YAMAHA

HTR-6050

AV Receiver

OWNER'S MANUAL

Important safety instructions

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

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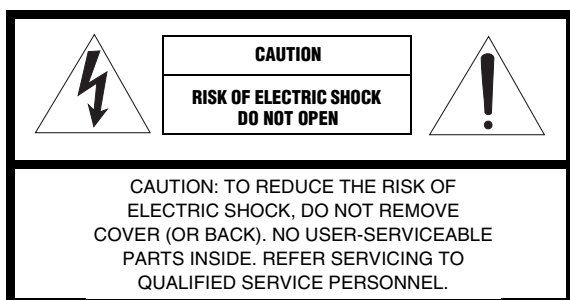
• Explanation of Graphical Symbols

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

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

1 Read Instructions – All the safety and operating instructions should be read before the product is operated.

2 Retain Instructions – The safety and operating instructions should be retained for future reference.

3 Heed Warnings – All warnings on the product and in the operating instructions should be adhered to.

4 Follow Instructions – All operating and use instructions should be followed.

5 Cleaning – Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.

6 Attachments – Do not use attachments not recommended by the product manufacturer as they may cause hazards.

7 Water and Moisture – Do not use this product near water – for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.

8 Accessories – Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

9 A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

10 Ventilation – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

11 Power Sources – This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

12 Grounding or Polarization – This product may be equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

13 Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

14 Lightning – For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

15 Power Lines – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

16 Overloading – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

17 Object and Liquid Entry – Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

18 Servicing – Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

19 Damage Requiring Service – Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a) When the power-supply cord or plug is damaged,

b) If liquid has been spilled, or objects have fallen into the product,

c) If the product has been exposed to rain or water,

d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation,

e) If the product has been dropped or damaged in any way, and

f) When the product exhibits a distinct change in performance - this indicates a need for service.

20 Replacement Parts – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

21 Safety Check – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

22 Wall or Ceiling Mounting – The unit should be mounted to a wall or ceiling only as recommended by the manufacturer.

23 Heat – The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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24 Outdoor Antenna Grounding – If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING

MAST
ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810–20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810–21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250. PART H)

NEC – NATIONAL ELECTRICAL CODE

FCC INFORMATION (for US customers)

1 **IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!**
This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2 **IMPORTANT:** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3 **NOTE:** This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices.
This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices.

Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Electronics Corp., U.S.A. 6660 Orangethorpe Ave., Buena Park, CA 90620.

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

Caution: Read this before operating your unit.

1 To assure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.

2 Install this sound system in a well ventilated, cool, dry, clean place – away from direct sunlight, heat sources, vibration, dust, moisture, and/or cold. Allow ventilation space of at least 30 cm on the top, 20 cm on the left and right, and 20 cm on the back of this unit.

3 Locate this unit away from other electrical appliances, motors, or transformers to avoid humming sounds.

4 Do not expose this unit to sudden temperature changes from cold to hot, and do not locate this unit in a environment with high humidity (i.e. a room with a humidifier) to prevent condensation inside this unit, which may cause an electrical shock, fire, damage to this unit, and/or personal injury.

5 Avoid installing this unit where foreign object may fall onto this unit and/or this unit may be exposed to liquid dripping or splashing. On the top of this unit, do not place:
   – Other components, as they may cause damage and/or discoloration on the surface of this unit.
   – Burning objects (i.e. candles), as they may cause fire, damage to this unit, and/or personal injury.
   – Containers with liquid in them, as they may fall and liquid may cause electrical shock to the user and/or damage to this unit.

6 Do not cover this unit with a newspaper, tablecloth, curtain, etc. in order not to obstruct heat radiation. If the temperature inside this unit rises, it may cause fire, damage to this unit, and/or personal injury.

7 Do not plug in this unit to a wall outlet until all connections are complete.

8 Do not operate this unit upside-down. It may overheat, possibly causing damage.

9 Do not use force on switches, knobs and/or cords.

10 When disconnecting the power cable from the wall outlet, grasp the plug; do not pull the cord.

11 Do not clean this unit with chemical solvents; this might damage the finish. Use a clean, dry cloth.

12 Only voltage specified on this unit must be used. Using this unit with a higher voltage than specified is dangerous and may cause fire, damage to this unit, and/or personal injury. Yamaha will not be held responsible for any damage resulting from use of this unit with a voltage other than specified.

13 To prevent damage by lightning, keep the power cord and outdoor antennas disconnected from a wall outlet or the unit during a lightning storm.

14 Do not attempt to modify or fix this unit. Contact qualified Yamaha service personnel when any service is needed. The cabinet should never be opened for any reasons.

15 When not planning to use this unit for long periods of time (i.e. vacation), disconnect the AC power plug from the wall outlet.

16 Install this unit near the AC outlet and where the AC power plug can be reached easily.

17 Be sure to read the "Troubleshooting" section on common operating errors before concluding that this unit is faulty.

18 Before moving this unit, press STANDBY/ON to set this unit in the standby mode, and disconnect the AC power plug from the wall outlet.

19 The batteries shall not be exposed to excessive heat such as sunshine, fire or like.

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

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

This unit is not disconnected from the AC power source as long as it is connected to the wall outlet, even if this unit itself is turned off by STANDBY/ON. This state is called the standby mode. In this state, this unit is designed to consume a very small quantity of power.

FOR CANADIAN CUSTOMERS
To prevent electric shock, match wide blade of plug to wide slot and fully insert.
This Class B digital apparatus complies with Canadian ICES-003.

IMPORTANT
Please record the serial number of this unit in the space below.
MODEL:
Serial No.:
The serial number is located on the rear of the unit.
Retain this Owner's Manual in a safe place for future reference.

Contents

About this manual

- ☀ indicates a tip for your operation.
- Some operations can be performed by using either the buttons on the front panel or the ones on the remote control. In case the button names differ between the front panel and the remote control, the button name on the remote control is given in parentheses.
- This manual is printed prior to production. Design and specifications are subject to change in part as a result of improvements, etc. In case of differences between the manual and product, the product has priority.
- "⑨**SPEAKERS**" or "Ⓐ**MULTI CH IN**" (example) indicates the name of the parts on the front panel or the remote control. Refer to the attached sheet or the appendix pages at the end of this manual for the information about each position of the parts.
- The symbol "☞" with page number(s) indicates the corresponding reference page(s).

INTRODUCTION

PREPARATION

BASIC OPERATION

ADVANCED OPERATION

ADDITIONAL INFORMATION

APPENDIX

English

Features

Built-in 5-channel power amplifier

◆ Minimum RMS output power
[Front, Center, Surround channels]
100 W (1 kHz, 0.9% THD, 6 Ω)

SCENE select function

◆ Preset SCENE templates for various situations
◆ SCENE template customizing capability

Decoders and DSP circuits

◆ Proprietary Yamaha technology for the creation of multi-channel surround sound
◆ Compressed Music Enhancer mode to improve the sound quality of compression artifacts (such as the MP3 format) to that of a high-quality stereo
◆ Dolby Digital decoder
◆ Dolby Pro Logic/Dolby Pro Logic II decoder
◆ DTS decoder
◆ Virtual CINEMA DSP
◆ SILENT CINEMA™

Sophisticated FM/AM tuner

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

HDMI (High-Definition Multimedia Interface)

◆ HDMI interface for standard, enhanced or high-definition video (includes 1080p video signal transmission)

USB features

◆ USB port to connect a USB memory device or a USB portable audio player
◆ MP3, WMA and WAV capability

Other features

◆ YPAO (Yamaha Parametric Room Acoustic Optimizer) for automatic speaker setup
◆ 192-kHz/24-bit D/A converter
◆ Direct Stereo mode for pure hi-fi sound for analog and PCM 2-channel sources
◆ 6 additional input jacks for discrete multi-channel input
◆ OSD (on-screen display) menus that allow you to optimize this unit to suit your individual audiovisual system
◆ Component video input/output capability (3 COMPONENT VIDEO INs and 1 MONITOR OUT)
◆ S-video signal input/output capability
◆ Optical and coaxial digital audio signal jacks
◆ Sleep timer
◆ Cinema and music night listening modes
◆ Remote control with preset remote control codes

We Want You Listening For A Lifetime

Yamaha and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion – and, most importantly, without affecting your sensitive hearing.

Since hearing damage from loud sounds is often undetectable until it is too late, Yamaha and the Electronic Industries Association's Consumer Electronics Group recommend you to avoid prolonged exposure from excessive volume levels.

Getting started

■ Checking the supplied accessories

Check that you received all of the following parts.

Remote control   **Batteries (2)**   **AM loop antenna**
                      (AAA, R03, UM-4)
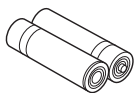
Optimizer   **Indoor FM antenna**
microphone

Note

The form of the supplied accessories varies depending on the models.

■ Installing batteries in the remote control
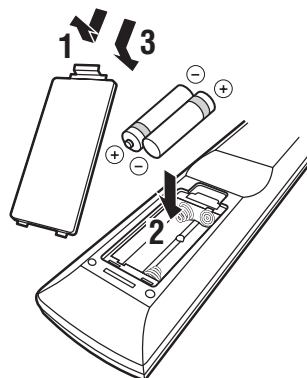
1 **Take off the battery compartment cover.**

2 **Insert the two supplied batteries (AAA, R03, UM-4) according to the polarity markings (+ and –) on the inside of the battery compartment.**

3 **Snap the battery compartment cover back into place.**

Notes

- Change all of the batteries if you notice the following condition:
  – the operation range of the remote control decreases.
- Do not use an old battery and a new one together.
- Do not use different types of batteries (such as alkaline and manganese batteries) together. Read the packaging carefully as these different types of batteries may have the same shape and color.
- If the batteries have leaked, dispose of them immediately. Avoid touching the leaked material or letting it come into contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.
- Do not throw away batteries with general house waste; dispose of them correctly in accordance with your local regulations.
- If the remote control is without batteries for more than 2 minutes, or if exhausted batteries remain in the remote control, the contents of the memory may be cleared. When the memory is cleared, insert new batteries and set up the remote control code.

English

3 *En*

Quick start guide

The following steps describe the easiest way to enjoy DVD movie playback in your home theater.

Video monitor

Front left speaker

Front right speaker

Subwoofer

Surround right speaker

Center speaker

DVD player

Surround left speaker
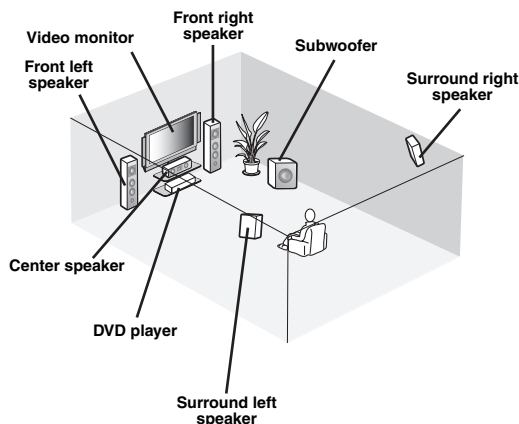
Step 1: Set up your speakers

☞ **P. 5**

Step 2: Connect your DVD player and other components

☞ **P. 6**

Step 3: Turn on the power and press SCENE 1 button

☞ **P. 8**

Enjoy DVD playback!

Preparation: Check the items

In these steps, you need the following supplied accessories.

❏ **Indoor FM antenna**
❏ **AM loop antenna**

The following items are not included in the package of this unit.

❏ **Speakers**
  ❏ **Front speakers** **2**
  ❏ **Center speaker** **1**
  ❏ **Surround speakers** **2**
  Select magnetically shielded speakers. The minimum required speakers are two front speakers.

❏ **Active subwoofer** **1**
  Select an active subwoofer equipped with an RCA input jack.

❏ **Speaker cables** **5**
❏ **Subwoofer cable** **1**
  Select a monaural RCA cable.

❏ **DVD player** **1**
  Select DVD player equipped with coaxial digital audio output jack and composite video output jack.

❏ **Video monitor** **1**
  Select a TV monitor, video monitor or projector equipped with a composite video input jack.

❏ **Video cable** **2**
  Select an RCA composite video cable.

❏ **Digital coaxial audio cable** **1**

Step 1: Set up your speakers

Place your speakers in the room and connect them to this unit.
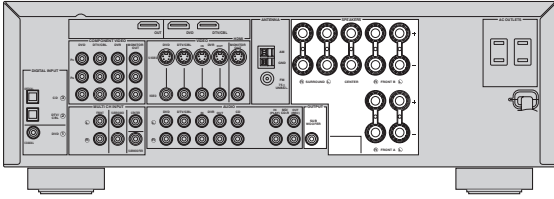
1   Place your speakers and subwoofer in the room.

2   Connect speaker cables to each speaker.
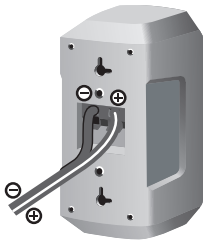
Cables are colored or shaped differently, perhaps with a stripe, groove or ridge. Connect the striped (grooved, etc.) cable to the "+" (red) terminals of your speaker. Connect the plain cable to the "–" (black) terminals.

3   Connect each speaker cable to the corresponding speaker terminal of this unit.
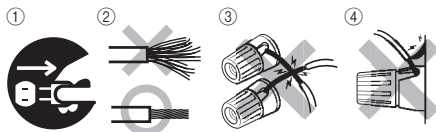
① Make sure that this unit and the subwoofer are unplugged from the AC wall outlets.
② Twist the exposed wires of the speaker cables together to prevent short circuits.
③ Do not let the bare speaker wires touch each other.
④ Do not let the bare speaker wires touch any metal part of this unit.

Be sure to connect the left channel (L), right channel (R), "+" (red) and "–" (black) properly.

Front speakers

Loosen   Insert   Tighten

To the front right speaker   Front left speaker
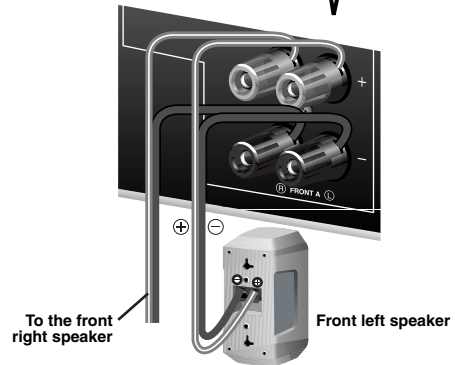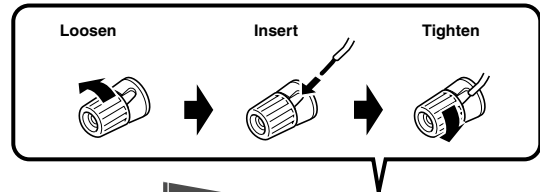
Center and surround speakers

To the surround right speaker
To the surround left speaker
To the center speaker
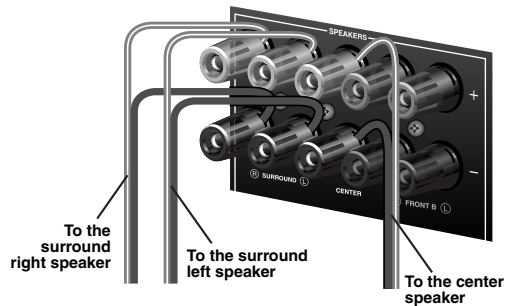
4   Connect the subwoofer cable to the input jack of the subwoofer and the SUBWOOFER OUTPUT jack of this unit.

Subwoofer
AV receiver
Input jack
SUBWOOFER OUTPUT jack
Subwoofer cable
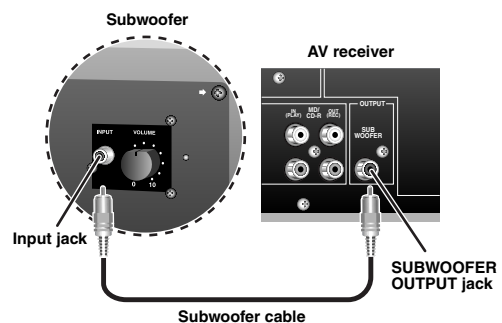
Step 2: Connect your DVD player and other components
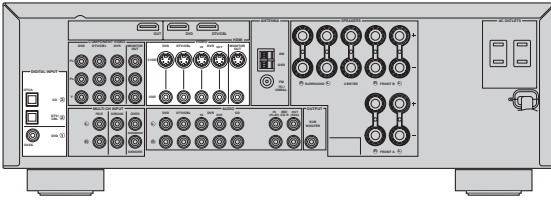
Make sure that this unit and the DVD player are unplugged from the AC wall outlets.

1 Connect the digital coaxial audio cable to the digital coaxial audio output jack of your DVD player and the DVD DIGITAL INPUT COAXIAL jack of this unit.

DVD player　　　　**AV receiver**

Digital coaxial audio output jack

Digital coaxial audio cable

DVD DIGITAL INPUT COAXIAL jack
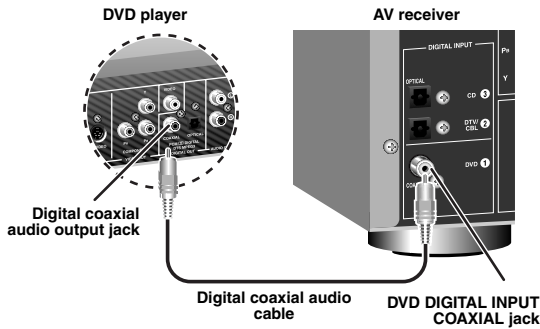
2 Connect the video cable to the composite video output jack of your DVD player and the DVD VIDEO jack of this unit.

AV receiver

DVD player

Composite video output jack

Video cable

DVD VIDEO jack
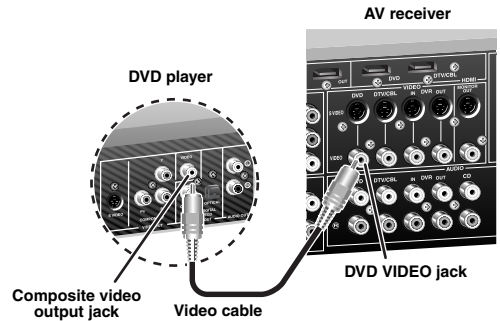
3 Connect the video cable to the video input jack of your video monitor and the VIDEO MONITOR OUT jack of this unit.

Video monitor　　　　**AV receiver**

Video input jack

Video cable

VIDEO MONITOR OUT jack

INTRODUCTION
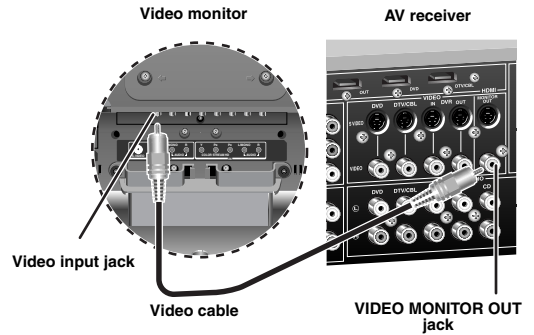
4 Connect the FM and AM antennas to this unit.

See page 20 for the details.

AM loop antenna

Indoor FM antenna

ANTENNA
AM
GND
FM
75Ω
UNBAL.

Open the lever	Insert	Close the lever
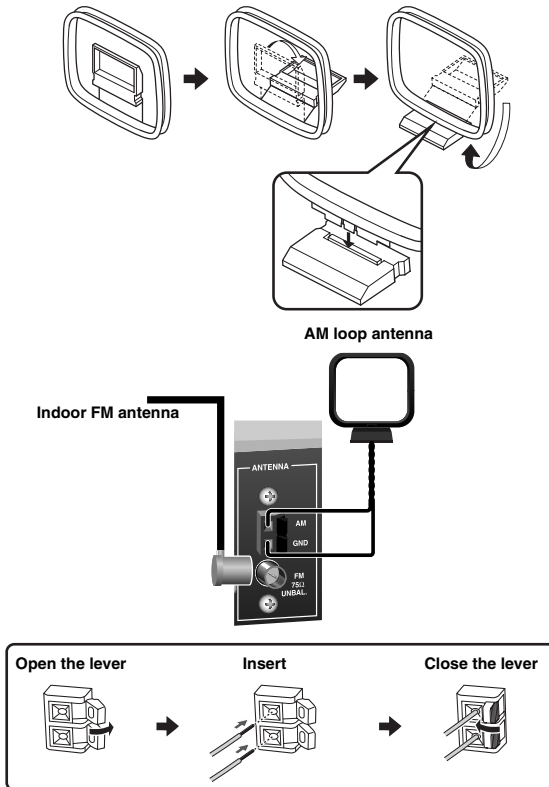
☼
The wire of the AM loop antenna does not have any polarity and you can connect either end of the wire to AM and GND terminal.

Note

The shape of the AM and GND terminals may vary depending on the unit.

5 Connect the power plug of this unit and other components into the AC wall outlet.

☼
This unit is equipped with AC OUTLETS for the power supply of the other components. See page 21 for details.

■ **For further connections**

• **Using the other kind of speaker combinations**

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• **Connecting a video monitor**

☞ **P. 16**

• **Connecting a DVD player**

☞ **P. 16**

• **Connecting a DVD recorder**

☞ **P. 16**

• **Connecting a cable TV or a satellite tuner**

☞ **P. 16**

• **Connecting a CD player and an MD recorder**

☞ **P. 19**

• **Connecting a DVD player via analog multi-channel audio connection**

☞ **P. 19**

• **Using the VIDEO AUX jacks on the front panel**

☞ **P. 20**

• **Connecting an outdoor FM/AM antenna**

☞ **P. 20**

• **Using the USB jack on the front panel**

☞ **P. 43**

English

Step 3: Turn on the power and press SCENE 1 button

Check the type of the connected speakers.
If the speakers are 6 ohm speakers, set "SP IMP." to
"6Ω MIN" before using this unit (see page 13).

1   Turn on the video monitor connected to this unit.

2   Press ①STANDBY/ON on the front panel.

Note

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

3   Press ⑯SCENE 1.
"DVD Viewing" appears in the front panel display,
and this unit automatically optimize own status for
the DVD playback.

☼
The indicator on the selected SCENE button lights up while
this unit is in the SCENE mode.

4   Start playback of the desired DVD on your player.

5   Rotate ⑧VOLUME to adjust the volume.

Note

When you change the input source or sound field program, the
SCENE mode is deactivated, and the indicator on the selected
SCENE button turns off.

■ Using the other SCENE buttons
In the following cases, try pressing the corresponding
SCENE button to enjoy playback of the desired sources.

Case A: "I want to listen to a music disc from the
connected DVD player as the back ground
music for this room..."

➤ **Press ⑯SCENE 2 (or
ⒺSCENE 2) to select
"Disc Listening".**

Case B: "I want to watch a TV program..."

➤ **Press ⑯SCENE 3 (or
ⒺSCENE 3) to select
"TV Viewing".**

Note

To use the "TV Viewing" template, you must connect a
cable TV or a satellite tuner to this unit in advance. See
page 16 for details.

Case C: "I want to listen to a music program from the FM radio station..."

➡ **Press ⑯SCENE 4 (or
ⒺSCENE 4) to select
"Radio Listening".**

Notes

• To use the "Radio Listening" template, you must tune into the desired radio station in advance. See pages 40 to 42 for tuning information.
• To achieve the best possible reception, orient the connected AM loop antenna, or adjust the position of the end of the indoor FM antenna.

☼

If you cannot find the desired situation, you can select and change the assigned SCENE template for the SCENE buttons. See page 28 for details.

■ After using this unit...

Press ①STANDBY/ON on the front panel to set this unit to the standby mode.

This unit is set to the standby mode. To turn on this unit from the standby mode, press ①**STANDBY/ON** (or Ⓜ**POWER**). See page 21 for details.

Note

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

What do you want to do with this unit?

■ Customizing the SCENE templates

• **Using various SCENE templates**

☞ **P. 28**

• **Creating your original SCENE templates**

☞ **P. 31**

■ Using various input sources

• **Basic controls of this unit**

☞ **P. 32**

• **Enjoying FM/AM radio programs**

☞ **P. 40**

• **Using your USB portable device with this unit**

☞ **P. 43**

■ Using various sound features

• **Using various sound field programs**

☞ **P. 37**

• **Using the pure direct mode for the high fidelity sound**

☞ **P. 34**

• **Customizing the sound field programs**

☞ **P. 39**

■ Adjusting the parameters of this unit

• **Automatically optimizing the speaker parameters for your listening room (AUTO SETUP)**

☞ **P. 24**

• **Manually adjusting various parameters of this unit**

☞ **P. 46**

• **Setting the remote control**

☞ **P. 56**

• **Adjusting the advanced parameters**

☞ **P. 60**

■ Additional features

Automatically turning off this unit

☞ **P. 36**

INTRODUCTION

English

Connections

Rear panel
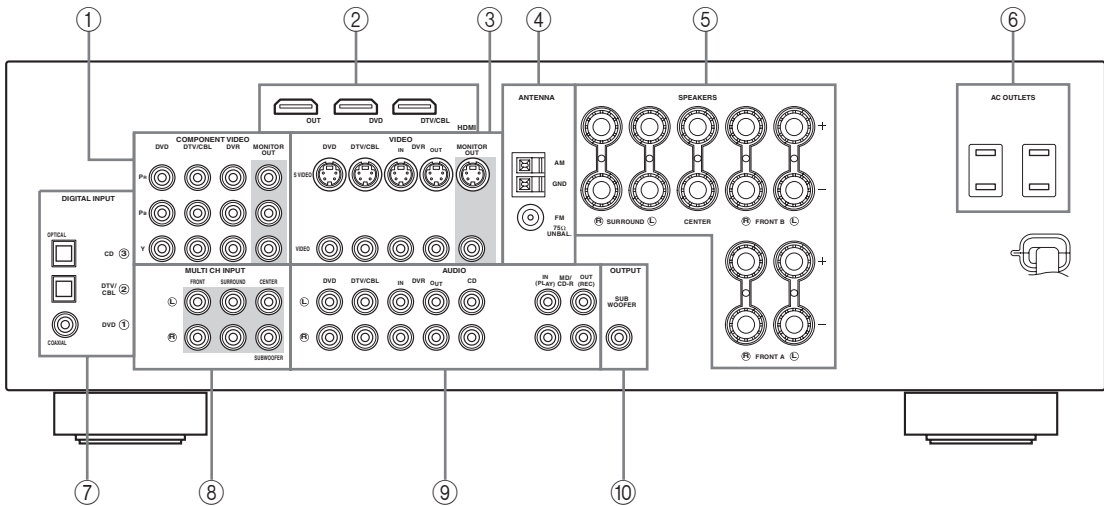
① **COMPONENT VIDEO jacks**
See page 18 for connection information.

② **HDMI jacks**
See page 17 for connection information.

③ **VIDEO jacks**
See pages 16 and 18 for connection information.

④ **ANTENNA terminals**
See page 20 for connection information.

⑤ **SPEAKERS terminals**
See page 12 for connection information.

⑥ **AC OUTLETS**
See page 21 for connection information.

⑦ **DIGITAL INPUT jacks**
See pages 16 and 19 for connection information.

⑧ **MULTI CH INPUT jacks**
See page 19 for connection information.

⑨ **AUDIO jacks**
See pages 16 and 19 for connection information.

⑩ **SUBWOOFER OUTPUT jack**
See page 12 for connection information.

Placing speakers

The speaker layout below shows the speaker setting we recommend. You can use it to enjoy CINEMA DSP and multi-channel audio sources.
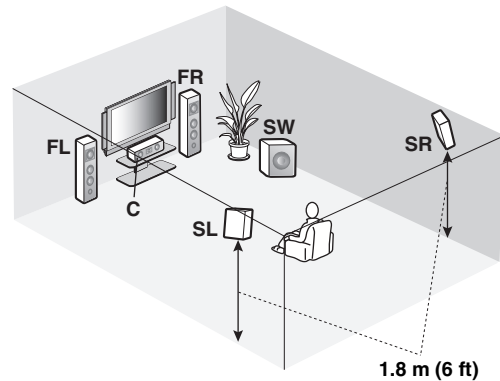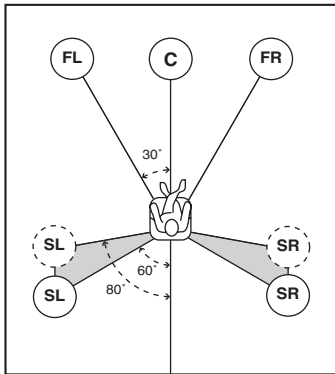
Front left and right speakers (FL and FR)

The front speakers are used for the main source sound plus effect sounds. Place these speakers at an equal distance from the ideal listening position. The distance of each speaker from each side of the video monitor should be the same.

Center speaker (C)

The center speaker is for the center channel sounds (dialog, vocals, etc.). If for some reason it is not practical to use a center speaker, you can do without it. Best results, however, are obtained with the full system.

Surround left and right speakers (SL and SR)

The surround speakers are used for effect and surround sounds.

Subwoofer (SW)

The use of a subwoofer with a built-in amplifier, such as the Yamaha Active Servo Processing Subwoofer System, is effective not only for reinforcing bass frequencies from any or all channels, but also for high fidelity sound reproduction of the LFE (low-frequency effect) channel included in Dolby Digital and DTS sources. The position of the subwoofer is not so critical, because low bass sounds are not highly directional. But it is better to place the subwoofer near the front speakers. Turn it slightly toward the center of the room to reduce wall reflections.

English

Connecting speakers

Be sure to connect the left channel (L), right channel (R), "+" (red) and "−" (black) properly. If the connections are faulty, this unit cannot reproduce the input sources accurately.

Caution
- Before connecting the speakers, make sure that this unit is turned off (see page 21).
- Do not let the bare speaker wires touch each other or let them touch any metal part of this unit. This could damage this unit and/or the speakers.
- Use the magnetically shielded speakers. If this type of speaker still creates interference with the monitor, place the speakers away from the monitor.
- If you are to use 6 ohm speakers, be sure to set "SP IMP." to "6Ω MIN" before using this unit (see page 13).

Note

A speaker cable is actually a pair of insulated cables running side by side. Cables are colored or shaped differently, perhaps with a stripe, groove or ridge. Connect the striped (grooved, etc.) cable to the "+" (red) terminals of this unit and your speaker. Connect the plain cable to the "−" (black) terminals.
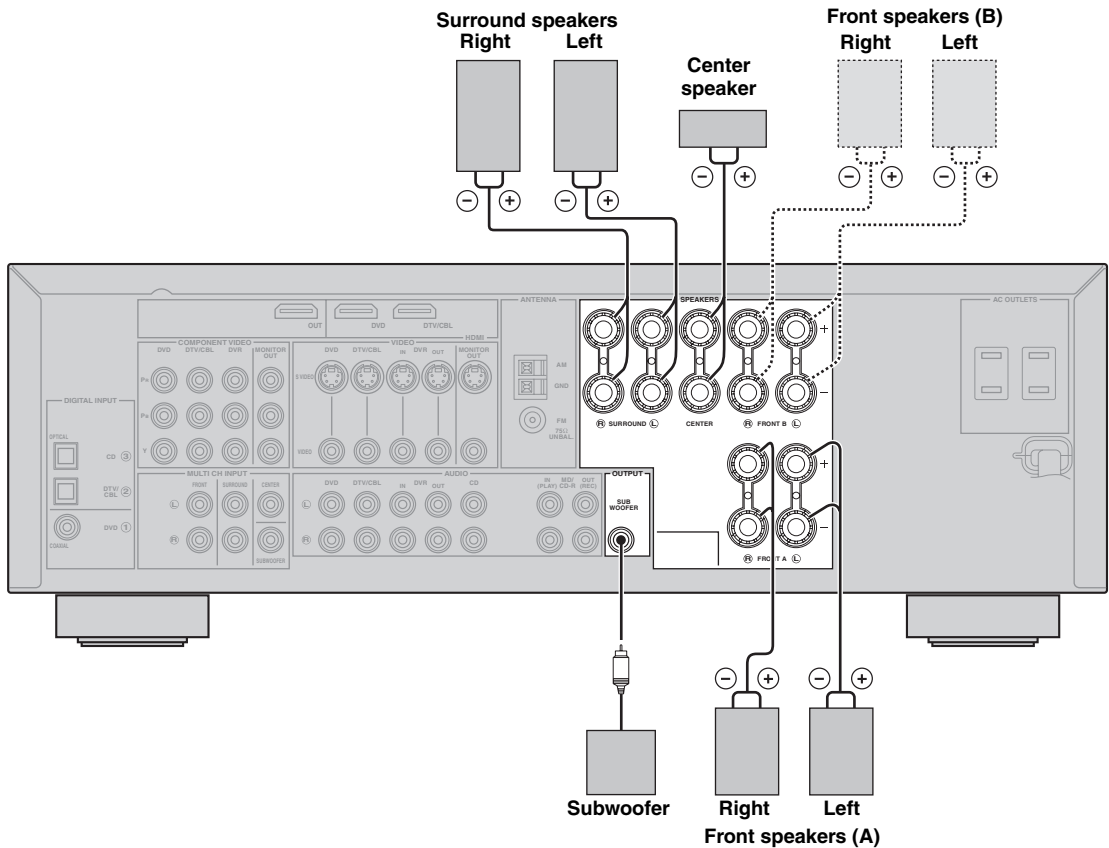
■ **Before connecting to the SPEAKERS terminal**

A speaker cord is actually a pair of insulated cables running side by side. Cables are colored or shaped differently, perhaps with a stripe, groove or ridges. Connect the striped (grooved, etc.) cable to the "+" (red) terminals of this unit and your speaker. Connect the plain cable to the "–" (black) terminals.

Remove approximately 10 mm (3/8") of insulation from the end of each speaker cable and then twist the bare wires of the cable together to prevent short circuits.

10 mm (3/8")

■ **Connecting to the SPEAKERS terminals**

2
1
3

Red: positive (+)
Black: negative (–)
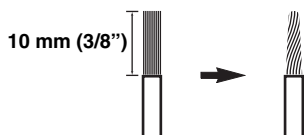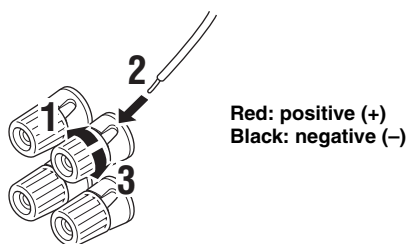
1 Loosen the knob.

2 Insert the bare end of the speaker wire into the hole on the terminal.

3 Tighten the knob to secure the wire.

Connecting the banana plug

The banana plug is a single-pole electrical connector widely used to terminate speaker cables. First, tighten the knob and then insert the banana plug connector into the end of the corresponding terminal.

Banana plug
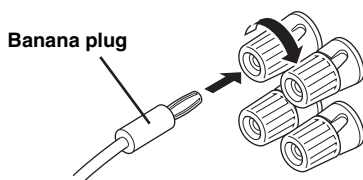
Setting the speaker impedance

Caution

If you are to use 6 ohm speakers, set "SP IMP." to "6Ω MIN" as follows BEFORE using this unit.

1 Make sure this unit is turned off.
See page 21 for details about turning on or off this unit.

2 Press and hold ⑩TONE CONTROL and then press ①STANDBY/ON to turn on this unit.
This unit turns on, an the advanced setup menu appears in the front panel display.

3 Press ⑪PROGRAM ◁ / ▷ repeatedly to select "SP IMP.".
The following display appears in the front panel display.

```
SP IMP.- 8ΩMIN
```

4 Press ⑫STRAIGHT repeatedly to select "6Ω MIN".
The following display appears in the front panel display.

```
SP IMP.- 6ΩMIN
```

5 Press ①STANDBY/ON to confirm your selection and set this unit to the standby mode.

Note

The setting you made is reflected next time you turn on this unit.

PREPARATION

English

13 *En*

Information on jacks and cable plugs

Audio jacks and cable plugs

AUDIO
ⓛ   ⓡ

DIGITAL AUDIO
COAXIAL

DIGITAL AUDIO
OPTICAL

(White) (Red)   (Orange)

L   R   C   O

Left and right analog audio cable plugs **Coaxial digital audio cable plug** **Optical digital audio cable plug**

Video jacks and cable plugs

VIDEO **S VIDEO**

COMPONENT VIDEO
Y   PB   PR

(Yellow)   (Green) (Blue) (Red)

V   S   Y   PB   PR
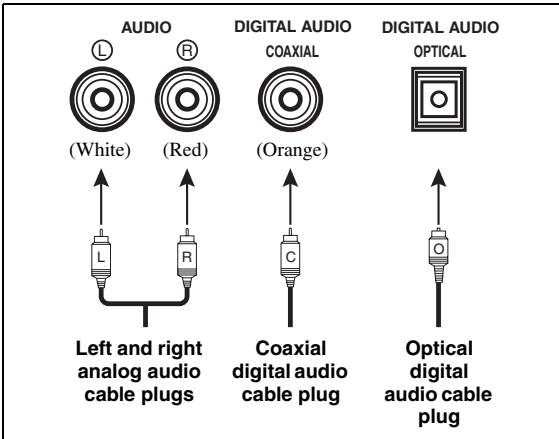
Composite video cable plug **S-video cable plug** **Component video cable plugs**
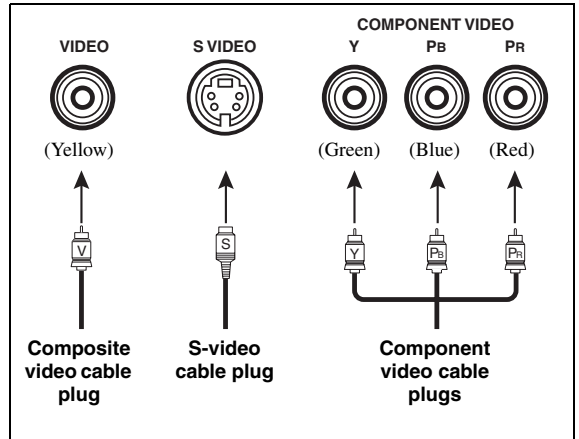
■ Audio jacks

This unit has three types of audio jacks. Connection depends on the availability of audio jacks on your other components.

AUDIO jacks

For conventional analog audio signals transmitted via left and right analog audio cables. Connect red plugs to the right jacks and white plugs to the left jacks.

DIGITAL AUDIO COAXIAL jacks

For digital audio signals transmitted via coaxial digital audio cables.

DIGITAL AUDIO OPTICAL jacks

For digital audio signals transmitted via optical digital audio cables.

Notes

• You can use the digital jacks to input PCM, Dolby Digital and DTS bitstreams. All digital input jacks are compatible with digital signals with up to 96 kHz of sampling frequency.
• This unit handles digital and analog signals independently. Thus audio signals input at the digital jacks are not output at the analog AUDIO OUT (REC) jacks.
• Pull out the cap from the optical jack before you connect the optical digital audio cable. Do not discard the cap. When you are not using the optical jack, be sure to put the cap back in place. This cap protects the jack from dust.

■ Video jacks

This unit has three types of video jacks. Connection depends on the availability of input jacks on your video monitor.

VIDEO jacks

For conventional composite video signals transmitted via composite video cables.

S VIDEO jacks

For S-video signals, separated into the luminance (Y) and chrominance (C) video signals transmitted on separate wires of S-video cables.

COMPONENT VIDEO jacks

For component signals, separated into the luminance (Y) and chrominance (P_B, P_R) video signals transmitted on separate wires of component video cables.

Video signal flow for MONITOR OUT

	Input	Output (MONITOR OUT)
COMPONENT VIDEO	P_R P_B Y	P_R P_B Y
S VIDEO		
VIDEO		
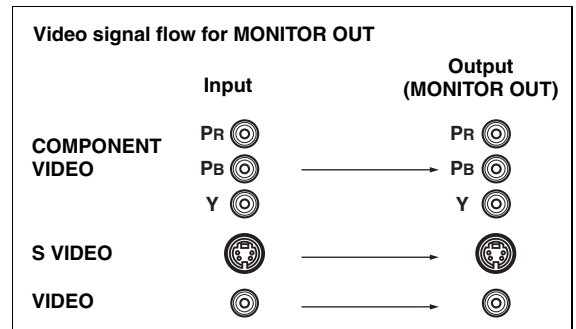
Note

The OSD signal is not output at the DVR OUT (REC) jacks.

Information on HDMI™

Audio signals input at the HDMI jack are not output from any speaker terminals but output from the connected video monitor.

To enjoy the sound from speakers connected to this unit,

– make an analog or digital connection besides the HDMI connection (see page 16).

– mute the volume of the connected video monitor.

You can play back pictures by connecting your video monitor and video source component to this unit using HDMI connections.

At that time, audio/video signals output from the connected component (such as DVD player etc.) are output to the connected video monitor only when this unit is turned on and set to the input source (DVD or DTV/CBL).

Furthermore, available audio/video signals depend on the specification of the connected video monitor. Refer to the instruction manual of each connected component.

■ HDMI jack and cable plug

HDMI

HDMI cable plug

☀️
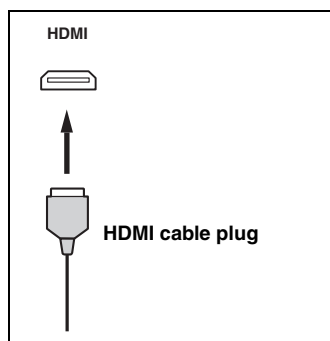
• We recommend using an HDMI cable shorter than 5 meters (16 feet) with the HDMI logo printed on it.

• Use a conversion cable (HDMI jack ↔ DVI-D jack) to connect this unit to other DVI components.

PREPARATION

English

Connecting video components

Connect the video components as follows.

☀
You can also connect a video monitor, DVD player, digital TV, and cable TV to this unit using the S VIDEO or COMPONENT VIDEO connections (see page 17).

Make sure that this unit and other components are unplugged from the AC wall outlets.

■ **Connecting a video monitor and a DVD player**

Video out
Audio out

Audio out

Video in

DVD player

Video monitor
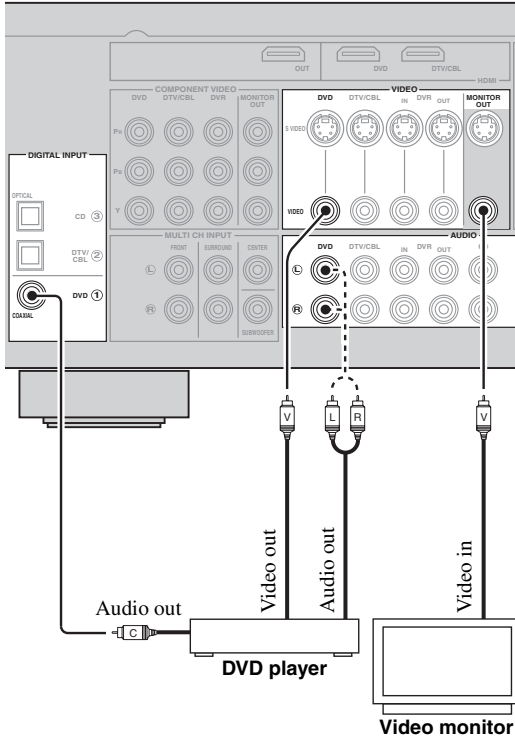
	indicates recommended connections
-------	indicates alternative connections

■ **Connecting a cable TV/satellite tuner and a DVD recorder**
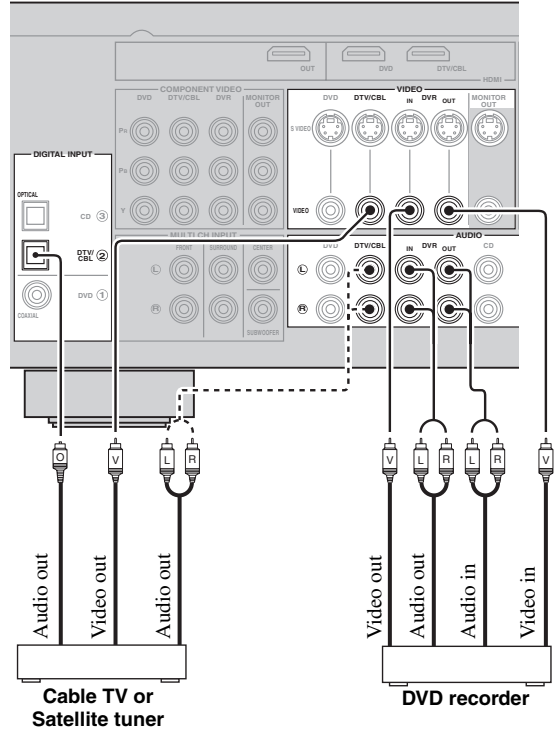
Audio out
Video out
Audio out

Video out
Audio out
Audio in
Video in

Cable TV or Satellite tuner

DVD recorder

	indicates recommended connections
-------	indicates alternative connections

■ Connecting to the HDMI, COMPONENT VIDEO or S VIDEO jacks

You can enjoy high-quality pictures by connecting your video monitor and video source components to this unit using HDMI, COMPONENT VIDEO or S VIDEO connections.

Note

Be sure to connect your video components in the same way you connect your video monitor to this unit. For example, if you connect your video monitor to this unit using a HDMI connection, connect your video components to this unit using the HDMI connection.

HDMI connection

Audio signals input at the HDMI jack are not output from any speaker terminals but output from the connected video monitor.
To enjoy the sound from speakers connected to this unit,
– make an analog or digital connection besides the HDMI connection (see page 16).
– mute the volume of the connected video monitor.

Notes

• When you connect your TV monitor or projector via HDMI connection, the OSD does not appear. In such cases, connect the TV monitor or projector via component, S-video or video connection.
• Connect the input source components to the HDMI DVD or HDMI DTV/CBL jack to display the video images on the video monitor connected to the HDMI OUT jack.
• Audio/video signals output from the connected component (such as DVD player etc.) are output to the connected video monitor only when this unit is turned on and set to the input source (DVD or DTV/CBL).
• Available audio/video signals depend on the specification of the connected video monitor. Refer to the instruction manual of each connected component.

Video monitor

Cable TV or satellite tuner

DVD player

PREPARATION

English

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COMPONENT VIDEO connection

Video monitor

DVD player

Video out

Video in

COMPONENT VIDEO MONITOR
DVD DTV/CBL DVR OUT

P_R

P_B

Y

MULTI CH INPUT
FRONT SURROUND CENTER

L

R

SUBWOOFER

Video out

Video out

Cable TV or satellite tuner

DVD recorder

S VIDEO connection

Cable TV or satellite tuner

Video monitor

Video out

Video in

OUT DVD DTV/CBL HDMI

VIDEO
DVD DTV/CBL IN DVR OUT MONITOR OUT

S VIDEO

VIDEO

DVD DTV/CBL IN DVR OUT CD

AUDIO

L

R

Video out

Video out

Video in
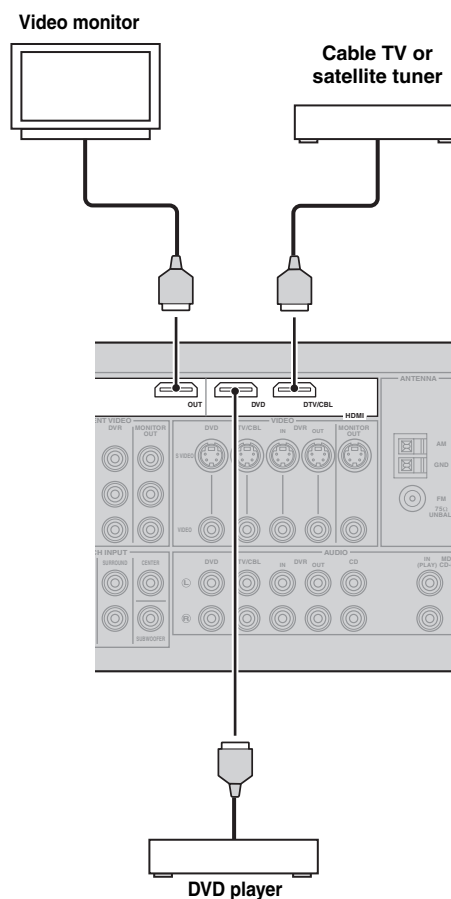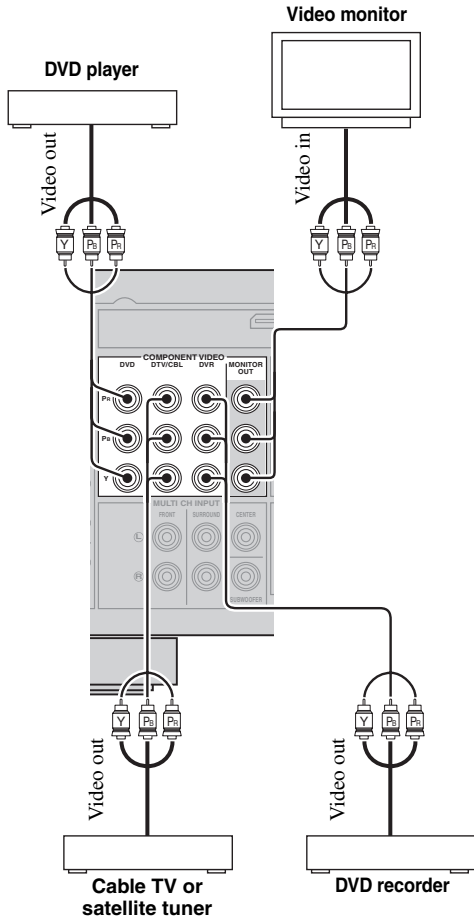
DVD player
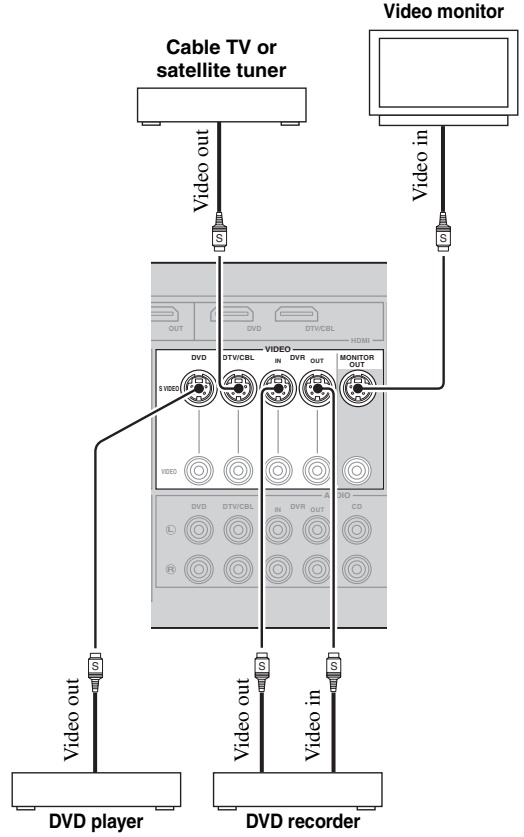
DVD recorder

Connecting audio components

Connect the audio components as follows.

■ Connecting a CD player and a CD recorder/MD recorder

Note

When you connect your CD player via analog and digital connection, priority is given to the signal input at the DIGITAL INPUT jack.

Make sure that this unit and other components are unplugged from the AC wall outlets.

Audio out   Audio out   Audio out   Audio in

CD player   **CD recorder or MD recorder**

——— **indicates recommended connections**

- - - - - - - **indicates alternative connections**
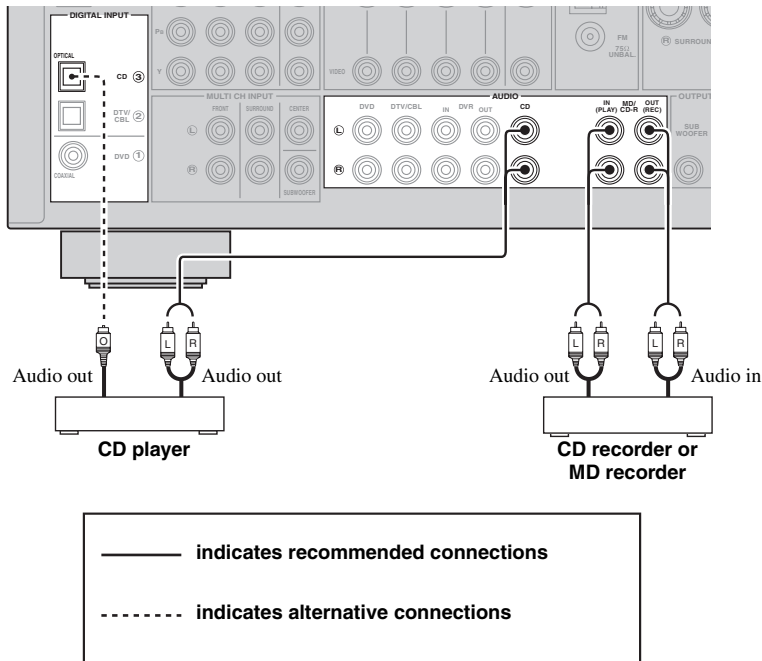
■ Connecting to the MULTI CH INPUT jacks

This unit is equipped with 6 additional input jacks (FRONT L/R, SURROUND L/R, CENTER and SUBWOOFER) for discrete multi-channel input from a multi-format player, external decoder or sound processor. Connect the output jacks on your multi-format player or external decoder to the MULTI CH INPUT jacks. Be sure to match the left and right output jacks to the left and right input jacks for the front and surround channels.

Front out
Surround out
Subwoofer out
Center out

Multi-format player or external decoder
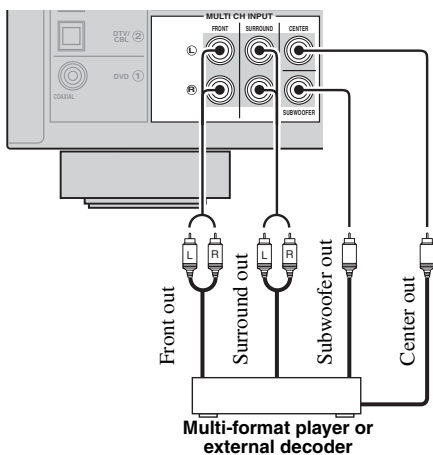
Notes

- When you select the component connected to the MULTI CH INPUT jacks as the input source (see page 33), this unit automatically turns off the digital sound field processor, and you cannot select sound field programs.
- This unit does not redirect signals input at the MULTI CH INPUT jacks to accommodate for missing speakers. We recommend that you connect a 5.1-channel speaker system before using this feature.

PREPARATION

English

Using the VIDEO AUX jacks on the front panel

Use the VIDEO AUX jacks on the front panel to connect a game console or a video camera to this unit.

Caution

Be sure to turn down the volume of this unit and other components before making connections.

Notes

To reproduce the source signals input at these jacks, select "V-AUX" as the input source.

Video output

Audio output

Game console or video camera
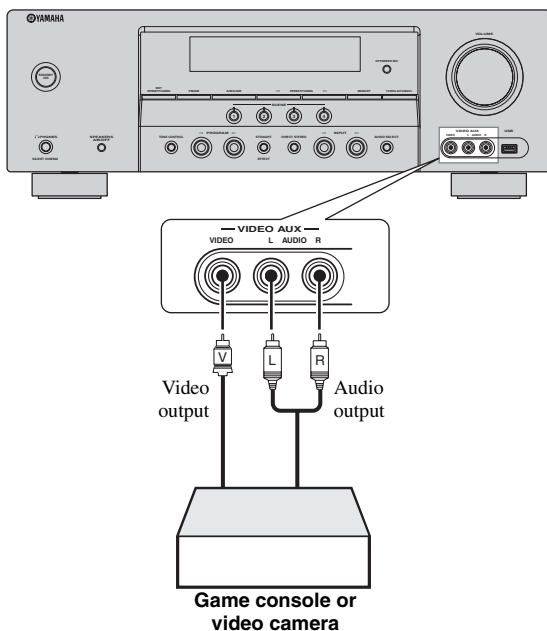
Connecting the FM and AM antennas

Both FM and AM indoor antennas are supplied with this unit. In general, these antennas should provide sufficient signal strength. Connect each antenna correctly to the designated terminals.

Notes

• The AM loop antenna should be placed away from this unit.
• A properly installed outdoor antenna provides clearer reception than an indoor one. If you experience poor reception quality, install an outdoor antenna. Consult the nearest authorized Yamaha dealer or service center about outdoor antennas.
• The AM loop antenna should always be connected, even if an outdoor AM antenna is connected to this unit.

Outdoor AM antenna
Use a 5 to 10 m (16 to 32 ft) of vinyl-covered wire extended outdoors from a window.

AM loop antenna (supplied)

Indoor FM antenna (supplied)

Ground
For maximum safety and minimum interference, connect the antenna GND terminal to a good earth ground. A good earth ground is a metal stake driven into moist earth.
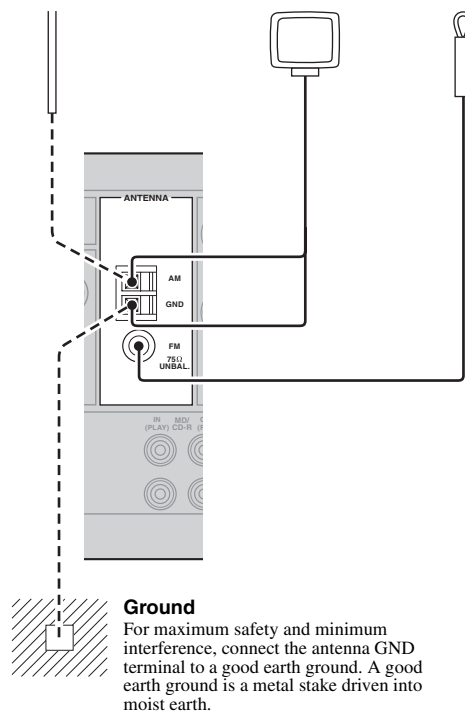
Connecting the power cable

Once all connections are complete, plug the power cable into the AC wall outlet.
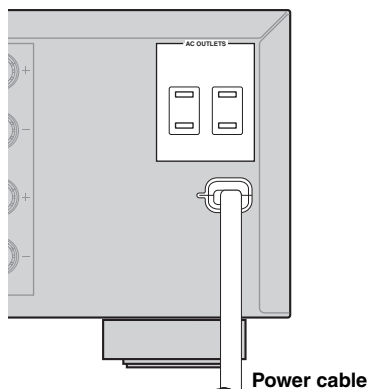
Power cable

■ **AC OUTLETS (SWITCHED)**

Use these outlets to supply power to any connected components. Connect the power cable of your other components to these outlets. Power to these outlets is supplied when this unit is turned on. However, power to these outlets is cut off when this unit is set to the standby mode. For information on the maximum power or the total power consumption of the components that can be connected to these outlets, see "Specifications" on page 70.

Turning on and off the power

■ **Turning on this unit**

Press ①STANDBY/ON (or ⓜPOWER) to turn on this unit.

☼
When you turn on this unit, there will be a 4 to 5-second delay before this unit can reproduce sound.

■ **Set this unit to the standby mode**

Press ①STANDBY/ON (or ⓝSTANDBY) to set this unit to the standby mode.

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

PREPARATION

English

21 *En*

Front panel display
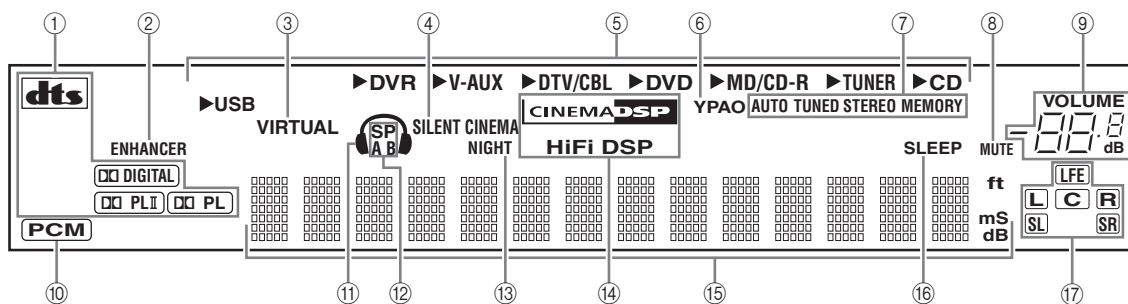
① Decoder indicator

The respective indicator lights up when any of the decoders of this unit functions.

② ENHANCER indicator

Lights up when the Compressed Music Enhancer mode is selected (see page 37).

③ VIRTUAL indicator

Lights up when Virtual CINEMA DSP is active (see page 38).

④ SILENT CINEMA indicator

Lights up when headphones are connected and a sound field program is selected (see page 38).

⑤ Input source indicators

The corresponding cursor lights up to show the currently selected input source.

⑥ YPAO indicator

Lights up when you run "AUTO SETUP" and when the speaker settings set in "AUTO SETUP" are used without any modifications (see page 24).

⑦ Tuner indicators

Lights up when this unit is in the FM or AM tuning mode (see pages 40).

⑧ MUTE indicator

Flashes while the MUTE function is on (see page 36).

⑨ VOLUME level indicator

Indicates the current volume level.

⑩ PCM indicator

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

⑪ Headphones indicator

Lights up when headphones are connected (see page 36).

⑫ SP A B indicators

Light up according to the set of front speakers selected (see page 33).

⑬ NIGHT indicator

Lights up when you select a night listening mode (see page 35).

⑭ CINEMA DSP indicator

Lights up when you select a CINEMA DSP sound field program (see page 37).

HiFi DSP indicator

Lights up when you select a HiFi DSP sound field program (see page 37).

⑮ Multi-information display

Shows the name of the current sound field program and other information when adjusting or changing settings.

⑯ SLEEP indicator

Lights up while the sleep timer is on (see page 36).

⑰ Input channel and speaker indicators
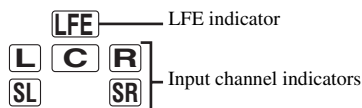
LFE indicator

Lights up when the input signal contains the LFE signal.

Input channel indicators

Indicate the channel components of the current digital input signal.

■ **Using the remote control**

The remote control transmits a directional infrared ray.
Be sure to aim the remote control directly at the remote
control sensor on this unit during operation.

30° 30° **Approximately 6 m (20 ft)**
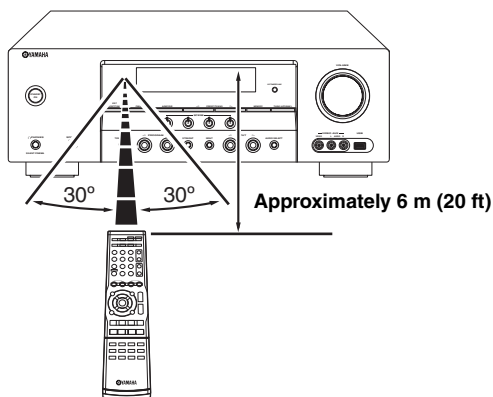
Ⓨ**Infrared window**

Outputs infrared control signals. Aim this window at the
component you want to operate.

☼

To set the remote control codes for other components, see
page 59.

Notes

• Do not spill water or other liquids on the remote control.
• Do not drop the remote control.
• Do not leave or store the remote control in the following types
  of conditions:
  – places of high humidity, such as near a bath
  – places of high temperature, such as near a heater or stove
  – places of extremely low temperatures
  – dusty places

PREPARATION

English

23 *En*

Optimizing the speaker setting for your listening room

This unit employs the YPAO (Yamaha Parametric Room Acoustic Optimizer) technology which lets you avoid troublesome listening-based speaker setup and achieves highly accurate sound adjustments automatically. The supplied optimizer microphone collects and this unit analyzes the sound your speakers produce in your actual listening environment.

Using AUTO SETUP

Notes

- Be advised that it is normal for loud test tones to be output during the "AUTO SETUP" procedure.
- To achieve the best results, make sure the room is as quiet as possible while the "AUTO SETUP" procedure is in progress. If there is too much ambient noise, the results may not be satisfactory.

¡¥'
You can run "AUTO SETUP" using the system menu that appears in the OSD or in the front panel display. This manual uses the OSD illustrations to explain the "AUTO SETUP" procedure.

1 Make sure of the following check points before starting the AUTO SETUP operations.

❏ Speakers are connected appropriately.
❏ Headphones are disconnected from this unit.
❏ This unit and the video monitor are turned on.
❏ The connected subwoofer is turned on and the volume level is set to about half way (or slightly less).
❏ The crossover frequency controls of the connected subwoofer is set to the maximum.
❏ FRONT A speakers are selected as the front speaker system (see page 33).
❏ The room is sufficiently quiet.

2 Connect the supplied optimizer microphone to the OPTIMIZER MIC jack on the front panel.

Optimizer microphone
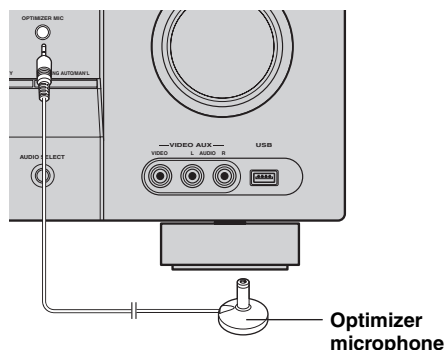
The following display appears in the OSD.
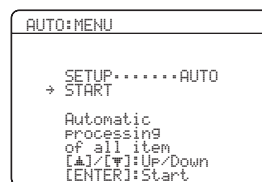
3 Place the optimizer microphone at your normal listening position on a flat level surface with the microphone heading upward.

Optimizer microphone
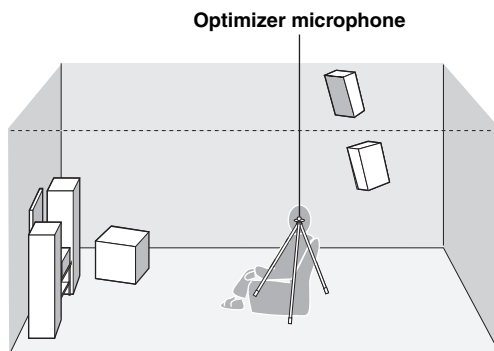
¡¥'
It is recommended that you use a tripod (etc.) to affix the optimizer microphone at the same height as your ears would be when you are seated in your listening position. You can use the attached screw of a tripod (etc.) to fix the optimizer microphone to the tripod (etc.).

4 Make sure that "SETUP" is set to "AUTO" and the pointer is pointing at "START".

☼

You can also select the following setup methods. In this case, press Ⓖ△ to select "SETUP", press Ⓖ◁ / ▷ to select the one of the following choises and then select "START".

Choices: **AUTO**, RELOAD, UNDO, DEFAULT

- Select "AUTO" to automatically run the entire "AUTO SETUP" procedure.
- Select "RELOAD" to reload the last "AUTO SETUP" settings and override the previous settings.
- Select "UNDO" to undo the last "AUTO SETUP" settings and restore the previous settings.
- Select "DEFAULT" to reset the "AUTO SETUP" parameters to the initial factory settings.

Note

"RELOAD" or "UNDO" is available only when you have previously run "AUTO SETUP" and confirmed the results.

5 Press Ⓓ AMP and then press Ⓖ ENTER to start the setup procedure.

This unit starts the auto setup procedure. Loud test tones are output from each speaker during the auto setup procedure. Once all items are set, the "AUTO:RESULT" display appears in the OSD.

Notes

- During the auto setup procedure, do not perform any operation on this unit.
- We recommend getting out of the room while this unit is in the auto setup procedure. It takes approximately 3 minutes for this unit to complete the auto setup procedure.

This unit performs the following checks:

Speaker wiring/volume level WIRING/LEVEL

Checks which speakers are connected and the polarity of each speaker. Also checks and adjusts the volume level of each speaker.

Speaker distance DISTANCE

Checks the distance of each speaker from the listening position and adjusts the timing of each channel.

Speaker size SIZE

Checks the frequency response of each speaker and sets the appropriate low-frequency crossover for each channel.

The display changes as follows.

```
AUTO:MENU

  SETUP·······AUTO
→ START

  Automatic
  processing
  of all item
[▲]/[▼]:Up/Down
[ENTER]:Start
```

⬇

```
AUTO:CHECK

→ INITIALIZING
  WIRING/LEVEL
  DISTANCE
  SIZE

  WAITING···
  ··········
  [▲]:Exit
```

⬇

```
AUTO:RESULT

  NO WARNING
  RESULT
   SP  :  3/2/0.1
   DIST:  3.2/3.5m
   LVL :   -2/+2dB
→ >SET    CANCEL
[▲]/[▼]:Up/Down
[ENTER]:Enter
```
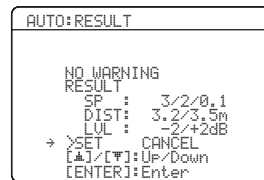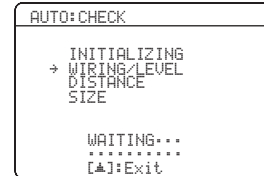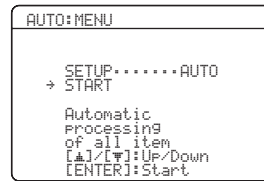
The results displayed under "RESULT" are as follows.

Number of speakers SP

Displays the number of speakers connected to this unit in the following order:
Front/Back/Subwoofer

Speaker distance DIST

Displays the speaker distance from the listening position in the following order:
Closest speaker distance/Farthest speaker distance

Speaker level LVL

Displays the speaker output level in the following order:
Lowest speaker output level/Highest speaker output level

Notes

- If "E-6:INTERNAL ERROR" appears during the testing procedure, restart from step 4.
- If you selected "RELOAD" in step 4, no test tones are output.
- If an error occurs during the "AUTO:CHECK" procedure, the setup procedure is canceled and an error screen appears. For details, see "If an error screen appears" on page 27.
- When this unit detects potential problems during the "AUTO SETUP" procedure, "WARNING" and the number of warning messages appears in the above of "RESULT" (see page 27).

PREPARATION

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6 Press ⑥**ENTER** to display the setup results in detail.

7 Press ⑥◁ / ▷ repeatedly to toggle between the setup result displays.

Results of the speaker connection and wiring

↕

Results of the speaker distance from the listening position

↕

Results of the speaker size

↕

Results of the speaker output level

⋍☼⋍
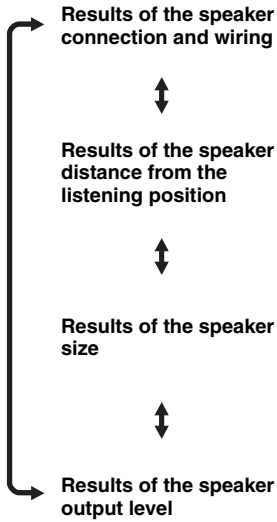
If you are not satisfied with the results or want to manually adjust each parameter, run "MANUAL SETUP" (see page 46).

Note

The distances displayed in the "DISTANCE" results may be longer than the actual distance depending on the characteristics of your speakers.

8 Press ⑥**ENTER** to return to the "AUTO:RESULT" display.

```
AUTO:RESULT

    NO WARNING
    RESULT
      SP  :   3/2/0.1
      DIST:  3.2/3.5m
      LVL :   -2/+2dB
  → >SET    CANCEL
    [▲]/[▼]:Up/Down
    [ENTER]:Enter
```
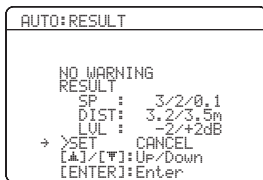
9 Make sure the pointer is pointing at "SET" and "CANCEL" and then press ⑥◁ / ▷ to select "SET" or "CANCEL".

Choices: **SET**, CANCEL
• Select "SET" to confirm the "AUTO SETUP" results.
• Select "CANCEL" to cancel the "AUTO SETUP" results.

10 Press ⑥**ENTER** to confirm your selection.

The top "SET MENU" display appears in the OSD.

```
SET MENU

      TOP MENU
  →  ·AUTO SETUP
     ·MANUAL SETUP
     ·SIGNAL INFO

    [▲]/[▼]:Up/Down
    [ENTER]:Enter
```
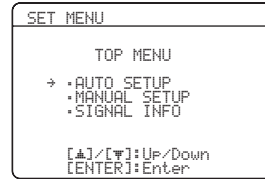
11 Press ②**MENU** to exit from "SET MENU".

12 Disconnect the optimizer microphone from this unit.

The optimizer microphone is sensitive to heat. Keep it away from direct sunlight and do not place it on top of this unit.

⋍☼⋍

If you change speakers, speaker positions, or the layout of your listening environment, run "AUTO SETUP" again to recalibrate your system.

■ **If an error screen appears**

Press ⒢△ / ▽ / ◁ / ▷ to select "RETRY" or "EXIT" and then press ⒢ENTER.

The following display is an example where "E-5:USER CANCEL" appears in the OSD.

```
AUTO:ERROR

→ E-5:USER CANCEL
  Don't operate
  any function

 >RETRY  EXIT
 [◄]/[►]:Select
 [ENTER]:Return
```
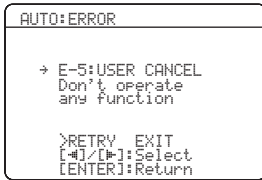
Choices: **RETRY**, EXIT
• Select "RETRY" to retry the "AUTO SETUP" procedure.
• Select "EXIT" to exit from the "AUTO SETUP" procedure.

■ **If "WARNING" appears**

When this unit detects potential problems during the "AUTO SETUP" procedure, "WARNING" appears in the "RESULT:EXIT" display. Check the warning messages to correct your speaker settings.

Note

Warnings differ from errors in that warnings do not cancel the "AUTO SETUP" procedure.

1 Make sure the pointer is pointing at "WARNING" and then press ⒢ENTER to display the detailed information about the warning.

The number on the right of "WARNING" indicates the number of warning messages.

```
AUTO:RESULT

→ WARNING(1)
  RESULT
   SP  :  3/2/0.1
   DIST:  3.2/3.5m
   LVL :  -2/+2dB
 >SET     CANCEL
 [▲]/[▼]:Up/Down
 [ENTER]:Enter
```
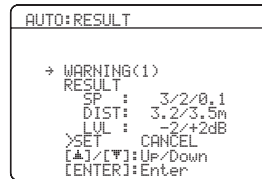
2 Press ⒢◁ / ▷ repeatedly to toggle between the warning displays.

```
WARNING:W-1

 <OUT OF PHASE>
 Reverse Channel
 --       FR
 CENTER
 --       --

 [◄]/[►]:Select
 [ENTER]:Return
```
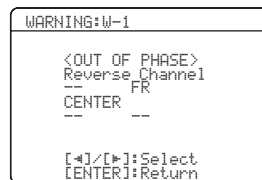
☆
• For details about each warning message, see the "AUTO SETUP" section in "Troubleshooting" on page 65.
• When the corresponding warning message is not applicable to a speaker, "−−" is displayed instead.

3 Press ⒢ENTER to return to the top "RESULT:EXIT" display.

PREPARATION

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Selecting the SCENE templates

This unit is equipped with 15 preset SCENE templates for various situations of using this unit. As the initial factory setting, the following SCENE templates are assigned to each SCENE button:

SCENE 1: DVD Viewing
SCENE 2: Disc Listening
SCENE 3: TV Viewing
SCENE 4: Radio Listening

If you want to use other SCENE templates, you can select the desired SCENE templates from the SCENE template library and assign the templates to the selected SCENE buttons on the front panel and the remote control.

Select the desired SCENE template

SCENE template library (Image)

Assign the SCENE template to the SCENE button

Selecting the desired SCENE template

1 Press and hold the desired ⑯SCENE (or ⒠SCENE) button for 3 seconds.

The indicator on the selected SCENE button on the front panel starts to flash, and the name of the currently assigned SCENE template appears in the front panel display.

3 seconds   **3 seconds**

Front panel   **or**   **Remote control**

Flashes

```
DVD Viewing
```

2 Press ⑭INPUT ◁ / ▷ (or press ⒟AMP and then press ⒢◁ / ▷) to select the desired template.

Front panel

or

Remote control

```
DVD Movie View
```
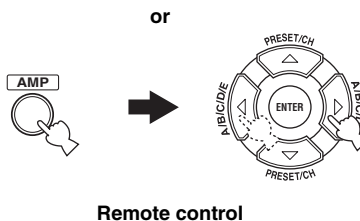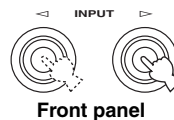
3 Press the ⑯SCENE (or ⒠SCENE) button again to confirm the selection.

The selected SCENE template is assigned to the button.

Front panel   **or**   **Remote control**
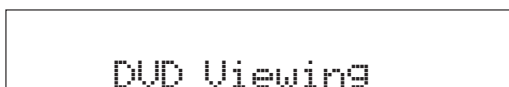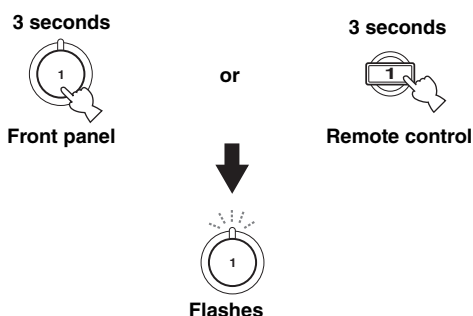
Notes

- If you do not carry out any operation within 30 seconds from the last operation in these steps, this procedure is automatically canceled.
- Once the desired SCENE templates are assigned to the corresponding SCENE buttons, you may need to set the input source of the SCENE template on the remote control. See page 56 for details.

■ **Which SCENE template would you like to select?**

Which source do you like to play back?	Which component do you like for playback?	SCENE template	Default SCENE buttons
Video sources (DVD video, Recorded video)	**DVD**	**DVD Viewing**	①
		DVD Movie Viewing	
		DVD Live Viewing	
	DVR	**DVR Viewing**	
Music discs (CD, SACD or DVD-Audio)	**DVD**	**Disc HiFi Listening**	
		Music Disc Listening	
		Disc Listening	②
	CD	**CD HiFi Listening**	
		CD Listening	
		CD Music Listening	
Radio programs	**TUNER (FM/AM)**	**Radio Listening**	④
USB memory device or USB portable audio player	**USB**	**USB Audio Listening**	
TV programs	**DTV/CBL**	**TV Viewing**	③
		TV Sports Viewing	
Video games	**V-AUX**	**Game Playing**	

☀️
You can create your original SCENE templates by editing the preset SCENE templates. See page 31 for details.

BASIC OPERATION

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■ Preset SCENE templates descriptions

SCENE template	
Features	
Input source	**Playback mode**

DVD Viewing (SCENE 1 as the default setting)	
Select this SCENE template when you play back general contents on your DVD player.	
DVD	**STRAIGHT**

DVD Movie Viewing	
Select this SCENE template when you play back movies on your DVD player.	
DVD	**Movie Dramatic**

DVD Live Viewing	
Select this SCENE template when you enjoy music live video on your DVD player.	
DVD	**Pop/Rock**

DVR Viewing	
Select this SCENE template when you play back movies on your digital video recorder.	
DVR	**Movie Dramatic**

Disc HiFi Listening	
Select this SCENE template when you enjoy the high fidelity sound of the music discs on your DVD player.	
DVD	**DIRECT STEREO**

Music Disc Listening	
Select this SCENE template when you play back music discs on your DVD player.	
DVD	**2ch Stereo**

Disc Listening (SCENE 2 as the default setting)	
Select this SCENE template when you play back music sources on your DVD player as the background music.	
DVD	**5ch Stereo**

CD HiFi Listening	
Select this SCENE template when you enjoy the high fidelity sound of the music discs on your CD player.	
CD	**DIRECT STEREO**

CD Listening	
Select this SCENE template when you play back music discs on your CD player.	
CD	**2ch Stereo**

CD Music Listening	
Select this SCENE template when you play back the music source on your CD player as the background music.	
CD	**5ch Stereo**

Radio Listening (SCENE 4 as the default setting)	
Select this SCENE template when you enjoy FM or AM radio programs.	
TUNER	**MUSIC ENHANCER 5ch STEREO**

USB Audio Listening	
Select this SCENE template when you play back music on your USB memory device or a USB portable audio player.	
USB	**MUSIC ENHANCER 5ch STEREO**

TV Viewing (SCENE 3 as the default setting)	
Select this SCENE template when you enjoy TV programs.	
DTV/CBL	**STRAIGHT**

TV Sports Viewing	
Select this SCENE template when you enjoy sports programs on TV.	
DTV/CBL	**TV Sports**

Game Playing	
Select this SCENE template when you play video games.	
V-AUX	**Game**

Creating your original SCENE templates

You can create your original SCENE templates for each SCENE button. You can refer to the preset 15 SCENE templates to create the original SCENE templates.

■ **Customizing the preset SCENE templates**

Use this feature to customize the preset SCENE templates.

Select a SCENE template   **Create the original SCENE template**

SCENE template library (Image)

Assign to the SCENE button
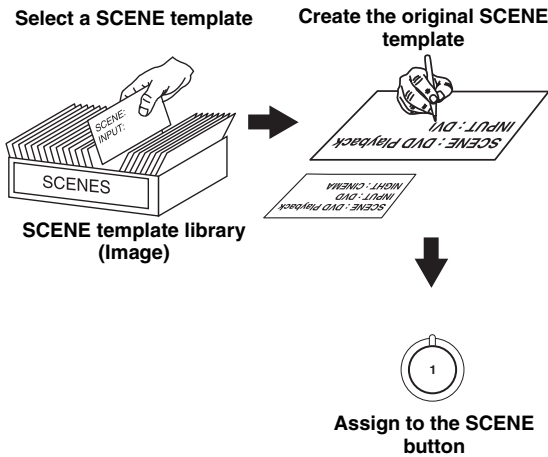
1 Turn on the video monitor connected to this unit.

2 Press and hold the desired ⒺSCENE button for 3 seconds and then press ⒹAMP.

The SCENE template customizing screen appears on the video monitor.

3 seconds

Note

When the SCENE template you want to customize is not assigned to any of the ⒺSCENE button, press Ⓖ◁ / ▷ repeatedly to recall the desired SCENE template on the menu screen.

3 Press Ⓖ△ / ▽ to select the desired parameter of the SCENE template and then Ⓖ◁ / ▷ to select the desired value of the selected parameter.

You can adjust the following parameters for a SCENE template:

- • **INPUT**:   The input source component
- • **MODE**:   The active sound field programs, STRAIGHT or DIRECT STEREO mode (see pages 34 and 38)
- • **NIGHT**:   The night listening mode setting (see page 35)
  - – SYSTEM: Keeps the current night listening mode.
  - – CINEMA: Sets the night listening mode to the CINEMA mode.
  - – MUSIC: Sets the night listening mode to the MUSIC mode.

4 Press the ⒺSCENE button again to confirm the edit.

☼
An asterisk mark (*) appears by the name of the original SCENE template.

Notes

- Once the desired SCENE templates are assigned to the corresponding ⒺSCENE buttons, you may need to set the input source of the SCENE template on the remote control. See page 56 for details.
- You can create a customized SCENE template for each ⒺSCENE button, and if you create another customized SCENE template, this unit overwrites the old customized SCENE template with the new one.
- The newly created template is only available for the assigned ⒺSCENE button.

■ **Renaming the SCENE templates**

Select "SCENE" in step 3 of "Customizing the preset SCENE templates" and then press ⒼENTER.

- • Press Ⓖ△ / ▽ to select the desired character.
- • Press Ⓖ◁ / ▷ to place "_" (underscore) under the space or the desired character.
- • Press ⒽRETURN to cancel the new name.
- • Press ⒼENTER to confirm the new name.

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Playback

Caution

Extreme caution should be exercised when you play back CDs encoded in DTS. If you play back a CD encoded in DTS on a DTS-incompatible CD player, you will only hear some unwanted noise that may damage your speakers. Check whether your CD player supports CDs encoded in DTS. Also, check the sound output level of your CD player before you play back a CD encoded in DTS.

Basic operations

1 **Turn on the video monitor connected to this unit.**

2 **Press ⑭INPUT ◁ / ▷ repeatedly (or press one of the input selector buttons (Ⓒ)) to select the desired input source.**
The name of the currently selected input source appears in the front panel display for a few seconds.

Available input source

| USB | | DVR V-AUX DTV/CBL ▶DVD MD/CD-R TUNER CD |

INPUT: DVD

Currently selected input source
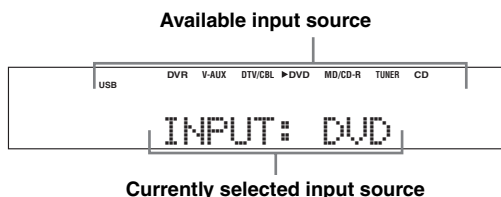
3 **Start playback on the selected component or select a broadcast station.**
- Refer to the operating instructions for the source component.
- See page 40 for details about FM/AM tuning instructions.

4 **Rotate ⑧VOLUME (or press ⓇVOLUME +/–) to adjust the volume to the desired output level.**

5 **Press ⑪PROGRAM ◁ / ▷ (or press ⒹAMP and then ⒿPROG ◁ / ▷) repeatedly to select the desired sound field program.**
The name of the selected sound field program appears in the front panel display.
See page 37 for details about sound field programs.

Movie Dramatic

Currently selected surround field program
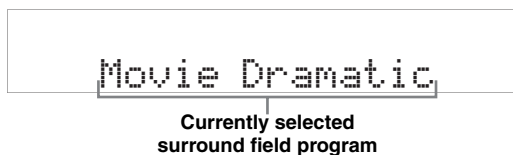
Notes

- Choose a sound field program based on your listening preference, not merely on the name of the program.
- When you select an input source, this unit automatically selects the last sound field program used with the corresponding input source.
- Sound field programs cannot be selected when the component connected to the MULTI CH INPUT jacks is selected as the input source (see page 33).
- When PCM signals with a sampling frequency higher than 48 kHz are input, this unit is automatically set to the "STRAIGHT" mode (see page 38).
- To display information about the currently selected input source in the OSD, see page 35 for details.

■ **A quick guide to contents**

When you want to...	See page
Enjoy pure hi-fi stereo sound	34
Adjust the tonal quality of the front speakers	34
Adjust the parameters of sound field programs	39
Enjoy the sources with a wide dynamic range at night	35
Use headphones	36
Select a decoder to play back sources with	38
Automatically set this unit to the standby mode	36

Additional operations

■ **Selecting the component connected to the MULTI CH INPUT jacks as the input source**

Press ⑭INPUT ◁ / ▷ repeatedly (or press Ⓐ MULTI CH IN) so that "MULTI CH" appears in the front panel display.

☼
Use "MULTI CH SET" menu in "INPUT MENU" to set the parameter for MULTI CH INPUT (see page 54).

Notes

• Sound field programs cannot be selected when the component connected to the MULTI CH INPUT jacks is selected as the input source.
• When headphones are used, signals are output only from the front left and right channels.

■ **Selecting the front speaker set**

Use this feature to select the front speaker system (FRONT A or FRONT B).

Press ⑨SPEAKERS on the front panel repeatedly to turn on or off the set of front speakers connected to the FRONT A or FRONT B speaker terminals.

The activate front speaker set changes as follows:

```
  ┌→ FRONT A ──────→ FRONT B ┐
  │                          │
  └──────── Off ←────────────┘
```
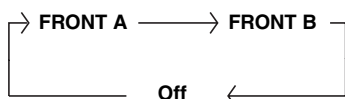
Note

Turn off the volume level of this unit when you switch the front speaker setting.

■ **Using the Zone B feature**

When you set "FRONT B" to "ZONE B" (see page 48), you can use the speakers connected to the FRONT B speaker terminals in another room (Zone B).

Press ⑨SPEAKERS on the front panel repeatedly to turn on or off the Zone B speakers.

When you activate the Zone B speakers, all the speakers in the main room are muted.

Notes

• You cannot activate both the main room and Zone B speakers simultaneously.
• If you select CINEMA DSP sound field program and activate the Zone B speakers, Virtual CINEMA DSP activates automatically (see page 38).

■ **Selecting audio input jacks (AUDIO SELECT)**

This unit comes with a variety of input jacks. Use this feature (audio input jack select) to switch between input jacks when more than one input jack is assigned to the same input source.

☼
• We recommend setting audio input jack select to "AUTO" in most cases.
• You can adjust the default audio input jack select of this unit by using "AUDIO SELECT" in "OPTION MENU" (see page 55).

Press ⑮AUDIO SELECT (or Ⓑ AUDIO SEL) repeatedly to select the desired audio input jack select setting.

```
         USB     DVR  V-AUX  DTV/CBL ▶DVD  MD/CD-R  TUNER  CD

              A.SEL:  AUTO
```

Audio input jack select setting

AUTO   Automatically selects input signals in the following order:
            (1) Digital signals
            (2) Analog signals
ANALOG   Selects only analog signals. If no analog signals are input, no sound is output.

Note

This feature is not available when no digital input jacks are assigned to the currently selected input source.

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■ Enjoying pure hi-fi stereo sound

The DIRECT STEREO mode allows sources to bypass the decoders and DSP processors of this unit so that you can enjoy pure hi-fi sound from 2-channel PCM and analog sources.

Press ⑬DIRECT STEREO (or press ⒟AMP and then press ⓥDIRECT ST.) to select "DIRECT STEREO".

Notes

- To avoid unexpected noise, do not play CDs encoded in DTS when the DIRECT STEREO mode is selected.
- When multi-channel signals (Dolby Digital and DTS) are input, this unit automatically switches to the corresponding analog input.
- No sound will be output from the subwoofer.
- "TONE CONTROL" (on this page) and "SOUND MENU" (see page 48) settings (except for speaker level settings) are not effective.
- The front panel display automatically dims.

■ Adjusting the tonal quality

Press ⑩TONE CONTROL repeatedly to select "BASS" or "TREBLE" and then press ⑪PROGRAM ◁ / ▷ (or ⒿPROG◁ / ▷) to adjust the corresponding frequency response level.

- Select "BASS" to adjust the low-frequency response.
- Select "TREBLE" to adjust the high-frequency response.

Notes

- Speaker and headphone adjustments are stored independently.
- If you increase or decrease the high-frequency or low-frequency sound to an extreme level, the tonal quality of the surround speakers may not match that of the front left and right speakers.

■ Adjusting speaker levels during playback

You can adjust the output level of each speaker while listening to a music source.

Note

This operation will override the level adjustments made in "AUTO SETUP" (see page 24) and "SP LEVEL" (see page 50).

1 Press ⒟AMP and then press ⒡LEVEL repeatedly to select the speaker you want to adjust.

Display	Adjusted speaker
FRONT L	Front left speaker
FRONT R	Front right speaker
CENTER	Center speaker
SWFR	Subwoofer
SUR.L	Surround left speaker
SUR.R	Surround right speaker

☆
Once you press ⒡LEVEL on the remote control, you can also select the speaker by pressing ⒢△ / ▽.

2 Press ⒢◁ / ▷ on the remote control to adjust the speaker output level.

The control range is from +10 dB to –10 dB.

☆
You can press ④A/B/C/D/E to select a speaker and then ⑤PRESET/TUNING ◁ / ▷ to adjust the speaker output level.

■ **Selecting the night listening mode**

The night listening modes are designed to improve listenability at lower volumes or at night.

1 Press ⒟AMP and then press ⒧NIGHT repeatedly to select "NIGHT:CINEMA" or "NIGHT:MUSIC".

Choices: NIGHT:CINEMA, NIGHT:MUSIC, OFF

• Select "NIGHT:CINEMA" to reduce the dynamic range of film soundtracks and make dialog easier to hear at lower volumes.
• Select "NIGHT:MUSIC" to preserve ease-of-listening for all sounds.
• Select "OFF" if you do not want to use this feature.

☀

When a night listening mode is selected, the NIGHT indicator lights up in the front panel display.

2 Press ⒢◁ / ▷ to adjust the effect level while "NIGHT:CINEMA" or "NIGHT:MUSIC" is displayed in the front panel display.

Choices: MIN, **MID**, MAX

• Select "MIN" for minimum compression.
• Select "MID" for standard compression.
• Select "MAX" for maximum compression.

☀

"NIGHT:CINEMA" and "NIGHT:MUSIC" adjustments are stored independently.

Notes

• You cannot use the night listening modes in the following cases:
  – when the DIRECT STEREO mode (see page 34) is selected.
  – when the component connected to the MULTI CH INPUT jacks is selected as the input source.
  – when headphones are connected to the PHONES jack.
  – when the sound field program is selected while you enjoy music contents in a USB memory device etc.
• The night listening modes may vary in effectiveness depending on the input source and surround sound settings you use.

■ **Displaying signal information**

You can display the format, sampling frequency, channel, bit rate and flag data of the current input signal.

1 Press ⒟AMP and then press ⓠMENU on the remote control.

The top "SET MENU" display appears in the OSD.

```
┌──────────────────────┐
│ SET MENU             │
│                      │
│       TOP MENU       │
│  → •AUTO SETUP        │
│    •MANUAL SETUP      │
│    •SIGNAL INFO       │
│                      │
│   [⏶]/[⏷]:Up/Down     │
│   [ENTER]:Enter       │
└──────────────────────┘
```

2 Press ⒢▽ repeatedly to select "SIGNAL INFO" and then press ⒢ENTER.

The following information about the input source appears in the OSD.

```
┌──────────────────────┐
│ •SIGNAL INFO         │
│                      │
│  → FORMAT   DolbyD    │
│    SAMPLING  48kHz    │
│    CHANNEL  3/2/0.1   │
│    BITRATE 384kbps    │
│    FLAG      None      │
│                      │
│   [RETURN]:Exit       │
└──────────────────────┘
```
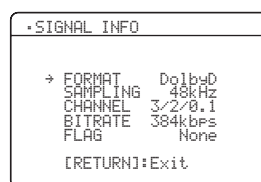
Display	Description
FORMAT	Signal format.
SAMPLING	The number of samples per second taken from a continuous signal to make a discrete signal.
CHANNEL	The number of source channels in the input signal (front/surround/LFE).
BITRATE	The number of bits passing a given point per second.
FLAG	Flag data encoded in DTS, Dolby Digital, or PCM signals that cue this unit to automatically switch decoders.

☀

The information indicated by the cursor is also displayed in the front panel display.

3 Press ⓠMENU again to exit from "SET MENU".

■ Playing video sources in the background

You can combine a video image from a video source with sound from an audio source. For example, you can enjoy listening to classical music while viewing beautiful scenery from the video source on the video monitor.

Press the input selector buttons on the remote control to select a video source and then an audio source.

■ Using your headphones

Connect a pair of headphones with a stereo analog audio cable plug to the PHONES jack on the front panel.

☆
When you select a sound field program, SILENT CINEMA mode activates automatically (see page 38).

Notes

• When you connect headphones, no signals are output at the speaker terminals.
• All Dolby Digital and DTS audio signals are mixed down to the left and right headphone channels.

■ Muting the audio output

Press ⓒMUTE to mute the audio output.
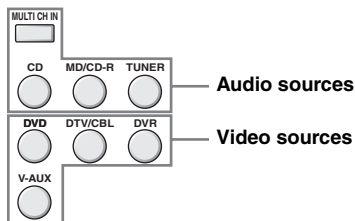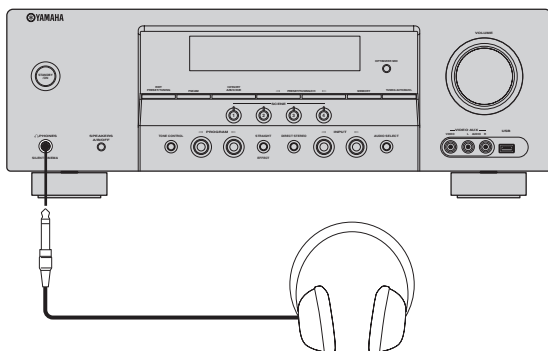Press ⓒMUTE again to resume the audio output.

☆
• You can also rotate ⑧VOLUME (or press ⓡVOLUME +/–) to resume the audio output.
• You can adjust the muting level by using "MUTE TYPE" in "SOUND MENU" (see page 51).
• The MUTE indicator flashes in the front panel display when the audio output is muted and disappears from the front panel display when the audio output is resumed.

■ Using the sleep timer

Use this feature to automatically set this unit to the standby mode after a certain amount of time. The sleep timer also automatically turns off any external components connected to the AC OUTLETS (see page 21).

Press ⒟AMP and then press ⓅSLEEP repeatedly to set the amount of time.
Each time you press ⓅSLEEP, the front panel display changes as shown below.

$$\longrightarrow \text{SLEEP } 120\text{min} \longrightarrow \text{SLEEP } 90\text{min} \longrightarrow$$
$$\text{SLEEP } \text{OFF} \leftarrow \text{SLEEP } 30\text{min} \leftarrow \text{SLEEP } 60\text{min} \leftarrow$$
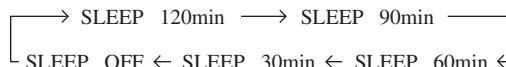
The SLEEP indicator flashes while you are switching the amount of time for the sleep timer. Once the sleep timer is set, the SLEEP indicator lights up in the front panel display, and the display returns to the selected sound field program.

☆
• To cancel the sleep timer, press ⓅSLEEP on the remote control repeatedly until "SLEEP OFF" appears in the front panel display.
• You can also cancel the sleep timer setting by pressing ①STANDBY/ON (or ⓃSTANDBY) to set this unit to the standby mode.

Sound field programs

This unit is equipped with a variety of precise digital decoders that allow you to enjoy multi-channel playback from almost any stereo or multi-channel sound source.

Press ⑪PROGRAM ◁ / ▷ (or press ⑩AMP and then press ⑪PROG ◁ / ▷ repeatedly).

The name of the selected sound field program appears in the front panel display.

☀️
- Choose a sound field program based on your listening preference, not merely on the name of the program itself.
- You can select "Music Enh. 2ch" and "Music Enh. 5ch" by pressing ⑪ENHANCER on the remote control repeatedly.

Notes

- When you select an input source, this unit automatically selects the last sound field program used with the corresponding input source.
- Sound field programs cannot be selected when the component connected to the MULTI CH INPUT jacks is selected as the input source (see page 33).
- When PCM signals with a sampling frequency higher than 48 kHz are input, this unit is automatically set to the "STRAIGHT" mode.
- The sound field program is canceled when the night listening mode is selected while you enjoy music contents in a USB memory device etc.

Sound field program descriptions

Category	Program	Features
MUSIC	Pop/Rock	CINEMA DSP processing. This program presents an image of pop, rock, or jazz live concert. The sound field reproduces the spaciousness of a massive pavilion with an emphasis on the vividness of vocals on the stage and solo instruments and the beats of rhythm instruments.
	Hall	HiFi DSP processing. This sound field is suitable for classic and orchestral music. The program uses data collected in a large concert hall in Munich. You can enjoy delicate and beautiful reverberation and a majestic atmosphere.
	Jazz	HiFi DSP processing. The sound field is suitable for jazz and fusion music. It uses data collected in a famous jazz club in New York. You can enjoy clear reverberation.
ENTERTAIN	Game	CINEMA DSP processing. You can enjoy dynamic and thrilling sound effects as you play games. The program lets you feel the depth and three-dimensional surrounding sounds of the field where you are playing, and offers cinema-like surrounding sound effects for the scenes of movies.
	TV Sports	CINEMA DSP processing. You can enjoy sports relays broadcast in stereo and variety shows with a live sound environment. For sports relays, the voices of commentators and announcers come clearly from the center; the cheers and atmosphere in the stadium spread around within a comfortable range, and you can feel like as if you are in the stadium.
MOVIE	Movie Spacious	CINEMA DSP processing. The sound field is suitable for movies with an emphasis on spectacular sound effects, and is a perfect fit with a wide screen. The program reproduces a wide dynamic range from minimum sound effects to powerful sounds.
	Movie Dramatic	CINEMA DSP processing. This sound field is also suitable for movies with an emphasis on three-dimensional sound effects. It restrains reverberation to an moderate extent, but reproduces sound effects and background music in a soft, three-dimensional manner with clarity and center orientation of voices as pivots.
STEREO	2ch Stereo	Downmixes multi-channel sources to 2 channel or plays back 2-channel sources as they are.
	5ch Stereo	HiFi DSP processing. Using this program increases the listening position range. This is a sound field suitable for background music at parties.
ENHANCER	Music Enh. 2ch Music Enh. 5ch	Select these programs to play back compression artifacts (such as the MP3 format) in 2-channel or 5-channel stereo. This program enhances your listening experience by regenerating the missing harmonics in a compression artifact.

Note

The sound field programs of this unit are recreations of real-world acoustic environments made from precise measurements taken in the actual concert hall, music venue, movie theater, etc. Thus, you may notice variations in the strength of the reflections coming from each direction.

■ **Enjoying 2-channel sources using the standard decoders**

Signals input from 2-channel sources can also be played back on multi-channels.

Press ⒟AMP and then press ⓚSUR. DECODE repeatedly to select a decoder.

You can select from the following decoders depending on the type of source you are playing and your personal preference.

STANDARD	Functions
PRO LOGIC	Dolby Pro Logic processing for any sources
PLII Movie	Dolby Pro Logic II processing for movie sources
PLII Music	Dolby Pro Logic II processing for music sources
PLII Game	Dolby Pro Logic II processing for game sources

■ **Using sound field programs without surround speakers (Virtual CINEMA DSP)**

Virtual CINEMA DSP allows you to enjoy the CINEMA DSP programs without surround speakers by creating virtual speakers.
If you set "SUR. L/R SP" to "NONE" (see page 49), Virtual CINEMA DSP activates automatically whenever you select a CINEMA DSP or HiFi DSP program (see page 37).

Note

Virtual CINEMA DSP will not activate even when "SUR. L/R SP" is set to "NONE" (see page 49) in the following cases:
– When "5ch Stereo" (see page 37) is selected.
– When headphones are connected to the PHONES jack.

■ **Enjoying multi-channel sources and sound field programs with headphones (SILENT CINEMA)**

SILENT CINEMA allows you to enjoy multi-channel music or movie sound, including Dolby Digital and DTS sources, through ordinary headphones. SILENT CINEMA activates automatically whenever you connect headphones to the PHONES jack while listening to CINEMA DSP or HiFi DSP sound field programs (see page 37). When activated, the SILENT CINEMA indicator lights up in the front panel display.

Note

SILENT CINEMA does not activate when the component connected to the MULTI CH INPUT jacks is selected as the input source (see page 33).

■ **Enjoying unprocessed input sources (Straight decoding mode)**

When this unit is in the "STRAIGHT" mode, multi-channel sources are decoded straight into the appropriate channels without any additional effect processing. 2-channel stereo sources are output from only the front left and right speakers.

Press ⑫STRAIGHT (or press ⒟AMP and then press ⓣSTRAIGHT) to select "STRAIGHT".

To deactivate the "STRAIGHT" mode, press ⑫STRAIGHT (or ⓣSTRAIGHT) again so that "STRAIGHT" disappears from the front panel display.

■ **Editing sound fields parameters**

You can enjoy good quality sound with the factory preset parameters. Although you do not have to change the initial settings, you can change some of the parameters to better suit the input source or your listening room.

1 **While listening to a source, press ⒟AMP and then press ⒢△ / ▽ to select the desired parameter.**

2 **Press ⒢◁ / ▷ to change the parameter value.**

Note

You cannot change parameter values when "MEMORY GUARD" in "OPTION MENU" is set to "ON" (see page 55).

☼

Initial settings are indicated in bold under each parameter.

For Pop/Rock, Hall, Jazz, Game, TV Sports, Movie Spacious and Movie Dramatic:

DSP level DSP LEVEL
Function: Adjusts the effect level.
Choices: MIN, **MID**, MAX

For PRO LOGIC II Music:

Panorama PANORAMA
Function: Sends stereo signals to the surround speakers as well as the front speakers for a wraparound effect.
Choices: **OFF**, ON

Dimension DIMENSION
Function: Gradually adjusts the sound field either towards the front or towards the rear.
Control range: –3 (towards the rear) to +3 (towards the front), initial setting is STD (standard).

Center width CT WIDTH
Function: Adjusts the center image from all three front speakers to varying degrees. A larger value adjusts the center image towards the front left and right speakers.
Control range: 0 (center channel sound is output only from center speaker) to 7 (center channel sound is output only from front left and right speakers), initial setting is 3.

For Music Enh. 2ch and Music Enh. 5ch

Effect level
Function: Adjusts the effect level.
Choices: LOW, **HIGH**

**BASIC OPERATION**

English

39 *En*

FM/AM tuning

There are 2 tuning methods: automatic and manual. Automatic tuning is effective when station signals are strong and there is no interference. If the signal from the station you want to select is weak, tune into it manually. You can also use the automatic and manual preset tuning features to store up to 40 stations.

Automatic tuning

Automatic tuning is effective when station signals are strong and there is no interference.

1 **Press ⑭INPUT ◁ / ▷ repeatedly so that "TUNER" is displayed in the front panel display.**

2 **Press ③FM/AM to select the reception band (FM or AM).**

3 **Press ⑦TUNING AUTO/MAN'L so that the AUTO indicator lights up in the front panel display.**

Lights up

A AM 1440 kHz
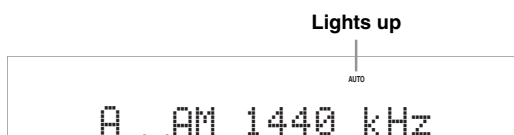
No colon (:)

If a colon (:) appears in the front panel display, automatic tuning is not possible. Press ②**PRESET/ TUNING** to turn the colon (:) off.

4 **Press ⑤PRESET/TUNING ◁ / ▷ once to begin automatic tuning.**
When this unit is tuned into a station, the TUNED indicator lights up and the frequency of the received station is shown in the front panel display.

Lights up

A AM 1530 kHz

Manual tuning

If the signal received from the station you want to select is weak, tune into it manually.

Note

Manually tuning into an FM station automatically switches the tuner to monaural reception to increase the signal quality.

1 **Press ⑭INPUT ◁ / ▷ repeatedly so that "TUNER" is displayed in the front panel display.**

2 **Press ③FM/AM to select the reception band (FM or AM).**

3 **Press ⑦TUNING AUTO/MAN'L so that the AUTO indicator disappears from the front panel display.**

A AM 1440 kHz
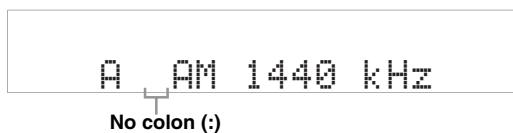
No colon (:)

If a colon (:) appears in the front panel display, manual tuning is not possible. Press ②**PRESET/ TUNING** to turn the colon (:) off.

4 **Press ⑤PRESET/TUNING ◁ / ▷ to tune into the desired station manually.**

☀️
Hold down the button to continue searching.

Automatic preset tuning

You can use the automatic preset tuning feature to store FM stations with strong signals up to 40 (A1 to E8: 8 preset station numbers in each of the 5 preset station groups) of those stations in order. You can then recall any preset station easily by selecting the preset station number.

1   Press ⑭INPUT ◁ / ▷ repeatedly so that "TUNER" is displayed in the front panel display.

2   Press ③FM/AM to select "FM" as the reception band.

3   Press and hold ⑥MEMORY for more than 3 seconds.
The preset station number as well as the MEMORY and AUTO indicators flashes. After approximately 5 seconds, automatic presetting starts from the current frequency and proceeds toward the higher frequencies.

Flash

AUTO   MEMORY

A1:FM 87.5 MHz

Flashes

When automatic preset tuning is completed, the front panel display shows the frequency of the last preset station.

☼
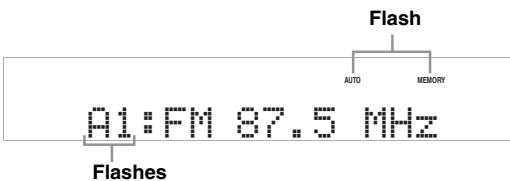You can select the preset station group and the preset station number where the first received station will be stored by pressing ④A/B/C/D/E and then ⑤PRESET/TUNING ◁ / ▷.

Notes
• Any stored station data existing under a preset station number is cleared when you store a new station under the same preset station number.
• Only FM stations with sufficient signal strength are stored automatically by automatic preset tuning. If the station you want to store is weak in signal strength, tune into it manually and store it as described in "Manual preset tuning" on this page.

Manual preset tuning

You can also store up to 40 stations (A1 to E8: 8 preset station numbers in each of the 5 preset station groups) manually.

1   Tune into a station automatically or manually.
See page 40 for tuning instructions.

2   Press ⑥MEMORY.
The MEMORY indicator flashes in the front panel display for approximately 10 seconds.

3   Press ④A/B/C/D/E and ⑤PRESET/ TUNING ◁ / ▷ repeatedly to select a preset station group (A1 to E8) while the MEMORY indicator is flashing.
Check that the colon (:) appears in the front panel display.

Flashes

TUNED   MEMORY

C3:AM 630 kHz

Preset station number

4   Press ⑥MEMORY while the MEMORY indicator is flashing.
The station band and frequency appear in the front panel display with the preset station group and number you have selected.

TUNED

C3:AM 630 kHz

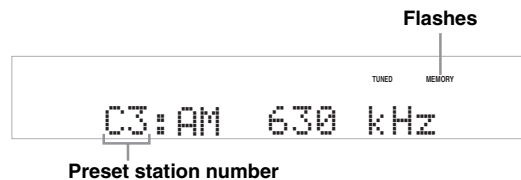**The displayed station has been stored as C3.**

Notes
• Any stored station data existing under a preset station number is cleared when you store a new station under the same preset station number.
• The reception mode (stereo or monaural) is stored along with the station frequency.

BASIC OPERATION

English

41 *En*

Selecting preset stations

You can tune into any desired station simply by selecting the preset station group and number under which it was stored.

☼
When performing this operation with the remote control, press Ⓒ**TUNER** to select "TUNER" as the input source.

1 Press ④**A/B/C/D/E** (or Ⓖ**A/B/C/D/E** ◁ / ▷) repeatedly to select the desired preset station group (A to E).

The preset station group letter appears in the front panel display and changes each time you press the button.

2 Press ⑤**PRESET/TUNING** ◁ / ▷ (or Ⓖ**PRESET/CH** △ / ▽) to select the desired preset station number (1 to 8).

The preset station group and number appear in the front panel display along with the station band and frequency.

```
    E1:FM 87.5 MHz
```

☼
You can select the desired preset station number (1 to 8) directly by pressing the numeric buttons on the remote control.

Exchanging preset station

You can exchange the assignments of two preset stations with each other. The example below describes the procedure to exchange preset station "E1" with "A5".

1 Select preset station "E1" using ④**A/B/C/D/E** and ⑤**PRESET/TUNING** ◁ / ▷.

See "Selecting preset stations" on this page.

2 Press and hold ②**PRESET/TUNING** for more than 3 seconds.

"E1" and the MEMORY indicator flash in the front panel display.

Flashes

```
                              MEMORY

    E1:FM 87.5 MHz
```

Flashes

3 Select preset station "A5" using ④**A/B/C/D/E** and ⑤**PRESET/TUNING** ◁ / ▷.

"A5" and the MEMORY indicator flash in the front panel display.
See "Selecting preset stations" on this page.

Flashes

```
                              MEMORY

    A5:FM 90.7 MHz
```

Flashes

4 Press ②**PRESET/TUNING** again.

"EDIT E1–A5" appears in the front panel display and the assignments of the two preset stations are exchanged.

Using a USB memory device or a USB portable audio player

Use this feature to enjoy WAV (PCM format only), MP3 and WMA files saved on your USB memory device or USB portable audio player connected to the USB port on the front panel of this unit.

■ Supported USB devices

This unit supports USB mass storage class devices (except USB hard disk drives) using FAT16 or FAT32 format.

Notes

- Only the first partition (32 GB or less) is displayed in the OSD. You cannot select files in other partitions.
- Up to 8 levels of directory hierarchy and 500 music files per directory are recognized.
- Some devices may not work properly even if they meet the requirements.
- Some WAV, MP3 and WMA files may not be playable or may be noisy when played.

■ Connecting a USB memory device or a USB potable audio player

Connect a USB jack of a USB memory device or USB portable audio player to the USB port on the front panel of this unit.

USB

USB memory device or USB portable audio player
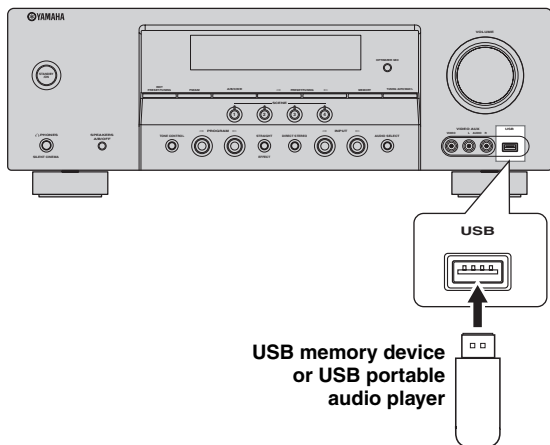
Playback operation

Follow the procedures below to enjoy the music stored in your USB device or a USB portable audio player.

1 **Press ⑭INPUT ◁ / ▷ repeatedly (or press ©USB) to select USB.**

The cursor on the left of the USB indicator lights up in the front panel display, and the contents previously played is automatically played.

Lights up

```
►USB        DVR  V-AUX  DTV/CBL  DVD  MD/CD-R  TUNER  CD

            INPUT:  USB
```

2 **Press ⓈDISPLAY to display the top USB file list.**

The USB file list appears in the OSD.

```
USB      Root
Ellis Margellis      >
Frankie Zipper       >
Hall in Call         >
Jackie Pastarius     >
Jmiel                >
Jean-Luc Ponta       >
Jim Hallo            >

        1/7
```

☼
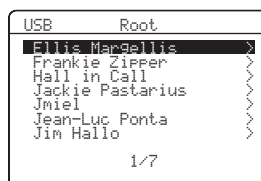
- "〉" in the right corner of each menu line indicates that there is a submenu available in the next menu level.
- When this unit is in the top directory, "Root" appears beside "USB".

3 Press ⓖ△ / ▽ / ◁ / ▷ on the remote control to select the desired file.

- Press ⓖ△ / ▽ to select the desired file/folder.
- Press ⓖ**ENTER** or ⓖ▷ to enter the selected folder.
- Press ⓖ◁ to return to the previous folder level.

4 Press ⓖ ENTER to play the selected file.

☼
- You can use ①◁◁ / ▷▷▷ to skip backward/forward and ①▷ / □ to start/stop playback independently from the menu in the OSD.
- You can set the settings for repeat and shuffle mode by using the "USB PLAY STYLE" parameters in "OPTION MENU" (see page 55).
- You can select the display mode in the front panel display by using "FL SCROLL" in "OPTION MENU" (see page 54).

■ **The function of the play information display**

```
USB      [Play]    ⊃⊂ ♊ ▶ ─⑤
                            ─⑥
                            ─⑦
①───Frankie Zipper
②───Made-to-order
③───Road to India

④───00:00
```
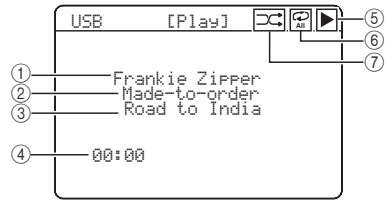
① Name of the artist

② Name of the album

③ Name of the song

④ Elapsed time

Note

When the elapsed time exceed "99:59", "--:--" appeared instead of the time.

⑤ ▶ (playback) icon

⑥ ♊ (all repeat), ♎ (single repeat) icons
When "REPEAT" of the "USB PLAY STYLE" in "OPTION MENU" (see page 55) is set to "OFF", no icon appears in the top right corner while files or folders are being played.

⑦ ⊃⊂ (shuffle) icon
When "SHUFFLE" of the "USB PLAY STYLE" in "OPTION MENU" (see page 55) is set to "OFF", no icon appears in the top right corner while files or holders are being played.

Recording

Recording adjustments and other operations are performed from the recording components. Refer to the operating instructions for those components.

Notes

• When this unit is set to the standby mode, you cannot record between other components connected to this unit.
• TONE CONTROL (see page 34) and VOLUME settings, speaker levels (see page 34) and the sound field programs (see page 37) do not affect recorded material.
• The source connected to the USB jack or the MULTI CH INPUT jacks of this unit cannot be recorded.
• Digital signals input at the DIGITAL INPUT jacks are not output at the analog AUDIO OUT (REC) jacks for recording. Therefore, if your source component is connected to provide only digital signals, you cannot record the source.
• S-video and composite video signals pass independently through the video circuits of this unit. Therefore, when recording or dubbing video signals input from a video source component that provides only an S-video or a composite video signal, you can record only an S-video or a composite video signal on your DVD recorder.
• A given input source is not output on the same OUT (REC) channel.
• Once you have connected a recording component to this unit, keep the component turned on while using this unit. If the component is turned off, this unit may distort the sound from other components.
• Check the copyright laws in your country to record from CDs, radio, etc. Recording of copyrighted material may infringe copyright laws.

☼
Do a test recording before you start an actual recording.

If you play back a video source that uses scrambled or encoded signals to prevent it from being dubbed, the picture itself may be disturbed due to those signals.

1   Turn on all the connected components.

2   Press ⑭INPUT ◁ / ▷ repeatedly (or press one of the input selector buttons (ⓒ)) to select the source component you want to record from.

3   Start playback on the selected source component or select a broadcast station.

4   Start recording on the recording component.

SET MENU

You can use the following parameters in "SET MENU" to adjust a variety of system settings and customize the way this unit operates. Change the initial settings (indicated in bold under each parameter) to reflect the needs of your listening environment.

■ **Auto setup** AUTO SETUP
Use this feature to automatically adjust speaker and system parameters (see page 24).

■ **Manual setup** MANUAL SETUP
Use this feature to manually adjust speaker and system parameters.

Sound menu 1 SOUND MENU
Use this menu to manually adjust any speaker settings, alter the quality and tone of the sound output by the system or compensate for video signal processing delays when using LCD monitors or projectors.

Parameter	Features	Page
A)SPEAKER SET	Selects the size of each speaker, the speakers for low-frequency signal output, and the crossover frequency, and the location of the front speakers connected to the FRONT B terminals.	48
B)SP LEVEL	Adjusts the output level of each speaker.	50
C)SP DISTANCE	Adjusts the distance of each speaker.	50
D)CENTER GEQ	Adjusts the tonal quality of the center speaker.	51
E)LFE LEVEL	Adjusts the output level of the LFE channel for Dolby Digital or DTS signals.	51
F)D.RANGE	Adjusts the dynamic range of Dolby Digital or DTS signals.	51
G)AUDIO SET	Adjusts the muting level, audio delay, maximum volume level and initial volume level.	51

Input menu 2 INPUT MENU
Use this menu to manually reassign the input jacks, select the input mode or rename the input source.

Parameter	Features	Page
A)INPUT ASSIGN	Assigns the input jacks of this unit according to the component to be used.	52
B)INPUT RENAME	Changes the name of the input source.	53
C)VOLUME TRIM	Adjusts the output volume of each input source.	53
D)DECODER MODE	Selects the decoder mode for the sources connected to the DIGITAL INPUT jacks on the rear panel of this unit.	53
E)MULTI CH SET	Selects the video source played in the background of the sources input from the MULTI CH INPUT jacks.	54

Option menu 3 OPTION MENU

Use this menu to manually adjust the optional system parameters.

Parameter	Features	Page
A)DISPLAY SET	Adjusts the brightness of the front panel display.	54
B)MEMORY GUARD	Locks sound field program parameters and other "SET MENU" settings.	55
C)AUDIO SELECT	Designates the default audio input jack select setting for the input sources connected to the DIGITAL INPUT jacks when you turn on the power of this unit.	55
D)PARAM. INI	Sets all the parameters of the sound field programs to the factory settings.	55
E)USB PLAY STYLE	Adjusts the playback style of a USB source.	55

■ **Signal information** SIGNAL INFO

Use this feature to check audio signal information (see page 35).

Using SET MENU

Use the remote control to access and adjust each parameter.

☼

You can change the "SET MENU" parameters while this unit is reproducing sound.

1 **Press** Ⓓ**AMP and then press** Ⓖ**MENU to enter "SET MENU".**

The top "SET MENU" display appears in the OSD.

```
SET MENU

    TOP MENU
→ •AUTO SETUP
  •MANUAL SETUP
  •SIGNAL INFO

[▲]/[▼]:Up/Down
[ENTER]:Enter
```

2 **Press** Ⓖ△ / ▽ **to select "MANUAL SETUP".**

```
SET MENU

    TOP MENU
  •AUTO SETUP
→ •MANUAL SETUP
  •SIGNAL INFO

[▲]/[▼]:Up/Down
[ENTER]:Enter
```
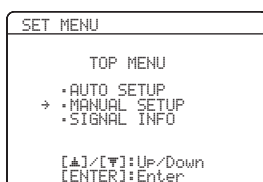
3 **Press** Ⓖ**ENTER to enter "MANUAL SETUP".**

The "MANUAL SETUP" display appears in the OSD.

```
•MANUAL SETUP


→ 1 SOUND MENU
  2 INPUT MENU
  3 OPTION MENU


[▲]/[▼]:Up/Down
[ENTER]:Enter
```
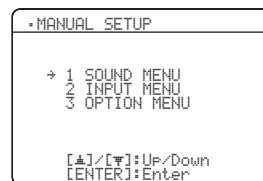
4 **Press** Ⓖ△ / ▽ / ◁ / ▷ **and** Ⓖ**ENTER to select and change the parameter.**

- Press Ⓖ△ / ▽ to select the desired menu or parameter.
- Press Ⓖ◁ / ▷ to change the parameter value.
- Press Ⓖ**ENTER** to enter the selected menu or to confirm the parameter.
- Press Ⓗ**RETURN** to return to the previous menu level.

5 **Press** Ⓖ**MENU to exit from "SET MENU".**

ADVANCED OPERATION

English

47 *En*

1 SOUND MENU

Use this menu to manually adjust any speaker settings or compensate for video signal processing delays.

```
.MANUAL SETUP               .MANUAL SETUP

  1 SOUND MENU    1/2          1 SOUND MENU    2/2

→ A)SPEAKER SET             → F)D.RANGE
  B)SP LEVEL                  G)AUDIO SET
  C)SP DISTANCE
  D)CENTER GEQ
  E)LFE LEVEL
  [▲]/[▼]:Up/Down             [▲]/[▼]:Up/Down
  [ENTER]:Enter              [ENTER]:Enter
```
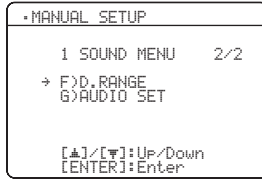
■ Speaker settings A)SPEAKER SET

Use this feature to manually adjust any speaker settings.

FRONT B speaker setting FRONT B

Use this feature to select the location of the front speakers connected to the FRONT B terminals.
Choices: **FRONT**, ZONE B

```
1 SOUND MENU

  A)SPEAKER SET

  FRONT B····FRONT



  [▲]/[▼]:Up/Down
  [◄]/[►]:Select
```
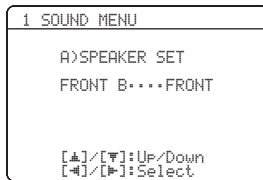
• Select "FRONT" to turn on or off SPEAKERS A and B when the speakers connected to the FRONT B terminals are set in the main zone.
• Select "ZONE B" if the speakers connected to the FRONT B terminals are set in another zone. If SPEAKERS A is turned off and SPEAKERS B is turned on, all the speakers including the subwoofer in the main zone are muted and this unit outputs sound at the FRONT B terminals only.

Notes

• If you connect headphones to the PHONES jack of this unit, the sound is output from both headphones and the FRONT B terminals when "FRONT B" is set to "ZONE B".
• If a DSP program is selected when "FRONT B" is set to "ZONE B", this unit automatically enters the Virtual CINEMA DSP mode (see page 38).

Woofer section of a speaker is 16 cm (6.5 in) or larger: large
Woofer section of a speaker is smaller than 16 cm (6.5 in): small

Front speakers FRONT SP

Choices: SMALL, **LARGE**

```
1 SOUND MENU

  A)SPEAKER SET
    FRONT SP




  SMALL  >LARGE
```
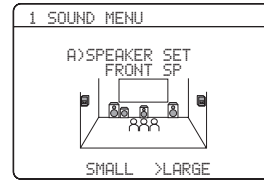
When the front speakers are large
Select "LARGE" (large).

When the front speakers are small
Select "SMALL" (small).

Note

When "LFE/BASS OUT" is set to "FRONT" (see page 49), you can select only "LARGE" in "FRONT SP". If the value of "FRONT SP" is set to a setting other than "LARGE" in advance, this unit automatically changes the value to "LARGE".

Center speaker CENTER SP

Choices: NONE, **SML**, LRG

```
1 SOUND MENU

  A)SPEAKER SET
    CENTER SP




  NONE >SML  LRG
```
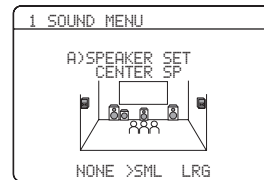
When the center speaker is large
Select "LRG" (large).

When the center speaker is small
Select "SML" (small).

When you do not use the center speaker
Select "NONE" (none). The center channel signals are directed to the front left and right speakers.

Surround left/right speakers SUR. L/R SP
Choices: NONE, **SML**, LRG

```
1 SOUND MENU

A)SPEAKER SET
   SUR. L/R SP



NONE >SML  LRG
```

When the surround speakers are large
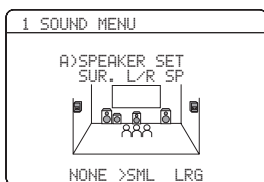Select "LRG" (large).

When the surround speakers are small
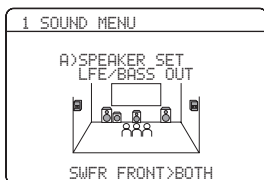Select "SML" (small).

When you do not use the surround speakers
Select "NONE" (none). This unit is set to the Virtual CINEMA DSP mode (see page 38).

LFE Bass out LFE/BASS OUT
Use this feature to select the speakers that output the LFE (low-frequency effect) and the low-frequency signals.
Choices: SWFR, FRONT, **BOTH**

```
1 SOUND MENU

A)SPEAKER SET
   LFE/BASS OUT



SWFR FRONT>BOTH
```

When a subwoofer is connected to this unit and you want to get natural bass sound
Select "SWFR" (subwoofer). The LFE signals as well as the low-frequency signals of other speakers set to "SML" (or "SMALL") are directed to the subwoofer.

When a subwoofer is connected to this unit and you want to get rich bass sound
Select "BOTH" (both). The low-frequency signals of any source are output from the subwoofer. The LFE signals as well as the low-frequency signals of other speakers set to "SML" (or "SMALL") are directed to the subwoofer. The low-frequency signals of the front left and right channels are directed to the front left and right speakers and the subwoofer regardless of the "FRONT SP" setting (see page 48).

When you do not use a subwoofer
Select "FRONT" (front). The LFE signals, the low-frequency signals of the front left and right channels, and the low-frequency signals of other speakers set to "SML" (or "SMALL") are all directed to the front left and right speakers regardless of the "FRONT SP" setting (see page 48).

Crossover CROSSOVER
Use this feature to select a crossover frequency of all the speakers set to "SML" (or "SMALL") or to "NONE" in "SPEAKER SET" (see pages 47 and 48). All frequencies below the selected frequency will be sent to the subwoofer or to the speakers set to "LRG" (or "LARGE") in "SPEAKER SET" (see pages 47 and 48).
Choices: 40Hz, 60Hz, **80Hz**, 90Hz, 100Hz, 110Hz, 120Hz, 160Hz, 200Hz

```
1 SOUND MENU

A)SPEAKER SET
   CROSSOVER



FREQ···80Hz
```

Subwoofer phase SUBWOOFER PHASE
Use this feature to switch the phase of your subwoofer if bass sounds are lacking or unclear.
Choices: **NORMAL**, REVERSE

```
1 SOUND MENU

A)SPEAKER SET
 SUBWOOFER PHASE



>NORMAL  REVERSE
```

- Select "NORMAL" if you do not want to reverse the phase of your subwoofer.
- Select "REVERSE" to reverse the phase of your subwoofer.

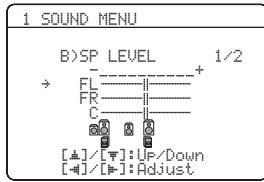**ADVANCED OPERATION**

English

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■ **Speaker level** B)SP LEVEL

Use this feature to manually adjust the output level of each speaker.

Control range: –10 to +10 dB
Control step: 1 dB
Initial setting: 0 dB

```
1 SOUND MENU

     B)SP LEVEL      1/2
       -_____+
   →   FL ———||————
       FR ———||————
       C ————||————
       🔲🔲 🔲 🔲
     [▲]/[▼]:Up/Down
     [◄]/[►]:Adjust
```

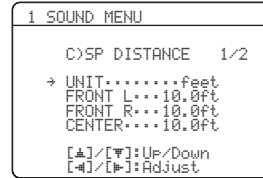| SP LEVEL	Adjusted speaker
FL	Front left speaker
FR	Front right speaker
C	Center speaker
SL	Surround left speaker
SR	Surround right speaker
SWFR	Subwoofer

Note

The available speaker channels differ depending on the setting of the speakers.

■ **Speaker distance** C)SP DISTANCE

Use this feature to manually adjust the distance of each speaker and the delay applied to the respective channel. Ideally, each speaker should be the same distance from the main listening position. However, this is not possible in most home situations. Thus, a certain amount of delay must be applied to the sound from each speaker so that all sounds will arrive at the listening position at the same time.

```
1 SOUND MENU

    C)SP DISTANCE    1/2

  → UNIT·········feet
    FRONT L···10.0ft
    FRONT R···10.0ft
    CENTER····10.0ft

    [▲]/[▼]:Up/Down
    [◄]/[►]:Adjust
```

Unit UNIT

Choices: meters (m), feet (ft)
Initial setting: feet (ft)
• Select "feet" to adjust speaker distances in feet.
• Select "meters" to adjust speaker distances in meters.

Speaker distances

Control range: 0.30 to 24.00 m (1.0 to 80.0 ft)
Control step: 0.10 m (0.5 ft)
Initial setting: 3.00 m (10.0 ft)

SP DISTANCE	Adjusted speaker
FRONT L	Front left speaker
FRONT R	Front right speaker
CENTER	Center speaker
SUR. L	Surround left speaker
SUR. R	Surround right speaker
SWFR	Subwoofer

Note

The available speaker channels differ depending on the setting of the speakers.
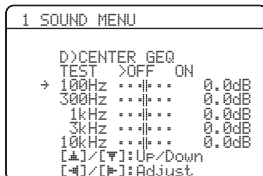
■ **Center speaker equalizer** D)CENTER GEQ

Use this feature to adjust the built-in 5-frequency band (100Hz, 300Hz, 1kHz, 3kHz and 10kHz) graphic equalizer for the center channel so that the tonal quality of the center speaker matches that of the front speakers. You can make adjustments while listening to the currently selected source component or a test tone.

Control range: –6.0 to +6.0 dB
Control step: 0.5 dB
Initial setting: 0 dB

```
1 SOUND MENU

    D)CENTER GEQ
    TEST  >OFF  ON
 →  100Hz ···╫···   0.0dB
    300Hz ···╫···   0.0dB
     1kHz ···╫···   0.0dB
     3kHz ···╫···   0.0dB
    10kHz ···╫···   0.0dB
    [▲]/[▼]:Up/Down
    [◀]/[▶]:Adjust
```

Test tone TEST

Use this feature to make adjustments for "CENTER GEQ" while listening to a test tone.

Choices: **OFF**, ON
• Select "OFF" to stop test tones and output the currently selected source component.
• Select "ON" to output test tones from the center and front left speakers.

■ **Low-frequency effect level** E)LFE LEVEL

Use this feature to adjust the output level of the LFE (low-frequency effect) channel according to the capacity of your subwoofer or headphones. The LFE channel carries low-frequency special effects which are only added to certain scenes. This setting is effective only when this unit decodes Dolby Digital or DTS signals.
Control range: –20 to **0** dB
Control step: 1 dB

```
1 SOUND MENU

    E)LFE LEVEL

 →  SPEAKER······0dB
    HEADPHONE····0dB


    [▲]/[▼]:Up/Down
    [◀]/[▶]:Adjust
```

Speaker SPEAKER

Adjusts the speaker LFE level.
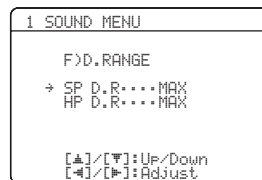
Headphone HEADPHONE

Adjusts the headphone LFE level.

Note

Depending on the settings of "LFE/BASS OUT" (see page 49), some signals may not be output at the SUBWOOFER OUTPUT jack.

■ **Dynamic range** F)D.RANGE

Use this feature to select the amount of dynamic range compression to be applied to your speakers or headphones. This setting is effective only when this unit is decoding Dolby Digital and DTS signals.

```
1 SOUND MENU

    F)D.RANGE

 →  SP D.R····MAX
    HP D.R····MAX


    [▲]/[▼]:Up/Down
    [◀]/[▶]:Adjust
```

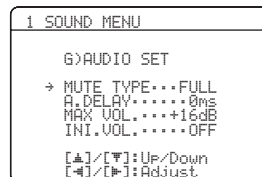**Speaker** SP

Adjusts the speaker compression.

Headphone HP

Adjusts the headphone compression.

Choices: MIN, STD, **MAX**
• Select "MIN" (minimum) if you regularly listen at low volume levels.
• Select "STD" (standard) for general use.
• Select "MAX" (maximum) to preserve the greatest amount of dynamic range.

■ **Audio settings** G)AUDIO SET

Use this feature to adjust the overall audio settings of this unit.

```
1 SOUND MENU

    G)AUDIO SET

 →  MUTE TYPE···FULL
    A.DELAY·······0ms
    MAX VOL.····+16dB
    INI.VOL.······OFF

    [▲]/[▼]:Up/Down
    [◀]/[▶]:Adjust
```

Mute type MUTE TYPE

Use this feature to adjust how much the mute function reduces the output volume (see page 36).
Choices: **FULL**, –20dB
• Select "FULL" to completely mute all the audio output.
• Select "–20dB" to reduce the current volume by 20 dB.

Audio delay A.DELAY

Use this feature to delay the sound output and synchronize it with the video image. This may be necessary when using certain LCD monitors or projectors.
Control range: **0** to 160 ms
Control step: 1 ms

ADVANCED OPERATION

English

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Maximum volume MAX VOL.

Use this feature to set the maximum volume level. This feature is useful to avoid the unexpected loud sound by mistake. For example, the original volume range is 16 dB to –80 dB. However, when "MAX VOL." is set to –5 dB, the volume range becomes –5.0 dB to –80.0 dB.

Control range: **16 dB**, 10 dB to –30 dB
Control step: 5 dB

Note

The "MAX VOL." setting takes priority over the "INI.VOL." setting. For example, if "INI.VOL." is set to –20 dB and "MAX VOL." is set to –30 dB, the volume level is automatically set to –30 dB when you turn on the power of this unit next time.

Initial volume INI.VOL.

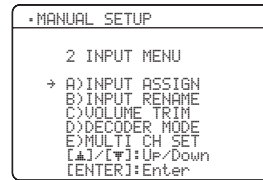Use this feature to set the volume level when the power of this unit is turned on.
Choices: **OFF**, –80 dB to +16 dB
Control step: 1 dB

Note

The "MAX VOL." setting takes priority over the "INI.VOL." setting.

2 INPUT MENU

Use this menu to reassign the input jacks, select the decoder mode or rename the input source.

```
·MANUAL SETUP

   2 INPUT MENU

 → A)INPUT ASSIGN
   B)INPUT RENAME
   C)VOLUME TRIM
   D)DECODER MODE
   E)MULTI CH SET
   [▲]/[▼]:Up/Down
   [ENTER]:Enter
```

■ Input assignment
A)INPUT ASSIGN

Use this feature to assign the input jacks according to the component to be used if the initial settings of this unit do not correspond to your needs. Change the following parameters to reassign the respective jacks and effectively connect more components.

Once the input jacks are reassigned, you can select the corresponding component by using ⑭**INPUT** ◁ / ▷ (or the input selector buttons (ⓒ)).

For COAXIAL INPUT jack 1
COAXIAL IN (1)
Choices: (1) CD, MD/CD-R, **DVD**, DTV/CBL, V-AUX, DVR

```
2 INPUT MENU

   A)INPUT ASSIGN
     COAXIAL IN

 → (1)······  DVD
         (  DVD   )


   [◄]/[►]:Select
```
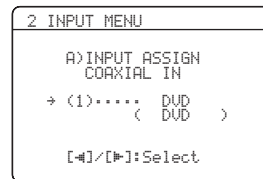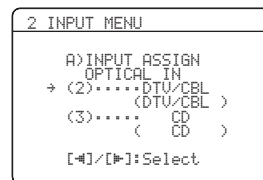
For OPTICAL INPUT jacks 2 and 3
OPTICAL IN (2)
OPTICAL IN (3)
Choices: (2) CD, MD/CD-R, DVD, **DTV/CBL**, V-AUX, DVR
        (3) **CD**, MD/CD-R, DVD, DTV/CBL, V-AUX, DVR

```
2 INPUT MENU

   A)INPUT ASSIGN
     OPTICAL IN
 → (2)······DTV/CBL )
         (DTV/CBL )
   (3)······   CD
         (   CD   )
   [◄]/[►]:Select
```

Note

You cannot select a specific item more than once.

■ **Input rename** B)INPUT RENAME

Use this feature to change the name of the input source
that appears in the OSD and in the front panel display.

```
2 INPUT MENU

   B)INPUT RENAME

   DVD ->  DVD

   [◄]/[►]:Position
   [▲]/[▼]:Chara.
```

**1 Press one of the input selector buttons (Ⓒ)
or Ⓐ MULTI CH IN to select the input
source you want to change the name of.**

```
MULTI CH IN

CD      MD/CD-R   TUNER

DVD     DTV/CBL   DVR

V-AUX            USB
```
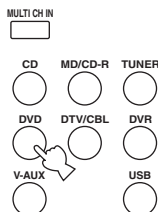
**2 Press Ⓓ AMP and then press Ⓖ ◁ / ▷ on the
remote control to place the "_" (underscore)
under the space or the character you want to
edit.**

**3 Press Ⓖ △ / ▽ to select the character you
want to use and then press Ⓖ ◁ / ▷ to move
to the next space.**

Notes

• You can use up to 8 characters for each input.
• Press Ⓖ▽ to change the character in the following order,
  or press Ⓖ△ to go in the reverse order:
  A to Z, a space, 0 to 9, a space, a to z, a space, symbols (#,
  *, –, +, etc.)

**4 Repeat steps 1 through 3 to rename each
input source.**

**5 Press Ⓖ ENTER to exit from "INPUT
RENAME".**

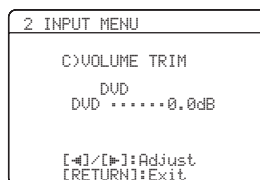■ **Volume trim** C)VOLUME TRIM

Use this feature to adjust the output volume of each
source. This is useful if you want to balance the level of
each input source to avoid sudden changes in volume
when switching between input sources.

Choices: CD, MD/CD-R, TUNER, DVD,
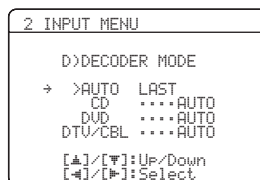   DTV/CBL, V-AUX, DVR, USB,
         MULTI CH IN

Control range: –6.0 to +6.0 dB
Control step: 1.0 dB
Initial setting: 0.0 dB

```
2 INPUT MENU

   C)VOLUME TRIM

      DVD
   DVD ......0.0dB

   [◄]/[►]:Adjust
   [RETURN]:Exit
```

■ **Decoder mode** D)DECODER MODE

```
2 INPUT MENU

   D)DECODER MODE

→  >AUTO  LAST
    CD    ....AUTO
    DVD   ....AUTO
   DTV/CBL ....AUTO

   [▲]/[▼]:Up/Down
   [◄]/[►]:Select
```

Decoder select mode

Use this feature to designate the default decoder mode for
the input sources connected to the DIGITAL INPUT jacks
when you turn on the power of this unit.

Choices: **AUTO**, LAST

• Select "AUTO" if you want this unit to automatically
  detect the type of input signals and select the
  appropriate decoder mode.
• Select "LAST" if you want this unit to automatically
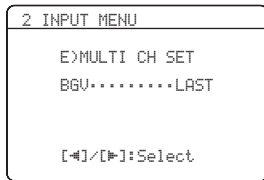 select the last decoder mode used the connected input
  source.

DTS decoder prioritize setting

Choices: **AUTO**, DTS

• Select "AUTO" if you want this unit to automatically
  detect input signal types and select the appropriate
  input mode.
• Select "DTS" when you play back a DTS-CD.

ADVANCED OPERATION

English

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■ **Multi channel input setup**
E)MULTI CH SET

```
2 INPUT MENU

    E)MULTI CH SET
    BGV·········LAST


   [◄]/[►]:Select
```

Background Video BGV

Use this feature to select the video source played in the background of the sources input at the MULTI CH INPUT jacks.
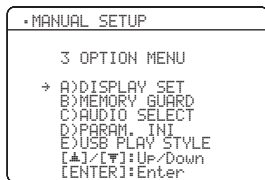
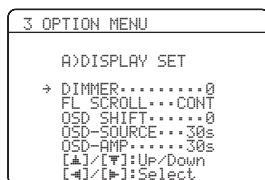Choices: DVD, DTV/CBL, V-AUX, DVR, **LAST**

※

Select "LAST" to set this unit to automatically select the last selected video source as the background video source.

3 OPTION MENU

Use this menu to adjust the optional system parameters.

```
·MANUAL SETUP

    3 OPTION MENU

  → A)DISPLAY SET
    B)MEMORY GUARD
    C)AUDIO SELECT
    D)PARAM. INI
    E)USB PLAY STYLE
    [▲]/[▼]:Up/Down
    [ENTER]:Enter
```

■ **Display settings** A)DISPLAY SET

```
3 OPTION MENU

    A)DISPLAY SET

  → DIMMER·········0
    FL SCROLL···CONT
    OSD SHIFT······0
    OSD-SOURCE···30s
    OSD-AMP······30s
    [▲]/[▼]:Up/Down
    [◄]/[►]:Select
```

Dimmer DIMMER

Use this feature to adjust the brightness of the front panel display.

Control range: – 4 to **0**

Control step: 1

• Press Ⓖ◁ to make the front panel display dimmer.
• Press Ⓖ▷ to make the front panel display brighter.

Front panel display scroll FL SCROLL

Use this feature to set whether to display the information (such as a song title or a channel name) in the front panel display in a continuous manner or by the first 14 alphanumeric characters after scrolling all characters once when "USB" is selected as the input source.

Choices: **CONT**, ONCE

• Select "CONT" to display the operation status in the front panel display in a continuous manner.
• Select "ONCE" to display the operation status in the front panel display by the first 14 alphanumeric characters after scrolling all characters once.

OSD shift OSD SHIFT

Use this feature to adjust the vertical position of the OSD.

Control range: –5 (upward) to +5 (downward)

Control step: 1

Initial setting: 0

• Press Ⓖ◁ to raise the position of the OSD.
• Press Ⓖ▷ to lower the position of the OSD.

Source feature OSD display time
OSD-SOURCE

Use this feature to set the amount of time to display the USB file list and the play information in the OSD after you perform a certain operation.

Choices: ON, 10s, **30s**

• Select "ON" to display the OSD continuously during an operation.
• Select "10s" to turn off the OSD 10 seconds after you perform a certain operation.
• Select "30s" to turn off the OSD 30 seconds after you perform a certain operation.

Amplifier function OSD display time
OSD-AMP

Use this feature to set the amount of time to display the status and sound field parameters information screen after you perform a certain operation.

Choices: ON, 10s, **30s**

• Select "ON" to display the OSD constantly during an operation.
• Select "10s" to turn off the OSD 10 seconds after you perform a certain operation.
• Select "30s" to turn off the OSD 30 seconds after you perform a certain operation.

■ **Memory guard** B)MEMORY GUARD

Use this feature to prevent accidental changes to DSP program parameter values and other system settings.
Choices: **OFF**, ON

```
3 OPTION MENU

  B)MEMORY  GUARD
   >OFF    ON


  [◄]/[►]:Select
```
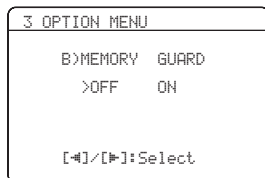
- Select "OFF" to turn off the "MEMORY GUARD" feature.
- Select "ON" to protect:
  – sound field program parameters
  – all "SET MENU" items
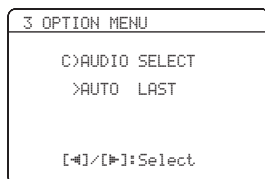 – all speaker levels
  – SCENE template parameters

Note

When "MEMORY GUARD" is set to "ON", you cannot select and adjust any other "SET MENU" items.

■ **Audio select** C)AUDIO SELECT

Use this feature to designate the default audio input jack select setting for the input sources when you turn on the power of this unit.
Choices: **AUTO**, LAST

```
3 OPTION MENU

   C)AUDIO SELECT
    >AUTO  LAST


   [◄]/[►]:Select
```

- Select "AUTO" if you want this unit to automatically detect the type of input signals and select the appropriate input mode.
- Select "LAST" if you want this unit to automatically select the last input mode used for the connected input source (see page 33).

■ **Parameter initialization** D)PARAM. INI

Use this feature to set all the parameters of the sound field programs to the initial factory settings.
Choices: **NO**, YES

```
3 OPTION MENU

   D)PARAM. INI
    >NO    YES


   [◄]/[►]:Select
   [ENTER]:Return
```
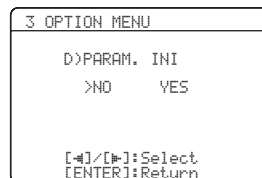
- Select "NO" to cancel the parameter initialization and return to the previous menu screen.
- Select "YES" and then press Ⓖ**ENTER** to set all the sound field parameters to the initial factory settings.

Notes

- You cannot automatically revert to the previous parameter settings once you initialize the sound field program parameters.
- You cannot separately initialize individual sound field programs.
- You cannot initialize any sound field program groups when "MEMORY GUARD" is set to "ON".

■ **USB playback styles** E)USB PLAY STYLE

Use this feature to adjust the playback style according to your preference. You can shuffle files in a random order or repeat one specific file or a sequence of files.

```
3 OPTION MENU

   E)USB PLAY STYLE
  → REPEAT.......OFF
    SHUFFLE......OFF

   [▲]/[▼]:Up/Down
   [◄]/[►]:Select
```
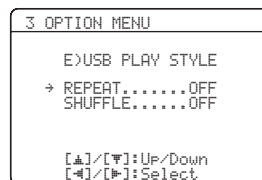
Repeat REPEAT

Use this feature to set this unit to repeat one file or a sequence of files.
Choices: **OFF**, SINGLE, ALL
- Select "OFF" to deactivate this feature.
- Select "SINGLE" to set this unit to repeat one file.
- Select "ALL" to set this unit to repeat a sequence of files.

Shuffle SHUFFLE

Use this feature to set this unit to play files or folders in a random order.
Choices: **OFF**, ON
- Select "OFF" to deactivate this feature.
- Select "ON" to set this unit to play files or folders in a random order.

ADVANCED OPERATION

English

55 *En*

Remote control features

In addition to controlling this unit, the remote control can also operate other audiovisual components made by Yamaha and other manufacturers. To control your TV or other components, you must set up the appropriate remote control code for each input source (see page 59).

Using remote control on the SCENE feature

■ Controlling the input source components in the SCENE mode

You can operate both this unit and the input source component by using the remote control. You must set the appropriate remote control code for each input source in advance (see page 59).

1 Press the desired ⒺSCENE button on the remote control.

2 Press the desired buttons in the * area below to control the input source component of the selected SCENE template.

* — | SCENE buttons

■ Setting input source of the customized SCENE template on the remote control

If you customize the input source of the selected SCENE template, you must set the input source of the SCENE template on the remote control to operate the input source component correctly.

Press and hold the ⒺSCENE button and the desired input selector button (Ⓒ) for 3 seconds.

☼
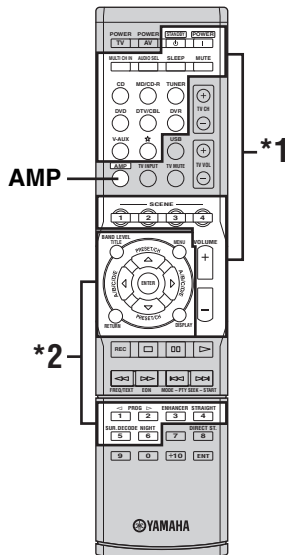Press the ⒺSCENE button again to operate the input source component.
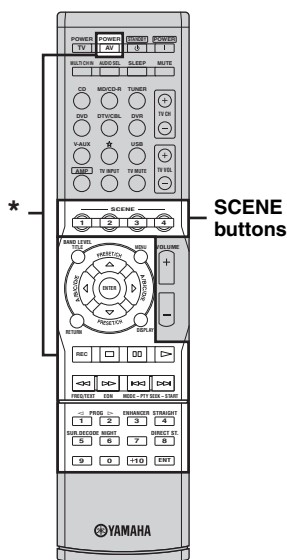
Note

* These buttons control the input source component. See page 58 for details of the function of each button.

Controlling this unit, a TV, or other components

■ Controlling this unit

Press Ⓓ**AMP** to control this unit.

■ Controlling a TV

Press Ⓒ**DTV/CBL** to control your TV. To control your TV, you must set the appropriate remote control code for DTV/CBL (see page 59).

AMP

*1

*2

DTV/CBL

*1

*2
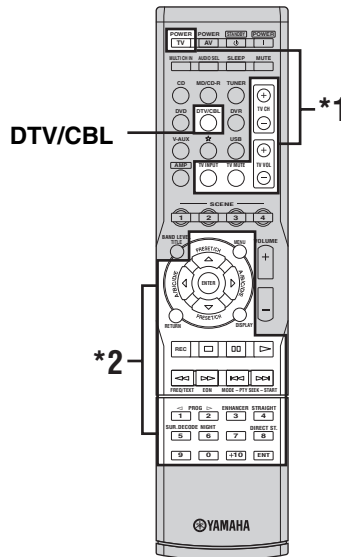
Notes

*1 These buttons always control this unit regardless of the operation mode selector position.

*2 These buttons control this unit only when Ⓓ**AMP** is pressed.

Notes

*1 These buttons always control your TV regardless of whether you press Ⓒ**DTV/CBL** or not.

Remote control	Digital TV/Cable TV
TV POWER	Turns on or off the power.
TV CH +/–	Changes the channel number.
TV VOL +/–	Increases or decreases the volume level.
TV MUTE	Mutes the audio output.
TV INPUT	Changes the input source.

*2 These buttons control your TV only when the operation mode selector is set to TV. For details, see the "Digital TV/Cable TV" column on page 58.

ADVANCED OPERATION

English

■ Controlling other components

Press one of the input selector buttons (ⓒ) or ☆ to control other components. You must set the appropriate remote control code for each input source in advance (see page 59). The following table shows the function of each control button used to control other components assigned to each input selector button. Be advised that some buttons may not correctly operate the selected component.

☼

The remote control has 10 modes (input areas) to control components so that the remote control can operate up to 10 different components.
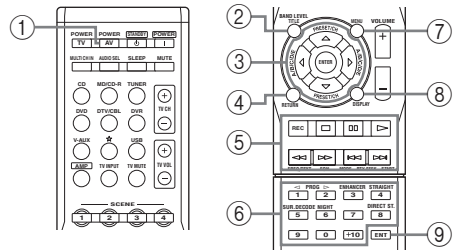
Remote control		DVD player/ recorder	VCR	Digital TV/ Cable TV	LD player	CD player	MD/CD recorder	Tuner	USB
①	AV POWER	Power *1	Power *1	Power *2	Power *1	Power *1	Power *1		
②	TITLE	Title						Band	
③	PRESET/CH △	Up	VCR channel up	Up				Preset up (1-8)	Up
	PRESET/CH ▽	Down	VCR channel down	Down				Preset down (1-8)	Down
	A/B/C/D/E ◁	Left		Left				Preset down (A-E)	Previous menu
	A/B/C/D/E ▷	Right		Right				Preset up (A-E)	Subsequent menu
	ENTER	Enter		Enter					Subsequent menu
④	RETURN	Return		Return					Previous menu
⑤	REC/ DISC SKIP	Disc skip (player) Rec (recorder)	Rec	Rec *2		Disc skip	Rec		
	▷	Play	Play	Play *2	Play	Play	Play		Play
	◁◁	Search backward	Search backward	Search backward *2	Search backward	Search backward	Search backward		
	▷▷	Search forward	Search forward	Search forward *2	Search forward	Search forward	Search forward		
	❙❙	Pause	Pause	Pause *2	Pause	Pause	Pause		
	❙◁◁	Skip backward	Skip backward	Skip backward *2	Skip backward	Skip backward	Skip backward		Skip backward
	▷▷❙	Skip forward	Skip forward	Skip forward *2	Skip forward	Skip forward	Skip forward		Skip forward
	☐	Stop	Stop	Stop *2	Stop	Stop	Stop		Stop
⑥	1-9, 0, +10	Numeric buttons	Numeric buttons	Numeric buttons	Numeric buttons	Numeric buttons	Numeric buttons	Preset stations (1-8)	
⑦	MENU	Menu		Menu					
⑧	DISPLAY	Display	Display	Display	Display	Display	Display		Display
⑨	ENT	Title/Index	Enter	Enter	Chapter/Time	Index	Index		

Notes

*1 This button is operational only when the original remote control supplied with the component has a POWER button.

*2 These buttons operate your DVD recorder only when you set the appropriate remote control code for DVR (see page 59).

Setting remote control codes

You can control other components by setting the appropriate remote control codes. For a complete list of available remote control codes, refer to "List of remote control codes" at the end of this manual.

Remote control code default settings

Input source	Component category	Manufacturer	Default code
CD	CD	YAMAHA	5013
MD/CD-R	CD-R	YAMAHA	5001
DVD	DVD	YAMAHA	2000
DTV/CBL	–	–	–
TUNER	TUNER	YAMAHA	5007
V-AUX	–	–	–
USB	USB	YAMAHA	5012
DVR	DVR	YAMAHA	2011
☆	–	–	–

Note

You may not be able to operate your Yamaha component even if a Yamaha remote control code is preset as listed above. In this case, try setting another Yamaha remote control code.

1 **While pressing and holding one of the input selector buttons (Ⓒ) on the remote control to select the input area you want to set up, press AV POWER for more than 3 seconds.**

While holding down   **Press for 3 seconds**
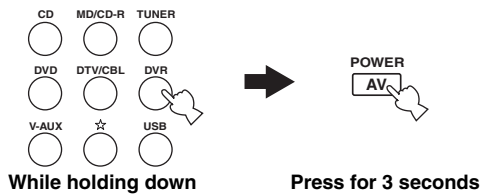
2 **Press the numeric buttons (0 to 9) (Ⓦ) to enter the four-digit remote control code for the component to be used.**

Notes

• If the manufacturer of your component has more than one code, try each of them until you find the correct one.
• If you do not press any buttons within 30 seconds in step 2, the setup process is canceled. If this happens, repeat the setup procedure.

ADVANCED OPERATION

English

Advanced setup

This unit has additional menus that are displayed in the front panel display. The advanced setup menu offers additional operations to adjust and customize the way this unit operates. Change the initial settings (indicated in bold under each parameter) to reflect the needs of your listening environment.

Notes

- Only ①**STANDBY/ON** and ⑫**STRAIGHT** are effective while you are using the advanced setup menu.
- No other operations can be made while you are using the advanced setup menu.
- The advanced setup menu is only available in the front panel display.

1 **Press ①STANDBY/ON on the front panel to set this unit to the standby mode.**

2 **Press and hold ⑩TONE CONTROL and then press ①STANDBY/ON to turn on this unit.**

This unit turns on, and the advanced setup menu appears in the front panel display.

3 **Press ⑫STRAIGHT repeatedly to change the selected parameter setting.**

4 **Press ①STANDBY/ON to confirm your selection and set this unit to the standby mode.**

☀
The settings you made are reflected next time you turn on this unit.

■ Speaker impedance SP IMP.

Use this feature to set the speaker impedance of this unit so that it matches that of your speakers.
Choices: **8Ω MIN**, 6Ω MIN
- Select "8Ω MIN" to set the speaker impedance to 8 Ω .
- Select "6Ω MIN" to set the speaker impedance to 6 Ω .

SP IMP.	Speaker	Impedance level
8Ω MIN	Front (A or B)	The impedance of each speaker must be 8 Ω or higher.
	Center	
	Surround	
6Ω MIN	Front (A or B)	The impedance of each speaker must be 6 Ω or higher.
	Center	
	Surround	

■ Factory presets PRESET

Use this feature to reset all the parameters of this unit to the initial factory settings (see page 67).
Choices: **CANCEL**, RESET
- Select "CANCEL" not to reset any parameters of this unit.
- Select "RESET" to reset the parameters of this unit.

Notes

- This setting completely resets all the parameters of this unit including the "SET MENU" parameters. However, the advanced setup menu parameters will not be initialized.
- The initial factory settings are activated next time you turn on this unit.

Troubleshooting

Refer to the table below when this unit does not function properly. If the problem you are experiencing is not listed below or if the instruction below does not help, turn off this unit, disconnect the power cable, and contact the nearest authorized Yamaha dealer or service center.

■ General

Problem	Cause	Remedy	See page
This unit fails to turn on or enters the standby mode soon after the power is turned on.	The power cable is not connected or the plug is not completely inserted.	Connect the power cable firmly.	—
	The speaker impedance setting is incorrect.	Set the speaker impedance to match your speakers.	13
	The protection circuitry has been activated.	Make sure that all speaker wire connections on this unit and on all speakers are secure and that the wire for each connection does not touch anything other than its respective connection.	12
	This unit has been exposed to a strong external electric shock (such as lightning or strong static electricity).	Set this unit to the standby mode, disconnect the power cable, plug it back in after 30 seconds and then use it normally.	—
No sound	Incorrect input or output cable connections.	Connect the cables properly. If the problem persists, the cables may be defective.	14-20
	No appropriate Audio input jack select has been set.	Set an appropriate Audio input jack select.	33
	No appropriate input source has been selected.	Select an appropriate input source with ⑭**INPUT** ◁ / ▷ on the front panel (or the input selector buttons (ⓒ) on the remote control).	32, 33
	Speaker connections are not secure.	Secure the connections.	12
	The front speakers to be used have not been selected properly.	Select the front speakers with ⑨**SPEAKERS** on the front panel.	33
	The volume is turned down.	Turn up the volume.	—
	The sound is muted.	Press ⓞ**MUTE** or ⓡ**VOLUME +/–** on the remote control to resume audio output and then adjust the volume.	36
	Signals this unit cannot reproduce are being input from a source component, such as a CD-ROM.	Play a source whose signals can be reproduced by this unit.	—
	Audio signals input at the HDMI jack are not output from any speaker terminals.	Make an analog or digital connection beside the HDMI connection.	—
	The setting of the connected component is improper.	Make an appropriate setting following the instruction manual of the connected component.	—

Problem	Cause	Remedy	See page
The sound suddenly goes off.	The protection circuitry has been activated because of a short circuit, etc.	Check that the impedance setting is correct.	13
		Check that the speaker wires are not touching each other and then turn this unit back on.	—
	The sleep timer has turned off this unit.	Turn on this unit, and play the source again.	—
	The sound is muted.	Press ⓒ**MUTE** or ⓡ**VOLUME +/–** on the remote control to resume audio output.	36
Sound is heard from the speaker on one side only.	Incorrect cable connections.	Connect the cables properly. If the problem persists, the cables may be defective.	14-20
	Incorrect settings in "SP LEVEL".	Adjust the "SP LEVEL" settings.	34
Only the center speaker outputs substantial sound.	When playing a monaural source with a CINEMA DSP program, the source signal is directed to the center channel, and the front and surround speakers output effect sounds.	This is not malfunction.	—
No sound is heard from the center speaker.	"CENTER" in "SET MENU" is set to "NONE".	Set "CENTER" to "SML" or "LRG".	48
	One of the HiFi DSP programs (except for 5ch Stereo) has been selected.	Try another sound field program.	37
No sound is heard from the surround speakers.	"SUR. L/R SP" in "SPEAKER SET" is set to "NONE".	Set "SUR. L/R SP" to "SML" or "LRG".	49
	This unit is in the "STRAIGHT" mode and a monaural source is being played back.	Press ⑫**STRAIGHT** on the front panel so that "STRAIGHT" disappears from the front panel display.	38
No sound is heard from the subwoofer.	"LFE/BASS OUT" in "SPEAKER SET" is set to "FRONT" when a Dolby Digital or DTS signal is being played.	Set "LFE/BASS OUT" to "SWFR" or "BOTH".	49
	"LFE/BASS OUT" in "SPEAKER SET" is set to "SWFR" or "FRONT" when a 2-channel source is being played.	Set "LFE/BASS OUT" to "SWFR" or "BOTH".	49
	The source does not contain low-frequency bass signals.	This is not malfunction.	—

Problem	Cause	Remedy	See page
Dolby Digital or DTS sources cannot be played. (Dolby Digital or DTS indicator in the front panel display does not light up.)	The connected component is not set to output Dolby Digital or DTS digital signals.	Make an appropriate setting following the operating instructions for your component.	—
	Audio input jack select is set to "ANALOG".	Set Audio input jack select to "AUTO".	33
A humming sound is heard.	Incorrect cable connections.	Connect the audio cables firmly. If the problem persists, the cables may be defective.	—
The volume level cannot be increased, or the sound is distorted.	You are attempting to set the volume level higher than the maximum volume level.	Adjust "MAX VOL." setting.	52
	The component connected to the AUDIO OUT (REC) jacks of this unit is turned off.	Turn on the power of the component.	—
The sound effect cannot be recorded.	It is not possible to record the sound effect with a recording component.	This is not malfunction.	—
A source cannot be recorded by an analog component connected to the AUDIO OUT (REC) jacks.	The source component is not connected to the analog AUDIO IN jacks of this unit.	Connect the source component to the analog AUDIO IN jacks.	16, 19
The sound field parameters and some other settings of this unit cannot be changed.	"MEMORY GUARD" in "OPTION MENU" is set to "ON".	Set "MEMORY GUARD" to "OFF".	55
This unit does not operate properly.	The internal microcomputer has been frozen by an external electric shock (such as lightning or excessive static electricity) or by a power supply with low voltage.	Disconnect the power cable from the AC wall outlet and then plug it in again after about 30 seconds.	—
"CHECK SP WIRES" appears in the front panel display.	Speaker cables are short-circuited.	Make sure all speaker cables are connected correctly.	12
There is noise interference from digital or radio frequency equipment.	This unit is too close to the digital or high-frequency equipment.	Move this unit further away from such equipment.	—
The picture is disturbed.	The video source uses scrambled or encoded signals to prevent dubbing.	This is not malfunction.	—
This unit suddenly enters the standby mode.	The internal temperature is too high and the overheat protection circuitry has been activated.	Wait about 1 hour for this unit to cool down and then turn it back on.	—

ADDITIONAL INFORMATION

English

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■ **Tuner**

	Problem	Cause	Remedy	See page
FM	**FM stereo reception is noisy.**	The characteristics of FM stereo broadcasts may cause this problem when the transmitter is too far away or the antenna input is poor.	Check the antenna connections.	20
			Try using a high-quality directional FM antenna.	—
			Use the manual tuning method.	40
	There is distortion, and clear reception cannot be obtained even with a good FM antenna.	There is multi-path interference.	Adjust the antenna position to eliminate multi-path interference.	—
	The desired station cannot be tuned into with the automatic tuning method.	The signal is too weak.	Use a high-quality directional FM antenna.	—
			Use the manual tuning method.	40
	Previously preset stations can no longer be tuned into.	This unit has been disconnected for a long period.	Set preset stations.	41
AM	**The desired station cannot be tuned into with the automatic tuning method.**	The signal is weak or the antenna connections are loose.	Tighten the AM loop antenna connections and orient it for the best reception.	—
			Use the manual tuning method.	40
	There are continuous crackling and hissing noises.	Noise can result from lightning, fluorescent lamps, motors, thermostats and other electrical equipment.	Use an outdoor antenna and a ground wire. This will help somewhat, but it is difficult to eliminate all noise.	—
	There are buzzing and whining noises.	A TV set is being used nearby.	Move this unit away from the TV set.	—

■ **AUTO SETUP**

Before AUTO SETUP

Error message	Cause	Remedy	See page
Connect MIC!	Optimizer microphone is not connected.	Connect the supplied optimizer microphone to the OPTIMIZER MIC jack on the front panel.	24
Unplug HP!	Headphones are connected.	Unplug the headphones.	—

During AUTO SETUP

Error message	Cause	Remedy	See page
E-1:NO FRONT SP	Front L/R channel signals are not detected.	Check the front L/R speaker connections.	12
E-2:NO SUR.SP	A surround channel signal is not detected.	Check the surround speaker connections.	12
E-3:NOISY	Background noise is too loud.	Try running "AUTO SETUP" in a quiet environment.	—
		Turn off noisy electric equipment like air conditioners or move them away from the optimizer microphone.	—
E-4:NO MIC	The optimizer microphone was unplugged during the "AUTO SETUP" procedure.	Connect the supplied optimizer microphone to OPTIMIZER MIC jack on the front panel.	24
E-5:USER CANCEL	The "AUTO SETUP" procedure was cancelled due to user activity.	Run "AUTO SETUP" again.	24
E-6:INTERNAL ERROR	An internal error occurred.	Run "AUTO SETUP" again.	24

After AUTO SETUP

Warning message	Cause	Remedy	See page
W-1:OUT OF PHASE	Speaker polarity is not correct. This message may appear depending on the speakers even when the speakers are connected correctly.	Check the speaker connections for proper polarity (+ or –).	12
W-2:OVER 24m (80ft)	The distance between the nearest speaker and the furthest speaker is out of adjustable range.	Bring the speaker closer to the listening position.	—
W-3:LEVEL ERROR	The difference of volume level among speakers is excessive. (No level correction is made.)	If "SWFR:TOO LOUD" or "SWFR:TOO LOW" appears, adjust the output volume of the subwoofer.	24
		Readjust the speaker installation so that all speakers are set in locations with similar conditions.	—
		Check the speaker connections.	12
		Use speakers of similar quality.	—

Notes

• If the "ERROR" or "WARNING" screens appears, check the cause of the problem, then run "AUTO SETUP" again.
• If a warning message "W-1" appears, corrections are made, but they may not be optimal.
• If a warning message "W-2" or "W-3" appears, no corrections are made.
• If an error message "E-6" occurs repeatedly, please contact a qualified Yamaha service center.

ADDITIONAL INFORMATION

English

■ **USB**

Problem	Cause	Remedy	See page
The music files and directories in the USB device cannot be viewed.	The music files and directories are placed in locations other than the FAT area.	Place music files and directories in the FAT area.	—
	You are attempting to browse directory hierarchies of over 8 levels or a directory with more than 500 files.	Modify the data structure on your USB device.	—
The USB device cannot be recognized.	The connected USB device is other than a USB mass storage class USB memory device or USB portable audio player.	This unit can recognize only a USB mass storage class USB memory device (except USB hard disk drives) or USB portable audio player. Also note that it cannot recognize certain USB devices even when they are devices as described above.	43
		Some devices may become easier to recognize when they are inserted before turning this unit on.	21
"Disconnected" is displayed even when a USB device is present.	This unit recognized the USB device as an illegal device.	Turn this unit off then on again.	21

Status message	Cause	Remedy	See page
Disconnected	Your USB memory device or USB portable audio player has been disconnected from the USB port of this unit.	Check the connection between this unit and your USB memory device or USB portable audio player.	—
	There is a problem with the signal path from your USB memory device or USB portable audio player to this unit.	Turn off this unit and reconnect your USB memory device or USB portable audio player to the USB port of this unit.	43
		Try resetting your USB memory device or USB portable audio player.	—
Access error	This unit cannot access your USB memory device or USB portable audio player.	Try another USB memory device or USB portable audio player.	—
	There is a problem with the signal path from your USB memory device or USB portable audio player to this unit.	Turn off this unit and reconnect your USB memory device or USB portable audio player to the USB port of this unit.	43
		Try resetting your USB memory device or USB portable audio player.	—
Unable to play	No varied data is detected.	Try another USB memory device or USB portable audio player.	—

■ **Remote control**

Problem	Cause	Remedy	See page
The remote control does not work nor function properly.	Wrong distance or angle.	The remote control functions within a maximum range of 6 m (20 ft) and no more than 30 degrees off-axis from the front panel.	23
	Direct sunlight or lighting (from an inverter type of fluorescent lamp, etc.) is striking the remote control sensor of this unit.	Reposition this unit.	—
	The batteries are weak.	Replace all batteries.	3
	The remote control code is not correctly set.	Set the remote control code correctly using "List of remote control codes" at the end of this manual.	59
		Try setting another code for the same manufacturer using "List of remote control codes" at the end of this manual.	59
	Even if the remote control code is correctly set, there are some models that do not respond to the remote control.		

■ **Resetting the system**

Use this feature to reset all the parameters of this unit to the initial factory settings.

1 Press ①STANDBY/ON on the front panel to set this unit to the standby mode.

2 Press and hold ⑩TONE CONTROL and then press ①STANDBY/ON to turn on this unit.

The advanced setup menu appears in the front panel display.

3 Press ⑫STRAIGHT repeatedly to select "RESET".

Select "CANCEL" to cancel the initialization procedure without making any changes.

4 Press ①STANDBY/ON to confirm your selection and set this unit to the standby mode.

Notes

- This procedure completely resets all the parameters of this unit including the "SET MENU" parameters. However, the advanced setup menu parameters will not be initialized.
- The initial factory settings are activated next time you turn on this unit.

☼

To cancel the initialization procedure at any time without making any changes, press ⑫STRAIGHT repeatedly to select "CANCEL" and then press ①STANDBY/ON.

ADDITIONAL INFORMATION

English

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Glossary

◼ Audio information

Dolby Digital

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

Dolby Pro Logic II

Dolby Pro Logic II is an improved technique used to decode vast numbers of existing Dolby Surround sources. This new technology enables a discrete 5-channel playback with 2 front left and right channels, 1 center channel, and 2 surround left and right channels instead of only 1 surround channel for conventional Pro Logic technology. There are three modes available: "Music mode" for music sources, "Movie mode" for movie sources and "Game mode" for game sources.

Dolby Surround

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

DTS Digital Surround

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

LFE 0.1 channel

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

PCM (Linear PCM)

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

Sampling frequency and number of quantized bits

When digitizing an analog audio signal, the number of times the signal is sampled per second is called the sampling frequency, while the degree of fineness when converting the sound level into a numeric value is called the number of quantized bits. The range of rates that can be played back is determined based on the sampling rate, while the dynamic range representing the sound level difference is determined by the number of quantized bits. In principle, the higher the sampling frequency, the wider the range of frequencies that can be played back, and the higher the number of quantized bits, the more finely the sound level can be reproduced.

■ Sound field program information

CINEMA DSP

Since the Dolby Surround and DTS systems were originally designed for use in movie theaters, their effect is best felt in a theater having many speakers designed for acoustic effects. Since home conditions, such as room size, wall material, number of speakers, and so on, can differ so widely, it is inevitable that there are differences in the sound heard. Based on a wealth of actually measured data, Yamaha CINEMA DSP uses Yamaha original DSP technology to combine Dolby Pro Logic, Dolby Digital and DTS systems to provide the audiovisual experience of movie theater in the listening room of your own home.

SILENT CINEMA

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

Virtual CINEMA DSP

Yamaha has developed a Virtual CINEMA DSP algorithm that allows you to enjoy DSP surround effects even without any surround speakers by using virtual surround speakers. It is even possible to enjoy Virtual CINEMA DSP using a minimal two-speaker system that does not include a center speaker.

■ Video information

Component video signal

With the component video signal system, the video signal is separated into the Y signal for the luminance and the P_B and P_R signals for the chrominance. Color can be reproduced more faithfully with this system because each of these signals is independent. The component signal is also called the "color difference signal" because the luminance signal is subtracted from the color signal. A monitor with component input jacks is required in order to output component signals.

Composite video signal

With the composite video signal system, the video signal is composed of three basic elements of a video picture: color, brightness and synchronization data. A composite video jack on a video component transmits these three elements combined.

S-video signal

With the S-video signal system, the video signal normally transmitted using a pin cable is separated and transmitted as the Y signal for the luminance and the C signal for the chrominance through the S-video cable. Using the S VIDEO jack eliminates video signal transmission loss and allows recording and playback of even more beautiful images.

■ HDMI

HDMI (High-Definition Multimedia Interface) is the first industry-supported, uncompressed, all-digital audio/video interface. Providing an interface between any source (such as a set-top box or AV receiver) and an audio/video monitor (such as a digital television), HDMI supports standard, enhanced or high-definition video as well as multi-channel digital audio using a single cable. HDMI transmits all ATSC HDTV standards and supports 8-channel digital audio, with bandwidth to spare to accommodate future enhancements and requirements. When used in combination with HDCP (High-bandwidth Digital Content Protection), HDMI provides a secure audio/video interface that meets the security requirements of content providers and system operators. For further information on HDMI, visit the HDMI website at "http://www.hdmi.org/".

■ MP3

One of the audio compression methods used by MPEG. It employs the irreversible compression method, which achieves a high compression rate by thinning out the data of hardly audible part to the human ears. It is said to be capable of compressing the data quantity by about 1/11 (128 kbps) while maintaining a similar audio quality to music CD.

■ WAV

Windows standard audio file format, which defines the method of recording the digital data obtained by converting audio signals. It does not specify the compression (coding) method so a desired compression method can be used with it. By default, it is compatible with the PCM method (no compression) and some compression methods including the ADPCM method.

■ WMA

An audio compression method developed by Microsoft Corporation. It employs the irreversible compression method, which achieves a high compression rate by thinning out the data of hardly audible part to the human ears. It is said to be capable of compressing the data quantity by about 1/22 (64 kbps) while maintaining a similar audio quality to music CD.

ADDITIONAL INFORMATION

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Specifications

AUDIO SECTION

- Minimum RMS Output Power for Front, Center, Surround
  1 kHz, 0.9% THD, 8 Ω .... 100 W

- Maximum Power for Front, Center, Surround (JEITA)
  1kHz, 10% THD, 8 Ω .... 135 W

- Dynamic Power
  (IHF, 8/6/4/2 Ω) .... 110/130/160/180 W

- Dynamic Headroom
  8 Ω .... 0.41 dB

- Maximum Input Signal
  CD, etc. Effect On, 1 kHz, 0.5% THD .... 2.0 V or more

- Frequency Response
  CD, etc. to Front L/R .... 10 Hz to 100 kHz, –3 dB

- Total Harmonic Distortion
  (1 kHz, 50 W, Front L/R, 8 Ω) .... 0.06% or less

- Signal to Noise Ratio (IHF-A Network)
  CD (200 mV) to Front L/R, Effect Off .... 98 dB or more
  CD (250 mV) to Front L/R, Effect Off .... 100 dB or more

- Residual Noise (IHF-A Network)
  Front L/R .... 150 μV or less

- Channel Separation (1 kHz/10 kHz)
  CD, etc. (5.1 kΩ terminated) to Front L/R
  .... 60 dB/45 dB or more

- Tone Control (Front L/R)
  BASS Boost/Cut .... ±10 dB/100 Hz
  TREBLE Boost/Cut .... ±10 dB/20 kHz

- Phones Output .... 400 mV/470 Ω

- Input Sensitivity/Input Impedance
  CD, etc. .... 200 mV/47 kΩ
  MULTI CH INPUT .... 200 mV/47 kΩ

- Output Level/Output Impedance
  AUDIO OUT (REC) .... 200 mV/1.2 kΩ
  SUBWOOFER OUTPUT .... 4 V/1.2 kΩ

- Filter Characteristics (fc=40/60/80/90/100/110/120/160/200 Hz)
  H.P.F.
    (FRONT SP, CENTER SP, SUR. L/R SP: SMALL/SML)
    ....12 dB/oct.
  L.P.F. (Subwoofer) ....24 dB/oct.

VIDEO SECTION

- Video Signal Type (Gray back) .... NTSC

- Signal Level
  Composite .... 1 Vp-p/75 Ω
  S-video .... 1 Vp-p/75 Ω (Y), 0.286 Vp-p/75 Ω (C)
  Component .... 1 Vp-p/75 Ω (Y), 0.7 Vp-p/75 Ω (PB/PR)

- Signal to Noise Ratio .... 50 dB or more

- Maximum Input Level .... 1.5 Vp-p or more

- Frequency Response (MONITOR OUT)
  Component Signal .... 5 Hz to 60 MHz, –3 dB

FM SECTION

- Tuning Range .... 87.5 to 107.9 MHz

- 50 dB Quieting Sensitivity (IHF, 100% mod.)
  Mono .... 2.8 μV (20.2 dBf)

- Signal to Noise Ratio (IHF)
  Mono/Stereo .... 73 dB/70 dB

- Harmonic Distortion (1 kHz)
  Mono/Stereo 0.5%/0.5%

- Antenna Input (unbalanced) .... 75 Ω

AM SECTION

- Tuning Range .... 530 to 1710 kHz

GENERAL

- Power Supply .... 120 V AC, 60 Hz

- Power Consumption .... 240 W/320 VA

- Standby Power Consumption .... 0.8 W or less

- AC Outlets .... 2 (Total 100 W maximum)

- Dimensions (W x H x D).................................. 435 x 151 x 318 mm
  (17-1/8" x 5-15/16" x 12-1/2")

- Weight .... 8.1 kg (17 lbs 14 oz)

* Specifications are subject to change without notice.

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ADDITIONAL
INFORMATION

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List of remote control codes

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VORTEC	0213, 0217
VOXSON	0205, 0210, 0211, 0213
WALTHAM	0207, 0212
WARDS	0057, 0058, 0060, 0061, 0063
WATSON	0213, 0217, 0218
WATT RADIO	0200, 0207, 0212, 0215
WEGA	0205
WELTBLICK	0213, 0217
WESTON	0215
WHITE WESTINGHOUSE	0008, 0200, 0207, 0217
WINCOM	0055, 0056
YAMAHA	0000, 0001, 0002, 0003, 0005, 0060, 0061
YAMISHI	0218
YOKO	0200, 0206, 0207, 0208, 0209, 0213, 0217, 0218
YORX	0209, 0218
ZANUSSI	0210
ZENITH	0058, 0060, 0100, 0105, 0119, 0121, 0154

TV/DVD COMBO

Brand	Codes
AIWA	0139, 2055

Brand	Codes
APEX	0132, 2049
BROKSONIC	0138, 2060
BUSH	0230, 2112
JVC	0136, 2053
PANASONIC	0137, 2054, 0254, 2110
RCA	0133, 0135, 2050, 2051
SYLVANIA	0134, 2052
THOMSON	0226, 2109
TOSHIBA	0131, 2048, 0231, 2111

TV/DVD/VCR COMBO

Brand	Codes
PANASONIC	0141, 1040, 2057
SAMSUNG	0241, 1070, 2113
SHARP	0143, 1028, 2059
SYLVANIA	0142, 1041, 2058
TOSHIBA	0140, 1029, 2056

TV/VCR COMBO

Brand	Codes
AIWA	0237, 1066
BUSH	0237, 1066
DAEWOO	0155, 0238, 1038, 1067
GE	0147, 1030
GOODMANS	0240, 1069
GRUNDIG	0236, 1062
HITACHI	0156, 1039
JVC	0153, 1036
MAGNAVOX	0150, 1033
ORION	0235, 1065
PANASONIC	0151, 1034
PHILIPS	0150, 0232, 0233, 1033, 1062, 1063
QUASAR	0152, 1035
RCA	0149, 1032
ROADSTAR	0237, 1066
SAMSUNG	0144, 0239, 1027, 1068
SHARP	0145, 1028
SONY	0234, 1064
SYLVANIA	0148, 1031
TATUNG	0237, 1066
TOSHIBA	0146, 0237, 1029, 1066
ZENITH	0154, 1037

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Brand	Codes
JVC	1017, 1017, 2045, 2045
LG	1071, 2087
PANASONIC	1020, 1072, 2040, 2105
PHILIPS	1025, 2046
RCA	1022, 2042
SAMSUNG	1021, 1021, 2041, 2104
SHARP	1023, 1073, 2043, 2106
SONY	1019, 1074, 2039, 2107
TOSHIBA	1024, 1075, 2044, 2108
ZENITH	1026, 2047

VCR

Brand	Codes
ADMIRAL	1008, 1013
ADVENTURA	1005
AIWA	1005, 1042, 1043, 1044, 1066
AKAI	1007, 1043

Brand	Codes
AKIBA	1050
AKURA	1043, 1050
ALBA	1044, 1050
AMERICAN HIGH	1004
AMSTRAD	1042
ANITECH	1050
ASA	1045, 1046
ASHA	1002, 1014
ASUKA	1042, 1045, 1046, 1050
AUDIO DYNAMICS	1000
AUDIOVOX	1003
BAIRD	1042, 1043, 1047
BASIC LINE	1044, 1050
BAUR	1046
BEAUMARK	1002, 1014
BELL & HOWELL	1001
BLAUPUNKT	1046, 1048
BROKSONIC	1012, 1013
BUSH	1044, 1050, 1066
CALIX	1003
CANDLE	1002, 1003
CANON	1004
CCE	1006
CGE	1042, 1043
CIMLINE	1044, 1050
CITIZEN	1002, 1003
COLORTYME	1000
COLT	1006
CRAIG	1002, 1003, 1006, 1014
CROWN	1050
CURTIS MATHES	1000, 1002, 1004, 1009
CYBERNEX	1002, 1014
DAEWOO	1005, 1038, 1061, 1067
DANSAI	1050
DANTAX	1044
DBX	1000
DE GRAAF	1046, 1049
DECCA	1042, 1043, 1046
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DIMENSIA	1009
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ELECTROHOME	1003
ELECTROPHONIC	1003
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FINLUX	1042, 1043, 1046, 1047, 1049
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FUJITSU	1042
FUNAI	1005, 1042
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GARRARD	1005
GBC	1050

GE	1002, 1004, 1009, 1014, 1030	MARANTZ	1000, 1001, 1004, 1046, 1051	PYE	1046, 1056	TELEFUNKEN	1043
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GELOSO	1050	MATSUI	1044, 1045	QUARTZ	1001, 1047	TENSAI	1042, 1045, 1050
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GRADIENTE	1005			RADIX	1003	TONSAI	1050
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YAMAHA	5005, 5006

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YAMAHA

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⊛YAMAHA

HTR-6050

The circled numbers and alphabets correspond to those in the Owner's Manual.
Les nombres et lettres dans un cercle correspondent à ceux du mode d'emploi.

■ **Front panel/Face avant**
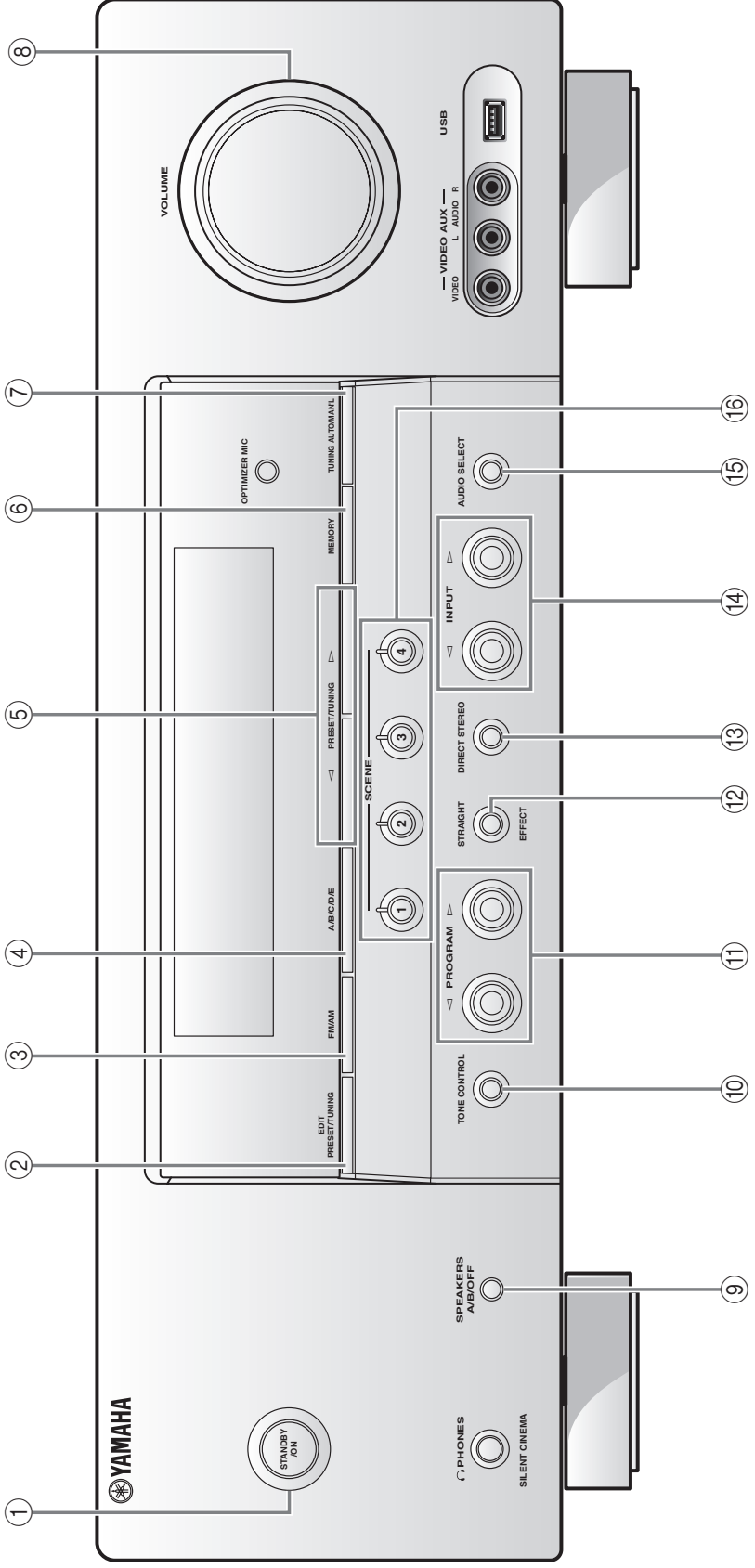
■ Remote control/Boîtier de télécommande