Owner’s Manual

marantz®

AV Pre Tuner
AV7701
SAFETY PRECAUTIONS

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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

CAUTION: HOT SURFACE. DO NOT TOUCH.

The top surface over the internal heat sink may become hot when operating this product continuously.

Do not touch hot areas, especially around the “Hot surface mark” and the top panel.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

CAUTION:

To completely disconnect this product from the mains, disconnect the plug from the wall socket outlet. The mains plug is used to completely interrupt the power supply to the unit and must be within easy access by the user.

FCC INFORMATION (For US customers)

1. COMPLIANCE INFORMATION

Product Name: AV Pre Tuner
Model Number: AV7701

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this product may not cause harmful interference, and (2) this product must accept any interference received, including interference that may cause undesired operation.

Marantz America, LLC.
(a D&M Holdings Company)
100 Corporate Drive,
Mahwah, NJ 07430, U.S.A.
Tel. 201-762-6500

2. IMPORTANT NOTICE: DO NOT MODIFY THIS PRODUCT

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modification not expressly approved by marantz may void your authority, granted by the FCC, to use the product.

3. IMPORTANT

When connecting this product to network hub or router, use only a shielded STP or ScTP LAN cable which is available at retailer.

Follow all installation instructions. Failure to follow instructions could void your authority, granted by the FCC, to use the product.

4. NOTE

This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This product generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the local retailer authorized to distribute this type of product or an experienced radio/TV technician for help.

For Canadian customers:

This Class B digital apparatus complies with Canadian ICES-003.
## NOTES ON USE

### WARNINGS

- Avoid high temperatures.
- Allow for sufficient heat dispersion when installed in a rack.
- Handle the power cord carefully.
  - Hold the plug when unplugging the cord.
- Keep the unit free from moisture, water, and dust.
- Unplug the power cord when not using the unit for long periods of time.
- Do not obstruct the ventilation holes.
- Do not let foreign objects into the unit.
- Do not let insecticides, benzene, and thinner come in contact with the unit.
- Never disassemble or modify the unit in any way.
- Ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, tablecloths or curtains.
- Never disassemble or modify the unit in any way.
- Naked flame sources such as lighted candles should not be placed on the unit.
- Observe and follow local regulations regarding battery disposal.
- Do not expose the unit to dripping or splashing fluids.
- Do not place objects filled with liquids, such as vases, on the unit.
- Do not handle the mains cord with wet hands.
- When the switch is in the OFF (STANDBY) position, the equipment is not completely switched off from MAINS.
- The equipment shall be installed near the power supply so that the power supply is easily accessible.
- Do not keep the battery in a place exposed to direct sunlight or in places with extremely high temperatures, such as near a heater.

### CAUTIONS ON INSTALLATION

- For proper heat dispersal, do not install this unit in a confined space, such as a bookcase or similar enclosure.
  - More than 12 in. (0.3 m) is recommended.
  - Do not place any other equipment on this unit.

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* Wall
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Features

Current feedback amplifier
This unit uses a high-speed current feedback amplifier circuit for its preamplifier so that signals from a Blu-ray Disc player and other equipment that support high-definition audio formats can be amplified with high fidelity. The high-speed current feedback amplifier also reproduces a natural sound space.

Digital video processor up-scales analog video signals (SD resolution) to 4K
This unit is equipped with the 4K video upscaling function, which allows for outputting analogue or SD (standard video quality) video to HDMI at 4K (3840 × 2160 pixels). This enables the unit and a TV connected with a single HDMI cable and any video source to be reproduced precisely with HD level of quality.

Equipped with “Hybrid PLL Jitter Reducer” capable of reducing jitter and phase noise that negatively affect sound quality
“Hybrid PLL Jitter Reducer” provided with this unit improves the sound localization, reproducing a natural sound field.

Equipped with a Multi-Zone Function 3 source, 3 zone output (incl. HDMI output for ZONE2)
This unit is equipped with a multi-zone function, so you can enjoy separate sound sources in three rooms including MAIN ZONE. Furthermore, this unit is equipped with an HDMI ZONE2 OUT connector, so you can play back in ZONE2 a video that is different from the one played back in MAIN ZONE.

7.2 ch XLR Balanced Output
This unit is equipped with balanced output connectors that are insusceptible to external noise.
It is possible to achieve audio transmission of higher quality by connecting this unit to a power amplifier equipped with a balanced input connector.

Supports internet radio, music, and photograph streaming
Supports AirPlay® (page 75)
You can enjoy a wide variety of content, including listening to Internet radio, playing the audio files stored on your PC, and displaying on a TV the photographs stored on your PC.
This unit also supports AirPlay that lets you stream your music library from an iPhone, iPad, iPod touch or iTunes.

Compatible with “marantz Remote App” for performing basic operations of the unit with an iPad, iPhone® or Android smartphone
“marantz Remote App” is application software that allows you to perform basic operations with an iPad, iPhone, Android smartphone or Android tablet such as turning the unit ON/OFF, controlling the volume, and switching the source.
*1 Download “marantz Remote App” from iTunes® App Store. The unit needs to be connected to a LAN and the iPhone/iPod touch needs to be connected to the same network by Wi-Fi (wireless LAN).

“Setup Assistant”, providing easy-to-follow setup instructions
First select the language when prompted. Then simply follow the instructions displayed on the TV screen to set up the speakers, network, etc.
Cautions on handling

• Before turning the power on
Check once again that all connections are correct and that there are no problems with the connection cables.

• Power is supplied to some of the circuitry even when the unit is set to the standby mode. When going on vacation or leaving home for long periods of time, be sure to unplug the power cord from the power outlet.

• About condensation
If there is a major difference in temperature between the inside of the unit and the surroundings, condensation (dew) may form on the operating parts inside the unit, causing the unit not to operate properly.
If this happens, let the unit sit for an hour or two with the power turned off and wait until there is little difference in temperature before using the unit.

• Cautions on using mobile phones
Using a mobile phone near this unit may result in noise. If that occurs, move the mobile phone away from this unit when it is in use.

• Moving the unit
Turn off the power and unplug the power cord from the power outlet. Next, disconnect the connection cables to other system units before moving the unit.

• About care
• Wipe the cabinet and control panel clean with a soft cloth.
• Follow the instructions when using a chemical cleaner.
• Benzene, paint thinner or other organic solvents as well as insecticide may cause material changes and discoloration if brought into contact with the unit, and should therefore not be used.

Easy to use, Graphical User Interface
This unit is equipped with an easy to see “Graphical User Interface” that uses menu displays and levels. The use of level displays increases operability of the this unit.

HDMI connectors enable connection to various digital AV devices (input: 7, output: 3)
The unit is equipped with 7 HDMI input connectors for connecting devices with HDMI connectors, such as a Blu-ray Disc player, game machine, HD digital camcorder, etc.

Supports HDMI (3D, ARC, Deep Color, “x.v.Color”, Auto Lip Sync, 4K) and HDMI control function (page 8)
In addition to HDMI 3D and ARC (Audio Return Channel) functions, this unit supports the video pass-through function, which outputs video to TV without changing the video quality when video signals of 4K (3840 x 2160 pixels) are input, and the GUI overlay function, which overlays the menu screen (GUI) on the 4K video screen.

Simultaneous playback on two HDMI channels (for MAIN ZONE)
This unit is equipped with two HDMI MONITOR outputs. You can connect one output to a projector and the other output to a TV for simultaneous signal outputs.

Direct play for iPod® and iPhone® via USB (page 20)
Music data from an iPod can be played back if you connect the USB cable supplied with the iPod via the iPod/USB port of this unit, and also an iPod can be controlled with the remote control unit for this unit.

Audyssey DSX®
This unit is equipped with Audyssey DSX® processor. By connecting front height speakers to Power Amplifier and playing back through Audyssey DSX®, you can experience a more powerful playback expression in the height audio range. By connecting front wide speakers, you can experience a more powerful playback expression in the wide audio range.

M-XPort (marantz-eXtension Port) (page 24)
This unit is equipped with the M-XPort, a marantz original innovation that provides outstanding expandability. You can connect the Wireless Receiver RX101 (sold separately) to this port.

Remote Power Control
This unit is equipped with a remote power control function. When a marantz Power Amplifier MM8077 or MM7055 or MM7025 is connected to this unit, this unit’s power can be switched ON/OFF together with the MM8077 or MM7055 or MM7025 power supply. Connection to the MM8077 or MM7055 or MM7025 is a ground floating connection that prevents negative influences on sound quality as far as possible.
Basic version

Here, we explain the connections and basic operation methods for this unit.

- Connections  page 5
- Setup  page 29
- Playback (Basic operation)  page 36
- Selecting a listening mode (Sound Mode)  page 77
Important information

Make connections before using this unit.
To create a home theater that can play back higher quality video and audio by fully utilizing the capabilities of this unit and your video devices, connect this unit to each of your video devices with HDMI cables.

 HDMI-compatible device

If your video device does not support HDMI connections, use the following connection.

 HDMI-incompatible device

This unit can change the source that is assigned to the DIGITAL AUDIO IN and COMPONENT VIDEO IN connectors.
You can change the source for connectors listed in Input connector setting within pages that describe connections for devices.
For details on assigning a source to connectors, see “Changing the source assigned to connectors” (page 13). For the setting method, see “Input Assign” (page 122).

NOTE

• The menu screen is only displayed on TV connected to this unit via HDMI. If your TV is connected to this unit via other video output connectors, perform menu operations while seeing the display on this unit.
• Do not plug in the power cord until all connections have been completed. However, when the “Setup Assistant” is running, follow the instructions in the “Setup Assistant” (page 7) screen for making connections. (During “Setup Assistant” operation, the input/output connectors do not conduct current.)
• When running the “Setup Assistant” (page 7), turn off the power supply of connected devices.
• When making connections, also refer to the operating instructions of the other devices being connected.
• Be sure to connect the left and right channels properly (left with left, right with right).
• Do not bundle power cords together with connection cables. Doing so can result in noise.
Converting input video signals for output (Video conversion function)

This unit is equipped with three types of video input connectors (HDMI, Component video and video) and three types of video output connectors (HDMI, Component video and video). This function automatically converts various formats of video signals input to this unit into the formats used to output the video signals from this unit to a monitor.

For example, if you connect this unit to an HDMI-compatible TV with a single HDMI cable, this unit automatically converts input signals other than HDMI video signals to HDMI signals to output from the HDMI connector to the TV. This unit outputs only one type of video signals, so video signals output from this unit to the TV remain unchanged even if you switch to a device that outputs another type of video signals for playback. Therefore, you do not need to switch the video input on the TV. Furthermore, this unit converts the input analog video signals such as video and component video signals to high resolution digital HDMI video signals for output, improving the quality of the video.

If your TV does not support HDMI connections, connect this unit to TV with analog video connectors. This unit can not convert HDMI input signals to analog video signals, so when inputting from an HDMI device, use component video or video input connectors.

Make Settings as Necessary

- If you do not want this unit to convert video signals automatically, use the following setting item to disable this function.
  "Video Conversion" (page 118)

- If you want to change the resolution of video signals output to the TV, use the following setting item to do so.
  "Resolution" (page 118)

NOTE

- The menu screen is only displayed on TV connected to this unit via HDMI. If your TV is connected to this unit via other video output connectors, perform menu operations while seeing the display on this unit.
- HDMI signals are digital. HDMI signals cannot be converted into analog signals.
- When a non-standard video signal from a game machine or some other source is input, the video conversion function might not operate.
- The HDMI ZONE2 function is only compatible with the HDMI 1 – 6 IN connectors. It is not compatible with the HDMI 7 IN connector.
**Flow of video signals for ZONE2**

- **Input (IN)**: HDMI connector
- **Output (ZONE2 MONITOR OUT)**: HDMI connector

- **Video device** (Output): HDMI connector
- **Video connector**: Component video connectors
- **HDMI-compatible TV**: HDMI connector
- **HDMI-incompatible TV**: HDMI connector

**NOTE**
- HDMI signals are digital. HDMI signals cannot be converted into analog signals.
- The HDMI ZONE2 function is only compatible with the HDMI 1 – 6 IN connectors. It is not compatible with the HDMI 7 IN connector.
Connecting an HDMI-compatible device

You can connect up to ten HDMI-compatible devices (7-inputs/3-outputs) to the unit. When a TV is connected to the HDMI ZONE2 OUT connector, you can play back a video or audio from the device connected to the HDMI 1 – 6 IN connector in ZONE2 (page 100).

If the device connected to this unit is equipped with an HDMI connector, it is recommended to use HDMI connections. Connections with an HDMI cable offer the following benefits that can not be achieved with other connection methods.

- **High quality playback by transmitting audio and video via digital signals**
  HDMI connections can transmit high definition video and high quality audio formats adopted by Blu-ray disc players (Dolby Digital Plus, Dolby TrueHD, dts-HD, dts-HD Master Audio).
  HDMI connections also convey information required for playback between devices. The information is used for copyright protection and TV resolution recognition, the ARC function, the HDMI control function, etc.

- **Transmission of audio and video signals with a single HDMI cable**
  Previous connections require multiple audio and video cables, but HDMI connections require only a single HDMI cable to transmit audio and video signals. This allows wires in a home theater system, which tend to be complicated, to be more organized.

- **Mutual control through the HDMI control function (page 92)**
  This unit and the HDMI device connected via HDMI can be linked to perform operations such as power control, volume control, and input source switching.

- **Other video and audio functions, such as 3D video playback, Content Type, the ARC function, are supported (page 12).**

- There is more than one version of HDMI standard. The supported functions and the performance vary according to the version. This unit complies with the HDMI standard, supporting the ARC and 3D playback functions. To enjoy these functions, the HDMI device connected to this unit also needs to use the same version of the standard. For the version of the HDMI standard on the device connected to this unit, see the device’s manual.
- Some TVs do not support audio input via HDMI connections. For details, see your TV’s manual.
Before connecting this unit to TV via HDMI connections

There are 2 methods to connect HDMI-compatible TV to this unit. Use the connection method that suits your TV.

Does the TV to be connected to this unit support the ARC function?

Yes ➞ Connecting this unit to a TV via HDMI connections (page 10)

No ➞ Connecting this unit to a TV via HDMI connections (page 10)

Connecting a TV (page 14)
For audio connections, use a method other than HDMI connections.

About ARC (Audio Return Channel) function
This function plays TV audio on this unit by sending the TV audio signal to this unit via HDMI cable. If a TV without the ARC function is connected via HDMI connections, video signals of the playback device connected to this unit are transmitted to the TV, but this unit cannot play back the audio from the TV. If you want to enjoy surround audio for TV program, a separate audio cable connection is required.

In contrast, if a TV with the ARC function is connected via HDMI connections, no audio cable connection is required. Audio signals from the TV can be input to this unit through the HDMI cable between this unit and the TV. This function allows you to enjoy surround playback on this unit for the TV.

When the ARC function is used, connect a device with a "Standard HDMI cable with Ethernet" or "High Speed HDMI cable with Ethernet" for HDMI.

Refer to the owner’s manual for your TV for details about TV connection and settings.

NOTE
The HDMI ZONE2 OUT connector is not compatible with the ARC function.

Connection to a TV with the ARC function
Audio signals from the TV

Connection to a TV without the ARC function
Audio signals from the TV
Optical cable
Connecting this unit to a TV via HDMI connections

When a TV is connected to the HDMI ZONE2 OUT connector, you can play back a video or audio from the device connected to the HDMI 1 – 6 IN connector in ZONE2 (☞ page 100).

Cables used for connections

<table>
<thead>
<tr>
<th>Audio and video cable (sold separately)</th>
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</thead>
<tbody>
<tr>
<td>HDMI cable</td>
</tr>
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</table>

- Video signals are not output if the input video signals do not match the monitor’s resolution. In this case, switch the Blu-ray Disc/DVD player’s resolution to a resolution with which the monitor is compatible.
- When this unit and monitor are connected with an HDMI cable, if the monitor is not compatible with HDMI audio signal playback, only the video signals are output to the monitor. Make audio connections (☞ page 14 "Connecting a TV").

NOTE
- The audio signal from the HDMI output connector (sampling frequency, number of channels, etc.) may be limited by the HDMI audio specifications of the connected device regarding permissible inputs.
- When connecting a TV that does not support the ARC function, an audio cable connection is required in addition to the HDMI cable. In this case, refer to “Connecting a TV” (☞ page 14) for the connection method.
- For the ARC function, see “About ARC (Audio Return Channel) function” (☞ page 9).

Connecting to a device equipped with a DVI-D connector

The DVI-D (Digital Visual Interface) method is also used for video transmission via digital signals. This is developed mainly for computers, and some AV devices such as projectors are equipped with this interface.

To output HDMI video signals to a DVI-D video input compatible device, use an HDMI/DVI conversion cable, which converts HDMI video signals to DVI signals.

The DVI-D connector can transmit high quality digital signals, but the copy guard and other issues may hinder normal operations for some device combinations.

NOTE
- No sound is output when connected to a device equipped with a DVI-D connector. Make audio connections as described in “Connecting a TV” (☞ page 14).
- Signals cannot be output to DVI-D devices that do not support HDCP.
- Depending on the combination of devices, the video signals may not be output.

Settings required when using a TV that supports the ARC function

When using a TV that supports the ARC function, make the following settings.
- Set “HDMI Control” (☞ page 117) to “On”.
- Set “Control Monitor” (☞ page 117) to match the number of the HDMI MONITOR connector connected to the TV that supports the ARC function.

NOTE
If the TV that supports the ARC function is connected to both HDMI MONITOR 1 and HDMI MONITOR 2 connectors, you cannot use ARC function at the same time.
Connecting this unit to video devices via HDMI connections

Cables used for connections

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>HDMI cable</td>
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</table>

- This interface allows transfer of digital video signals and digital audio signals over a single HDMI cable.

- When this unit is connected to other devices with HDMI cables, connect this unit and TV also with an HDMI cable.
- When connecting a device that supports Deep Color or 4K, please use a “High Speed HDMI cable” or “High Speed HDMI cable with Ethernet”.
- Video signals are not output if the input video signals do not match the monitor’s resolution. In this case, switch the Blu-ray Disc/DVD player’s resolution to a resolution with which the monitor is compatible.
Connecting an HDMI-compatible device

HDMI function

This unit supports the following HDMI functions:

- **About 3D function**
  This unit supports input and output of 3D (3 dimensional) video signals of HDMI.
  To play back 3D video, you need a TV and player that provide support for the HDMI 3D function and a pair of 3D glasses.

  **NOTE**
  - When playing back 3D video, refer to the instructions provided in the manual of your playback device together with this manual.
  - When playing back 3D video content, the menu screen or status display screen can be superimposed over the image. However, the menu screen or status display screen cannot be superimposed over certain 3D video content.
  - If 3D video with no 3D information is input, the menu screen and status display on this unit are displayed over the playback video.
  - If 2D video is converted to 3D video on the television, the menu screen and status display on this unit are not displayed correctly. To view the menu screen and status display on this unit correctly, turn the television setting that converts 2D video to 3D video off.

- **About 4K function**
  This unit supports input and output of 4K (3840 x 2160 pixels) video signals of HDMI.
  When a device supporting 4K is connected, use a cable compatible with “High Speed HDMI cable” or “High Speed HDMI cable with Ethernet”.

- **HDMI control function (page 92)**
  This function allows you to operate external devices from the unit and operate the unit from external devices.

  **NOTE**
  - The HDMI control function may not work depending on the device it is connected to and its settings.
  - You cannot operate a TV or Blu-ray Disc player/DVD player that is not compatible with the HDMI control function.
  - The HDMI ZONE2 function is not compatible with the HDMI control function.

- **About Content Type**
  This function was added with the HDMI standard. It automatically makes settings suitable for the video-output type (content information).

  **NOTE**
  To enable the Content Type, set “Video Mode” to “Auto” (page 118).

- **Deep Color (page 166)**
  When a device supporting Deep Color is connected, use a cable compatible with “High Speed HDMI cable” or “High Speed HDMI cable with Ethernet”.

- **Auto Lip Sync (page 116, 166)**

- **“x.v.Color”, sYCC601 color, Adobe RGB color, Adobe YCC601 color (page 166, 168)**

- **High definition digital audio format**

- **ARC (Audio Return Channel) (page 9)**

Copyright protection system

In order to play back digital video and audio such as BD-Video or DVD-Video via HDMI connection, both this unit and TV or the player need to support the copyright protection system known as HDCP (High-bandwidth Digital Content Protection System). HDCP is copyright protection technology comprised of data encryption and authentication of the connected AV devices. This unit supports HDCP.

- If a device that does not support HDCP is connected, video and audio are not output correctly. Read the owner’s manual of your television or player for more information.

Settings related to HDMI connections

Set as necessary. For details, see the respective reference pages.

- **HDMI Setup (page 116)**
  Make settings for HDMI video/audio output.
  - Auto Lip Sync
  - HDMI Audio Out
  - Video Output
  - HDMI Control
  - Standby Source
  - Control Monitor
  - Power Off Control

  **NOTE**
  The audio signal input from the HDMI input connector can be output as an output signal from the HDMI output connector by setting the HDMI audio output destination to TV. Audio signals input via the Analog/Coaxial/Optical input connectors cannot be output from the HDMI MONITOR output connector.

About 3D function

Deep Color

Auto Lip Sync

“x.v.Color”, sYCC601 color, Adobe RGB color, Adobe YCC601 color

High definition digital audio format

ARC (Audio Return Channel)
Connecting an HDMI-incompatible device

For high quality video and surround playback, it is recommended to use an HDMI cable to connect this unit to TV and other video devices (page 8 “Connecting an HDMI-compatible device”). This section describes connections when your device does not support HDMI connections.

Connection methods for various devices

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<tr>
<td>CD</td>
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Cables used for connections

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Image</th>
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</thead>
<tbody>
<tr>
<td>Video cable (sold separately)</td>
<td><img src="image" alt="Video cable" /></td>
</tr>
<tr>
<td>Component video cable</td>
<td><img src="image" alt="Component video cable" /></td>
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<tr>
<td>Audio cable (sold separately)</td>
<td><img src="image" alt="Audio cable" /></td>
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<tr>
<td>Coaxial digital cable</td>
<td><img src="image" alt="Coaxial digital cable" /></td>
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<tr>
<td>Optical cable</td>
<td><img src="image" alt="Optical cable" /></td>
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<td>Audio cable</td>
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<td>Cable (sold separately)</td>
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</tr>
<tr>
<td>Ethernet cable</td>
<td><img src="image" alt="Ethernet cable" /></td>
</tr>
</tbody>
</table>

Changing the source assigned to connectors

This unit can change the source that is assigned to the HDMI IN, DIGITAL AUDIO IN and COMPONENT VIDEO IN connectors.

Let us take a digital audio connection for Blu-ray Disc players for an example. The rear panel digital audio input connectors do not have the input connector indication for Blu-ray disc players (Blu-ray). You can assign Blu-ray disc players to these connectors to use them for Blu-ray disc players. Select “Blu-ray” when switching functions on this unit to play back the source connected to these connectors.

- How to change the source assigned to connectors (page 122)
Connecting a TV

- This section describes how to connect when your TV does not support HDMI connections.
- For instructions on HDMI connections, see “Connecting an HDMI-compatible device” (page 8).
- If the TV connected to this unit is equipped with an HDMI connector that supports ARC, digital audio signals from TV can be transmitted to this unit (page 9 “About ARC (Audio Return Channel) function”). The ARC function allows you to enjoy on this unit the audio from TV programs and HDMI devices directly connected to TV, without having to make a separate audio connection. For the ARC function, also see your TV’s manual.
- To listen to TV audio through this device, use the optical digital connection.

- For video connections, see “Converting input video signals for output (Video conversion function)” (page 6).

Audio connection

The following methods are available for connecting to this unit. Use either of the methods to make a connection.

- DIGITAL AUDIO OPTICAL connector
- DIGITAL AUDIO COAXIAL connector

When a multichannel audio (digital bit stream audio) is input, this unit decodes the audio to play back surround sound.

* When making this type of connection, you must change the settings on this unit.

Video connection

The following methods are available for connecting to this unit. Use either of the methods to make a connection.

The numbers prefixed with connectors indicate the recommendation order. The smaller the number is, the higher playback quality is achieved.

- COMPONENT VIDEO OUT (MONITOR) connector
  This makes an analog video connection. This connection method separates video signals into 3 signals for transmission based on color components, achieving the best quality video playback among analog video connections, with less signal degradation.

- VIDEO OUT (MONITOR) connector
  This makes an analog video connection.

NOTE

- The menu screen is only displayed on TV connected to this unit via HDMI. If your TV is connected to this unit via other video output connectors, perform menu operations while seeing the display on this unit.
- If you do not connect this unit to your TV via HDMI, do not make HDMI connections for video inputs from other video devices, either. For details see “Converting input video signals for output (Video conversion function)” (page 6).
- When content on iPod, USB memory devices, or the network is being played back with your TV connected to the COMPONENT VIDEO OUT connector, screens output from this unit such as the playback cannot be displayed. To display screens output from this unit, connect your TV to both the COMPONENT VIDEO OUT connector and the VIDEO OUT connector.
Connecting a set-top box (Satellite tuner/cable TV)

This section describes how to connect when your satellite tuner or cable TV does not support HDMI connections. For instructions on HDMI connections, see “Connecting an HDMI-compatible device” (page 8).

Audio connection
The following methods are available for connecting to this unit. **Use either of the methods to make a connection.**

The numbers prefixed with connectors indicate the recommendation order. The smaller the number is, the higher playback quality is achieved.

1. **DIGITAL AUDIO COAXIAL connector**
   - DIGITAL AUDIO OPTICAL connector *
   - When a multichannel audio (digital bit stream audio) is input, this unit decodes the audio to play back surround sound.
   - When making this type of connection, you must change the settings on this unit.

2. **AUDIO IN (CBL/SAT) connector**
   - This makes an analog audio connection. This type of connection converts digital audio to analog audio, so the output audio may be degraded compared to connections 1.

Video connection
The following methods are available for connecting to this unit. **Use either of the methods to make a connection.**

The numbers prefixed with connectors indicate the recommendation order. The smaller the number is, the higher playback quality is achieved.

1. **COMPONENT VIDEO IN (CBL/SAT) connector**
   - This makes an analog video connection. This connection method separates video signals into 3 signals for transmission based on color components, achieving the best quality video playback among analog video connections, with less signal degradation.

2. **VIDEO IN (CBL/SAT) connector**
   - This makes an analog video connection.

Input connector setting
When making the following connection, you must change the input connector settings.

1. **DIGITAL AUDIO OPTICAL connector**
   - When connecting to connectors marked as 1, change “TV AUDIO” to “CBL/SAT”.
   - For how to change, see “Input Assign” (page 122).
Connecting a DVD player

This section describes how to connect when your DVD player does not support HDMI connections. For instructions on HDMI connections, see “Connecting an HDMI-compatible device” (page 8).

Audio connection

The following methods are available for connecting to this unit. Use either of the methods to make a connection.

The numbers prefixed with connectors indicate the recommendation order. The smaller the number is, the higher playback quality is achieved.

1 DIGITAL AUDIO COAXIAL connector
2 DIGITAL AUDIO OPTICAL connector *

When making this type of connection, you must change the settings on this unit.

3 AUDIO IN (DVD) connector

When a multichannel audio (digital bit stream audio) is input, this unit decodes the audio to play back surround sound.

* When making this type of connection, you must change the settings on this unit.

Video connection

The following methods are available for connecting to this unit. Use either of the methods to make a connection.

The numbers prefixed with connectors indicate the recommendation order. The smaller the number is, the higher playback quality is achieved.

1 COMPONENT VIDEO IN (DVD) connector
2 VIDEO IN (DVD) connector

When making the following connection, you must change the input connector settings.

1 DIGITAL AUDIO OPTICAL connector

When connecting to connectors marked as 1, change “TV AUDIO” to “DVD”.

For how to change, see “Input Assign” (page 122).

Input connector setting

When making the following connection, you must change the input connector settings.

1 DIGITAL AUDIO OPTICAL connector

When connecting to connectors marked as 1, change “TV AUDIO” to “DVD”.

For how to change, see “Input Assign” (page 122).

Diagram showing connections and input settings.
Connecting a Blu-ray Disc player

This section describes how to connect when your Blu-ray disc player does not support HDMI connections. For instructions on HDMI connections, see “Connecting an HDMI-compatible device” (page 8).

Audio connection

The following methods are available for connecting to this unit. Use either of the methods to make a connection.

The numbers prefixed with connectors indicate the recommendation order. The smaller the number is, the higher playback quality is achieved.

1 DIGITAL AUDIO COAXIAL connector

When a multichannel audio (digital bit stream audio) is input, this unit decodes the audio to play back surround sound. However, digital bit stream audio signals for HD audios from Blu-ray disc players (such as Dolby Digital Plus and dts-HD) can not be transmitted.

When making this type of connection, you must change the settings on this unit.

(\textit{Input connector setting})

2 AUDIO IN (Blu-ray) connector

This makes an analog audio connection. This type of connection converts digital audio to analog audio, so the output audio may be degraded compared to connections 1.

Video connection

The following methods are available for connecting to this unit.

1 COMPONENT VIDEO IN (Blu-ray) connector

This makes an analog video connection. This connection method separates video signals into 3 signals for transmission based on color components, achieving the best quality video playback among analog video connections, with less signal degradation.

Input connector setting

When making the following connection, you must change the input connector settings.

1 DIGITAL AUDIO COAXIAL connector

When connecting to connectors marked as 1, change “CBL/SAT” to “Blu-ray”.

DIGITAL AUDIO OPTICAL connector

When connecting to connectors marked as 1, change “TV AUDIO” to “Blu-ray”.

For how to change, see “Input Assign” (page 122).

When you want to play back HD Audio (Dolby TrueHD, DTS-HD, Dolby Digital Plus, DTS Express) and Multi-channel PCM with this unit, use an HDMI connection (page 8 “Connecting an HDMI-compatible device”).
Connecting an HDMI-incompatible device

This section describes how to connect when your digital camcorder does not support HDMI connections. For instructions on HDMI connections, see “Connecting an HDMI-compatible device” (page 8).

Audio connection

The following methods are available for connecting to this unit. Use either of the methods to make a connection.

1 DIGITAL AUDIO COAXIAL connector
   DIGITAL AUDIO OPTICAL connector
   When a multichannel audio (digital bit stream audio) is input, this unit decodes the audio to play back surround sound.
   When making this type of connection, you must change the settings on this unit. (Input connector setting)

2 AUDIO IN (AUX1) connector
   This makes an analog audio connection. This type of connection converts digital audio to analog audio, so the output audio may be degraded compared to connections 1.

Video connection

The following methods are available for connecting to this unit. Use either of the methods to make a connection.

1 COMPONENT VIDEO IN connector
   This makes an analog video connection. This connection method separates video signals into 3 signals for transmission based on color components, achieving the best quality video playback among analog video connections, with less signal degradation.
   When making this type of connection, you must change the settings on this unit. (Input connector setting)

2 VIDEO IN (AUX1) connector
   This makes an analog video connection.

When making the following connection, you must change the input connector settings.

1 DIGITAL AUDIO COAXIAL connector
   When connecting to connectors marked as 1, change “CBL/SAT” to “AUX2”.

1 DIGITAL AUDIO OPTICAL connector
   When connecting to connectors marked as 1, change “TV AUDIO” to “AUX2”.

1 COMPONENT VIDEO IN connector
   When connecting to connectors marked as 1, change “CBL/SAT” to “AUX2”.

For how to change, see “Input Assign” (page 122).

NOTE

You can enjoy games by connecting a game machine via the AUX1 input connector. In this case, select the input source to “AUX1”.

When a non-standard video signal from a game machine or some other source is input, the video conversion function (page 8) might not operate. In this case, use the monitor output of the same connector as the input.
### Connecting a media player

This section describes how to connect when your media player does not support HDMI connections. For instructions on HDMI connections, see “Connecting an HDMI-compatible device” (page 8).

#### Audio connection

The following methods are available for connecting to this unit. Use either of the methods to make a connection.

The numbers prefixed with connectors indicate the recommendation order. The smaller the number is, the higher playback quality is achieved.

1. **DIGITAL AUDIO COAXIAL connector**
   - **DIGITAL AUDIO OPTICAL connector**
     - When a multichannel audio (digital bit stream audio) is input, this unit decodes the audio to play back surround sound.
     - When making this type of connection, you must change the settings on this unit. (Input connector setting)

2. **AUDIO IN (MEDIA PLAYER) connector**
   - This makes an analog audio connection. This type of connection converts digital audio to analog audio, so the output audio may be degraded compared to connections 1.

#### Video connection

The following methods are available for connecting to this unit. Use either of the methods to make a connection.

The numbers prefixed with connectors indicate the recommendation order. The smaller the number is, the higher playback quality is achieved.

1. **COMPONENT VIDEO IN connector**
   - This makes an analog video connection. This connection method separates video signals into 3 signals for transmission based on color components, achieving the best quality video playback among analog video connections, with less signal degradation.
   - When making this type of connection, you must change the settings on this unit. (Input connector setting)

2. **VIDEO IN/OUT (MEDIA PLAYER) connector**
   - This makes an analog video connection.

### Input connector setting

When making the following connection, you must change the input connector settings.

1. **DIGITAL AUDIO COAXIAL connector**
   - When connecting to connectors marked as 1, change “CBL/SAT” to “MEDIA PLAYER”.

2. **DIGITAL AUDIO OPTICAL connector**
   - When connecting to connectors marked as 1, change “TV AUDIO” to “MEDIA PLAYER”.

3. **COMPONENT VIDEO IN connector**
   - When connecting to connectors marked as 1, change “CBL/SAT” to “MEDIA PLAYER”.

For how to change, see “Input Assign” (page 122).

### NOTE

To record video signals through this unit, use the video cable for connection between this unit and the player.
Connecting an iPod or USB memory device to the iPod/USB port

- You can enjoy music stored on an iPod or USB memory device.
- For operating instructions see "Playing an iPod" ([page 39]) or "Playing a USB memory device" ([page 42]).

Cables used for connections

To connect an iPod to this unit, use the USB cable supplied with the iPod.

marantz does not guarantee that all USB memory devices will operate or receive power. When using a portable USB connection type HDD of the kind to which an AC adapter can be connected to supply power, use the AC adapter.

**NOTE**
- USB memory devices will not work via a USB hub.
- It is not possible to use this unit by connecting the unit’s iPod/USB port to a PC via a USB cable.
- Do not use an extension cable when connecting a USB memory device. This may cause radio interference with other devices.
- When connecting an iPhone to this unit, keep the iPhone at least 20 cm away from this unit. If the iPhone is kept closer to this unit and a telephone call is received by the iPhone, noise may be output from this device.
- If the iPod is connected using an iPod cable (commercially available) that is longer than 6.6 ft (2 m), sound may not be played correctly. In this case, use a genuine iPod cable, or a cable that is shorter than 3.3 ft (1 m).

Supported iPod models

- **iPod classic**
  - iPod classic 80GB
  - iPod classic 160GB (2007)
  - iPod classic 160GB (2009)

- **iPod nano**
  - iPod nano 3rd generation (video) 4GB 8GB
  - iPod nano 4th generation (video) 8GB 16GB
  - iPod nano 5th generation (video camera) 8GB 16GB
  - iPod nano 6th generation 8GB 16GB

- **iPod touch**
  - iPod touch 1st generation 8GB 16GB 32GB
  - iPod touch 2nd generation 8GB 16GB 32GB
  - iPod touch 3rd generation 8GB 16GB 32GB 64GB
  - iPod touch 4th generation 8GB 32GB 64GB

- **iPhone**
  - iPhone 4GB 8GB 16GB
  - iPhone 3G 8GB 16GB
  - iPhone 3GS 8GB 16GB 32GB
  - iPhone 4 8GB 16GB 32GB
  - iPhone 4S 16GB 32GB 64GB

(As of Aug 2012)
Connecting an HDMI-incompatible device

Connecting a CD player

You can enjoy CD sound.

Audio connection
The following methods are available for connecting to this unit. Use either of the methods to make a connection.
The numbers prefixed with connectors indicate the recommendation order. The smaller the number is, the higher playback quality is achieved.

1 DIGITAL AUDIO OPTICAL connector
   DIGITAL AUDIO COAXIAL connector *
   When a multichannel audio (digital bit stream audio) is input, this unit decodes the audio to play back surround sound.
   * When making this type of connection, you must change the settings on this unit.
   ([Input connector setting])

2 AUDIO IN (CD) connector
   This makes an analog audio connection. This type of connection converts digital audio to analog audio, so the output audio may be degraded compared to connections [1].

[Input connector setting]
When making the following connection, you must change the input connector settings.

1 DIGITAL AUDIO COAXIAL connector
   When connecting to connectors marked as [1], change “CBL/SAT” to “CD”.
   For how to change, see “Input Assign” ([page 122]).

When you want to play back HD Audio (Dolby TrueHD, DTS-HD, Dolby Digital Plus, DTS Express), DSD and Multi-channel PCM with this unit, use an HDMI connection ([page 8 “Connecting an HDMI-compatible device”]).
Connecting a record player

You can enjoy playing records.

Audio connection
The following methods are available for connecting to this unit.

1. AUDIO IN (PHONO) connector
This makes an analog audio connection.

- This unit is compatible with record players with an MM cartridge. When you connect to a record player with an MC cartridge, use a commercially available MC head amp or a step-up transformer.
- If you set this unit’s input source to “PHONO” and increase the volume without connecting the record player, there may be a “booming” noise from the speakers.

NOTE
The SIGNAL GND terminal of this unit is not a safety ground connection. Connect it to reduce noise when noise is excessive. Note that depending on the record player, connecting the ground line may have the reverse effect of increasing noise. In this case, it is not necessary to connect the ground line.
Connecting an HD Radio receiver

- By connecting a HD Radio antenna to this unit, you can receive HD Radio programs.
- HD Radio broadcasting currently is available in the United States and select other countries.
- After connecting the antenna and receiving a broadcast signal (page 46, "Listening to HD Radio stations"), fix the antenna with tape in a position where the noise level becomes minimal.

#### AM loop antenna assembly

1. Put the stand section through the bottom of the loop antenna from the rear and bend it forward.
2. Insert the projecting part into the square hole in the stand.

### Using the AM loop antenna

#### Suspending on a wall
Suspend directly on a wall without assembling.

#### Standing alone
Use the procedure shown above to assemble.

### NOTE
- Do not connect two FM antennas simultaneously.
- Even if an external AM antenna is used, do not disconnect the AM loop antenna.
- Make sure the AM loop antenna lead terminals do not touch metal parts of the panel.
- If the signal has noise interference, connect the ground terminal (GND) to reduce noise.
- If you are unable to receive a good broadcast signal, we recommend installing an outdoor antenna. For details, inquire at the retail store where you purchased the unit.
Connecting a wireless receiver (RX101)

- You can connect a wireless receiver (RX101, sold separately) to play back music on your Bluetooth device with this unit.
- To do this, switch the input source to “M-XPort” ([page 36 “Selecting the input source”]).
- This unit supports the A2DP standard of the Bluetooth profile.
- See also the manuals for your wireless receiver and Bluetooth device.

- When connecting your Bluetooth device to the wireless receiver for the first time, pairing is necessary. Once pairing is completed, the communication between your Bluetooth device and the wireless receiver can be established just by connecting them. Pairing is necessary for each Bluetooth device.
- You can also use the wireless receiver as an IR receiver. In this case, disable the remote control signal receiving function ([page 98 “Remote lock function”).
Connecting a device with a multi-channel output connector

- You can connect this unit to an external device fitted with multi-channel sound audio output connectors to enjoy music and video.
- To play analog signals input from 7.1CH IN connectors, set "Input Mode" (page 124) to "7.1CH IN".
- The video signal can be connected in the same way as a Blu-ray Disc player / DVD player (page 16 “Connecting a DVD player”, page 17 “Connecting a Blu-ray Disc player”).
**Power amp**

- Connect a power amp (sold separately) to the PRE OUT terminal of this unit.
- This unit has an UNBALANCED PRE OUT terminal and BALANCED PRE OUT terminal. Connect to the correct terminal for your power amp.

**Example of connections to marantz MM7055 and MM7025 power amp**

**Connecting the unbalanced PRE OUT terminal**

1. Connect the speakers to the power amp.
2. For details on speaker connections, see the User Guide for the power amp.
3. This section shows how to make a 7.1 ch connection by using a surround speaker. For how to make other speaker connections, see page 86.

**Connecting the balanced PRE OUT terminal**

The PIN arrangement in this device uses the European method. In the USA method, \( \text{HOT} \) is COLD, and \( \text{COLD} \) is HOT. When connecting a device that utilizes the USA type of PIN arrangement, replace the \( \text{HOT} \) and \( \text{COLD} \) plugs on one side of the balanced cable.

**NOTE**
Do not short the \( \text{HOT} \) and GND or \( \text{COLD} \) and GND for use.
Connecting to a home network (LAN)

You can connect this unit to your home network (LAN) to perform various types of playbacks and operations as follows. Make network connections for this unit by carefully reading information on this page.

- Playback of network audio such as the Internet radio and music servers
- Playback of music from online services
- AirPlay
- Operations on this unit via the network

In addition, when an updated firmware becomes available for improving this unit, the update information is delivered from us to this unit over the network. You can then download the latest firmware.

For more information, on the menu, select “Update” (page 138).

Network settings are necessary. See “Network” on the menu (page 130) for more information on network setting.

Required system

- Modem
  - Device that connects to the broadband circuit and conducts communications on the Internet. A type that is integrated with a router is also available.
  - Device that connects to the broadband circuit and conducts communications on the Internet. A type that is integrated with a router is also available.

- Router
  - When using this unit, we recommend you use a router equipped with the following functions:
    - Built-in DHCP server
    - Built-in 100BASE-TX switch
    - When connecting multiple devices, we recommend a switching hub with a speed of 100 Mbps or greater.

- Ethernet cable
  - Use only a shielded STP or ScTP LAN cable which is available at retailer.
  - The normal shielded-type Ethernet cable is recommended. If a flat-type cable or unshielded-type cable is used, other devices could be affected by noise.

For connections to the Internet, contact an ISP (Internet Service Provider) or a computer shop.
Connecting the power cord

After completing all the connections, insert the power plug into the power outlet.

To household power outlet
(AC 120 V, 60 Hz)

Power cord (supplied)

NOTE

- Do not plug in the power cord until all connections have been completed.
- Do not bundle power cords together with connection cables. Doing so can result in humming or noise.
The acoustic characteristics of the connected speakers and listening room are measured and the optimum settings are made automatically. This is called “Audyssey® Setup”. To perform measurement, place the setup microphone in multiple locations all around the listening area. For best results, we recommend you measure in six or more positions, as shown in the illustration (up to eight positions).

- When performing Audyssey® Setup, Audyssey MultEQ® XT/Audyssey Dynamic EQ®/Audyssey Dynamic Volume® functions become active (page 112).
- To set up the speakers manually, use “Speakers” (page 126) on the menu.

**NOTE**
- Make the room as quiet as possible. Background noise can disrupt the room measurements. Close windows and turn off the power on electronic devices (TVs, radios, air conditioners, fluorescent lights, etc.). The measurements could be affected by the sounds emitted by such devices.
- During the measurement process, place cell phones outside the listening room. Cell phone signals could disrupt the measurements.
- Do not unplug the setup microphone from the main unit until Audyssey® Setup is completed.
- Do not stand between the speakers and setup microphone or allow obstacles in the path while the measurements are being made. This will cause inaccurate readings.
- During the measurement process, loud test sounds may be played, but this is part of normal operation. If there is background noise in the room, these test signals will increase in volume.
- Operating VOLUME ↑↓ on the remote control unit or VOLUME on the main unit during the measurements will cancel the measurements.
- Measurement cannot be performed when headphones are connected. Unplug the headphones before performing Audyssey® Setup.

**About setup microphone placement**
- Measurements are performed by placing the setup microphone successively at multiple positions throughout the entire listening area, as shown in Example 1. For best results, we recommend you measure in six or more positions, as shown in the illustration (up to eight positions).
- Even if the listening environment is small as shown in Example 2, measuring at multiple points throughout the listening environment results in more effective correction.

**About the main listening position (**M**)**

The main listening position is the position where listeners would normally sit or where one would normally sit alone within the listening environment. Before starting Audyssey® Setup, place the setup microphone in the main listening position. Audyssey MultEQ® XT uses the measurements from this position to calculate speaker distance, level, polarity, and the optimum crossover value for the subwoofer.
1 Prepare the included setup microphone

Mount the setup microphone on a tripod or stand and place it in the main listening position. When placing the setup microphone, adjust the height of the sound receptor to the level of the listener’s ear.

If you do not have a tripod or stand, set up the microphone on, for example, a seat without a back.

**Note**
- Do not hold the setup microphone in your hand during measurements.
- Avoid placing the setup microphone close to a seat back or wall as sound reflections may give inaccurate results.

2 Set up the subwoofer

If using a subwoofer capable of the following adjustments, set up the subwoofer as shown below.

For details, see your subwoofer’s manual.

- **When using a subwoofer with a direct mode**
  - Set the direct mode to “On” and disable the volume adjustment and crossover frequency setting.

- **When using a subwoofer without a direct mode**
  - Make the following settings:
    - **Volume**: “12 o’clock position”
    - **Crossover frequency**: “Maximum/Highest Frequency”
    - **Low pass filter**: “Off”
    - **Standby mode**: “Off”

**Note**
When using 2 subwoofers at the same time, before starting Audyssey® Setup, adjust the volume of the subwoofers by using “Subwoofer Level” (page 111) from the menu. You cannot set the volume for individual subwoofers.

3 Set up the remote control unit

- **Set up the zone mode**
  - Press ZONE SELECT to switch “MAIN”.
  - Press ZONE SELECT

**Note**
When using a remote control with preset codes registered (page 143), press AVR to set the remote control to the AVR-operation mode before operation.

4 Connect the setup microphone to the SETUP MIC jack of this unit.

When the setup microphone is connected, the following screen is displayed.

- If unused channels are set with “Channel Select”, measuring time can be shortened. For setting, perform steps 3 to 9 of “Set up “Channel Select”” (page 88).
5 Select “Start” and then press ENTER.

6 Select “Next” and then press ENTER. The subwoofer volume setting screen is displayed.

7 Select “Begin Test” and then press ENTER. When measuring begins, a test tone is output from each speaker.
   • Measurement requires several minutes.

8 The detected speakers are displayed.
   • The illustration below shows an example of when the front speakers, center speaker, subwoofer, surround speakers and surround back speakers have been detected.

   ![Speaker Detection Screen]

9 Select “Next” and then press ENTER.

**NOTE**

If a connected speaker is not displayed, the speaker may not be connected correctly. Check the speaker connection.

**NOTE**

If “Caution!” is displayed on TV screen:
Go to “Error messages” (page 34). Check any related items, and perform the necessary procedures.
If the problem is resolved, return and restart “Audyssey® Setup”.

**Going back to the previous screen**
Select “Back” and then press ENTER.

**When measuring has stopped**
1. Press BACK to display the popup screen.
2. Press \( \triangledown \) to select “Yes”, and then press ENTER.

**Setting up the speakers again**
Repeat the operation from step 4.
Measurement (2nd – 8th)

- In this step, you will perform measurements at multiple positions (two to eight positions) other than the main listening position.
- Just one position can be measured but measuring multiple positions increases the accuracy of the correction of acoustic distortion within the listening area.

10 Move the setup microphone to position 2, select “Continue”, and then press ENTER.
The measurement of the second position starts. Measurements can be made in up to eight positions.

11 Repeat step 10, measuring positions 3 to 8.
When measurement of position 8 is completed, a “Measurements finished.” message is displayed.

12 Select “Calculation” and then press ENTER.
Measuring results are analyzed, and the frequency response of each speaker in the listening room is determined.

• Analysis takes several minutes to complete. The more speakers and measurement positions that there are, the more time it takes to perform the analysis.

• To skip measuring the third and subsequent listening position, use $\Delta$ to select “Calculation” and press ENTER to proceed to step 13.
• To measure the second position again, use $\Delta$ to select “Repeat Last Test” and press ENTER.
13 Use ▲▼ to select the item you want to check, and then press ENTER.

- Subwoofers may measure a greater reported distance than the actual distance due to added electrical delay common in subwoofers.
- If you want to check another item, press BACK.

NOTE
- If the result differs from the actual connection status, or if “Caution!” is displayed, see “Error messages” (page 34). Then carry out Audyssey® Setup again.
- If you change speaker positions or orientation, perform Audyssey® Setup again to find the optimal equalizer settings.

14 Select “Store” and then press ENTER.

- Save the measurement results.

- Saving the results requires about 10 seconds.
- During saving of measurement results, “Now storing...Please wait.” is displayed. When saving is completed, “Storing complete. Audyssey® Setup is now finished. Please unplug microphone.” is displayed.

NOTE
- During saving of measurement results, be sure not to turn off the power.

15 Unplug the setup microphone from the unit’s SETUP MIC jack.

16 Set Audyssey Dynamic Volume®.

- This feature adjusts the output volume to the optimal level while constantly monitoring the level of the audio input to the unit. Optimal volume control is performed automatically without any loss in the dynamism and clarity of the sound when, for example, the volume suddenly increases for commercials shown during television programs.

- When turning Dynamic Volume on
  - Press ▲ to select “Yes”, and then press ENTER. The unit automatically enters “Medium” (page 113) mode.

- When turning Dynamic Volume off
  - Press ▼ to select “No”, and then press ENTER.

NOTE
After performing Audyssey® Setup, do not change the speaker connections or subwoofer volume. In event of a change, perform Audyssey® Setup again.
### Error messages

**NOTE**
- An error message is displayed if Audyssey® Setup could not be completed due to speaker placement, the measurement environment, etc. If an error message is displayed, check the relevant items and perform the necessary measures. Then perform Audyssey® Setup again.
- If the result still differs from the actual connection status after c or the error message still appears, it is possible that the speakers are not connected properly. Turn this unit off, check the speaker connections and repeat the measurement process from the beginning.
- Be sure to turn off the power before checking speaker connections.

<table>
<thead>
<tr>
<th>Examples</th>
<th>Error details</th>
<th>Measures</th>
</tr>
</thead>
</table>
| ![Audyssey Setup](screen1.png) | • The connected setup microphone is broken, or a device other than the supplied setup microphone is connected.  
• Not all speakers could be detected. | • Connect the included setup microphone to the SETUP MIC jack of this unit.  
• Check the speaker connections. |
| ![Audyssey Setup](screen2.png) | • There is too much noise in the room for accurate measurements to be made.  
• Speaker or subwoofer sound is too low for accurate measurements to be made. | • Either turn off any device generating noise or move it away.  
• Perform again when the surroundings are quieter.  
• Check the speaker installation and the direction in which the speakers are facing.  
• Adjust the subwoofer’s volume. |
| ![Audyssey Setup](screen3.png) | • The displayed speaker could not be detected.  
(The screen on the left indicates that the front right speaker cannot be detected.) | • Check the connections of the displayed speaker. |
| ![Audyssey Setup](screen4.png) | • The displayed speaker is connected with the polarity reversed.  
(The screen on the left indicates that the polarity phases of the front right speakers are reversed.) | • Check the polarity of the displayed speaker.  
• For some speakers, this error message may be displayed even if the speaker is properly connected. If you are sure the connection is correct, use < | > to select “Skip Error”, then press ENTER. |
Parameter Check

This function enables you to check the measurement results and equalizer characteristics after Audyssey® Setup.

1 Use \( \Delta \) \( \nabla \) to select “Parameter Check” and then press ENTER.

   ![Audyssey Setup]
   ![Parameter Check]

2 Use \( \Delta \) \( \nabla \) to select the item you want to check, then press ENTER.

   - **Speaker Config.** Check the speaker configuration.
   - **Distances** Check the speaker distance.
   - **Levels** Check the speaker channel level.
   - **Crossovers** Check the speaker crossover frequency.
   - **Equalizers** Check the equalizer.

   If “Equalizers” is selected, press \( \Delta \) \( \nabla \) to select equalizing curve (“Audyssey” or “Audyssey Flat”) to be checked.

   Use \( \Delta \) \( \nabla \) to switch the display between the different speakers.

3 Press \( \downarrow \) or BACK.

   The confirmation screen reappears. Repeat step 2.

Retrieving Audyssey® Setup settings

If you set “Restore...” to “Yes”, you can return to Audyssey® Setup measurement result (value calculated at the start by MultEQ® XT) even when you have changed each setting manually.

Making the network settings (Network)

This unit can be connected to a home network (LAN) to listen to Internet radio or play back music files and still image (JPEG) files stored on a computer.

1 Connect the Ethernet cable (page 27 “Connecting to a home network (LAN)”).

2 Turn on this unit (page 36).

   This unit performs automatic network setup due to the DHCP function.

   When connecting to a network that has no DHCP function, perform the setting in “Settings” (page 132).
Playback (Basic operation)

Setup (page 29)
- Turning the power on (page 36)
- Selecting the input source (page 36)
- Adjusting the master volume (page 37)
- Turning off the sound temporarily (page 37)
- Playing a Blu-ray Disc player/DVD player (page 37)
- Playing Super Audio CD (page 37)
- Playing a CD player (page 38)
- Playing an iPod (page 39)
- Playing a USB memory device (page 42)
- Listening to HD Radio stations (page 45)
- Listening to internet radio (page 54)
- Playing back files stored on a PC and NAS (page 57)
- Using online services (page 61)
- Convenient functions (page 71)
- AirPlay function (page 75)

Selecting a listening mode (Sound Mode) (page 77)

Playback (Advanced operation) (page 92)

Important information
Before starting playback, make the connections between the different devices and the settings on the unit.

NOTE
Also refer to the operating instructions of the connected devices when playing them.

Turning the power on
Press ON/STANDBY \(\square\) to turn on power to the unit.
The power turns on.

You can also switch the power to standby by pressing \(\square\) ON/STANDBY on the main unit.

STANDBY indicator status in standby mode
- Normal standby : Red
- When “HDMI Control” (page 117) is set to “On” : Orange
- When “IP Control” (page 131) is set to “Always On” : Orange

Selecting the input source
Press the input source select button (CBL/SAT, DVD, Blu-ray, AUX1, M-XP, TUNER, GAME, AUX2, PHONO, iPod/USB, MEDIA PLAYER, CD, NETWORK or INTERNET RADIO) to be played back.
The desired input source can be selected directly.

You can also use the following operation to select an input source.

Select the input source using the main unit
Turn INPUT SELECTOR.

When power is switched to standby
Press ON/STANDBY \(\square\).

[STANDBY indicator status in standby mode]
- Normal standby : Red
- When “HDMI Control” is set to “On” : Orange
- When “IP Control” (page 131) is set to “Always On” : Orange
Adjusting the master volume

Use VOLUME ▲▼ to adjust the volume.
• The volume display method varies depending on the “Scale” setting (page 112).

When the “Scale” setting (page 112) is “0 – 98”
[Adjustable range] 0.0 0.5 – 98.0

When the “Scale” setting (page 112) is “–79.5dB – 18.0dB”
[Adjustable range] – – – – – – – – 79.5dB – 18.0dB

• The variable range differs according to the input signal and channel level setting.

You can also adjust the master volume by turning VOLUME on the main unit.

Turning off the sound temporarily

Press MUTE △. 
• “MUTE” indicator on the display flashes.
• △ appears on a TV screen.

• The sound is reduced to the level set at “Mute Level” (page 112).
• To cancel, press MUTE △ again. Muting can also be canceled by adjusting the master volume.

Playing a Blu-ray Disc player/DVD player

The following describes the procedure for playing Blu-ray Disc player/DVD player.

1 Prepare for playback.
   ① Turn on the power of the TV, subwoofer and player.
   ② Change the TV input to the input of this unit.
   ③ Load the disc in the player.

2 Press ON/STANDBY ▲ to turn on power to the unit.

3 Press Blu-ray or DVD to switch an input source for a player used for playback.

4 Play the Blu-ray Disc player or DVD player.
   • Make the necessary settings on the player (language setting, subtitles setting, etc.) beforehand.

Playing Super Audio CD

The following describes the procedure for playing Super Audio CD.

1 Prepare for playback.
   ① Turn on the power of the subwoofer and player.
   ② Load the disc in the player.

2 Press ON/STANDBY ▲ to turn on power to the unit.

3 Perform the settings of the “Input Assign” menu (page 122).
   Assign HDMI connectors for the input source (example: DVD).

4 Press the input source select button (example: DVD) to switch an input source assigned in step 3 – ▲.

5 Set the audio input mode to “Auto” using the “Input Mode” menu (page 124).
   • The default setting of “Input Mode” is “Auto”.

6 Play the component connected to this unit.
   The [SPE] indicator lights on the display.

When playing back Super Audio CD, DSD signals are converted into PCM signals which are then converted into analog signals.
## Playing a CD player

The following describes the procedure for playing CD player.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Prepare for playback.  
  ① Turn on the power of the subwoofer and player.  
  ② Load the disc in the player. |
| 2    | Press **ON/STANDBY** to turn on power to the unit. |
| 3    | Press **CD** to switch the input source to “CD”. |
| 4    | Play the CD player. |
Playing an iPod

You can use the USB cable provided with the iPod to connect the iPod with the unit’s iPod/USB port and enjoy music stored on the iPod. For information on the iPod models that can be played back with this unit, see “Connecting an iPod or USB memory device to the iPod/USB port” (page 20).

Listening to music on an iPod

The iPod display modes include “Direct Mode” and “Remote Mode”. By default, “Direct Mode”, where you directly operate iPod itself while seeing the iPod screen, is set.

To change to “Remote Mode”, where you perform operations while having the iPod information displayed on the TV screen, see “Setting “Remote Mode” (Operation Mode)” (page 40).

1 Using the USB cable provided with the iPod, connect the iPod to the iPod/USB port (page 20).
2 Press ON/STANDBY to turn on power to the unit.
3 Press iPod/USB to switch the input source to “iPod/USB”.
   “Remote iPod” is displayed on the display of this unit.
   • Nothing is displayed on the TV screen.
4 Operate iPod itself directly while seeing the iPod screen to playback music.

Operations available through the OPTION button

Press the OPTION button to display a menu of functions that can be used on the TV screen. Select the function you want to use from this menu. You can easily find and use the desired function.

- Setting “Remote Mode” (Operation Mode) (page 40)
- Performing repeat playback (Repeat) (page 41)
- Performing random playback (Random) (page 41)

- Streaming music stored in iPhone, iPod touch, or iPad directly to the unit (page 75)
- Playing iTunes music with this unit (page 75)
Setting “Remote Mode” (Operation Mode)

In this mode, various lists and screens during playback on iPod are displayed on the TV screen. This section describes the steps up to playing back tracks on iPod in “Remote Mode”.

1. Press iPod/USB to switch the input source to “iPod/USB”.
2. Press OPTION. The option menu screen is displayed.
4. Use to select “Remote Mode”, then press ENTER. The iPod screen is displayed.
5. Use to select the item, then press ENTER or to select the file to be played.
6. Press ENTER, or . Playback starts.

• English letters, numbers and certain symbols are displayed. Incompatible characters are displayed as “.” (period).
• Operations available for “Direct Mode” and “Remote Mode” are listed below.

<table>
<thead>
<tr>
<th>Display mode</th>
<th>Direct Mode</th>
<th>Remote Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playable files</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music file</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Video file</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Active buttons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remote control unit (This unit)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>iPod</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

* Only the sound is played.

Adjusting the sound quality (M-DAX)

Make this setting at “M-DAX” (page 111) in the menu. You can use the “M-DAX” function to restore to a state close to the audio before compression while correcting the bass feel to enjoy a richer playback experience. The default setting is “Off”.

Changing the screen display duration

Make this setting at “Audio Display” (page 120) in the menu. The default setting is “30s”. Press while the display is off to return to the original screen.

Switching the screen display

In Remote Mode, press STATUS on the main unit during playback. The display switches between track title, artist name, and album title etc. each time the button is pressed.

NOTE
• Depending on the type of iPod and the software version, some functions may not operate.
• Note that marantz will accept no responsibility whatsoever for any problems arising with the data on an iPod when using this unit in conjunction with the iPod.
Performing repeat playback (Repeat)

1. Press OPTION while in Remote Mode. The option menu screen is displayed.

2. Use △▼ to select “Repeat”, then press ENTER.

3. Use ◀▶ to select repeat playback mode.

   - Each time ◀▶ is pressed, the setting is changed as shown below.

     | ◀   | ◀▶     | ▶   |
     | Off | One    | All |

   - Off: Repeat playback mode is canceled.
   - One: A file being played is played repeatedly.
   - All: All files in the folder currently being played are played repeatedly.

4. Press ENTER. The display returns to the playback screen.

Performing random playback (Random)

1. Press OPTION while in Remote Mode. The option menu screen is displayed.

2. Use △▼ to select “Random”, then press ENTER.

3. Use ◀▶ to select random playback mode.

   - Each time ◀▶ is pressed, the setting is changed as shown below.

     | ◀   | ◀▶     | ▶   |
     | Off | On     |

   - Off: Disable random playback.
   - On: Enable random playback.

4. Press ENTER. The display returns to the playback screen.

The random playback randomly selects a track to play back from all tracks every time a track ends. Therefore, the same track may be played back consecutively.
Playing a USB memory device

Playing back music or still picture (JPEG) files recorded on a USB memory device.

Important information

- Only USB memory devices conforming to mass storage class and MTP (Media Transfer Protocol) standards can be played on this unit.
- This unit is compatible with USB memory devices in "FAT16" or "FAT32" format.
- This unit is compatible with MP3 files conforming to "MPEG-1 Audio Layer-3" standards.
- File types that this unit can play back and specifications are shown below.

<table>
<thead>
<tr>
<th>Supported file types</th>
<th>USB memory devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMA (Windows Media Audio)</td>
<td>✔</td>
</tr>
<tr>
<td>MP3 (MPEG-1 Audio Layer-3)</td>
<td>✔</td>
</tr>
<tr>
<td>WAV</td>
<td>✔</td>
</tr>
<tr>
<td>MPEG-4 AAC</td>
<td>✔</td>
</tr>
<tr>
<td>FLAC (Free Lossless Audio Codec)</td>
<td>✔</td>
</tr>
<tr>
<td>JPEG</td>
<td>✔</td>
</tr>
</tbody>
</table>

*1 USB memory device
- This unit is compatible with MP3 ID3-Tag (Ver. 2) standard.
- This unit can show the artwork that was embedded by using MP3 ID3-Tag Ver. 2.3 or 2.4.
- This unit is compatible with WM META tags.
- If the image size (pixels) of an album artwork exceeds 500 x 500 (WMA/MP3/WAV/FLAC) or 349 x 349 (MPEG-4 AAC), then music may not be played back properly.
- WAV format Quantization bit length: 16 bits.
- FLAC format Quantization bit length: 16 or 24 bits.

*2 Copyright-protected files can be played on certain portable players compatible with MTP.

*3 Only files that are not protected by copyright can be played on this unit. Content downloaded from pay sites on the Internet are copyright protected. Also, files encoded in WMA format when ripped from a CD, etc. on a computer may be copyright protected, depending on the computer’s settings.

**NOTE**

File types that this unit does not support are not displayed.

<table>
<thead>
<tr>
<th>[Compatible formats]</th>
<th>Sampling frequency</th>
<th>Bit rate</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMA (Windows Media Audio)</td>
<td>32/44.1/48 kHz</td>
<td>48 – 192 kbps</td>
<td>.wma</td>
</tr>
<tr>
<td>MP3 (MPEG-1 Audio Layer-3)</td>
<td>32/44.1/48 kHz</td>
<td>32 – 320 kbps</td>
<td>.mp3</td>
</tr>
<tr>
<td>WAV</td>
<td>32/44.1/48 kHz</td>
<td>16 – 320 kbps</td>
<td>.wav</td>
</tr>
<tr>
<td>MPEG-4 AAC</td>
<td>32/44.1/48 kHz</td>
<td>16 – 320 kbps</td>
<td>.aac/</td>
</tr>
<tr>
<td>FLAC (Free Lossless Audio Codec)</td>
<td>32/44.1/48 kHz</td>
<td>–</td>
<td>.flac</td>
</tr>
<tr>
<td>ALAC (Apple Lossless Audio Codec)</td>
<td>32/44.1/48/88.2/96/176.4/192 kHz</td>
<td>–</td>
<td>.m4a</td>
</tr>
</tbody>
</table>

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**Maximum Number of Playable Files and Folder**

The limits on the number of folders and files that can be displayed by this unit are as follows.

<table>
<thead>
<tr>
<th>Media</th>
<th>USB memory devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory capacity</td>
<td>FAT16 : 2 GB, FAT32 : 2 TB</td>
</tr>
<tr>
<td>Number of folder directory levels *1</td>
<td>8 levels</td>
</tr>
<tr>
<td>Number of folders *2</td>
<td>500</td>
</tr>
<tr>
<td>Number of files *2</td>
<td>5000</td>
</tr>
</tbody>
</table>

*1 The limited number includes the root folder.
*2 The allowable number of files may differ according to the USB memory device capacity and the file size.
Playing files stored on USB memory devices

1 Connect the USB memory device to the iPod/USB port (page 20).

2 Press iPod/USB to switch the input source to “iPod/USB”.

3 Use △▽ to select the search item or folder, then press ENTER or ▶. Use △▽ to select the file, then press ENTER, ▶ or ▶. Playback starts.

Adjusting the sound quality (M-DAX)
Make this setting at “M-DAX” (page 111) in the menu. You can use the “M-DAX” function to restore to a state close to the audio before compression while correcting the bass feel to enjoy a richer playback experience. The default setting is “Off”.

Going back to the previous screen
Press ◄ or BACK.

Changing the screen display duration
Make this setting at “Audio Display” (page 120) in the menu. The default setting is “30s”. Press △▽◄ ◄ while the display is off to return to the original screen.

NOTE
• When an MP3 music file includes album art data, the album art can be displayed while playing the file.
• If the USB memory device is divided into multiple partitions, only the first partition is played back.

Operations available through the OPTION button
Press the OPTION button to display a menu of functions that can be used on the TV screen. Select the function you want to use from this menu. You can easily find and use the desired function.

Searching content with keywords (Text Search) (page 71)
Performing repeat playback (Repeat) (page 72)
Performing random playback (Random) (page 72)
Playing back music and a favorite picture at the same time (Picture View) (page 74)
Playing back still images in sequential order (Slideshow) (page 74)

Playback starts.

• Note that marantz will accept no responsibility whatsoever for any problems arising with the data on a USB memory device when using this unit in conjunction with the USB memory device.
• USB memory devices will not work via a USB hub.
• marantz does not guarantee that all USB memory devices will operate or be supplied power. When using a USB portable hard disk that can draw power from an AC adapter, we recommend using the AC adapter.
• It is not possible to connect and use a computer via the iPod/USB port of this unit using a USB cable.
### USB memory device operation buttons

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH/PAGE ▲▼</td>
<td>Page search</td>
</tr>
<tr>
<td>INFO</td>
<td>Display of information such as the source name, volume, and sound mode name</td>
</tr>
<tr>
<td>OPTION</td>
<td>Text Search / Repeat playback / Random playback / Picture View / Slideshow</td>
</tr>
<tr>
<td>△▼&lt; ▶</td>
<td>Cursor operation / Auto search (cue, △▼)</td>
</tr>
<tr>
<td>ENTER (Press and release)</td>
<td>Enter</td>
</tr>
<tr>
<td>ENTER (Press and hold)</td>
<td>Stop</td>
</tr>
<tr>
<td>BACK</td>
<td>Return</td>
</tr>
<tr>
<td>SETUP</td>
<td>Setup</td>
</tr>
<tr>
<td>II</td>
<td>Pause</td>
</tr>
<tr>
<td>▶</td>
<td>Playback / Pause</td>
</tr>
<tr>
<td>■</td>
<td>Stop</td>
</tr>
<tr>
<td>◀ ▶ ◀▶</td>
<td>Auto search (cue)</td>
</tr>
</tbody>
</table>
Listening to HD Radio stations

For antenna connections, see "Connecting an HD Radio receiver" (page 23).

Important information

- **Using the HD Radio™ receiver**
  HD Radio stations offer higher sound quality than conventional FM/AM broadcasts. It is also possible to receive data services and select broadcasts from among up to eight multicast programs.
  HD Radio Technology provides higher quality sound than conventional broadcasts and allows reception of data services.

- **Digital Sound**
  - Digital, CD-quality sound. HD Radio Technology enables local radio stations to broadcast a clean digital signal. AM sounds like today’s FM and FM sounds like a CD.

- **PSD**
  - Program Service Data: Contributes to the superior user experience of HD Radio Technology. Presents song name, artist, station IDs, and other relevant data streams.

- **HD2/HD3**
  - Adjacent to traditional main stations are extra local FM channels. These HD2/HD3 Channels provide new, original music as well as deep cuts into traditional genre.

How to tune in

The modes for receiving FM broadcasts consists of “Auto” mode that automatically searches available broadcast stations and “Manual” mode that lets you tune in using buttons to change the frequency. The default setting is “Auto”. You can also use “Direct Tune” to tune in by entering the frequency directly.

In “Auto” mode, you cannot tune in to radio stations if the reception is not good. If this is the case, then use the “Manual” mode or “Direct Tune” to tune in.

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For detailed information on HD Radio Technology, please go to “www.hdradio.com/”.
Listening to HD Radio stations

1. Press TUNER to switch the input source to “HD Radio”.

2. Press OPTION. The option menu screen is displayed.

3. Use △▼ to select “Band”, then press ENTER. The Band screen is displayed.

4. Use ◄► to select “FM” or “AM”, then press ENTER.

5. Press TUNE + or TUNE – to select the station you want to hear.

   - Scanning is performed until it finds an available radio station. When it finds a radio station, it stops the scan automatically and tunes in.

   - If the desired station cannot be tuned in with auto tuning, tune it in manually.

   - When tuning in stations manually, press and hold TUNE + or TUNE – to change frequencies continuously.

-changing the screen display duration

Make this setting at “Audio Display” (page 120) in the menu. The default setting is “30s”.
Press △▼◄► while the display is off to return to the original screen.

Adding to the FAVORITE STATION button (page 73)

Operations available through the OPTION button

- Press the OPTION button to display a menu of functions that can be used on the TV screen. Select the function you want to use from this menu. You can easily find and use the desired function.

- Tuning in by entering the radio frequency (Direct Tune) (page 48)

- Presetting the current broadcast station (Preset Memory) (page 50)

- Changing the tuning mode (Tune Mode) (page 47)

- Tuning in to radio stations and presetting them automatically (Auto Preset Memory) (page 49)

- Specify a name for the preset broadcast station (Preset Name) (page 51)

- Skipping preset broadcast stations (Preset Skip) (page 52)
Changing the tuning mode (Tune Mode)
You can change the mode for tuning into FM/AM broadcasts.

1 Press TUNER to switch the input source to “HD Radio”.
2 Press OPTION.
The option menu screen is displayed.
3 Use △▽ to select “Tune Mode”, then press ENTER.

Use < > to select tuning mode, then press ENTER.

- Auto
  - Automatically tune to the station.
- HD-Auto
  - Automatically tune to the HD Radio station.
- Analog-Auto
  - Automatically tune to an analog station and analog HD Radio station.
- Manual
  - Manually tune to the station.
- Analog-Manual
  - Manually tune to an analog station and analog HD Radio station.

When tuning in stations manually, press and hold TUNE + or TUNE – to change frequencies continuously.

Selecting audio programs
HD Radio Technology enables stations to broadcast multiple Audio Program and data services on HD2 / HD3 / HD4 channels.

1 Select the tuning mode ("HD-AUTO", "AUTO" or "MANUAL").
2 Press TUNE + or TUNE – to tune in the desired Multicast channel.

- If the station you are tuning in has multiple audio programs, “HD1” is indicated on the display.
- If it only has one audio program, “HD” is indicated.
- When the unit receives multicast channels, the multicast program number (HD2) is displayed to the right of the station name.

NOTE
- This function is not available for AM HD Radio stations because they cannot broadcast multicast channels.
- If digital audio data cannot be received after the station is selected, or if the station signal is weak, the unit may not be able to receive the multicast channels.
- If the station signal is weak, the digital audio of the multicast channel may cut out.

Changing the screen display duration
Make this setting at “Audio Display” (page 120) in the menu. The default setting is “30s”.
Press △▽< > while the display is off to return to the original screen.
Listening to HD Radio stations

- **Tuning in by entering the radio frequency (Direct Tune)**
  You can enter the receiving frequency directly to tune in.

1. Press **TUNER** to switch the input source to “HD Radio”.
2. Press **OPTION**. The option menu screen is displayed.
3. Use **△▼** to select “Direct Tune”, then press **ENTER**. The direct tuner screen is displayed and “-” in the display flashes.
   - **TV Screen**
   - **Display of this unit**
4. Use **△▼ or 0 – 9** to select a number and press **▶**. The screen that lets you enter the frequency is displayed.
   - **TV Screen**
   - **Display of this unit**
5. Repeat step 4 and enter the frequency of the radio station you want to hear.
6. When setting is completed, press **ENTER**. The preset frequency is tuned in.

- **•** If **◄** is pressed, the immediately preceding input is cancelled.
Presetting broadcast stations

- Tuning in to radio stations and presetting them automatically (Auto Preset Memory)
  Up to 56 stations can be preset. If “Auto Preset Memory” is performed after performing “Preset Memory”, the “Preset Memory” settings will be overwritten.

1 Press TUNER to switch the input source to “HD Radio”.
2 Press OPTION. The option menu screen is displayed.
3 Use ▲▼ to select “Auto Preset Memory”, then press ENTER.

   [TV Screen]

4 Press ENTER. The unit starts to tune in to radio stations automatically and preset them.

   [Display of this unit]

   - When presetting is completed, “Completed” is displayed for about 5 seconds and the option menu screen turns off.

Listening to HD Radio stations

- Pressing TUNER to switch the input source to “HD Radio”.
- Pressing OPTION.
- Using ▲▼ to select “Auto Preset Memory”, then pressing ENTER.
- Pressing ENTER.
- When presetting is completed, “Completed” is displayed for about 5 seconds and the option menu screen turns off.
Presetting the current broadcast station (Preset Memory)

Your favorite broadcast stations can be preset so that you can tune them in easily. Up to 56 stations can be preset.

1. Tune in the broadcast station you want to preset.
2. Press OPTION. The option menu screen is displayed.
3. Use △∇ to select “Preset Memory”, then press ENTER. The list of already preset channels is displayed.
4. Use △∇ or 0 – 9 to select the channel you want to preset, then press ENTER. The current broadcast station that is preset.

   - To preset other stations, repeat steps 1 to 4.

   - The channel numbers of broadcast stations set as “Preset Skip” (page 52) are grayed out, but these stations can be preset. When grayed out channel numbers are preset, these are highlighted and the “Preset Skip” setting changes to “On”.

Listening to preset stations

Use CH/PAGE ▲▼ or 0 – 9 to select the desired preset channel.

The channel numbers of broadcast stations set as “Preset Skip” (page 52) are grayed out, but these stations can be preset. When grayed out channel numbers are preset, these are highlighted and the “Preset Skip” setting changes to “On”.

Listening to HD Radio stations

<table>
<thead>
<tr>
<th>Channel</th>
<th>Default Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 8</td>
<td>87.50 / 87.90 / 89.10 / 93.30 / 97.90 / 98.10 / 98.90 / 100.10 MHz</td>
</tr>
<tr>
<td>9 – 16</td>
<td>101.90 / 102.70 / 107.90 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz</td>
</tr>
<tr>
<td>17 – 24</td>
<td>530 / 600 / 930 / 1000 / 1120 / 1210 / 1400 / 1710 kHz</td>
</tr>
<tr>
<td>25 – 32</td>
<td>90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz</td>
</tr>
<tr>
<td>33 – 40</td>
<td>90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz</td>
</tr>
<tr>
<td>41 – 48</td>
<td>90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz</td>
</tr>
<tr>
<td>49 – 56</td>
<td>90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz</td>
</tr>
</tbody>
</table>

Channel Default Settings

1 – 8 87.50 / 87.90 / 89.10 / 93.30 / 97.90 / 98.10 / 98.90 / 100.10 MHz
9 – 16 101.90 / 102.70 / 107.90 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz
17 – 24 530 / 600 / 930 / 1000 / 1120 / 1210 / 1400 / 1710 kHz
25 – 32 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz
33 – 40 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz
41 – 48 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz
49 – 56 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 / 90.10 MHz
Specify a name for the preset broadcast station (Preset Name)
You can set the name to the preset broadcast station or change it.
Up to eight characters can be input.

1. Press TUNER to switch the input source to “HD Radio”.

2. Press OPTION.
The option menu screen is displayed.

3. Use △▽ to select “Preset Name”, then press ENTER.
The Preset Name screen is displayed.

4. Use ◄► to select the group of the broadcast station you want to name then press ENTER.
The screen that lets you edit the preset name is displayed.
- Each time ◄► is pressed, the setting is changed as shown below.

   1 – 8  9 – 16  17 – 24  25 – 32

   49 – 56  41 – 48  33 – 40

5. Use △▽ to select the broadcast station you want to name, then press ENTER.

6. Use △▽ to select a name label, then press ENTER.
The screen that lets you edit the preset name is displayed.
- • Each time △▽ is pressed, the setting is changed as shown below.

   1 – 8  9 – 16  17 – 24  25 – 32

   49 – 56  41 – 48  33 – 40

   • If you select “Set Defaults”, then the unit returns to displaying the frequency.

7. Enter the characters, then press OK.
- • For character input, see page 107.

8. Press BACK twice.
The display returns to the playback screen.
Skipping preset broadcast stations
(Preset Skip)

You can set in advance, the stations you do not want to be displayed when tuning in, by groups or by stations. The preset skip setting is useful when tuning in, because only your favorite stations are displayed.

1 Press TUNER to switch the input source to “HD Radio”.

2 Press OPTION. The option menu screen is displayed.

3 Use △▽ to select “Preset Skip”, then press ENTER. The Preset Skip screen is displayed.

4-1 [To set the stations you want to skip by groups]

① Use ◀▶ to select the group of broadcast stations you want to skip.
   - Each time ◀▶ is pressed, the setting is changed as shown below.

   | 1 – 8 | 9 – 16 | 17 – 24 | 25 – 32 |
   | 49 – 56 | 41 – 48 | 33 – 40 |

② Press △ to select “Set * – * to Skip”, then press ENTER.
   - All broadcast stations in the group “* – *” you selected are not displayed.
   - ( * are the selected group numbers)

③ Press BACK.

4-2 [To set the stations you want to skip by stations]

① Use ◀▶ to select the group of broadcast stations you want to skip.
   - Each time ◀▶ is pressed, the setting is changed as shown below.

   | 1 – 8 | 9 – 16 | 17 – 24 | 25 – 32 |
   | 49 – 56 | 41 – 48 | 33 – 40 |

② Use △▽ to select the broadcast station you want to skip.

③ Use ◀▶ to select “Skip”.
   - The station you selected is not displayed.

④ Press BACK.
Cancelling preset skip

1. While the Preset Skip screen is displayed, use ◀▶ to select a group containing a broadcast station to cancel the skip for.

2. Use ▲▼ to select a broadcast station to cancel the skip for.

3. Use ◀▶ to select “On”.
   The skip is cancelled.

   **NOTE**
   You cannot cancel the skip for each group.

---

Check the HD Radio reception information

Press STATUS on the main unit while an HD Radio broadcast is being received.
   The current reception information is shown on the display.

1. Normal
2. Frequency / Signal strength
3. Station name / Program and Program type
4. Title name / Artist name
5. Album name / Genre name

**NOTE**
If the station signal weakens while receiving a digital broadcast (while “HD” and text is displayed), the mode automatically switches to the analog reception mode (the reception frequency is displayed). Because of this, the “HD” and text may flicker if the station signal level is weak and unstable.

---

Tuner (HD Radio reception) operation buttons

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH/PAGE ▲▼</td>
<td>Display of information such as the source name, volume, and sound mode name</td>
</tr>
<tr>
<td>INFO</td>
<td>Switch tuning modes / Direct frequency tuning / Preset Memory / Auto Preset Memory / Preset Name / Preset Skip</td>
</tr>
<tr>
<td>OPTION</td>
<td>Cursor operation</td>
</tr>
<tr>
<td>ENTER</td>
<td>Enter</td>
</tr>
<tr>
<td>BACK</td>
<td>Return</td>
</tr>
<tr>
<td>SETUP</td>
<td>Setup</td>
</tr>
<tr>
<td>TUNE +, –</td>
<td>Tuning (up/down) / Multicast switching</td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4</td>
<td>Call up favorites</td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4</td>
<td>Add to the favorites list</td>
</tr>
<tr>
<td>0 – 9</td>
<td>Preset channel selection (1 – 8) / Direct frequency tuning (0 – 9)</td>
</tr>
</tbody>
</table>
Listening to internet radio

Internet radio refers to radio broadcasts distributed over the Internet. Internet radio stations from around the world can be received.

Important information

The broadcast station types and specifications supported by this unit for playback are as follows.

<table>
<thead>
<tr>
<th>Playable broadcast station types</th>
<th>Supported file types</th>
<th>Internet radio</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMA (Windows Media Audio)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>MP3 (MPEG-1 Audio Layer-3)</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>playable broadcast station specifications</th>
<th>Sampling frequency</th>
<th>Bit rate</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMA (Windows Media Audio)</td>
<td>32/44, 1/48 kHz</td>
<td>48 – 192 kbps</td>
<td>.wma</td>
</tr>
<tr>
<td>MP3 (MPEG-1 Audio Layer-3)</td>
<td>32/44, 1/48 kHz</td>
<td>32 – 320 kbps</td>
<td>.mp3</td>
</tr>
</tbody>
</table>

1 Prepare for playback.
   ① Check the network environment, then turn on this unit’s power (page 27 “Connecting to a home network (LAN)”).
   ② If settings are required, make the “Settings” (page 132).

2 Press NETWORK.
   • You can also press INTERNET RADIO to select the input source “Internet Radio” directly.

3 Use ▲▼ to select “Internet Radio”, then press ENTER.

4 Use ▲▼ to select the item you want to play, then press ENTER or ▶.

   - Search Stations
     Displays all Internet radio stations that this unit can tune in to.
   - Search Podcasts
     Displays Internet radio stations in the podcasts that this unit can tune in to.
   - Recommended Stations
     Displays recommended Internet radio stations.
   - radiomarantz.com
     Displays Internet radio stations added to favorites in vTuner. For instructions on how to add to favorites in vTuner, see “Using vTuner to add Internet radio stations to favorites” (page 56).
   - Recently Played
     Displays recently played Internet radio stations. Up to 20 stations stored in “Recently Played”.
   - Search by Keyword
     Displays Internet radio stations searched by keyword. For character input, see page 107.

5 Repeat step 4 until the station list is displayed.
   The station list is displayed.

6 Use ▲▼ to select the station, then press ENTER or ▶.
   Playback starts once buffering reaches “100%”.

See overleaf
Listening to internet radio

- **Adjusting the sound quality (M-DAX)**
  Make this setting at “M-DAX” (page 111) in the menu. You can use the “M-DAX” function to restore to a state close to the audio before compression while correcting the bass feel to enjoy a richer playback experience. The default setting is “Off”.

- **Switching the screen display**
  Press STATUS on the main unit. The display switches between track title and radio station name etc. each time the button is pressed.

- **Going back to the previous screen**
  Press ◄ or BACK.

- **Changing the screen display duration**
  Make this setting at “Audio Display” (page 120) in the menu. The default setting is “30s”. Press △▼◄► while the display is off to return to the original screen.

- **There are many Internet radio stations on the Internet, and the quality of the programs they broadcast as well as the bit rate of the tracks varies widely.**
  Generally, the higher the bit rate, the higher the sound quality, but depending on the communication lines and server traffic, the music or audio signals being streamed may be interrupted. Inversely, lower bit rates mean a lower sound quality but less tendency for the sound to be interrupted.

- **“Radio station server full” or “Connection down” is displayed if the station is busy or not broadcasting.**
- **On this unit, folder and file names can be displayed as titles. Any characters that cannot be displayed are replaced with “." (period).**

**NOTE**
The radio station database service may be suspended without notice.

Operations available through the OPTION button

- **Searching content with keywords (Text Search)** (page 71)
- **Add to favorites from the Option menu (Favorite Memory)** (page 73)
- **Playing back music and a favorite picture at the same time (Picture View)** (page 74)

Playing the last played Internet radio station

This unit memorizes the last played Internet radio station. If you press INTERNET RADIO to switch to the Internet radio function from another input source, the last Internet radio station you listened to is played.

Press INTERNET RADIO. The source switches to “Internet Radio” and the last played radio station plays.
Using vTuner to add Internet radio stations to favorites

There are many Internet radio stations in the world, and this unit can tune into these stations. But finding the radio station you want to hear may be difficult, because there are too many stations. If this is the case, then please use vTuner, an Internet radio station search website specifically designed for this unit. You can use your PC to search Internet radio stations and add them as your favorites. This unit can play radio stations added to vTuner.

1. Check the MAC address of this unit (page 131).
   The screen that lets you edit the preset name is displayed.
   MAC address:
   - The MAC address is necessary when you create an account for vTuner.

2. Use your PC to access the vTuner website (http://www.radiomarantz.com).
   The vTuner login screen is displayed.

3. Enter the MAC address of this unit, then click “Go”.
   The account creation screen is displayed.

4. Enter your E-mail address and a password of your choice.
   The account is registered and you can now log in.

5. Enter your account information (E-mail address and password) and log in.
   The top menu of vTuner is displayed.

6. Select the search criteria (genre, region, language, etc.) of your choice.
   The list of radio stations matching the criteria is displayed.
   - You can also enter a keyword to search for a station you want to hear.

7. Select the radio station of your choice from the list, and then click the Add to Favorites icon.
   The screen that lets you create a favorite group is displayed.

8. Enter the name of the favorite group, then click “Go”.
   A new favorite group that includes the selected radio station is created.
   - Internet radio stations added to favorites in vTuner can be played from “radiomarantz.com” (page 54) with this unit.

Internet radio operation buttons

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERNET RADIO</td>
<td>Last played internet radio station</td>
</tr>
<tr>
<td>CH/PAGE ▲▼</td>
<td>Page search</td>
</tr>
<tr>
<td>INFO</td>
<td>Display of information such as the source name, volume, and sound mode name</td>
</tr>
<tr>
<td>OPTION</td>
<td>Text Search / Favorite Memory / Picture View</td>
</tr>
<tr>
<td>ENTER (Press and release)</td>
<td>Enter</td>
</tr>
<tr>
<td>ENTER (Press and hold)</td>
<td>Stop</td>
</tr>
<tr>
<td>BACK</td>
<td>Return</td>
</tr>
<tr>
<td>SETUP</td>
<td>Setup</td>
</tr>
<tr>
<td>SETUP</td>
<td>Stop</td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4 (Press and release)</td>
<td>Call up favorites</td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4 (Press and hold)</td>
<td>Add to the favorites list</td>
</tr>
</tbody>
</table>
Playing back files stored on a PC and NAS

This unit can play back music files and playlists (m3u, wpl) stored on a PC and on Network Attached Storage (NAS) that supports DLNA.

Important information

- The network audio playback function of this unit connects to the server using technologies shown below.
  - Windows Media Player Network Sharing Service
  - Windows Media DRM10
- File types that this unit can play back and specifications are shown below.

| Supported file types | Media server *
|----------------------|----------------
| WMA (Windows Media Audio) | ✓ |
| MP3 (MPEG-1 Audio Layer-3) | ✓ |
| WAV | ✓ |
| MPEG-4 AAC | ✓ *
| FLAC (Free Lossless Audio Codec) | ✓ |
| JPEG | ✓ |

A server or server software compatible with distribution in the corresponding formats is required to play music files via a network.

1 Media server:
- This unit is compatible with MP3 ID3-Tag (Ver. 2) standard.
- This unit can show the artwork that was embedded by using MP3 ID3-Tag Ver. 2.3 or 2.4.
- This unit is compatible with WMA META tags.
- If the image size (pixels) of an album artwork exceeds 500 × 500 (WMA/MP3/WAV/FLAC) or 349 × 349 (MPEG-4 AAC), then music may not be played back properly.
- WAV format Quantization bit length: 16 bits.
- FLAC format Quantization bit length: 16 or 24 bits.

2 Only files that are not protected by copyright can be played on this unit.

Content downloaded from pay sites on the Internet are copyright protected. Also, files encoded in WMA format when ripped from a CD, etc. on a computer may be copyright protected, depending on the computer’s settings.

**NOTE**

File types that this unit does not support are not displayed.
Applying media sharing settings

Here, we apply the settings to share music files stored on a PC and NAS on the network.

### Sharing media stored in PC
If you are using a media server, be sure to apply this setting first.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the PC’s “Control Panel”, select “Network and Internet” - “Choose homegroup and sharing options”.</td>
</tr>
<tr>
<td>2</td>
<td>Select the “Stream my pictures, music, and videos to all devices on my home network” check box and select “Choose media streaming options”.</td>
</tr>
<tr>
<td>3</td>
<td>Select “Allowed” in the drop-down list for “AV7701”.</td>
</tr>
<tr>
<td>4</td>
<td>Select “Allowed” in the drop-down list for “Media programs on this PC and remote connections...”.</td>
</tr>
<tr>
<td>5</td>
<td>Click “OK” to finish.</td>
</tr>
</tbody>
</table>

### When using Windows Media Player 12 (Windows 7)

**NOTE**
Perform this procedure after changing the control panel display to “Category”.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Start up Windows Media Player 11 on the PC.</td>
</tr>
<tr>
<td>2</td>
<td>Select “Media Sharing” in the “Library”.</td>
</tr>
<tr>
<td>3</td>
<td>Click the “Share my media” check box, select “AV7701”, and then click “Allow”.</td>
</tr>
<tr>
<td>4</td>
<td>As you did in step 3, select the icon of the device (other PCs and mobile devices) you want to use as a media controller, and then click “Allow”.</td>
</tr>
<tr>
<td>5</td>
<td>Click “OK” to finish.</td>
</tr>
</tbody>
</table>

### Sharing media stored in NAS
Change settings on the NAS to allow this unit and other devices (PCs and mobile devices) used as media controllers to access the NAS. For details, see the owner’s manual that came with the NAS.
Playing back files stored on a PC and NAS

Use this procedure to play music files, image files or playlists.

1 Prepare for playback.
   ① Check the network environment, then turn on this unit’s power (page 27 “Connecting to a home network (LAN)”).
   ② If settings are required, make the “Settings” (page 132).
   ③ Prepare the computer (Computer’s operating instructions).

2 Press NETWORK.

3 Use △▽ to select “Media Server”, then press ENTER.

4 Use △▽ to select the server including the file to be played, then press ENTER or ▶.

5 Use △▽ to select the search item or folder, then press ENTER or ▶.

6 Repeat step 4 until the file is displayed.

7 Use △▽ to select the file, then press ENTER or ▶.
   Playback starts once buffering reaches “100%”.

- Adjusting the sound quality (M-DAX)
  Make this setting at “M-DAX” (page 111) in the menu.
  You can use the “M-DAX” function to restore to a state close to the audio before compression while correcting the bass feel to enjoy a richer playback experience. The default setting is “Off”.

- Switching the screen display
  Press STATUS on the main unit.
  The display switches between track title, artist name, and album title each time the button is pressed.

- Going back to the previous screen
  Press ◄ or BACK.

- Changing the screen display duration
  Make this setting at “Audio Display” (page 120) in the menu.
  The default setting is “30s”.
  Press △▽ while the display is off to return to the original screen.

- When a WMA (Windows Media Audio), MP3 or MPEG-4 AAC file includes album art data, the album art can be displayed while the music files are playing.
- If you use Ver. 11 or later of Windows Media Player, the album art for WMA files can be displayed.
- WMA Lossless files can be played when using a server supporting transcoding, such as Windows Media Player Ver. 11 or later.

- Depending on the size of the still picture (JPEG) file, some time may be required for the file to be displayed.
- The order in which the tracks/files are displayed depends on the server specifications. If the tracks/files are not displayed in alphabetical order due to the server specifications, searching by the first letter may not work properly.

- WMA Lossless files can be played when using a server supporting transcoding, such as Windows Media Player Ver. 11 or later.
Operations available through the OPTION button
Press the OPTION button to display a menu of functions that can be used on the TV screen. Select the function you want to use from this menu. You can easily find and use the desired function.

- Searching content with keywords (Text Search) (page 71)
- Performing repeat playback (Repeat) (page 72)
- Performing random playback (Random) (page 72)
- Add to favorites from the Option menu (Favorite Memory) (page 73)
- Playing back music and a favorite picture at the same time (Picture View) (page 74)
- Playing back still images in sequential order (Slideshow) (page 74)

Media server operation buttons

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH/PAGE ▼▼▼▼▼</td>
<td>Page search</td>
</tr>
<tr>
<td>INFO</td>
<td>Display of information such as the source name, volume, and sound mode name</td>
</tr>
<tr>
<td>OPTION</td>
<td>Text Search / Repeat playback / Random playback / Favorite Memory / Picture View / Slideshow</td>
</tr>
<tr>
<td>△▼&lt;▷▷</td>
<td>Cursor operation / Auto search (cue, △▼)</td>
</tr>
<tr>
<td>ENTER (Press and release)</td>
<td>Enter</td>
</tr>
<tr>
<td>ENTER (Press and hold)</td>
<td>Stop</td>
</tr>
<tr>
<td>BACK</td>
<td>Return</td>
</tr>
<tr>
<td>SETUP</td>
<td>Setup</td>
</tr>
<tr>
<td>■</td>
<td>Pause</td>
</tr>
<tr>
<td>▶</td>
<td>Playback / Pause</td>
</tr>
<tr>
<td>■</td>
<td>Stop</td>
</tr>
<tr>
<td>◀◀ ▶▶ ◀▶</td>
<td>Auto search (cue)</td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4 (Press and release)</td>
<td>Call up favorites</td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4 (Press and hold)</td>
<td>Add to the favorites list</td>
</tr>
</tbody>
</table>
Using online services

This unit supports playback of the online services shown below.

- **About Flickr** ([page 62])
  Flickr is an online photograph sharing service that started in 2004. You can use this unit to view photographs that have been made public by Flickr users. You do not need an account to use Flickr. To view photographs that you recorded yourself, you need an account in order to upload these photographs to the Flickr server. For details, see the Flickr homepage. [http://www.flickr.com/](http://www.flickr.com/)

- **About Pandora®** ([page 64])
  Pandora is an automated music recommendation and Internet radio service created by the Music Genome Project. To listen to Pandora, you will need a free Pandora account. If you do not have a Pandora account, you can create one at [www.pandora.com](http://www.pandora.com) or from the Pandora smartphone application. It is necessary to associate this machine with a Pandora account by visiting [http://www.pandora.com/marantz](http://www.pandora.com/marantz) from your PC.

- **About SiriusXM** ([page 67])
  Enjoy anywhere access to the unparalleled content of SiriusXM. Whether on your computer, smartphone, tablet, Lynx Portable Radio, or compatible Internet-connected device, you don’t need to be in your vehicle to enjoy SiriusXM. For details, see the SiriusXM homepage. [http://www.siriusxm.com](http://www.siriusxm.com)

- **About Spotify** ([page 69])
  Introduce your marantz to a whole new world of music. With Spotify, you can enjoy instant access to millions of songs. A Spotify Premium subscription is required. For details, see the Spotify homepage. [http://www.spotify.com](http://www.spotify.com)
Viewing photographs on the Flickr site

You can view photographs shared by particular users, or all of the photographs shared on Flickr.

Viewing photographs shared by particular users

1. Prepare for playback.
   ① Check the network environment, then turn on this unit’s power (page 27 “Connecting to a home network (LAN)”).
   ② If settings are required, make the “Settings” (page 132).

2. Press NETWORK.

3. Use Δ∇ to select “Flickr”, then press ENTER.

4. Use Δ∇ to select “Add Flickr Contact”, then press ENTER or ▶.

5. In “Contact”, add the screen name (user name you want to view) you want to add.
   • For character input, see page 107.

6. After inputting the “Contact”, press OK.
   The screen name is added to “Contact”, and the screen name you entered in Step 5 is displayed on the top screen of Flickr.
   • If you enter a screen name that does not exist, “The Flickr Contact you entered could not be found” is displayed. Check and enter the correct screen name.

7. Use Δ∇ to select the folder, and then press ENTER or ▶.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favorites</td>
<td>Displays the favorite photographs of the specified user.</td>
</tr>
<tr>
<td>Photostream</td>
<td>Displays a list of shared photographs.</td>
</tr>
<tr>
<td>PhotoSets</td>
<td>Displays the folder (photograph album) list.</td>
</tr>
<tr>
<td>Contacts</td>
<td>Displays the screen name used by the specified user in Contacts.</td>
</tr>
<tr>
<td>Remove this Contact</td>
<td>Deletes a user from Flickr Contact.</td>
</tr>
<tr>
<td>Add this Contact</td>
<td>Adds a user from Flickr Contact.</td>
</tr>
</tbody>
</table>

8. Use Δ∇ to select the file, and then press ENTER or ▶.
   The selected file is displayed.

Going back to the previous screen

Press Q or BACK.

Operations available through the OPTION button

Press the OPTION button to display a menu of functions that can be used on the TV screen. Select the function you want to use from this menu. You can easily find and use the desired function.

Playing back still images in sequential order (Slideshow) (page 74)
Viewing all photographs on Flickr

1. Use \( \Delta \) \( \nabla \) to select “All Content”, then press ENTER or \( \nabla \).

2. Use \( \Delta \) \( \nabla \) to select the folder, and then press ENTER or \( \nabla \).

   - **Interestness**: Displays photographs that are popular from the number of user comments or number of times they are added as favorites.
   - **Recent**: Displays the most recently added photographs.
   - **Search by text**: Search for photographs by keyword.

3. Use \( \Delta \) \( \nabla \) to select the file, and then press ENTER or \( \nabla \).

   The selected file is displayed.

---

**NOTE**

Depending on the file format, some photographs cannot be viewed.

---

### Flickr operation buttons

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH/PAGE ▼</td>
<td></td>
</tr>
<tr>
<td>INFO</td>
<td></td>
</tr>
<tr>
<td>OPTION</td>
<td></td>
</tr>
<tr>
<td>ENTER (Press and release)</td>
<td></td>
</tr>
<tr>
<td>ENTER (Press and hold)</td>
<td></td>
</tr>
<tr>
<td>BACK</td>
<td></td>
</tr>
<tr>
<td>SETUP</td>
<td></td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4 (Press and release)</td>
<td></td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4 (Press and hold)</td>
<td></td>
</tr>
</tbody>
</table>

- **INFO**: Display of information such as the source name, volume, and sound mode name
- **OPTION**: Slideshow
- **ENTER**: Enter
- **ENTER**: Stop
- **BACK**: Return
- **SETUP**: Setup
- **FAVORITE STATION 1 – 4** (Press and release): Call up favorites
- **FAVORITE STATION 1 – 4** (Press and hold): Add to the favorites list
Listening to Pandora®

1 Prepare for playback.
   ① Check the network environment, then turn on this unit’s power (page 27 “Connecting to a home network (LAN)”).
   ② If settings are required, make the “Settings” (page 132).
   ③ Complete step 4 and obtain a Pandora account.
   • If you already have a Pandora account, you do not need to obtain a new account. Use your existing Pandora account.

2 Press NETWORK.

3 Use ▲▼◄► to select “Pandora”, then press ENTER.

4 If you have a Pandora account, use ▲▼ to select “I have a Pandora account”, then press ENTER or ►.
   • If you do not have a Pandora account, press ▼ to select “I am new to Pandora”. The URL of Pandora and activation code are displayed. Access the Pandora web page from your PC and register the displayed activation code and account information. Then press ENTER.

5 Input “Email address” and “Password”.
   • For character input, see page 107.

6 After inputting the “Email address” and “Password”, select “OK”, then press ENTER.
   If the “Email address” and “Password” match, the top menu for Pandora is displayed.

NOTE
   Press BACK to cancel the input. When “Cancel input?” is displayed, select “Yes”, then press ENTER.

This is an identification code required to register your purchased product to the Pandora service.
This code is used to obtain your account.
Creating a new station

You can create up to 100 radio stations.

1 Use ▲▼ to select “New Station”, then press ENTER or ▶.

2 Input a track or artist name, then press OK.

3 Use ▲▼ to select “Search by Artist” or “Search by Track”, then press ENTER.
You can search and display a list by track or artist.

4 Press ▲▼, select a file (e.g. D&M2) from the list, and press ENTER or ▶.
“Radio” is added to the end of a filename, and your new station is created (e.g. D&M2 Radio).

Listening to an existing station

Use ▲▼ and select the radio station (“D&M2 Radio”) that you want to listen to, and press ENTER or ▶.

Listening to created radio stations at random

Use ▲▼ to select “Quick Mix”, then press ENTER or ▶.
Created radio stations are selected at random, and tracks are streamed.

• Your new station will play music with similar qualities to the artist or track you entered.

• For character input, see page 107.
Giving Feedback and Managing Stations
You can personalize your stations by providing feedback.

Press \( \uparrow \) while a track is playing.
The Pandora menu screen is displayed.

I like this track
- Press when you like the track that is being played.
- It will return to the Play Screen. And (Thumbs up) icon is displayed. (The icon is not displayed on the next track.)

I don’t like this track
- Press when you don’t like the track that is being played.
- It will return to the Play Screen. And (Thumbs down) icon is displayed. (The icon is not displayed on the next track.)

Why is this track playing?
- Displays the reason why Pandora selected this track.

Create station
- Creates a Station for the Track or Artist being played.

Bookmark this artist
- Bookmarks the artist currently being played.
- You can check on a computer or iPhone etc.
- For details, see the Pandora web page.

Bookmark this track
- Bookmarks the track currently being played.
- You can check on a computer or iPhone etc.
- For details, see the Pandora web page.

I’m tired of this track
- Press when you don’t like the track that is being played.
- The track will not be played for 1 month.

Delete this station
- Press when you want to delete the station that is being played.

NOTE
- You can Skip up to 6 Tracks that are being played back within 1 hour.
- You can create up to 100 Stations (radio stations).

Sign out
Disassociate this unit from your Pandora account.

1 While the Pandora top menu is displayed, press BACK.

2 When the popup menu appears, use \( \downarrow \) to select “Yes”, then press ENTER.
Listening to SiriusXM Internet Radio

Over 120 channels of the SiriusXM programming you love, including commercial-free music plus sports, talk, news and entertainment. Listen anywhere on your computer or smartphone.

1 Prepare for playback.
   ① Check the network environment, then turn on this unit’s power [page 27 “Connecting to a home network (LAN)”).
   ② If settings are required, make the “Settings” [page 132).
   ③ Access the following website from your PC and obtain a SiriusXM account.
      http://www.siriusxm.com
      If you already have a SiriusXM account, you do not need to obtain a new account. Select “Sign in” in step 4, and enter your existing SiriusXM account.

2 Press NETWORK.

3 Use △▽◁▷ to select “SiriusXM”, then press ENTER.

4 Select “Sign in”, then press ENTER.

5 Input the “Username” and “Password”.
   • For character input, see page 107.

6 Select the “Sign in”, and then press ENTER.
   The top menu of SiriusXM is displayed.

7 Use △▽ to select the genre, then press ENTER or ▷.

8 Use △▽ to select the file, and then press ENTER or ▷.
   The selected file is displayed.


**Sign out**
Disassociate this unit from your SiriusXM account.

1. While the SiriusXM top menu is displayed, press **BACK**.

2. When the popup menu appears, use << >> to select “Yes”, then press **ENTER**.

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**SiriusXM operation buttons**

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
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</thead>
<tbody>
<tr>
<td>CH/PAGE ▼</td>
<td>Page search</td>
</tr>
<tr>
<td>INFO</td>
<td>Display of information such as the source name, volume, and sound mode name</td>
</tr>
<tr>
<td>△ □</td>
<td>Cursor operation</td>
</tr>
<tr>
<td>ENTER (Press and release)</td>
<td>Enter</td>
</tr>
<tr>
<td>ENTER (Press and hold)</td>
<td>Stop</td>
</tr>
<tr>
<td>BACK</td>
<td>Return</td>
</tr>
<tr>
<td>SETUP</td>
<td>Setup</td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4 (Press and release)</td>
<td>Call up favorites</td>
</tr>
<tr>
<td>FAVORITE STATION 1 – 4 (Press and hold)</td>
<td>Add to the favorites list</td>
</tr>
</tbody>
</table>
Using online services

Listening to Spotify

Introduce your Marantz to a whole new world of music. With Spotify, you can enjoy instant access to millions of songs. A Spotify Premium subscription is required. For details, see the Spotify homepage.

http://www.spotify.com

1 Prepare for playback.
   ① Check the network environment, then turn on this unit’s power (page 27 “Connecting to a home network (LAN)”).
   ② If settings are required, make the “Settings” (page 132).
   ③ Complete step 5 and obtain a Spotify account.
      • If you already have a Spotify account, you do not need to obtain a new account. Use your existing Spotify account.

2 Press NETWORK.

3 Use \(\Delta \nabla < >\) to select “Spotify”, then press ENTER.

4 If you have a Spotify account, then press ENTER.

5 Use \(\Delta \nabla\) to enter your username and password.

   • The password should be no longer than 99 characters.
     For character input, see page 107.
   • The types of characters that can be input are as shown below.

   [Upper case characters/Numbers/Symbols]
   ABCDEFGHIJKLMNOPQRSTUVWXYZ
   0123456789
   ! " # $ % & ’ ( ) * + , . / : ; < = >

   [Lower case characters/Numbers/Symbols]
   abcdefghijklmnopqrstuvwxyz
   ÄÀÁÂÃÅÆÇÐÈÉÊËÌÍÎÏÑÖÒÓÔÕØÜÙÚÝÞ
   0123456789
   . @ - _ / : ˜ ? \ [ ] ^ ‘ ”

   • When you use \(\Delta \nabla\) while you type in, you can change uppercase characters to lowercase and vice versa.
   • Press BACK to cancel the input. When “Cancel input?” is displayed, select “Yes”, then press ENTER.

6 After inputting the username and password, select “Log In”, then press ENTER.

If the username and password match, the top menu for Spotify is displayed.

7 Use \(\Delta \nabla\) to select menu and then press ENTER.

   Search
   Searches for tracks, artists or albums by entering keywords.

   What’s New
   Displays the list of the latest albums.

   Starred
   Displays the list of the starred tracks.

   Playlists
   Displays the playlists for Spotify.

   Accounts
   Manages accounts (Log out, Add new user, Switch to user).

8 Use \(\Delta \nabla\) to select a station, and press ENTER or \(\Uparrow\) to start playback.

Playback starts and the following screen appears.
Menu items on playback screen.

- **Star this track**
  Adds a star to the selected track.

- **Browse albums by “Artist name”**
  Displays the list of albums by the artist of the track that is being played back.

- **Browse tracks on “Album name”**
  Displays the list of tracks on the album that is being played back.

- **Adjusting the sound quality (M-DAX)**
  Make this setting at “M-DAX” (page 111) in the menu. You can use the “M-DAX” function to restore to a state close to the audio before compression while correcting the bass feel to enjoy a richer playback experience. The default setting is “Off”.

- **Switching the screen display**
  Press STATUS on the main unit. The display switches between track title, artist name, and album title each time the button is pressed.

- **Going back to the previous screen**
  Press ▼ or BACK.

- **Changing the screen display duration**
  Make this setting at “Audio Display” (page 120) in the menu. The default setting is “30s”. Press △△∀∀ while the display is off to return to the original screen.

Operations available through the OPTION button

Press the OPTION button to display a menu of functions that can be used on the TV screen. Select the function you want to use from this menu. You can easily find and use the desired function.

- **Performing repeat playback (Repeat)** (page 72)

- **Performing random playback (Random)** (page 72)

Spotify operation buttons

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH/PAGE ▲▼</td>
<td>Page search</td>
</tr>
<tr>
<td>INFO</td>
<td>Display of information such as the source name, volume, and sound mode name</td>
</tr>
<tr>
<td>OPTION</td>
<td>Repeat playback / Random playback</td>
</tr>
<tr>
<td>△△∀∀</td>
<td>Cursor operation / Auto search (cue, △△)</td>
</tr>
<tr>
<td>ENTER (Press and release)</td>
<td>Enter</td>
</tr>
<tr>
<td>ENTER (Press and hold)</td>
<td>Stop</td>
</tr>
<tr>
<td>BACK</td>
<td>Return</td>
</tr>
<tr>
<td>SETUP</td>
<td>Setup menu</td>
</tr>
<tr>
<td></td>
<td>Pause</td>
</tr>
<tr>
<td></td>
<td>Playback / Pause</td>
</tr>
<tr>
<td></td>
<td>Stop</td>
</tr>
<tr>
<td></td>
<td>Auto search (cue)</td>
</tr>
</tbody>
</table>
Convenient functions

Here, we explain how to use convenient functions for NETWORK sources and USB sources. The source names under the titles of each function’s description are sources that allow use of these functions.

- Searching content with keywords (Text Search) (page 71)
- Performing repeat playback (Repeat) (page 72)
- Performing random playback (Random) (page 72)
- Favorites function (page 73)
- Playing back music and a favorite picture at the same time (Picture View) (page 74)
- Playing back still images in sequential order (Slideshow) (page 74)

Searching content with keywords (Text Search)

1. While content is playing, press OPTION. The option menu screen is displayed.

2. Use \( \uparrow \downarrow \) to select “Text Search”, then press ENTER. The keyboard input screen is displayed.

3. Enter the first character of the Internet radio station or file you want to search for, and then press OK.

   - For character input, see page 107.

   “Text Search” searches for Internet radio stations or files that start with the entered first character from the displayed list.

   NOTE

   “Text Search” may not work for some lists.

Playing back a search result content

Use \( \uparrow \downarrow \) to select the content you want to play, and then press ENTER or \( \triangleright \). Playback starts.
Performing repeat playback (Repeat)

1. While content is playing, press OPTION.
   The option menu screen is displayed.

2. Use △▽ to select “Repeat”, then press ENTER.

3. Use ◄► to select repeat playback mode.
   - Each time ◄► is pressed, the setting is changed as shown below.
     - Off: Repeat playback mode is canceled.
     - One: A file being played is played repeatedly.
     - All: All files in the folder currently being played are played repeatedly.

4. Press ENTER.
   The display returns to the playback screen.

Performing random playback (Random)

1. While content is playing, press OPTION.
   The option menu screen is displayed.

2. Use △▽ to select “Random”, then press ENTER.

3. Use ◄► to select random playback mode.
   - Each time ◄► is pressed, the setting is changed as shown below.
     - Off: Disable random playback.
     - On: Enable random playback.

4. Press ENTER.
   The display returns to the playback screen.

The random playback randomly selects a track to play back from all tracks every time a track ends. Therefore, the same track may be played back consecutively.
Favorites function

There are two ways to add content to favorites:
① Add to favorites from the Option menu
② Add to the FAVORITE STATION button

Add to favorites from the Option menu (Favorite Memory)
- Internet Radio
- Media Server

You can add up to 100 items as favorites for all sources (Internet Radio and Media Server).

1. While content is playing, press OPTION.
The option menu screen is displayed.
2. Use △▼ to select “Favorite Memory”, then press ENTER.
“Favorite added” is displayed, and the current content is added to favorites.

While content is playing, press and hold one of the FAVORITE STATION 1 – 4 buttons for more than 3 seconds.
The content is added to the button you pressed.

3. Use △▼ to select the content you want to play, and then press ENTER or ▶.
Playback starts.

Playing back content added in “Favorite Memory”

Press NETWORK.

Use △▼ to select “Favorites”, then press ENTER.

Contents that can be added to the FAVORITE STATION button differ depending on the input source.

<table>
<thead>
<tr>
<th>Input source</th>
<th>Contents that can be added</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD Radio</td>
<td>input source / Radio station</td>
</tr>
<tr>
<td>Internet Radio</td>
<td>input source / Internet Radio station</td>
</tr>
<tr>
<td>Media Server</td>
<td>input source / Track</td>
</tr>
<tr>
<td>Flickr</td>
<td>input source</td>
</tr>
<tr>
<td>Pandora</td>
<td>input source</td>
</tr>
<tr>
<td>SiriusXM</td>
<td>input source</td>
</tr>
<tr>
<td>Spotify</td>
<td>input source</td>
</tr>
<tr>
<td>Favorites</td>
<td>input source</td>
</tr>
</tbody>
</table>

Adding to the FAVORITE STATION button

You can add up to four types of content.

NOTE
- Please note that if you add new content to a number that already contains content, the older content is deleted.
- The following operations update the database on the media server, which may make the added music files unplayable.
- When you quit the media server and then restart it.
- When music files are deleted or added on the media server.
- When using an ESCIENT server, place “ESCIENT” before the server name.

Playing back content added to the FAVORITE STATION button

You can easily call up content by pressing the FAVORITE STATION 1 – 4 buttons that you added content to.
Playback starts.

When the FAVORITE STATION 1 – 4 buttons is pressed, the AVR-operation mode starts automatically.
Convenient functions

Deleting content added to favorites (Remove Favorites)

1 Press NETWORK.

2 Use △▼◄► to select “Favorites”, then press ENTER.

3 Use △▼ to select the content you want to delete from favorites, then press OPTION. The option menu screen is displayed.

4 Use △▼ to select “Remove Favorites”, then press ENTER. “Favorite removed” is displayed, and the selected content is deleted from favorites.

The display returns to the original screen when the procedure is completed.

Playing back music and a favorite picture at the same time (Picture View)

1 Play back a still picture (page 62).

2 Play back a music file or Internet radio station (page 54, 59).

3 Press OPTION. The option menu screen is displayed.

4 Use △▼ to select “Picture View”, then press ENTER. The option menu disappears, and the picture you were viewing is shown on the screen.

Playing back still images in sequential order (Slideshow)

You can play back still image (JPEG) files stored on a USB memory device or media server and pictures on Flickr website as a slide show. The display time can also be set.

1 Play back an image and press OPTION. The option menu screen is displayed.

2 Use △▼ to select “Slideshow”, then press ENTER.

3 Use ◀▶ to set the display time.

• Each time ◀▶ is pressed, the setting is changed as shown below.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Off</th>
<th>5s</th>
<th>10s</th>
<th>15s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60s</td>
<td>30s</td>
<td>20s</td>
<td></td>
</tr>
</tbody>
</table>

Off The slide show is not played back.

5s – 60s Set the time for displaying a single image when playing back images in the slide show.

4 Press ENTER. The slide show is displayed on the screen.

This unit plays back image (JPEG) files in the orientation in which they are stored in the folder.
AirPlay function

Enjoy music from your iTunes library with high quality sound anywhere in your home.

Use the Apple Remote app for iPhone, iPod touch and iPad to control iTunes from any room in your home.

* Available as a free download from the App Store.

.streaming music stored in iPhone, iPod touch, or iPad directly to the unit

If you update your “iPhone/iPod touch/iPad” to iOS 4.2.1 or later, you can stream music stored in your “iPhone/iPod touch/iPad” directly to this unit.

1. Make the Wi-Fi settings for iPhone, iPod touch, or iPad.
   • For details, see your device’s manual.

2. Startup iPhone, iPod touch, or iPad app.
   ( is displayed on the iPhone, iPod touch or iPad screen.

3. Tap the AirPlay icon.

4. Select the speaker you want to use.

NOTE
In playback using the AirPlay function, the sound is output at the iPhone, iPod touch, iPad or iTunes volume setting level. You should turn down the iPhone, iPod touch, iPad or iTunes volume prior to playback and then adjust it to a suitable level.

Playing iTunes music with this unit

1. Install iTunes 10, or later, on a Mac or Windows PC that is connected to the same network as this unit.

2. Turn this unit ON.
   Set “IP Control” (page 131) to “Always On” for this unit.

NOTE
When “IP Control” is set to “Always On”, the unit consumes more standby power.

3. Launch iTunes and click the AirPlay icon displayed in the lower right of the window and select this unit from the list.

4. Choose a song and click play in iTunes.
   The music will stream to this unit.

Selecting multiple speakers (devices)
It is possible to play iTunes songs on your home’s AirPlay compatible speakers (devices) other than those of this unit.

1. Click the AirPlay icon and select “Multiple Speakers” from the list.

2. Check the speakers you want to use.

![See overleaf]
Perform iTunes playback operations with the remote control unit of this unit
With this unit’s remote control unit, you can perform iTunes song play, pause, and auto search (cue) operations.

1. Select “Edit” – “Preferences...” on the menu.
2. Select “Devices” in the iTunes setting window.
3. Check “Allow iTunes control from remote speakers”, and then click “OK”.

![Device backups]

- ![AirPlay function](image)
  - ![Screen](image)
  - ![Screen](image)

- ![Screen](image)
  - ![Screen](image)

- ![Screen](image)
  - ![Screen](image)

- ![Screen](image)
  - ![Screen](image)

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Selecting a listening mode (Sound Mode)

This unit allows you to enjoy various kinds of surround and stereo playbacks.

Multi-channel audio formats are adopted by many of the contents including Blu-ray disc and DVD as well as digital broadcasting and Internet-delivered movies and music.

This unit supports playback of almost all of these multi-channel audio formats. It also supports surround playback of audio formats other than multi-channel audio such as 2-channel stereo audio.

This unit automatically generates a list of all the playable sound modes based on the input audio format and the current speaker setup configuration and displays the list on the screen. Therefore, you can select a correct surround playback mode even if you are not familiar with sound mode selection. Try out various surround playback modes and enjoy surround playback in your favorite mode.

Example When MOVIE is pressed and held

The displayed sound modes include the 2-channel stereo playback mode.

For audio formats recorded in a disc, see the disc jacket.

Selecting a listening mode

1 Play the selected device (page 37 – 69).

2 Press and hold MOVIE, MUSIC or GAME to select a listening mode.

This unit automatically generates and displays a list of selectable sound modes.

• Each time MOVIE, MUSIC or GAME is pressed, the listening mode is switched.

• Pressing MOVIE, MUSIC or GAME displays a list of the listening modes that can be selected. Each time you press MOVIE, MUSIC or GAME, the listening mode changes.

• While the list is displayed, you can also use Δ to select a listening mode.

• The MOVIE, MUSIC, or GAME button memorizes the last sound mode selected for its button. Pressing MOVIE, MUSIC, or GAME recalls the same sound mode as the one selected at the previous playback.

• If the content played back does not support the previously selected sound mode, the most standard sound mode for the content is automatically selected.

• This can also be set by pressing MOVIE, MUSIC, or GAME on the main unit.

Direct playback

Sound recorded in source is played as is.

1 Play the selected device (page 37 – 69).

2 Press PURE to select “DIRECT”.

Direct playback begins.

Pure direct playback

This mode is for playback in higher sound quality than in “DIRECT” mode. Turn the display of the amplifier off to stop the analogue video circuit. This suppresses the source of noise that affects sound quality.

1 Play the selected device (page 37 – 69).

2 Press PURE to select “PURE DIRECT On”.

PURE DIRECT indicator on the main unit lights.

The display goes dark, and pure direct playback begins.

• In DIRECT and PURE DIRECT listening mode, the following items cannot be adjusted.
  • Tone (page 110)
  • MultEQ® XT (page 112)
  • Dynamic EQ (page 113)
  • Dynamic Volume (page 113)
  • M-DAX (page 111)
  • This can also be set by pressing PURE DIRECT on the main unit.

NOTE

• Video signals are only output when HDMI signals are played in the PURE DIRECT mode.
• When in the PURE DIRECT mode, the menu screen is not displayed.
• When in the PURE DIRECT mode, the display turns off and appears as if there is no electricity.
### Auto surround playback
This mode detects the type of input digital signal, and automatically selects the corresponding mode for playback.

1. **Play the selected device** ([page 37 – 69]).
2. **Press** **PURE to select “AUTO”**. Auto surround playback begins.

   ![Image](image.png)

   - This can also be set by pressing **PURE DIRECT** on the main unit.

---

### Listening mode
- The following listening modes can be selected using the MOVIE, MUSIC, GAME, and PURE buttons.
- Adjust the sound field effect with the menu “Surround Parameter” ([page 109]) to enjoy your favorite sound mode.

#### Operation button | Input signal | Listening mode
--- | --- | ---
2-channel | STEREO | MOVIE
 | AUTO | MOVIE
 | DOLBY PLIIx Movie | MOVIE
 | DOLBY PLII Movie | MOVIE
 | DOLBY Pro Logic | MOVIE
 | DOLBY Pro Logic A-DSX | MOVIE
 | DTS NEO:6 Cinema | MOVIE
 | DTS NEO:6 Cinema A-DSX | MOVIE
 | DOLBY PLIIz Height | MOVIE
 | MULTI CH STEREO | MOVIE
 | VIRTUAL | MOVIE

#### Operation button | Input signal | Listening mode
--- | --- | ---
Multi-channel | STEREO | MOVIE
 | AUTO | MOVIE
 | DOLBY DIGITAL / DOLBY DIGITAL A-DSX | MOVIE
 | DOLBY DIGITAL EX | MOVIE
 | DOLBY DIGITAL + PLIIx Movie | MOVIE
 | DOLBY DIGITAL + PLIIz | MOVIE

#### Operation button | Input signal | Listening mode
--- | --- | ---
Dolby Digital | DOLBY TrueHD / DOLBY TrueHD A-DSX | MOVIE
 | DOLBY TrueHD + EX | MOVIE
 | DOLBY TrueHD + PLIIx Movie | MOVIE
 | DOLBY TrueHD + PLIIz | MOVIE

#### Operation button | Input signal | Listening mode
--- | --- | ---
Dolby TrueHD Plus | DOLBY DIGITAL Plus / DOLBY DIGITAL Plus A-DSX | MOVIE
 | DOLBY DIGITAL Plus + EX | MOVIE
 | DOLBY DIGITAL Plus + PLIIx Movie | MOVIE
 | DOLBY DIGITAL Plus + PLIIz | MOVIE

#### Operation button | Input signal | Listening mode
--- | --- | ---
DTS | DTS SURROUND / DTS SURROUND A-DSX | MOVIE
 | DTS ES DSCRT 6.1 | MOVIE
 | DTS ES MTRX 6.1 | MOVIE
 | DTS 96/24 | MOVIE
 | DTS + NEO:6 | MOVIE
 | DTS + PLIIx Movie | MOVIE
 | DTS + PLIIz | MOVIE

---

1. 2-channel also includes analog input.
2. When **AUTO** mode is selected, the sound mode that is compatible with the input signal is used for playback.
3. This mode plays back 2-channel source in 5.1 or 7.1-channel playback. It cannot be selected when headphones are used, or when only front speakers are used.
4. Some listening modes cannot be selected, depending on the audio format or number of channels of the input signal. For details, see “Types of input signals, and corresponding sound modes” ([page 161]).
5. These modes add a new channel to the 5.1 channel surround using Audyssey DSX® processing ([page 113]). When “On-Height-” is selected in Audyssey DSX®, a front height channel is added in playback. When “On-Wide-” is selected, a front wide channel is added in playback.

---

### See overleaf
## Selecting a listening mode

<table>
<thead>
<tr>
<th>Operation button</th>
<th>Input signal</th>
<th>Listening mode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2-channel #1</strong></td>
<td>STEREO</td>
<td>DTS-HD / DTS Express</td>
</tr>
<tr>
<td></td>
<td>AUTO</td>
<td>DTS-HD MSTR / DTS-HD MSTR A-DSX</td>
</tr>
<tr>
<td></td>
<td>Dolby Digital</td>
<td>DTS Express / DTS Express A-DSX</td>
</tr>
<tr>
<td></td>
<td>Dolby TrueHD</td>
<td>DTS HD + NEO:6</td>
</tr>
<tr>
<td></td>
<td>Dolby Digital Plus</td>
<td>DTS HD + PLIIx Music</td>
</tr>
<tr>
<td></td>
<td>DTS</td>
<td>DTS HD + PLIIz</td>
</tr>
<tr>
<td><strong>Multi-channel #4</strong></td>
<td>STEREO</td>
<td>PCM/DSD</td>
</tr>
<tr>
<td>Dolby TrueHD</td>
<td>Dolby TrueHD / Dolby TrueHD A-DSX</td>
<td>DTS HD MSTR / DTS HD MSTR A-DSX</td>
</tr>
<tr>
<td></td>
<td>DTS</td>
<td>DTS HD + NEO:6</td>
</tr>
<tr>
<td></td>
<td>Dolby Digital Plus</td>
<td>DTS HD + PLIIx Music</td>
</tr>
<tr>
<td></td>
<td>DTS</td>
<td>DTS HD + PLIIz</td>
</tr>
</tbody>
</table>

### Notes

1. 2-channel also includes analog input.
2. When AUTO mode is selected, the sound mode that is compatible with the input signal is used for playback.
3. This mode plays back 2-channel source in 5.1 or 7.1-channel playback. It cannot be selected when headphones are used, or when only front speakers are used.
4. Some listening modes cannot be selected, depending on the audio format or number of channels of the input signal. For details, see “Types of input signals, and corresponding sound modes” (page 161).
5. These modes add a new channel to the 5.1 channel surround using Audyssey DSX® processing (page 113). When “On-Height-” is selected in Audyssey DSX® (page 113), a front height channel is added in playback. When “On-Wide-” is selected, a front wide channel is added in playback.
## Selecting a listening mode

### Operation button Input signal Listening mode

<table>
<thead>
<tr>
<th>2-channel</th>
<th>STEREO #1</th>
<th>AUTO #2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOLBY PLIIx Game #3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOLBY PLII Game #3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOLBY PLII Game A-DSX #5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOLBY PLII Height #3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MULTI CH STEREO</td>
<td>VIRTUAL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Multi-channel</th>
<th>STEREO</th>
<th>AUTO #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dolby Digital</td>
<td>DOLBY DIGITAL / DOLBY DIGITAL A-DSX #5</td>
<td>DOLBY DIGITAL EX</td>
</tr>
<tr>
<td></td>
<td>DOLBY DIGITAL PLIIx / DOLBY DIGITAL PLIIx</td>
<td>DOLBY DIGITAL PLIIx</td>
</tr>
<tr>
<td>Dolby TrueHD</td>
<td>DOLBY TrueHD / DOLBY TrueHD A-DSX #5</td>
<td>DOLBY TrueHD + EX</td>
</tr>
<tr>
<td></td>
<td>DOLBY TrueHD PLIIx / DOLBY TrueHD PLIIx</td>
<td>DOLBY TrueHD PLIIx</td>
</tr>
<tr>
<td>Dolby Digital Plus</td>
<td>DOLBY DIGITAL Plus / DOLBY DIGITAL Plus A-DSX #5</td>
<td>DOLBY DIGITAL Plus + EX</td>
</tr>
<tr>
<td></td>
<td>DOLBY DIGITAL Plus PLIIx / DOLBY DIGITAL Plus PLIIx</td>
<td>DOLBY DIGITAL Plus PLIIx</td>
</tr>
<tr>
<td>DTS</td>
<td>DTS SURROUND / DTS SURROUND A-DSX #5</td>
<td>DTS ES DSCRT 6.1</td>
</tr>
<tr>
<td></td>
<td>DTS ES MTRX 6.1</td>
<td>DTS 96/24</td>
</tr>
<tr>
<td></td>
<td>DTS + NEO:6</td>
<td>DTS + PLIIx</td>
</tr>
<tr>
<td>DTS-HD</td>
<td>DTS-HD HI RES / DTS-HD HI RES A-DSX #5</td>
<td>DTS-HD MSTR / DTS-HD MSTR A-DSX #5</td>
</tr>
<tr>
<td>DTS Express</td>
<td>DTS Express / DTS Express A-DSX #5</td>
<td>DTS-HD + NEO:6</td>
</tr>
<tr>
<td></td>
<td>DTS-HD + PLIIx</td>
<td>DTS-HD + PLIIx</td>
</tr>
<tr>
<td>PCM/DSD</td>
<td>MULTI CH IN / MULTI CH IN A-DSX #5</td>
<td>MULTI CH IN 7.1</td>
</tr>
<tr>
<td>multi-channel</td>
<td>MULTI CH IN + Dolby EX</td>
<td>MULTI IN + PLIIx</td>
</tr>
<tr>
<td></td>
<td>MULTI CH STEREO</td>
<td>VIRTUAL</td>
</tr>
</tbody>
</table>

### Operation button Input signal Listening mode

<table>
<thead>
<tr>
<th>DIRECT</th>
<th>All</th>
<th>PURE DIRECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO #2</td>
<td></td>
<td>AUTO #2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIRECT</th>
<th>All</th>
<th>PURE DIRECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO #2</td>
<td></td>
<td>AUTO #2</td>
</tr>
</tbody>
</table>

### Views on the TV screen or display

1. Shows a decoder to be used. A DOLBY DIGITAL Plus decoder is displayed as “+ PLIIx”.
2. Shows a decoder that creates sound output from the surround back speakers. “+ PLIIx” indicates the front height sound from front height speakers.
3. Shows the name of the input source being played back.

When “On-Height-” is selected in Audyssey DSX® processing (page 113), a front height channel is added in playback. When “On-Wide-” is selected, a front wide channel is added in playback.

Some listening modes cannot be selected, depending on the audio format or number of channels of the input signal. For details, see “Types of input signals, and corresponding sound modes” (page 161).
## Description of listening mode types

### Dolby listening mode

<table>
<thead>
<tr>
<th>Listening mode type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOLBY PLx*1</td>
<td>This mode can be selected when a Dolby Pro Logic IIx decoder is used to play back 2-channel source in 6.1/7.1-channel surround sound including the surround back channel. By adding the surround back channel, a stronger surround feeling is obtained compared to Dolby Pro Logic II. There are three playback modes: “Movie” mode that is optimized for movie playback, “Music” mode that is optimized for music playback, and “Game” mode that is optimized for game play.</td>
</tr>
<tr>
<td>DOLBY PLII</td>
<td>This mode can be selected when a Dolby Pro Logic II decoder is used to play back 2-channel source in 5.1-channel surround sound with a natural, realistic feel.</td>
</tr>
<tr>
<td>DOLBY Pro Logic</td>
<td>This mode can be selected when a Dolby Pro Logic decoder is used to play back 2-channel source in 4.1-channel surround sound (Left/Center/Right/Surround Mono).</td>
</tr>
<tr>
<td>DOLBY PLIIz*2</td>
<td>This mode can be selected when a Dolby Pro Logic IIz decoder is used to play back 2-channel source in 7.1-channel surround sound with added front height channel. By adding a front height channel, the vertical expression is emphasized, improving the three-dimensionality of the sound.</td>
</tr>
<tr>
<td>DOLBY DIGITAL</td>
<td>This mode can be selected when playing sources recorded with Dolby Digital.</td>
</tr>
<tr>
<td>DOLBY DIGITAL EX*1</td>
<td>Using a Dolby Digital EX decoder, this mode plays Dolby Digital source in 6.1/7.1 channel surround sound with added surround back channel. By adding a surround back channel, spatial expressiveness and sound localization are enhanced.</td>
</tr>
<tr>
<td>DOLBY TrueHD</td>
<td>This mode can be selected when playing sources recorded with Dolby TrueHD.</td>
</tr>
<tr>
<td>DOLBY DIGITAL Plus</td>
<td>This mode can be selected when playing sources recorded with Dolby Digital Plus.</td>
</tr>
</tbody>
</table>

**1** This can be selected when “Speaker Config.” – “Surr. Back” is not set to “None”.

**2** This can be selected when “Speaker Config.” – “Front Height” is not set to “None”.

### DTS listening mode

<table>
<thead>
<tr>
<th>Listening mode type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTS NEO:6</td>
<td>This mode can be selected when a DTS NEO:6 decoder is used to play back 2-channel source in 6.1/7.1-channel surround sound including the surround back channel. There is a “Cinema” mode optimized for movie playback, and a “Music” mode optimized for music playback.</td>
</tr>
<tr>
<td>DTS SURROUND</td>
<td>This mode can be selected when playing sources recorded in DTS.</td>
</tr>
<tr>
<td>DTS ES DSCRT6.1*</td>
<td>This mode is suitable for playing discs recorded in DTS-ES. The surround back channel added using the discrete method is played as an independent channel. Since all channels are independent, the 360-degree spatial expressiveness and sound localization are enhanced.</td>
</tr>
<tr>
<td>DTS ES MTRX6.1*</td>
<td>This mode is suitable for playing discs recorded in DTS-ES. The surround back channel added to the surround-left and surround-right channels by a matrix encoder at software recording time is decoded by this unit’s matrix decoder and played from each channel (surround left, surround right, surround back).</td>
</tr>
<tr>
<td>DTS 96/24</td>
<td>This mode can be selected when playing sources recorded in DTS 96/24.</td>
</tr>
<tr>
<td>DTS-HD</td>
<td>This mode can be selected when playing sources recorded in DTS-HD.</td>
</tr>
<tr>
<td>DTS Express</td>
<td>This mode can be selected when playing sources recorded in DTS Express.</td>
</tr>
</tbody>
</table>

* This can be selected when “Speaker Config.” – “Surr. Back” is not set to “None”.

### PCM multi-channel listening mode

<table>
<thead>
<tr>
<th>Listening mode type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MULTI CH IN</td>
<td>This mode can be selected when playing multi-channel PCM sources.</td>
</tr>
</tbody>
</table>

See overleaf
### Audyssey DSX listening mode

<table>
<thead>
<tr>
<th>Listening mode type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audyssey DSX (A-DSX)*</td>
<td>This mode creates playback for the new channels (front wide or front height) in 5.1-channel systems. By adding front wide or front high channels, the surround sound effects sound more three dimensional and realistic. *This can be selected when a setting other than “None” is selected for “Front Height” or “Front Wide”, and a setting other than “None” is selected for “Center” in “Speaker Config.” (Page 127).</td>
</tr>
</tbody>
</table>

### Original listening mode

<table>
<thead>
<tr>
<th>Listening mode type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MULTI CH STEREO</td>
<td>This mode is for enjoying stereo sound from all speakers. The same sound as that from the front speakers (L/R) is played back at the same level from the surround speakers (L/R) and surround back speakers (L/R).</td>
</tr>
<tr>
<td>VIRTUAL</td>
<td>This mode is for enjoying surround effects using only the front speakers or headphones.</td>
</tr>
</tbody>
</table>

### AUTO listening mode

<table>
<thead>
<tr>
<th>Listening mode type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO</td>
<td>In this mode, the type of digital signal input, such as Dolby Digital, Dolby TrueHD, Dolby Digital Plus, DTS, DTS-HD, PCM (multi-channel) is detected, and the playback mode switches automatically to the corresponding mode. If the input signal is analog or PCM (2-channel), stereo playback is used.</td>
</tr>
</tbody>
</table>

### STEREO listening mode

<table>
<thead>
<tr>
<th>Listening mode type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEREO</td>
<td>This is the mode for playing in stereo. The tone can be adjusted. • Sound is output from the front left and right speakers and subwoofer. • If multichannel signals are input, they are mixed down to 2-channel audio and are played.</td>
</tr>
</tbody>
</table>

### Direct listening mode

<table>
<thead>
<tr>
<th>Listening mode type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIRECT</td>
<td>Sound recorded in source is played as is.</td>
</tr>
<tr>
<td>PURE DIRECT</td>
<td>This mode is for playback in higher sound quality than in DIRECT mode. Turn the display of the amplifier off to stop the analogue video circuit. This suppresses the source of noise that affects sound quality.</td>
</tr>
</tbody>
</table>
Advanced version

Here, we explain functions and operations that let you make better use of this unit.

- Installation/connection/setup of speakers (Advanced) page 84
- Connections (Advanced connection) page 90
- Playback (Advanced operation) page 92
- Playback in ZONE2/ZONE3 (Separate room) page 100
- How to make detailed settings page 103
- Operating external devices with the remote control page 140
**Installation Procedure**

1. **Install**
2. **Connect** *(page 86)*
3. **Set up speakers** *(page 88)*

**Install**

Determine the speaker system depending on the number of speakers you are using and install each speaker and subwoofer in the room. Here, we explain how to install the speakers using a typical example.

This unit is compatible with Audyssey DSX® *(page 166)* and Dolby Pro Logic IIz *(page 166)*, which offers an even wider and deeper surround sensation.

- **When using Audyssey DSX™**, install front wide speakers or front height speakers.
- **When using Dolby Pro Logic IIz**, install front height speakers.

Use the illustration below as a guide for how high each speaker should be installed. The height does not need to be exactly the same.

- **Surround speaker**
  - At least 3.3 ft/1 m
  - Point slightly downwards

- **Surround back speaker**
  - Point slightly downwards

- **Front wide speaker**
  - Recommended for Dolby Pro Logic IIz
  - Recommended for Audyssey DSX®

**NOTE**

You cannot have audio output from the surround back speakers, front height speakers and front wide speakers simultaneously.

*1 Recommended for Dolby Pro Logic IIz
*2 Recommended for Audyssey DSX®
When 7.1-channel speakers are installed using surround back, front height, and front wide speakers

- When using Audyssey DSX®, install front wide speakers or front height speakers.
- When using Dolby Pro Logic IIz, install front height speakers.

<table>
<thead>
<tr>
<th>Speaker abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL  Front speaker (L)</td>
</tr>
<tr>
<td>FR  Front speaker (R)</td>
</tr>
<tr>
<td>C   Center speaker</td>
</tr>
<tr>
<td>SW  Subwoofer</td>
</tr>
<tr>
<td>SL  Surround speaker (L)</td>
</tr>
<tr>
<td>SR  Surround speaker (R)</td>
</tr>
<tr>
<td>SB  Surround back speaker</td>
</tr>
</tbody>
</table>

When 6.1ch speakers are installed

- When 6.1-channel speakers are installed

When 5.1ch speakers are installed

- When 6.1-channel speakers are installed
Connect

- Example of connections to marantz MM7055 and MM7025 power amp

**7.1-channel (Surround back / Front height / Front wide speaker) connection**

**6.1-channel (Surround back speaker) connection**

If you are using just one surround back speaker, connect it to the UNBALANCED or BALANCED PRE OUT SBL terminals on the power amp.

For speaker settings in this case, see "When 6.1ch speakers are installed" (page 85).
Connect

5.1-channel connection

2.1-channel connection

For connecting four subwoofers
Four subwoofers can be connected to this unit.
The same signal is output from each subwoofer terminal.
Set up speakers

This section describes detailed settings for Audyssey® Setup.

Connecting the Pre Tuner, Power Amplifier and your TV.

Before Audyssey® Setup measurement, the settings shown below can be made.

- Setting the channels to be used (Channel Select)

If channels that are not to be used are set in advance, measurement for the set channels is skipped, and measuring time can be reduced. You can also change the number of surround back speakers (page 88 “Set up “Channel Select””).

Audio output from each PRE OUT terminal

<table>
<thead>
<tr>
<th>UNBALANCED</th>
<th>PRE OUT Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL/FR</td>
<td>C</td>
</tr>
<tr>
<td>Subwoofer 1/Surround</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BALANCED PRE OUT terminal</th>
<th>PRE OUT Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL/FR</td>
<td>C</td>
</tr>
<tr>
<td>Subwoofer 2/Surround Back</td>
<td>Front Height</td>
</tr>
</tbody>
</table>

When using a remote control with preset codes registered (page 143), press AVR to set the remote control to the AVR-operation mode before operation.

1 Set up the remote control unit

- Set up the zone mode

Press ZONE SELECT to switch “MAIN”.

2 Connect the setup microphone.

When the setup microphone is connected, the following screen is displayed.

3 Set up “Channel Select”

Use △▼ to select “Channel Select”, and then press ENTER.
4 Use △▽ to select a channel, and then press ENTER.

- **Subwoofer**: Select for no subwoofers to be used. In this case, go to step 5.
- **Surround Back**: Select the number of surround back speakers to be used. In this case, go to step 6.
- **Front Height**: Select for no front height speakers to be used. In this case, go to step 7.
- **Front Wide**: Select for no front wide speakers to be used. In this case, go to step 8.

5 Use ◄► to set whether or not a subwoofer channel is measured, and then press ENTER.

- **Measure**: Set for measuring a subwoofer.
- **Skip**: Set for no measuring of a subwoofer.

6 Use ◄► to set whether or not a surround back channel is measured, and then press ENTER.

- **Measure (2 spkrs)**: Set for measuring two surround back speakers.
- **Measure (1 spkr)**: Set for measuring a surround back speaker.
- **Skip**: Set for no measuring of a surround back speaker.

7 Use ◄► to set whether or not a front height channel is measured, and then press ENTER.

- **Measure**: Set to measure the front height speakers.
- **Skip**: Set when you do not want to measure the front height speakers.

8 Use ◄► to set whether or not a front wide channel is measured, and then press ENTER.

- **Measure**: Set to measure the front wide speakers.
- **Skip**: Set when you do not want to measure the front wide speakers.

9 Press ◄ or BACK.

Proceed to page 31 [Preparation] step 5.

**NOTE**

After performing Audyssey® Setup, do not change the speaker connections or subwoofer volume. In event of a change, perform Audyssey® Setup again.
Connections (Advanced connection)

Connecting the REMOTE CONTROL connectors

Performing operations on this unit and external devices

- You can connect an IR receiver to this unit to perform operations on this unit and external devices with the supplied remote control unit.
- To do this, disable the remote control signal receiving function (page 98 “Remote lock function”).

NOTE
When not connecting an IR receiver, make sure to enable the remote control signal receiving function. When the function is disabled, you cannot perform operations with the remote control unit.

Remotely connecting marantz devices

- When you are using a marantz device other than this unit that supports remote connection, an IR receiver is not necessary.
- You can transmit remote control signals just by connecting the device to the REMOTE CONTROL IN/OUT connector with a monaural cable.
- Set the remote control switch located on the rear panel of the connected audio component to “EXTERNAL” or “EXT.” to use this feature.
- If a marantz power amplifier (excluding certain models) is connected to any of these connectors, the power of the power amplifier switches to on/standby in conjunction with the ON/STANDBY button of the this unit.
Connecting an external control device

RS-232C connector
When you connect an external control device, you can control this unit with the external control device (such as power supply operation, volume adjustment, and input source switching).

Perform the operation below beforehand.
① Turn on the power of this unit.
② Turn off the power of this unit from the external controller.
③ Check that the unit is in the standby mode.

DC OUT jacks
When a device with DC IN jack is connected, the connected device’s power on/standby can be controlled through linked operation to this unit.
The DC OUT jack outputs a maximum 12 V/150 mA electrical signal.

12 V/150 mA trigger-compatible device

NOTE
• Use the monaural mini-plug cable for connecting DC OUT jacks. Do not use the stereo mini-plug cable.
• If the permissible trigger input level for the connected device is larger than 12 V/150 mA, or has shorted, the DC OUT jack cannot be used. In this case, turn off the power to the unit, and disconnect it.
HDMI control function

If you connect the unit and an HDMI control function compatible TV or player with an HDMI cable and then enable the HDMI control function setting on each device, the devices will be able to control each other.

 quizzes }

Operations possible by HDMI control

- This unit power off can be linked to the TV power off step.
- You can switch audio output devices with a TV operation.
  When you set “Output audio from amp” in the TV audio output setup operation, you can switch the amp power on.
- You can adjust this unit volume in the TV volume adjustment operation.
- You can switch this unit input sources through linkage to TV input switching.
- When playing the player, this unit input source switches to the source for that player.
- If you switch the input source of the unit to “TV AUDIO”, you can play TV audio with this unit (“page 9 “About ARC (Audio Return Channel) function”).
- When “HDMI Control” (“page 117) in the menu is set to “On”, signals input to the HDMI input connector are output to the television or other device connected to the HDMI output connector, even if the power of this unit is in standby (pass-through function).

To use this unit to play the audio of a TV that does not support the ARC function, connect the TV with an optical-digital or analog connection (“page 9”).

To use the pass-through function, connect an HDMI connection device that is compatible with HDMI control.

Setting procedure

1. Set the HDMI output connector corresponding with the HDMI control function.
   Set “HDMI Control” (“page 117) to “On”.
2. Turn the power on for all the devices connected by HDMI cable.
3. Set the HDMI control function for all devices connected by HDMI cable.
   - Please consult the operating instructions for the connected devices to check the settings.
   - Carry out steps 2 and 3 should any of the devices be unplugged.
4. Switch the television input to the HDMI input connected to this unit.
5. Switch this unit input to the HDMI input source and check if the picture from the player is ok.
6. When you turn the TV’s power to standby, check that the power of this unit also goes to standby.
If the HDMI control function does not operate properly, check the following points.

- Is the TV or player compatible with the HDMI control function?
- Is “HDMI Control” (page 117) set to “On”?
- Is “Power Off Control” (page 117) set to “All” or “Video”?
- Is “Control Monitor” (page 117) set for the monitor output connected to television?
- Is “Control Monitor” (page 117) set to the TV that uses the HDMI control function when this unit is connected to two TVs that support HDMI connectors?
- Are the HDMI control function settings of all devices correct?

**NOTE**

- When “HDMI Control” is set to “On”, it consumes more standby power.
- The HDMI control function controls operations of a TV that is compatible with the HDMI control function. Make sure that the TV and HDMI are connected when you perform HDMI control.
- Some functions may not operate depending on the connected TV or player. Check the owner’s manual of each device for details beforehand.
- When “Power Off Control” on the menu is set to “Off” (page 117), this unit is not set to standby even if the connected device is in the standby mode.
- When connection changes are implemented, such as adding connections to HDMI devices, linked operations may be initialized. In this case, you will need to reconfigure the settings.
- When “HDMI Control” is set to “On”, it is not possible to assign an HDMI connector to “TV AUDIO” at “Input Assign” (page 122).
- Should any of the operations below be performed, the interlocking function may be reset, in which case, repeat steps 2 and 3.
  - “Input Assign” – “HDMI” (page 122) setting has changed.
  - “Video Output” (page 117) setting is changed.
  - There is a change to the connection between the devices and the HDMI, or an increase in devices.
- The HDMI ZONE2 function is not compatible with the HDMI control function.
- When the HDMI ZONE2 function is used with “HDMI Control” in the menu set to “On”, the HDMI ZONE2 function may not fully work.
- If “HDMI Control” in the menu is set to “On” and the power of ZONE2 is on, this units may behave as follows. It is recommended to disable the HDMI control function on your TV and player when using the HDMI ZONE2 function. (Some example behaviors are listed below.)
  - When the power of the TV used for MAIN ZONE is off and the player selected for ZONE2 starts playback, the TV used for MAIN ZONE is turned on. In this case, the input source selected for MAIN ZONE changes to the input source selected for ZONE2.
  - When playing back a TV used for MAIN ZONE and ZONE2 with an HDMI connection, turning off the TV used for MAIN ZONE also turns off this unit and the player.
  - When a same input source is selected for MAIN ZONE and ZONE2, stopping playback of the player on the TV stops the playback on the player and the video being played back in ZONE2 as well.
Sleep timer function

• You can have the power automatically switched to standby once a set time has elapsed. This is convenient for viewing and listening while going to sleep.
• The sleep timer function can be set for each zone (page 102 “Sleep timer function”). (The MAIN ZONE setting method is explained here.)

1 Press ZONE SELECT to switch “MAIN”.

2 Press SLEEP and display the time you want to set.
The SLEEP indicator on the display lights.
• If SLEEP on the main unit is pressed, the same function as with the remote control unit can be obtained.

• The time switches as shown below each time SLEEP is pressed.

To confirm the countdown time before putting the unit to sleep
Press SLEEP.
“Sleep : * min” appears on the display.
* Countdown time

To cancel the sleep timer
Press SLEEP to set “Off”.
The SLEEP indicator on the display turns off.

• The sleep timer setting is canceled if this unit’s power is set to standby.
• The sleep timer function can be set separately for the different zones (page 102 “Sleep timer function”).

NOTE
The sleep timer function cannot turn off the power of devices connected to this unit. To turn off the power of those connected devices, set up sleep timers on the connected devices themselves.
Web control function

You can control this unit from a web control screen on a web browser.

- This unit and the PC need to be connected to the network properly (page 27 “Connecting to a home network (LAN)”) in order to use the web control function.
- Depending on the settings of your security-related software, you may not be able to access this unit from your PC. If this is the case, then change the settings of the security-related software.

1. Switch the “IP Control” setting to “Always On” (page 131).

2. Check the IP address of this unit with “Information” (page 131).

3. Start up the web browser.

4. Enter the IP address of this unit in browser’s address box.
   For example, if the IP address of this unit is “192.168.100.19”, enter “http://192.168.100.19/”.

5. When the top menu is displayed, click on the menu item you want to operate.

- By adding this unit’s IP address to the browser’s bookmark, you can display the web control screen using the bookmark function the next time you use the browser. If you are using a DHCP server and “IP Control” (page 131) is set to “Off In Standby”, turning the power on/off changes the IP address.
Click the menu item from which you want to make settings. The display on the right becomes the individual setting screens.

Click when you perform a power operation of the unit.

Click when you update to the latest information. Normally, there is a change to the latest information each time you operate. When operating from the main unit, click this or else the screen will not be updated.

Click to add a setting to “Favorites” in your browser. We recommend registering the setting screens for the different zones in the browser’s favorites so as not to accidentally perform menu operations for zones you do not intend to operate.

Click to return to the top menu. Displayed when setting “Top Menu Link Setup” to “ON” in [Example 3]

To adjust the main volume, click “<”, “>”, or the volume display.

Click “v” to set the sleep timer function.

Displays the name of the selected input source.

Click a button to change the input source.

Register your favorite content.

Displays the sound mode.

The sound mode switches each time you click the button.

Click the menu item from which you want to make settings. The display on the right becomes the individual setting screens.

Click “SAVE” when you want to save settings, and click “LOAD” when you want to call settings.

Enter figures or click “<” or “>” to make the setting, and then click “Set”.

Click an item to make a setting.

Click to return to the previous screen.

Click the content you want to operate.

Use to operate content.

Click “ON” when performing Top Menu Link Setup. When set up, return to the top menu from each operation screen. (Default setting : “OFF”)

Click this item to return to the top menu.
Panel lock function
To prevent accidental operation of this unit, you can disable operation of the buttons on the front panel.

- Disabling all key button operations
  1. Press \(\text{ON/STANDBY}\) while you press and hold \(\text{BACK}\) and \(\text{ENTER}\) with the unit in standby mode.
  2. Press \(\Delta \nabla\) to select “FP/VOL LOCK ON”.
  3. Press \(\text{ENTER}\) to enter the setting.

Disabling all button operations except VOLUME

- Disabling all button operations except VOLUME
  1. Press \(\text{ON/STANDBY}\) while you press and hold \(\text{BACK}\) and \(\text{ENTER}\) with the unit in standby mode.
  2. Press \(\Delta \nabla\) to select “FP LOCK ON”.
  3. Press \(\text{ENTER}\) to enter the setting.

Dual backup memory function
The unit stores settings information in nonvolatile memory even when the main power supply is turned off. Using the Dual Backup Memory function, you can write settings information to another memory area to back up saved settings for recovery anytime as needed. Remembering set details (Backup).

- Remembering set details (Backup)
  1. Set the unit in the state you want remembering, and press and hold \(\text{DISPLAY}\) and \(\text{ZONE SELECT}\) for at least 3 seconds.
  2. “MEMORY SAVING” is shown in the display, and the setting details are remembered.

  **NOTE**
  - The volume is not remembered.
  - If remembered details are overwritten, the previously remembered contents are deleted.

- Recalling remembered details (Recovery)
  1. Press and hold \(\text{BACK}\) and \(\text{ZONE SELECT}\) together for at least 3 seconds.
  2. “MEMORY LOAD” is shown in the display, and the remembered details are recalled.

  **NOTE**
  - If there is no remembered data, “NO BACKUP” is shown in the display, and no remembered details are recalled.
  - As the volume cannot be recalled, it returns to the factory setting volume.
Canceling the Panel lock function

1. Press \textbf{ON/STANDBY} while you press and hold \textbf{BACK} and \textbf{ENTER} with the unit in standby mode.
2. Press \textbf{△ ▽} to select “FP LOCK *Off”.
   (※ The currently set mode.)
3. Press \textbf{ENTER} to enter the setting.
   The Panel lock function is canceled.

Even when the Panel lock function is set, you can operate the unit using the remote control unit.

Remote lock function

- When not connecting an IR receiver, disable the Remote lock function. When the function is enabled, you cannot perform operations with the remote control unit.
- By default, this function is disabled.

Disabling the sensor function of the remote control unit

1. When the main unit is in standby mode, press \textbf{ON/STANDBY} while holding down \textbf{BACK} and \textbf{ENTER} on the main unit.
2. Press \textbf{△ ▽} to select “RC LOCK On”.
3. Press \textbf{ENTER} to enter the setting.
   The infrared light receiving function is disabled.

Enabling the remote sensor function

1. When the main unit is in standby mode, press \textbf{ON/STANDBY} while holding down \textbf{BACK} and \textbf{ENTER} on the main unit.
2. Press \textbf{△ ▽} to select “RC LOCK *Off”.
   (※ The currently set mode.)
3. Press \textbf{ENTER} to enter the setting.
   The infrared light receiving function on the main unit is enabled.
Switches light illumination on/off

- You can switch the lighting around the main display on or off.
- The factory setting is “ON”.

Press and hold DISPLAY on the main unit for 3 seconds.

- Carry out the same procedure if you want to change the settings again.

Various memory functions

Personal memory plus function

This function sets the settings (input mode, sound mode, HDMI output mode, MultEQ® XT, Dynamic EQ, audio delay etc.) last selected for the individual input sources.

The surround parameters, tone settings and the volumes of the different speakers are stored for the individual sound modes.

Last function memory

This function stores the settings which were made before going into the standby mode.
When the power is turned back on, the settings are restored.
**Playback in ZONE2/ZONE3 (Separate room)**

- You can operate this unit so as to enjoy audio in a room (ZONE2, ZONE3) other than the MAIN ZONE (room where the unit is located).
- You can simultaneously play back the same source in both the MAIN ZONE, ZONE2 and ZONE3. You can also play back separate sources in the MAIN ZONE, ZONE2 and ZONE3.
- When a TV is connected to the HDMI ZONE2 OUT connector, you can play back a video or audio from the device connected to the HDMI 1 – 6 IN connector in ZONE2 (HDMI ZONE2 function).

The source selected for ZONE2 is also output from the recording output connectors (MEDIA PLAYER).

**NOTE**
The following restrictions apply to the HDMI ZONE2 function.
- If you select a same input source for MAIN ZONE and ZONE2, audio playback may be restricted or video may be interrupted.
- Video may not be output depending on the resolution of the TV used for MAIN ZONE and ZONE2. In this case, use your player to set the resolution of the TV.
- The HDMI audio signals for the input source selected in ZONE2 are not output from the ZONE2 speakers.
- When HDMI ZONE2 function is used, you cannot set the following:
  - Picture Adjust
  - Auto Lip Sync
  - Video Mode
  - Video Conversion
  - Lip Sync
  - Progressive Mode
  - Aspect Ratio
  - Setup menu display

**Audio output**

It is possible to play 2-channel audio in rooms other than the MAIN ZONE where multi-channel playback is done. Choose one of the methods.
- Zone playback by audio output (PRE OUT)
  Use an external amplifier.

**Zone playback by audio output (PRE OUT)**

- **Audio connections (ZONE2, ZONE3)**
The audio signals of this unit’s ZONE2 and ZONE3 audio output terminals are output to the ZONE2 and ZONE3 amplifiers and played on these amplifiers.

We recommend using high quality pin-plug cables for audio connections in order to prevent noise.

**NOTE**
In ZONE2 or ZONE3, the digital audio signals input from the HDMI, COAXIAL or OPTICAL connector cannot be played back. When playing back in ZONE2 or ZONE3, make an analog connection.
Video output

Video Connection

The video signals of this unit’s ZONE2 video output connector are played by the ZONE2 TV.

NOTE
The menu screen is not output.

When “Component Video Out” (page 119) in the menu is set to “ZONE2”, the component video output connector outputs the ZONE2 video.
Playback

1 Press ZONE SELECT to switch “ZONE2” or “ZONE3”.

2 Press ON/STANDBY to turn on the ZONE2 or ZONE3 power.
   • Also press input source select button when in standby mode, the power turns on.
   • When ON/STANDBY is pressed, ZONE2 or ZONE3 turns off.
   • Power in ZONE2 or ZONE3 can be turned on or off by pressing ZONE2 ON/OFF or ZONE3 ON/OFF on the main unit.

3 Press the input source select button to select the input source to be played.
   The audio signal of the selected source is output to ZONE2 or ZONE3.

Adjusting the volume

Use VOLUME ▲▼ to adjust the volume.

[Adjustable range] 0 – 98
   (When the “Scale” (page 112) setting is “0 – 98”)

[Adjustable range] -79dB – -40dB – 18dB
   (When the “Scale” (page 112) setting is “-79.5dB – 18.0dB”)  
   • At time of purchase, “Volume Limit” (page 135) is set to “70 (~10dB)”.

Turn VOLUME after pressing ZONE SELECT on the main unit to adjust the sound volume.

Turning off the sound temporarily

Press MUTE.
   The sound is reduced to the level set at “Mute Level” (page 135) in the menu.
   • To cancel, either adjust the volume or press MUTE again.
   • The setting can also be cancelled by adjusting the volume or turning off the ZONE2 or ZONE3 power.

You can adjust the tone and volume for ZONE2 or ZONE3 in “ZONE2 Setup” or “ZONE3 Setup” (page 135) in the menu.

Sleep timer function

• This is convenient for viewing and listening while going to sleep in ZONE2 or ZONE3.
• The sleep timer function can be set by zone.

1 Press ZONE SELECT to switch “ZONE2” or “ZONE3”.

2 Press SLEEP and display the time you want to set.

   • If SLEEP on the main unit is pressed, the same function as with the remote control unit can be obtained.

   • The time switches as shown below each time SLEEP is pressed.

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
</tr>
<tr>
<td>10 min</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td>60</td>
</tr>
</tbody>
</table>

To confirm the countdown time before putting the unit to sleep

Press SLEEP.
   “Z2 Sleep : *min” or “Z3 Sleep : *min” appears on the display.
   * Countdown time

To cancel the sleep timer

Press SLEEP to set “Off”.

The sleep timer is also cancelled when this unit is set to the standby mode or the ZONE2 or ZONE3 power is turned off.

NOTE

The sleep timer function cannot turn off the power of devices connected to this unit. To turn off the power of those connected devices, set up sleep timers on the connected devices themselves.
# How to make detailed settings

## Menu map

For menu operation, connect a TV to this unit and display the menu on the TV screen. For menu operations, see the following page.

By default, this unit has recommended settings defined. You can customize this unit based on your existing system and your preferences.

### Setting items

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Detailed items</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audio</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surround Parameter</td>
<td>Adjusts surround sound parameters.</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>Tone</td>
<td>Adjusts the tonal quality of the sound.</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>Dialogue Level</td>
<td>Sets the output level to clarify the dialogue output from the center channel.</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>Subwoofer Level</td>
<td>Sets the subwoofer on/off and its output level.</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>M-DAX</td>
<td>Expands the low and high frequency components of compressed audio to enable richer audio playback.</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>Audio Delay</td>
<td>Compensates for incorrect timing between video and audio.</td>
<td>112</td>
<td></td>
</tr>
<tr>
<td>Volume</td>
<td>Set the MAIN ZONE (room where the unit is located) volume setting.</td>
<td>112</td>
<td></td>
</tr>
<tr>
<td>Audyssey</td>
<td>Makes Audyssey MultiEQ® XT, Audyssey Dynamic EQ® and Audyssey Dynamic Volume® settings.</td>
<td>112</td>
<td></td>
</tr>
<tr>
<td>Graphic EQ</td>
<td>Uses the graphic equalizer to adjust the tone of each speaker.</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td><strong>Video</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Picture Adjust</td>
<td>Adjusts the video quality.</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>HDMI Setup</td>
<td>Makes settings for HDMI video/audio output.</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>Output Settings</td>
<td>Makes screen-related settings.</td>
<td>118</td>
<td></td>
</tr>
<tr>
<td>Component Video Out</td>
<td>Sets whether to use the component video output connector for MAIN ZONE or ZONE2.</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>Volume Display</td>
<td>Sets where to display the master volume level.</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>Info Display</td>
<td>Displays status of operation temporarily when the sound mode is changed, or input source is switched. You can set whether or not to show each of these status displays.</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>Audio Display</td>
<td>Sets how long each menu is displayed when the input source is “NETWORK”, “iPod/USB”, or “HD Radio”.</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>TV Format</td>
<td>Set the video signal format to be output for the TV you are using.</td>
<td>120</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Detailed items</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
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<tr>
<td><strong>Inputs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Assign</td>
<td>Changes input connector assignment.</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td>Source Rename</td>
<td>Changes the display name for this source.</td>
<td>123</td>
<td></td>
</tr>
<tr>
<td>Hide Sources</td>
<td>Remove from the display input sources that are not used.</td>
<td>124</td>
<td></td>
</tr>
<tr>
<td>Source Level</td>
<td>Adjusts the playback level of the audio input.</td>
<td>124</td>
<td></td>
</tr>
<tr>
<td>Input Select</td>
<td>Sets the audio input mode and decode mode.</td>
<td>124</td>
<td></td>
</tr>
<tr>
<td>Video Source</td>
<td>Video of another input source is played back combined with the playing audio.</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td><strong>Speakers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audyssey® Setup</td>
<td>The acoustic characteristics of the connected speakers and listening room are measured and the optimum settings are made automatically.</td>
<td>29, 88</td>
<td></td>
</tr>
<tr>
<td>Manual Setup</td>
<td>Perform when setting the speakers manually or when changing settings made in Audyssey® Setup.</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td><strong>Network</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>Display network information.</td>
<td>131</td>
<td></td>
</tr>
<tr>
<td>IP Control</td>
<td>Set the network function on/off during standby.</td>
<td>131</td>
<td></td>
</tr>
<tr>
<td>Friendly Name</td>
<td>The Friendly Name is the name of this unit displayed on the network. You can change the Friendly Name according to your preferences.</td>
<td>131</td>
<td></td>
</tr>
<tr>
<td>Settings</td>
<td>Make settings for wired LAN.</td>
<td>132</td>
<td></td>
</tr>
<tr>
<td>Maintenance Mode</td>
<td>Use when receiving maintenance from a marantz service engineer or custom installer.</td>
<td>133</td>
<td></td>
</tr>
</tbody>
</table>

---

See overleaf
<table>
<thead>
<tr>
<th>Setting items</th>
<th>Detailed items</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Language</td>
<td>Sets the language for display the menu on the TV screen.</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>ZONE2 Setup</td>
<td>Makes settings for audio playback in a ZONE2 system.</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>ZONE3 Setup</td>
<td>Makes settings for audio playback in a ZONE3 system.</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>Zone Rename</td>
<td>Change the display title of each zone to one you prefer.</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Trigger Out 1</td>
<td>Selects when to activate trigger out 1.</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Trigger Out 2</td>
<td>Selects when to activate trigger out 2.</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Auto Standby</td>
<td>When you do not perform any operation on this unit with no audio or video input for a specified time, this unit automatically enters the standby mode. Before it enters the standby mode, “Auto Standby” is displayed on the display of this unit and the menu screen.</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Front Display</td>
<td>Makes settings related to the display on this unit.</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Information</td>
<td>Show information about receiver settings, input signals, etc.</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>Firmware</td>
<td>Set whether or not to check for firmware update, update the firmware, and display update and upgrade notifications.</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>Setup Lock</td>
<td>Protect settings from inadvertent change.</td>
<td>139</td>
</tr>
<tr>
<td>Setup</td>
<td>Assistant</td>
<td>Perform the installation, connection, and setup procedures to prepare the unit for operation following guidance.</td>
<td>7</td>
</tr>
</tbody>
</table>
Examples of menu screen displays
Typical examples are described below.

[Example 1]
Menu selection screen (Top menu)

Use △▽ to select “Audio” and then press ▶.
(Or press ENTER.)

[Example 2]
Audyssey® Setup screen (with illustration)

NOTE
When the menu is operated on a computer’s resolution (e.g. VGA) or during playback of certain 3D video content, the playback image switches to the menu screen image.
Examples of menu and front display

Below we describe typical examples of displays on the TV screen and on the set’s display window.

<table>
<thead>
<tr>
<th>Menu display</th>
<th>Front display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top menu display</strong></td>
<td><img src="image" alt="Top menu display" /></td>
<td><img src="image" alt="Top menu display" /></td>
</tr>
<tr>
<td><strong>Display when changing settings</strong></td>
<td><img src="image" alt="Display when changing settings" /></td>
<td><img src="image" alt="Display when changing settings" /></td>
</tr>
<tr>
<td><strong>Display when returning to the settings in effect at time of purchase</strong></td>
<td><img src="image" alt="Display when returning to the settings in effect at time of purchase" /></td>
<td><img src="image" alt="Display when returning to the settings in effect at time of purchase" /></td>
</tr>
</tbody>
</table>
Inputting characters

On this unit, you can change the name displayed on the following screens to the names that you prefer.

- Text Search (page 71)
- Preset Name (page 51)
- Source Rename (page 123)
- Friendly Name (page 131)
- Zone Rename (page 136)
- Character input for the network functions (page 54, 62, 64, 67, 69, 133)

Keyboard screen

Select a character on the TV screen to input characters.

Display of a keyboard input screen

1. Character input section
2. Cursor
3. Keyboard section
4. Uppercase and lowercase switch key
5. Space key
6. Cursor keys
7. Insert key
8. Delete key
9. OK key

Input method

1. Display the screen for inputting characters (page 103 “Menu map”).

2. Select a character to be changed.
   ① Use △▼◄► to select  or .
   ② Press ENTER to place the cursor at the character to be changed.
   Each time ENTER is pressed, the cursor moves by one character.

3. Select a character to be input with △▼◄► then press ENTER.
   • The types of characters that can be input are as shown below.

   [Upper case characters/Numbers/Symbols]
   ABCDEFGHIJKLMNOPQRSTUVWXYZ
   0123456789
   !"#$%&'()*

   [Lower case characters/Numbers/Symbols]
   abcdefghijklmnopqrstuvwxyz
   0123456789
   .@_/?:{[\]^}\`

4. Repeat steps 2 and 3 to change the name.

5. Use △▼◄► to select OK, then press ENTER.
## Audio

Make audio-related settings.

### Menu operation

1. Press ZONE SELECT to switch “MAIN”.
2. Press SETUP. The menu is displayed on the TV screen.
3. Use \( \Delta \nabla \) to select the menu to be set or operated.
4. Press ENTER or \( \triangleright \) to enter the setting.

- To return to the previous item, press \( \triangleleft \) or BACK.
- Exiting the Menu, press SETUP while the menu is displayed. The menu display disappears.

### Items that can be set with the “Audio” procedure

<table>
<thead>
<tr>
<th>Setting</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surround Parameter</td>
<td>109</td>
</tr>
<tr>
<td>Tone</td>
<td>110</td>
</tr>
<tr>
<td>Dialogue Level</td>
<td>110</td>
</tr>
<tr>
<td>Subwoofer Level</td>
<td>111</td>
</tr>
<tr>
<td>M-DAX</td>
<td>111</td>
</tr>
<tr>
<td>Audio Delay</td>
<td>112</td>
</tr>
<tr>
<td>Volume</td>
<td>112</td>
</tr>
<tr>
<td>Audyssey</td>
<td>112</td>
</tr>
<tr>
<td>Graphic EQ</td>
<td>114</td>
</tr>
</tbody>
</table>
Surround Parameter

You can adjust the surround audio sound field effects to match your preferences. The items (parameters) that can be adjusted depend on the signal being input and the currently set sound mode. For details on the adjustable parameters, see “Sound modes and surround parameters” (page 158).

NOTE
• Some setting items cannot be set while playback is stopped. Make the settings during playback.
• When the sound mode is “PURE DIRECT”, you cannot set the surround parameters.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Home Theater EQ</strong>&lt;br&gt;Softens the treble range of movie soundtracks for better understanding.</td>
<td>On: “Home Theater EQ” is used.&lt;br&gt;Off: “Home Theater EQ” is not used.</td>
</tr>
<tr>
<td><strong>Loudness Management</strong>&lt;br&gt;This can be set in the Dolby TrueHD mode.&lt;br&gt;This sets whether to output as specified in “Dynamic Compression” or output directly without compressing the dynamic range of audio recorded on the disc.</td>
<td>On: Outputs using the settings made in “Dynamic Compression”.&lt;br&gt;Off: “Dynamic Compression” settings and “Dialogue normalization” (page 137) are disabled, and the signals on the disk are output as is.</td>
</tr>
<tr>
<td><strong>Dynamic Compression</strong>&lt;br&gt;Compress dynamic range (difference between loud and soft sounds).</td>
<td>Auto: Automatic dynamic range compression on/off control according to source.&lt;br&gt;Low / Medium / High: These set the compression level.&lt;br&gt;Off: Dynamic range compression always off.&lt;br&gt;—you can set “Auto” only for the Dolby TrueHD source.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Frequency Effects</strong>&lt;br&gt;Adjust the low-frequency effects level (LFE).</td>
<td>When “Input Mode” (page 124) is set other than to “7.1CH IN” –10dB – 0dB&lt;br&gt;When “Input Mode” (page 124) is set to “7.1CH IN” 0dB / +5dB / +10dB / +15dB&lt;br&gt;For proper playback of the different sources, we recommend setting to the values below.&lt;br&gt;Dolby Digital sources: “0dB”&lt;br&gt;DTS movie sources: “0dB”&lt;br&gt;DTS music sources: “–10dB”</td>
</tr>
<tr>
<td><strong>Center Image</strong>&lt;br&gt;Distributes the dialogue output from the center channel to the front left and right channels and widens the sound image in the front. You can set this when the sound mode is set to DTS NEO:6 in the “Music” mode.</td>
<td>0.0 – 1.0 (0.3)&lt;br&gt;The smaller the value, the more dialogue is concentrated on the center channel. The larger the value, the more dialogue is distributed to front left and right channels, and the more the sound image widens in the front.</td>
</tr>
<tr>
<td><strong>Panorama</strong>&lt;br&gt;Assign front L/R signal also to surround channels for wider sound. You can set this when the sound mode is Dolby PLII in the “Music” mode.</td>
<td>On: Set.&lt;br&gt;Off: Do not set.</td>
</tr>
<tr>
<td><strong>Dimension</strong>&lt;br&gt;Shift sound image center to front or rear to adjust playback balance. You can set this when the sound mode is Dolby PLII in the “Music” mode.</td>
<td>0 – 6 (3)&lt;br&gt;As you set a smaller number, the surround sound field shifts backward; as you set a larger number, the surround sound field shifts forward.</td>
</tr>
</tbody>
</table>

Audio
### Tone

Adjust the tonal quality of the sound.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tone Control</strong></td>
<td>Set the tone control function to “On” and “Off”.</td>
</tr>
<tr>
<td><strong>On</strong></td>
<td>Allow tone adjustment (bass, treble).</td>
</tr>
<tr>
<td><strong>Off</strong></td>
<td>Playback without tone adjustment.</td>
</tr>
</tbody>
</table>

**NOTE**
- “Tone Control” can be set when “Dynamic EQ” ([page 113]) is set to “Off”.
- The tone cannot be adjusted in the “DIRECT” or “PURE DIRECT” mode.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bass</strong></td>
<td>Adjust bass.</td>
</tr>
<tr>
<td>-6dB – +6dB (0dB)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE**
- “Bass” can be set when the menu “Tone Control” setting is “On”.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treble</strong></td>
<td>Adjust treble.</td>
</tr>
<tr>
<td>-6dB – +6dB (0dB)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE**
- “Treble” can be set when the menu “Tone Control” setting is “On”.

### Dialogue Level

Sets the output level to clarify the dialogue output from the center channel.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dialogue</strong></td>
<td>-12.0dB – +12.0dB (0dB)</td>
</tr>
</tbody>
</table>

**NOTE**
- Only speakers that are set to something other than “None” in “Speaker Config.” ([page 127]) can be selected.

---

**Default settings are underlined.**
### Subwoofer Level

Sets the subwoofer on/off and its output level.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subwoofer</strong></td>
<td>Turn subwoofer output on and off.</td>
</tr>
<tr>
<td><strong>Subwoofer Level</strong></td>
<td>Set the subwoofer output level.</td>
</tr>
</tbody>
</table>

**Setting items**

- **On**: The subwoofer is used.
- **Off**: The subwoofer is not used.

**NOTE**

This can be set when the sound mode is “DIRECT” or “PURE DIRECT” (page 77) and the “Subwoofer Mode” (page 128) is “LFE+Main”.

### M-DAX

Compressed audio formats such as MP3, WMA (Windows Media Audio) and MPEG-4 AAC reduce the amount of data by eliminating signal components that are hard for the human ear to hear. The M-DAX function generates the signals eliminated upon compression, restoring the sound to conditions near those of the original sound before compression. It also corrects the sense of volume of the bass to obtain richer sound with compressed audio signals.

**Setting items**

- **Mode**: Set the mode for M-DAX.
  - **Off**: Do not use M-DAX.
  - **Low**: Optimized mode for compressed sources with normal highs.
  - **Mid**: Apply suitable bass and treble boost for all compressed sources.
  - **High**: Optimized mode for compressed sources with very weak highs.

**Setting details**

- This item can be set with analog signals or PCM signal (Sample rate = 44.1/48 kHz) is input.
- “M-DAX” settings are stored for each input source.
- When set to “Off”, the M-DAX indicator on the front panel switches off.
- This cannot be set when the surround mode is set to “DIRECT” or “PURE DIRECT”.
- This can also be set by pressing **M-DAX** on the main unit. Each time **M-DAX** is pressed, the setting is changed as shown below.
**Audio Delay**

While viewing video, manually adjust the time to delay audio output.

**Setting details**

- **0ms – 200ms**
  - This item can be set within the range of 0 to 100 ms when “Auto Lip Sync” (page 116) is set to “On” and when a TV compatible with Auto Lip Sync is connected.
  - Store “Audio Delay” for each input source.
  - Audio Delay for game mode can be set when “Video Mode” (page 118) is set to “Auto” or “Game”.

**Volume**

Set the MAIN ZONE (room where the unit is located) volume setting.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
</table>
| Scale         | Set how volume is displayed.  
  - **0 – 98**: Display in the range 0 (Min) to 98.  
  - **–79.5dB – 18.0dB**: Display in dB (Min), in the range –79.5 dB to 18.0 dB.  
  - The “Scale” setting is applied also to the “Limit” and “Power On Level” display method.  
  - The “Scale” setting applies to all zones. |
| Limit         | Make a setting for maximum volume.  
  - **Off**: Do not set a maximum volume.  
  - **60 (–20dB) / 70 (–10dB) / 80 (0dB)** |
| Power On Level| Define the volume setting that is active when the power is turned on.  
  - **Last**: Use the memorized setting from the last session.  
  - **Mute**: Always use the muting on condition when power is turned on.  
  - **1 – 98 (–79dB – 18dB)**: The volume is adjusted to the set level. |
| Mute Level    | Set the amount of attenuation when muting is on.  
  - **Full**: The sound is muted entirely.  
  - **–40dB**: The sound is attenuated by 40 dB down.  
  - **–20dB**: The sound is attenuated by 20 dB down. |

**Audyssey**

Set Audyssey MultEQ® XT, Audyssey Dynamic EQ® and Audyssey Dynamic Volume®. These can be selected after Audyssey® Setup has been performed. For additional information on Audyssey technology, please see page 166.

**NOTE**

- If you have not performed Audyssey® Setup, or if you change the speaker settings after performing Audyssey® Setup, you may not be able to select Dynamic EQ/Dynamic Volume.
  - In this case, either perform Audyssey® Setup over again or perform “Restore...” (page 35) to return to the settings after Audyssey® Setup was run.
- When HD Audio for which the sampling frequency exceeds 96 kHz is played back, the “Audyssey” cannot be set.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
</table>
| MultEQ® XT    | MultEQ® XT compensates for both time and frequency characteristics of the listening area based on “Audyssey® Setup” measurement results. Selection is done from three types of compensation curves. We recommend the “Audyssey” setting. MultEQ® XT is the prerequisite function for Dynamic EQ and Dynamic Volume.  
  - **MultEQ® XT**: Optimize the frequency response of all speakers.  
  - **Audyssey Byp. L/R**: Optimize frequency response of speakers except front L and R speakers.  
  - **Audyssey Flat**: Optimize frequency response of all speakers to flat response.  
  - **Graphic EQ**: Apply frequency response set with “Graphic EQ” (page 114).  
  - **Off**: Turn “MultEQ® XT” equalizer off. |
| Audyssey       | Optimize the frequency response of all speakers.  
  - **Audyssey Byp. L/R**: Optimize frequency response of speakers except front L and R speakers.  
  - **Audyssey Flat**: Optimize frequency response of all speakers to flat response.  
  - **Graphic EQ**: Apply frequency response set with “Graphic EQ” (page 114).  
  - **Off**: Turn “MultEQ® XT” equalizer off. |
| Audyssey® Setup| When using headphones, “MultEQ® XT” is automatically set to “Off”. |

“MultEQ® XT”, “Dynamic EQ” and “Dynamic Volume” settings are stored for each input source.
### Dynamic EQ
Solve the problem of deteriorating sound quality as volume is decreased by taking into account human perception and room acoustics. Works with MultEQ® XT.

- **On**: Use Dynamic EQ.
- **Off**: Do not use Dynamic EQ.

**NOTE**
When the menu “Dynamic EQ” setting is “On”, it is not possible to do “Tone Control” (page 110) adjustment.

### Reference Level Offset
Audyssey Dynamic EQ® is referenced to the standard film mix level. It makes adjustments to maintain the reference response and surround envelopment when the volume is turned down from 0 dB. However, film reference level is not always used in music or other non-film content.

- **0dB (Film Ref)**: This is the default setting and should be used when listening to movies.
- **5dB**: Select this setting for content that has a very wide dynamic range, such as classical music.
- **10dB**: Select this setting for jazz or other music that has a wider dynamic range. This setting should also be selected for TV content as that is usually mixed at 10 dB below film reference.
- **15dB**: Select this setting for pop/rock music or other program material that is mixed at very high listening levels and has a compressed dynamic range.

**NOTE**
Setting is enabled when “Dynamic EQ” is “On” (page 113).

### Dynamic Volume
Solve the problem of large variations in volume level between TV, movies and other content (between quiet passages and loud passages, etc.) by automatically adjusting to the user’s preferred volume setting.

- **Heavy**: Most adjustment to softest and loudest sounds.
- **Medium**: Medium adjustment to loudest and softest sound.
- **Light**: Least adjustment to loudest and softest sounds.
- **Off**: Do not use “Dynamic Volume”.

**NOTE**
- “AUDYSSEY is displayed when set to “Heavy”, “Medium” or “Light”.
- If “Dynamic Volume” is set to “Yes” in “Audyssey® Setup” (page 33), the setting is automatically changed to “Medium”.
- This can also be set by pressing DYNAMIC VOL on the main unit. Each time DYNAMIC VOL is pressed, the setting is changed as shown below.

### Audyssey DSX®
Provides more immersive surround sound by adding the new channels.

- **On–Height–**: Turn on A-DSX processing for height expansion.
- **On–Wide–**: Turn on A-DSX processing for wide expansion.
- **Off**: Do not set Audyssey DSX®.

**NOTE**
“Audyssey DSX®” cannot be configured if the HD Audio source being played includes Front height and Front wide channels. In this case, the respective channels are played back using the input signals.
Audio

Setting items | Setting details
--- | ---
Stage Height | Adjust sound stage height when using front height speakers.
-10 – +10 (0)

- "Audyssey DSX®" can be set when you are using front height speakers or front wide speakers.
- "Audyssey DSX®" is only valid when using a center speaker.
- "Audyssey DSX®" is valid when surround mode is DOLBY listening mode or DTS listening mode other than PLIIz Height.

About Audyssey Dynamic Surround Expansion (A-DSX)
Audyssey DSX® is a scalable system that adds new speakers to improve surround impression. Starting with a 5.1 system Audyssey DSX® first adds Wide channels for the biggest impact on envelopment. Research in human hearing has proven that information from the Wide channels is much more critical in the presentation of a realistic soundstage than the Back Surround channels found in traditional 7.1 systems. Audyssey DSX® then creates a pair of Height channels to reproduce the next most important acoustical and perceptual cues. In addition to these new Wide and Height channels, Audyssey DSX® applies Surround Envelopment Processing to enhance the blend between the front and surround channels.

Stage Width | Adjust sound stage width when using front wide speakers.
-10 – +10 (0)

Graphic EQ
Use the graphic equalizer to adjust the tone of each speaker.
“Graphic EQ” can be set when “MultEQ® XT” setting is “Graphic EQ”.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker Selection</td>
<td>Select whether to adjust tones for individual speakers or for all speakers. All : Adjust the tone of all speakers together. Left/Right : Adjust the tone of left and right speakers together. Each : Adjust the tone of each speaker.</td>
</tr>
</tbody>
</table>
| Adjust EQ | Adjust tones for each frequency band. Adjust the speaker selected in “Speaker Selection”.
① Select the speaker.
② Select the adjustment frequency band. 63Hz / 125Hz / 250Hz / 500Hz / 1kHz / 2kHz / 4kHz / 8kHz / 16kHz
③ Adjust the level. –20.0dB – +6.0dB (0.0dB)
| Curve Copy | Copy “Audyssey Flat” curve from MultEQ® XT. Yes : Copy. No : Do not copy.
① “Curve Copy” is displayed after “Audyssey® Setup” has been performed.
② When you select “Curve Copy” and press ENTER, the “Copy “Audyssey Flat”?” prompt is displayed. Select either “Yes” or “No”, and press ENTER.
| Set Defaults | The “Graphic EQ” settings are returned to the default settings. Yes : Reset to the defaults. No : Do not reset to the defaults.
① When you select “Set Defaults” and press ENTER, the “Reset to the default values?” prompt is displayed. Select either “Yes” or “No”, and press ENTER.
Video
Make video-related settings.

NOTE
When HDMI ZONE2 function is used, these settings are not available.

Menu operation

1 Press ZONE SELECT to switch “MAIN”.

2 Press SETUP.
The menu is displayed on the TV screen.

3 Use △ ▽ to select the menu to be set or operated.

4 Press ENTER or ▶ to enter the setting.

• To return to the previous item, press ◀ or BACK.
• Exiting the Menu, press SETUP while the menu is displayed.
The menu display disappears.

Items that can be set with the “Video” procedure

- Picture Adjust (page 116)
- HDMI Setup (page 116)
- Output Settings (page 118)
- Component Video Out (page 119)
- Volume Display (page 119)
- Info Display (page 119)
- Audio Display (page 120)
- TV Format (page 120)
**Picture Adjust**

- Picture quality can be adjusted.
- We recommend leaving the settings unchanged from the default settings. First adjust the display image quality on your TV, and use this menu only when you want to make fine adjustments.
- This item can be set when the input source is CBL/SAT, DVD, Blu-ray, GAME, AUX1, or AUX2.
- With input sources other than the ones above, this item can be set when “Video Select” is selected. In this case, the original input source settings are called out.
- Can be set when the “Video Conversion” setting (page 118) is “On”.
- “Blu-ray”, “GAME”, “AUX2”, “TV AUDIO” or “CD” can be set when “HDMI” or “COMP” (page 122, 123) has been assigned.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contrast</td>
<td>Adjust picture contrast. Off / Low / Medium / High</td>
</tr>
<tr>
<td>Brightness</td>
<td>Adjust picture brightness. 0 – +12</td>
</tr>
<tr>
<td>Saturation</td>
<td>Adjust picture chroma level (saturation). 0 – +12</td>
</tr>
<tr>
<td>Hue</td>
<td>Adjust green and red balance. 0 – +12</td>
</tr>
<tr>
<td>Noise Reduction</td>
<td>Reduce overall video noise. Off / Low / Medium / High</td>
</tr>
<tr>
<td>Enhancer</td>
<td>Emphasize picture contours. 0 – +12</td>
</tr>
</tbody>
</table>

- “Picture Adjust” can not be set when video and component video signals are output.
- “Picture Adjust” can not be set when 4K signals are input.

**HDMI Setup**

- Make settings for HDMI video/audio output.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDMI Audio Out</td>
<td>Select HDMI audio output device. AVP : Play back through speakers connected to Power Amplifier. (Audio is output from the PRE OUT terminal on this unit.) TV : Play back through TV connected to the unit.</td>
</tr>
</tbody>
</table>

- The audio signal input from the HDMI input connector can be output as an output signal from the HDMI output connector by setting the HDMI audio output destination to TV. Audio signals input via the Analog/Coaxial/Optical input connectors cannot be output from the HDMI output connector.
- When the HDMI control function is activated, priority is given to the TV audio setting (page 92 “HDMI control function”).
Video Output

Make settings for HDMI monitor output.

**Auto (Dual)**: The presence of a TV connected to the HDMI MONITOR 1 or HDMI MONITOR 2 connector is detected automatically, and that TV connection is used.

**Monitor 1**: A TV connected to the HDMI MONITOR 1 connector is always used. Video is not output from the TV connected to the HDMI MONITOR 2 connector.

**Monitor 2**: A TV connected to the HDMI MONITOR 2 connector is always used. Video is not output from the TV connected to the HDMI MONITOR 1 connector.

- If both the HDMI MONITOR 1 and HDMI MONITOR 2 connectors are connected and “Resolution” (page 118) is set to “Auto”, the signals are output with a resolution compatible with both TV.
- With “Resolution” (page 118) not set to “Auto”, check whether the TV you are using is compatible with the resolution under “Video” – “Monitor” (page 137).
- This can also be set by pressing **HDMI OUT** on the main unit. Each time **HDMI OUT** is pressed, the setting is changed as shown below.

| Auto (Dual) | Monitor 1 | Monitor 2 |

**NOTE**

Depending on the monitor you have connected, the display may not be correct when you set to “Auto (Dual)”. In such a case, set to either “Monitor 1” or “Monitor 2”.

HDMI Control

You can link operations with devices connected to HDMI and compatible with HDMI Control.

**On**: Use HDMI control function.

**Off**: Do not use HDMI control function.

- When a device that is not compatible with the HDMI control function is connected, set “HDMI Control” to “Off”.
- Please consult the operating instructions for each connected device to check the settings.
- Refer to “HDMI control function” (page 92) for more information about the HDMI control function.

**NOTE**

- When “HDMI Control” is set to “On”, it consumes more standby power. If you are not using this unit for an extended period, it is recommended that you unplug the power cord from the power outlet.
- The HDMI control function controls operations of a TV that is compatible with the HDMI control function. Make sure that the TV and HDMI are connected when you perform HDMI control.
- If the “HDMI Control” settings have been changed, always reset the power to connected devices after the change.

**Power Off Control**

Links the power standby of this unit to external devices.

**All**: If power to a connected TV is turned off independently of the input source, power to this unit is automatically set to standby.

**Video**: If power to a connected TV is turned off when the input source is CBL/SAT / DVD / Blu-ray / GAME / AUX1 / AUX2 / MEDIA PLAYER / CD, power to this unit is automatically set to standby.

**Off**: This unit does not link with power to a TV.

- “Power Off Control” can be set when “HDMI Control” is set to “On”.

**Standby Source**

Sets the HDMI input source to put into standby when the power is on.

**Last**: Enters standby with the previously used input source.

**CBL/SAT / DVD / Blu-ray / GAME / AUX1 / AUX2 / MEDIA PLAYER / CD**: Enters standby with each of the input sources assigned to each input connector.

- “Standby Source” can be set when “HDMI Control” is set to “On”.

**Control Monitor**

Set the HDMI MONITOR terminal to output the HDMI control signal.

**Monitor 1**: Output from the HDMI MONITOR 1 connector.

**Monitor 2**: Output from the HDMI MONITOR 2 connector.

- “Control Monitor” can be set when “HDMI Control” is set to “On”.
- ARC function works only with the terminal selected by “Control Monitor”.

**Power Off Control**

Links the power standby of this unit to external devices.

**All**: If power to a connected TV is turned off independently of the input source, power to this unit is automatically set to standby.

**Video**: If power to a connected TV is turned off when the input source is CBL/SAT / DVD / Blu-ray / GAME / AUX1 / AUX2 / MEDIA PLAYER / CD, power to this unit is automatically set to standby.

**Off**: This unit does not link with power to a TV.

- “Power Off Control” can be set when “HDMI Control” is set to “On”.
Output Settings

Default settings are underlined.

Makes screen-related settings. * “Blu-ray”, “GAME”, “AUX2”, “TV AUDIO” or “CD” can be set when “HDMI” or “COMP” (page 122, 123) has been assigned.

“Output Settings” can not be set when 4K signals are input.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
</table>
| **Video Mode** Make settings for video processing. | **Auto**: Process video automatically based on the HDMI content information.  
**Game**: Always process video for game content.  
**Movie**: Always process video for movie content. |
| **Video Conversion** The input video signal is converted automatically in conjunction with the connected TV (Converting input video signals for output (Video conversion function)). | **On**: The input video signal is converted.  
**Off**: The input video signal is not converted.  
- When a non-standard video signal from a game machine or some other source is input, the video conversion function might not operate. In this case set “Video Conversion” to “Off”.  
- When “Video Conversion” is set to “Off”, the video conversion function does not work. In this case, connect this unit and TV with the same type of cable. |
| **Resolution** Set the output resolution. You can set “Resolution” separately for HDMI output of the analog video input and HDMI input. | **Auto**: The number of pixels the TV connected to the HDMI MONITOR OUT connector supports is detected automatically and the appropriate output resolution is set.  
**480p**: Set the output resolution. |

### i/p Scaler

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
</table>
| **Analog**: Use i/p scaler function for analog video signal.  
**Analog & HDMI**: Use i/p scaler function for analog and HDMI video signal.  
**HDMI**: Use i/p scaler function for HDMI video signal. |
| **Off**: Do not use i/p scaler function. |

- “Analog & HDMI” can be set for input sources for which an HDMI input connector is assigned.  
- Which items can be set depend on the input source assigned to each input connector.  
- This function is not effective when the input signal is “x.v.Color”, 3D, sYCC 601 color, Adobe RGB color, Adobe YCC 601 color or computer resolution.

### Resolution

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
</table>
| **Auto**: The number of pixels the TV connected to the HDMI MONITOR OUT connector supports is detected automatically and the appropriate output resolution is set.  
**480p**: Set the output resolution. |

- This item can be set when “i/p Scaler” is set to anything other than “OFF”.  
- When “i/p Scaler” is set to “Analog & HDMI”, the resolution of both the analog video input signal and HDMI input signal can be set.  
- To watch 1080p/24Hz pictures, use a TV that supports 1080p/24Hz video signals.  
- When set to “1080p:24Hz”, you can enjoy film-like pictures for film sources (in 24 Hz). For video sources and mixed sources, we recommend setting the resolution to “1080p”.  
- It is not possible to convert a 50 Hz signal into 1080p/24Hz. It is output at a resolution of 1080p/50Hz.
### Progressive Mode

Set an appropriate progressive conversion mode for the source video signal.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CBL/SAT</strong></td>
<td><strong>DVD</strong></td>
</tr>
<tr>
<td><strong>GAME</strong></td>
<td><strong>AUX1</strong></td>
</tr>
<tr>
<td><strong>MEDIA PLAYER</strong></td>
<td><strong>CD</strong></td>
</tr>
<tr>
<td><strong>TV AUDIO</strong></td>
<td>*</td>
</tr>
</tbody>
</table>

- **Auto**: The video signal is automatically detected and the appropriate mode is set.
- **Video**: Select mode suitable for video playback.
- **Video and Film**: Select mode suitable for video and 30-frame film material playback.

- This item can be set when “i/p Scaler” is set to anything other than “Off”.

### Aspect Ratio

Set the aspect ratio for the video signals output to the HDMI.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CBL/SAT</strong></td>
<td><strong>DVD</strong></td>
</tr>
<tr>
<td><strong>GAME</strong></td>
<td><strong>AUX1</strong></td>
</tr>
<tr>
<td><strong>MEDIA PLAYER</strong></td>
<td><strong>CD</strong></td>
</tr>
<tr>
<td><strong>NETWORK</strong></td>
<td><strong>TV AUDIO</strong></td>
</tr>
</tbody>
</table>

- **16:9**: Output at 16:9 aspect ratio.
- **4:3**: Output at 4:3 aspect ratio.

- “Aspect Ratio” can be set when “i/p Scaler” is set to anything other than “Off”.

### Volume Display

Sets where to display the master volume level.

#### Setting items

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volume</strong></td>
<td><strong>Bottom</strong></td>
</tr>
</tbody>
</table>

- **Bottom**: Display at the bottom.
- **Top**: Display at the top.
- **Off**: Turn display off.

- When the master volume display is hard to see when superimposed on movie subtitles, set to “Top”.

### Info Display

Displays status of operation temporarily when the sound mode is changed, or input source is switched. You can set whether or not to show each of these status displays.

#### Setting items

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>On-screen Info</strong></td>
<td><strong>On</strong></td>
</tr>
</tbody>
</table>

- **On**: Turn display on.
- **Off**: Turn display off.

### Component Video Out

Sets the zone to which the component video output connector is assigned.

#### Setting items

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Component</strong></td>
<td><strong>MAIN ZONE</strong></td>
</tr>
</tbody>
</table>

- **Assigns the component video output connector to MAIN ZONE**.
- **ZONE2**: Assigns the component video output connector to ZONE2.

---

*“Blu-ray”, “GAME”, “AUX2”, “TV AUDIO” or “CD” can be set when “HDMI” or “COMP” (page 122, 123) has been assigned.*
**Audio Display**

Sets how long each menu is displayed when the input source is “NETWORK”, “iPod/USB”, or “HD Radio”.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audio</strong></td>
<td><strong>Default settings are underlined.</strong> Always : Show display continuously. 30s : Show display for 30 seconds after operation. 10s : Show display for 10 seconds after operation. Off : Turn display off.</td>
</tr>
</tbody>
</table>

**TV Format**

Set the video signal format to be output for the TV you are using.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Format</strong></td>
<td><strong>Default settings are underlined.</strong> NTSC : Select NTSC output. PAL : Select PAL output.  &quot;Format:&quot; can also be set by the following procedure. However, the menu screen is not displayed. 1. Press and hold the main unit’s STATUS and ZONE SELECT for at least 3 seconds. &quot;V.Format : &lt;NTSC&gt;&quot; appears on the display. 2. Use the main unit’s &lt; or &gt; and set the video signal format. 3. Press the main unit’s ENTER to complete the setting.</td>
</tr>
</tbody>
</table>

**NOTE**

When a format other than the video format of the connected TV is set, the picture will not be displayed properly.
Inputs

Perform settings related to input source playback.
• You do not have to change the settings to use the unit. Make settings when needed.

Menu operation

1 Press ZONE SELECT to switch “MAIN”.

2 Press SETUP.
   The menu is displayed on the TV screen.

3 Use △▽ to select the menu to be set or operated.

4 Press ENTER or ▶ to enter the setting.
   • To return to the previous item, press ◄ or BACK.
   • Exiting the Menu, press SETUP while the menu is displayed.
     The menu display disappears.

Important information

About the display of input sources

In this section, the configurable input sources for each item are shown as follows.

- CBL/SAT
- DVD
- Blu-ray
- GAME
- AUX1
- AUX2
- MEDIA PLAYER
- iPod/USB
- CD
- HD Radio
- NETWORK
- TV AUDIO
- M-XPort
- PHONO

NOTE

Input sources that have been set to “Hide” at “Hide Sources” (page 124) cannot be selected.
**Input Assign**

This unit has certain input sources such as “CBL/SAT” assigned to audio and video connectors by default. By making the default connections, you can simply press an input source select button to play back audio or video from the connected device with ease. When making connections other than the default settings, you must change settings in this section.

**Examples of “Input Assign” menu screen displays**

This screen appears when the “Inputs” – “each input source” – “Input Assign” menu is selected. Use the “Input Assign” menu to change the 2 HDMI input connectors, 3 Digital input connectors, and 4 component input connectors that are assigned to the 1 input sources in default settings.

**Input assignments menu operations**

1. Use ▲ ▼ △ to move the cursor to the item you want to set, and then press ENTER.
2. Use ◀ ▶ to select the input connector to be assigned.
3. Press ENTER to register the setting.

**Setting items**

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDMI</td>
<td>Set this to change the HDMI input connectors assigned to the input sources.</td>
</tr>
<tr>
<td>None: Do not assign an HDMI input connector to the selected input source.</td>
<td></td>
</tr>
<tr>
<td>GAME</td>
<td>an HDMI input connector to the selected input source.</td>
</tr>
</tbody>
</table>

- At time of purchase, the settings of the different input sources are as shown below.

<table>
<thead>
<tr>
<th>Input source</th>
<th>CBL/SAT</th>
<th>DVD</th>
<th>Blu-ray</th>
<th>GAME</th>
<th>AUX1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default setting</td>
<td>HDMI 1</td>
<td>HDMI 2</td>
<td>HDMI 3</td>
<td>HDMI 4</td>
<td>HDMI 7</td>
</tr>
<tr>
<td>Input source</td>
<td>AUX2</td>
<td>MEDIA PLAYER</td>
<td>CD</td>
<td>TV AUDIO</td>
<td></td>
</tr>
<tr>
<td>Default setting</td>
<td>HDMI 6</td>
<td>HDMI 5</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
### Setting items Setting details

#### DIGITAL
- **Set this to change the digital input connectors assigned to the input sources.**
- **COAX 1 / COAX 2 / OPT 1 / OPT 2** : Assign a digital input connector to the selected input source.
- **None** : Do not assign a digital input connector to the selected input source.
- • At time of purchase, the settings of the different input sources are as shown below.

<table>
<thead>
<tr>
<th>Input source</th>
<th>CBL/SAT</th>
<th>DVD</th>
<th>Blu-ray</th>
<th>GAME</th>
<th>AUX1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default setting</td>
<td>COAX 1</td>
<td>COAX 2</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

#### COMP
- **(Component video)**
- **Set this to change the component video input connectors assigned to the input sources.**
- **COMP 1 / COMP 2 / COMP 3** : Assign the component video input connector to the selected input source.
- **None** : Do not assign a component video input connector to the selected input source.
- • At time of purchase, the settings of the different input sources are as shown below.

<table>
<thead>
<tr>
<th>Input source</th>
<th>CBL/SAT</th>
<th>DVD</th>
<th>Blu-ray</th>
<th>GAME</th>
<th>AUX1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default setting</td>
<td>COMP 1</td>
<td>COMP 2</td>
<td>COMP 3</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

- An input source to which an component video input connector cannot be assigned is displayed as “– – –”.

### Source Rename

Change the display name of the selected input source.

This is convenient when the input source name of your device and the input source name of this unit are different. You can change the name to suit your needs. When the renaming is completed, the name is displayed on this unit’s display and on the menu screen.

#### Setting details
- **Set Defaults** : The input source name is returned to the default setting.
  - **Yes** : Reset to the defaults.
  - **No** : Do not reset to the defaults.
  - If you select “Set Defaults” and press ENTER, the message “Reset to the default values?” is displayed. Select “Yes” or “No”, and then press ENTER.

####  Set Defaults
- **The input source name is returned to the default setting.**
- **Yes** : Reset to the defaults.
- **No** : Do not reset to the defaults.
- **If you select “Set Defaults” and press ENTER, the message “Reset to the default values?” is displayed. Select “Yes” or “No”, and then press ENTER.**
**Hide Sources**

Default settings are underlined.

Remove from the display input sources that are not used.

Setting details

<table>
<thead>
<tr>
<th>CBL/SAT / DVD / Blu-ray / GAME / AUX1 / AUX2 / MEDIA PLAYER / iPod/USB / CD / HD Radio / NETWORK / TV AUDIO / M-XPort / PHONO</th>
<th>Select input source that is not used.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Show</strong></td>
<td>Use this source.</td>
</tr>
<tr>
<td>• <strong>Hide</strong></td>
<td>Do not use this source.</td>
</tr>
</tbody>
</table>

**NOTE**

- Input sources being used in the MAIN ZONE, ZONE2 or ZONE3 cannot be selected.
- Input sources being used in the various zones cannot be deleted.
- Input sources set to “Hide” cannot be selected using the input source select button.

**Source Level**

Default settings are underlined.

This function corrects the playback level of the selected input source’s audio input.

• Make this setting if there are differences in the input volume levels between the different sources.

Setting details

-12dB – +12dB (0dB)

The analog input level and digital input level can be adjusted independently for input sources for which “DIGITAL” is assigned at “Input Assign” (page 122).

**Input Select**

Set the audio input mode and decode mode of each input source.

The input modes available for selection may vary depending on the input source.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input Mode</strong></td>
<td>Set the audio input modes for the different input sources. It is normally recommended to set the audio input mode to “Auto”.</td>
</tr>
<tr>
<td><strong>Digital</strong></td>
<td>Play only signals from digital input.</td>
</tr>
<tr>
<td><strong>Analog</strong></td>
<td>Play only signals from analog input.</td>
</tr>
<tr>
<td><strong>7.1CH IN</strong></td>
<td>Only signals input from the 7.1CH IN connector will be played back.</td>
</tr>
</tbody>
</table>

**NOTE**

- “Digital” can be set for input sources for which “DIGITAL” is assigned at “Input Assign” (page 123).
- If the input source is set to “CBL/SAT”, “DVD”, “Blu-ray”, “MEDIA PLAYER”, “CD” or “PHONO”, it can be set to “Analog”.
- When digital signals are properly input, the indicator lights on the display. If the indicator does not light, check “Input Assign” (page 122) and the connections.
- If “HDMI Control” is set to “On” and a TV compatible with the ARC is connected via the HDMI MONITOR connectors, the input mode whose input source is “TV” is fixed to ARC.
- The surround mode cannot be set if the input mode is set to “7.1CH IN”.

<table>
<thead>
<tr>
<th><strong>Decode Mode</strong></th>
<th>Set the audio decode mode for input source.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Auto</strong></td>
<td>Detect type of digital input signal and decode and play automatically.</td>
</tr>
<tr>
<td><strong>PCM</strong></td>
<td>Decode and play only PCM input signals.</td>
</tr>
<tr>
<td><strong>DTS</strong></td>
<td>Decode and play only DTS input signals.</td>
</tr>
</tbody>
</table>

**NOTE**

- This item can be set for input sources for which “DIGITAL” is assigned at “Input Assign” (page 122).
- Normally set this mode to “Auto”. Set “PCM” and “DTS” when inputting the corresponding input signal.
Video Source

Video of another input source is played back combined with the playing audio.

Setting details

Default: Play the picture and sound of the input source.
CBL/SAT / DVD / Blu-ray / GAME / AUX1 / AUX2 / MEDIA PLAYER / TV AUDIO / CD: Select video input source to view. The video of the selected input source is played along with the audio currently being played. This can be set for individual input sources.

“Blu-ray”, “GAME”, “AUX2”, “TV AUDIO” or “CD” can be selected only when “COMP” is assigned to the input source.

NOTE

• It is not possible to select HDMI input signals.
• Input sources for which “Hide” is selected at “Hide Sources” (p. 124) cannot be selected.
**Speakers**

Set when changing Audyssey® Setup settings.

- If you change the speaker settings after performing Audyssey® Setup, it will not be possible to set Audyssey MultEQ® XT, Audyssey Dynamic EQ® and Audyssey Dynamic Volume® (page 112).
- Can be used without changing the settings. Please set if necessary.

**Menu operation**

1. Press **ZONE SELECT** to switch “MAIN”.
2. Press **SETUP**. The menu is displayed on the TV screen.
3. Use **△ ▽** to select the menu to be set or operated.
4. Press **ENTER** or **▷** to enter the setting.

- To return to the previous item, press **◁** or **BACK**.
- Exiting the Menu, press **SETUP** while the menu is displayed. The menu display disappears.

**Items that can be set with the “Speakers” procedure**

<table>
<thead>
<tr>
<th>Setting</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audyssey® Setup</td>
<td>28, 88</td>
</tr>
<tr>
<td>Manual Setup</td>
<td>127</td>
</tr>
</tbody>
</table>
**Manual Setup**

Default settings are underlined.

Perform when setting the speakers manually or when changing settings made in Audyssey® Setup.

- If you change the speaker settings after performing Audyssey® Setup, it will not be possible to select Audyssey MultEQ® XT, Audyssey Dynamic EQ® and Audyssey Dynamic Volume® (\( \text{page 112} \)).
- “Manual Setup” can be used without changing the settings. Please set if necessary.

Audio output from each PRE OUT terminal

<table>
<thead>
<tr>
<th>Audio Output</th>
<th>PRE OUT Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNBALANCED</td>
<td>PRE OUT Channel</td>
</tr>
<tr>
<td>BALANCED PRE</td>
<td></td>
</tr>
<tr>
<td>OUT terminal</td>
<td></td>
</tr>
<tr>
<td>Audio Output</td>
<td>Front Center</td>
</tr>
<tr>
<td></td>
<td>Subwoofer 1</td>
</tr>
<tr>
<td></td>
<td>Subwoofer 2</td>
</tr>
<tr>
<td></td>
<td>Surround</td>
</tr>
<tr>
<td></td>
<td>Surround Back</td>
</tr>
<tr>
<td></td>
<td>Front Height</td>
</tr>
<tr>
<td></td>
<td>Front Wide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker Config.</td>
<td>Indicate speaker presence and select speaker size categories based on bass reproduction capability.</td>
</tr>
<tr>
<td>Front</td>
<td>Set the front speaker size.</td>
</tr>
<tr>
<td>Large : Use a large speaker that can adequately play back low frequencies.</td>
<td></td>
</tr>
<tr>
<td>Small : Use a small speaker that has inadequate playback capacity for low frequencies.</td>
<td></td>
</tr>
<tr>
<td>Center</td>
<td>Set the presence and size of the center speaker.</td>
</tr>
<tr>
<td>Large : Use a large speaker that can adequately play back low frequencies.</td>
<td></td>
</tr>
<tr>
<td>Small : Use a small speaker that has inadequate playback capacity for low frequencies.</td>
<td></td>
</tr>
<tr>
<td>None : Select when a center speaker is not connected.</td>
<td></td>
</tr>
<tr>
<td>Subwoofer</td>
<td>Set the presence of a subwoofer.</td>
</tr>
<tr>
<td>Yes : Use a subwoofer.</td>
<td></td>
</tr>
<tr>
<td>No : Select when a subwoofer is not connected.</td>
<td></td>
</tr>
<tr>
<td>Surround</td>
<td>Set the presence and size of the surround speakers.</td>
</tr>
<tr>
<td>Large : Use a large speaker that can adequately play back low frequencies.</td>
<td></td>
</tr>
<tr>
<td>Small : Use a small speaker that has inadequate playback capacity for low frequencies.</td>
<td></td>
</tr>
<tr>
<td>None : Select when the surround speakers are not connected.</td>
<td></td>
</tr>
<tr>
<td>When “Surround” is set to “Large”, “Front Wide” and “Front Height” can be set to “Large”.</td>
<td></td>
</tr>
<tr>
<td>When “Surround” is set to “None”, “Front Wide” and “Front Height” and “Front Wide” are automatically set to “None”.</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE**

Do not use the outward shape of the speaker to determine selection of a “Large” or “Small” speaker. Instead, use the frequencies set in “Crossovers” (\( \text{page 129} \)) as the standard for determining bass reproduction capability.

See overleaf
## Setting items
### Setting details

<table>
<thead>
<tr>
<th>Speaker Config. (Continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surr. Back</strong>: Set the presence, size and number of surround back speakers.</td>
</tr>
<tr>
<td>• <strong>Large</strong>: Use a large speaker that can adequately play back low frequencies.</td>
</tr>
<tr>
<td>• <strong>Small</strong>: Use a small speaker that has inadequate playback capacity for low frequencies.</td>
</tr>
<tr>
<td>• <strong>None</strong>: Select when the surround back speakers are not connected.</td>
</tr>
<tr>
<td>• <strong>2spkrs</strong>: Use two surround back speakers.</td>
</tr>
<tr>
<td>• <strong>1spkr</strong>: Use only one surround back speaker. When you select this setting, connect the surround back speaker to the left (L) channel.</td>
</tr>
</tbody>
</table>

| **Front Height**: Set the presence and size of the front height speakers. |
| • **Large**: Use a large speaker that can adequately play back low frequencies. |
| • **Small**: Use a small speaker that has inadequate playback capacity for low frequencies. |
| • **None**: Select when the front height speakers are not connected. |

| **Front Wide**: Set the presence and size of the front wide speakers. |
| • **Large**: Use a large speaker that can adequately play back low frequencies. |
| • **Small**: Use a small speaker that has inadequate playback capacity for low frequencies. |
| • **None**: Select when the front height speakers are not connected. |

| **Bass**: Set subwoofer and LFE signal range playback. |
| **Subwoofer Mode**: Select low range signals to be reproduced by subwoofer. |
| • **LFE**: The low range signal of the channel set to “Small” speaker size is added to the LFE signal output from the subwoofer. |
| • **LFE+Main**: The low range signal of all channels is added to the LFE signal output from the subwoofer. |

* “Subwoofer Mode” can be set when “Speaker Config.” – “Subwoofer” (page 127) is set to “Yes”.
* Play music or a movie source and select the mode offering the strongest bass.
* Select “LFE+Main” if you want the bass signals to always be produced from the subwoofer.

**NOTE**
If “Front” and “Center” for “Speaker Config.” are set to “Large”, and “Subwoofer Mode” is set to “LFE”, no sound may be output from the subwoofers, depending on the input signal or selected sound mode.

| **LPF for LFE**: Set LFE signal playback range. Set this when you want to change the playback frequency of the subwoofer. |
| • **80Hz / 90Hz / 100Hz / 110Hz / 120Hz / 150Hz / 200Hz / 250Hz** |

---

<table>
<thead>
<tr>
<th>Setting items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distances</strong>: Set distance from listening position to speakers. Measure beforehand the distance from the listening position to each speaker.</td>
</tr>
<tr>
<td><strong>Unit</strong>: Set the unit of distance.</td>
</tr>
<tr>
<td>• <strong>Feet / Meters</strong></td>
</tr>
</tbody>
</table>

| **Step**: Set the minimum variable width of the distance. |
| • **1ft / 0.1ft** |
| • **0.1m / 0.01m** |

| **Set Defaults**: The “Distances” settings are returned to the default settings. |
| • **Yes**: Reset to the defaults. |
| • **No**: Do not reset to the defaults. |

When you select “Set Defaults” and press ENTER, the “Reset to the default values?” prompt is displayed. Select either “Yes” or “No”, and press ENTER.


* When the “Speaker Config.” – “Surr. Back” setting (page 127) is set to “1spkr”, “Surr. Back” is displayed.

| **0.0ft – 60.0ft / 0.00m – 18.00m**: Set the distance. |

* The speakers that can be selected differ depending on the “Speaker Config.” (page 127) settings.

* Default settings:
  - Front L / Front R / F. Height L / F. Height R / Center / Subwoofer / Front Wide L / Front Wide R : 12.0 ft (3.60 m)
  - Surround L / Surround R / Surr. Back L / Surr. Back R : 10.0 ft (3.00 m)

* Set the difference in the distance between the speakers to less than 20.0 ft (6.00 m).

**NOTE**
Speakers set to “None” in “Speaker Config.” (page 127) are not displayed.
### Levels
Set the volume of the test tone to be the same when it is output from each speaker.

**Test Tone Start**
- Output test tone.
- Select speaker to output test tone.
  - **-12.0dB – +12.0dB (0.0dB)**
  - Adjust the volume.

When “Levels” is adjusted, the adjusted values are set for all the sound modes.

**NOTE**
- Speakers set to “None” in the “Speaker Config.” (page 127) settings are not displayed.
- When a headphones jack is inserted in the PHONES jack of this unit, the “Levels” is not displayed.

**Set Defaults**
The “Levels” settings are returned to the default settings.
- **Yes**
  - Reset to the defaults.
- **No**
  - Do not reset to the defaults.

When you select “Set Defaults” and press ENTER, the “Reset to the default values?” prompt is displayed. Select either “Yes” or “No”, and press ENTER.

### Crossovers
Set the maximum frequency of the bass signal output from each channel to the subwoofer. Set the Crossover Frequency to suit the bass reproduction capability of the speaker being used.

**Crossover**
- Set the crossover frequency.
  - **40Hz / 60Hz / 80Hz / 90Hz / 100Hz / 110Hz / 120Hz / 150Hz / 200Hz / 250Hz / Individual**
  - Set the crossover frequency for all speakers. See the speaker manual for information concerning speaker crossover frequency.

The following settings can be set when the “Crossover” setting is set to “Individual”.
- **Front / Center / Surround / Surr. Back / Front Height**
  - Select speaker for setting of crossover frequency.
  - **40Hz / 60Hz / 80Hz / 90Hz / 100Hz / 110Hz / 120Hz / 150Hz / 200Hz / 250Hz**
  - Set the crossover frequency.

“Crossovers” can be set when the “Bass” – “Subwoofer Mode” (page 128) setting is “LFE+Main”, or when you have a speaker that is set to “Small”.

**NOTE**
- Always set the crossover frequency to “80Hz”. When using small speakers, however, we recommend setting the crossover frequency to a higher frequency.
- For speakers set to “Small”, sound below the crossover frequency is cut from the sound output. The cut bass sound is output from the subwoofer or front speakers.
- The speakers that can be set when “Individual” is selected differ depending on to the “Subwoofer Mode” setting (page 128).
  - When “LFE” is selected, speakers set to “Small” at “Speaker Config.” can be set. If the speakers are set to “Large”, “Full Band” is displayed and the setting cannot be made.
  - If set to “LFE+Main”, this setting can be made regardless of the speaker size.
Network

To use this unit by connecting it to a home network (LAN), you must configure network settings.

If you set up your home network (LAN) via DHCP, set “DHCP” to “On” (use the default setting). This allows this unit to use your home network (LAN).

If you assign an IP address for each device, you must use the “IP Address” setting to assign an IP address to this unit and enter the information about your home network (LAN) such as the gateway address and subnet mask.

Menu operation

1. Press ZONE SELECT to switch “MAIN”.
2. Press SETUP.
   The menu is displayed on the TV screen.
3. Use ▲▼ to select the menu to be set or operated.
4. Press ENTER or ▶ to enter the setting.
   - To return to the previous item, press ◄ or BACK.
   - Exiting the Menu, press SETUP while the menu is displayed.
     The menu display disappears.

Items that can be set with the “Network” procedure

- Information (page 131)
- IP Control (page 131)
- Friendly Name (page 131)
- Settings (page 132)
- Maintenance Mode (page 133)
### Information

Display network information.

**Friendly Name / DHCP=On or Off / IP Address / MAC Address**

MAC Address is required to make a vTuner account.

### IP Control

Set the network function on/off during standby.

**Off In Standby**: Suspend network function during standby.

**Always On**: Network is on during standby. Main unit operable with a network compatible controller.

Set to “Always On” when using the web control function.

### Friendly Name

The Friendly Name is the name of this unit displayed on the network. You can change the Friendly Name according to your preferences.

**Setting items**

- **Edit Name**: Edits Friendly Name.
  - The default Friendly Name on first use is “marantz AV7701”.
  - Up to 63 characters can be input.
  - For character input, see page 107.

- **Set Defaults**: Restores Friendly Name, which you had changed, to the default setting.
  - Yes: Reset to the defaults.
  - No: Do not reset to the defaults.

When you select “Set Defaults” and press ENTER, the “Reset to the default values?” prompt is displayed. Select either “Yes” or “No”, and press ENTER.

**NOTE**

When “IP Control” is set to “Always On”, it consumes more standby power.
Network Settings

Make settings for wired LAN.
Only set “Settings” when connecting to a network without a DHCP function.

Setting details

On the menu, select “Network” – “Settings” and press ENTER.
2. Use \( \uparrow \downarrow \) to select “DHCP”, then press ENTER.
3. Use \( \leftarrow \rightarrow \) to select “Off”, then press ENTER.
4. Use \( \uparrow \downarrow \) to select “IP Address”, then press ENTER.
   - IP Address: Set the IP address within the ranges shown below.
     The Network Audio function cannot be used if other IP addresses are set.
     CLASS A: 10.0.0.1 – 10.255.255.254
     CLASS B: 172.16.0.1 – 172.31.255.254
     CLASS C: 192.168.0.1 – 192.168.255.254
5. Use \( \uparrow \downarrow \leftarrow \rightarrow \) to input the address and press ENTER.
6. Use \( \uparrow \downarrow \) to select the setting item, then press ENTER.
   - Subnet Mask: When connecting an xDSL modem or terminal adapter directly to this unit, input the subnet mask indicated in the documentation supplied by your provider. Normally input 255.255.255.0.
   - Default Gateway: When connected to a gateway (router), input its IP address.
   - Primary DNS, Secondary DNS: If there is only one DNS address indicated in the documentation supplied by your provider, input it at “Primary DNS”. If two or more DNS are provided by your provider, enter both Primary DNS and Secondary DNS.
   - When connecting to the network via a Proxy server, select “Proxy” and press ENTER (page 133).
Setting details

** Proxy settings **
Make this setting when connecting to the Internet via a proxy server.
Make the proxy settings only when you connect to the Internet via a proxy server that is on your internal network or provided by your provider, etc.

![Network Information](image)

** Network/Settings **
- **DHCP**: On
- **IP Address**: 192.168.000.001
- **Subnet Mask**: 255.255.255.000
- **Default Gateway**: 000.000.000.000
- **Primary DNS**: 000.000.000.000
- **Secondary DNS**: 000.000.000.000

** Proxy **
- **Address**: 00000
- **Port**: 000.000.000.000

** Maintenance Mode **
Use when receiving maintenance from a Marantz service engineer or custom installer.

** NOTE **
Only use this function if so instructed by a Marantz serviceperson or installer.

1. On the menu, select “Network” – “Settings” and press ENTER.
2. Use Δ∇ to select “Proxy” and press ENTER.
3. Press ENTER again.
4. Use ◄ ► to select “On” and press ENTER.
5. Press Δ to select “Proxy”, then press ENTER.
6. Use ◄ ► to select “Address” or “Name”, and then press ENTER.
   - **Address**: Select when inputting by address.
   - **Name**: Select when inputting by domain name.
7. Press Δ to select “Address” or “Name”, then press ENTER.
   - When “Address” is selected in step 7: Use Δ∇ ◄ ► to enter the proxy server address, and press ENTER.
   - When “Name” is selected in step 7: Use the software keyboard (page 107) to enter the domain name, and select K.K.
   - For character input, see page 107.
8. Press ◄ to select “Port”, then press ENTER. Use Δ∇ ◄ ► to input the proxy server port number and press ENTER.
   - Setup is complete.
9. Press ◄ or BACK.
   - The display returns to the original screen.
General

Make various other settings.

Menu operation

1. Press ZONE SELECT to switch “MAIN”.

2. Press SETUP. The menu is displayed on the TV screen.

3. Use ▲▼ to select the menu to be set or operated.

4. Press ENTER or ▶ to enter the setting.

   • To return to the previous item, press ◄ or BACK.
   • Exiting the Menu, press SETUP while the menu is displayed. The menu display disappears.

Items that can be set with the “General” procedure

<table>
<thead>
<tr>
<th>Language</th>
<th>(page 135)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE2 Setup / ZONE3 Setup</td>
<td>(page 135)</td>
</tr>
<tr>
<td>Zone Rename</td>
<td>(page 136)</td>
</tr>
<tr>
<td>Trigger Out 1 / Trigger Out 2</td>
<td>(page 136)</td>
</tr>
<tr>
<td>Auto Standby</td>
<td>(page 136)</td>
</tr>
<tr>
<td>Front Display</td>
<td>(page 136)</td>
</tr>
<tr>
<td>Information</td>
<td>(page 137)</td>
</tr>
<tr>
<td>Firmware</td>
<td>(page 138)</td>
</tr>
<tr>
<td>Setup Lock</td>
<td>(page 139)</td>
</tr>
</tbody>
</table>
Language

Set the language for display on the menu screen.

**Setting details**

**English** / **Français** / **Español**

“Language” can also be set by the following procedure. However, the menu screen is not displayed.

- Following the display content to make the setting.
- 1. Press and hold the main unit’s **STATUS** and **ZONE SELECT** for at least 3 seconds.
- 2. Press the main unit’s **△** and set “Language : <ENGLISH>”.
- 3. Use the main unit’s **<** and **>** to set the language.
- 4. Press the main unit’s **ENTER** to complete the setting.

**ZONE2 Setup / ZONE3 Setup**

Set the audio to play back with multi-zone (ZONE2, ZONE3).

**NOTE**

When HDMI ZONE2 function is used, these settings are not available.

### Setting items | Setting details
--- | ---
**Bass** | Adjust bass tones.
-10dB – +10dB (0dB)

**Treble** | Adjust treble tones.
-10dB – +10dB (0dB)

**High Pass Filter** | Make settings for cutting the low range to reduce distortion in the bass.
On : The low range is attenuated.
Off : The low range is not attenuated.

**Lch Level** | Adjust the left channel output level.
-12dB – +12dB (0dB)

**Rch Level** | Adjust the right channel output level.
-12dB – +12dB (0dB)

### Setting items | Setting details
--- | ---
**Channel** | Set the signal output from multi-zone.
Stereo : Select stereo output.
Mono : Select monaural output.

**Volume Level** | Set the volume output level.
Variable : Volume adjustment is enabled by main unit and remote control unit.
40 (–40dB) : Fix volume at –40 dB. Set when adjusting volume by external amplifier.
80 (0dB) : Fix volume at 0 dB. Set when adjusting volume by external amplifier.

**Volume Limit** | Make a setting for maximum volume.
Off : Do not set a maximum volume.
60 (–20dB) / 70 (–10dB) / 80 (0dB)

This is displayed from –79 dB to 18 dB when “Scale” (page 112) is set to “–79.5dB – 18.0dB”.

**Power On Volume** | Define the volume setting that is active when the power is turned on.
Last : Use the memorized setting from the last session.
Mute : Always mute when power is turned on.
1 – 98 (–79dB – 18dB) : The volume is adjusted to the set level.

This is displayed from –79 dB to 18 dB when “Scale” (page 112) is set to “–79.5dB – 18.0dB”.

**Mute Level** | Set the amount of attenuation when muting is on.
Full : The sound is muted entirely.
–40dB : The sound is attenuated by 40 dB down.
–20dB : The sound is attenuated by 20 dB down.
Zone Rename
Change the display title of each zone to one you prefer.

Setting details

MAIN ZONE / ZONE2 / ZONE3
• Up to 10 characters can be input.
• For character input, see page 107.

Trigger Out 1 / Trigger Out 2
Selects when to activate trigger out.
For details about how to connect the DC OUT jacks, see “DC OUT jacks” (page 91).

Setting details

When setting for zone (MAIN ZONE / ZONE2 / ZONE3)
Trigger out is activated through linkage to the power of the zone set to “On”.

When setting for input source
Activate trigger out when the input source set to “On” is selected.

When setting for HDMI monitor
Activate trigger out when the HDMI monitor set to “On” is selected.

• On : Activate trigger on this mode.
• – – – : Do not activate trigger on this mode.

Auto Standby
Default settings are underlined.
When you do not perform any operation on this unit with no audio or video input for a specified time, this unit automatically enters the standby mode. Before it enters the standby mode, “Auto Standby” is displayed on the display of this unit and the menu screen.

Setting details

30min : The unit goes into standby after 30 minutes.
60min : The unit goes into standby after 60 minutes.
Off : The unit does not go into standby automatically.

Front Display
Default settings are underlined.
Makes settings related to the display on this unit.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>On : Display is always on. Auto OFF : Display is off except when showing the status display. Off : Display is always off.</td>
</tr>
<tr>
<td></td>
<td>This can also be set by pressing DISPLAY on the main unit. Each time DISPLAY is pressed, the setting is changed as shown below.</td>
</tr>
<tr>
<td></td>
<td>NOTE When “Display” is set to “Off”, the display turns off and appears as if there is no electricity.</td>
</tr>
</tbody>
</table>

Channel Indicator
Sets whether to use the input signal display or output signal display for the channel indication on the display.

Output : Uses the output signal display for the channel indication on the display.
Input : Uses the input signal display for the channel indication on the display.
**Information**

Show information about receiver settings, input signals, etc.

**NOTE**
This item is not compatible with the HDMI ZONE2 function.

<table>
<thead>
<tr>
<th>Items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audio</strong></td>
<td>Show information about audio input signals.</td>
</tr>
<tr>
<td>Sound Mode</td>
<td>The currently set surround mode.</td>
</tr>
<tr>
<td>Input Signal</td>
<td>The input signal type.</td>
</tr>
<tr>
<td>Format</td>
<td>The number of input signal channels (presence of front, surround, LFE).</td>
</tr>
<tr>
<td>Sample Rate</td>
<td>The input signal’s sampling frequency.</td>
</tr>
<tr>
<td>Offset</td>
<td>The dialogue normalization correction value.</td>
</tr>
<tr>
<td>Flag</td>
<td>This is displayed when inputting signals including a surround back channel. “MATRIX” is displayed with Dolby Digital EX and DTS-ES Matrix signals, “DISCRETE” with DTS-ES Discrete signals.</td>
</tr>
</tbody>
</table>

**Dialogue normalization function**

This function is automatically activated when playing Dolby Digital sources. It automatically corrects the standard signal level for individual program sources. The correction value can be checked using the STATUS on the main unit.

- The figure is the corrected value. This cannot be changed.

| **Video** | Show information about HDMI input/output signals and monitor. |
| Signal | • Resolution / Color Space / Pixel Depth |
| Monitor 1 / Monitor 2 | • Interface / Resolutions |

**Examples of screen display**

- **Status display screen**
  - When the input source is switched. |
  - When the volume is adjusted. |

Status display: The operating status appears briefly on the screen when the input source is switched or the volume is changed.

**NOTE**

The status display screen cannot be displayed at a computer’s resolution (e.g. VGA) or while certain 3D video contents is being played.
Firmware

Set whether or not to check for firmware update, update the firmware, and display update and upgrade notifications.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Update</strong></td>
<td><strong>Check for Update</strong>: Check for firmware updates. You can also check approximately how long it will take to complete an update. <strong>Update Start</strong>: Execute the update process. When updating starts, the STANDBY indicator becomes red and the menu screen is shut down. The amount of update time which has elapsed is displayed. • If updating fails, the set automatically retries, but if updating is still not possible, one of the messages shown below is displayed. If the display reads as shown below, check the settings and network environment, then update again.</td>
</tr>
<tr>
<td><strong>Notifications</strong></td>
<td>Displays a notification message on this unit’s menu screen when the latest firmware is released with “Update”. Display a notification message on this unit’s menu screen when downloadable firmware is released with “Add New Feature”.</td>
</tr>
<tr>
<td><strong>Update</strong></td>
<td>The notification message is displayed for about 20 seconds when the power is turned on. Connect to broadband Internet (page 27) when using this function. • <strong>On</strong>: Display update message. • <strong>Off</strong>: Do not display update message.</td>
</tr>
<tr>
<td><strong>Upgrade</strong></td>
<td>The notification message is displayed for about 20 seconds when the power is turned on. Connect to broadband Internet (page 27) when using this function. • <strong>On</strong>: Display upgrade message. • <strong>Off</strong>: Do not display upgrade message.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updating fail</td>
<td>Updating failed.</td>
</tr>
<tr>
<td>Login failed</td>
<td>Failure to log into server.</td>
</tr>
<tr>
<td>Server is busy</td>
<td>Server is busy. Wait a while then try again.</td>
</tr>
<tr>
<td>Connection fail</td>
<td>Failure in connecting to server.</td>
</tr>
<tr>
<td>Download fail</td>
<td>Downloading of the firmware has failed.</td>
</tr>
</tbody>
</table>

NOTE: In cases where it is not possible to connect to the network after doing a firmware update, connect to the network again using “Network” (page 130).
Add New Feature
Display new features that can be downloaded to this unit and perform an upgrade.

**NOTE**
In cases where it is not possible to connect to the network after adding a new function, connect to the network again using “Network” (page 130).

**Upgrade Package**
Display the items to be upgraded.

**Upgrade Status**
Display a list of the additional functions provided by the upgrade.

**Upgrade Start**
Execute the upgrade process.
When the upgrade starts, the STANDBY indicator becomes red and the menu screen is shut down. During the upgrade, the amount of upgrade time which has elapsed is displayed.
- If the upgrade is not successful, an error message identical to those in “Update” will appear on the display. Check the settings and network environment and then perform the upgrade again.

See the marantz website for details about upgrades.
When the procedure is complete, “Registered” is displayed in this menu and upgrades can be carried out. If the procedure has not been carried out, “Not Registered” is displayed.
The ID number shown on this screen is needed when carrying out the procedure.
The ID number can also be displayed by pressing and holding the main unit’s **SETUP** and **ON/STANDBY** for at least 3 seconds.

### Setup Lock
Protect settings from inadvertent change.

<table>
<thead>
<tr>
<th>Setting items</th>
<th>Setting details</th>
</tr>
</thead>
</table>
| **Lock**      | **On**: Turn protection on.  
**Off**: Turn protection off. |

When canceling the setting, set “Lock” to “Off”.

**NOTE**
When “Lock” is set to “On”, the settings listed below can no longer be changed. Also, “Setup Locked!” is displayed if you attempt to operate related settings.
- Setup menu operations

### Notes concerning use of “Update” and “Add New Feature”
- In order to use these functions, you must have the correct system requirements and settings for a broadband Internet connection (page 27).
- Do not turn off the power until updating or upgrading is completed.
- Even with a broadband connection to the Internet, approximately 1 hour is required for the updating/upgrading procedure to be completed.
- Once updating/upgrading starts, normal operations on this unit cannot be performed until updating/upgrading is completed. Furthermore, there may be cases where backup data is reset for the parameters, etc., set on this unit.
- If the update or upgrade fails, press and hold the **ON/STANDBY** on the main unit for more than 5 seconds, or remove and re-insert the power cord. “Update retry” appears on the display and update restarts from the point at which update failed. If the error continues despite this, check the network environment.

- Information regarding the “Update” function and “Add New Feature” will be announced on the marantz website each time related plans are defined.
- When usable new firmware is released with “Update” or “Add New Feature”, a notification message is displayed on the menu screen. When you do not want to be notified, set “Notifications” – “Update” (page 138) and “Notifications” – “Upgrade” (page 138) to “Off”.

### Upgrade Start
Execute the upgrade process.
When the upgrade starts, the STANDBY indicator becomes red and the menu screen is shut down. During the upgrade, the amount of upgrade time which has elapsed is displayed.
- If the upgrade is not successful, an error message identical to those in “Update” will appear on the display. Check the settings and network environment and then perform the upgrade again.

See the marantz website for details about upgrades.
When the procedure is complete, “Registered” is displayed in this menu and upgrades can be carried out. If the procedure has not been carried out, “Not Registered” is displayed.
The ID number shown on this screen is needed when carrying out the procedure.
The ID number can also be displayed by pressing and holding the main unit’s **SETUP** and **ON/STANDBY** for at least 3 seconds.
Registering preset codes

When preset codes are registered in the included remote control unit, it can then be used to operate any devices you have, such as DVD players or TVs made by different manufacturers.

Buttons used for operating the devices

- **DEVICE X**
  - For switching power of each device on or off.
  - For menu operation of each device.
- **MENU, INFO, OPTION, SETUP**
  - For displaying the menu of each device.
- **CH/PAGE ▲▼**
  - For operating a TV
    - This button is enabled in any mode.

For details on operation with the remote control unit, see pages 41, 44, 53, 56, 60, 63, 66, 68, 70, 144, 145.

The preset code cannot be registered to **M-XP, TUNER, PHONO, iPod/USB, NETWORK and INTERNET RADIO**.

Registering preset codes

The following two methods can be used for registering the preset code.

1. **Entering a 4-digit code**
2. **Scanning the code table**

Entering a 4-digit code

See the preset code list table for the code to be input.

1. Press and hold the input source select buttons for the appliance to control, and press SET until indicator blinks twice.
   - The back light flashes.

2. Press the 4-digit code for the appliance using 0 – 9 (code table at the end of this manual).
   - When the settings are complete, “OK” is shown in the remote control display.

Scanning the code table

1. Switch the power on of the device for which you want to set the preset code.
2. Press and hold the input source select buttons for the appliance to control, and press SET until indicator blinks twice.
   - The back light flashes.
3. Aim the remote control at the appliance and slowly alternate between pressing CH/PAGE ▲ and DEVICE X for the appliance.
   - The preset code is shown in the remote control display.
4. Stop when the appliance turns off.
5. Press ENTER once to lock in the code.

Some manufacturers use more than one type of remote control code. It is advisable to change the number and verify correct operation.

If the AV device is not a Marantz device, or if the device does not operate even when the preset code is registered, use the learning function. Remote codes for different devices can be remembered for use by the Marantz remote control included with this device.

Depending on the model and year of manufacture of your device, some buttons may not operate.
Check the registered preset code

1. Press and hold the input source select buttons for the appliance to control, and press SET until the indicator blinks twice.
   The back light flashes.

2. Press INFO.
   The indicator blinks twice, after which the set code is shown for 3 seconds in the remote control display.

Remote control operation modes

- By default, the input source select buttons on the remote control perform only the input source select operation. To operate an external device with this remote control, set the preset code in “List of preset codes” (page 177) for the device you want to register to each input source select button.
- For how to set preset codes to buttons, see “Registering preset codes” (page 140).
- If you register preset codes on this remote control, the input source select buttons on the remote control can perform the following two functions.
  1. The function to switch input sources on this unit (AVR operation mode)
  2. The function to make this remote control switch to the mode in which you can operate the device registered to the button (External device operation mode)

How to switch operation modes

- Press the input source select button.
  - AVR operation mode*1
  - External device operation mode*2

  Press AVR.

*1 The mode in which you can operate this unit.
*2 If you press one of these buttons, the input source on this unit changes and the remote control switches to the mode in which you can operate the external device registered to that button.
Devices that can be registered to input source select buttons on the remote control

The types of devices that can be registered to each input source select button on this remote control are assigned as shown in the following table. Register the preset code under the desired device name in “List of preset codes” (page 177).

Preset codes that can be registered to CBL/SAT, Blu-ray, GAME, MEDIA PLAYER, DVD, AUX1, AUX2, and CD buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Default preset mode</th>
<th>Available change to preset</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBL/SAT group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DVD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBL/SAT group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DVD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBL/SAT group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DVD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBL/SAT group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DVD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBL/SAT group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DVD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBL/SAT group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DVD group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD group</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To unregister the device from a button and reset to the default setting, set the AVR code “0000” to the button.

Preset codes that can be registered to TV buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Default preset mode</th>
<th>Available change to preset</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>AVR</td>
<td>TV group</td>
</tr>
</tbody>
</table>

When you press TV AUDIO that has a preset code registered to it, the “TV” indication on the remote control lights.

To perform menu operations of this unit, press AVR to have the remote control enter the AVR operation mode.
Operating external devices

Press the input source select button (page 36).

- The operation mode of the remote control unit is switched as shown in the table.

<table>
<thead>
<tr>
<th>Input source select button</th>
<th>Input source of this unit</th>
<th>Operation mode</th>
<th>Devices controllable with the remote control unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVR</td>
<td>–</td>
<td>This unit (AVR-operation)</td>
<td>*2</td>
</tr>
<tr>
<td>CBL/SAT</td>
<td>*1</td>
<td>Device registered on the CBL/SAT button</td>
<td></td>
</tr>
<tr>
<td>Blu-ray</td>
<td>*1</td>
<td>Device registered on the Blu-ray button</td>
<td></td>
</tr>
<tr>
<td>GAME</td>
<td>*1</td>
<td>Device registered on the GAME button</td>
<td></td>
</tr>
<tr>
<td>MEDIA PLAYER</td>
<td>*1</td>
<td>Device registered on the MEDIA PLAYER button</td>
<td></td>
</tr>
<tr>
<td>DVD</td>
<td>*1</td>
<td>Device registered on the DVD button</td>
<td></td>
</tr>
<tr>
<td>AUX1</td>
<td>*1</td>
<td>Device registered on the AUX1 button</td>
<td></td>
</tr>
<tr>
<td>AUX2</td>
<td>*1</td>
<td>Device registered on the AUX2 button</td>
<td></td>
</tr>
<tr>
<td>CD</td>
<td>*1</td>
<td>Device registered on the CD button</td>
<td></td>
</tr>
<tr>
<td>TV AUDIO</td>
<td>*1</td>
<td>Device registered on the TV AUDIO button</td>
<td></td>
</tr>
</tbody>
</table>

*1 If a preset code is registered for this button, the remote control unit of this unit can control another devices.

*2 With this mode, you can operate: HD Radio, iPod, USB memory device, turntable and network function.

When the **FAVORITE STATION** is pressed, the AVR-operation mode starts automatically.

**NOTE**

If the mode of the remote control unit is set to other than AVR-operation mode, press **AVR** to switch the remote control unit to the AVR-operation mode to perform the following operations:

- For menu operation by pressing **SETUP**.
Operating external devices

The supplied remote control unit can control a device other than this unit.

1 Press the input source select button to which the preset code for the device you want to operate has been registered (page 143).

2 Operate the device.

• For details, refer to the device’s operating instructions.

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>TV power on/standby</td>
</tr>
<tr>
<td>TV INPUT</td>
<td>Switch TV input</td>
</tr>
<tr>
<td>CH/PAGE ▲▼</td>
<td>Switch channels (up/down)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVICE</td>
<td>Power on/standby</td>
</tr>
<tr>
<td>DEVICE MENU</td>
<td>Menu</td>
</tr>
<tr>
<td>TV</td>
<td>TV power on/standby</td>
</tr>
<tr>
<td>TV INPUT</td>
<td>Switch TV input</td>
</tr>
<tr>
<td>INFO</td>
<td>Information</td>
</tr>
<tr>
<td>OPTION</td>
<td>Top menu</td>
</tr>
<tr>
<td>△▼◆ DVD</td>
<td>Cursor operation</td>
</tr>
<tr>
<td>ENTER</td>
<td>Enter</td>
</tr>
<tr>
<td>BACK</td>
<td>Return</td>
</tr>
<tr>
<td>SETUP</td>
<td>Setup</td>
</tr>
<tr>
<td>■</td>
<td>Pause</td>
</tr>
<tr>
<td>▶</td>
<td>Playback</td>
</tr>
<tr>
<td>■</td>
<td>Stop</td>
</tr>
<tr>
<td>voie</td>
<td>Auto search (cue)</td>
</tr>
<tr>
<td>◄►</td>
<td>Manual search</td>
</tr>
<tr>
<td>0 – 9, +10</td>
<td>Select title, chapter or channel selection</td>
</tr>
</tbody>
</table>

See overleaf
### CD group (3***)
(CD player / CD recorder) operation

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVICE</td>
<td>Power on/off</td>
</tr>
<tr>
<td>DEVICE MENU</td>
<td>Menu</td>
</tr>
<tr>
<td>TV</td>
<td>TV power on/standby</td>
</tr>
<tr>
<td>TV INPUT</td>
<td>Switch TV input</td>
</tr>
<tr>
<td>ENTER</td>
<td>Enter</td>
</tr>
<tr>
<td>■</td>
<td>Pause</td>
</tr>
<tr>
<td>▶</td>
<td>Playback</td>
</tr>
<tr>
<td>▶ ▶ ▶ ▶</td>
<td>Auto search (cue)</td>
</tr>
<tr>
<td>❯ ❯</td>
<td>Manual search (fast-reverse/fast-forward)</td>
</tr>
<tr>
<td>0 – 9</td>
<td>Track selection</td>
</tr>
</tbody>
</table>

### CBL/SAT group (4***)
(Set top box for satellite (SAT) / cable (CBL) / Media player) operation

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVICE</td>
<td>Power on/standby</td>
</tr>
<tr>
<td>DEVICE MENU</td>
<td>Menu</td>
</tr>
<tr>
<td>TV</td>
<td>TV power on/standby</td>
</tr>
<tr>
<td>TV INPUT</td>
<td>Switch TV input</td>
</tr>
<tr>
<td>CH/PAGE ▲ ▼</td>
<td>Switch channels (up/down)</td>
</tr>
<tr>
<td>INFO</td>
<td>Information</td>
</tr>
<tr>
<td>△ ▽</td>
<td>Cursor operation</td>
</tr>
<tr>
<td>ENTER</td>
<td>Enter</td>
</tr>
<tr>
<td>BACK</td>
<td>Return</td>
</tr>
<tr>
<td>SETUP</td>
<td>Setup</td>
</tr>
<tr>
<td>■</td>
<td>Pause</td>
</tr>
<tr>
<td>▶</td>
<td>Playback</td>
</tr>
<tr>
<td>▶ ▶ ▶ ▶</td>
<td>Auto search (cue)</td>
</tr>
<tr>
<td>❯ ❯</td>
<td>Manual search (fast-reverse/fast-forward)</td>
</tr>
<tr>
<td>0 – 9, +10</td>
<td>Channel selection</td>
</tr>
</tbody>
</table>

### BD group (5***)
(Blu-ray Disc player) operation

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVICE</td>
<td>Power on/standby</td>
</tr>
<tr>
<td>DEVICE MENU</td>
<td>(Popup) Menu</td>
</tr>
<tr>
<td>TV</td>
<td>TV power on/standby</td>
</tr>
<tr>
<td>TV INPUT</td>
<td>Switch TV input</td>
</tr>
<tr>
<td>INFO</td>
<td>Information</td>
</tr>
<tr>
<td>△ ▽</td>
<td>Cursor operation</td>
</tr>
<tr>
<td>ENTER</td>
<td>Enter</td>
</tr>
<tr>
<td>BACK</td>
<td>Return</td>
</tr>
<tr>
<td>SETUP</td>
<td>Setup</td>
</tr>
<tr>
<td>■</td>
<td>Pause</td>
</tr>
<tr>
<td>▶</td>
<td>Playback</td>
</tr>
<tr>
<td>■</td>
<td>Stop</td>
</tr>
<tr>
<td>▶ ▶ ▶ ▶</td>
<td>Auto search (cue)</td>
</tr>
<tr>
<td>❯ ❯</td>
<td>Manual search (fast-reverse/fast-forward)</td>
</tr>
<tr>
<td>0 – 9, +10</td>
<td>Select title, chapter or channel selection</td>
</tr>
</tbody>
</table>
Operating learn function

• If the AV device is not a marantz device, or if the device does not operate even when the preset code is registered, use the learning function. Remote codes for different devices can be remembered for use by the marantz remote control included with this device.
• This remote control unit is capable of learning around 160 codes.

Remembering remote control codes from other devices

1 Place the marantz remote control and remote control from the other device approximately 5 cm apart, with the remote control signal transmission sections facing each other.

5 Press and hold the button that you want to register on the other remote control until “OK” is displayed on the marantz remote control display.
   • If “NG” is shown on the remote control display, perform step 5 again. If “NG” is shown again on the remote control display, the remote control may not be able to learn the code correctly. In this case, use the specialized remote control for the device.
   • If the remote control memory becomes full, “FULL” is shown on the remote control display. If you want to learn the code, you should erase other learned button.

2 Press and hold SET until the LEARN indicator blinks.

6 Repeat steps 4 and 5 to learn other buttons for the same input source.

3 Press input source select buttons to select the input source.
The input source is shown in the remote control display.

7 Repeat steps 3 to 6 to learn other input sources.

4 Select the button to be learned.
   LEARN indicator lights up.

8 When programming of the remote control unit is completed, press SET.
The LEARN indicator turns off, and the remote control unit exits learn mode.

NOTE

• There are some remote control units that cannot be programmed, or even if they can be programmed, they may not operate correctly. If this happens, use the remote control unit supplied with the AV equipment to operate it.
• The operations of the programmed buttons override the preset memory. If you do not require the programmed buttons, erase the stored remote control codes to return to the initial settings (page 147 “Delete saved remote control codes”).
• The number of buttons that can be stored varies depending on the remote control unit used. If you have stored the maximum number of buttons allowed for the remote control unit, “FULL” appears on its display.

• The learning function is unavailable for all ZONE SELECT, SET, AVR, ON/STANDBY, VOLUME, FAVORITE STATION, SOUND MODE and input source select buttons in any mode.
• While in the AVR operation mode, the learning function is unavailable.
• The learning procedure does not operate correctly if the batteries have become worn.
• If no buttons are pressed for approximately 1 minutes while in the LEARN mode, the remote control unit automatically exits from the LEARN mode.
Delete saved remote control codes

Codes can be erased in three ways: by buttons, sources, and by all memory contents.

- **Delete remote control codes for each button**
  1. Press and hold SET until the LEARN indicator blinks.
  2. Press input source select buttons to select the input source you want to delete.
     The input source is shown in the remote control display.
  3. Press and hold ON/STANDBY and press the learned button to be erased twice.
     “ERASE” is shown in the remote control display.
     - To return the normal mode, press SET.

- **Delete remote control codes for each input source**
  1. Press and hold SET until the LEARN indicator blinks.
  2. Press and hold ON/STANDBY and press the learned input source select buttons to be erased twice.
     “ERASE” is shown in the remote control display.
  3. Press ENTER to continue erasing.
     The “” indicator blinks twice and the mode returns to LEARN mode.
     - To cancel the erasing operation, do not press ENTER, and simply press any other button.
     - To return the normal mode, press SET.

- **Delete remote control codes for all input sources**
  1. Press and hold SET until the LEARN indicator blinks.
  2. Press and hold ON/STANDBY and press AVR.
     LEARN indicator lights.
  3. Press ENTER to continue erasing.
     “ERASE” is shown in the remote control display, and the mode returns to LEARN mode.
     - To cancel the erasing operation, do not press ENTER, and simply press any other button.
     - To return the normal mode, press SET.
**Setting the back light**

Press the Light button on the side of the remote control, and the buttons on the remote control light for 2 seconds. If the Light button is pressed while the buttons are lit, the buttons remain lit for another 2 seconds.

- Backlight is set on in the factory settings.

**Disabling the backlight**

Press and hold both SET and Light button until indicator flashes twice.

---

**Turning the backlight on**

Press and hold both SET and Light button until indicator flashes twice.

---

**Specifying the zone used with the main remote control unit**

When the ZONE SELECT button is pressed, only the set zone can be operated with the remote control unit.

- The factory setting is “M23”.

1. Press and hold ZONE SELECT and SET for at least 3 seconds.

2. Use \( \Delta \) \( \nabla \) to set the zone to be used and press ENTER.

   “SET” flashes four times on the remote control unit and the normal operation mode is restored.

<table>
<thead>
<tr>
<th>Remote control unit display</th>
<th>Zone to be used</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>MAIN ZONE only</td>
</tr>
<tr>
<td>M2</td>
<td>MAIN ZONE / ZONE2</td>
</tr>
<tr>
<td>M23</td>
<td>MAIN ZONE / ZONE2 / ZONE3</td>
</tr>
</tbody>
</table>
Informations

Here, we list various information related to this unit. Please refer to this information as needed.

- Part names and functions  page 150
- Other information  page 157
- Troubleshooting  page 169
- Specifications  page 174
- Index  page 175
Part names and functions

Front panel

For buttons not explained here, see the page indicated in parentheses ( ).

1 STANDBY indicator ................................................................. 36
[STANDBY indicator status]
• Power on : Off
• Normal standby : Red
• When “HDMI Control” (page 117) is set to “On” : Orange
• When “IP Control” (page 131) is set to “Always On” : Orange

2 Power operation button
(ON/STANDBY) ................................................................. 36
Turns power to this unit on and off (standby).

3 Door
When you are using buttons and/or connectors behind the door, press the bottom of the door to open it. When not using buttons and/or connectors behind the door, close it. Be careful not to catch your fingers when closing the door.

4 VOLUME knob ................................................................. (37, 102)

5 Remote control sensor ......................................................... 156

6 Main display ...................................................................... 152

7 INPUT SELECTOR knob ......................................................... (36, 173)
With the door open

For buttons not explained here, see the page indicated in parentheses ( ).

1 Headphones jack (PHONES)
When the headphones are plugged into this jack, audio will no longer be output from the PRE OUT terminals.

2 SETUP MIC jack ........................................ (31, 88)
3 iPod/USB port ............................................. (20)
4 HDMI7 (AUX1) connector ............................... (11)
5 AUX1 INPUT connectors ................................. (18)
6 SETUP button ............................................. (108, 115, 121, 126, 130, 134)
7 ENTER button ............................................ (106, 108, 115, 121, 126, 130, 134)
8 Cursor buttons (△▼<▶) ..................................... (106, 108, 115, 121, 126, 130, 134)
9 BACK button ............................................. (43, 55, 59, 62, 67, 70)
10 Sub display ................................................. (152)
11 Dynamic Volume button (DYNAMIC VOL) ............ (113)
12 M-DAX button/indicator ................................. (111)
13 PURE DIRECT button/indicator ......................... (77)
14 DYNAMIC EQ button ..................................... (113)
15 SOUND MODE buttons ................................... (77)
   • MOVIE button
   • MUSIC button
   • GAME button
16 Audyssey DSX® button (A-DSX) ......................... (113)
17 SLEEP button (SLEEP) .................................. (94, 102)
18 HDMI OUT button ....................................... (117)
19 DISPLAY button ......................................... (136)
20 STATUS button .......................................... (40, 55, 59, 70, 137)
21 ZONE SELECT button ................................. (102)
22 ZONE2 ON/OFF button ................................ (102)
23 ZONE3 ON/OFF button ................................ (102)
24 Sub display ................................................. (152)
25 Dynamic Volume button (DYNAMIC VOL) ............ (113)
26 M-DAX button/indicator ................................. (111)
27 PURE DIRECT button/indicator ......................... (77)
28 DYNAMIC EQ button ..................................... (113)
29 SOUND MODE buttons ................................... (77)

NOTE
To prevent hearing loss, do not raise the volume level excessively when using headphones.
Display

Main Display

The input source name, surround mode, setting values and other information are displayed here.

- **Standard display**
  - ① Light illumination
    - When the power to this device is switched on, the surrounding area is lit blue. The settings can be changed so the light does not switch on ([page 99](#) “Switches light illumination on/off”).
  - ② Master volume indicator
  - ③ Input source indicator
    - The currently selected input source name is displayed.
    - If the input source name has been changed using “Source Rename” ([page 123](#)) in the menu, the input source name after the change is displayed.

- **Sleep timer display**
  - ⑤ This lights when the sleep mode is selected ([page 94](#)).

- **Tuner display**
  - ④ Lights up when the broadcast is properly turned in.
  - ⑤ In the FM mode, this lights up when receiving stereo broadcasts.

- **ZONE2/ZONE3 power on display**
  - ⑦ This lights up when ZONE2 (separate room) power is turned on ([page 100](#)).
  - ⑧ This lights up when ZONE3 (separate room) power is turned on ([page 100](#)).
**Sub Display**

1. **Information display**
   - The input source name, sound mode, setting values and other information are displayed here.

2. **Output signal channel indicators**
   - Lights when audio signals are being output from the PRE OUT terminals.

3. **Master volume indicator**
4. **MUTE indicator**
   - This lights when the mute mode is selected (page 37).

5. **Sleep timer indicator**
   - This lights when the sleep mode is selected (page 94, 102).

6. **MULTI ZONE indicators**
   - This lights up when ZONE2, ZONE3 (separate room) power is turned on (page 102).

7. **Monitor output indicator**
   - These light according to the HDMI monitor output setting. When set to "Auto (Dual)", the indicators light according to connection status.

8. **Tuner reception mode indicators**
   - These light according to the reception conditions when the input source is set to “HD Radio”.
     - **STEREO**: In FM mode, this lights up when receiving analog stereo broadcasts.
     - **TUNED**: Lights up when the broadcast is properly tuned in.

9. **Audyssey® indicator**
   - This indicator lights when the “MultEQ® XT” (page 112), “Dynamic EQ” (page 113), or “Dynamic Volume” (page 113) setting is set to “On”.

10. **Decoder indicator**
    - These light when Dolby or DTS signals are input or when the Dolby or DTS decoder is running.

11. **Input mode indicators**
    - Set the audio input modes for the different input sources (page 124).
Rear panel
See the page indicated in parentheses ( ).

- **FM/AM antenna terminal (ANTENNA)**
- **Analog audio connectors (ANALOG AUDIO IN/ANALOG AUDIO OUT)**
- **UNBALANCED PRE OUT terminals**
- **7.1ch input connectors (7.1CH IN)**
- **BALANCED PRE OUT terminals**
- **AC inlet (AC IN)**
- **Component video connectors (COMPONENT VIDEO IN/COMPONENT VIDEO OUT)**
- **Video connectors (VIDEO IN/VIDEO OUT)**
- **HDMI connectors**
- **REMOTE CONTROL connectors**
- **M-XPort connector**
- **FLASHER IN jack**
- **Digital audio connectors (DIGITAL AUDIO IN)**
- **Network connector (NETWORK)**
- **SIGNAL GND terminal**
- **RS-232C connector**
- **DC OUT jacks**

**NOTE**
Do not touch the inner pins of the connectors on the rear panel. Electrostatic discharge may cause permanent damage to the unit.
Remote control unit

For buttons not explained here, see the page indicated in parentheses ( ).

1. Display
   1. LEARN indicator
   2. Information display
   3. indicator
2. AVR button .............................................. (141, 143)
3. SET button ................................................ (140, 146, 148)
4. ZONE SELECT button .................................. (30, 102)
5. Device operation buttons
   (DEVICE / DEVICE MENU) .................................. (144, 145)
6. Input source select buttons ................................ (36, 102)
7. Channel/page search buttons
   (CH/PAGE ▲▼) ................................................ (41, 44, 53, 56, 60, 63, 66, 68, 70)
8. SLEEP button ................................................ (94, 102)
9. Information button (INFO) ................................ (137)
10. Cursor buttons (△▼◁▷) .................................. (106, 108, 115, 121, 126, 130, 134)
11. BACK button ............................................... (43, 55, 59, 62, 67, 70)
12. DEVICE CONTROL buttons
    ................................................................ (41, 44, 60, 66, 70)
    • Pause button (II)
    • Play button (▷)
    • Stop button (■)
    • Skip buttons (◄◄◄)
    • Search buttons (◄►►)
    Tuning up / Tuning down buttons
   (TUNE +, -) .................................................. (46, 47)
13. FAVORITE STATION buttons
    (1 – 4) ........................................................ (46, 179)
14. SOUND MODE buttons ................................... (177)
    • MOVIE button
    • MUSIC button
    • GAME button
    • PURE button
15. Number buttons ........................................... (48, 50, 140, 144, 145)
**Inserting the batteries**

1. Remove the rear lid in the direction of the arrow and remove it.
2. Load the two batteries properly as indicated by the marks in the battery compartment.

3. Put the rear cover back on.

**NOTE**

- Insert the specified batteries in the remote control unit.
- Replace the batteries with new ones if the set does not operate even when the remote control unit is operated close to the unit. (The supplied batteries are only for verifying operation. Replace them with new batteries at an early date.)
- When inserting the batteries, be sure to do so in the proper direction, following the Θ and Θ marks in the battery compartment.
- To prevent damage or leakage of battery fluid:
  - Do not use a new battery together with an old one.
  - Do not use two different types of batteries.
  - Do not attempt to charge dry batteries.
  - Do not short-circuit, disassemble, heat or dispose of batteries in flames.
  - Do not keep the battery in a place exposed to direct sunlight or in places with extremely high temperatures, such as near a heater.
  - If the battery fluid should leak, carefully wipe the fluid off the inside of the battery compartment and insert new batteries.
- Remove the batteries from the remote control unit if it will not be in use for long periods.
- Used batteries should be disposed of in accordance with the local regulations regarding battery disposal.
- The remote control unit may function improperly if rechargeable batteries are used.

**Operating range of the remote control unit**

Point the remote control unit at the remote sensor when operating it.

Approx. 23 ft / 7 m

**NOTE**

- The set may function improperly or the remote control unit may not operate if the remote control sensor is exposed to direct sunlight, strong artificial light from an inverter type fluorescent lamp or infrared light.
- When using 3D video devices that transmit radio communication signals (such as infrared signals etc.) between the various units (such as the monitor, 3D glasses, 3D transmitter unit etc.), the remote control unit may not operate due to interference from those radio communication signals. If this occurs, adjust the direction and distance of the 3D communication for each unit, and check that the remote control unit operation is not affected by these signals.
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### Surround

This unit is equipped with a digital signal processing circuit that lets you play program sources in the sound mode to achieve the same sense of presence as in a movie theater.

### Sound modes and surround parameters

This table shows the speakers that can be used in each sound mode and the surround parameters adjustable in each sound mode.

#### Symbols in the table

- This indicates the audio output channels or surround parameters that can be set.
- This indicates the audio output channels. The output channels depend on the settings of “Speaker Config.” (See page 127).

#### Table

<table>
<thead>
<tr>
<th>Sound Mode</th>
<th>Front L/R</th>
<th>Rear L/R</th>
<th>Center</th>
<th>Surround back L/R</th>
<th>Front height L/R</th>
<th>Front wide L/R</th>
<th>Subwoofer</th>
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</table>

#1 During playback in PURE DIRECT mode, the surround parameters are the same as in DIRECT mode.
#2 Only when “Subwoofer Mode” is set to “LFE+Main” (See page 128), sound is output from the subwoofer.
#3 A signal for each channel contained in an input signal is output as audio.
#4 Audio is output from the front height speaker when the set sound mode name contains “+PLg” For information on how to check the sound mode, see page 77.
#5 Audio is output from the front height speaker when “Audyssey DSX®” (See page 113) is set to “On-Height-”.
#6 Audio is output from the front wide speaker when “Audyssey DSX®” is set to “On-Wide-”.
#7 Audio is output from the surround back speaker when “Speaker Select” is set to “S. Back”.
#8 Audio is output from the front height speaker when “Speaker Select” is set to “F. Height”.
#9 Audio is output from the front wide speaker when “Speaker Select” is set to “F. Wide”.

---

See overleaf
### Surround Parameter

<table>
<thead>
<tr>
<th>Sound Mode</th>
<th>Home Theater EQ</th>
<th>Loudness Management</th>
<th>Dynamic Compression</th>
<th>Low Frequency Effects</th>
<th>Height Gain</th>
<th>Speaker Select</th>
<th>PRO LOGIC IIx Music mode only</th>
<th>N.E.O.6 Music mode only</th>
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**Notes:**
- During playback in PURE DIRECT mode, the surround parameters are the same as in DIRECT mode.
- This item cannot be selected during DSD (SA-CD signal) playback.
- This item can be selected when a Dolby TrueHD signal is played.
- This item can be selected when a Dolby Digital or DTS signal is played.
- This item can be selected when a Dolby Digital or DTS signal or DVD-Audio is played.
- This setting is available when the set sound mode name contains “+PLx”. For information on how to check the sound mode, see page 77.
- This setting is unavailable when the set sound mode name contains “+PLx Music”. For information on how to check the sound mode, see page 77.
- This setting is possible when the set sound mode is “PLII Movie” or “DTS NEO:6 Cinema”.
- This setting is possible when the sound mode is “PLII Movie”.
## Surround

<table>
<thead>
<tr>
<th>Sound Mode (page 77)</th>
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<th>Audyssey (page 112)</th>
<th>M-DAX #21 (page 111)</th>
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*1 During playback in PURE DIRECT mode, the surround parameters are the same as in DIRECT mode.
*5 Only when “Subwoofer Mode” is set to “LFE+Main” (page 128), sound is output from the subwoofer.
*18 This item cannot be set when “Dynamic EQ” (page 113) is set to “On”.
*19 This item cannot be set for HD audio exceeding a frequency of 96kHz or during DSD(SA-CD) signal playback.
*20 This item cannot be set when “MultEQ® XT” (page 112) is set to “Off” or “Graphic EQ”.
*21 This item can be set when the input signal is analog, PCM 48 kHz or 44.1 kHz.
*22 In this sound mode, bass is +6 dB, and treble is +4 dB (Default).
## Types of input signals, and corresponding sound modes

This table shows the input signal that can be played in each sound mode. Check the audio signal of the input source then select the sound mode.

### Symbols in the table
- ● This indicates the default sound mode.
- ○ This indicates the selectable sound mode.

### Input signal types and formats
- **ANALOG**
  - PCM (multi ch)
  - PCM (2ch)
- **DTS-HD**
  - Master Audio
  - High Resolution Audio
  - Express
  - (With Flag)
- **DTS**
  - (5.1ch)
  - (2ch)
  - 96/24
- **DOLBY**
  - TrueHD
  - Digital Plus
  - Digital EX (With Flag)
  - Digital EX (With no Flag)
  - Digital (5.1ch)
  - Digital (2ch)
- **DSD**
  - (multi ch)
  - (2ch)

### Sound Mode

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<th>DTS ES MTRX (With Flag)</th>
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### Notes
- **1** If “Audyssey DSX®” ([page 113]) is set to “On”, the Audyssey DSX® effect is added to the sound mode marked with ●.
- **2** If “Speaker Config.” – “Surr. Back” ([page 128]) is set to “None”, this sound mode cannot be selected.
- **3** If “Speaker Config.” – “Surr. Back” ([page 128]) is set to “1spkr” or “None”, this sound mode cannot be selected.
- **4** If “Speaker Config.” – “Front Height” ([page 128]) is set to “None”, this sound mode cannot be selected.
### Surround Sound Mode

**NOTE**

- **ANALOG**
  - PCM (multi ch)
  - PCM (2ch)
  - DTS-HD Master Audio
  - DTS-HD High Resolution Audio
  - DTS EXPRESS
  - DTS ES DISCRT (With flag)
  - DTS ES MTRX (With flag)
  - DTS (5.1ch)
  - DTS 96/24
  - DOLBY TrueHD
  - DOLBY Digital Plus
  - DOLBY Digital EX (With flag)
  - DOLBY Digital EX (With no flag)
  - DOLBY Digital (5.1ch)
  - DOLBY Digital (2ch)
  - DSD (multi ch)
  - DSD (2ch)

**Input signal types and formats**

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**Audyssey DSX®**

- **1** If “Audyssey DSX®” ([page 113]) is set to “On”, the Audyssey DSX® effect is added to the sound mode marked with *1.
- **2** If “Speaker Config.” – “Surr. Back” ([page 128]) is set to “None”, this sound mode cannot be selected.
- **3** If “Speaker Config.” – “Surr. Back” ([page 128]) is set to “1spkr” or “None”, this sound mode cannot be selected.
- **4** If “Speaker Config.” – “Front Height” ([page 128]) is set to “None”, this sound mode cannot be selected.

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**See overleaf**
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<th>Sound Mode</th>
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<td>MULTI CH IN + Dolby EX</td>
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<td>DIRECT Pure DIRECT</td>
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<td>MULTI CH STEREO</td>
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<td>VIRTUAL</td>
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<td>STEREO</td>
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</tr>
</tbody>
</table>

*1 If “Audyssey DSX®” (page 113) is set to “On”, the Audyssey DSX® effect is added to the sound mode marked with *1.
*2 If “Speaker Config.” – “Surr. Back” (page 128) is set to “None”, this sound mode cannot be selected.
*3 If “Speaker Config.” – “Surr. Back” (page 128) is set to “1spkr” or “None”, this sound mode cannot be selected.
*4 If “Speaker Config.” – “Front Height” (page 128) is set to “None”, this sound mode cannot be selected.

Super Audio CD: ○
### Relationship between video signals and monitor output

#### MAIN ZONE MONITOR OUT

<table>
<thead>
<tr>
<th>Video Conversion</th>
<th>Input connector</th>
<th>Output connector</th>
<th>Menu displayed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HDMI</td>
<td>COMPONENT</td>
<td>VIDEO</td>
</tr>
<tr>
<td>On</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>On</td>
<td>×</td>
<td>×</td>
<td>×</td>
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<tr>
<td>On</td>
<td>×</td>
<td>×</td>
<td>×</td>
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<tr>
<td>Off</td>
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<tr>
<td>Off</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>

○ : Video signal input present  
× : No video signal input  
○<>: The input signal between the <> marks is output.  
×<>: No video signal output  
○(): Superimposed on the picture indicated in ().  
×(): Only the picture in () is output.  
×(): Neither the picture nor the menu is output.

#### ZONE2 MONITOR OUT

<table>
<thead>
<tr>
<th>Input connector</th>
<th>Output connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDMI</td>
<td>COMPONENT</td>
</tr>
<tr>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>×</td>
<td>×</td>
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<tr>
<td>○</td>
<td>×</td>
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<tr>
<td>○</td>
<td>×</td>
</tr>
<tr>
<td>○</td>
<td>×</td>
</tr>
</tbody>
</table>

○ : Video signal input present  
× : No video signal input  
○<>: The input signal between the <> marks is output.  
×<>: No video signal output

---

The main zone video conversion function is compatible with the following formats: NTSC, PAL, SECAM, NTSC4.43, PAL-N, PAL-M and PAL-60.

**NOTE**

- The status display screen cannot be displayed at a computer’s resolution (e.g. VGA) or while certain 3D video contents is being played.
- When the menu is operated at a computer’s resolution (e.g. VGA) or during playback of certain 3D video content, the playback image switches to the menu screen image.
When “Video Conversion” (page 118) is set to “On”, “i/p Scaler” (page 118) is set to “Analog”, “Analog & HDMI” or “HDMI” are set, the resolution of the input video signal can be converted to a different resolution for output (page 6 “Converting input video signals for output (Video conversion function”). The relationship between the resolution of the convertible video signal and HDMI output resolution is shown in the table below.

<table>
<thead>
<tr>
<th>HDMI Output</th>
<th>480i/576i</th>
<th>480p/576p</th>
<th>1080i</th>
<th>720p</th>
<th>1080p</th>
<th>1080p 24Hz</th>
<th>4K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video input</td>
<td>480i/576i</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Component video input</td>
<td>480i/576i</td>
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<td>HDMI input</td>
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<td>1080p 24Hz</td>
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</tbody>
</table>

○ The resolution set in “Resolution” (page 118) in the menu is output.
- Output at the same resolution as the input video signal resolution.
  1 Only output when “i/p Scaler” in the menu is set to “Off”.
  2 Output at a resolution of 3840 x 2160 (24/25/30Hz).
  3 The resolution set in “Resolution” (page 118) in the menu is set to “Auto”, and a television that does not support 1080p 24Hz video signals is connected.
  4 The resolution set in “Resolution” (page 118) in the menu is set to “Auto”, and a television that supports 1080p 24Hz video signals is connected.
  5 Output at the same resolution as the input video signal resolution.

**NOTE**

- Component video and video output are output at the same resolution as the input video signal resolution.
- The 4K, 3D, Computer resolution, “x.v.Color”, sYCC601 color, Adobe RGB color or Adobe YCC601 color input to HDMI is output at the same resolution as the input video signal.
- When “Video Mode” in the menu is set to “Game” or “Auto” and game contents are played, the same resolution as the input video signal is output.
- When “Resolution” in the menu is set to “Auto”, the number of pixels in the television panel connected to the HDMI output connector is automatically detected, and the optimum resolution is output according to the table above.
- If 1080p 24Hz signals input from the HDMI terminal are converted into 1080p 60Hz/1080p 50Hz for output, they are output according to the specified “Format” (page 120) setting in the menu: “NTSC” – Output as 1080p 60Hz. “PAL” – Output as 1080p 50Hz.
- You can not convert 60Hz into 50Hz or vice versa.
- You can not convert 50Hz into 24Hz.
- This item does not support the HDMI ZONE2 function.
Audyssey Dynamic Volume®
Dynamic Volume solves the problem of large variations in volume level between television programs, commercials, and between the soft and loud passages of movies. Audyssey Dynamic EQ® is integrated into Dynamic Volume so that as the playback volume is adjusted automatically, the perceived bass response, tonal balance, surround impression, and dialog clarity remain the same.

Audyssey MultEQ® XT
MultEQ® XT is a room equalization solution that calibrates any audio system so that it can achieve optimum performance for every listener in a large listening area. Based on several room measurements, MultEQ® XT calculates an equalization solution that corrects for both time and frequency response problems in the listening area and also performs a fully automated surround system setup.

Auto Lip Sync
If you connect the unit to a TV that supports the Auto Lip Sync function, it can automatically correct delay between the audio and video.

Bluetooth
Bluetooth is a short-distance wireless communication technology used for connecting handheld devices several meters apart. This enables notebook computers, PDA’s, mobile phones, etc. to connect without a cable for transmitting audio and data.

Deep Color
An imaging technology supported by HDMI. Unlike RGB, which uses 8 bits (256 shades) per color, it can use 10 bits (1024 shades), 12 bits (4096 shades), or 16 bits (65536 shades) to produce colors in higher definition. Both devices linked via HDMI must support Deep Color.

DLNA
DLNA and DLNA CERTIFIED are trademarks and/or service marks of Digital Living Network Alliance. Some contents may not be compatible with other DLNA CERTIFIED® products.

Audyssey Dynamic Volume®
Audyssey Dynamic Volume is a technology that puts very high importance on sound quality as volume is decreased by taking into account human perception and room acoustics. Audyssey Dynamic EQ® works in tandem with Audyssey Dynamic Volume to produce more vivid and natural images. Because it is a wider color space than RGB, it can be even more revealing, with perceptually discrete height channel information to the front height channels, complementing the performance of left and right surround sound speakers. Content that is encoded with Dolby Pro Logic IIz height channel information can be even more revealing, with perceptually discrete height channel information bringing an exciting new dimension to home entertainment.

Dolby Digital
Dolby Digital is a multi-channel digital signal format developed by Dolby Laboratories. A total of 5.1 channels are played: 3 front channels (“FL”, “FR” and “C”), 2 surround channels (“SL” and “SR”) and the “LFE” channel for low frequencies. Because of this, there is no crosstalk between channels and a realistic sound field with a “three-dimensional” feeling (sense of distance, movement and position) is achieved.

Dolby Digital Plus
Dolby Digital Plus is an improved Dolby Digital signal format that is compatible with up to 7.1 channels of discrete digital sound and also improves sound quality thanks to extra data bit rate performance. It is upwardly compatible with conventional Dolby Digital, so it offers greater flexibility in response to the source signal and the conditions of the playback device.

Dolby Pro Logic II
Dolby Pro Logic II is a multi-channel decoding technology developed by Dolby Laboratories. Regular music such as that on CDs is encoded into 5 channels to achieve an excellent surround effect. The surround channel signals are converted into stereo and full band signals (with a frequency response of 20 Hz to 20 kHz or greater) to create a “three-dimensional” sound image offering a rich sense of presence for all stereo sources.

Dolby TrueHD
Dolby TrueHD is a high definition audio technology developed by Dolby Laboratories, using lossless coding technology to faithfully reproduce the sound of the studio master. This format provides the facility to support up to 8 audio channels with a sampling frequency of 96 kHz/24 bit resolution and up to 6 audio channels with a sampling frequency of 192 kHz/24 bit resolution. Dolby TrueHD is adopted for applications that put very high importance on sound quality.
DTS High Resolution Audio

DTS-HD High Resolution Audio is an improved version of the conventional DTS, DTS-ES and DTS 96/24 signals formats, compatible with sampling frequencies of 96 or 48 kHz and up to 7.1 channels of discrete digital sound. High data bit rate performance provides high quality sound. This format is fully compatible with conventional products, including conventional DTS digital surround 5.1-channel data.

DTS-HD Master Audio

DTS-HD Master Audio is a lossless audio format created by Digital Theater System (DTS). This format provides the facility to support up to 8 audio channels with a sampling frequency of 96 kHz/24 bit resolution and up to 6 audio channels with a sampling frequency of 192 kHz/24 bit resolution. It is fully compatible with conventional products, including conventional DTS digital surround 5.1-channel data.

DTS NEO:6™ Surround

DTS NEO:6™ is a matrix decoding technology for achieving 6.1-channel surround playback with 2-channel sources. It includes “DTS NEO:6 Cinema” suited for playing movies and “DTS NEO:6 Music” suited for playing music.

Dynamic range

The difference between the maximum undistorted sound level and the minimum discernible level above the noise emitted by the device.

FLAC

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HDCP

When transmitting digital signals between devices, this copyright protection technology encrypts the signals to prevent content from being copied without authorization.

HDMI

This is an abbreviation of High-Definition Multimedia Interface, which is an AV digital interface that can be connected to a TV or amplifier. Video signal and audio signal can be connected using 1 cable.

iTunes

iTunes is the name of the multimedia player provided by Apple Inc. It enables management and playback of multimedia contents including music and movies. iTunes supports many main file formats including AAC, WAV, and MP3.

LFE

This is an abbreviation of Low Frequency Effect, which is an output channel that emphasizes bass.

MAIN ZONE

The room where this unit is placed is called the MAIN ZONE.

MP3 (MPEG Audio Layer-3)

This is an internationally standardized audio data compression scheme, using the “MPEG-1” video compression standard. It compresses the data volume to about one eleventh its original size while maintaining sound quality equivalent to a music CD.

MPEG (Moving Picture Experts Group), MPEG-2, MPEG-4

These are the names for digital compression format standards used for the encoding of video and audio. Video standards include "MPEG-1 Video", "MPEG-2 Video", "MPEG-4 Visual", “MPEG-4 AVC”. Audio standards include "MPEG-1 Audio", "MPEG-2 Audio", "MPEG-4 AAC".

FLAC

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### Pairing
Pairing is an operation required for settings to connect two Bluetooth devices. Pairing enables Bluetooth devices to access each other.

### Progressive (sequential scanning)
This is a scanning system of video signal that displays 1 frame of video as one image. Compared to the interlace system, this system provides images with less flickering and bleeding.

### Sampling frequency
Sampling involves taking a reading of a sound wave (analog signal) at regular intervals and expressing the height of the wave at each reading in digitized format (producing a digital signal). The number of readings taken in one second is called the "sampling frequency". The larger the value, the closer the reproduced sound is to the original.

### Speaker impedance
This is an AC resistance value, indicated in Ω (ohms). Greater power can be obtained with this value smaller.

### sYCC601 color
Like "x.v.Color", each of these color spaces defines a palette of available colors that is larger than the traditional RGB color model.

### vTuner
This is a free online content server for Internet radio. Note that usage fees are included in upgrade costs.

For inquiries about this service, visit the vTuner site below.

vTuner website: [http://www.radionarantz.com](http://www.radionarantz.com)

This product is protected by certain intellectual property rights of Nothing Else Matters Software and BridgeCo. Use or distribution of such technology outside of this product is prohibited without a license from Nothing Else Matters Software and BridgeCo or an authorized subsidiary.

### Windows Media DRM
This is a copyright protection technology developed by Microsoft. Content providers are using the digital rights management technology for Windows Media contained in this device (WM-DRM) to protect the integrity of their content (Secure Content) so that their intellectual property, including copyright, in such content is not misappropriated. This device uses WM-DRM software to play Secure Content (WM-DRM Software). If the security of the WM-DRM Software in this device has been compromised, owners of Secure Content (Secure Content Owners) may request that Microsoft revoke the WM-DRM Software’s right to acquire new licenses to copy, display and/or play Secure Content. Revocation does not alter the WM-DRM Software’s ability to play unprotected content. A list of revoked WM-DRM Software is sent to your device whenever you download a license for Secure Content from the Internet or from a PC. Microsoft may, in conjunction with such license, also download revocation list onto your device on behalf of Secure Content Owners.

**Windows Media Player Ver.11 or later**
This is a media player distributed free of charge by Microsoft Corporation. It can play playlists created with Ver.11 or later of Windows Media Player, as well as WMA, DRM WMA, WAV, and other files.

**WMA (Windows Media Audio)**
This is audio compression technology developed by Microsoft Corporation. WMA data can be encoded using Windows Media® Player Ver.7, 7.1, Windows Media® Player for Windows® XP and Windows Media® Player 9 Series.

To encode WMA files, only use applications authorized by Microsoft Corporation. If you use an unauthorized application, the file may not work properly.

### x.v.Color
This function lets HDTVs display colors more accurately. It enables display with natural, vivid colors. "x.v.Color" is trademark of Sony Corporation.

### ZONE2
This unit can operate in a room other than the room where this unit is placed (MAIN ZONE) (ZONE2 playback). The room for ZONE2 playback is called ZONE2.

### ZONE3
This unit can operate in a room other than the room where this unit is placed (MAIN ZONE) (ZONE3 playback). The room for ZONE3 playback is called ZONE3.
## Troubleshooting

If a problem should arise, first check the following:

1. Are the connections correct?
2. Is the set being operated as described in the owner’s manual?
3. Are the other devices operating properly?

If this unit does not operate properly, check the items listed in the table below. Should the problem persist, there may be a malfunction.

In this case, disconnect the power immediately and contact your store of purchase.

<table>
<thead>
<tr>
<th>General</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symptom</strong></td>
<td><strong>Cause/Solution</strong></td>
<td><strong>Page</strong></td>
</tr>
</tbody>
</table>
| Power does not turn on. | • Check whether the power plug is correctly inserted into the power outlet.  
• The protection circuit is active. Disconnect the power plug from the electric outlet, wait 5 to 10 seconds and then insert it back into the outlet. | 36 |
| Power automatically switches to standby mode. | • The sleep timer is set. Turn on the power again, or change the sleep timer settings.  
• “Auto Standby” is triggered when there is no operation for a set amount of time. To disable “Auto Standby”, set “Auto Standby” on the menu to “Off”. | 94, 102 |
| Display is off. | • Set “Display” on the menu to something other than “Off”. | 136 |
| Set does not operate properly. | • Reset the microprocessor. | 173 |

<table>
<thead>
<tr>
<th>HDMI</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symptom</strong></td>
<td><strong>Cause/Solution</strong></td>
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</tbody>
</table>
| No audio is output with HDMI connection. | • Check the connection of the HDMI connectors.  
• When outputting HDMI audio from the speakers, set “HDMI Audio Out” on the menu to “AVP”.  
• When outputting HDMI audio from a TV, set “HDMI Audio Out” on the menu to “TV”. | 11, 116 |
| No video is output with HDMI connection. | • Check the connection of the HDMI connectors.  
• Set the input source to match the connected HDMI connector.  
• Check whether the TV is compatible with copyright protection (HDCP). If connected to a device not compatible with HDCP, video will not be output correctly. | 11, 36, 12 |
| When the following operations are performed on devices compatible with HDMI control, the same operations occur on this unit.  
• Power ON/OFF  
• Switching audio output devices  
• Adjust volume  
• Switch input source | • Set “HDMI Control” in the menu to “Off”.  
• “HDMI Control” in the menu is set to “On”. In this case, the HDMI control function set for MAIN ZONE affects playback in ZONE2. When the HDMI ZONE2 function is used, set “HDMI Control” in the menu to “Off”.

When the HDMI ZONE2 function is used and an operation is performed in MAIN ZONE, the following operations occur.  
• The player is turned off or playback pauses.  
• The input source on this unit automatically changes. | 92, 117 |
| When the HDMI ZONE2 function is used, Dolby TrueHD/DTS HD Master Audio/Dolby Digital/DTS cannot be played back in MAIN ZONE. | • Make sure that “HDMI Audio Out” in the menu is set to “AVP”.  
• When a same input source is selected for MAIN ZONE and ZONE2, set the ZONE2 ON/OFF button to “OFF”, or change the input source for ZONE2 to an input source that is different from the one for MAIN ZONE. | 116 |
### Videocassette Recorder

**Symptom**: When the HDMI ZONE2 function is used, no video or audio is output to TV in ZONE2.

- Make sure that the power is on for ZONE2.
- Check the input source for ZONE2.
- Check the output settings (resolution/audio format) for the input device.

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**Symptom**: When playing back the input device just to use the HDMI ZONE2 function, the TV used for MAIN ZONE is turned on.

- “HDMI Control” in the menu is set to “On”. When using the HDMI ZONE2 function, set “HDMI Control” in the menu to “Off”.

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### Audio

**Symptom**: Audio is not output.

- Check the connections for all devices.
- Check the speaker connections and configurations.
- Check the connections for PRE OUT terminals.
- Check whether the audio device power is turned on.
- Adjust the master volume.
- Cancel the mute mode.
- Check the connection with the playback device and select the proper input source.
- Match the input mode and the terminal assigned to be the digital input terminal.
- Disconnect the headphones. No sound is output from the PRE OUT terminals when headphones are connected.

**Page**: 10, 11, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27

**Symptom**: The volume does not increase.

- The maximum volume is set too low. Set the maximum volume using “Limit” on the menu.
- Power for external devices connected to the output connectors of the unit may not be turned on. Check the power of connected external devices.

**Page**: 112

**Symptom**: No sound is produced from surround speaker.

- Check if the surround speakers are connected to the SURROUND terminals of Power Amplifier.

**Page**: –

**Symptom**: No sound is produced from surround back speaker.

- Set “Speaker Config.” – “Surr. Back” on the menu to something other than “None”.
- Set the sound mode to something other than “STEREO” and “VIRTUAL”.

**Page**: 128

**Symptom**: No sound is produced from front height speaker.

- Set “Speaker Config.” – “Front Height” on the menu to something other than “None”.

**Page**: –

**Symptom**: No sound is produced from front wide speaker.

- Set “Speaker Config.” – “Front Wide” on the menu to something other than “None”.

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<td>• Check if the surround speakers are connected to the SURROUND terminals of Power Amplifier.</td>
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<td>• Set “Speaker Config.” – “Surr. Back” on the menu to something other than “None”.</td>
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<td>No sound is produced from front height speaker.</td>
<td>• Set “Speaker Config.” – “Front Height” on the menu to something other than “None”.</td>
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<tr>
<td>No sound is produced from front wide speaker.</td>
<td>• Set “Speaker Config.” – “Front Wide” on the menu to something other than “None”.</td>
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**Symptom**

- No sound is produced from subwoofer.
- DTS sound is not output.
- Dolby TrueHD, DTS-HD, Dolby Digital Plus audio is not output.
- Dolby PL II mode or DTS NEO:6 mode cannot be selected.
- Audyssey MultEQ XT, Audyssey Dynamic EQ and Audyssey Dynamic Volume cannot be selected.
- Audyssey DSX cannot be selected.
- Audyssey Dynamic EQ and Audyssey Dynamic Volume cannot be selected.
- “M-DAX” cannot be selected.

**Cause/Solution**

- Check the subwoofer connections.
- Set “Decode Mode” on the menu to “Auto” or “DTS”.
- Check that an analog signal or PCM signal (Sample Rate=44.1/48 kHz) is input. For playback of multichannel signals such as Dolby Digital or DTS surround, “M-DAX” cannot be used.
- Check that “Speaker Config.” – “Front Height” or “Front Wide” is set to other than “None”.
- Switch the sound mode to other than “DIRECT” or “PURE DIRECT”.
- Run Audyssey® Setup.
- Check that the subwoofer’s power.
- Set “Speaker Config.” – “Subwoofer” on the menu to “Yes”.
- If “Front” and “Center” for “Speaker Config.” are set to “Large”, and “Subwoofer Mode” is set to “LFE”, no sound may be output from the subwoofers, depending on the input signal or selected sound mode.
- Check the subwoofer connections.
- Make HDMI connections.
- Check that “Speaker Config.” – “Center” or “Surround” is set to other than “None”. If the speaker system is 2.0/2.1ch, this sound mode cannot be selected.
- Check that “Speaker Config.” – “Front” is set to other than “None”.
- Switch the sound mode to other than “DIRECT” or “PURE DIRECT”.
- Run Audyssey® Setup.

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**Symptom**

- Reception fails, or there is a lot of noise or distortion.
- iPod cannot be played.
- Files on a USB memory device cannot be played.

**Cause/Solution**

- Change the antenna orientation or position.
- Check that “Speaker Config.” – “Center” or “Surround” is set to other than “None”.
- Change the file structure of the USB memory device if necessary.
- Characters that cannot be displayed are used. This is not a malfunction. This is not a malfunction. marantz does not guarantee that all USB memory devices will operate or receive power.
- The set cannot recognize a USB memory device. Check the connection.
- This unit supports mass storage class and MTP-compatible USB memory devices. It will not recognize other USB memory devices.
- A USB memory device that the set cannot recognize is connected. This is not a malfunction. marantz does not guarantee that all USB memory devices will operate or receive power.
- When headphones are used, Audyssey DSX cannot be selected.
- Some iPods do not support being used connected directly to the iPod/USB port.
- invalid tags are used for files within the USB memory device connected to this unit. Use tags that are supported by this unit.
- The USB memory device format should be set to FAT16 or FAT32.
- The USB memory device format should be set to FAT16 or FAT32.
- This is not a malfunction. marantz does not guarantee that all USB memory devices will operate or receive power.
- When a USB memory device is connected, “No Connection” is displayed.
- Invalid tags are used for files within the USB memory device connected to this unit. Use tags that are supported by this unit.
- The file names are not displayed properly (“...”, etc.).

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---

**HD Radio**

**Symptom**

- Files on a USB memory device cannot be played.

**Cause/Solution**

- USB memory device is connected via USB hub. Connect the USB memory device directly to the iPod/USB port.
- The unit supports file structures with up to 8 levels and a total maximum of 6000 subfolders and files per 1 folder. Change the file structure of the USB memory device if necessary.
- The file names are not displayed properly (“...”, etc.).

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<td>• Ethernet cable is not properly connected or network is disconnected. Check the connection status.</td>
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<td>• Program is being broadcast in non-compatible format. Only Internet radio programs in MP3 and WMA can be played on this unit.</td>
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<td>• The firewall of the PC or router has been activated. Check the firewall settings of the connected PC or router.</td>
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<td>• Radio station is not currently broadcasting. Choose a radio station that is currently broadcasting.</td>
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<td>• IP address is wrong. Check the set’s IP address.</td>
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<td>• Some radio stations may go silent at certain times of the day. In this case, no audio is output even when a station is received. Try again later, or switch to another radio station.</td>
<td>–</td>
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<tr>
<td>Files stored on a computer cannot be played.</td>
<td>• Files are stored in a non-compatible format. Record in a compatible format.</td>
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<td>• You are attempting to play a file that is copyright protected. Files that are copyright protected cannot be played on this unit.</td>
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<td>• Set and computer are connected by USB cable. The set’s iPod/USB port cannot be used for connection to a computer.</td>
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<td>• Media sharing settings are not correct. Change media sharing settings so that the unit can access the folders on your computer.</td>
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<td>Music stored on a NAS cannot be played.</td>
<td>• If you use a NAS in conformity with the DLNA standard, enable the DLNA server function in the NAS setting.</td>
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<tr>
<td></td>
<td>• If you use a NAS that does not conform with the DLNA standard, play the music via a PC. Set Windows Media Player’s media sharing function and add NAS to the selected play folder.</td>
<td>58</td>
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<td></td>
<td>• If connection is restricted, set audio equipment as the connection target.</td>
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</tr>
<tr>
<td>Server is not found, or it is not possible to connect to the server.</td>
<td>• The computer’s or router’s firewall is activated. Check the computer’s or router’s firewall settings.</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>• Computer’s power is not turned on. Turn on the power.</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>• Server is not running. Launch the server.</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>• Set’s IP address is wrong. Check the set’s IP address.</td>
<td>131</td>
</tr>
<tr>
<td>Cannot connect to preset or favorite radio stations.</td>
<td>• Radio station is not currently broadcasting. Wait a while before trying again.</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>• Radio station is not currently in service. It is not possible to connect to radio stations that are no longer in service.</td>
<td>–</td>
</tr>
<tr>
<td>A list of broadcasting stations is not displayed.</td>
<td>• Connection to the network is unstable. Reconnect to the network or redo the &quot;Network&quot; setting in the menu.</td>
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</tr>
</tbody>
</table>

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<tbody>
<tr>
<td>For some radio stations, &quot;Radio station server full” or &quot;Connection down” is displayed and station cannot be connected to.</td>
<td>• Station is congested or not currently broadcasting. Wait a while before trying again.</td>
<td>–</td>
</tr>
<tr>
<td>Sound is broken during playback.</td>
<td>• Network or USB memory device’s signal transfer speed is slow or communications lines or radio station is congested. This is not a malfunction. When playing broadcast data with a high bit rate, the sound may be broken, depending on the communications conditions.</td>
<td>–</td>
</tr>
<tr>
<td>Sound quality is poor or noise is heard during play.</td>
<td>• File being played has a low bit rate. This is not a malfunction.</td>
<td>–</td>
</tr>
<tr>
<td>Cannot login to Pandora. (&quot;Email address” or “Password” is displayed.)</td>
<td>• Login information is incorrect. Check if the “Email address” for Pandora has been properly entered. Re-enter the “Password”. (Password is not displayed.) <a href="http://www.pandora.com/marantz">http://www.pandora.com/marantz</a></td>
<td>64</td>
</tr>
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</table>

### [AirPlay](#)

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<tr>
<th>Symptom</th>
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</tr>
</thead>
<tbody>
<tr>
<td>The AirPlay icon is not displayed in iTunes or on the iPhone/iPod touch/iPad.</td>
<td>• This unit and the computer or iPhone/iPod touch/iPad are not connected to the same network (LAN). Connect the computer or iPhone/iPod touch/iPad to the same network as this unit.</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>• iTunes or the iPhone/iPod touch/iPad do not have firmware that supports AirPlay installed. Update to the latest firmware.</td>
<td>138</td>
</tr>
<tr>
<td>No sound.</td>
<td>• The volume in iTunes or on the iPhone/iPod touch/iPad is set to the minimum setting. Adjust the volume to the optimum level.</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>• This unit is not selected in the screen that is displayed when iTunes or the iPhone/iPod touch/iPad is started. Start iTunes or switch on the iPhone/iPod touch/iPad, click the AirPlay icon in the displayed screen, and select this unit.</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>• AirPlay playback has not started. Click the ▶ button in iTunes or press the ▶ button on the iPhone/iPod touch/iPad.</td>
<td>–</td>
</tr>
</tbody>
</table>

See overleaf
### When using AirPlay with the iPhone/iPod touch/iPad, the sound suffers from intermittent breaks or AirPlay does not function.

- Quit the application running in the background of the iPhone/iPod touch/iPad, and then play using AirPlay.
- When playing via a wireless connection, outside conditions may affect the unit. To remedy this, change the network environment, e.g. shorten the distance to the wireless LAN access point.
- Update the iPhone/iPod touch/iPad application or iTunes to the latest version.

### Audio is not output when a wireless receiver (RX101 is connected).

- Check that the Bluetooth device and Wireless receiver (RX101) are correctly paired.

### The set cannot be operated with the remote control unit.

- Batteries are worn out. Replace with new batteries.
- Operate the remote control unit within a distance of about 23 ft/7 m from this unit and at an angle of within 30°.
- Remove any obstacle between this unit and the remote control unit.
- Insert the batteries in the proper direction, checking the ◎ and ● marks.
- The set’s remote control sensor is exposed to strong light (direct sunlight, inverter type fluorescent bulb light, etc.). Move the set to a place in which the remote control sensor will not be exposed to strong light.
- The setting of the zone to operate does not match. Press ZONE SELECT to select the zone to operate.

---

### Resetting the microprocessor

Perform this procedure if the display is abnormal or if operations cannot be performed. When the microprocessor is reset, all the settings are reset to their default values.

1. Turn off the power using ◇.
2. Press ◇ ON/STANDBY while simultaneously pressing GAME and A-DSX.
3. Once the display starts flashing at intervals of about 1 second, release the two buttons.

If in step 3 the display does not flash at intervals of about 1 second, start over from step 1.
Specifications

Audio section

• Analog
  Input sensitivity/Input impedance: 200 mV/47 kΩ
  Frequency response: 10 Hz – 100 kHz — +1, –3 dB (DIRECT mode)
  S/N: 106 dB (IHF–A weighted, DIRECT mode)
  Distortion: 0.005 % (20 Hz – 20 kHz) (DIRECT mode)
  Rated output: Unbalanced pre-output: 1.2 V
  Balanced pre-output: 2.4 V

• Digital
  D/A output: Rated output — 2 V (at 0 dB playback)
  Total harmonic distortion — 0.008 % (1 kHz, at 0 dB)
  S/N ratio — 102 dB

Digital input: Format — Digital audio interface

• Phono equalizer (PHONO input — MEDIA PLAYER OUT)
  Input sensitivity: 2.5 mV
  RIAA deviation: ±1 dB (20 Hz to 20 kHz)
  S/N: 74 dB (A weighting, with 5 mV input)
  Rated output: 150 mV
  Distortion factor: 0.03 % (1 kHz, 3 V)

Video section

• Standard video connectors
  Input/output level and impedance: 1 Vp-p, 75 Ω
  Frequency response: 5 Hz – 10 MHz — +1, –3 dB

• Color component video connector
  Input/output level and impedance: Y (brightness) signal — 1 Vp-p, 75 Ω
  Pb / Cb signal — 0.7 Vp-p, 75 Ω
  Pr / Cr signal — 0.7 Vp-p, 75 Ω
  Frequency response: 5 Hz – 60 MHz — 0, –3 dB

Tuner section

(ANTENNA input – MEDIA PLAYER OUT)

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<td>Receiving Range: 87.5 MHz – 107.9 MHz</td>
<td>530 kHz – 1710 kHz</td>
</tr>
<tr>
<td>Usable Sensitivity: 1.5 μV (14.8 dBf)</td>
<td>20 μV</td>
</tr>
<tr>
<td>S/N (IHF–A weighted): MONO 78 dB</td>
<td>HD 85 dB</td>
</tr>
<tr>
<td>HD 85 dB</td>
<td>0.1 %</td>
</tr>
<tr>
<td>Dynamic range — 100 dB</td>
<td>STEREO 0.2 %</td>
</tr>
<tr>
<td>Distortion (1 kHz): MONO 0.1 %</td>
<td>HD 0.02 %</td>
</tr>
<tr>
<td>STEREO 0.2 %</td>
<td>0.02 %</td>
</tr>
</tbody>
</table>

General

Power supply: AC 120 V, 60 Hz
Power consumption: 60 W
Power consumption in standby mode: 0.2 W
Power consumption in CEC standby mode: 0.5 W
Power consumption in network standby mode: 2.7 W

For purposes of improvement, specifications and design are subject to change without notice.
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zlib
http://www.zlib.net/

zlib.h – interface of the ‘zlib’ general purpose compression library version 1.2.3, July 18th, 2005
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Dimensions

Unit: in. (mm)

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