horizontal as possible.

6: Preparing the receiver and the remote

Setting the voltage selector

If your receiver and power amplifier have a voltage selector on the rear panel, check that the voltage selector is set to the local power supply voltage. If not, use a screwdriver to set the selector to the correct position before connecting the AC power cord to a wall outlet. Depending on the models of area code, the VOLTAGE SELECTOR may differ.

Receiver

VOLTAGE SELECTOR

120V[a)]　　220V　　240V[b)]

Power amplifier

120V[a)]　220V　240V[b)]
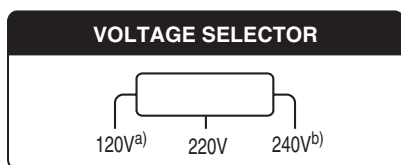
VOLTAGE SELECTOR
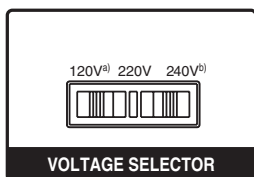
[a)] For the models of area code EA3: 120 - 127V
[b)] For the models of area code EA3: 230 - 240V

Connecting the AC power cord (mains lead)

Connect the AC power cord (mains lead) to a wall outlet.

AC power cord (mains lead)

To the wall outlet
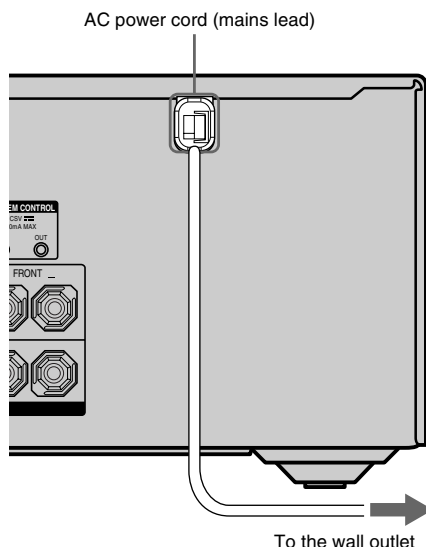
Performing initial setup operations

Before using the receiver for the first time, initialize the receiver by performing the following procedure. This procedure can also be used to return settings you have made to their factory defaults.
Be sure to use the buttons on the receiver for this operation.

I/(¹)
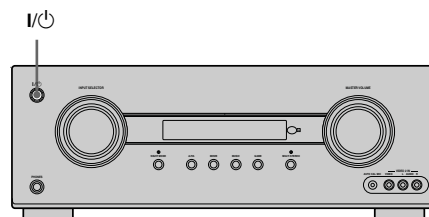
1 **Press I/(¹) to turn off the receiver.**

2 Hold down I/⏻ for 5 seconds.

After "CLEARING" appears on the display for a while, "CLEARED" appears.
All the settings you have changed or adjusted are reset to the initial settings.

Inserting batteries into the remote

Insert two R6 (size-AA) batteries in the RM-AAU027 Remote Commander.
Observe the correct polarity when installing batteries.
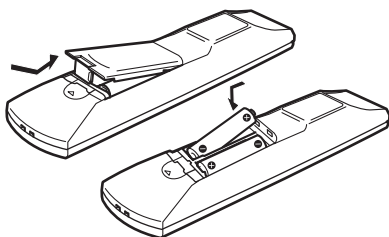
Notes
- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with old ones.
- Do not mix manganese batteries and other kinds of batteries.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you do not intend to use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.
- When you replace the batteries, the remote buttons may be reset to their factory settings. If this happens, reassign the buttons again (page 71).
- When the remote no longer operates the receiver, replace all the batteries with new ones.

7: Calibrating the appropriate settings automatically
(AUTO CALIBRATION)

The DCAC (Digital Cinema Auto Calibration) function allows you to perform automatic calibration such as:
- Checking the connection between each speaker and the receiver.
- Adjusting the speaker level.
- Measuring the distance of each speaker from your listening position.

The DCAC is designed to obtain proper sound balance in your room. However, you can adjust the speaker levels and balance manually according to your preference. For details, see "8: Adjusting the speaker levels and balance (TEST TONE)" (page 35).

Before you perform Auto Calibration

Before you perform Auto Calibration, install and connect the speakers (page 15, 17).
- The AUTO CAL MIC jack is used for the supplied optimizer microphone only. Do not connect other microphones to this jack. Doing so may damage the receiver and the microphone.
- During calibration, the sound that comes out of the speakers is very loud. The volume of the sound cannot be adjusted. Pay attention to the presence of children or to the effect on your neighborhood.
- Perform Auto Calibration in a quiet environment to avoid the effect of noise and to get a more accurate measurement.
- If there are any obstacles in the path between the optimizer microphone and the speakers, the calibration cannot be performed correctly. Remove any obstacles from the measurement area to avoid measurement error.

Notes
- The Auto Calibration function does not work when headphones are connected.
- If the muting function has been activated before you perform Auto Calibration, the muting function will be set to off automatically.

Example: HT-DDW7600

Optimizer microphone
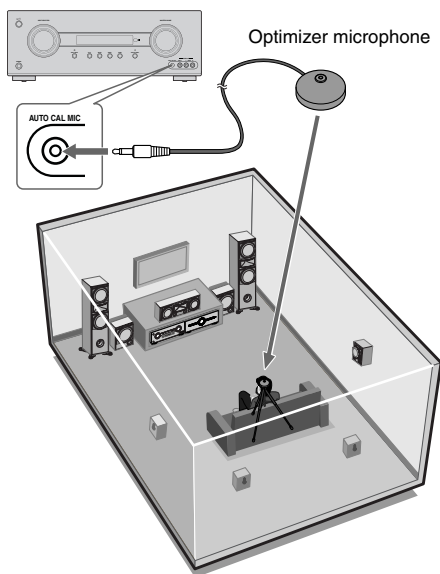
1 Connect the supplied optimizer microphone to the AUTO CAL MIC jack.

2 Set up the optimizer microphone.

Place the optimizer microphone at your listening position. You can also use a stool or tripod so that the optimizer microphone remains at the same height as your ears.

Tip
When you face the speaker towards the optimizer microphone, you will get a more accurate measurement.

Performing Auto Calibration

Input buttons

I/(1) switch

AUTO CAL

AMP MENU

MUTING

MASTER VOL +/−
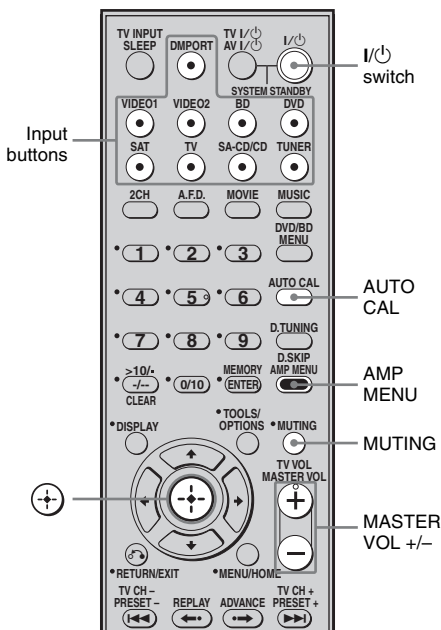
1 Press AMP MENU.

2 Press AUTO CAL.

Measurement starts in 5 seconds and the display changes as follows:
A.CAL [5] → A.CAL [4] → A.CAL [3] → A.CAL [2] → A.CAL [1]
While the time is counting down, stand away from the measurement area to avoid measurement error.

3 Measurement starts.

The measurement process will take a few minutes to complete.
The table below shows the display when measurement starts.

Measurement for	Display
Environment noise level	NOISE.CHK
Speaker connection	MEASURE and SP DET. appears alternately*
Speaker level	MEASURE and GAIN appears alternately*
Speaker distance	MEASURE and DISTANCE appears alternately*

* The corresponding speaker indicator lights up in the display during measurement.

4 Measurement ends.

"COMPLETE" appears on the display and the settings are registered.

When you have finished

Disconnect the optimizer microphone from the AUTO CAL MIC jack.

Notes

• Auto Calibration cannot detect the subwoofer. Therefore, all subwoofer settings will be maintained.
• If you have changed the position of the speakers, it is recommended that you perform Auto Calibration again in order to enjoy the surround sound.

Tips

• When Auto Calibration starts:
  – Stand some distance from the speakers and the listening position to avoid measurement failure. This is because test signals are output from the speakers during measurement.
  – Avoid making noise to get a more accurate measurement.
• The Auto Calibration function will be canceled when you do the following during the measurement process:
  – Press I/(¹) or MUTING.
  – Press the input buttons or turn the INPUT SELECTOR on the receiver.
  – Change the volume level.
  – Connect the headphones.
  – Press AUTO CAL again.

Error and warning codes

When error codes appear

When an error is detected during Auto Calibration, an error code will appear on the display cyclically after each measurement process as follows:
Error code → blank display → (error code → blank display)[a] → PUSH → blank display → ENTER

[a] Appears when there are more than one error code.

To rectify the error

1 Record down the error code.
2 Press ⊕.
3 Press I/(¹) to turn off the receiver.
4 Rectify the error.
  For details, see "Error codes and remedies" on page 34.
5 Turn on the receiver and perform Auto Calibration again (page 32).

Error codes and remedies

Error code	Cause and remedy
ERROR 10	The environment is too noisy. Make sure the environment is quiet during Auto Calibration.
ERROR 11	The speakers are placed too near the optimizer microphone. Place your speakers further away from the optimizer microphone.
ERROR 12	None of the speakers are detected. Make sure that the optimizer microphone is connected properly and perform Auto Calibration again.
ERROR 20	Front speakers are not detected or only one front speaker is detected. Check the front speakers connection.
ERROR 21	Only one surround speaker is detected. Check the surround speakers connection.
ERROR 22	The surround back speaker is connected only to the SPEAKERS SURROUND BACK R terminals. When you connect only one surround back speaker, connect it to the SPEAKERS SURROUND BACK L terminals.
ERROR 23	Surround back speaker is detected but surround speakers are not connected. Be sure to connect the surround speakers.

When warning codes appear

During Auto Calibration, the warning code provides information on the measurement result. The warning code will appear on the display cyclically as follows:
Warning code → blank display → (warning code → blank display)[b] → PUSH → blank display → ENTER

[b] Appears when there are more than one warning code.

You can choose to ignore the warning code as the Auto Calibration function will automatically adjust the settings. You can also change the settings manually.

To change the settings manually

1 Record down the warning code.
2 Press ⊕.
3 Press I/⏻ to turn off the receiver.
4 Follow the solution provided in the "Warning codes and solutions" below.
5 Turn on the receiver and perform Auto Calibration again (page 32).

Warning codes and solutions

Warning code	Explanation and solution
WARN. 40	The environment is noisy. Make sure the environment is quiet during Auto Calibration.
WARN. 50	The center speaker is not connected. Be sure to connect the center speaker.
WARN. 51	The surround speakers are not connected. Be sure to connect the surround speakers.
WARN. 52	The surround back speakers are not connected. Be sure to connect the surround back speakers.
WARN. 60	The front speaker balance is out of range. Reposition your front speakers.[c]
WARN. 62	The center speaker level is out of range. Reposition your center speaker.[d]
WARN. 63	The surround left speaker level is out of range. Reposition your surround left speaker.[d]
WARN. 64	The surround right speaker level is out of range. Reposition your surround right speaker.[d]
WARN. 65	The surround back left speaker level is out of range. Reposition your surround back left speaker.[d]
WARN. 66	The surround back right speaker level is out of range. Reposition your surround back right speaker.[d]
WARN. 70	The front speaker distance is out of range. Reposition your front speakers.[c]

Warning code	Explanation and solution
WARN. 72	The center speaker distance is out of range. Reposition your center speaker.[d]
WARN. 73	The surround left speaker distance is out of range. Reposition your surround left speaker.[d]
WARN. 74	The surround right speaker distance is out of range. Reposition your surround right speaker.[d]
WARN. 75	The surround back left speaker distance is out of range. Reposition your surround back left speaker.[d]
WARN. 76	The surround back right speaker distance is out of range. Reposition your surround back right speaker.[d]

[c] For details, refer "Front speaker distance" (page 48).
[d] For details, refer "Tip" on page 49.

8: Adjusting the speaker levels and balance (TEST TONE)

You can adjust the speaker levels and balance while listening to the test tone from your listening position.

Tip
The receiver employs a test tone with a frequency centered at 800 Hz.

Input buttons

AMP MENU

MASTER VOL +/−

♠/♦/♣/♠,
(+)

1 Press AMP MENU.
"1-LEVEL" appears on the display.

2 Press (+) or ♦ to enter the menu.

3 Press ♠/♦ repeatedly to select "T. TONE".

4 Press (+) or ♦ to enter the parameter.

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5 Press ⬆/⬇ repeatedly to select "T. TONE Y".

The test tone is output from each speaker in sequence as follows:
Front left → Center → Front right → Surround right → Surround back right → Surround back left → Surround left → Subwoofer

6 Adjust the speaker levels and balance using the LEVEL menu so that the level of the test tone sounds the same from each speaker.

For details, see "Adjusting the level (LEVEL menu)" (page 43).

Tips
• To adjust the level of all speakers at the same time, press MASTER VOL +/–. You can also use MASTER VOLUME on the receiver.
• The adjusted value is shown on the display during adjustment.

7 Repeat steps 1 to 5 to select "T. TONE N".

You can also press any input buttons. The test tone turns off.

When a test tone is not output from the speakers

• The speaker cords may not be connected securely.
• The speaker cords may have the short-circuit problem.

Selecting a component
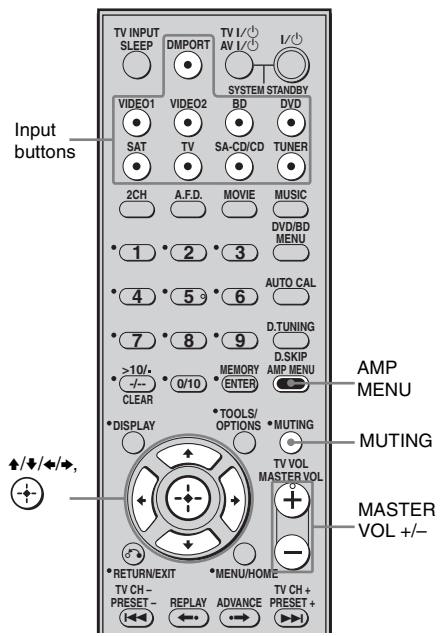
1 Press the input button to select a component.

You can also use INPUT SELECTOR on the receiver.

The selected input appears on the display.

Selected input [Display]	Components that can be played back
DMPORT [DMPORT]	DIGITAL MEDIA PORT adapter connected to the DMPORT jack
VIDEO 1 [VIDEO 1]	DVD recorder, VCR, etc., connected to the VIDEO 1 jack
VIDEO 2 [VIDEO 2]	Camcorder, video game, etc., connected to the VIDEO 2 IN jack
BD [BD]	Blu-ray disc player, etc., connected to the BD jack
DVD [DVD]	DVD player, etc., connected to DVD jack

Selected input [Display]	Components that can be played back
SAT [SAT]	Satellite tuner, etc. connected to the SAT jack
TV [TV]	TV, etc. connected to the TV jack
SA-CD/CD [SA-CD/CD/CD-R]*	Super Audio CD/CD player/CD recorder, etc., connected to the SA-CD/CD/CD-R jack
TUNER [FM or AM band]	Built-in radio tuner

* "SA-CD/CD/CD-R" scrolls across the display, then "SA-CD/CD" appears.

2 Turn on the component and start playback.

3 Press MASTER VOL +/– to adjust the volume.

You can also use MASTER VOLUME on the receiver.

To activate the muting function

Press MUTING.

The muting function will be canceled when you do the following.

- Press MUTING again.
- Increase the volume.
- Turn off the receiver.

To avoid damaging your speakers

Before you turn off the receiver, be sure to turn down the volume level.

To listen to the subwoofers

- You can use the SUBWOOFER VOLUME on the power amplifier to adjust the volume of the subwoofers.
- Set the volume level to suit your preference according to the selected input as slight adjustments may enhance the sound.
- If you set the subwoofer volume to maximum, extraneous noise may be heard depending on the source you are playing.

Naming inputs

You can enter a name of up to 8 characters for inputs and display it on the receiver's display. This is convenient for labeling the jacks with the names of the connected components.

1 Press the input button to select the input you want to create an index name for.

You can also use INPUT SELECTOR on the receiver.

2 Press AMP MENU.

"1-LEVEL" appears on the display.

3 Press ✦/✦ repeatedly to select "7-SYSTEM".

4 Press ⊕ or ➔ to enter the menu.

5 Press ✦/✦ to select "NAME IN".

6 Press ⊕ or ➔ to enter the parameter.

The cursor flashes and you can select a character.

7 Press ✦/✦ to select a character, then press ◄/➔ to move the cursor to the next position.

If you made a mistake

Press ◄/➔ until the character you want to change flashes, then press ✦/✦ to select the correct character.

Tips

- You can select the character type as follows by pressing ✦/✦.
  Alphabet (upper case) → Numbers → Symbols
- To enter a blank space, press ➔ without selecting a character.

8 Press ⊕.

The name you entered is registered.

37^{GB}

Listening/Watching a component

Listening to a Super Audio CD/CD
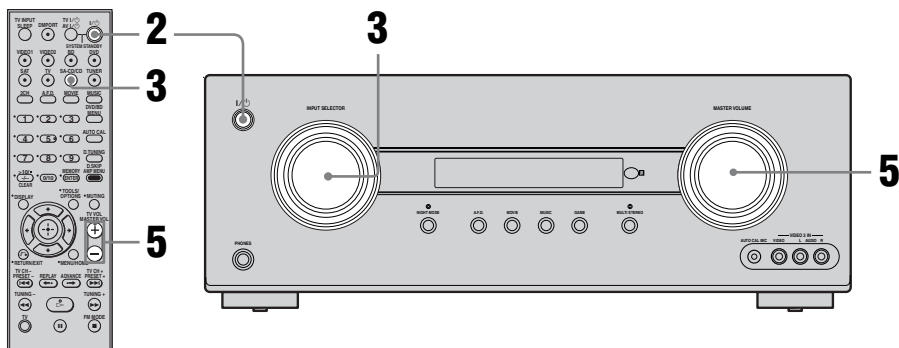
Notes
- The operation is described for a Sony Super Audio CD player.
- Refer to the operating instructions supplied with the Super Audio CD player or CD player.

Tips
- You can select the sound field to suit the music. Refer to page 53 for details.
  Recommended sound fields:
  Classical: HALL
  Jazz: JAZZ
  Live concert: CONCERT
- You can listen to the sound that was recorded in the 2 channel format from all speakers (multi channel). Refer to page 48 for details.

1 **Turn on the Super Audio CD player/CD player, then place the disc on the tray.**

2 **Turn on the receiver.**

3 **Press SA-CD/CD.**

You can also use INPUT SELECTOR on the receiver to select "SA-CD/CD/CD-R".

4 **Play back the disc.**

5 **Adjust to a suitable volume.**

6 **After you have finished listening to the Super Audio CD/CD, eject the disc and turn off the receiver and Super Audio CD player/ CD player.**

Watching a DVD/Blu-ray disc
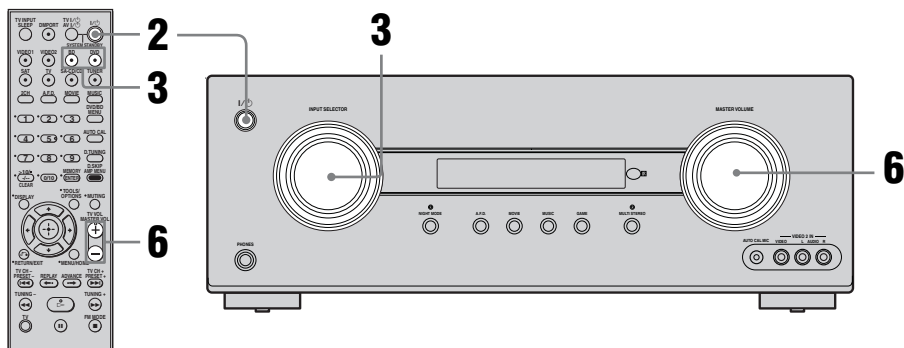
Notes
- Refer to the operating instructions supplied with the TV and DVD player/Blu-ray disc player.
- Check the following if you cannot listen to multi channel sound.
  - Be sure this receiver is connected to the DVD player/Blu-ray disc player via a digital connection.
  - Be sure the digital audio output of the DVD player/Blu-ray disc player is set up properly.

Tips
- Select the sound format of the disc to be played, if necessary.
- You can select the sound field to suit the movie/music. Refer to page 53 for details.
  Recommended sound fields:
  Movie: C.ST.EX
  Music: CONCERT

1 **Turn on the TV and DVD player/Blu-ray disc player.**

2 **Turn on the receiver.**

3 **Press DVD to watch a DVD or press BD to watch a Blu-ray disc.**

  You can also use INPUT SELECTOR on this receiver to select "DVD" or "BD".

4 **Switch the input of the TV so that an image of the DVD/Blu-ray disc is displayed.**

5 **Play back the disc.**

6 **Adjust to a suitable volume.**

7 **After you have finished watching the DVD/Blu-ray disc, eject the disc and turn off the receiver, TV and DVD player/Blu-ray disc player.**

Navigating through menus

By using the amplifier menus, you can make various adjustments to customize the receiver.

1 Press AMP MENU.

"1-LEVEL" appears on the display.

2 Press ▲/▼ repeatedly to select the menu you want.

3 Press ⊕ or ➔ to enter the menu.

4 Press ▲/▼ repeatedly to select the parameter you want to adjust.

5 Press ⊕ or ➔ to enter the parameter.

6 Press ▲/▼ repeatedly to select the setting you want.

The setting is entered automatically.
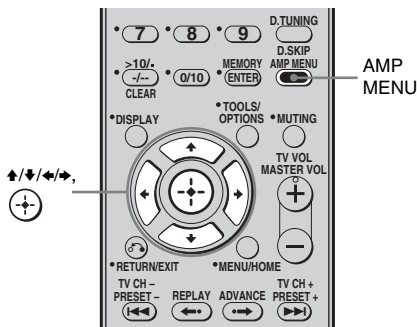
To return to the previous display

Press ◄.

To exit the menu

Press AMP MENU.

Note

Some parameters and settings may appear dimmed on the display. This means that they are either unavailable or fixed and unchangeable.

Overview of the menus

The following options are available in each menu. For details on navigating through menus, see page 40.

Menu [Display]	Parameters [Display]	Settings	Initial setting
LEVEL [1-LEVEL] (page 43)	Test tone[a] [T. TONE]	T. TONE N, T. TONE Y	T. TONE N
	Front speaker balance[a] [FRT BAL]	BAL. L +1 to BAL. L +8, BALANCE, BAL. R +1 to BAL. R +8	BALANCE
	Center speaker level [CNT LVL]	CNT –10 dB to CNT +10 dB (1 dB step)	CNT 0 dB
	Surround left speaker level [SL LVL]	SUR L –10 dB to SUR L +10 dB (1 dB step)	SUR L 0 dB
	Surround right speaker level [SR LVL]	SUR R –10 dB to SUR R +10 dB (1 dB step)	SUR R 0 dB
	Surround back left speaker level [SBL LVL]	SBL –10 dB to SBL +10 dB (1 dB step)	SBL 0 dB
	Surround back right speaker level [SBR LVL]	SBR –10 dB to SBR +10 dB (1 dB step)	SBR 0 dB
	Subwoofer level [SW LVL]	SW –10 dB to SW +10 dB (1 dB step)	SW 0 dB
	Dynamic range compressor[a] [D. RANGE]	COMP. OFF, COMP. STD, COMP. MAX	COMP. OFF
TONE [2-TONE] (page 44)	Front speaker bass level[a] [BASS LVL]	BASS –6 dB to BASS +6 dB (1 dB step)	BASS 0 dB
	Front speaker treble level[a] [TRE LVL]	TRE –6 dB to TRE +6 dB (1 dB step)	TRE 0 dB
SUR [3-SUR] (page 44)	Sound field selection[a] [S.F. SELCT]	For details, see "Enjoying Surround Sound" (page 51).	A.F.D. AUTO
	Surround back decoding mode[a] [SB DEC]	SB OFF, SB AUTO, SB ON	SB AUTO
	Effect level[a] [EFFECT]	EFCT. MIN, EFCT. STD, EFCT. MAX	EFCT. STD
TUNER [4-TUNER] (page 46)	FM station receiving mode[a] [FM MODE]	FM AUTO, FM MONO	FM AUTO
	Naming preset stations[a] [NAME IN]	For details, see "Naming preset stations" (page 60).	
	AM tuning scale selection[a)b)] [AM STEP]	For details, see "Changing the AM tuning scale" (page 58).	

Amplifier Operations

Menu [Display]	Parameters [Display]	Settings	Initial setting
AUDIO [5-AUDIO] (page 46)	Digital audio input decoding priority[a) [DEC. PRI.]	DEC. PCM, DEC. AUTO	DEC. PCM for: SA-CD/CD; DEC. AUTO for: VIDEO 1, 2, BD, DVD, SAT, TV
	Digital broadcast language selection[a)] [DUAL]	DUAL M/S, DUAL M, DUAL S, DUAL M+S	DUAL M
	Synchronizes audio with video output[a)] [A.V. SYNC.]	A.V.SYNC. N, A.V.SYNC. Y	A.V.SYNC. N
	Digital audio input assignment[a)] [D. ASSIGN]	For details, see "Listening to digital sound from other inputs (DIGITAL ASSIGN)" (page 66).	
	Switching the audio input mode[a)] [IN MODE]	For details, see "Switching between digital and analog audio (INPUT MODE)" (page 65).	
	Night mode[a)] [NIGHT.MODE]	NIGHT OFF, NIGHT ON	NIGHT OFF
HDMI [6-HDMI] (page 48)	Audio for HDMI[a)] [AUDIO OUT]	AMP, TV+AMP	AMP
	Control for HDMI[a)] [CTRL:HDMI]	CTRL OFF, CTRL ON	CTRL ON
SYSTEM [7-SYSTEM] (page 48)	Front speaker distance[a)] [FRT DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Center speaker distance[a)] [CNT DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Surround left speaker distance[a)] [SL DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Surround right speaker distance[a)] [SR DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Surround back left speaker distance[a)] [SBL DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Surround back right speaker distance[a)] [SBR DIST.]	DIST. 1.0 m to DIST. 7.0 m (0.1 m step)	DIST. 3.0 m
	Subwoofer phase polarity[a)] [SW PHASE]	NORMAL, REVERSE	NORMAL
	Surround speaker position[a)] [SUR POS.]	BEHD/HI, BEHD/LO, SIDE/HI, SIDE/LO	SIDE/LO
	Naming inputs[a)] [NAME IN]	For details, see "Naming inputs" (page 37).	
A. CAL [8-A. CAL] (page 50)	Auto Calibration[a)] [AUTO CAL]	A.CAL NO, A.CAL YES	A.CAL NO

[a)] For details, refer to the page in the parentheses.

[b)] This parameter is not available for models of area code EA3.

Adjusting the level (LEVEL menu)

You can use the LEVEL menu to adjust the balance and level of each speaker. These settings are applied to all sound fields. Select "1-LEVEL" in the amplifier menus. For details on adjusting the parameters, see "Navigating through menus" (page 40) and "Overview of the menus" (page 41).

LEVEL menu parameters

■ T. TONE (Test tone)

Lets you adjust the speaker levels and balance while listening to the test tone from your listening position. For details, see "8: Adjusting the speaker levels and balance (TEST TONE)" (page 35).

■ FRT BAL (Front speaker balance)

Lets you adjust the balance between front left and right speakers.

■ CNT LVL (Center speaker level)

■ SL LVL (Surround left speaker level)

■ SR LVL (Surround right speaker level)

■ SBL LVL (Surround back left speaker level)

■ SBR LVL (Surround back right speaker level)

■ SW LVL (Subwoofer level)

■ D. RANGE (Dynamic range compressor)

Lets you compress the dynamic range of the sound track. This may be useful when you want to watch movies at low volumes late at night. Dynamic range compression is possible with Dolby Digital sources only.

• COMP. OFF
  The dynamic range is not compressed.
• COMP. STD
  The dynamic range is compressed as intended by the recording engineer.
• COMP. MAX
  The dynamic range is compressed dramatically.

Tip

Dynamic range compressor lets you compress the dynamic range of the soundtrack based on the dynamic range information included in the Dolby Digital signal.
"COMP. STD" is the standard setting, but it only enacts light compression. Therefore, we recommend using the "COMP. MAX" setting. This greatly compresses the dynamic range and lets you view movies late at night at low volumes. Unlike analog limiters, the levels are predetermined and provide a very natural compression.

Amplifier Operations

Adjusting the equalizer (TONE menu)

You can use the TONE menu to adjust the tonal quality (bass/treble level) of the front speakers.
Select "2-TONE" in the amplifier menus. For details on adjusting the parameters, see "Navigating through menus" (page 40) and "Overview of the menus" (page 41).

TONE menu parameters

■ BASS LVL (Front speaker bass level)

■ TRE LVL (Front speaker treble level)

Notes
• This function does not work for signals with a sampling frequency of more than 48 kHz.
• If you adjust the equalizer during DTS 96/24 signal reception, the signal will be output only at 48 kHz.

Settings for the surround sound (SUR menu)

You can use the SUR menu to select the sound field you want for your listening pleasure. Select "3-SUR" in the amplifier menus. For details on adjusting the parameters, see "Navigating through menus" (page 40) and "Overview of the menus" (page 41).

SUR menu parameters

■ S.F. SELCT (Sound field selection)

Lets you select the sound field you want. For details, see "Enjoying Surround Sound" (page 51).

Note
The receiver lets you apply the last selected sound field to an input whenever it is selected (Sound Field Link). For example, if you select "HALL" for the DVD input, then change to a different input and then return to DVD, "HALL" will automatically be applied again.

■ SB DEC (Surround back decoding mode)

Lets you select the surround back decoding mode. For details, see "Using the surround back decoding mode (SB DEC)" (page 45).

■ EFFECT (Effect level)

Lets you adjust the "presence" of the surround effect for sound fields selected with the MOVIE or MUSIC buttons.
• EFCT. MIN
  The surround effect is minimum.
• EFCT. STD
  The surround effect is standard.
• EFCT. MAX
  The surround effect is maximum.

Using the surround back decoding mode (SB DEC)

By decoding the surround back signal of DVD software (etc.) recorded in Dolby Digital Surround EX, DTS-ES Matrix, DTS-ES Discrete 6.1, etc., format, you can enjoy the surround sound intended by the filmmakers. Select the surround back decoding mode using "SB DEC" on the SUR menu (page 44).

Types of the surround back decoding functions

■ SB OFF
Surround back decoding is not performed.

■ SB AUTO
When the input stream contains the 6.1 channel decode flag[a], the appropriate decoding is performed on the surround back signal.

Input stream	Output channel	Surround back decoding
Dolby Digital 5.1	5.1[e]	—
Dolby Digital Surround EX[b]	6.1[e]	Dolby PLIIx Matrix Decoding
DTS 5.1	5.1[e]	—
DTS-ES Matrix 6.1[c]	6.1[e]	DTS Matrix decoding
DTS-ES Discrete 6.1[d]	6.1[e]	DTS Discrete decoding

[a] A 6.1 channel decode flag is information recorded in software such as DVDs.
[b] A Dolby Digital DVD that includes a Surround EX flag. The Dolby Corporation web page can help you distinguish Surround EX films.
[c] Software encoded with a flag to denote it has both DTS-ES Matrix and 5.1 channel signals.
[d] Software encoded with both 5.1 channel signals and an extension stream designed for returning those signals to 6.1 discrete channels. Discrete 6.1 channel signals are DVD specific signals not used in movie theaters.
[e] When two surround back speakers are connected, the output channel will be 7.1 channel.

■ SB ON
The surround back decoding is applied to 5.1 channel and 6.1 channel decoding in the input stream.

Notes
• This function does not work in the following cases.
  – The sound field for music or movies is selected.
  – The multi-channel Linear PCM signals are received via an HDMI IN jack.
• There may be no sound from the surround back speaker in Dolby Digital EX mode. Some discs have no Dolby Digital Surround EX flag even though the packages have Dolby Digital EX logos. In this case, select "SB ON".
• You can select the surround back decoding mode only when A.F.D. mode is selected. However, this function is canceled when Dolby Pro Logic IIx is selected.

Settings for the tuner (TUNER menu)

You can use the TUNER menu to set the FM station receiving mode and to name preset stations.
Select "4-TUNER" in the amplifier menus. For details on adjusting the parameters, see "Navigating through menus" (page 40) and "Overview of the menus" (page 41).

TUNER menu parameters

■ FM MODE (FM station receiving mode)

- FM AUTO
  This receiver will decode the signal as stereo signal when the radio station is broadcast in stereo.
- FM MONO
  This receiver will decode the signal as mono signal regardless of the broadcast signal.

■ NAME IN (Naming preset stations)

Lets you set the name of preset stations. For details, see "Naming preset stations" (page 60).

■ AM STEP (AM tuning scale selection)[a]

Lets you change the AM STEP to either 9kHz or 10kHz. For details, see "Changing the AM tuning scale" (page 58).

[a] This parameter is not available for models of area code EA3.

Settings for the audio (AUDIO menu)

You can use the AUDIO menu to make settings for the audio to suit your preference. Select "5-AUDIO" in the amplifier menus. For details on adjusting the parameters, see "Navigating through menus" (page 40) and "Overview of the menus" (page 41).

AUDIO menu parameters

■ DEC. PRI. (Digital audio input decoding priority)

Lets you specify the input mode for the digital signal input to the DIGITAL IN and HDMI IN jacks.

- DEC. PCM
  When signals from the DIGITAL IN jack are selected, PCM signals are given priority (to prevent interruption when playback starts). However, when other signals are input, there may be no sound, depending on the format. In this case, set this item to "DEC. AUTO". When signals from the HDMI IN jack are selected, only PCM signals are output from the connected player. When signals in any other format are received, set this item to "DEC. AUTO".
- DEC. AUTO
  Automatically switches the input mode between DTS, Dolby Digital, or PCM.

Note

When set to "DEC. AUTO" and the sound from the digital audio jacks (for a CD, etc.) is interrupted when playback starts, set to "DEC. PCM".

■ DUAL (Digital broadcast language selection)

Lets you select the language you want to listen to during digital broadcast. This feature only functions for Dolby Digital sources.

• DUAL M/S (Main/Sub)

Sound of the main language will be output through the front left speaker and sound of the sub language will be output through the front right speaker simultaneously.

• DUAL M (Main)

Sound of the main language will be output.

• DUAL S (Sub)

Sound of the sub language will be output.

• DUAL M+S (Main + Sub)

Mixed sound of both the main and sub languages will be output.

■ A.V. SYNC. (Synchronizes audio with video output)

• A.V.SYNC. N (No) (Delay time: 0 ms)

The audio output is not delayed.

• A.V.SYNC. Y (Yes) (Delay time: 60 ms)

The audio output is delayed so that the time gap between the audio output and visual display is minimized.

Notes

• This parameter is useful when you use a large LCD or plasma TV or a projector.
• This parameter is valid only when you use a sound field selected with the 2CH or A.F.D. buttons.
• This parameter is not valid when
  – signals with a sampling frequency of more than 48 kHz is input.
  – the multi channel Linear PCM signals are received via an HDMI IN jack.

■ D. ASSIGN (Digital audio input assignment)

Lets you assign the digital audio input to other input source. For details, see "Listening to digital sound from other inputs (DIGITAL ASSIGN)" (page 66).

■ IN MODE (Switching the audio input mode)

Lets you set the audio input mode of inputs. For details, see "Switching between digital and analog audio (INPUT MODE)" (page 65).

■ NIGHT.MODE

Lets you to retain a theater-like environment at low volume levels. This function can be used with other sound fields. When watching a movie late at night, you will able to hear the dialog clearly even at a low volume level.

• NIGHT OFF
• NIGHT ON

Settings for the HDMI (HDMI menu)

You can use the HDMI menu to make various adjustments for HDMI.
Select "6-HDMI" in the amplifier menus. For details on adjusting the parameters, see "Navigating through menus" (page 40) and "Overview of the menus" (page 41).

HDMI menu parameters

■ AUDIO OUT (Audio for HDMI)

Lets you set the audio output for HDMI from the playback component connected to the receiver via an HDMI connection.

- AMP

  The HDMI audio signals from the playback component is only output to speakers connected to the receiver. Multi-channel sound can be played back as it is.

  Note

  Audio signals are not output from the TV's speakers when "AUDIO OUT" is set to "AMP".

- TV+AMP

  The sound is output from TV's speaker and the speakers connected to the receiver.

  Notes

  - The sound quality of the playback component depends on the TV's sound quality, such as the number of channels, and the sampling frequency, etc. When the TV has stereo speakers, the sound output from the receiver is also stereo as that of the TV, even if you play back multi-channel source.
  - When you connect the receiver to a video component (projector, etc.), sound may not be output from the receiver. In this case, select "AMP".

■ CTRL:HDMI (Control for HDMI)

Lets you turn the Control for HDMI function on or off. For details, see ""BRAVIA" Sync Features" (page 60).

Settings for the system (SYSTEM menu)

You can use the SYSTEM menu to set the size and distance of the speakers connected to this system.
Select "7-SYSTEM" in the amplifier menus. For details on adjusting the parameters, see "Navigating through menus" (page 40) and "Overview of the menus" (page 41).

SYSTEM menu parameters

■ FRT DIST. (Front speaker distance)

Lets you set the distance from your listening position to the front speakers (Ⓐ).
If both front speakers are not placed an equal distance from your listening position, set the distance to the closest speaker.

With two surround back speakers (The angle Ⓑ should be the same)
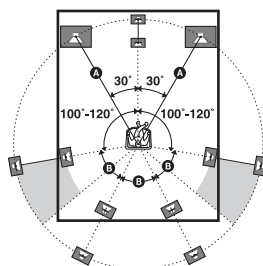
■ CNT DIST. (Center speaker distance)

Lets you set the distance from your listening position to the center speaker.

■ SL DIST. (Surround left speaker distance)

■ SR DIST. (Surround right speaker distance)

Lets you set the distance from your listening position to the surround speakers.

■ SBL DIST. (Surround back left speaker distance)

■ SBR DIST. (Surround back right speaker distance)

Lets you set the distance from your listening position to the surround back speakers.

Tip

To enjoy better surround sound, the distance between the center speaker and the listening position B cannot be more than 1.5 meters closer than the one between the listening position and the front speaker A. Place the speakers so that the difference in the length of B in the following diagram is no more than 1.5 meters closer than the length of A. Example: Adjust the distance B to 4.5 meters or more when the distance A is 6 meters.
Also, the distance between the surround speakers/surround back speakers and the listening position C cannot be more than 4.5 meters closer than the distance between the listening position and the front speakers A. Place the speakers so that the difference in the length of C in the following diagram is no more than 4.5 meters closer than the length of A.
Example: Adjust the distance C to 1.5 meters or more when the distance A is 6 meters.
This is important because incorrect speaker placement is not conductive to the enjoyment of surround sound. Please note that placing the speakers closer than the required will cause a delay in the output of the sound from that speaker. In other words, the speaker will sound like it is farther away. Adjusting these parameter while listening to the sound often results in much better surround sound. Give it a try!
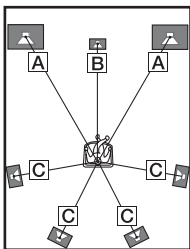
■ SW PHASE (Subwoofer phase polarity)

Lets you set the subwoofer phase polarity.
• NORMAL
  Normally, select "NORMAL".
• REVERSE
  Depending on the type of front speakers, the position of the subwoofer, and the cut-off frequency of the subwoofer, setting the phase polarity to "REVERSE" may produce better bass. Besides bass reproduction, the richness and tightness of the overall sound may also be affected. While listening from the main listening position, select the setting that best suits your environment.

■ SUR POS. (Surround speaker position)

Lets you specify the location of your surround speakers for proper implementation of the surround effects in the CINEMA STUDIO EX modes (page 54).
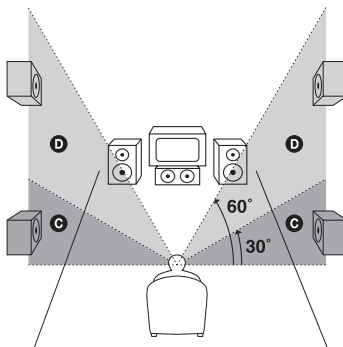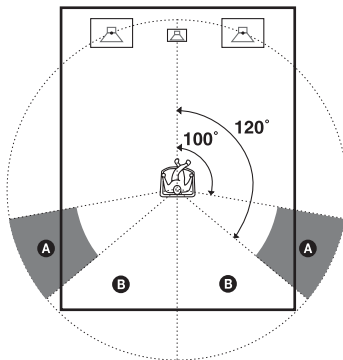
- BEHD/HI

  Select if the location of your surround speakers corresponds to sections **B** and **D**.
- BEHD/LO

  Select if the location of your surround speakers corresponds to sections **B** and **C**.
- SIDE/HI

  Select if the location of your surround speakers corresponds to sections **A** and **D**.
- SIDE/LO

  Select if the location of your surround speakers corresponds to sections **A** and **C**.

Tip

Surround speaker position is designed specifically for implementation of the CINEMA STUDIO EX modes. For other sound fields, speaker position is not so critical.

Those sound fields were designed under the premise that the surround speakers would be located behind the listening position, but presentation remains fairly consistent even with the surround speakers positioned at a rather wide angle. However, if the speakers are pointing toward the listener from the immediate left and right of the listening position, the surround effects become unclear unless set to "SIDE/LO" or "SIDE/HI".

Nevertheless, each listening environment has many variables, such as wall reflections, and you may obtain better results using "BEHD/HI" if your speakers are located high above the listening position, even if they are located to the immediate left and right.

Therefore, although it may result in a setting contrary to the above explanation, we recommend that you play back multi channel surround encoded software and select the setting that provides a good sense of spaciousness and that best succeeds in forming a cohesive space between the surround sound from the surround speakers and the sound of the front speakers. If you are not sure which sounds best, select "BEHD/LO" or "BEHD/HI" and then use the speaker distance parameter and speaker level adjustments to obtain proper balance.

■ **NAME IN (Naming inputs)**

Lets you set the name of inputs. For details, see "Naming inputs" (page 37).

Calibrating the appropriate settings automatically

(A. CAL menu)

For details on Auto Calibration, see "7: Calibrating the appropriate settings automatically (AUTO CALIBRATION)" (page 31).

Enjoying Dolby Digital and DTS Surround sound
(AUTO FORMAT DIRECT)

The Auto Format Direct (A.F.D.) mode allows you to listen to higher fidelity sound and select the decoding mode for listening to a 2 channel stereo sound as multi channel sound.

A.F.D.
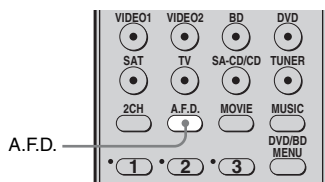
Press A.F.D. repeatedly to select the sound field you want.

For details, see "Types of A.F.D. mode" (page 52).

Enjoying Surround Sound

Types of A.F.D. mode

A.F.D. mode [Display]	Multi channel audio after decoding	Effect
A.F.D. AUTO [A.F.D. AUTO]	(Detecting automatically)	Presents the sound as it was recorded/encoded without adding any surround effects. However, this receiver will generate a low frequency signal for output to the subwoofer when there is no LFE signals.
PRO LOGIC [DOLBY PL]	4 channel	Performs Dolby Pro Logic decoding. The source recorded in 2 channel format is decoded into 4.1 channels.
PRO LOGIC II MOVIE [PLII MV]	5 channel	Performs Dolby Pro Logic II Movie mode decoding. This setting is ideal for movies encoded in Dolby Surround. In addition, this mode can reproduce sound in 5.1 channel for watching videos of overdubbed or old movies.
PRO LOGIC II MUSIC [PLII MS]	5 channel	Performs Dolby Pro Logic II Music mode decoding. This setting is ideal for normal stereo sources such as CDs.
PRO LOGIC II GAME [PLII GM]	5 channel	Performs Dolby Pro Logic II Game mode decoding. This setting is ideal for game softwares.
PRO LOGIC IIx MOVIE [PLIIX MV]	7 channel	Performs Dolby Pro Logic IIx Movie mode decoding. This setting expands Dolby Pro Logic II Movie or Dolby Digital 5.1 to discrete 7.1 movie channels.
PRO LOGIC IIx MUSIC [PLIIX MS]	7 channel	Performs Dolby Pro Logic IIx Music mode decoding. This setting is ideal for normal stereo sources such as CDs.
PRO LOGIC IIx GAME [PLIIX GM]	7 channel	Performs Dolby Pro Logic IIx Game mode decoding.
Neo:6 Cinema [NEO6 CIN]	6 channel	Performs DTS Neo:6 Cinema mode decoding.
Neo:6 Music [NEO6 MUS]	6 channel	Performs DTS Neo:6 Music mode decoding. This setting is ideal for normal stereo sources such as CDs.
MULTI STEREO [MULTI ST.]	(Multi Stereo)	Outputs 2 channel left/right signals from all speakers. However, sound may not be output from certain speakers depending on the speaker settings.

Note

Dolby Pro Logic IIx decoding does not function for DTS format signals or for signals with a sampling frequency of more than 48 kHz.

Tip

When a multi channel signal is input, only Dolby Pro Logic IIx decoding is effective. When you select decoding modes other than Dolby Pro Logic IIx, multi channel sound (being encoded) is output.

Selecting a pre-programmed sound field

You can take advantage of surround sound simply by selecting one of the receiver's pre-programmed sound fields. They bring the exciting and powerful sound of movie theaters and concert halls into your home.

2CH — [diagram of remote control buttons] — MUSIC

A.F.D. — — MOVIE
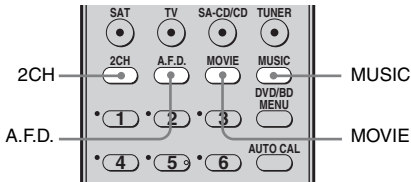
Press MOVIE repeatedly to select a sound field for movies or press MUSIC repeatedly to select a sound field for music.

For details, see "Types of sound field available" (page 54).

Types of sound field available

Sound field for	Sound field [Display]	Effect
Movie	CINEMA STUDIO EX A D C S [C.ST.EX A]	Reproduces the sound characteristics of the Sony Pictures Entertainment "Cary Grant Theater" cinema production studio. This is a standard mode, great for watching almost any type of movie.
	CINEMA STUDIO EX B D C S [C.ST.EX B]	Reproduces the sound characteristics of the Sony Pictures Entertainment "Kim Novak Theater" cinema production studio. This mode is ideal for watching science-fiction or action movies with lots of sound effects.
	CINEMA STUDIO EX C D C S [C.ST.EX C]	Reproduces the sound characteristics of the Sony Pictures Entertainment scoring stage. This mode is ideal for watching musicals or films where orchestra music is featured in the soundtrack.
	GAME [GAME]	Reproduces the sound processing of video games for better gaming experience.
Music	HALL [HALL]	Reproduces the acoustics of a classical concert hall.
	JAZZ CLUB [JAZZ]	Reproduces the acoustics of a jazz club.
	LIVE CONCERT [CONCERT]	Reproduces the acoustics of a 300-seat live house.
	STADIUM [STADIUM]	Reproduces the feeling of a large open-air stadium.
	SPORTS [SPORTS]	Reproduces the feeling of sports broadcasting.
	PORTABLE AUDIO ENHANCER [PORTABLE]	Reproduces a clear enhanced sound image from your portable audio device. This mode is ideal for MP3 and other compressed music.
Headphone*	HEADPHONE 2CH [HP 2CH]	This mode is selected automatically if you use headphone. Standard 2 channel stereo sources completely bypass the sound field processing and multi channel surround formats are downmixed to 2 channels.

* You can only select this sound field if the headphones are connected to the receiver.

Notes
• The effects provided by the virtual speakers may cause increased noise in the playback signal.
• When listening with sound fields that employ the virtual speakers, you will not be able to hear any sound coming directly from the surround speakers.
• This function does not work when:
  – signals with a sampling frequency of more than 48 kHz is input.
  – the multi channel Linear PCM signals are received via an HDMI IN jack.
• The surround back decoding mode does not function when a sound field for movie or music is selected (page 45).

Tips
• You can identify the encoding format of DVD software, etc., by looking at the logo on the package.
• Sound fields with **DCS** mark use DCS technology. See "Glossary" (page 72).

To turn off the surround effect for movie/music

Press 2CH to select "2CH ST." or press A.F.D. repeatedly to select "A.F.D. AUTO".

Using only the front speakers and the subwoofers
(2CH STEREO)

In this mode, the receiver outputs the sound from the front left/right speakers and the subwoofers.

When multi channel surround formats are input, the signals are downmixed to 2 channel with bass frequencies being output from the subwoofer.

When standard 2 channel stereo sources are input, the receiver's bass redirection circuitry will be activated. The front channel bass frequencies will be output from the subwoofers.
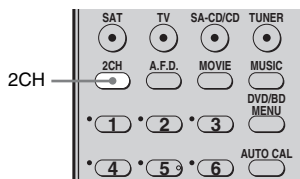
Press 2CH.

Enjoying the surround effect at low volume levels
(NIGHT MODE)

This function allows you to retain a theater like environment at low volume levels. This function can be used with other sound fields. When watching a movie late at night, you will be able to hear the dialog clearly even at a low volume level.
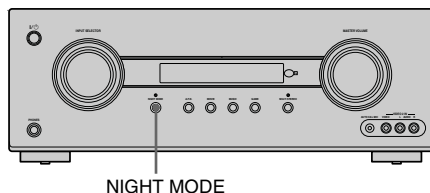
NIGHT MODE

Press NIGHT MODE.

The NIGHT MODE function is activated. The NIGHT MODE is set to on and off as you press NIGHT MODE.

Note

This function does not work when PCM signals with a sampling frequency of more than 96 kHz are being received.

Resetting sound fields to the initial settings

Be sure to use the buttons on the receiver for this operation.

I/⏻

A.F.D.
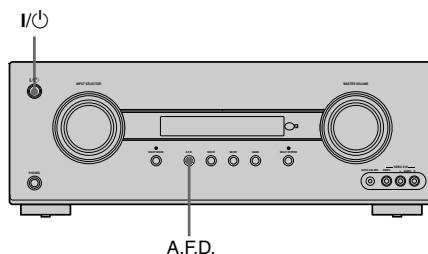
1 Press I/⏻ to turn off the power.

2 While holding down A.F.D., press I/⏻.

"S.F. CLR." appears on the display and all sound fields are reset to their initial setting.

Listening to FM/AM radio

You can listen to FM and AM broadcasts through the built-in tuner. Before operation, make sure you have connected the FM and AM antennas (aerials) to the receiver (page 30).

Tip

The tuning scale for direct tuning differs depending on the area code as shown in the following table. For details on area codes, see page 2.

Area code	FM	AM
AR2, E51	50 kHz	10 kHz*
AU1, SA2	50 kHz	9 kHz*
EA3	50 kHz	9 kHz

* The AM tuning scale can be changed (page 58).

Numeric buttons

TUNER

D.TUNING

ENTER

TUNING +/−

FM MODE
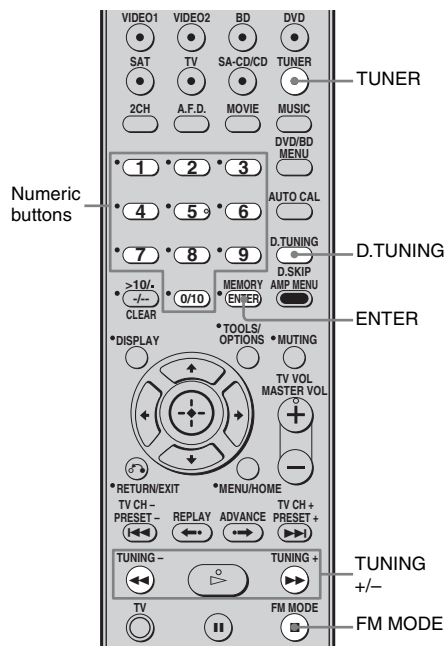
Tuning into a station automatically (Automatic Tuning)

1 Press TUNER repeatedly to select the FM or AM band.

2 Press TUNING + or TUNING −.

Press TUNING + to scan from low to high; press TUNING − to scan from high to low.
The receiver stops scanning whenever a station is received.

In case of poor FM stereo reception

If the FM stereo reception is poor and "ST" flashes on the display, select monaural audio so that the sound will be less distorted.
Press FM MODE repeatedly until the "FM MONO" appears on the display.
To return to stereo mode, press FM MODE repeatedly until the "FM AUTO" appears on the display.

Tuning into a station directly (Direct Tuning)

Enter the frequency of a station directly by using the numeric buttons.

1 **Press TUNER repeatedly to select the FM or AM band.**

You can also use INPUT SELECTOR on the receiver.

2 **Press D.TUNING.**

3 **Press the numeric buttons to enter the frequency.**

Example 1: FM 102.50 MHz
Select 1 ➜ 0 ➜ 2 ➜ 5 ➜ 0
Example 2: AM 1,350 kHz
Select 1 ➜ 3 ➜ 5 ➜ 0
If you have tuned in an AM station, adjust the direction of the AM loop antenna (aerial) for optimum reception.

4 **Press ENTER.**

If you cannot tune in a station

Make sure you have entered the right frequency. If not, repeat steps 2 to 4. If you still cannot tune in a station, the frequency is not used in your area.

Changing the AM tuning scale

(Except for models of area code EA3 only)

You can change the AM tuning scale to either 9 kHz or 10 kHz.

1 **Press TUNER repeatedly to select AM.**

2 **Press AMP MENU.**

"1-LEVEL" appears on the display.

3 **Press ✦/✦ repeatedly to select "4-TUNER".**

4 **Press ⊕ or ➜ to enter the menu.**

5 **Press ✦/✦ repeatedly to select "AM STEP".**

6 **Press ⊕ or ➜ to enter the parameter.**

7 **Press ✦/✦ repeatedly to select the AM tuning scale you want.**

Note

All AM preset stations will be erased when you change the tuning scale.

Presetting FM/AM radio stations

You can preset up to 30 FM stations and 30 AM stations. Then you can easily tune in the stations you often listen to.
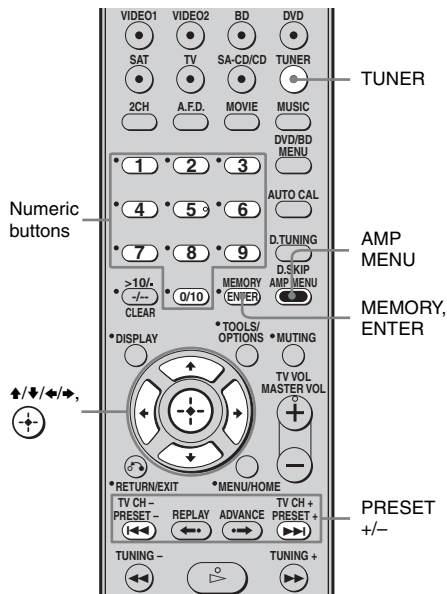
Numeric buttons

TUNER

AMP MENU

MEMORY, ENTER

↑/↓/←/→, ⊕

PRESET +/−

1 Press TUNER repeatedly to select the FM or AM band.

You can also use INPUT SELECTOR on the receiver.

2 Tune in the station that you want to preset using Automatic Tuning (page 57) or Direct Tuning (page 58).

In case of poor FM stereo reception, switch the FM reception mode (page 57).

3 Press MEMORY.

"MEM" lights up for a few seconds. Perform steps 4 and 5 before "MEM" goes out.

4 Press the numeric buttons to select a preset number.

You can also press PRESET + or PRESET − to select a preset number. If "MEM" goes out before you select the preset number, start again from step 3.

5 Press ENTER.

The station is stored as the selected preset number.

If "MEM" goes out before you press ENTER, start again from step 3.

6 Repeat steps 1 to 5 to preset another station.

Tuning to preset stations

1 Press TUNER repeatedly to select the FM or AM band.

2 Press PRESET + or PRESET − repeatedly to select the preset station you want.

Each time you press the button, you can select a preset station as follows:

→ 01 ↔ 02 ↔ 03 ↔ 04 ↔ 05 ↔ ... ↔ 27 ←
→ 30 ↔ 29 ↔ 28 ←
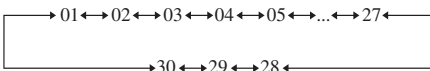
You can also press the numeric buttons to select the preset station you want. Then, press ENTER to enter the selection.

Tuner Operations

Naming preset stations

1 Press TUNER repeatedly to select the FM or AM band.

You can also use INPUT SELECTOR on the receiver.

2 Tune in the preset station you want to create an index name for (page 59).

3 Press AMP MENU.

"1-LEVEL" appears on the display.

4 Press ↑/↓ repeatedly to select "4-TUNER".

5 Press ⊕ or → to enter the menu.

6 Press ↑/↓ repeatedly to select "NAME IN".

7 Press ⊕ or → to enter the parameter.

The cursor flashes and you can select a character.

8 Press ↑/↓ to select a character, then press ←/→ to move the cursor to the next position.

If you made a mistake

Press ←/→ until the character you want to change flashes, then press ↑/↓ to select the correct character.

Tips

• You can select the character type as follows by pressing ↑/↓.
Alphabet (upper case) → Numbers → Symbols
• To enter a blank space, press → without selecting a character.

9 Press ⊕.

The name you entered is registered.

What is "BRAVIA" Sync?

"BRAVIA" Sync is compatible with Sony TV, Blu-ray Disc/DVD player, AV amplifier, etc., that is equipped with the Control for HDMI function.

By connecting Sony components that are compatible with the "BRAVIA" Sync with an HDMI cable (not supplied), operation is simplified as follows:

• One-Touch Play: When you play back a component such as a DVD/Blu-ray disc player, the receiver and the TV will switch to the appropriate HDMI input automatically. In case the receiver or/and the TV is in standby mode, they will be turned on automatically.
• System Audio Control: While watching TV, you can select to output the sound from the TV speaker or the speakers connected to the receiver.
• System Power Off: When you turn off the TV, the receiver and connected components are also turned off simultaneously.

Control for HDMI is a mutual control function standard used by HDMI CEC (Consumer Electronics Control) for HDMI (High-Definition Multimedia Interface).

The Control for HDMI function does not work in the following cases:

• When you connect the receiver to a component which does not correspond with Sony Control for HDMI function.
• When you connect the receiver and components using other than HDMI connection.

We recommend that you connect the receiver to products featuring "BRAVIA" Sync.

Note

Depending on the connected component, the Control for HDMI function may not work. Refer to the operating instructions of the component.

Preparing for the "BRAVIA" Sync

To use the "BRAVIA" Sync, turn the Control for HDMI function on for both the receiver and the connected component. The receiver is compatible with the "Control for HDMI-Easy Setting" function.

When your TV is compatible with the "Control for HDMI-Easy Setting" function

When you connect a Sony TV with the "Control for HDMI-Easy Setting" function, the Control for HDMI function of the receiver can be turned on simultaneously by turning the Control for HDMI function of the TV on.

1 Make sure that the receiver, TV, and playback components are connected using an HDMI cable (not supplied). (The respective components must be compatible with the Control for HDMI function.)

2 Turn on the receiver, TV and playback components.

3 Turn the Control for HDMI function of the TV on.
The Control for HDMI function of the receiver and all the connected components are simultaneously turned on. During setup, "CONTROL", "SCAN FOR" and "HDMI" appear sequentially in the display, and once setting is completed, "COMPLETE" will appear. Wait until the setup is complete.

For details on setting the TV, refer to the operating instructions supplied with the TV.

When your TV is not compatible with the "Control for HDMI-Easy Setting" function

Turn the Control for HDMI function of the receiver and the connected component on individually.

AMP MENU

▲/▼/◄/►,
⊕
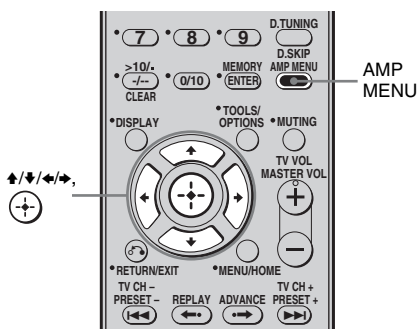
1 Perform the steps given in "When your TV is compatible with the "Control for HDMI-Easy Setting" function" (page 61).

2 Press AMP MENU.
"1-LEVEL" appears on the display.

3 Press ▲/▼ repeatedly to select "6-HDMI".

4 Press ⊕ or ► to enter the menu.

5 Press ▲/▼ repeatedly to select "CTRL:HDMI".

6 Press ⊕ or ► to enter the parameter.

7 Press ▲/▼ repeatedly to select "CTRL ON".
Control for HDMI function is activated.

8 Select the HDMI input of the receiver and TV to match the HDMI input of the connected component, so that the image from the connected component is displayed.

9 Set the Control for HDMI function for the connected component to on.
If the Control for HDMI function for the connected component is already set to on, you do not need to change the setting.

10 Repeat steps 8 and 9 for other components that you want to use the Control for HDMI function.

For details on setting the TV and connected components, refer to the operating instructions of the respective components.

Notes
• When you unplug the HDMI cable or change the connection, perform the steps given in "When your TV is compatible with the "Control for HDMI-Easy Setting" function" (page 61) or "When your TV is not compatible with the "Control for HDMI-Easy Setting" function" (page 62).
• You cannot perform One-Touch Play and System Audio Control during Control for HDMI-Easy Setting operation.
• Before you do the Control for HDMI-Easy Setting from the TV, be sure to turn on the TV, connected components and receiver.
• If the playback components cannot function after you have made the settings for Control for HDMI-Easy Setting, check the Control for HDMI setting on your TV.
• If the connected components do not support the Control for HDMI-Easy Setting, you need to set the Control for HDMI function for the connected components to on before you perform the Control for HDMI-Easy Setting from the TV.

Watching a DVD
(One-Touch Play)

You can enjoy sound and image from the components connected to the receiver via HDMI connections by a simple operation.

Play back a connected component.

The receiver and the TV will switch to the appropriate HDMI input automatically.
In case the receiver or/and the TV is in standby mode, they will be turned on automatically.

Watching a DVD/Blu-ray disc by simple operation

You can also select a connected component, such as a DVD/Blu-ray disc player using the TV menu. In this case, the receiver and the TV switch to the appropriate HDMI input.

Note

Depending on the TV, the start of the content may not be output.

Enjoying the TV sound from the speakers connected to the receiver
(System Audio Control)

You can enjoy the TV sound from the speakers connected to the receiver by a simple operation.
You can operate System Audio Control function using the TV menu. For details, refer to the operating instructions of the TV.
When System Audio Control function is turned on, the receiver will turns on and switches to the appropriate input automatically.
TV sound is output from the speakers connected to the receiver, and the volume of the TV is minimized simultaneously.
You can also use the System Audio Control function as follows.

• If you turn on the receiver while the TV is turned on, the System Audio Control function will automatically be set to on and the TV sound will output from the speakers connected to the receiver. However, if you turn off the receiver, the sound will output from the TV speakers.

• You can adjust the receiver's volume when you adjust the TV volume.

Notes

• If System Audio Control does not function according to your TV setting, refer to the operating instructions of the TV.

• When "CTRL:HDMI" is set to "CTRL ON", the "AUDIO OUT" settings in the HDMI menu will set automatically depending on the System Audio Control settings.

• When you connect a TV that does not have System Audio Control function, the System Audio Control function does not work.

• If the TV is turned on before turning on the receiver, the TV sound will not be output for a moment.

• When you switch to an input other than HDMI or TV, the System Audio Control function will automatically be set to off.

"BRAVIA" Sync Features

Turning off the receiver with the TV
(System Power Off)

When you turn the TV off by using the POWER button on the TV's remote, the receiver and the connected components turn off automatically.
You can also use the receiver's remote to turn off the TV.

TV I/⏻

TV

Press TV and TV I/⏻ at the same time.

The TV, receiver and the components connected via HDMI are turned off.

Notes
- Set the TV Standby Synchro to "ON" before using the System Power Off function. For details, refer to the operating instructions of the TV.
- Depending on the status, the connected components may not be turned off. For details, refer to the operating instructions of the connected components.

Switching between digital and analog audio (INPUT MODE)

When you connect components to both digital and analog audio input jacks on the receiver, you can fix the audio input mode to either of them, or switch from one to the other, depending on the type of material you intend to watch.

1 Press the input button.

You can also use INPUT SELECTOR on the receiver.

2 Press AMP MENU.

"1-LEVEL" appears on the display.

3 Press ✦/✦ repeatedly to select "5-AUDIO".

4 Press ⊕ or ➔ to enter the menu.

5 Press ✦/✦ repeatedly to select "IN MODE".

6 Press ⊕ or ➔ to enter the parameter.

7 Press ✦/✦ repeatedly to select the audio input mode.

The selected audio input mode appears on the display.

Audio input modes

• **AUTO**

Gives priority to digital audio signals when there are both digital and analog connections.
If there are more than one digital connection, HDMI audio signals have priority over COAXIAL and OPTICAL audio signals.
If there are no digital audio signals, analog audio signals are selected.

• **COAX**

Specifies the digital audio signals input to the DIGITAL COAXIAL jack.

• **OPT**

Specifies the digital audio signals input to the DIGITAL OPTICAL jack.

• **ANALOG**

Specifies the analog audio signals input to the AUDIO IN (L/R) jacks.

Note

Some audio input modes may not be set up depending on the input.

Other Operations

Listening to digital sound from other inputs
(DIGITAL ASSIGN)

You can reassign digital audio input that has OPTICAL or COAXIAL (SAT IN, DVD IN) signals to another input when they are not currently being used.
For example, to output the sound source for the DVD player using the OPTICAL IN jack on the receiver:
- Connect the optical output jack of the DVD player to the OPTICAL SAT IN jack of the receiver.
- Assign "SAT OPT" to "DVD" in the "D. ASSIGN" setting.

1 Press AMP MENU.

"1-LEVEL" appears on the display.

2 Press ▲/▼ repeatedly to select "5-AUDIO".

3 Press ⊕ or ➜ to enter the menu.

4 Press ▲/▼ repeatedly to select "D. ASSIGN".

5 Press ⊕ or ➜ to enter the parameter.

6 Press ▲/▼ repeatedly to select a vacant digital audio input ("SAT OPT" in the example).

7 Press ⊕ or ➜ to enter your selection.

8 Press ▲/▼ repeatedly to select the input ("SAT- DVD" in the example) you want to assign to the digital audio input jack selected in step 6.

When "DVD" input is selected, the sound of the DVD player will become a digital sound through the OPTICAL SAT IN jack.
The input you can assign varies for each audio input. For details, see the following "Assignable inputs for digital audio input".

Assignable inputs for digital audio input

The initial setting is marked with an underscore.

Digital audio input [Display]	Assignable inputs	Display
COAXIAL DVD IN [DVD COAX]	VIDEO 1	DVD– VD1
	VIDEO 2	DVD– VD2
	BD	DVD– BD
	DVD	DVD– DVD
	SAT	DVD– SAT
	SA-CD/CD	DVD– CD
OPTICAL SAT IN [SAT OPT]	VIDEO 1	SAT– VD1
	VIDEO 2	SAT– VD2
	BD	SAT– BD
	DVD	SAT– DVD
	SAT	SAT– SAT
	SA-CD/CD	SAT– CD

Notes
- You cannot reassign more than one digital audio input to the same input.
- You cannot use the digital audio input as the original input when it has been reassigned to another input.
- When you assign the digital audio input, the INPUT MODE setting may change automatically (page 65).

Enjoying the DIGITAL MEDIA PORT (DMPORT)

The DIGITAL MEDIA PORT (DMPORT) allows you to enjoy sound and image from a network system such as a portable audio/video source or computer.

By connecting a DIGITAL MEDIA PORT adapter (not supplied), you can enjoy sound and image from the connected component on the receiver.

For details, refer to the operating instructions supplied with the DIGITAL MEDIA PORT adapter.

Notes

• Do not connect an adapter other than the DIGITAL MEDIA PORT adapter.
• Before connecting the cords, be sure to disconnect the AC power cord (mains lead).
• Do not connect or disconnect the DIGITAL MEDIA PORT adapter while the receiver is turned on.
• Depending on the DIGITAL MEDIA PORT adapter, video output may not be possible.
• The DIGITAL MEDIA PORT adapters are available for purchase depending on the area.

Connecting the DIGITAL MEDIA PORT adapter

You can listen to the sound and view the images from the component connected through the DIGITAL MEDIA PORT adapter to the DMPORT jack on the receiver.
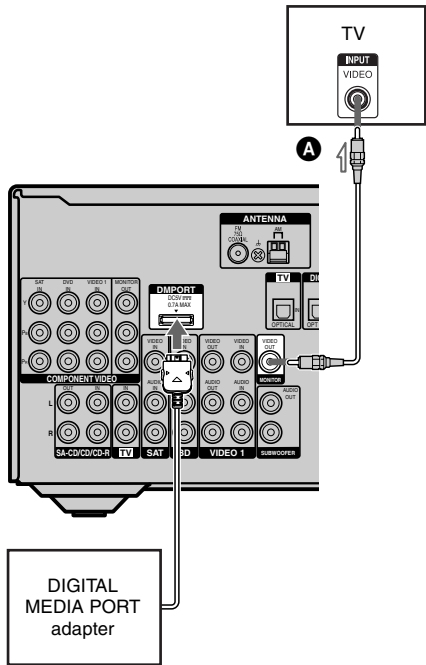
A Video cord (not supplied)

To detach the DIGITAL MEDIA PORT adapter from DMPORT jack
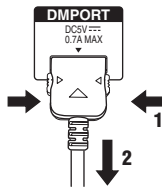
Press and hold both sides of the connector and then pull out the connector.

Notes

- When connecting the DIGITAL MEDIA PORT adapter, be sure the connector is inserted with the arrow mark facing towards the arrow mark on the DMPORT jack.
- Be sure to make DMPORT connections firmly, insert the connector straight in.
- As the connector of the DIGITAL MEDIA PORT adapter is fragile, be sure to handle with care when placing or moving the receiver.

Listening/watching a connected component through DMPORT connection

1 Press DMPORT.

You can also use the INPUT SELECTOR on the receiver to select "DMPORT".

2 Start playback of the connected component.

The sound is played back on the receiver and the image appears on the TV.
For details, refer to the operating instructions supplied with the DIGITAL MEDIA PORT adapter.

Notes

- Depending on the type of DIGITAL MEDIA PORT adapter, you can operate the connected component by using the remote. For details on the remote button operation, see page 12.
- Be sure you have connected the MONITOR OUT of the receiver to the TV (page 67).

Tip

When listening to MP3 or other compressed music using a portable audio source, you can enhance the sound. Press MUSIC repeatedly to select "PORTABLE" (page 53).

Changing the display

You can check the sound field, etc., by changing the information on the display.

Press DISPLAY repeatedly.

Each time you press the button, the display changes cyclically as follows:

All inputs except the FM and AM band

Index name of the input[a)] → Selected input → Sound field currently applied

FM and AM band

Preset station name[a)] → Frequency → Sound field currently applied

[a)] Index name appears only when you have assigned one to the input or preset station (page 37, 60). Index name does not appear when only blank spaces have been entered, or it is the same as the input name.

Note

Character or marks may not be displayed for some languages.

Using the Sleep Timer

You can set the receiver to turn off automatically at a specified time.

Press SLEEP repeatedly while the power is on.

Each time you press SLEEP, the display changes cyclically as follows:

2-00-00 → 1-30-00 → 1-00-00 → 0-30-00 → OFF

When sleep timer is being used, "SLEEP" lights up in the display.

Tip

To check the remaining time before the receiver turns off, press SLEEP. The remaining time appears on the display. If you press SLEEP again, the sleep timer will be canceled.

Other Operations

Recording using the receiver

You can record from an audio/video component using the receiver. Refer to the operating instructions supplied with your recording component.

Recording onto a CD-R

You can record onto a CD-R using the receiver. Refer to the operating instructions supplied with your CD recorder.

1 **Press one of the input buttons to select the playback component.**

You can also use INPUT SELECTOR on the receiver.

2 **Prepare the playback component for playing.**

For example, tune to the radio station you want to record (page 57).

3 **Prepare the recording component.**

Insert a blank CD-R into the CD recorder and adjust the recording level.

4 **Start recording on the recording component, then start playback on the playback component.**

Note

Sound adjustments do not affect the signal output from the SA-CD/CD/CD-R OUT jacks.

Recording onto a recording media

1 **Press one of the input buttons to select the playback component.**

You can also use INPUT SELECTOR on the receiver.

2 **Prepare the playback component for playing.**

For example, insert the video tape you want to copy into the VCR.

3 **Prepare the recording component.**

Insert a blank video tape, etc. into the recording component (VIDEO 1) for recording.

4 **Start recording on the recording component, then start playback on the playback component.**

Note

Some sources contain copy guards to prevent recording. In this case, you may not be able to record from the source.

Changing button assignments

You can change the factory settings of the input buttons to suit the components in your system. For example, if you connect a DVD recorder to the VIDEO 1 jacks on the receiver, you can set the VIDEO 1 button on this remote to control the DVD recorder.

Note

You cannot change the settings of DMPORT and TUNER buttons.

1 Hold down the input button of which you want to change the assignment.

Example: Hold down VIDEO 1.

2 Referring to the table below, press the corresponding button for the category you want.

Example: Press 4.
Now you can use the VIDEO 1 button to control the DVD recorder.

Categories and the corresponding buttons

Categories	Press
VCR (command mode VTR 3)[a]	1
VCR (command mode VTR 2)[a]	2
DVD player/DVD recorder (command mode DVD1)[b]	3
DVD recorder (command mode DVD3)[b]	4
CD player	5
Euro Digital Satellite Receiver	6
DVR (Digital CATV terminal)	7
DSS (Digital Satellite Receiver)	8
Blu-ray disc player (command mode BD1)[c]	9
Blu-ray disc recorder (command mode BD3)[c]	0/10
TV	-/--/>10/▪/CLEAR

[a] Sony VCRs are operated with a VTR 2 or VTR 3 setting which corresponds to 8 mm and VHS respectively.
[b] Sony DVD recorders are operated with a DVD1 or DVD3 setting. For details, refer to the operating instructions supplied with the DVD recorders.
[c] For details on the BD1 or BD3 setting, refer to the operating instructions supplied with the Blu-ray disc player or Blu-ray disc recorder.

To clear all remote button assignments

While holding down MASTER VOL –, press I/⏻ and DMPORT.
The remote is reset to its factory settings.

Glossary

■ Cinema Studio EX

A surround sound mode that can be regarded as the compilation of Digital Cinema Sound technology, delivers the sound of a dubbing theater using three technologies: "Virtual Multi Dimensions", "Screen Depth Matching", and "Cinema Studio Reverberation".

"Virtual Multi Dimensions", the virtual speaker technology, creates a virtual multi-surround environment with actual speakers up to 7.1 channels, and brings the surround sound experience of a theater with the latest facilities into your home.

"Screen Depth Matching" reproduces treble attenuation, fullness, and depth of sound usually created in a theater using sound emission from behind the screen. This is then added to the front and center channels.

"Cinema Studio Reverberation" reproduces the sound characteristics of state-of-the-art dubbing theaters and recording studios, including Sony Pictures Entertainment's dubbing studios. There are three modes, A/B/C, available according to the studio type.

■ Component video

A format for transmitting video signal information consisting of three separate signals: luminance Y, chrominance Pb, and chrominance Pr. High quality pictures, such as DVD video or HDTV pictures, are transmitted more faithfully. The three jacks are color-coded green, blue and red.

■ Composite video

A standard format for transmitting video signal information. The luminance signal Y and chrominance signal C are combined and transmitted together.

■ Digital Cinema Sound (DCS)

A unique sound reproduction technology for home theater developed by Sony, in cooperation with Sony Pictures Entertainment, for enjoying the exciting and powerful sound of movie theaters at home. With this "Digital Cinema Sound" developed by integrating a DSP (Digital Signal Processor) and measured data, the ideal sound field intended by filmmakers can be experienced at home.

■ Dolby Digital

Digital audio encoding/decoding technology developed by Dolby Laboratories, Inc. It consists of front (left/right), center, surround (left/right) and subwoofer channels. It is a designated audio standard for DVD-video and also known as 5.1 channel surround. Since surround information is recorded and reproduced in stereo, more realistic sound with fuller presence is delivered than with Dolby surround.

■ Dolby Digital Surround EX

Acoustic technology developed by Dolby Laboratories, Inc. Surround back information is matrixed into regular left and right surround channels so that the sound can be reproduced in 6.1 channel. Active scenes, especially, are recreated with a more dynamic and realistic sound field.

■ Dolby Pro Logic II

This technology converts 2 channel stereo recorded audio into 5.1 channel for playback. There is a MOVIE mode for movies and MUSIC mode for stereo sources such as music. Old movies encoded in the traditional stereo format can be enhanced with 5.1 channel surround sound.

■ Dolby Pro Logic IIx

Technology for 7.1 channel (or 6.1 channel) playback. Along with audio encoded in Dolby Digital Surround EX, 5.1 channel Dolby Digital encoded audio can be reproduced in 7.1 channel (or 6.1 channel). Furthermore, existing stereo recorded content can also be reproduced in 7.1 channel (or 6.1 channel).

■ Dolby Surround (Dolby Pro Logic)

Audio processing technology developed by Dolby Laboratories, Inc. Center and mono surround information is matrixed into two stereo channels. When reproduced, audio is decoded and output in 4 channel surround sound. This is the most common audio processing method for DVD-video.

■ DTS 96/24

A high sound quality digital signal format. It records audio at a sampling frequency and bit rate of 96kHz/24bit which is the highest possible for DVD-video. The number of playback channels varies depending on the software.

■ DTS Digital Surround

Digital audio encoding/decoding technology for theaters developed by DTS, Inc. It compresses audio less than Dolby Digital, delivering a higher quality sound reproduction.

■ DTS-ES

Format for 6.1 channel playback with surround back information. There are two modes, "Discrete 6.1" which records all channels independently, and "Matrix 6.1" which matrixes surround back channel into LS (left surround) and RS (right surround) channels. It is ideal for playback of motion picture soundtracks.

■ DTS Neo:6

This technology converts 2 channel stereo recorded audio for 6.1 channel playback. There are two modes to select according to the playback source or your preference, CINEMA for movies, and MUSIC for stereo sources such as music.

■ HDMI (High-Definition Multimedia Interface)

HDMI (High-Definition Multimedia Interface) is an interface that supports both video and audio on a single digital connection, allowing you to enjoy high quality digital picture and sound. The HDMI specification supports HDCP (High-bandwidth Digital Contents Protection), a copy protection technology that incorporates coding technology for digital video signals.

■ PCM (Pulse Code Modulation)

A method of converting analog audio to digital audio for easy enjoyment of digital sound.

■ Sampling frequency

To convert analog audio to digital, analog data should be quantified. This process is called sampling, and the number of times per second the analog data is quantified is called the sampling frequency. A standard music CD stores data quantified at 44,100 times per second, which is expressed as a sampling frequency of 44.1 kHz. Generally speaking, a higher sampling frequency means better sound quality.

■ x.v.Colour

x.v.Colour is a more familiar term for the xvYCC standard proposed by Sony, and is a trademark of Sony. xvYCC is an international standard for colour space in video.
This standard can express a wider colour range than the currently used broadcast standard.

Precautions

On safety

Should any solid object or liquid fall into the cabinet, unplug the receiver and have it checked by qualified personnel before operating it any further.

On power sources

- Before operating the receiver, check that the operating voltage is identical with your local power supply.
  The operating voltage is indicated on the nameplate on the back of the receiver.
- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- If you are not going to use the receiver for a long time, be sure to disconnect the receiver from the wall outlet. To disconnect the AC power cord (mains lead), grasp the plug itself; never pull the cord.
- The AC power cord (mains lead) must be changed only at a qualified service shop.

On heat buildup

Although the receiver heats up during operation, this is not a malfunction. If you continuously use this receiver at a large volume, the cabinet temperature of the top, side and bottom rises considerably. To avoid burning yourself, do not touch the cabinet.

On placement

- Place the receiver in a location with adequate ventilation to prevent heat buildup and prolong the life of the receiver.
- Do not place the receiver near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.
- Do not place anything on top of the cabinet that might block the ventilation holes and cause malfunctions.
- Do not place the receiver near equipment such as a television, VCR, or tape deck. If the receiver is being used in combination with a television, VCR, or tape deck, and is placed too close to that equipment, noise may result, and picture quality may suffer. This is especially likely when using an indoor antenna (aerial). Therefore, we recommend using an outdoor antenna (aerial).
- Use caution when placing the receiver on surfaces that have been specially treated (with wax, oil, polish, etc.) as staining or discoloration of the surface may result.

On operation

Before connecting other components, be sure to turn off and unplug the receiver.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as alcohol or benzine.

If you have any questions or problems concerning your receiver, please consult your nearest Sony dealer.

Troubleshooting

If you experience any of the following difficulties while using the receiver, use this troubleshooting guide to help you remedy the problem.

Audio

There is no sound, no matter which component is selected, or only a very low-level sound is heard.

- Check that the speakers and components are connected correctly and securely.
- Check that all speaker cords are connected correctly.
- Check that both the receiver and all components are turned on.
- Check that MASTER VOLUME is not set to "VOL MIN".
- Check that headphones are not connected.
- Press MUTING to cancel the muting function.
- When only a very low-level sound is heard, check to see if NIGHT MODE is activated.
- Check that you have selected the correct component with the input buttons.
- The protective device on the receiver has been activated. Turn off the receiver, eliminate the short-circuit problem, and turn on the power again.

There is no sound from a specific component.

- Check that the component is connected correctly to the audio input jacks for that component.
- Check that the cord(s) used for the connection is (are) fully inserted into the jacks on both the receiver and the component.

There is no sound from one of the front speakers.

- Connect a pair of headphones to the PHONES jack to verify that sound is output from the headphones. If only one channel is output from the headphones, the component may not be connected to the receiver correctly. Check that all the cords are fully inserted into the jacks on both the receiver and the component. If both channels are output from the headphones, the front speaker may not be connected to the receiver correctly. Check the connection of the front speaker which is not outputting any sound.
- Make sure you have connected to both the L and R jacks of an analog component, and not only to either the L or R jack. Use an audio cord (not supplied).

There is no sound from digital sources (from COAXIAL or OPTICAL input jack).

- Check that the INPUT MODE is not set to "ANALOG" (page 65).
- Check to make sure the selected digital audio input jack is not assigned to other inputs using DIGITAL ASSIGN function (page 66).

The left and right sounds are unbalanced or reversed.

- Check that the speakers and components are connected correctly and securely.
- Adjust the balance parameters using the LEVEL menu.

"NO INPUT" appears on the display

- Check that your component is connected to the COAXIAL or OPTICAL jack. If no signal is input through the COAXIAL or OPTICAL jack, "NO INPUT" appears on the display and this is not a malfunction.

Additional Information

There is severe hum or noise.

- Check that the speakers and components are connected securely.
- Check that the connecting cords are away from a transformer or motor, and at least 3 meters away from a TV set or fluorescent light.
- Move your audio components away from the TV.
- The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.

There is no sound, or only a very low-level sound is heard from the center/surround/surround back speakers.

- Select a CINEMA STUDIO EX mode (page 54).
- Adjust the speaker level (page 35).

There is no sound from the surround back speaker.

- Some discs have no Dolby Digital Surround EX flag even though the packages have Dolby Digital Surround EX logos. In this case, select "SB ON" (page 41).

There is no sound from the subwoofer.

- Check that the speaker cords and monaural audio cord (supplied) are connected correctly and securely (page 17).
- Check that the system control cable (supplied) is fully inserted into the SYSTEM CONTROL jack (page 17).
- Check that the SUBWOOFER VOLUME on the power amplifier is not set to MIN.

The surround effect cannot be obtained.

- Make sure the sound field function is on (press MOVIE, or MUSIC).
- Sound fields do not function for signals with a sampling frequency of more than 48 kHz.

Dolby Digital or DTS multi channel sound is not reproduced.

- Check that the DVD, etc. you are playing is recorded in Dolby Digital or DTS format.
- When connecting the DVD player, etc., to the digital input jacks of this receiver, check the audio setting (the settings for the audio output) of the connected component. For example, when connecting the "PlayStation 3", set the BD/DVD audio output format to "Bitstream" on the "PlayStation 3".
- Set "AUDIO OUT" to "AMP" in the HDMI Settings menu.

There is no sound from the component connected to the DIGITAL MEDIA PORT adapter.

- Adjust the volume of this receiver.
- The DIGITAL MEDIA PORT adapter and/or component is not connected correctly. Turn off the receiver, then reconnect the DIGITAL MEDIA PORT adapter and/or component.
- Check the DIGITAL MEDIA PORT adapter and/or component device to make sure it supports this receiver.

Video

There is no picture or an unclear picture appears on the TV screen.

- Select the appropriate input using the input buttons.
- Set your TV to the appropriate input mode.
- Move your audio components away from the TV.
- Depending on the DIGITAL MEDIA PORT adapter, video output may not be possible.

The source image input to the VIDEO IN or COMPONENT VIDEO IN jacks is not output from the TV.

- Check that your component is connected to the MONITOR OUT jack (page 21).
- Make sure "CTRL:HDMI" is set to "CTRL OFF" in HDMI menu (page 42).

Recording cannot be carried out.

- Check that the components are connected correctly (page 23).
- Select the source component using the input buttons (page 36).

HDMI

The source sound input to the HDMI jack on the receiver is not output from the receiver or the TV speaker.

- Check the HDMI connection (page 24).
- You cannot listen to the Super Audio CD by connecting HDMI.
- Depending on the playback component, you may need to set up the component. Refer to the operating instructions supplied with each component.
- Be sure to use a High Speed HDMI cable when you view images or listen to sound during Deep Colour or 3D transmission.

The source image input to the HDMI jack on the receiver is not output from the TV.

- Check the HDMI connection.
- Depending on the playback component, you may need to set up the component. Refer to the operating instructions supplied with each component.
- Be sure to use a High Speed HDMI cable when you view images or listen to sound during Deep Colour or 3D transmission.

The control for HDMI function does not work.

- Check the HDMI connection (page 24).
- Make sure "CTRL:HDMI" is set to "CTRL ON" in HDMI menu.
- Make sure the connected component is compatible with the Control for HDMI function.
- Check the Control for HDMI settings on the connected component. See the operating instructions of the connected component.
- If you change the HDMI connection, connect/disconnect the AC power cord, or there is a power failure, repeat the procedures of "Preparing for the "BRAVIA" Sync" (page 61).

No sound is output from the receiver and TV speaker while using the System Audio Control function.

- Make sure the TV is compatible with the System Audio Control function.
- If the TV does not have System Audio Control function, set the "AUDIO OUT" settings in HDMI menu to
  - "TV+AMP" if you want to listen to the sound from the TV speaker and receiver.
  - "AMP" if you want to listen to the sound from the receiver.
- If you cannot listen to the sound of a component connected to the receiver
  - Select the appropriate input when you want to watch a program on a component connected via HDMI connection to the receiver.
  - Change the TV channel when you want to watch a TV broadcast.
  - Select the component or input you want to watch when you watch a program on the component connected to the TV. Refer to the operating instructions of the TV on this operation.

The TV's remote cannot be used to control the connected component when using the Control for HDMI function.

- Change the input of the receiver to the HDMI input connected to the component.

## Tuner

The FM reception is poor.

- Use a 75-ohm coaxial cable (not supplied) to connect the receiver to an outdoor FM antenna (aerial) as shown below. If you connect the receiver to an outdoor antenna (aerial), ground it against lightning. To prevent a gas explosion, do not connect the ground wire to a gas pipe.

Outdoor FM antenna (aerial)

Receiver

Ground wire (not supplied)

To ground
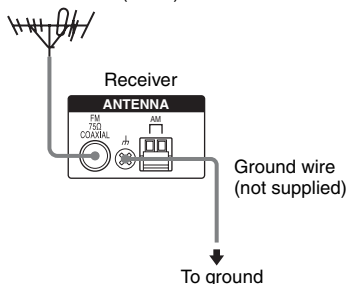
Radio stations cannot be tuned in.

- Check that the antennas (aerials) are connected securely. Adjust the antennas (aerials) and connect an external antenna (aerial), if necessary.
- The signal strength of the stations is too weak (when tuning in with automatic tuning). Use direct tuning.
- Make sure you set the tuning interval correctly (when tuning in AM stations with direct tuning).
- No stations have been preset or the preset stations have been cleared (when tuning by scanning preset stations). Preset the stations (page 59).
- Press DISPLAY repeatedly so that the frequency appears on the display.

Remote commander

The remote does not function.
- Point the remote at the remote sensor on the receiver.
- Remove any obstacles in the path between the remote and the receiver.
- Replace all the batteries in the remote with new ones, if they are weak.
- Make sure you select the correct input on the remote.

Error messages

If there is a malfunction, the display shows a message. You can check the condition of the system by the message. Refer to the following table to solve the problem. If any problem persists, consult your nearest Sony dealer. If an error message appears while you perform Auto Calibration, see "Error and warning codes" (page 33) to solve the problem.

PROTECT

Irregular current is output to the speakers, or the upper panel of the receiver is covered with something. The receiver will automatically turn off after a few seconds. Check the speaker connection and turn on the power again.

PROTECT SUBWOOFER

Irregular current is output to the subwoofers. The receiver will automatically turn off after a few seconds. Check the subwoofers connections and turn on the power again.

If you are unable to remedy the problem using the troubleshooting guide

Clearing the receiver's memory may remedy the problem (page 30). However, note that all memorized settings will be reset to their initial settings and you will have to readjust all settings on the receiver.

If the problem persist

Consult your nearest Sony dealer. Note that if service personnel changes some parts during repair, these parts may be retained.

Reference sections for clearing the receiver's memory

To clear	See
All memorized settings	page 30
Customized sound fields	page 56

Additional Information

Specifications

Amplifier section

Models of area code AU1, E51, SA2, EA3, AR2

• Receiver (STR-KM7600)

Power Output

Stereo mode output (rated) (6 ohms, 1 kHz, THD 1%)

100 W + 100 W[1]

Surround mode output (reference)[2]

	RMS output
FRONT:	185 W per channel[1] (with SS-MSP7500)
CENTER:	185 W[1] (with SS-CNP7500)
SURROUND:	185 W per channel[1] (with SS-SRP7500)
SURROUND BACK:	185 W per channel[1] (with SS-SRP7500)

• Power amplifier (TA-KMSW500)

RMS output (6 ohms, 80 Hz, THD 10%)

200 W per channel[1]

Input   LINE IN (input pin jacks)

[1]Measured under the following conditions:

Area code	Power requirements
E51, SA2	240 V AC, 50 Hz
EA3	127 V AC, 60 Hz
AU1	230 V AC, 50 Hz
AR2	230 V AC, 50 Hz

[2]Reference power output for front, center, surround and surround back speakers. Depending on the sound field settings and the source, there may be no sound output.

Inputs

Analog	Sensitivity: 800 mV/ 50 kohms
Digital (Coaxial)	Impedance: 75 ohms

Outputs (Analog)

AUDIO OUT	Voltage: 800 mV/ 10 kohms
SUBWOOFER	Voltage: 2 V/1 kohm

Tone

Gain levels   ±6 dB, 1 dB step

Reproduction frequency range:

28 – 20,000 Hz

FM tuner section

Tuning range	87.5 – 108.0 MHz
Antenna	FM wire antenna
Antenna terminals	75 ohms, unbalanced
Intermediate frequency	
	10.7 MHz

AM tuner section

Tuning range

Area code	Tuning scale	
	10 kHz step	9 kHz step
E51, AU1, AR2	530 – 1,710 kHz	531 – 1,710 kHz
SA2	530 – 1,610 kHz	531 – 1,602 kHz
EA3	–	531 – 1,602 kHz

Antenna	Loop antenna
Intermediate frequency	
	450 kHz

Video section

Inputs/Outputs

Video: 1 Vp-p, 75 ohms

COMPONENT VIDEO:

Y: 1 Vp-p, 75 ohms

P_B: 0.7 Vp-p, 75 ohms

P_R: 0.7 Vp-p, 75 ohms

80 MHz HD Pass Through

HDMI Video
Input/Output (HDMI Repeater block)
640 × 480p@60 Hz
720 × 480p@59.94/60 Hz
1280 × 720p@59.94/60 Hz
1920 × 1080i@59.94/60 Hz
1920 × 1080p@59.94/60 Hz
720 × 576p@50 Hz
1280 × 720p@50 Hz
1920 × 1080i@50 Hz
1920 × 1080p@50 Hz
1920 × 1080p@24 Hz

HDMI Video (3D)
Input/Output (HDMI Repeater block)
1280 × 720p@59.94/60Hz Frame packing
1920 × 1080i@59.94/60Hz Frame packing
1920 × 1080i@59.94/60Hz Side-by-Side (Half)
1920 × 1080p@59.94/60Hz Side-by-Side (Half)
1280 × 720p@50Hz Frame packing
1920 × 1080i@50Hz Frame packing
1920 × 1080i@50Hz Side-by-Side (Half)
1920 × 1080p@50Hz Side-by-Side (Half)
1920 × 1080p@24Hz Frame packing

General
Power requirements

Area code	Power requirements
AU1	230 V AC, 50 Hz
SA2	230 – 240 V AC, 50/60 Hz
E51	120/220/240 V AC, 50/60 Hz
AR2	220 – 230 V AC, 50/60 Hz
EA3	120 – 127/220/230 – 240 V AC, 50/60 Hz

Power output (DIGITAL MEDIA PORT)
    DC OUT: 5 V, 0.7 A MAX
System Control output
    DC OUT: 5 V, 50mA MAX

Power consumption

• STR-KM7600

Area code	Power consumption
AU1, E51, SA2, EA3, AR2	220 W

• TA-KMSW500

Area code	Power consumption
AU1, E51, SA2, EA3, AR2	160 W

Power consumption (during standby mode)
                    0.3 W (when
                    "CTRL:HDMI" in HDMI
                    menu is set to "CTRL
                    OFF")

Dimensions (width/height/depth) including projecting parts and controls (Approx.)
    Receiver   430 × 158 × 342 mm
    Power amplifier   430 × 158 × 332 mm

Mass (Approx.)
    Receiver   8.0 kg
    Power amplifier   6.6 kg

Speaker section

• Front speaker (SS-MSP7500)
Speaker system   2-way, 3-driver, Bass
                   reflex, Magnetically
                   shielded
Speaker unit
Woofer: 200 mm, cone type × 2
Tweeter: 25 mm, horn type
Rated Impedance   6 ohms
Dimensions (width/height/depth) (Approx.)
                   325 × 980 × 340 mm
                   (with foot)
Mass (Approx.)   13.5 kg

Additional Information

continued

• Center speaker (SS-CNP7500)

Speaker system	2-way, 3-driver, Bass reflex, Magnetically shielded
Speaker unit	
Woofer:	100 mm, cone type × 2
Tweeter:	25 mm, horn type
Rated Impedance	6 ohms
Dimensions (width/height/depth) (Approx.)	
	515 × 175 × 245 mm (with foot)
Mass (Approx.)	4.7 kg

• Surround/Surround back speaker (SS-SRP7500)

Speaker system	Full range, Bass reflex
Speaker unit	
Woofer:	100 mm, cone type
Rated Impedance	6 ohms
Dimensions (width/height/depth) (Approx.)	
	174 × 220 × 180 mm (with foot)
Mass (Approx.)	1.6 kg

• Subwoofer (SS-WP7500)

Speaker system	Bass reflex, Magnetically shielded
Speaker unit	250 mm, cone type
Rated Impedance	6 ohms
Dimensions (width/height/depth) (Approx.)	
	335 × 420 × 330 mm (with foot)
Mass (Approx.)	7.9 kg

Supplied speakers

Front speaker (2)
Center speaker (1)
Surround/Surround back speaker (4)
Subwoofer
• HT-DDW7600 (2)
• HT-DDW8600 (4)

Supplied accessories

Operating instructions (this manual)
Quick Setup Guide (1)
FM wire antenna (1)
AM loop antenna (1)
Monaural audio cord
– HT-DDW7600 (1)
– HT-DDW8600 (2)
System control cable
– HT-DDW7600 (1)
– HT-DDW8600 (2)
Speaker cords
• Long
 – HT-DDW7600 (4)
 – HT-DDW8600 (4)
• Short
 – HT-DDW7600 (5)
 – HT-DDW8600 (7)
Foot pads
• Speakers (20)
• Subwoofer
 – HT-DDW7600 (8)
 – HT-DDW8600 (16)
Optimizer microphone (ECM-AC2) (1)
Remote commander (RM-AAU027) (1)
R6 (size-AA) batteries (2)

Design and specifications are subject to change without notice.

Halogenated flame retardants are not used in the certain printed wiring boards.

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Numerics

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http://www.sony.net/