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.

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.

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

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.
About This Manual

• The instructions in this manual are for model HT-DDW5000. In this manual, models of area code SP is used for illustration purposes unless stated otherwise. Any difference in operation is clearly indicated in the text, for example, “Models of area code MX 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-DDW5000 consists of:
• Receiver STR-KM5000
• Speaker system
  – Front speaker SS-MSP5000
  – Center speaker SS-CNP5000
  – Surround/Surround back speaker SS-SRP5000
  – Subwoofer SA-WP5000

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. © 1996-2007 DTS, Inc. All Rights Reserved.

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).

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

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.
# Table of Contents

## Getting Started
- Description and location of parts...................5
- 1: Installing the speakers .............................14
- 2: Connecting the speakers .............................16
- 3: Connecting the TV ..................................18
- 4a: Connecting the audio components...............19
- 4b: Connecting the video components ............20
- 5: Connecting the antennas ............................27
- 6: Preparing the receiver and the remote .......28
- 7: Calibrating the appropriate settings automatically (AUTO CALIBRATION) .....................30
- 8: Adjusting the speaker levels and balance (TEST TONE) ...........................33

## Playback
- Selecting a component.....................................34
- Listening/Watching a component .......................36

## Amplifier Operations
- Navigating through menus...............................38
- Adjusting the level (LEVEL menu).....................41
- Adjusting the tone (TONE menu) .......................42
- Settings for the surround sound (SUR menu).........42
- Settings for the tuner (TUNER menu) .................44
- Settings for the audio (AUDIO menu) ...............44
- Settings for the video (VIDEO menu) ...............45
- Settings for the system (SYSTEM menu) ............46
- Calibrating the appropriate settings automatically (A. CAL menu) .....................48

## Enjoying Surround Sound
- Enjoying Dolby Digital and DTS Surround sound (AUTO FORMAT DIRECT) ........ 49
- Selecting a pre-programmed sound field ......... 51
- Using only the front speakers and subwoofers (2CH + STEREO SUBWOOFER) ....... 53
- Resetting sound fields to the initial settings ........................................... 53

## Tuner Operations
- Listening to FM/AM radio......................... 54
- Presetting radio stations ............................. 55

## Other Operations
- Switching between digital and analog audio (INPUT MODE) .......................... 58
- Enjoying the DIGITAL MEDIA PORT (DMPORT) .................................. 58
- Creating a party environment (X-ROUND) ................. 61
- Naming inputs ......................................... 62
- Changing the display ................................ 62
- Using the Sleep Timer ............................... 63
- Recording using the receiver ......................... 63

## Using the Remote
- Changing button assignments ....................... 64

## Additional Information
- Glossary ................................................. 65
- Precautions ........................................... 67
- Troubleshooting ...................................... 69
- Specifications ......................................... 73
- Index .............................................. Back cover
## Getting Started

### Description and location of parts

#### Receiver

### Front panel

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> I/○ (on/standby)</td>
<td>Press to turn the receiver on or off (page 29, 36, 37, 53, 65, 73).</td>
</tr>
<tr>
<td><strong>2</strong> AUTO CAL</td>
<td>Press to activate the Auto Calibration function (page 31).</td>
</tr>
<tr>
<td><strong>3</strong> TUNING MODE</td>
<td>Press or turn to operate the tuner (FM/AM) (page 54).</td>
</tr>
<tr>
<td><strong>4</strong> Display</td>
<td>The current status of the selected component or a list of selectable items appears here (page 7).</td>
</tr>
<tr>
<td><strong>5</strong> MULTICHANNEL DECODING lamp</td>
<td>Lights up when multi channel audio signals are decoded (page 37).</td>
</tr>
<tr>
<td><strong>6</strong> Remote sensor</td>
<td>Receives signals from remote commander.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7</strong> DISPLAY</td>
<td>Press to select information displayed on the display (page 61, 62).</td>
</tr>
<tr>
<td><strong>8</strong> INPUT MODE</td>
<td>Press to select the input mode when the same components are connected to both digital and analog jacks (page 58).</td>
</tr>
<tr>
<td><strong>9</strong> MASTER VOLUME</td>
<td>Turn to adjust the volume level of all speakers at the same time (page 34, 35, 36, 37).</td>
</tr>
<tr>
<td><strong>10</strong> X-ROUND MODE</td>
<td>Press to select the X-ROUND mode (page 61).</td>
</tr>
<tr>
<td><strong>11</strong> X-ROUND SPEED</td>
<td>Press to adjust the speed of the X-ROUND effect (page 61).</td>
</tr>
</tbody>
</table>

continued
<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT SELECTOR</td>
<td>Turn to select the input source to play back (page 34, 36, 37, 54, 57, 58, 60, 62, 63, 64).</td>
</tr>
<tr>
<td>2CH</td>
<td>Press to select a sound field (page 49).</td>
</tr>
<tr>
<td>A.F.D.</td>
<td></td>
</tr>
<tr>
<td>MOVIE</td>
<td></td>
</tr>
<tr>
<td>MUSIC</td>
<td></td>
</tr>
<tr>
<td>SUR BACK DECODING</td>
<td>Press to select the surround back decoding mode (page 43).</td>
</tr>
<tr>
<td>SLEEP</td>
<td>Press to activate the Sleep Timer function and the duration which the receiver turns off automatically (page 63).</td>
</tr>
<tr>
<td>DIMMER</td>
<td>Press to change the brightness of the display (page 48).</td>
</tr>
<tr>
<td>MEMORY/ENTER</td>
<td>Press to store a station or enter the selection when selecting the settings (page 29).</td>
</tr>
<tr>
<td>VIDEO 2 IN/PORTABLE AV IN jacks</td>
<td>Connect to a portable audio/video component such as a camcorder or video game (page 25, 34).</td>
</tr>
<tr>
<td>AUTO CAL MIC jack</td>
<td>Connects to the supplied optimizer microphone for the Auto Calibration function (page 30).</td>
</tr>
<tr>
<td>PHONES jack</td>
<td>Connects to headphones (page 69).</td>
</tr>
</tbody>
</table>
About the indicators on the display

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW</td>
<td>Lights up when the audio signal is output from the SUBWOOFER jack.</td>
</tr>
<tr>
<td>LFE</td>
<td>Lights up when the disc being played back contains an LFE (Low Frequency Effect) channel and the LFE channel signal is actually being reproduced.</td>
</tr>
<tr>
<td>D/ D EX</td>
<td>“D” lights up when Dolby Digital signals are input. “D EX” lights up when Dolby Digital Surround EX signals are decoded. &lt;br&gt;Note&lt;br&gt;When playing a Dolby Digital format disc, be sure that you have made digital connections and that INPUT MODE is set to “AUTO” (page 58).</td>
</tr>
<tr>
<td>PL/ PLII/ PLIIx</td>
<td>“PL” lights up when the receiver applies Pro Logic processing to 2 channel signals in order to output the center and surround channel signals. “PLII” lights up when the Pro Logic II Movie/Music/Game decoder is activated. “PLIIx” lights up when the Pro Logic IIx Movie/Music/Game decoder is activated. &lt;br&gt;Note&lt;br&gt;Dolby Pro Logic IIx decoding does not function for DTS format signals or for signals with a sampling frequency of more than 48 kHz.</td>
</tr>
<tr>
<td>OPT</td>
<td>Lights up when INPUT MODE is set to “AUTO” and the source signal is a digital signal being input through the OPTICAL jack (page 58).</td>
</tr>
<tr>
<td>DTS/ DTS-ES/ DTS 96/24</td>
<td>“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 kHz/24 bit signals. &lt;br&gt;Note&lt;br&gt;When playing a DTS format disc, be sure that you have made digital connections and that INPUT MODE is set to “AUTO” (page 58).</td>
</tr>
<tr>
<td>MEMORY</td>
<td>Lights up when a memory function, such as Preset Memory (page 55), etc., is activated.</td>
</tr>
<tr>
<td>Tuner indicators</td>
<td>Lights up when using the receiver to tune in radio stations (page 54), etc.</td>
</tr>
<tr>
<td>Preset station indicators</td>
<td>Lights up when using the receiver to tune in radio stations you have preset. For details on presetting radio stations, see page 55.</td>
</tr>
<tr>
<td>D.RANGE</td>
<td>Lights up when dynamic range compression is activated (page 41).</td>
</tr>
</tbody>
</table>

continued
<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEO:6</td>
<td>Lights up when DTS Neo:6 Cinema/Music decoder is activated (page 50).</td>
</tr>
<tr>
<td>COAX</td>
<td>Lights up when INPUT MODE is set to “AUTO” and the source signal is a digital signal being input through the COAXIAL jack (page 58).</td>
</tr>
<tr>
<td>HDMI</td>
<td>Lights up when the receiver recognizes a component connected via an HDMI IN jack (page 21).</td>
</tr>
<tr>
<td><strong>Playback channel indicators</strong></td>
<td>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.</td>
</tr>
<tr>
<td>L</td>
<td>Front Left</td>
</tr>
<tr>
<td>R</td>
<td>Front Right</td>
</tr>
<tr>
<td>C</td>
<td>Center (monaural)</td>
</tr>
<tr>
<td>SL</td>
<td>Surround Left</td>
</tr>
<tr>
<td>SR</td>
<td>Surround Right</td>
</tr>
<tr>
<td>S</td>
<td>Surround (monaural or the surround components obtained by Pro Logic processing)</td>
</tr>
<tr>
<td>SB</td>
<td>Surround back (the surround back components obtained by 6.1 channel decoding)</td>
</tr>
</tbody>
</table>

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

```
SW
L C R
SL SR
```
Rear panel

1 DIGITAL INPUT/OUTPUT section
- OPTICAL IN jacks
- COAXIAL IN jack
- HDMI IN/OUT* jacks

2 ANTENNA section
- FM ANTENNA jack
- AM ANTENNA terminals

3 COMPONENT VIDEO INPUT/OUTPUT section
- Green (Y), Blue (Pb/Cb), Red (Pr/Cr) IN/OUT* jacks

4 SPEAKERS section
- Connects to the supplied speakers (page 16).

continued
**5 AUDIO INPUT/OUTPUT section**

- **White (L) OUT** jacks Connects to a Super Audio CD player, etc. (page 19).
- **Red (R)**
- **Black** AUDIO OUT jacks Connects to the supplied subwoofers (page 16).

**6 VIDEO/AUDIO INPUT/OUTPUT section**

- **White (L) OUT** jacks Connects to a VCR, DVD player, etc. (page 18, 23, 24, 25).
- **Red (R)**

**7 DMPORT**

- **DMPORT** jack Connects to a DIGITAL MEDIA PORT adapter (page 59).

*You can watch the selected input image when you connect the HDMI OUT or MONITOR OUT jack to a TV (page 18).

---

**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. For details, see “Changing button assignments” (page 64).

**RM-AAU027**

![Remote Commander Diagram]
Table of Contents

Getting Started

Table 1: Name Function

1. **TV I/\(\) (on/standby)**
   - Press TV I/\(\) and TV \((14)\) at the same time to turn the TV on or off.

2. **AV I/\(\) (on/standby)**
   - Press to turn on or off the Sony audio/video components that the remote is assigned to operate.
   - If you press I/\(\) \((2)\) at the same time, it will turn off the receiver and other components (SYSTEM STANDBY).
   - **Note**
     - The function of the AV I/\(\) switch changes automatically each time you press the input buttons \((3)\).

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 64.

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 \(\uparrow, \downarrow, \rightarrow, \leftarrow\) and \(\oplus (16)\) to perform menu operations.

6. **AUTO CAL**
   - Press to activate the Auto Calibration function (page 31).

7. **D.TUNING**
   - Press to enter direct tuning mode.

8. **D.SKIP**
   - Press to skip a disc when using a multi-disc changer.

9. **AMP MENU**
   - Press to display the menu of the receiver. Then, use \(\uparrow, \downarrow, \rightarrow, \leftarrow\) and \(\oplus (16)\) to perform menu operations.

10. **ENTER**
    - Press to enter the value after selecting a channel, disc or track using the numeric buttons of the TV, VCR or satellite tuner.

11. **MEMORY**
    - Press to store a station.

12. **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.

13. **TV VOL \(+/-\)**
    - Press TV VOL \(+/-\) and TV \((14)\) at the same time to adjust the TV volume level.

14. **MASTER VOL \(+/-\)**
    - Press to adjust the volume level of all speakers at the same time.

15. **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 \(\uparrow, \downarrow, \rightarrow, \leftarrow\) and \(\oplus (16)\) to perform menu operations.

16. **REPLAY \(\leftarrow/\rightarrow\)**
    - Press to skip a track of the CD player, DVD player or Blu-ray disc player.

17. **REPLAY \(\leftarrow/\rightarrow\)**
    - Press to replay the previous scene or fast forward the current scene of the VCR, DVD player or Blu-ray disc player.

18. **REPLAY \(\leftarrow/\rightarrow\)**
    - 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.

19. **REPLAY \(\leftarrow/\rightarrow\)**
    - Press to start playback of the VCR, CD player, DVD player or Blu-ray disc player.

continued
<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong>&lt;sup&gt;b)&lt;/sup&gt;</td>
<td>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.)</td>
</tr>
<tr>
<td><strong>2</strong>&lt;sup&gt;b)&lt;/sup&gt;</td>
<td>Press to stop playback of the VCR, CD player, DVD player or Blu-ray disc player.</td>
</tr>
<tr>
<td><strong>TV CH +/-</strong></td>
<td>Press TV CH +/- and TV (14) at the same time to select preset TV channels.</td>
</tr>
</tbody>
</table>
| **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 the TV operation. |
| **15 RETURN/EXIT ©</sup> | 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 © 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. |
| **16 ©</sup> | 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 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/©</sup> | 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. |
| **20 Numeric buttons (number 5<sup>a)</sup>)** | 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, MASTER VOL +, TV 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, see 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

This receiver allows you to use a 6 channel speaker with 4 subwoofer system.
To fully enjoy theater-like multi channel surround sound requires five speakers (two front speakers, a center speaker and two surround speakers) and a subwoofer (5.1 channel).
You can enjoy high fidelity reproduction of DVD software recorded sound in the Surround EX format if you connect one additional surround back speaker (6.1 channel) (see “Using the surround back decoding mode (SUR BACK DECODING)” on page 43.

Example of a 6 channel speaker with 2 subwoofer system configuration

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 a flat surface

A Front speaker (left)
B Front speaker (right)
C Center speaker
D Surround speaker (left)
E Surround speaker (right)
F Surround back speaker
G Subwoofer
H Subwoofer
Getting Started

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.

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

3. Hang the speakers on the screws.

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

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

A Monaural audio cord (supplied)\textsuperscript{a)}
B Speaker cord (supplied)\textsuperscript{c)}

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

\textsuperscript{a)} Before connecting the cords, be sure to attach the supplied monaural audio cord labels to both ends of the cord. For details, see “To connect the subwoofers correctly” (page 17).
\textsuperscript{b)} If you have additional subwoofers, connect them to the SUBWOOFER jacks.
\textsuperscript{c)} Use the long speaker cords to connect the surround and surround back speakers and the short speaker cords to connect the front and center speakers.
To connect the speakers correctly
Check the speaker type by referring to the speaker label* on the rear panel of the speakers.

<table>
<thead>
<tr>
<th>Character on speaker label</th>
<th>Speaker type</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>Front left</td>
</tr>
<tr>
<td>R</td>
<td>Front right</td>
</tr>
<tr>
<td>SL</td>
<td>Surround left</td>
</tr>
<tr>
<td>SR</td>
<td>Surround right</td>
</tr>
<tr>
<td>SB</td>
<td>Surround back</td>
</tr>
</tbody>
</table>

*The center speaker and subwoofers do not have any character on the speaker label. For details on the speaker type, see page 3.

To connect the subwoofers correctly
1. Attach the supplied “SW-L” labels to the supplied monaural audio cord as shown below.

```
    SW-L
    SW-R
```

Repeat the procedure above for the other supplied monaural audio cord using the “SW-R” labels.

2. Connect the monaural audio cord attached with the “SW-L” labels (and “SW-R” labels) to the subwoofer placed at left (and right) and to the SUBWOOFER L jack (and SUBWOOFER R jack) on the receiver.

**Tip**
Use the supplied speakers to optimize the system’s performance.
3: Connecting the TV

You can watch the selected input image when you connect the HDMI 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.

<table>
<thead>
<tr>
<th>TV</th>
<th>Audio signals</th>
<th>Audio/video signals</th>
<th>Video signals</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTPUT</td>
<td>AUDIO L R</td>
<td>INPUT</td>
<td>HDMI</td>
</tr>
<tr>
<td>INPUT</td>
<td>COMPONENT VIDEO Y Pb/Cb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INPUT</td>
<td>VIDE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A Audio cord (not supplied)
B HDMI cable (not supplied)
We recommend that you use a Sony HDMI cable.
C Component video cord (not supplied)
D Video cord (not supplied)
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.

Tip
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 jack of the receiver.
– turn off the TV’s volume or activate the TV’s muting function.

4a: Connecting the audio components

Connecting a Super Audio CD/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. After connecting your Super Audio CD player, CD player or CD recorder, proceed to “4b: Connecting the video components” (page 20) or “5: Connecting the antennas” (page 27).

Audio cord (not supplied)
4b: Connecting the video components

How to hook up your components

This section describes how to hook up your 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.

After hooking up all your components, proceed to “5: Connecting the antennas” (page 27).

Component to be connected

<table>
<thead>
<tr>
<th>Component</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>18</td>
</tr>
<tr>
<td>With HDMI jack</td>
<td>21</td>
</tr>
<tr>
<td>DVD player</td>
<td>23</td>
</tr>
<tr>
<td>Satellite tuner/Set-top box</td>
<td>24</td>
</tr>
<tr>
<td>DVD recorder, VCR</td>
<td>25</td>
</tr>
<tr>
<td>Camcorder, video game, etc.</td>
<td>25</td>
</tr>
</tbody>
</table>

Video input/output jack 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.

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. The sound is output from the TV speaker only when a playback component and this receiver, as well as this receiver and the TV are connected via an HDMI jack.

To output the sound from the supplied speakers and to take advantage of the multi channel surround sound, be sure to

– connect the digital audio jacks on the playback component to the receiver.
– turn off the TV’s volume or activate the TV’s muting function.

A HDMI cable (not supplied)
We recommend that you use a Sony HDMI cable.
B Optical digital cord (not supplied)
C Coaxial digital cord (supplied)
Notes on HDMI connections

- This receiver may not be able to transfer video or audio signals with certain types of components.
- The multi/stereo area audio signals of a Super Audio CD are not output.
- 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.
- Check the setup of the connected component if the image is poor or the sound does not come out of a component connected via the HDMI cable.
- Video signals input to the HDMI IN jack can only be output from the HDMI OUT jack. The video input signals cannot be output from the VIDEO OUT jacks or MONITOR OUT jacks.
- Refer to the operating instructions of each component connected for details.

Notes on digital audio connection

- 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.
Connecting a DVD player

The following illustration shows how to connect a DVD 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.
Connecting a satellite tuner/set-top box

The following illustration shows how to connect a satellite tuner or 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.

Audio signals
- OUTPUT AUDIO OUT
- OUTPUT DIGITAL OPTICAL

Video signals
- OUTPUT VIDEO
- COMPONENT VIDEO PATCH
- HDMI VIDEO OUT
- VIDEO IN
- AUDIO IN
- AUDIO OUT
- SUBWOOFER
- SURROUND BACK CENTER
- SUBWOOFER
- CENTER: ONLY FOR SS-CNP5000
- SURROUND: ONLY FOR SS-SRP5000
- FRONT: ONLY FOR SS-MSP5000
- SPEAKERS
- DC5V 0.7A MAX
- MONITOR IN
- MONITOR OUT
- Y PB/PR CB CR
- COMPONENT VIDEO
- SAT IN
- BD IN
- DVD IN
- DIGITAL SAT VIDEO IN
- OPTICAL
- COAXIAL

Audio cord (not supplied)
Audio signals
Audio cord (not supplied)
Optical digital cord (not supplied)
Video cord (not supplied)
Component video cord (not supplied)
Connecting components with analog video and audio jacks

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.

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

continued
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 64).
- 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 62).
5: Connecting the antennas

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

*The shape of the connector varies depending on the area code of this receiver.

Notes
• To prevent noise pickup, keep the AM loop antenna away from the receiver and other components.
• Be sure to fully extend the FM wire antenna.
• After connecting the FM wire antenna, keep it as horizontal as possible.
6: Preparing the receiver and the remote

Setting the voltage selector

If your receiver and subwoofer has 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.

Receiver

Subwoofer

Connecting the AC power cord

Connect the AC power cord to a wall outlet.
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.

1. Press \( \text{I/O} \) to turn off the receiver.

2. Hold down \( \text{I/O} \) for 5 seconds. “PUSH” and “ENTER” appears on the display alternately.

3. Press MEMORY/ENTER. 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 64).

Tip
Under normal conditions, the batteries should last for about 3 months. 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 33).

Before you perform Auto Calibration

Before you perform Auto Calibration, install and connect the speakers (page 14, 16).
- 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.

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

1 Press AMP MENU.

2 Press AUTO CAL.

Measurement starts in 5 seconds and the display changes as follows:
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.

<table>
<thead>
<tr>
<th>Measurement for</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment noise level</td>
<td>NOISE.CHK</td>
</tr>
<tr>
<td>Speaker connection</td>
<td>MEASURE and SP DET. appears alternately*</td>
</tr>
<tr>
<td>Speaker level</td>
<td>MEASURE and GAIN appears alternately*</td>
</tr>
<tr>
<td>Speaker distance</td>
<td>MEASURE and DISTANCE appears alternately*</td>
</tr>
</tbody>
</table>

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

4 Measurement ends.
“COMPLETE” appears on the display and the settings are registered.

After you have finished
Disconnect the optimizer microphone from the AUTO CAL MIC jack.

Notes
• Auto Calibration cannot detect the subwoofer. Therefore, the subwoofer settings will be maintained.
• If you have changed the position of the speakers, it is recommended that you perform Auto Calibration again to enjoy the surround sound.
• You cannot select Auto Calibration when the headphones are connected.

Tips
• When Auto Calibration starts:
  – Stand some distance away 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/ 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) → 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 POWER.
3. Press I/STANDBY to turn off the receiver.
4. Rectify the error.
   For details, see “Error codes and remedies” below.
5. Turn on the receiver and perform Auto Calibration again (page 31).

**Error codes and remedies**

<table>
<thead>
<tr>
<th>Error code</th>
<th>Cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERROR 10</td>
<td>The environment is too noisy. Make sure the environment is quiet during Auto Calibration.</td>
</tr>
<tr>
<td>ERROR 11</td>
<td>The speakers are placed too near the optimizer microphone. Place your speakers further away from the optimizer microphone.</td>
</tr>
<tr>
<td>ERROR 12</td>
<td>None of the speakers are detected. Make sure that the optimizer microphone is connected properly and perform Auto Calibration again.</td>
</tr>
<tr>
<td>ERROR 20</td>
<td>The front speakers are not detected or only one front speaker is detected. Check the front speakers connection.</td>
</tr>
<tr>
<td>ERROR 21</td>
<td>Only one surround speaker is detected. Check the surround speakers connection.</td>
</tr>
<tr>
<td>ERROR 23</td>
<td>Surround back speaker is detected but surround speakers are not connected. Be sure to connect the surround speakers.</td>
</tr>
</tbody>
</table>

**Warning codes and solutions**

<table>
<thead>
<tr>
<th>Warning code</th>
<th>Explanation and solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARN. 40</td>
<td>The environment is noisy. Make sure the environment is quiet during Auto Calibration.</td>
</tr>
<tr>
<td>WARN. 50</td>
<td>The center speaker is not connected. Be sure to connect the center speaker.</td>
</tr>
<tr>
<td>WARN. 51</td>
<td>The surround speakers are not connected. Be sure to connect the surround speakers.</td>
</tr>
<tr>
<td>WARN. 52</td>
<td>The surround back speaker is not connected. Be sure to connect the surround back speaker.</td>
</tr>
<tr>
<td>WARN. 60</td>
<td>The front speakers balance are out of range. Reposition your front speakers.</td>
</tr>
<tr>
<td>WARN. 62</td>
<td>The center speaker level is out of range. Reposition your center speaker.</td>
</tr>
</tbody>
</table>

**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) → 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 POWER.
3. Press I/STANDBY 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 31).
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]

```
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.
```

---

### Warning codes and explanations

<table>
<thead>
<tr>
<th>Code</th>
<th>Explanation and solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARN. 63</td>
<td>The surround left speaker level is out of range. Reposition your surround left speaker.</td>
</tr>
<tr>
<td>WARN. 64</td>
<td>The surround right speaker level is out of range. Reposition your surround right speaker.</td>
</tr>
<tr>
<td>WARN. 65</td>
<td>The surround back speaker level is out of range. Reposition your surround back speaker.</td>
</tr>
<tr>
<td>WARN. 70</td>
<td>The front speakers distance are out of range. Reposition your front speakers.</td>
</tr>
<tr>
<td>WARN. 72</td>
<td>The center speaker distance is out of range. Reposition your center speaker.</td>
</tr>
<tr>
<td>WARN. 73</td>
<td>The surround left speaker distance is out of range. Reposition your surround left speaker.</td>
</tr>
<tr>
<td>WARN. 74</td>
<td>The surround right speaker distance is out of range. Reposition your surround right speaker.</td>
</tr>
<tr>
<td>WARN. 75</td>
<td>The surround back speaker distance is out of range. Reposition your surround back speaker.</td>
</tr>
</tbody>
</table>

---

c) For details, refer “Front speaker distance” (page 46).

d) For details, refer “Tip” on page 46.
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 →
Surround left → Subwoofer

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 41).

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 are shown on the display during adjustment.

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.

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.

<table>
<thead>
<tr>
<th>Selected input [Display]</th>
<th>Components that can be played back</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMPORT [DMPORT]</td>
<td>DIGITAL MEDIA PORT adapter connected to DMPORT jack</td>
</tr>
<tr>
<td>VIDEO 1 [VIDEO 1]</td>
<td>DVD recorder, VCR, etc., connected to the VIDEO 1 jack</td>
</tr>
<tr>
<td>VIDEO 2 [VIDEO 2/PORTABLE AV]&quot;</td>
<td>Camcorder, video game, etc., connected to the VIDEO 2 IN/PORTABLE AV IN jack</td>
</tr>
<tr>
<td>BD [BD]</td>
<td>Blu-ray disc player, etc., connected to the BD jack</td>
</tr>
</tbody>
</table>
Playback

<table>
<thead>
<tr>
<th>Selected input [Display]</th>
<th>Components that can be played back</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD [DVD]</td>
<td>DVD player, etc., connected to DVD jack</td>
</tr>
<tr>
<td>SAT [SAT]</td>
<td>Satellite tuner, etc., connected to the SAT jack</td>
</tr>
<tr>
<td>TV [TV]</td>
<td>TV, etc. connected to TV jack</td>
</tr>
<tr>
<td>SA-CD/CD [SA-CD/CD/CD-R]*</td>
<td>Super Audio CD/CD player, etc., connected to the SA-CD/CD/CD-R jack</td>
</tr>
<tr>
<td>TUNER [FM or AM band]</td>
<td>Built-in radio tuner</td>
</tr>
</tbody>
</table>

* “VIDEO 2/PORTABLE AV” and “SA-CD/CD/CD-R” scroll across the display, then “VIDEO 2” and “SA-CD/CD” appear respectively.

To listen to the subwoofers
Be sure to use the controls on the rear panel of the subwoofer for this operation.

1 Press POWER. The POWER indicator on the front panel of the subwoofer lights up.
2 Turn LEVEL to adjust the volume. Set the volume level to suit your preference according to the selected input as slight adjustments may enhance the sound.

Note
If you set the subwoofer volume to maximum, extraneous noise may be heard depending on the source you are playing.

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.
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 51 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 49 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. Playback 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 the sound source corresponds to the multi channel format (the MULTI CHANNEL DECODING lamp on the front panel lights up during playback).
  – 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 51 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 Playback 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 38.

<table>
<thead>
<tr>
<th>Menu [Display]</th>
<th>Parameters [Display]</th>
<th>Settings</th>
<th>Initial setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL [1-LEVEL] (page 41)</td>
<td>Test tone&lt;sup&gt;a)&lt;/sup&gt; [T. TONE]</td>
<td>T. TONE N, T. TONE Y</td>
<td>T. TONE N</td>
</tr>
<tr>
<td></td>
<td>Front speaker balance&lt;sup&gt;a)&lt;/sup&gt; [FRT BAL]</td>
<td>BAL. L +1 to BAL. L +8, BALANCE, BAL. R +1 to BAL. R +8</td>
<td>BALANCE</td>
</tr>
<tr>
<td></td>
<td>Center speaker level [CNT LVL]</td>
<td>CNT –10 dB to CNT +10 dB (1 dB step)</td>
<td>CNT 0 dB</td>
</tr>
<tr>
<td></td>
<td>Surround left speaker level [SL LVL]</td>
<td>SUR L –10 dB to SUR L +10 dB (1 dB step)</td>
<td>SUR L 0 dB</td>
</tr>
<tr>
<td></td>
<td>Surround right speaker level [SR LVL]</td>
<td>SUR R –10 dB to SUR R +10 dB (1 dB step)</td>
<td>SUR R 0 dB</td>
</tr>
<tr>
<td></td>
<td>Surround back speaker level [SB LVL]</td>
<td>SB –10 dB to SB +10 dB (1 dB step)</td>
<td>SB 0 dB</td>
</tr>
<tr>
<td></td>
<td>Subwoofer level&lt;sup&gt;b)&lt;/sup&gt; [SW LVL.]</td>
<td>SW –10 dB to SW +10 dB (1 dB step)</td>
<td>SW 0 dB</td>
</tr>
<tr>
<td></td>
<td>Dynamic range compressor&lt;sup&gt;a)&lt;/sup&gt; [D. RANGE]</td>
<td>COMP. OFF, COMP. STD, COMP. MAX</td>
<td>COMP. OFF</td>
</tr>
<tr>
<td>TONE [2-TONE] (page 42)</td>
<td>Front speaker bass level&lt;sup&gt;c)&lt;/sup&gt;[d) [BASS LVL]</td>
<td>BASS –6 dB to BASS +6 dB (1 dB step)</td>
<td>BASS 0 dB</td>
</tr>
<tr>
<td></td>
<td>Front speaker treble level&lt;sup&gt;c)&lt;/sup&gt;[d) [TRE LVL]</td>
<td>TRE –6 dB to TRE +6 dB (1 dB step)</td>
<td>TRE 0 dB</td>
</tr>
<tr>
<td>SUR [3-SUR] (page 42)</td>
<td>Sound field selection&lt;sup&gt;a)&lt;/sup&gt; [S.F. SELCT]</td>
<td>For details, see “Enjoying Surround Sound” (page 49).</td>
<td>A.F.D. AUTO</td>
</tr>
<tr>
<td></td>
<td>Surround back decoding mode&lt;sup&gt;a)&lt;/sup&gt; [SB DEC]</td>
<td>SB OFF, SB AUTO, SB ON</td>
<td>SB AUTO</td>
</tr>
<tr>
<td></td>
<td>Effect level&lt;sup&gt;a)&lt;/sup&gt; [EFFECT]</td>
<td>EFCT. MIN, EFCT. STD, EFCT. MAX</td>
<td>EFCT. STD</td>
</tr>
<tr>
<td>TUNER [4-TUNER] (page 44)</td>
<td>FM station receiving mode&lt;sup&gt;a)&lt;/sup&gt; [FM MODE]</td>
<td>FM AUTO, FM MONO</td>
<td>FM AUTO</td>
</tr>
<tr>
<td></td>
<td>Naming preset stations&lt;sup&gt;a)&lt;/sup&gt; [NAME IN]</td>
<td>For details, see “Naming preset stations” (page 57).</td>
<td></td>
</tr>
</tbody>
</table>

continued
<table>
<thead>
<tr>
<th>Menu [Display]</th>
<th>Parameters [Display]</th>
<th>Settings</th>
<th>Initial setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIO [5-AUDIO] (page 44)</td>
<td>Digital audio input decoding priority&lt;sup&gt;a&lt;/sup&gt; [DEC. PRI.]</td>
<td>DEC. PCM, DEC. AUTO</td>
<td>DEC. AUTO</td>
</tr>
<tr>
<td></td>
<td>Digital broadcast language selection&lt;sup&gt;a&lt;/sup&gt; [DUAL]</td>
<td>DUAL M/S, DUAL M, DUAL S, DUAL M+S</td>
<td>DUAL M</td>
</tr>
<tr>
<td></td>
<td>Synchronizes audio with video output&lt;sup&gt;b&lt;/sup&gt; [A.V. SYNC.]</td>
<td>A.V.SYNC. N, A.V.SYNC. Y</td>
<td>A.V.SYNC. N</td>
</tr>
<tr>
<td></td>
<td>Naming inputs&lt;sup&gt;a&lt;/sup&gt; [NAME IN]</td>
<td>For details, see “Naming inputs” (page 62).</td>
<td></td>
</tr>
<tr>
<td>VIDEO [6-VIDEO] (page 45)</td>
<td>DIGITAL MEDIA PORT video assign&lt;sup&gt;a&lt;/sup&gt; [DMPORT V.]</td>
<td>–NONE, –VIDEO 1, –VIDEO 2, –DVD, –SAT</td>
<td>–NONE</td>
</tr>
<tr>
<td></td>
<td>Naming inputs&lt;sup&gt;a&lt;/sup&gt; [NAME IN]</td>
<td>For details, see “Naming inputs” (page 62).</td>
<td></td>
</tr>
<tr>
<td>SYSTEM [7-SYSTEM] (page 46)</td>
<td>Front speaker distance&lt;sup&gt;a&lt;/sup&gt; [FRT DIST.]</td>
<td>DIST. 1.0 m to DIST. 7.0 m (0.1 m step)</td>
<td>DIST. 3.0 m</td>
</tr>
<tr>
<td></td>
<td>Center speaker distance&lt;sup&gt;a&lt;/sup&gt; [CNT DIST.]</td>
<td>DIST. 1.0 m to DIST. 7.0 m (0.1 m step)</td>
<td>DIST. 3.0 m</td>
</tr>
<tr>
<td></td>
<td>Surround left speaker distance&lt;sup&gt;a&lt;/sup&gt; [SL DIST.]</td>
<td>DIST. 1.0 m to DIST. 7.0 m (0.1 m step)</td>
<td>DIST. 3.0 m</td>
</tr>
<tr>
<td></td>
<td>Surround right speaker distance&lt;sup&gt;a&lt;/sup&gt; [SR DIST.]</td>
<td>DIST. 1.0 m to DIST. 7.0 m (0.1 m step)</td>
<td>DIST. 3.0 m</td>
</tr>
<tr>
<td></td>
<td>Surround back speaker distance&lt;sup&gt;a&lt;/sup&gt; [SB DIST.]</td>
<td>DIST. 1.0 m to DIST. 7.0 m (0.1 m step)</td>
<td>DIST. 3.0 m</td>
</tr>
<tr>
<td></td>
<td>Subwoofer phase polarity&lt;sup&gt;a,b&lt;/sup&gt; [SW PHASE]</td>
<td>NORMAL, REVERSE</td>
<td>NORMAL</td>
</tr>
<tr>
<td></td>
<td>Surround speaker position&lt;sup&gt;a&lt;/sup&gt; [SUR POS.]</td>
<td>BEHD/Hi, BEHD/Lo, SIDE/Hi, SIDE/Lo</td>
<td>SIDE/Lo</td>
</tr>
<tr>
<td></td>
<td>Brightness of the display&lt;sup&gt;a&lt;/sup&gt; [DIMMER]</td>
<td>0% dim, 40% dim, 70% dim</td>
<td>0% dim</td>
</tr>
<tr>
<td>A. CAL [8-A. CAL] (page 48)</td>
<td>Auto Calibration&lt;sup&gt;a&lt;/sup&gt; [AUTO CAL]</td>
<td>A.CAL NO, A.CAL YES</td>
<td>A.CAL NO</td>
</tr>
</tbody>
</table>

<sup>a</sup>For details, refer to the page in the parentheses.
<sup>b</sup>This parameter is not available when the sound field is set to “2CH ST.”.
<sup>c</sup>This function does not work for signals with a sampling frequency of more than 48 kHz.
<sup>d</sup>If you adjust the tone during DTS 96/24 signal reception, the signal will be output only at 48 kHz.
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 38) and “Overview of the menus” (page 39).

LEVEL menu parameters

■ T. TONE (Test tone)
Let 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 33).

■ 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)

■ SB LVL (Surround back 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.
Adjusting the tone
(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 38) and “Overview of the menus” (page 39).

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 tone 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 38) and “Overview of the menus” (page 39).

SUR menu parameters

■ S.F. SELCT (Sound field selection)

Lets you select the sound field you want. For details, see “Enjoying Surround Sound” (page 49).

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 (SUR BACK DECODING)” (page 43).

■ EFFECT (Effect level)

Lets you adjust the “presence” of the surround effect for sound fields selected with the MOVIE or MUSIC buttons and for “HP THEA” sound field.
• 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

(SUR BACK DECODING)

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 42).

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.

<table>
<thead>
<tr>
<th>Input stream</th>
<th>Output channel</th>
<th>Surround back decoding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dolby Digital 5.1</td>
<td>5.1</td>
<td>—</td>
</tr>
<tr>
<td>Dolby Digital Surround EX(^b)</td>
<td>6.1</td>
<td>Matrix decoder that conforms to Dolby Digital EX</td>
</tr>
<tr>
<td>DTS 5.1</td>
<td>5.1</td>
<td>—</td>
</tr>
<tr>
<td>DTS-ES Matrix 6.1(^c)</td>
<td>6.1</td>
<td>DTS Matrix decoding</td>
</tr>
<tr>
<td>DTS-ES Discrete 6.1(^d)</td>
<td>6.1</td>
<td>DTS Discrete decoding</td>
</tr>
</tbody>
</table>

\(^a\) 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.

Notes
- 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.

■ SB ON
To decode the surround back signal regardless of the 6.1 channel decode flag\(^a\), Dolby Digital EX is applied when the output channel is 6.1.

<table>
<thead>
<tr>
<th>Input stream</th>
<th>Output channel</th>
<th>Surround back decoding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dolby Digital 5.1</td>
<td>6.1</td>
<td>Matrix decoder that conforms to Dolby Digital EX</td>
</tr>
<tr>
<td>Dolby Digital Surround EX(^b)</td>
<td>6.1</td>
<td>Matrix decoder that conforms to Dolby Digital EX</td>
</tr>
<tr>
<td>DTS 5.1</td>
<td>6.1</td>
<td>Matrix decoder that conforms to Dolby Digital EX</td>
</tr>
<tr>
<td>DTS-ES Matrix 6.1(^c)</td>
<td>6.1</td>
<td>Matrix decoder that conforms to Dolby Digital EX</td>
</tr>
<tr>
<td>DTS-ES Discrete 6.1(^d)</td>
<td>6.1</td>
<td>Matrix decoder that conforms to Dolby Digital EX</td>
</tr>
</tbody>
</table>

**Using the surround back decoding mode**

(SUR BACK DECODING)

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 42).

**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.

<table>
<thead>
<tr>
<th>Input stream</th>
<th>Output channel</th>
<th>Surround back decoding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dolby Digital 5.1</td>
<td>5.1</td>
<td>—</td>
</tr>
<tr>
<td>Dolby Digital Surround EX(^b)</td>
<td>6.1</td>
<td>Matrix decoder that conforms to Dolby Digital EX</td>
</tr>
<tr>
<td>DTS 5.1</td>
<td>5.1</td>
<td>—</td>
</tr>
<tr>
<td>DTS-ES Matrix 6.1(^c)</td>
<td>6.1</td>
<td>DTS Matrix decoding</td>
</tr>
<tr>
<td>DTS-ES Discrete 6.1(^d)</td>
<td>6.1</td>
<td>DTS Discrete decoding</td>
</tr>
</tbody>
</table>

\(^a\) 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.

**Notes**
- 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 38) and “Overview of the menus” (page 39).

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 57).

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 38) and “Overview of the menus” (page 39).

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 jacks.
  - DEC. PCM
    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 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 monitor 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 are input.

**NAME IN (Naming inputs)**

Lets you set the name of inputs. For details, see “Naming inputs” (page 62).

---

**Settings for the video**

(VIDEO menu)

You can use the VIDEO menu to assign the composite video input to DMPORT input and to name inputs.

Select “6-VIDEO” in the amplifier menus. For details on adjusting the parameters, see “Navigating through menus” (page 38) and “Overview of the menus” (page 39).

**VIDEO menu parameters**

- **DMPORT V. (DIGITAL MEDIA PORT video assign)**
  Lets you assign the composite video input to DMPORT input so that you can view the image on the TV or projector. For details, see “Watching a connected component through DMPORT connection” (page 60).

- **NAME IN (Naming inputs)**
  Lets you set the name of inputs. For details, see “Naming inputs” (page 62).
Settings for the system
(SYSTEM menu)

You can use the SYSTEM menu to set the 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 38) and “Overview of the menus” (page 39).

SYSTEM menu parameters

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

■ 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.

■ SB DIST. (Surround back speaker distance)
Lets you set the distance from your listening position to the surround back speaker.

Tip
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 conducive 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.

*This parameter is not available when the sound field is set to “2CH ST.”.

---

**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 52).

- **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 playback 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.

DIMMER (Brightness of the display)
Lets you adjust the brightness in 3 steps.

Calibrating the appropriate settings automatically (A. CAL menu)

For details, see “7: Calibrating the appropriate settings automatically (AUTO CALIBRATION)” (page 30).
Enjoying Surround Sound

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.

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

You can also use A.F.D. on the receiver. For details, see “Types of A.F.D. mode” (page 50).
Types of A.F.D. mode

<table>
<thead>
<tr>
<th>A.F.D. mode [Display]</th>
<th>Multi channel audio after decoding</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.F.D. AUTO [A.F.D. AUTO]</td>
<td>(Detecting automatically)</td>
<td>Performs 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.</td>
</tr>
<tr>
<td>PRO LOGIC [DOLBY PL]</td>
<td>4 channel</td>
<td>Performs Dolby Pro Logic decoding. The source recorded in 2 channel format is decoded into 4.1 channels.</td>
</tr>
<tr>
<td>PRO LOGIC II MOVIE [PLII MV]</td>
<td>5 channel</td>
<td>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.</td>
</tr>
<tr>
<td>PRO LOGIC II MUSIC [PLII MS]</td>
<td>5 channel</td>
<td>Performs Dolby Pro Logic II Music mode decoding. This setting is ideal for normal stereo sources such as CDs.</td>
</tr>
<tr>
<td>PRO LOGIC II GAME [PLII GM]</td>
<td>5 channel</td>
<td>Performs Dolby Pro Logic II Game mode decoding. This setting is ideal for game softwares.</td>
</tr>
<tr>
<td>PRO LOGIC IIx MOVIE [PLIIX MV]</td>
<td>6 channel</td>
<td>Performs Dolby Pro Logic IIx Movie mode decoding. This setting expands Dolby Pro Logic II Movie or Dolby Digital 5.1 to discrete 6.1 movie channels.</td>
</tr>
<tr>
<td>PRO LOGIC IIx MUSIC [PLIIX MS]</td>
<td>6 channel</td>
<td>Performs Dolby Pro Logic IIx Music mode decoding. This setting is ideal for normal stereo sources such as CDs.</td>
</tr>
<tr>
<td>PRO LOGIC IIx GAME [PLIIX GM]</td>
<td>6 channel</td>
<td>Performs Dolby Pro Logic IIx Game mode decoding.</td>
</tr>
<tr>
<td>Neo:6 Music [NEO6 MUS]</td>
<td>6 channel</td>
<td>Performs DTS Neo:6 Music mode decoding. This setting is ideal for normal stereo sources such as CDs.</td>
</tr>
<tr>
<td>MULTI STEREO [MULTI ST.]</td>
<td>(Multi Stereo)</td>
<td>Outputs 2 channel left/right signals from all speakers.</td>
</tr>
</tbody>
</table>

Notes
- DTS Neo:6 does not work for DTS 2CH audio, the sound is played as 2 channel.
- 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.

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 52).
### Types of sound field available

<table>
<thead>
<tr>
<th>Sound field for</th>
<th>Sound field [Display]</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movie</td>
<td>CINEMA STUDIO EX A <strong>DCS</strong> [C.ST.EX A]</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>CINEMA STUDIO EX B <strong>DCS</strong> [C.ST.EX B]</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>CINEMA STUDIO EX C <strong>DCS</strong> [C.ST.EX C]</td>
<td>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.</td>
</tr>
<tr>
<td>Music</td>
<td>PORTABLE AUDIO ENHANCER <strong>PORTABLE</strong></td>
<td>Reproduces a clear enhanced sound image from your portable audio device. This mode is ideal for MP3 and other compressed music.</td>
</tr>
<tr>
<td></td>
<td>HALL <strong>HALL</strong></td>
<td>Reproduces the acoustics of a classical concert hall.</td>
</tr>
<tr>
<td></td>
<td>JAZZ CLUB <strong>JAZZ</strong></td>
<td>Reproduces the acoustics of a jazz club.</td>
</tr>
<tr>
<td></td>
<td>LIVE CONCERT <strong>CONCERT</strong></td>
<td>Reproduces the acoustics of a 300-seat live house.</td>
</tr>
<tr>
<td>Headphone*</td>
<td>HEADPHONE 2CH <strong>HP 2CH</strong></td>
<td>This mode is selected automatically if you use headphone when 2 channel mode (page 53)/A.F.D. mode (page 50) is selected. Standard 2 channel stereo sources completely bypass the sound field processing and multi channel surround formats are downmixed to 2 channels.</td>
</tr>
<tr>
<td></td>
<td>HEADPHONE THEATER <strong>DCS</strong> [HP THEA]</td>
<td>This mode is selected automatically if you use headphone when sound field for movie/music is selected. It allows you to experience a theater-like environment while listening through a pair of headphones.</td>
</tr>
</tbody>
</table>

* 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 for signals with a sampling frequency of more than 48 kHz.
- The surround back decoding mode does not function when a sound field for movie or music is selected (page 43).

### 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 65).

### 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 subwoofers (2CH + STEREO SUBWOOFER)**

To enjoy a better sound quality from the front left/right speakers and left/right subwoofers, place your speakers and subwoofers as shown on page 14. In this mode, multi channel surround sources are downmixed to 2 channels. When standard 2 channel stereo sources are input, the receiver’s bass redirection circuitry will be activated. The front bass frequencies will be also output from the stereo subwoofer.

Press 2CH.

“2CH + STEREO SUBWOOFER” will scroll accross the display, then “2CH ST.” appears.

**Note**

When you select a sound field other than “2CH ST.”, you can only hear the monaural bass sound from the subwoofers.

---

**Resetting sound fields to the initial settings**

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

1. Press \( \text{I/} \) to turn off the power.
2. While holding down 2CH, press \( \text{I/} \).
   
   “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 to the receiver (page 27).

Tip
The tuning scale differs depending on the area code as shown in the following table. For details on area codes, see page 3.

<table>
<thead>
<tr>
<th>Area code</th>
<th>FM</th>
<th>AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP, TH1</td>
<td>50 kHz</td>
<td>9 kHz</td>
</tr>
<tr>
<td>MX, AR</td>
<td>50 kHz</td>
<td>10 kHz</td>
</tr>
<tr>
<td>E51</td>
<td>50 kHz</td>
<td>10 kHz*</td>
</tr>
</tbody>
</table>

* The AM tuning scale can be changed (page 73).

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.

Using the controls on the receiver

1 Turn INPUT SELECTOR to select the FM or AM band.
2 Press TUNING MODE repeatedly to select “AUTO T.”.
3 Turn TUNING +/-.

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 “MONO” indicator lights up on the display.
To return to stereo mode, press FM MODE repeatedly until the “MONO” indicator on the display lights off.
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
   Press 1 0 2 5 0
   Example 2: AM 1,350 kHz
   Press 1 3 5 0
   If you have tuned in an AM station, adjust the direction of the AM loop antenna for optimum reception.

4 Press ENTER.
   You can also use MEMORY/ENTER on the receiver.

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.

Presetting 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.

Presetting radio 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 station that you want to preset using Automatic Tuning (page 54) or Direct Tuning (page 55).
   Switch the FM reception mode, if necessary (page 54).
3 Press MEMORY.
You can also use MEMORY/ENTER on
the receiver.
“MEMORY” lights up for a few seconds.
Perform steps 4 and 5 before
“MEMORY” goes out.

4 Press the numeric buttons to
select a preset number.
You can also press PRESET + or
PRESET – repeatedly to select a preset
number.
If “MEMORY” goes out before you
select the preset number, start again from
step 3.

5 Press ENTER.
You can also use MEMORY/ENTER on
the receiver.
The station is stored as the selected preset
number.
If “MEMORY” 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.
Using the controls on the receiver
1 Turn INPUT SELECTOR to select the FM or AM band.
2 Press TUNING MODE repeatedly to select “PRESET T.”.
3 Turn TUNING +/- to select the preset station you want.

6 Press †/‡ repeatedly to select “NAME IN”.
7 Press ⊕ or ◄ to enter the parameter.

The cursor flashes and you can select a character. Follow the procedure given in “To create an index name” below.

To create an index name
1 Use †/‡/◄/▬ to create an index name. 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, you can
  – press †/‡ repeatedly until a blank space appears in the display.
  – press ◄ without selecting a character.

2 Press ⊕.
The entered name is registered.

Naming preset stations
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 Turn INPUT SELECTOR on the receiver to select the input.
   You can also use the input buttons on the remote.

2 Press INPUT MODE repeatedly on the receiver 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 no digital audio signals, analog audio signals are selected.

- **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.

Enjoying the DIGITAL MEDIA PORT (DMPORT)

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

When you connect a DIGITAL MEDIA PORT adapter (not supplied), you can enjoy sound 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.
- 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 from the component connected through the DIGITAL MEDIA PORT adapter to the DMPORT jack on the receiver.

You can also view the images on the TV screen by connecting the video output of the DIGITAL MEDIA PORT adapter to the receiver.

To view the images, proceed to “Watching a connected component through DMPORT connection” on page 60.

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 toward 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.

* The type of connector varies depending on the DIGITAL MEDIA PORT adapter.
For details, refer to the operating instructions supplied with the DIGITAL MEDIA PORT adapter.

A Video cord (not supplied)
Listening to 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.
   For details, refer to the operating instructions supplied with the DIGITAL MEDIA PORT adapter.

Watching a connected component through DMPORT connection

You need to assign composite video input to DMPORT input so that you can view the images on the TV screen.

1 Press AMP MENU.
   “1-LEVEL” appears on the display.

2 Press ↑/↓ repeatedly to select “6-VIDEO”.

3 Press + or − to enter the menu.

4 Press ↑/↓ repeatedly to select “DMPORT V.”.

5 Press + or − to enter the parameter.

6 Press ↑/↓ repeatedly to select the composite video input you want to assign to DMPORT input.
   Initial setting: –NONE
   The assignable composite video input are VIDEO 1, VIDEO 2, DVD and SAT inputs.
   For example, select “–VIDEO 1”.
   When you press DMPORT, the images from the component connected to the VIDEO 1 VIDEO IN jack through DIGITAL MEDIA PORT adapter will appear on the TV screen.

To return to the previous display
Press ←.

Notes
• Depending on the type of DIGITAL MEDIA PORT adapter, you can operate the connected component by using the remote. For details on remote button operation, see page 10.
• Be sure you have made the video connection from DIGITAL MEDIA PORT adapter to the receiver (page 59).
• Be sure you have connected the MONITOR OUT of the receiver to the TV (page 59).
• Depending on the DIGITAL MEDIA PORT adapter, video output may not be possible.

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 51).
Creating a party environment (X-ROUND)

You can create a party environment by using X-ROUND. Be sure to use the buttons on the receiver for this operation.

Press X-ROUND MODE repeatedly to select the X-ROUND mode you want.

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

X-WAVE → X-FADER → X-BAL → X-OFF

X-ROUND mode and effect

<table>
<thead>
<tr>
<th>Select</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-WAVE</td>
<td>Output sound in a circular motion (clockwise direction).</td>
</tr>
<tr>
<td>X-FADER</td>
<td>Output sound back and forth between the front speakers and surround speakers.</td>
</tr>
<tr>
<td>X-BAL</td>
<td>Output sound back and forth between the left speakers and right speakers.</td>
</tr>
<tr>
<td>X-OFF</td>
<td>Return to the sound field selected previously.</td>
</tr>
</tbody>
</table>

Tip

You can get the best X-Round effect from 2 channel sources.

Adjusting the speed of the X-ROUND effect

You can adjust the speed of each X-ROUND effect.

Press X-ROUND SPEED repeatedly to adjust the speed of the selected X-ROUND effect.

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

SPEED 1 → SPEED 2 → ... → SPEED 19 → SPEED 20

Note

When you select X-OFF, you cannot adjust the speed.

Changing the X-ROUND display

Press DISPLAY repeatedly.

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

Index name of the input → Selected input → Selected X-ROUND mode.
**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 “5-AUDIO” or “6-VIDEO”.

4. **Press 🌡️ or 💾 to enter the menu.**

5. **Press ⬆️/⬇️ repeatedly to select “NAME IN”.

6. **Press 🌡️ or 💾 to enter the parameter.**
   The cursor flashes and you can select a character. Follow the procedure given in “To create an index name” (page 57).

**Changing the display**

You can check the sound field, etc., by changing the information on the display. Be sure to use the button on the receiver for this operation.

**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* → Selected input → Sound field currently applied

**FM and AM band**

Preset station name* → Frequency → Sound field currently applied

* Index name appears only when you have assigned one to the input or preset station (page 57, 62). Index name does not appear when only blank spaces have been entered, or it is the same as the input name.

**Note**

Characters 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 the button, the display changes cyclically as follows:

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

When sleep timer is activated, the display dims.

Note
If you press any buttons on the remote or receiver after the display dims, the display brightens up. After a while, the display dims again if no button is pressed.

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.

Recording using the receiver

You can record from an audio/video component using the receiver. For details, 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.

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.

Notes
- Some sources contain copy guards to prevent recording. In this case, you may not be able to record from the source.
- When DMPORT input is selected and you have assigned VIDEO 1 input to DMPORT input, no video signals are output from the VIDEO 1 VIDEO OUT jack.

Using the Remote

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.

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

<table>
<thead>
<tr>
<th>Categories</th>
<th>Press</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCR (command mode VTR 3)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1</td>
</tr>
<tr>
<td>VCR (command mode VTR 2)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2</td>
</tr>
<tr>
<td>DVD player/DVD recorder (command mode DVD1)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>DVD recorder (command mode DVD3)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4</td>
</tr>
<tr>
<td>CD player</td>
<td>5</td>
</tr>
<tr>
<td>Euro Digital Satellite Receiver</td>
<td>6</td>
</tr>
<tr>
<td>DVR (Digital CATV terminal)</td>
<td>7</td>
</tr>
<tr>
<td>DSS (Digital Satellite Receiver)</td>
<td>8</td>
</tr>
<tr>
<td>Blu-ray disc player (command mode BD1)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>9</td>
</tr>
<tr>
<td>Blu-ray disc recorder (command mode BD3)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0/10</td>
</tr>
<tr>
<td>TV</td>
<td>/--</td>
</tr>
<tr>
<td>Not assigned</td>
<td>ENTER/MEMORY</td>
</tr>
</tbody>
</table>

<sup>a</sup>Sony VCRs are operated with a VTR 2 or VTR 3 setting which corresponds to 8 mm and VHS respectively.

<sup>b</sup>Sony DVD recorders are operated with a DVD1 or DVD3 setting. For details, refer to the operating instructions supplied with the DVD recorders.

<sup>c</sup>For details on the BD1 or BD3 setting, refer to operating instructions supplied with the Blu-ray disc player or Blu-ray disc recorder.

To clear all remote button assignments
Press I/C, DMPORT and MASTER VOL – at the same time. 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.

---

**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, grasp the plug itself; never pull the cord.
- The AC power cord 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. Therefore, we recommend using an outdoor antenna.)
- Use caution when placing the receiver or speakers on surfaces that have been specially treated (with wax, oil, polish, etc.) as staining or discoloration of the surface may result.

If color irregularity is observed again...
Place the speakers further away from the TV set.

If howling occurs
Reposition the speakers or turn down the volume on 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.

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

If you encounter color irregularity on a nearby TV screen
The front speakers, center speaker and the subwoofers are magnetically shielded to allow it to be installed near a TV set. However, color irregularities may still be observed on certain types of TV sets. As the surround and surround back speakers are not magnetically shielded, we recommend that you place them slightly further away from a TV set (page 14).

If color irregularity is observed...
Turn off the TV set, then turn it on again after 15 to 30 minutes.
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.
- 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 digital sources (from COAXIAL or OPTICAL input jack).

- Check that the INPUT MODE is set to “AUTO” (page 58).

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.

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.

continued
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 52).
- Adjust the speaker level (page 33).

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 43).

There is no sound from the subwoofer.

- Check that the subwoofer is connected correctly and securely.
- Make sure you have turned on your subwoofer.

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.

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.

The MULTI CHANNEL DECODING lamp does not light up.

- Check that the playback component is connected to a digital jack and the input is selected properly on this receiver.
- Check whether the input source of the software being played back corresponds to the multi channel format.
- Check whether the setup on the playback component is set to multi channel sound.

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.

Recording cannot be carried out.

- Check that the components are connected correctly.
- Select the source component using the input buttons.
**HDMI**

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

There is no sound from the speakers of the receiver when you connect the receiver and the playback component via an HDMI connection.
- Make sure that you have connected the digital audio jacks on the playback component to the receiver. Then, turn off the TV’s volume or activate the TV’s muting function.

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 the each component.

**Tuner**

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

![Outdoor FM antenna diagram](image)

Radio stations cannot be tuned in.
- Check that the antennas are connected securely. Adjust the antennas and connect an external antenna, 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 55).
- Press DISPLAY repeatedly on the receiver so that the frequency appears on the display.

*continued*
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 32) to solve the problem.

PROTECT
Irregular current is output from the
speakers. The receiver will automatically
turn off after a few seconds. Check the
speaker connection 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 29). However, note that all
memorized settings will be reset to their
factory 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

<table>
<thead>
<tr>
<th>To clear</th>
<th>See</th>
</tr>
</thead>
<tbody>
<tr>
<td>All memorized settings</td>
<td>page 29</td>
</tr>
<tr>
<td>Customized sound fields</td>
<td>page 53</td>
</tr>
</tbody>
</table>
## Specifications

### Amplifier section

**Power Output**
Models of area code SP, MX, E51, AR, TH1

Stereo mode output (rated) (6 ohm, 1 kHz, THD 1%)  
- 90 W + 90 W\(^1\)  
- 85 W + 85 W\(^2\)

Surround mode output (reference)\(^3\)
- RMS output
  - FRONT: 185 W per channel\(^1\)  
  - CENTER: 185 W\(^1\)  
  - SURROUND: 185 W per channel\(^1\)  
  - SURROUND BACK: 185 W\(^1\)

\(^1\) Measured under the following conditions:

<table>
<thead>
<tr>
<th>Area code</th>
<th>Power requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>E51, SP</td>
<td>240 V AC, 50 Hz</td>
</tr>
<tr>
<td>MX</td>
<td>127 V AC, 60 Hz</td>
</tr>
<tr>
<td>AR, TH1</td>
<td>230 V AC, 50 Hz</td>
</tr>
</tbody>
</table>

\(^2\) Measured under the following conditions:

<table>
<thead>
<tr>
<th>Area code</th>
<th>Power requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR, TH1</td>
<td>220 V AC, 50 Hz</td>
</tr>
</tbody>
</table>

\(^3\) 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.

### FM tuner section

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

### AM tuner section

Tuning range
Models of area code SP, TH1
With 9-kHz tuning scale: 531 – 1,602 kHz
Models of area code E51
With 10-kHz tuning scale: 530 – 1,610 kHz\(^4\)
With 9-kHz tuning scale: 531 – 1,602 kHz\(^4\)
Models of area code MX, AR
With 10-kHz tuning scale: 530 – 1,610 kHz
Antenna Loop antenna
Intermediate frequency 450 kHz

\(^4\) You can change the AM tuning scale to 9 kHz or 10 kHz. After tuning in any AM station, turn off the receiver. While holding down TUNING MODE, press I/\(\bigcirc\). All preset stations will be erased when you change the tuning scale. To reset the scale to 10 kHz (or 9 kHz), repeat the procedure.

### Inputs

- **Analog**
  - Sensitivity: 800 mV/50 kohm

- **Digital (Coaxial)**
  - Impedance: 75 ohm

### Outputs (Analog)

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

### Tone

- Gain levels ±6 dB, 1 dB step

### Reproduction frequency range:

28 – 20,000 Hz
**Video section**

Inputs/Outputs

Video: 1 Vp-p, 75 ohm

COMPONENT VIDEO:
Y: 1 Vp-p, 75 ohm
Pb/Cb: 0.7 Vp-p, 75 ohm
Pr/Cr: 0.7 Vp-p, 75 ohm
80 MHz HD Pass Through

**General**

Power requirements

<table>
<thead>
<tr>
<th>Area code</th>
<th>Power requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>230 – 240 V AC, 50/60 Hz</td>
</tr>
<tr>
<td>MX</td>
<td>127 V AC, 60 Hz</td>
</tr>
<tr>
<td>E51</td>
<td>120/220/240 V AC, 50/60 Hz</td>
</tr>
<tr>
<td>AR, TH1</td>
<td>220 – 230 V AC, 50/60 Hz</td>
</tr>
</tbody>
</table>

Power output (DIGITAL MEDIA PORT)

DC OUT: 5 V, 0.7 A MAX

Power consumption: 200 W

Power consumption (during standby mode): 0.3 W

Dimensions (width/height/depth) (Approx.)
430 x 157.5 x 318 mm including projecting parts and controls

Mass (Approx.) 7.7 kg

**Speaker section**

**Front speaker (SS-MSP5000)**

Speaker system: 2-way, 3-driver, Bass reflex, Magnetically shielded

Speaker unit
Woofers: 160 mm, cone type x 2
Tweeter: 25 mm, horn type
Rated Impedance: 4 ohm

Dimensions (width/height/depth) (Approx.)
305 x 1,000 x 325 mm (with foot)

Mass (Approx.) 13.5 kg

**Center speaker (SS-CNP5000)**

Speaker system: 2-way, 3-driver, Bass reflex, Magnetically shielded

Speaker unit
Woofers: 100 mm, cone type x 2
Tweeter: 25 mm, horn type
Rated Impedance: 4 ohm

Dimensions (width/height/depth) (Approx.)
515 x 175 x 225 mm (with foot)

Mass (Approx.) 4.8 kg

**Surround/Surround back speaker (SS-SRP5000)**

Speaker system: Full range, Bass reflex

Speaker unit
Woofers: 100 mm, cone type
Rated Impedance: 4 ohm

Dimensions (width/height/depth) (Approx.)
174 x 220 x 166 mm (with foot)

Mass (Approx.) 1.4 kg

**Subwoofer (SA-WP5000)**

Speaker system: Active subwoofer, Bass reflex, Magnetically shielded

Speaker unit
Woofers: 250 mm, cone type
RMS output: 200 W 5) 175 W 6)

Input: LINE IN (input pin jacks)

5) Measured under the following conditions:

<table>
<thead>
<tr>
<th>Area code</th>
<th>Power requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>E51, SP</td>
<td>240 V AC, 50 Hz</td>
</tr>
<tr>
<td>MX</td>
<td>127 V AC, 60 Hz</td>
</tr>
<tr>
<td>AR, TH1</td>
<td>230 V AC, 50 Hz</td>
</tr>
</tbody>
</table>

6) Measured under the following conditions:

<table>
<thead>
<tr>
<th>Area code</th>
<th>Power requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR, TH1</td>
<td>220 V AC, 50 Hz</td>
</tr>
</tbody>
</table>
Power requirements

<table>
<thead>
<tr>
<th>Area code</th>
<th>Power requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>230 – 240 V AC, 50/60 Hz</td>
</tr>
<tr>
<td>MX</td>
<td>127 V AC, 60 Hz</td>
</tr>
<tr>
<td>E51</td>
<td>120/220/240 V AC, 50/60 Hz</td>
</tr>
<tr>
<td>AR, TH1</td>
<td>220 – 230 V AC, 50/60 Hz</td>
</tr>
</tbody>
</table>

Power consumption 80 W

Dimensions (width/height/depth) (Approx.)

335 × 420 × 430 mm
(with foot)

Mass (Approx.) 11 kg

**Supplied speakers**

Front speaker (2)
Center speaker (1)
Surround speaker (2)
Surround back speaker (1)
Subwoofer (2)

**Supplied accessories**

Operating instructions (this manual)
Quick Setup Guide (1)
FM wire antenna (1)
AM loop antenna (1)
Monaural audio cord (2)
Coaxial digital cord (1)
Speaker cords
• Long (3)
• Short (3)
Foot pads
• Speakers (16)
• Subwoofer (8)
Monaural audio cord label
• SW-L (2)
• SW-R (2)
Optimizer microphone (ECM-AC2 or ECM-AC2a) (1)
Remote commander (RM-AAU027) (1)
R6 (size-AA) batteries (2)

For details on the area code of the component you are using, see page 3.

Design and specifications are subject to change without notice.
## Index

### Numerics

<table>
<thead>
<tr>
<th>Numerics</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2CH + STEREO SUBWOOFER</td>
<td>53</td>
</tr>
<tr>
<td>6.1 channel</td>
<td>14</td>
</tr>
</tbody>
</table>

### A

<table>
<thead>
<tr>
<th>A</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO CALIBRATION</td>
<td>30</td>
</tr>
<tr>
<td>AUTO FORMAT DIRECT (A.F.D.)</td>
<td>49</td>
</tr>
</tbody>
</table>

### B

<table>
<thead>
<tr>
<th>B</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blu-ray disc player</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>21</td>
</tr>
<tr>
<td>playback</td>
<td>37</td>
</tr>
<tr>
<td>Blu-ray disc player</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>21</td>
</tr>
<tr>
<td>playback</td>
<td>37</td>
</tr>
</tbody>
</table>

### C

<table>
<thead>
<tr>
<th>C</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD player</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>19</td>
</tr>
<tr>
<td>playback</td>
<td>36</td>
</tr>
<tr>
<td>CD player</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>19</td>
</tr>
<tr>
<td>playback</td>
<td>36</td>
</tr>
</tbody>
</table>

### D

<table>
<thead>
<tr>
<th>D</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Cinema Sound (DCS)</td>
<td>66</td>
</tr>
<tr>
<td>DIGITAL MEDIA PORT</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>59</td>
</tr>
<tr>
<td>input</td>
<td>34</td>
</tr>
<tr>
<td>video assign</td>
<td>60</td>
</tr>
<tr>
<td>Dolby Digital</td>
<td>66</td>
</tr>
<tr>
<td>DTS</td>
<td>66</td>
</tr>
<tr>
<td>DVD player</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>23</td>
</tr>
<tr>
<td>playback</td>
<td>37</td>
</tr>
<tr>
<td>DVD recorder</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>25</td>
</tr>
</tbody>
</table>

### E

<table>
<thead>
<tr>
<th>E</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error messages</td>
<td>72</td>
</tr>
</tbody>
</table>

### H

<table>
<thead>
<tr>
<th>H</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDMI</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>21</td>
</tr>
</tbody>
</table>

### I

<table>
<thead>
<tr>
<th>I</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial setup</td>
<td>29</td>
</tr>
<tr>
<td>INPUT MODE</td>
<td>58</td>
</tr>
</tbody>
</table>

### M

<table>
<thead>
<tr>
<th>M</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu</td>
<td></td>
</tr>
<tr>
<td>A. CAL</td>
<td>48</td>
</tr>
<tr>
<td>AUDIO</td>
<td>44</td>
</tr>
<tr>
<td>LEVEL</td>
<td>41</td>
</tr>
<tr>
<td>SUR</td>
<td>42</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>46</td>
</tr>
<tr>
<td>TONE</td>
<td>42</td>
</tr>
<tr>
<td>TUNER</td>
<td>44</td>
</tr>
<tr>
<td>VIDEO</td>
<td>45</td>
</tr>
<tr>
<td>Muting</td>
<td>35</td>
</tr>
</tbody>
</table>

### N

<table>
<thead>
<tr>
<th>N</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naming</td>
<td>57, 62</td>
</tr>
</tbody>
</table>

### R

<table>
<thead>
<tr>
<th>R</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording</td>
<td></td>
</tr>
<tr>
<td>onto a CD-R</td>
<td>63</td>
</tr>
<tr>
<td>onto a recording media</td>
<td>64</td>
</tr>
<tr>
<td>Recording</td>
<td></td>
</tr>
<tr>
<td>onto a CD-R</td>
<td>63</td>
</tr>
<tr>
<td>onto a recording media</td>
<td>64</td>
</tr>
</tbody>
</table>

### S

<table>
<thead>
<tr>
<th>S</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satellite tuner</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>24</td>
</tr>
<tr>
<td>Selecting</td>
<td></td>
</tr>
<tr>
<td>component</td>
<td>34</td>
</tr>
<tr>
<td>sound field</td>
<td>51</td>
</tr>
<tr>
<td>Set-top box</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>24</td>
</tr>
<tr>
<td>Sleep Timer</td>
<td>63</td>
</tr>
<tr>
<td>Sound fields</td>
<td></td>
</tr>
<tr>
<td>resetting</td>
<td>53</td>
</tr>
<tr>
<td>selecting</td>
<td>51</td>
</tr>
<tr>
<td>Speakers</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>16</td>
</tr>
<tr>
<td>installing</td>
<td>14</td>
</tr>
<tr>
<td>Subwoofer phase polarity</td>
<td>47</td>
</tr>
<tr>
<td>Super Audio CD player</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>19</td>
</tr>
<tr>
<td>playback</td>
<td>36</td>
</tr>
<tr>
<td>SUR BACK DECODING</td>
<td>43</td>
</tr>
</tbody>
</table>

### T

<table>
<thead>
<tr>
<th>T</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEST TONE</td>
<td>33</td>
</tr>
<tr>
<td>Tuner</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>27</td>
</tr>
<tr>
<td>Tuning</td>
<td></td>
</tr>
<tr>
<td>automatically</td>
<td>54</td>
</tr>
<tr>
<td>directly</td>
<td>55</td>
</tr>
<tr>
<td>to preset stations</td>
<td>56</td>
</tr>
<tr>
<td>TV</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>18</td>
</tr>
</tbody>
</table>

### V

<table>
<thead>
<tr>
<th>V</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCR</td>
<td></td>
</tr>
<tr>
<td>connecting</td>
<td>25</td>
</tr>
</tbody>
</table>

### X

<table>
<thead>
<tr>
<th>X</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-ROUND</td>
<td>61</td>
</tr>
</tbody>
</table>