



# R-N500

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*Network Receiver*

OWNER'S MANUAL

## 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. For proper ventilation, allow the following minimum clearances.  
Top: 30 cm (11-3/4 in)  
Rear: 20 cm (7-7/8 in)  
Sides: 20 cm (7-7/8 in)
- 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 an 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 objects 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 cable.
- 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 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 Be sure to read the “Troubleshooting” section in the owner’s manual on common operating errors before concluding that this unit is faulty.
- 17 Before moving this unit, press  $\phi$  downward to turn off this unit and then disconnect the AC power plug from the AC wall outlet.
- 18 Condensation will form when the surrounding temperature changes suddenly. Disconnect the power cable from the outlet, then leave this unit alone.
- 19 When using this unit for a long time, this unit may become warm. Turn the system off, then leave this unit alone for cooling.
- 20 Install this unit near the wall outlet and where the AC power plug can be reached easily.
- 21 The batteries shall not be exposed to excessive heat such as sunshine, fire or the like. When you dispose of batteries, follow your regional regulations.
- 22 Excessive sound pressure from earphones and headphones can cause hearing loss.

As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if you set this unit to standby mode by  $\phi$ . In this state, this unit is designed to consume a very small quantity of power.

### WARNING

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

### CAUTION

Danger of explosion if battery is incorrectly replaced.  
Replace only with the same or equivalent type.



This label is required to be attached to a product of which the temperature of the top cover may be hot during operation.

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INTRODUCTION

PREPARATION

BASIC OPERATION


ADVANCED OPERATION

ADDITIONAL INFORMATION

## Useful features

This unit allows you to:

<b>Play back music from your iPod and USB devices</b>	➔ p.21, 23
<b>Play back music from network sources (PC/NAS, AirPlay)</b>	➔ p.25, 28
<b>Listen to network streaming services</b>	➔ p.27, 29
<b>Listen to FM and AM radio stations</b>	➔ p.17
<b>Boost bass sounds by connecting a subwoofer</b>	➔ p.10
<b>Configure speaker impedance</b>	➔ p.11
<b>Use this unit's remote control to operate other components such as a CD player, BD/DVD player or TV</b>	➔ p.40
<b>Use this unit to eco mode (power saving function)</b>	➔ p.37

-  indicates a tip for your operation.
- This manual explains operations using the supplied remote control.
- This manual describes all the “iPod”, “iPhone” and “iPad” as the “iPod”. “iPod” refers to “iPod”, “iPhone” and “iPad”, unless otherwise specified.

### Easy operation and wireless music playback from iPhone or Android device.

By using the application for smartphone /tablet “NP Controller”, you can control the unit from an iPhone, iPad, iPod touch or Android devices.

#### Features

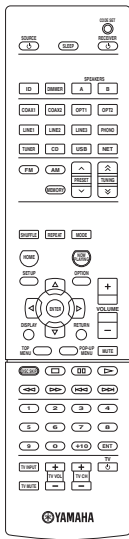
- Basic operations such as turning the power on/off and adjusting the volume
- Switching the input source
- Displaying FM tuner information
- Selecting songs and starting/stopping playback
- Playing back music from the iPhone or Android device
- To download the application or see the latest information, access the App Store or Google Play and search for “NP Controller.”

For details, please visit Yamaha website.

# Supplied accessories

Check that the following accessories are supplied with the product.

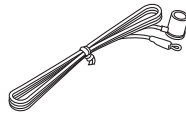
Remote control



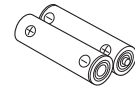
AM antenna



FM antenna



Batteries (x2)  
(AAA, R03, UM-4)

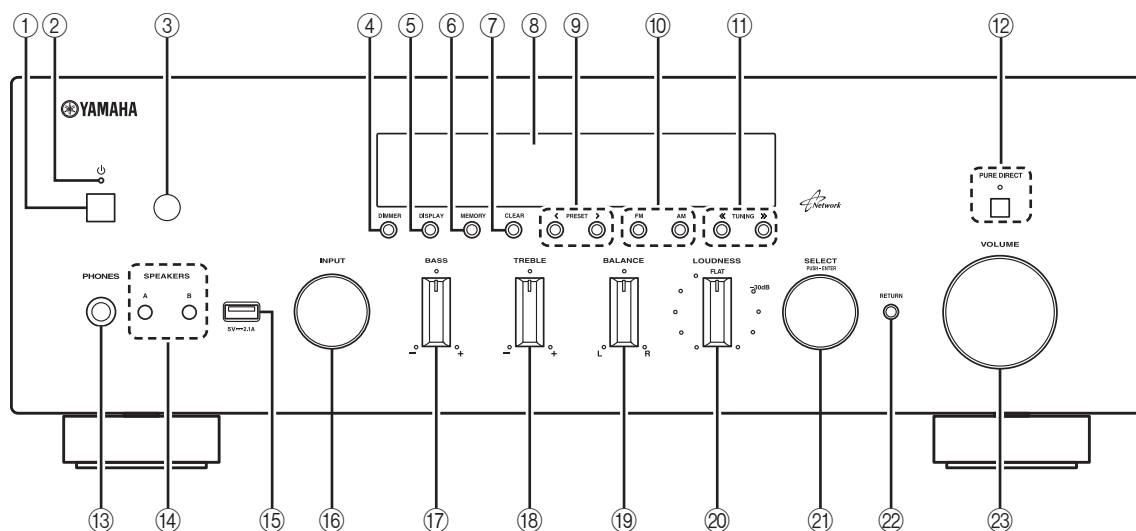


## ■ Notes on remote controls and batteries

- 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 conditions:
  - places of high humidity, such as near a bath
  - places of high temperatures, such as near a heater or stove
  - places of extremely low temperatures
  - dusty places
- Insert batteries according to the polarity markings (+ and -).
- Change all batteries if you notice the operation range of the remote control narrows.
- If the batteries run out, immediately remove them from the remote control to prevent an explosion or acid leak.
- If you find leaking batteries, discard the batteries immediately, taking care not to touch the leaked material. If the leaked material comes into contact with your skin or gets into your eyes or mouth, rinse it away immediately and consult a doctor. Clean the battery compartment thoroughly before installing new batteries.
- Do not use old batteries together with new ones. This may shorten the life of the new batteries or cause old batteries to leak.
- 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.
- Before inserting new batteries, wipe the battery compartment clean.
- Keep the batteries in a location out of reach of children. Batteries can be dangerous if a child were to put in his or her mouth.
- If the batteries grow old, the effective operation range of the remote control decreases considerably. If this happens, replace the batteries with new one as soon as possible.
- If you plan not to use the unit for a long period of time, remove the batteries from the unit. Otherwise, the batteries will wear out, possibly resulting in a leakage of battery liquid that may damage the unit.
- Do not throw away batteries with general house waste. Dispose of them correctly in accordance with your local regulations.

# Controls and functions

## Front panel



### ① **⏻ (power)**

Turns on/off (standby) the unit.

#### **Note**

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

### ② **Power indicator**

Lights up as follows:

Brightly lit: Power is on

Dimly lit: Standby mode

### ③ **Remote control sensor**

Receives infrared signals from the remote control.

#### **Note**

Switch the remote control ID between ID1 and ID2 when using multiple Yamaha receivers or amplifiers (p.38).

### ④ **DIMMER**

Changes the brightness level of the front display. Choose brightness from 5 levels by pressing this button repeatedly.



This setting is retained even if you turn off this unit.

### ⑤ **DISPLAY**

Selects the information displayed on the front display (p.33).

### ⑥ **MEMORY**

Stores the current FM/AM station as a preset when TUNER is selected as the input source (p.18).

### ⑦ **CLEAR**

Clears a FM/AM preset station when TUNER is selected as the input source (p.19).

### ⑧ **Front display**

Shows information about the operational status of this unit.

### ⑨ **PRESET </>**

Selects a preset FM/AM station when TUNER is selected as the input source (p.19).

### ⑩ **FM and AM keys**

Switch between FM and AM (p.17).

### ⑪ **TUNING <</>**

Selects the tuning frequency when TUNER is selected as the input source (p.17).

### ⑫ **PURE DIRECT and indicator**

Allows you to listen to a source in the purest possible sound (p.14). The indicator above it lights up and the front display turns off when this function is turned on.

### ⑬ **PHONES jack**

Outputs audio to your headphones for private listening.

### ⑭ **SPEAKERS A/B**

Turns on or off the speaker set connected to the SPEAKERS A and/or SPEAKERS B terminals on the rear panel each time the corresponding button is pressed.

### ⑮ **USB jack**

For connecting a USB storage device (p.23) or an iPod (p.21).

**⑩ INPUT selector**

Selects the input source you want to listen to.

**⑪ BASS control**

Increases or decreases the low frequency response. The center position produces a flat response (p.15).

**⑫ TREBLE control**

Increases or decreases the high frequency response. The center position produces a flat response (p.15).

**⑬ BALANCE control**

Adjusts the sound output balance of the left and right speakers to compensate for sound imbalances caused by speaker locations or listening room conditions (p.15).

**⑭ LOUDNESS control**

Retains a full tonal range at any volume level to compensate for the human ears' loss of sensitivity to high and low-frequency ranges at a low volume level (p.15).

**⑮ SELECT/ENTER (jog dial)**

Turn the dial to select a numeric value or setting, and press the dial to confirm.

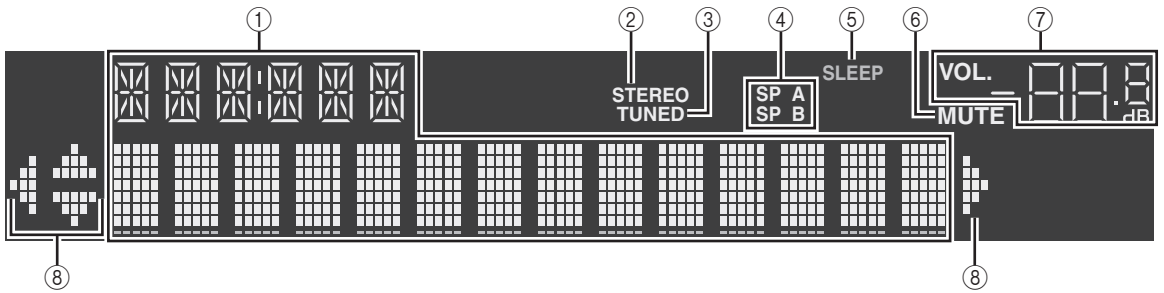
**⑯ RETURN**

Returns to the previous indication of the front display.

**⑰ VOLUME control**

Increases or decreases the sound output level.

## Front display



### ① Information display

Displays the current status (such as input name sound mode name).

You can switch the information that is displayed when you press DISPLAY (p.33).

### ② STEREO

Lights up when the unit is receiving a stereo FM radio signal.

### ③ TUNED

Lights up when the unit is receiving an FM/AM radio station signal.

### ④ Speaker indicators

“SP A” lights up when the SPEAKERS A output is enabled and “SP B” lights up when the SPEAKERS B output is enabled.

### ⑤ SLEEP

Lights up when the sleep timer is on.

### ⑥ MUTE

Blinks when audio is muted.

### ⑦ Volume indicator

Indicates the current volume.

### ⑧ Cursor indicators

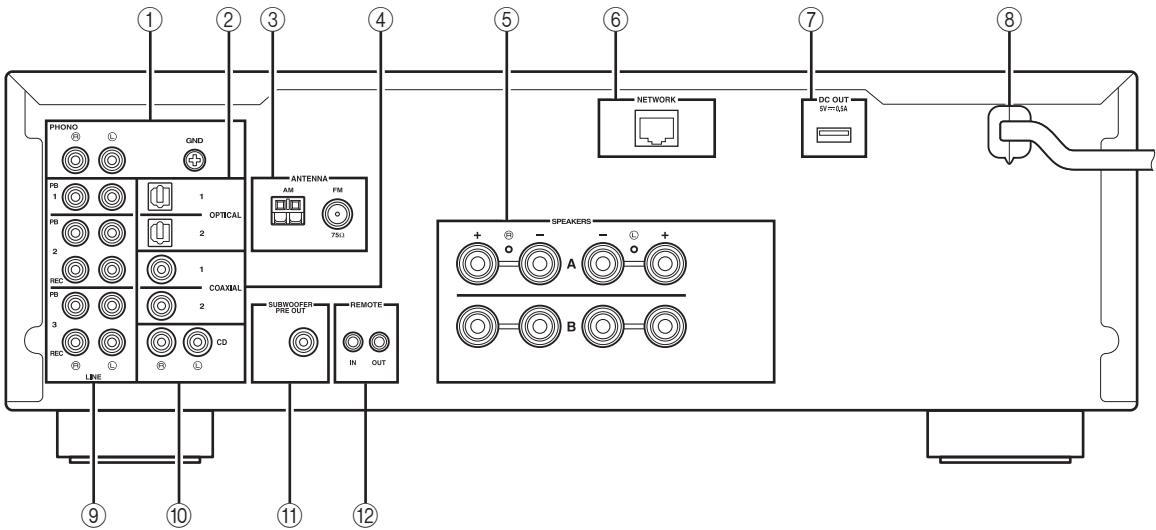
Indicate the remote control cursor keys currently operational.



You can change the brightness level of the front display by pressing DIMMER on the remote control (p.8).



## Rear panel



**① PHONO jacks**

For connecting to a turntable (p.10).

**② OPTICAL 1-2 jacks**

For connecting to audio components equipped with optical digital output (p.10).

**③ ANTENNA terminals**

For connecting to FM and AM antennas (p.12).

**④ COAXIAL 1-2 jacks**

For connecting to audio components equipped with a coaxial digital output (p.10).

**⑤ SPEAKERS terminals**

Used to connect speakers (p.11).

**⑥ NETWORK jack**

For connecting to a network (p.13).

**⑦ DC OUT jack**

For supplying power to a Yamaha AV accessory. For details on connections, refer to the instruction manual of the AV accessory.

**⑧ Power cable**

For connecting to an AC wall outlet (p.13).

**⑨ LINE 1-3 jacks**

For connecting to analog audio components (p.10).

**⑩ CD jacks**

For connecting to a CD player (p.10).

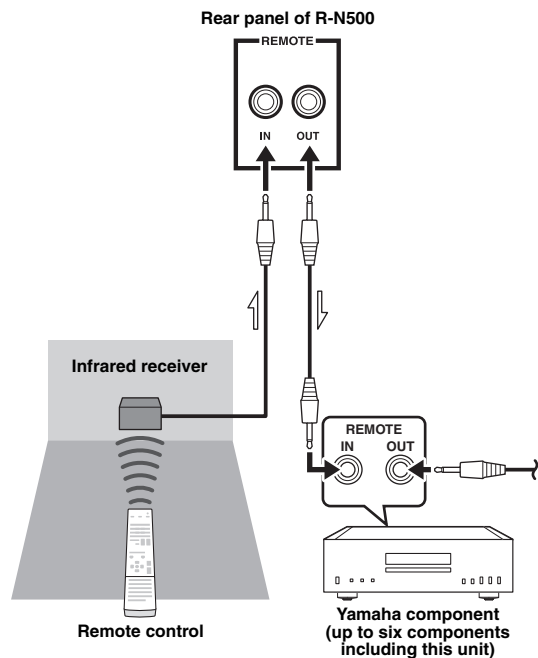
**⑪ SUBWOOFER PRE OUT jack**

For connecting to a subwoofer with built-in amplifier (p.10).

**⑫ REMOTE IN/OUT jacks**

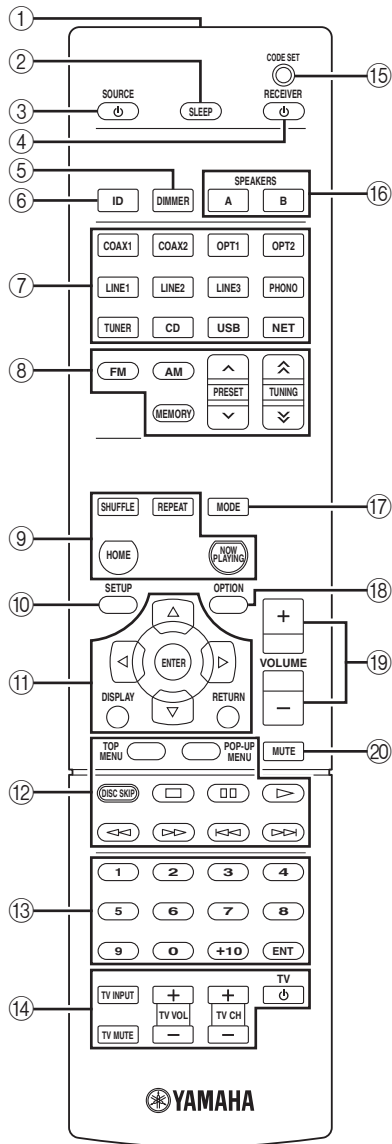
When you have another Yamaha component supporting remote connection, as this unit does, an infrared transmitter is not necessary. You can transmit remote signals by connecting an infrared receiver and the REMOTE IN jack of the other component to the REMOTE IN/OUT jacks of this unit, using cables with monaural miniplugs.

Up to six Yamaha components (including this unit) can be connected.



## Remote control

This section describes the function of each key on the remote control used to control this unit or other components made by Yamaha or other manufacturers.



### ① Infrared signal transmitter

Sends infrared signals.

### ② SLEEP

Sets the sleep timer (p.16).

### ③ SOURCE

Turns on/off an external device.

### ④ RECEIVER

Turns on/off (standby) the unit.

### ⑤ DIMMER

Changes the brightness level of the front display. Choose brightness from 5 levels by pressing this key repeatedly.

### ⑥ ID

Changes the remote control ID (p.38).

### ⑦ Input selection keys

Select an input source for playback.

**COAX 1-2** COAXIAL 1-2 jacks

**OPT 1-2** OPTICAL 1-2 jacks

**LINE 1-3** LINE 1-3 jacks

**PHONO** PHONO jacks

**TUNER** FM/AM tuner

**CD** CD jacks

**USB** USB jack

**NET** NETWORK jack (press repeatedly to select a desired network source)

### ⑧ Radio keys

Operate the FM/AM radio (p.17).

**FM** Switches to FM radio.

**AM** Switches to AM radio.

**MEMORY** Registers FM/AM radio stations as presets.

**PRESET** Select a preset station.

**TUNING** Select the radio frequency.

### ⑨ Contents operation keys

**SHUFFLE** Switches shuffle modes.

**REPEAT** Switches repeat modes.

**HOME** Shows top-level menu in the front display.

**NOW PLAYING** Shows the playback information in the front display.

### ⑩ SETUP

Displays the "SETUP" menu (p.35).

### ⑪ Menu operation keys

**Cursor keys** Select a menu or a parameter.

**ENTER** Confirms a selected item.

**RETURN** Returns to the previous state.

**DISPLAY** Switches information shown in the front display.

### ⑫ External device operation keys

Let you play back and select menus and perform other operations for external devices (p.41).

### ⑬ Numeric keys

Let you enter numerical values, such as radio frequencies.

### ⑭ TV operation keys

Let you select TV input and volume, and perform other TV operations (p.40).

### ⑮ CODE SET

Registers remote control codes of external devices on the remote control (p.40).

### ⑯ SPEAKERS A/B

Turns on and off the set of speakers connected to the SPEAKERS A and/or SPEAKERS B terminals on the rear panel of this unit when the corresponding key is pressed.

### ⑰ MODE

Switches between "Stereo" and "Mono" for FM radio reception (p.17).

Switches the iPod operation modes (p.22).

### ⑱ OPTION

Displays the "OPTION" menu (p.34).

### ⑲ VOLUME keys

Adjust the volume.

### ⑳ MUTE

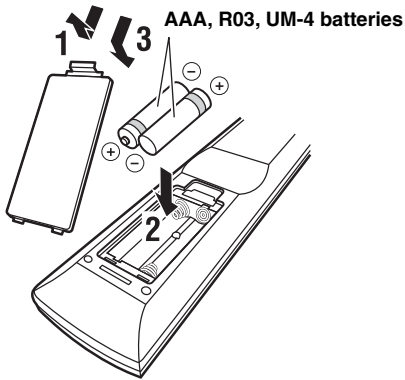
Mutes the audio output.



To operate external devices with the remote control, register a remote control code for each device before using (p.40).

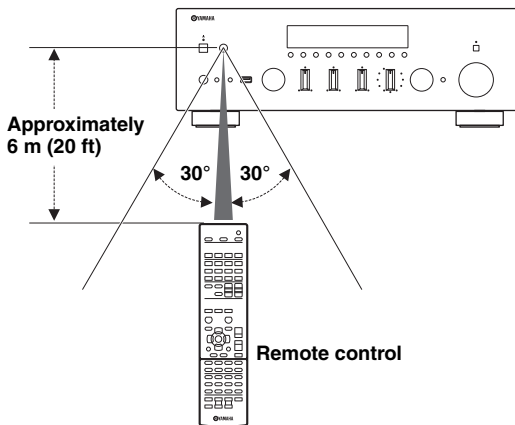
## Using the remote controls

### ■ Installing batteries



### ■ Operation range

The remote controls transmit a directional infrared beam. Be sure to aim the remote controls directly at the remote control sensor on the front panel of this unit.

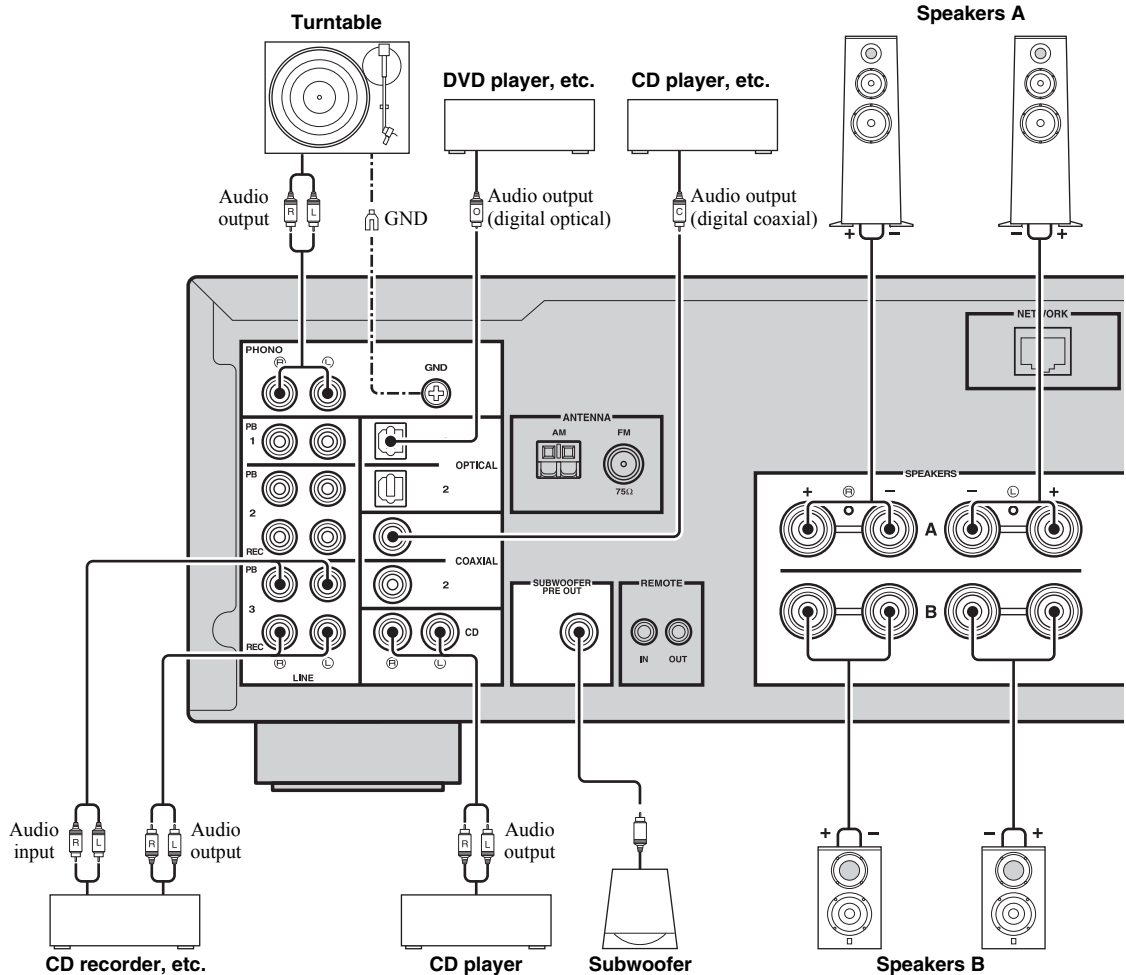


# Connections

## Connecting speakers and source components

### CAUTION

- Do not connect this unit or other components to the main power until all connections between components are complete.
- All connections must be correct: L (left) to L, R (right) to R, “+” to “+” and “-” to “-”. If the connections are faulty, no sound will be heard from the speakers, and if the polarity of the speaker connections is incorrect, the sound will be unnatural and lack bass. Refer to the owner’s manual for each of your components.
- Do not let bare speaker wires touch each other or any metal part of this unit. This could damage this unit and/or the speakers.



- The PHONO jacks are designed for connecting a turntable with an MM cartridge.
- Connect your turntable to the GND terminal to reduce noise in the signal. However, for some turntables, you may hear less noise without the GND connection.

### Connecting recording devices

You can connect audio recording devices to the LINE 2-3 (REC) jacks. This jack output analog audio signals selected as the input.

#### Notes

- Be sure to use the LINE 2-3 (REC) jacks only for connecting recording devices.
- If you select LINE2 as the input source, the audio output of the LINE 2 (REC) jacks will be muted. If you select LINE3 as the input source, the audio output of the LINE 3 (REC) jacks will be muted.

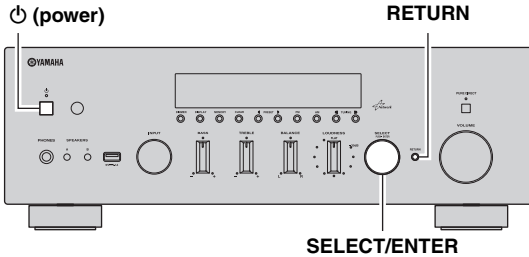
## Connecting the speakers

### Setting the speaker impedance

Under its default settings, the unit is configured for 8-ohm speakers. When connecting 4 to 6-ohm speakers, set the speaker impedance to “4 Ω MIN”.

**1** Before connecting speakers, connect the power cable to an AC wall outlet.

**2** While holding down RETURN on the front panel, press  $\odot$  (power).



**3** Check that “SP IMP.” is displayed on the front display.

The front display shows the text "SP IMP. . . 8ΩMIN".

**4** Press SELECT/ENTER to select “4 Ω MIN”.

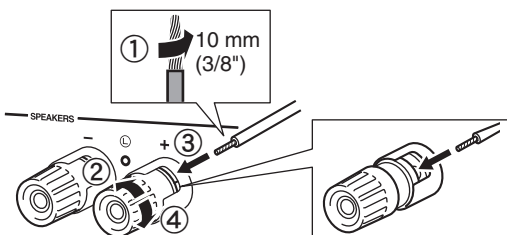
**5** Press  $\odot$  (power) to set the unit to turn off and remove the power cable from the AC wall outlet.

You are now ready to connect the speakers.

### Connecting speaker cables

Speaker cables have two wires. One is for connecting the negative (-) terminal of the unit and the speaker, and the other is for the positive (+) terminal. If the wires are colored to prevent confusion, connect the black wire to the negative and the other wire to the positive terminal.

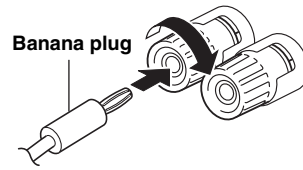
- ① Remove approximately 10 mm (3/8") of insulation from the ends of the speaker cable and twist the bare wires of the cable firmly together.
- ② Loosen the speaker terminal.
- ③ Insert the bare wires of the cable into the gap on the side (upper right or bottom left) of the terminal.
- ④ Tighten the terminal.



### Connecting via banana plug

(Australia model only)

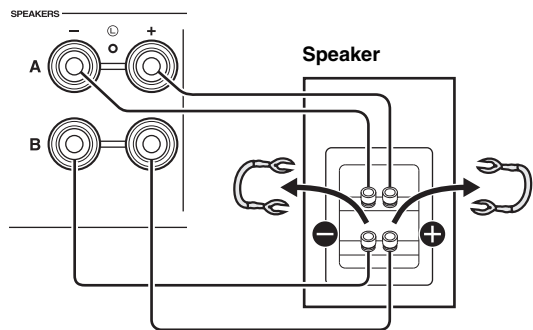
Tighten the knob and then insert the banana plug into the end of the corresponding terminal.



### Bi-wire connection

Bi-wire connection separates the woofer from the combined midrange and tweeter section. A bi-wire compatible speaker has four binding post terminals. These two sets of terminals allow the speaker to be split into two independent sections. With these connections, the mid and high frequency drivers are connected to one set of terminals and the low frequency driver to another set of terminals.

#### This unit



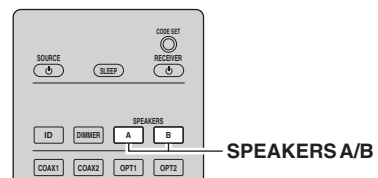
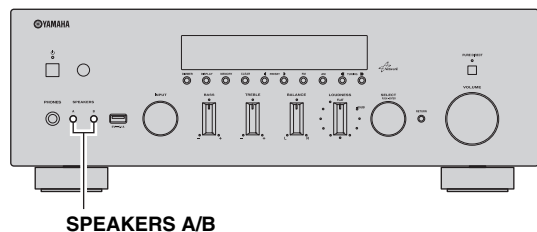
Connect the other speaker to the other set of terminals in the same way.

#### Note

When making bi-wire connections, remove the shorting bridges or cables on the speaker.



To use the bi-wire connections, press SPEAKERS A and SPEAKERS B on the front panel or on the remote control so that both SP A and B light up on the front display.

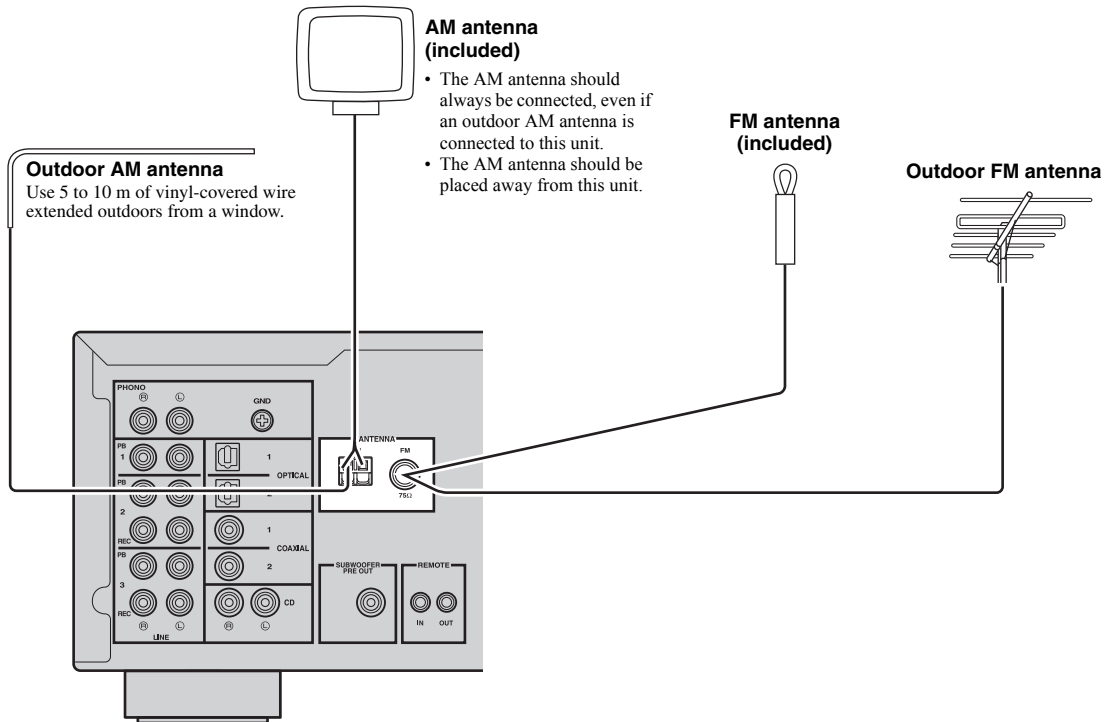


## Connecting the FM and AM antennas

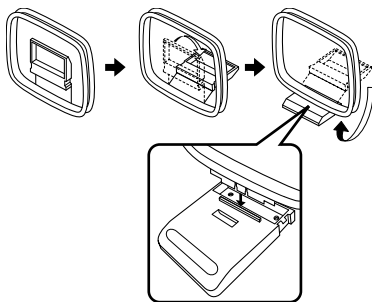
The antennas for receiving FM and AM broadcasts are included with this unit. In general, these antennas should provide sufficient signal strength. Connect each antenna correctly to the designated terminals.

### Note

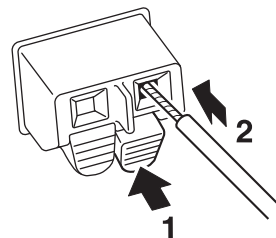
If you experience poor reception quality, install an outdoor antenna. Consult the nearest authorized Yamaha dealer or service center about outdoor antennas.



### ■ Assembling the supplied AM antenna



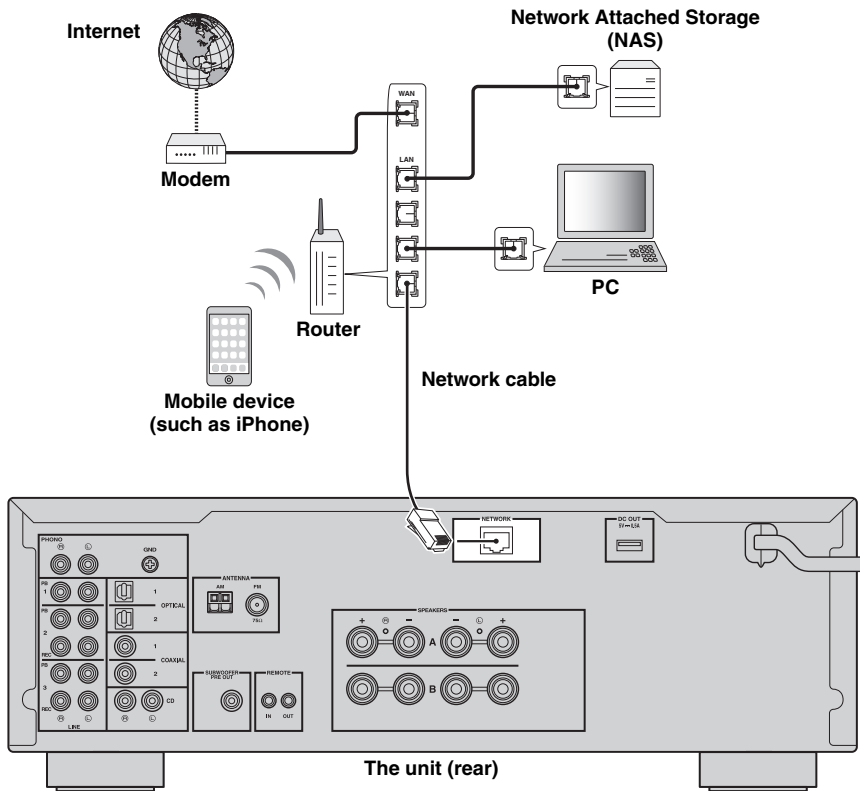
### ■ Connecting the wires of the AM antenna



## Connecting to a network

You can enjoy Internet radio or music files stored on media servers, such as PCs and Network Attached Storage (NAS), on the unit.

Connect the unit to your router with a commercially-available STP network cable (CAT-5 or higher straight cable).



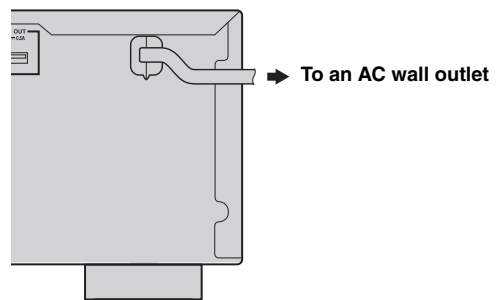
- If you are using a router that supports DHCP, you do not need to configure any network settings for the unit, as the network parameters (such as the IP address) will be assigned automatically to it. You only need to configure the network settings if your router does not support DHCP or if you want to configure the network parameters manually (p.36).
- You can check whether the network parameters (such as IP address) are properly assigned to the unit in “Information” (p.36) in the “SETUP” menu.

### Notes

- Some security software installed on your PC or the firewall settings of network devices (such as a router) may block the access of the unit to the network devices or the Internet. In these cases, configure the security software or firewall settings appropriately.
- Each server must be connected to the same subnet as the unit.
- To use the service via the Internet, broadband connection is strongly recommended.

## Connecting power cable

After all the connections are complete, plug in the power cable.



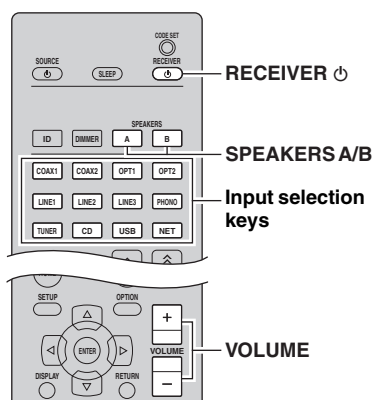
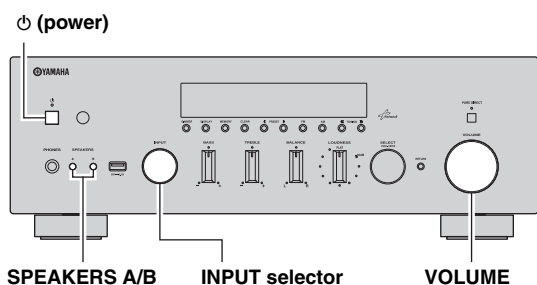
# Playback

## 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 CD player that does not support DTS, only noise will be heard, and this noise 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.

## Playing a source



**1** Press **power** on the front panel (or **RECEIVER** on the remote control) to turn on this unit.

**2** Rotate the **INPUT selector** on the front panel (or press one of the input selection keys on the remote control) to select the input source you want to listen to.

**3** Press **SPEAKERS A** and/or **SPEAKERS B** on the front panel or on the remote control to select speakers A and/or speakers B.

When speaker set A or speaker set B are turned on, SP A or SP B is displayed on the front display accordingly (p.6).

## Notes

- When one set of speakers is connected using bi-wire connections, or when using two sets of speakers simultaneously (A and B), make sure SP A and SP B are displayed on the front display.
- When listening with headphones, turn off the speakers.

**4** Play the source.

**5** Rotate the **VOLUME** control on the front panel (or press **VOLUME +/-** on the remote control) to adjust the sound output level.

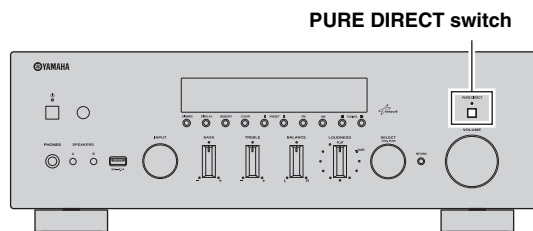


You can adjust the tonal quality by using the **BASS**, **TREBLE**, **BALANCE** and **LOUDNESS** controls or the **PURE DIRECT** switch on the front panel.

**6** Press **power** on the front panel again (or **RECEIVER** on the remote control) to finish using this unit and set it to standby mode.

## Using the PURE DIRECT switch

Routes input signals from your audio sources so that the input signals bypass the **BASS**, **TREBLE**, **BALANCE** and **LOUDNESS** controls, thus eliminating any alterations to the audio signals and creating the purest possible sound. The **PURE DIRECT** indicator lights up and the front display turns off after a few seconds.

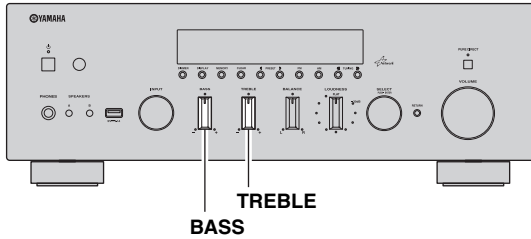


## Notes

- The **BASS**, **TREBLE**, **BALANCE**, and **LOUDNESS** controls do not function while the **PURE DIRECT** feature is turned on.
- This setting is retained even if you turn off this unit.



## ■ Adjusting the BASS and TREBLE controls



The BASS and TREBLE controls adjust high and low frequency response.

The center position produces a flat response.

### BASS

When you feel there is not enough bass (low frequency sound), rotate clockwise to boost. When you feel there is too much bass, rotate counterclockwise to suppress.

Control range: -10 dB to +10 dB (20 Hz)

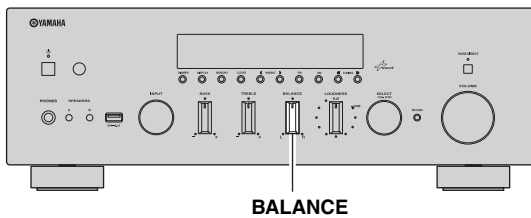
### TREBLE

When you feel there is not enough treble (high frequency sound), rotate clockwise to boost. When you feel there is too much treble, rotate counterclockwise to suppress.

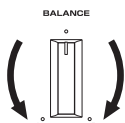
Control range: -10 dB to +10 dB (20 kHz)



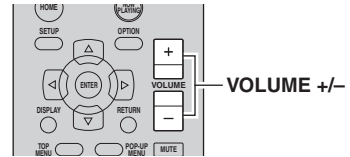
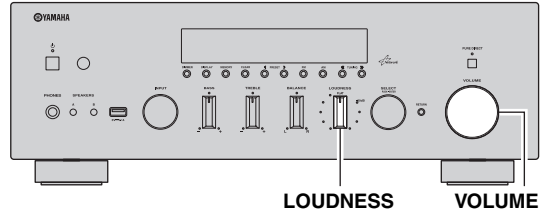
## ■ Adjusting the BALANCE control



The BALANCE control adjusts the sound output balance of the left and right speakers to compensate for sound imbalance caused by speaker locations or listening room conditions.



## ■ Adjusting the LOUDNESS control

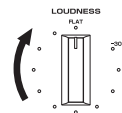


Retain a full tonal range at any volume level, thus compensating for the human ears' loss of sensitivity to high and low-frequency ranges at low volume.

### CAUTION

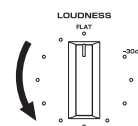
If the PURE DIRECT switch is turned on with the LOUDNESS control set at a certain level, the input signals bypass the LOUDNESS control, resulting in a sudden increase in the sound output level. To prevent your ears or the speakers from being damaged, be sure to press the PURE DIRECT switch after lowering the sound output level or after checking that the LOUDNESS control is properly set.

### 1 Set the LOUDNESS control to the FLAT position.



### 2 Rotate the VOLUME control on the front panel (or press VOLUME +/- on the remote control) to set the sound output level to the loudest listening level that you would listen to.

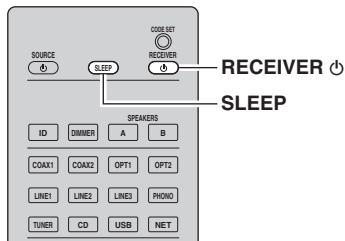
### 3 Rotate the LOUDNESS control until the desired volume is obtained.



After setting the LOUDNESS control, enjoy listening to music at your preferred volume level. If the effect of the LOUDNESS control setting is too strong or weak, readjust the LOUDNESS control.

## Using the sleep timer

Use this feature to automatically set this unit to standby mode after a certain amount of time. The sleep timer is useful when you are going to sleep while this unit is playing or recording a source.

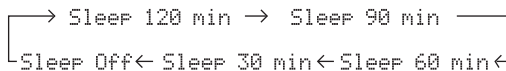


### Note

The sleep timer can only be set with the remote control.

### 1 Press SLEEP repeatedly to set the amount of time before this unit is set to standby mode.

Each time you press SLEEP, the front display changes as shown below.




The SLEEP indicator blinks while setting the amount of time for the sleep timer.



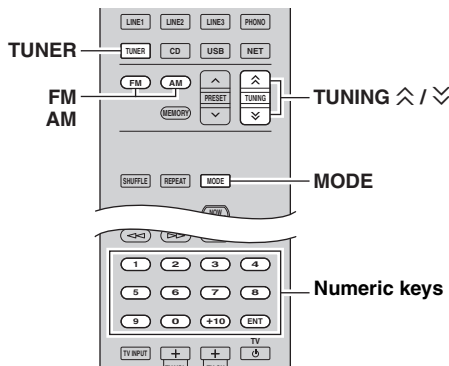
If the sleep timer is set, the SLEEP indicator on the front display lights up.



- To disable the sleep timer, select “Sleep Off”.
- The sleep timer setting can also be canceled by pressing RECEIVER  on the remote control to set this unit to standby mode.

# Listening to FM/AM radio

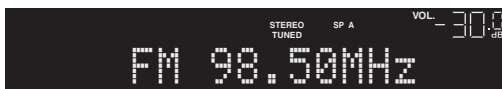
## FM/AM tuning



- 1 Press TUNER to select TUNER as the input source.**
- 2 Press FM or AM to select the reception band (FM or AM).**
- 3 Press and hold TUNING  $\wedge$  /  $\vee$  for more than 1 second to begin tuning.**  
Press  $\wedge$  to tune in to a higher frequency.  
Press  $\vee$  to tune in to a lower frequency.

The frequency of the received station is shown in the front display.

If a broadcast is being received, “TUNED” indicator on the front display will be lit. If a stereo broadcast is being received, the “STEREO” indicator will also lit.



Frequency

If the tuning search does not stop at the desired station because the station signals are weak, use the following keys to set a frequency.

### TUNING $\wedge$ / $\vee$ :

Increase/decrease the frequency.

### Numeric keys:

Enter a frequency directly. For example, to select 98.50 MHz, press “9”, “8”, “5” and “0” (or ENT).

### Notes

- When you press the numeric keys on the remote control during preset tuning, a preset number is selected. Set the tuning mode to frequency tuning mode using TUNING  $\wedge$  /  $\vee$  before pressing the numeric keys.

- “Wrong Station!” is displayed on the front display if you enter a frequency that is out of receivable range. Make sure that the entered frequency is correct.



When the signal reception for an FM radio station is unstable, switching to monaural may improve it.

### Improving FM reception

If the signal from the station is weak and the sound quality is not good, set the FM band reception mode to monaural mode to improve reception.

- 1 Press MODE repeatedly to select “Stereo” (automatic stereo mode) or “Mono” (monaural mode) when this unit is tuned in to an FM radio station.**

- When Mono is selected, FM broadcasts will be heard in monaural sound.
- When Stereo is selected and an FM station with a stereo broadcast is tuned in, the broadcast will be heard in stereo.

### Note

The STEREO indicator on the front panel lights up while listening to a station in stereo.

## Automatic preset tuning (FM stations only)

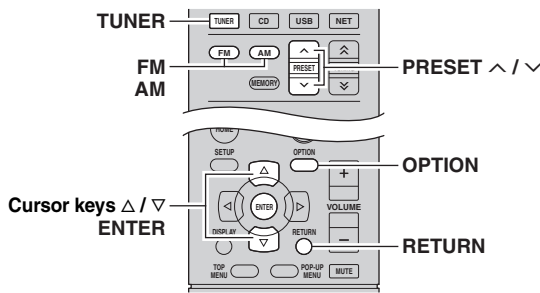
You can use the automatic preset tuning function to automatically register FM stations as presets. This function enables this unit to automatically tune in to FM stations that have a strong signal and store up to 40 of those stations in order. You can then easily recall any preset station by selecting its preset number.

### Notes

- If a station is registered to a preset number that already has a station registered to it, the previously registered station is overwritten.
- If the station you want to store is weak in signal strength, try using the manual preset tuning method.



- FM stations registered as presets using the automatic preset registration feature will be heard in stereo.
- (U.K. model only)  
Only Radio Data System broadcasting stations are stored automatically by the Auto Preset function.



- 1 Press **TUNER** to select **TUNER** as the input source.
- 2 Press **OPTION** on the remote control. The “OPTION” menu is displayed (p.34).
- 3 Press **Δ / ∇** to select “Auto Preset”, and then press **ENTER**.



This unit starts scanning the FM band about 5 seconds later from the lowest frequency upwards. To begin scanning immediately, hold down the ENTER key.



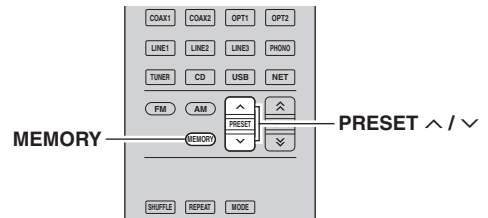
- Before scanning begins, you can specify the first preset number to be used by pressing PRESET  $\wedge/\vee$  or cursor key ( $\Delta/\nabla$ ) on the remote control.
- To cancel scanning, press FM, AM or RETURN.



When scanning is complete, “FINISH” is displayed and then the display returns to original state.

## Manual tuning preset

You can manually register up to 40 FM/AM stations (40 total). You can then easily recall any preset station by selecting its preset number.



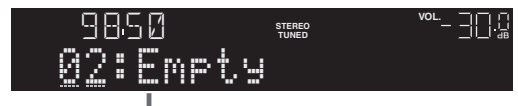
### ■ Registering a radio station manually

Select a radio station manually and register it to a preset number.

- 1 Follow “FM/AM tuning” (p.17) to tune into the desired radio station.
- 2 Hold down **MEMORY** for more than **2 seconds**.



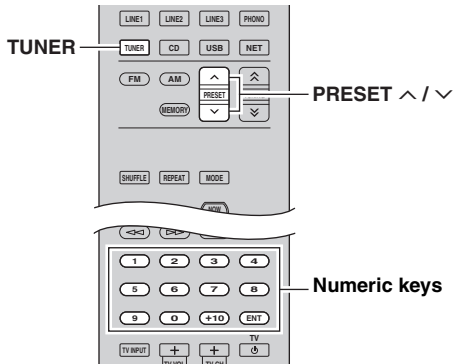
To select a preset number for registering, press MEMORY once after tuning into the desired radio station, press PRESET  $\wedge/\vee$  to select a preset number, and then press MEMORY again.



“Empty” (not in use) or the frequency currently registered

## Recalling a preset station

You can recall preset stations that were registered using automatic station preset or manual station preset.



**1** Press TUNER to select “TUNER” as the input source.

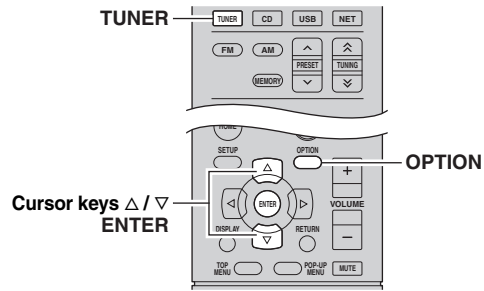
**2** Press PRESET  $\wedge$  /  $\vee$  to select a preset number.



- Preset numbers to which no stations are registered are skipped.
- “No Presets” is displayed if no stations are registered.
- You can directly select a preset number by pressing the numeric keys on the remote control while recalling a preset station. “Empty” is displayed on the display if you enter a preset number to which no station is registered. “Wrong Num.” is displayed if you enter an invalid number.
- When you press the numeric keys on the remote control during normal tuning, a frequency is entered. Set the tuning mode to preset tuning mode using PRESET  $\wedge$  /  $\vee$  before pressing numeric keys.

## Clearing a preset station

Clear radio stations registered to the preset numbers.



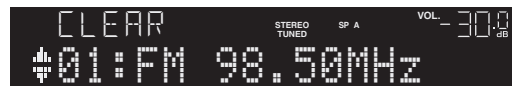
**1** Press TUNER to select “TUNER” as the input source.

**2** Press OPTION.

**3** Use the cursor keys to select “Clear Preset” and press ENTER.



**4** Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select a preset station to be cleared and press ENTER.



Preset station to be cleared

If the preset station is cleared, “Cleared” appears and then the next in-use preset number is displayed.



**5** Repeat step 4 until all desired preset stations are cleared.

**6** To exit from the menu, press OPTION.



You can clear a preset station from the front panel.

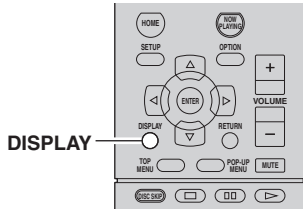
- ① Press CLEAR on the front panel.
- ② Rotate SELECT/ENTER to select the preset station that you want to clear.
- ③ Press SELECT/ENTER or CLEAR to clear the preset station.

## Radio Data System tuning

(U.K.model only)

Radio Data System is a data transmission system used by FM stations in many countries. The unit can receive various types of Radio Data System data, such as “Program Service”, “Program Type,” “Radio Text” and “Clock Time”, when it is tuned into a Radio Data System broadcasting station.

### ■ Displaying the Radio Data System information



#### 1 Tune into the desired Radio Data System broadcasting station.



We recommend using “Auto Preset” to tune into the Radio Data System broadcasting stations (p.18).

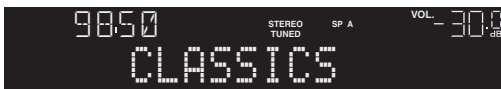
#### 2 Press DISPLAY.

Each time you press the key, the displayed item changes.



Item name

About 3 seconds later, the corresponding information for the displayed item appears.



Information

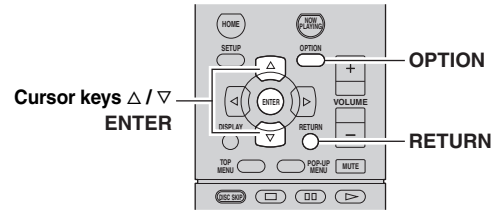
<b>Program Service</b>	Program service name
<b>Program Type</b>	Current program type
<b>Radio Text</b>	Information on the current program
<b>Clock Time</b>	Current time
<b>Frequency</b>	Frequency

#### Note

“Program Service”, “Program Type”, “Radio Text”, and “Clock Time” are not displayed if the radio station does not provide the Radio Data System service.

### ■ Receiving traffic information automatically

When “TUNER” is selected as the input source, the unit automatically receives traffic information. To enable this function, follow the procedure below to set the traffic information station.



#### 1 When “TUNER” is selected as the input source, press OPTION.

#### 2 Use the cursor keys to select “TrafficProgram” and press ENTER.

The traffic information station search will start in 5 seconds. Press ENTER again to start the search immediately.



- To search upward/downward from the current frequency, press the cursor keys (Δ/▽) while “READY” is displayed.
- To cancel the search, press RETURN.
- Texts in parentheses denote indicators on the front display.

The following screen appears for about 3 seconds when the search finishes.



Traffic information station (frequency)

#### Note

“TP Not Found” appears for about 3 seconds when no traffic information stations are found.

# Playing back iPod music

You can play back iPod music on the unit using a USB cable supplied with the iPod.

## Note

An iPod may not be detected by the unit or some features may not be compatible, depending on the model or software version of the iPod.

### Made for

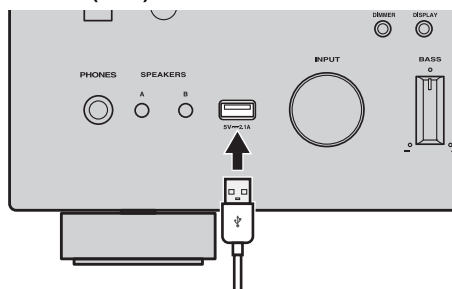
- iPod touch (1st, 2nd, 3rd, 4th and 5th generation)
- iPod nano (2nd, 3rd, 4th, 5th, 6th and 7th generation)
- iPhone 5, iPhone 4S, iPhone 4, iPhone 3GS, iPhone 3G, iPhone
- iPad (4th generation), iPad mini, iPad (3rd generation), iPad 2, iPad (as of August 2013)

## Connecting an iPod

Connect your iPod to the unit with the USB cable supplied with the iPod.

- 1 Connect the USB cable to the iPod.
- 2 Connect the USB cable to the USB jack.

The unit (front)



The iPod charges while it is connected to the unit. If you set the unit to standby mode while the iPod is charging, the iPod continues to charge up to 4 hours. If "NET Standby" (p.36) in the "SETUP" menu is set to "On", it continues to charge without limit.

## Note

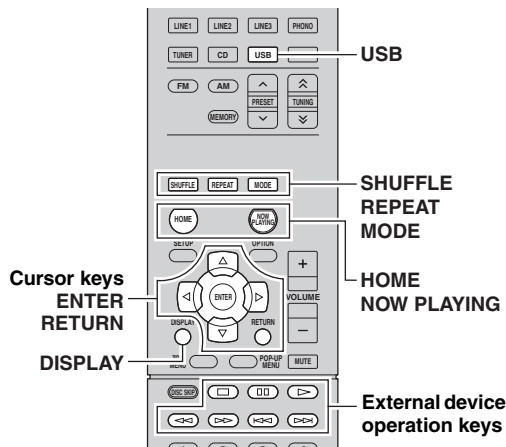
Disconnect the iPod from the USB jack when it is not in use.

## Playback of iPod content

Follow the procedure below to operate the iPod contents and start playback.

## Note

"\_" (underscore) will be displayed for characters not supported by the unit.



- 1 Press USB to select "USB" as the input source.



- 2 Use the cursor keys to select an item and press ENTER.

If a song is selected, playback starts and the playback information is displayed.



- To return to the previous state, press RETURN.
- If you press the DISPLAY repeatedly, you can switch the playback information on the front display (p.33).
- To operate the iPod manually to select content or control playback, switch to the simple play mode (p.22).

Use the following remote control keys to control playback.

External device operation keys	Function
	Resumes playback from pause.
	Stops playback.
	Stops playback temporarily.
	Skips forward/backward.
	Searches forward/backward (by holding down).
<b>HOME</b>	Displays the top menu of the iPod.
<b>NOW PLAYING</b>	Displays information about the song that's playing.

### ■ Operating the iPod itself or remote control (simple play)

#### 1 Press MODE to switch to the simple play mode.

Between the simple play mode, only the input name is displayed on the front display. If you confirm the playback information, see the iPod screen.



If you want to exit the simple play mode, press MODE again.

#### 2 Operate your iPod itself or the remote control to start playback.

Operational remote control keys	Function	
<b>Cursor keys</b>	Select an item.	
<b>ENTER</b>	Confirms the selection.	
<b>RETURN</b>	Returns to the previous state.	
<b>External device operation keys</b>		Starts playback or stops playback temporarily.
		Stops playback.
		Skips forward/backward.
		Searches forward/backward (while holding down).

### ■ Repeat/shuffle settings

You can configure the repeat/shuffle settings of your iPod.

#### 1 If the input source is “USB,” press REPEAT or SHUFFLE repeatedly to select the playback method.

Item	Setting	Function
<b>Repeat</b>	Off	Turns off the repeat function.
	One	Plays back the current song repeatedly.
	All	Plays back all songs repeatedly.
<b>Shuffle</b>	Off	Turns off the shuffle function.
	Songs	Plays back songs in random order.
	Albums	Plays back albums in random order.



- Repeat/shuffle can also be specified in the “OPTION” menu (p.34).
- The operation or display of repeat/shuffle may differ, depending on the type or software version of iPod used.



# Playing back music stored on a USB storage device

You can play back music files stored on a USB storage device on the unit. Refer to the instruction manuals for the USB storage device for more information.

The unit supports USB mass storage class devices (FAT16 or FAT32 format).

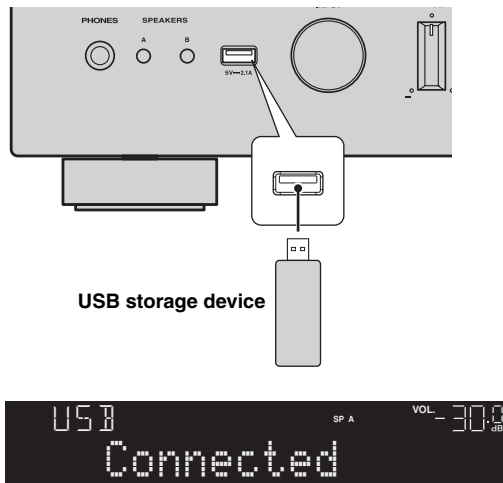
## Notes

- The unit supports WAV (PCM format only), MP3, WMA, MPEG-4 AAC and FLAC files (1- or 2-channel audio only).
- The unit is compatible with sampling rate of up to 192 kHz for WAV and FLAC files, and 48 kHz for other files.
- Some features may not be compatible, depending on the model or manufacturer of the USB storage device.
- Digital Rights Management (DRM) contents cannot be played back.

## Connecting a USB storage device

### 1 Connect the USB storage device to the USB jack.

The unit (front)



If the USB storage device contains many files, it may take time to load the them. In this case, “Loading...” appears in the front display.

## Notes

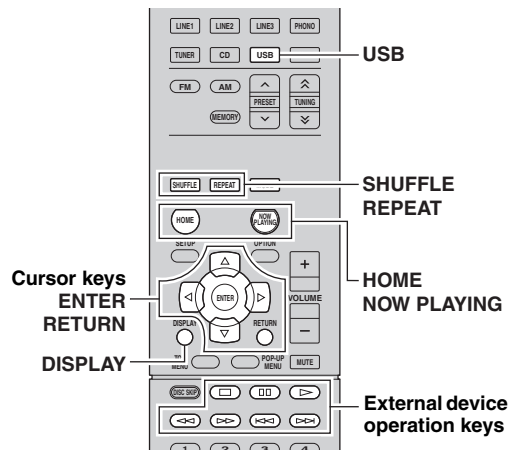
- Disconnect the USB storage device from the USB jack when it is not in use.
- Stop playback of the USB storage device before disconnect it from the USB jack.
- You cannot connect the PC to the USB jack of the unit.

## Playback of USB storage device contents

Follow the procedure below to operate the USB storage device contents and start playback.

## Note

“\_” (underscore) will be displayed for characters not supported by the unit.



### 1 Press USB to select “USB” as the input source.



### 2 Use the cursor keys to select an item and press ENTER.






If a song is selected, playback starts and the playback information is displayed.



## Notes

- To return to the previous state, press RETURN.
- If you press the DISPLAY repeatedly, you can switch the playback information on the front display (p.33).
- If you select a file that is not supported by this unit, a warning icon appears at top of the file name.

Use the following remote control keys to control playback.

External device operation keys	Function
	Resumes playback from pause.
	Stops playback.
	Stops playback temporarily.
	Skips forward/backward.
	
<b>HOME</b>	Displays the top menu of the USB device.
<b>NOW PLAYING</b>	Displays information about the song that's playing.

### ■ Repeat/shuffle settings

You can configure the repeat/shuffle settings for playback of USB storage device contents.

#### 1 If the input source is “USB,” press REPEAT or SHUFFLE repeatedly to select the playback method.

Item	Setting	Function
<b>Repeat</b>	Off	Turns off the repeat function.
	One	Plays back the current song repeatedly.
	All	Plays back all songs in the current album (folder) repeatedly.
<b>Shuffle</b>	Off	Turns off the shuffle function.
	On	Plays back songs in the current album (folder) in random order.



Repeat/shuffle can also be specified in the “OPTION” menu (p.34).

# Playing back music stored on media servers (PCs/NAS)

You can play back music files stored on your PC or DLNA-compatible NAS on the unit.

## Notes

- To use this function, the unit and your PC must be connected to the same router (p.13). You can check whether the network parameters (such as the IP address) are properly assigned to the unit in “Information” (p.36) in the “SETUP” menu.
- The unit supports playback of WAV (PCM format only), MP3, WMA, MPEG-4 AAC and FLAC files.
- The unit is compatible with sampling rates of up to 192 kHz for WAV and FLAC files, and 48 kHz for other files.
- To play back FLAC files, you need to install server software that supports sharing of FLAC files via DLNA on your PC or use a NAS that supports FLAC files.

## Setting the media sharing of music files

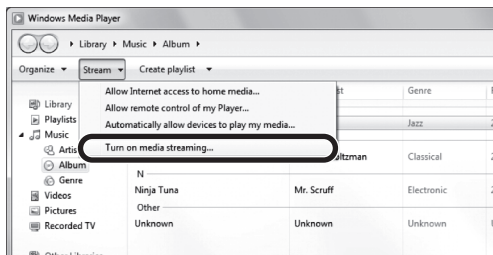
To play back music files in your computer with this unit, you need to make the media sharing setting between the unit and computer (Windows Media Player 11 or later). In here, setting with Windows Media Player in Windows 7 is taken as an example.

**1 Start Windows Media Player 12 on your PC.**

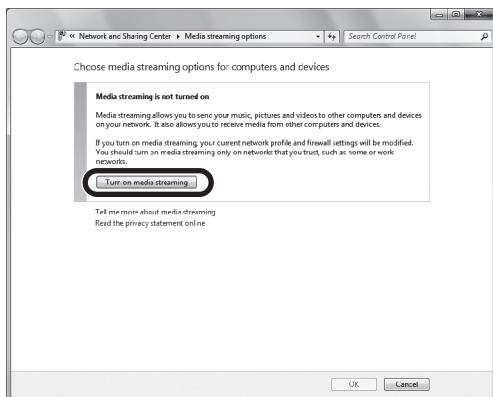
**2 Select “Stream”, then “Turn on media streaming.”**

The control panel window of your PC is shown.

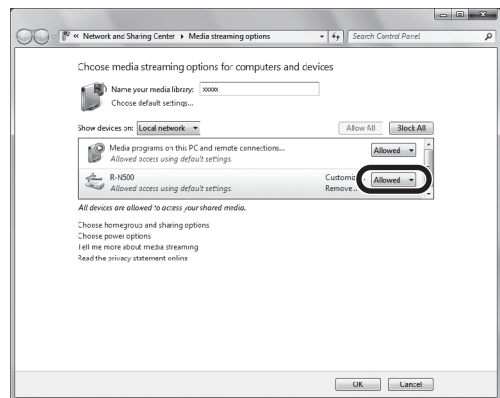
(Example of English version)



**3 Click “Turn on media streaming.”**



**4 Select “Allowed” from the drop-down list next to “R-N500”.**



**5 Click “OK” to exit.**



For details on media sharing settings, refer to Windows Media Player help.

• **For Windows Media Player 11**

- ① Start the Windows Media Player 11 on your PC.
- ② Select “Library” then “Media Sharing”.
- ③ Check the “Share my media to” box, select the “R-N500” icon, and click “Allow”.
- ④ Click “OK” to exit.

• **For a PC or a NAS with other DLNA server software installed**

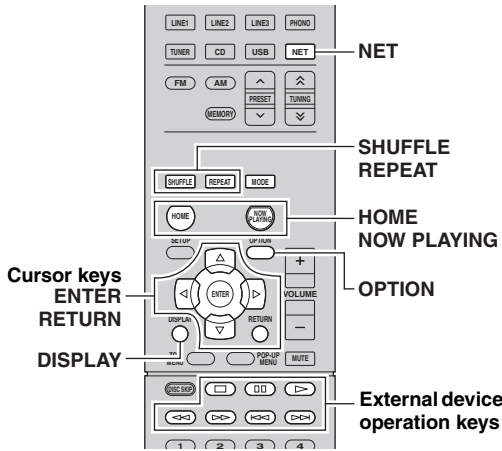
Refer to the user’s manual of your device or software and configure the media sharing settings.

## Playback of PC music contents

Follow the procedure below to operate the PC music contents and start playback.

### Note

“\_” (underscore) will be displayed for characters not supported by the unit.



Use the following remote control keys to control playback.

External device operation keys	Function
	Resumes playback from pause.
	Stops playback.
	Stops playback temporarily.
	Skips forward/backward.
<b>HOME</b>	Displays the root directory of the music server.
<b>NOW PLAYING</b>	Displays information about the song that's playing.



You can also use a DLNA-compatible Digital Media Controller (DMC) to control playback. For details, see “DMC Control” (p.36).

### Repeat/shuffle settings

You can configure the repeat/shuffle settings for the playback of PC music content.

- 1 Press **NET** repeatedly to select “SERVER” as the input source.



Music server name



If playback of a music file selected from the unit is ongoing on your PC, the playback information is displayed.

- 2 Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select a music server and press **ENTER**.

- 3 Use the cursor keys to select an item and press **ENTER**.

If a song is selected, playback starts and the playback information is displayed.



- To return to the previous state, press **RETURN**.
- If you press the **DISPLAY** repeatedly, you can switch the playback information on the front display (p.33).
- If you select a file that is not supported by this unit, appears at top of the file name.

- 1 When the input source is “SERVER,” press **REPEAT** or **SHUFFLE** repeatedly to select the playback method.

Item	Setting	Function
<b>Repeat</b>	Off	Turns off the repeat function.
	One	Plays back the current song repeatedly.
	All	Plays back all songs in the current album (folder) repeatedly.
<b>Shuffle</b>	Off	Turns off the shuffle function.
	On	Plays back songs in the current album (folder) in random order.



Repeat/shuffle can also be specified in the “OPTION” menu (p.34).

# Listening to Internet radio

You can listen to Internet radio stations from all over the world.

## Notes

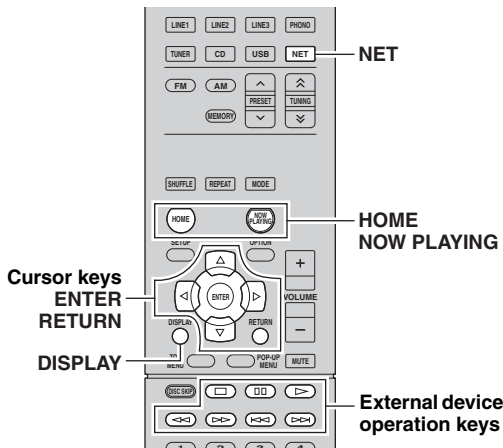
- To use this function, the unit must be connected to the Internet (p.13). You can check whether the network parameters (such as the IP address) are properly assigned to the unit in “Information” (p.36) in the “SETUP” menu.
- You may not be able to receive some Internet radio stations.
- The unit uses the vTuner Internet radio station database service.
- This service may be discontinued without notice.



- To return to the previous state, press RETURN.
- If you press the DISPLAY repeatedly, you can switch the playback information on the front display (p.33).
- By accessing the following website from your computer's web browser, you can register your favorite Internet radio stations in the Bookmarks folder.
  - Before you register an Internet radio station, play back any Internet radio station on this unit.
  - To create the account that is required for registration, you'll need the vTuner ID of this unit (the MAC address of this unit) and an email address. You can confirm the vTuner ID of this unit in “Information” of the “Network Setup (SETUP menu)” (p.36).

<http://yradio.vtuner.com/>

- Use the external device operation key (□) to stop playback.
- Some information may not be available depending on the station.



## 1 Press NET repeatedly to select “NET RADIO” as the input source.

The station list appears on the front display.



## 2 Use the cursor keys to select an item and press ENTER.

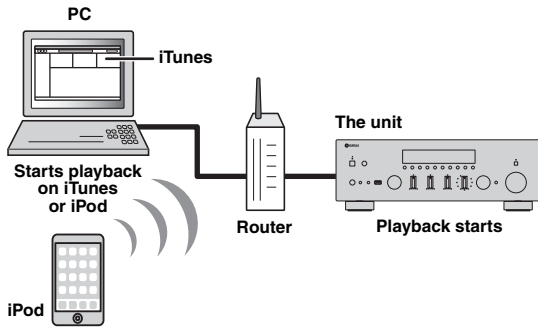
If an Internet radio station is selected, playback starts and the playback information is displayed.



If you want to display the station list during playback, press HOME. To return the playback information, press NOW PLAYING.

# Playing back iTunes/iPod music via a network (AirPlay)

The AirPlay function allows you to play back iTunes/iPod music on the unit via network.



## Note


To use this function, the unit and your PC or iPod must be connected to the same router (p.13). You can check whether the network parameters (such as the IP address) are properly assigned to the unit in "Information" (p.36) in the "SETUP" menu.

AirPlay works with iPhone, iPad, and iPod touch with iOS 4.3.3 or later, Mac with OS X Mountain Lion, and Mac and PC with iTunes 10.2.2 or later. (as of August 2013)

## Playback of iTunes/iPod music contents

Follow the procedure below to play back iTunes/iPod music contents on the unit.

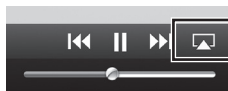
### 1 Turn on the unit, and start iTunes on the PC or display the playback screen on the iPod.

If the iTunes/iPod recognizes the unit, the AirPlay icon (  ) appears.

iTunes (example)



iPod (example)

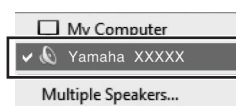


## Note

If the icon does not appear, check whether the unit and PC/iPod are connected to the router properly.

### 2 On the iTunes/iPod, click (tap) the AirPlay icon and select the unit (network name of the unit) as the audio output device.

iTunes (example)



iPod (example)



Network name of the unit

### 3 Select a song and start playback.

The unit automatically selects "AirPlay" as the input source and starts playback. The playback information is displayed on the front display.








- If you press the DISPLAY repeatedly, you can switch the playback information on the front display (p.33).
- You can turn on the unit automatically when starting playback on iTunes or iPod by setting "NET Standby" (p.36) in the "SETUP" menu to "On".
- You can edit the network name (the unit's name on the network) displayed on iTunes/iPod in "Network Name" (p.37) in the "SETUP" menu.
- If you select the other input source on the unit during playback, playback on the iTunes/iPod stops automatically.
- You can adjust the unit's volume from the iTunes/iPod during playback. To disable volume controls from iTunes/iPod, set "Vol.Interlock" (p.34) in the "OPTION" menu to "Off".

## Caution

- When you use iTunes/iPod controls to adjust volume, the volume may be unexpectedly loud. This could result in damage to the unit or speakers. If the volume suddenly increases during playback, stop playback on the iTunes/iPod immediately.

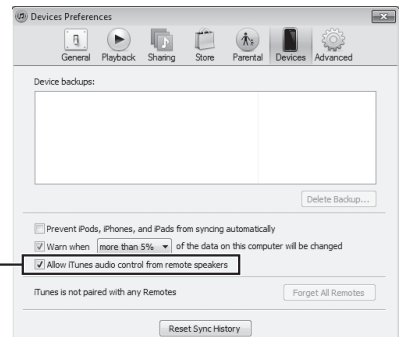
Use the following remote control keys to control playback.

External device operation keys		Resumes playback from pause.
		Stops playback.
		Stops playback temporarily.
		Skips forward/backward.
		Changes the Repeat settings
Repeat		Changes the Repeat settings
Shuffle		Changes the Shuffle settings

## Note

To control iTunes playback with the remote control of the unit, you need to configure the iTunes preferences to enable iTunes control from remote speakers in advance.

iTunes (example of English version)



Check this box

# Listening to Pandora service

(Australia model only)

The Pandora service is available in the U.S.A, Australia, New Zealand only.

Pandora is a free, personalized Internet radio service playing only music you love. Enter your favorite artists or tracks and Pandora will bring an effortless personal soundtrack into your living room. Rate tracks as they play, because Pandora caters to your tastes and adapts stations to your feedback on the spot.

Since all Pandora accounts are portable, you can always access your own personalized Pandora stations from any computer or device in the United States, Australia and New Zealand that support Pandora. Pandora is currently only available within these countries due to licensing restrictions.

Pandora is always free, with the option to upgrade to Pandora One which is completely free of all advertising and comes with additional features.

For more information, <http://www.pandora.com>

## Notes

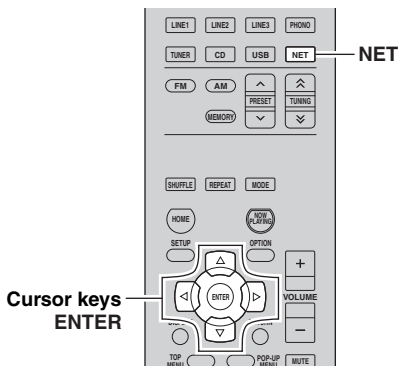
- To use this function, the unit must be connected to the Internet. For detail on connections and network settings (p.13).
- If any error message appears on the front display, see “Error indications on the front display” (p.49)

## Account setup for Pandora

If you have not set up your Pandora account yet, the account setup display appears when you select “Pandora”. To start using the Pandora service on the unit, follow the procedure below to set up your Pandora account.



You can register up to eight Pandora accounts on the unit. For details, see “Editing the Pandora accounts” (p.32).



## 1 Press NET repeatedly to select “Pandora” as the input source.

If you have not set up your Pandora account on the unit yet, “Sign in” appears on the front display.



## 2 If you have a Pandora account, press ENTER. If you do not have a Pandora account, use the cursor keys to select “Activation” and press ENTER.

## 3 Perform the following procedure.

### If you select “Sign in” in Step 2

- ① Use the cursor keys to enter your Pandora account e-mail address.
- ② Press ENTER to enter password entry.
- ③ Use the cursor keys to enter your Pandora password.
- ④ Press ENTER to access your account.  
If you have successfully logged into your account, “Login OK” appears on the front display.

If “CREATE” appears on the front display, you can create Pandora stations. Refer to step 4 in “Creating Pandora stations” (p.30) for details.



- If you want to delete characters, press numeric key 1.
- If you want to insert characters, press numeric key 2.
- Rotate SELECT/ENTER on the front panel, you can change characters quickly.

## Notes

When login goes failed, “Login Failed” appears on front display.

- If you want to retry same password, use cursor key to select “Retry” and press ENTER.
- If you want to reset the password, select the “Forgot” and press ENTER twice. An e-mail message containing a link to reset your password will be sent to your e-mail address that you entered in step ①. Please check your mail and click it.



**If you select “Activation” in Step 2**

- Write down the URL and active code shown in the front display.



- Use a web browser on your PC to access the URL and follow the on-screen instruction to register for a Pandora account.
- After activation, press ENTER to log in with your new Pandora account.

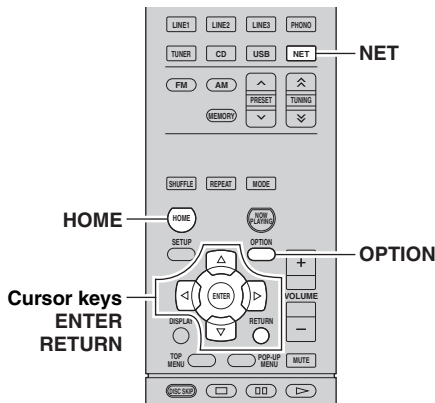
If “CREATE” appears on the front display, you can create Pandora stations. Refer to step 4 in “Creating Pandora stations” (p.30) for details.

## Creating Pandora stations

Pandora lets you create up to 100 custom radio stations that play only music you love. Just type in your favorite track or artist and Pandora will create a station that plays similar music.



- If there are no Pandora stations in your account, the “CREATE” appears automatically. In this case, proceed to Step 4 and create Pandora stations.
- When the Pandora station is created to the maximum, “Max Stations” appears on the front display.



- Press NET repeatedly to select “Pandora” as the input source.**

The station list appears on the front display. If HOME is pressed, the station list can be displayed at any time. When a station list is not displayed, perform the following operations after press HOME.



station list

- Press OPTION.**

- Use the cursor keys (Δ / ▽) to select “Create Station” and press ENTER.**

- Use the cursor keys to enter the name of an artist or a track (all or part of the name) and press ENTER.**



- If you want to delete characters, press numeric key 1.
- If you want to insert characters, press numeric key 2.

- Perform the following procedure.**

**If both artists and tracks are found**



- Use the cursor keys to select “Artist” or “Track” and press ENTER.

- Use the cursor keys to select a desired item and press ENTER.

The selected item is added to your Pandora stations. The playback starts automatically and the playback information is displayed.

**If either artists or tracks are found**

Use the cursor keys to select a desired item and press ENTER.

The selected item is added to your Pandora stations. The playback starts automatically and the playback information is displayed.

**If only one item is found**

In this case, the item found is automatically added to your Pandora stations. The playback starts automatically and the playback information is displayed.

**If no items are found**

“No content” appears on front display. Press ENTER and repeat Step 4 to try another keyword.

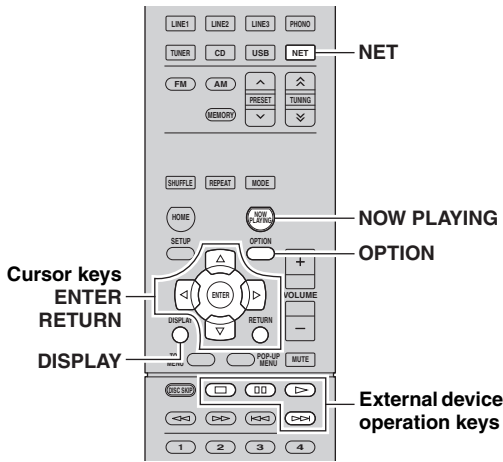


To return to the previous state, press RETURN.



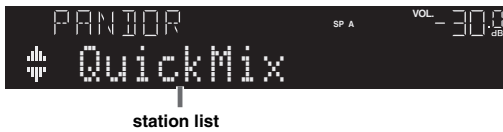
## Playback of Pandora stations

If you have created Pandora stations, follow the procedure below to select a Pandora station to be played.



### 1 Press NET repeatedly to select “Pandora” as the input source.

The station list appears on the front display. When a station list is not displayed, perform the following operations after press HOME.



If playback of any Pandora station is ongoing, the playback information is displayed.

### 2 Use the cursor keys (Δ / ▽) to select a Pandora station and press ENTER.

Playback of the selected station starts and the playback information is displayed.

If NOW PLAYING is pressed during a playback, the playback information can be displayed at any time.



- If you press the DISPLAY repeatedly, you can switch the playback information on the front display (p.33).
- You can also use the external device operation keys (▶, ◻, ◻◻, ◻◻◻) on the remote control to control playback.
- If you display the station list during playback, 📶 appears at top of the Pandora station name.

### 3 Perform the following procedure if you needed.

#### If you want to set a rating of track

- ① When the playback information is displayed, press OPTION.
- ② Use the cursor keys (Δ / ▽) to select “RateThisTrack” and press ENTER.



- ③ Use the cursor keys (Δ / ▽) to select rating and press ENTER.

<b>I like it</b>	Gives positive feedback (thumbs up) for the current track. 📶 (thumbs up) is displayed in the track name.
<b>I dont like it</b>	Gives negative feedback (thumbs down) for the current track and skip to the next track. If you can not skip at skip limit, 📶 (thumbs down) is displayed in the track name.
<b>Tired of it</b>	Requests not to playback the current track for a month and skip to the next track.

#### If you want to bookmark track/artist

- ① When the playback information is displayed, press OPTION.
- ② Use the cursor keys (Δ / ▽) to select “Bookmark” and press ENTER.
- ③ Use the cursor keys (Δ / ▽) to select bookmark type and press ENTER.

<b>Track</b>	Adds the current track to your bookmarks on your Pandora profile page at “ <a href="http://www.pandora.com">http://www.pandora.com</a> ”.
<b>Artist</b>	Adds the current artist to your bookmarks on your Pandora profile page at “ <a href="http://www.pandora.com">http://www.pandora.com</a> ”.

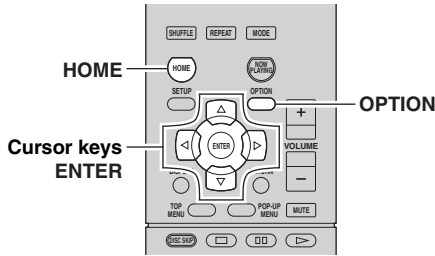
#### If you want to confirm why you have to play

- ① When the playback information is displayed, press OPTION.
- ② Use the cursor keys (Δ / ▽) to select “WhyThisTrack?” and press ENTER.
- ③ Return to previous state, press RETURN.

Some functions are not available during advertisement broadcast.

## Deleting Pandora stations

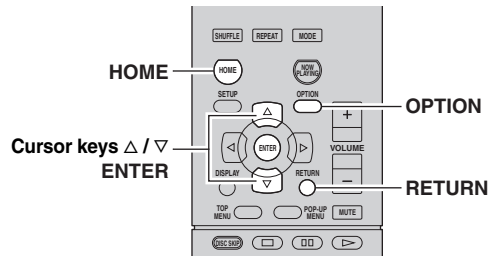
The created Pandora station can be deleting in the following procedures.



- 1 Press HOME to display the station list.
- 2 Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select Pandora station to be delete.
- 3 Press OPTION.
- 4 Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select “Delete station” and press ENTER.
- 5 Use the cursor keys ( $\triangleleft$  /  $\triangleright$ ) to select “OK” and press ENTER.

## Editing the Pandora accounts

You can register up to 8 Pandora accounts on the unit. Follow the procedure below to add or remove Pandora accounts, or switch to another Pandora account.



- 1 Press HOME to display the station list.
- 2 Press OPTION.
- 3 Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select “PandoraAccount” and press ENTER.
- 4 Perform the following procedure.

### To add a new Pandora account

- ① Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select “Add Account” and press ENTER.
- ② Follow from Step 3 of “Account setup for Pandora” (p.29).



When the Pandora account is created to the maximum, “Max account” appears on the front display.

### To remove a Pandora account

- ① Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select “Remove Account” and press ENTER.
- ② Use the cursor keys to select a Pandora account to be removed and press ENTER.
- ③ Use the cursor keys to select “OK” and press ENTER.
- ④ Return to previous state, press RETURN.

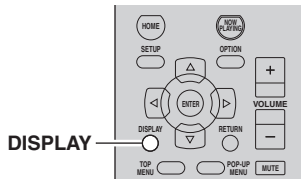
### To switch to another Pandora account

- ① Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select “Switch User” and press ENTER.
- ② Use the cursor keys to select a Pandora account to be used and press ENTER.

Pandora and Pandora Internet Radio logo are registered trademarks or trademarks of Pandora Media, Inc. in the United States and/or other countries.

# Switching information on the front display

When you select USB or a network source as the input source, you can switch playback information on the front display.



## 1 Press DISPLAY.

Each time you press the key, the displayed item changes.



Item name

About 3 seconds later, the corresponding information for the displayed item appears.



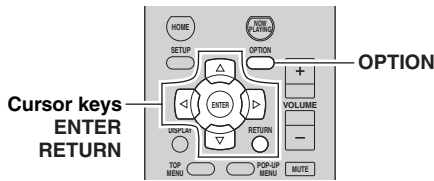
Information

Input source	Item
<b>USB (iPod) SERVER AirPlay</b>	Song (song title), Artist (artist name), Album (album name), Time
<b>NET RADIO</b>	Song (song title), Album (album name), Station (station name), Time
<b>Pandora *</b>	Track (track title), Station (station name), Album (album name), Time

\* Australia model only

# Configuring playback settings for different playback sources (OPTION menu)

You can configure separate playback settings for different playback sources. This menu allows you to easily configure settings during playback.



## 1 Press OPTION.



## 2 Use the cursor keys to select an item and press ENTER.



To return to the previous state during menu operations, press RETURN.

## 3 Use the cursor keys (◀/▶) to select a setting.

## 4 To exit from the menu, press OPTION.

### OPTION menu items



Available items vary depending on the selected input source.

Item	Function	Page
<b>Volume Trim</b>	Corrects volume differences between input sources.	34
<b>Signal Info</b>	Displays information about the audio signal.	34
<b>Auto Preset</b>	Automatically registers FM radio stations with strong signals as presets.	18
<b>Clear Preset</b>	Clear radio stations registered to preset numbers.	19
<b>TrafficProgram *1</b>	Automatically searches for a traffic information station.	20
<b>Repeat</b>	Configures the repeat setting for the iPod, USB storage device, or media server.	22, 24, 26
<b>Shuffle</b>	Configures the shuffle setting for the iPod, USB storage device, or media server.	22, 24, 26
<b>Vol.Interlock</b>	Enables/disables volume controls from iTunes/iPod via AirPlay.	34

Item	Function	Page
<b>PandoraAccount *2</b> <b>Create Station *2</b> <b>Delete Station *2</b>	(While the Pandora station list is displayed) Configures the Pandora accounts and create/delete Pandora stations.	32
<b>RateThisTrack *2</b> <b>Bookmark *2</b> <b>WhyThisTrack? *2</b>	(While the Pandora playback information is displayed) Configures the track rating, bookmark, etc.	31

\*1U.K. model only

\*2Australia model only

### ■ Volume Trim

Corrects volume differences between input sources. If you are bothered by volume differences when switching between input sources, use this function to correct it.



This setting is applied separately to each input source.

### Setting range

-10.0 dB to +10.0 dB (0.5 dB increments)

### Default

0.0 dB

### ■ Signal Info

Displays information about audio signal.

### Choices

<b>FORMAT</b>	Audio format of the input signal
<b>CHAN</b>	If other than two-channel audio is being input, the indication will be “---.”
<b>SAMPL</b>	The number of samples per second of the input digital signal



To switch the information on the front display, press the cursor keys (Δ / ▽) repeatedly.

### ■ Vol.Interlock

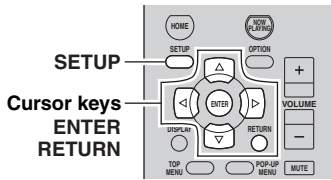
Enables/disables volume controls from iTunes/iPod via AirPlay.

### Settings

<b>Off</b>	Disables volume controls from iTunes/iPod.
<b>Ltd (default)</b>	Enables volume controls from iTunes/iPod within the limited range (-80.0 dB to 0.0 dB and mute).
<b>Full</b>	Enables volume controls from iTunes/iPod in the full range (-80.0 dB to +16.5 dB and mute).

# Configuring various functions (SETUP menu)

You can configure the unit's various functions.



## 1 Press SETUP.



## 2 Use the cursor keys (Δ / ▽) to select a menu.



## 3 Press ENTER.



## 4 Use the cursor keys (◀ / ▶) to select a setting and press ENTER.



To return to the previous state during menu operations, press RETURN.

## 5 Exit from the menu, press SETUP.

## SETUP menu items

Menu item	Function	Page
<b>Information</b>	Displays the network information on the unit.	36
<b>IP Address</b>	Configures the network parameters (such as IP address).	36
<b>MAC Filter</b>	Filter Sets the MAC address filter to limit access to the unit from other network devices.	36
<b>DMC Control</b>	Selects whether to allow a DLNA-compatible Digital Media Controller (DMC) to control playback.	36
<b>NET Standby</b>	Selects whether to enable/disable the function that turns on the unit from other network devices.	36
<b>Network Name</b>	Edits the network name (the unit's name on the network) displayed on other network devices.	37
<b>Update</b>	Updates the firmware via the network.	37
<b>Max Volume</b>	Sets the maximum volume to prevent excessive loudness.	37
<b>Initial Volume</b>	Sets the initial volume for when this receiver is turned on.	37
<b>AutoPowerStdby</b>	Sets the amount of time for the auto-standby function.	37
<b>ECO Mode</b>	Enables/disables the eco mode (power saving mode).	37
<b>DC OUT</b>	Selects how to supply power through the DC OUT jack.	37

## Network Setup

Configures the network settings.

### Information

Displays the network information on the unit.

<b>NewFwAvailable</b>	Appears if an update for this unit's firmware is available (p.43).
<b>STATUS</b>	The connection status of the NETWORK jack
<b>MAC</b>	MAC address
<b>IP</b>	IP address
<b>SUBNET</b>	Subnet mask
<b>GTWY</b>	The IP address of the default gateway
<b>DNS P</b>	The IP address of the primary DNS server
<b>DNS S</b>	The IP address of the secondary DNS server
<b>VTUNER</b>	The ID of the Internet radio (vTuner)

### IP Address

Configures the network parameters (such as IP address).

#### DHCP

Select whether to use a DHCP server.

<b>Off</b>	Does not use a DHCP server. Configure the network parameters manually. For details, see "Manual network settings".
<b>On (default)</b>	Uses a DHCP server to automatically obtain the unit's network parameters (such as IP address).

#### Manual network settings

**1 Set "DHCP" to "Off".**

**2 Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select a parameter type.**

<b>Address</b>	Specifies an IP address.
<b>Subnet Mask</b>	Specifies a subnet mask.
<b>Default Gateway</b>	Specifies the IP address of the default gateway.
<b>DNS Server(P)</b>	Specifies the IP address of the primary DNS server.
<b>DNS Server(S)</b>	Specifies the IP address of the secondary DNS server.

**3 Use the cursor keys ( $\leftarrow$  /  $\rightarrow$ ) to select the edit position.**



(Example: IP address setting)

Use the cursor keys ( $\leftarrow$  /  $\rightarrow$ ) to switch between segments (Address1, Address2...) of the address.

**4 Use the Cursor keys ( $\Delta$  /  $\nabla$ ) or numeric keys to change a value.**

**5 To exit from the menu, press SETUP.**

### MAC Filter

Sets the MAC address filter to limit access to the unit from other network devices.

#### Filter

Enables/disables the MAC address filter.

<b>Off (default)</b>	Disables the MAC address filter.
<b>On</b>	Enables the MAC address filter. In "MAC Address 01-10", specify the MAC addresses of the network devices that will be permitted access to the unit.

#### MAC address filter settings

**1 Set "Filter" to "On".**

**2 Use the cursor keys ( $\Delta$  /  $\nabla$ ) to select an MAC address number (01 to 10).**

**3 Use the cursor keys ( $\leftarrow$  /  $\rightarrow$ ) to move the edit position and the cursor keys ( $\Delta$  /  $\nabla$ ) to select a value.**

**4 To exit from the menu, press SETUP.**



When using "AirPlay" (p.28) and "DMC Control" (p.36), you cannot limit access from network devices regardless of the MAC address filter.

### DMC Control

Selects whether to allow DLNA-compatible Digital Media Controller (DMC) to control playback.

<b>Disable</b>	Does not allow DMCs to control playback.
<b>Enable (default)</b>	Allows DMCs to control playback.



A Digital Media Controller (DMC) is a device that can control other network devices through the network. When this function is enabled, you can control playback of the unit from DMCs (such as Windows Media Player 12) on the same network.

### NET Standby

Selects whether the unit can be turned on from other network devices (network standby).

<b>Off (default)</b>	Disables the network standby function.
<b>On</b>	Enables the network standby function. (The unit consumes more power than when "Off" is selected.)

## ■ Network Name

Edits the network name (the unit's name on the network) displayed on other network devices.

### 1 Select "Network Name".



### 2 Press ENTER to enter the name edit display.



### 3 Use the cursor keys (◀/▶) to move the edit position and the cursor keys (△/▽) to select a character.



### 4 To confirm the new name, press ENTER.

### 5 To exit from the menu, press SETUP.

## ■ Update

Updates the firmware via the network.

<b>Perform Update</b>	Starts the process to update the unit's firmware. For details, see "Updating the unit's firmware via the network" (p.43).
<b>Version</b>	Displays the version of the firmware installed on the unit.
<b>ID</b>	Displays the system ID number.

## Max Volume

Sets the maximum volume to prevent excessive loudness.

### Setting range

-30.0 dB to +15.0 dB (5.0 dB increments), +16.5 dB

### Default

+16.5 dB

## Initial Volume

Sets the initial volume when the receiver is turned on.

<b>Off (default)</b>	Sets the level to the volume level of the unit when it last entered standby mode.
<b>Mute</b>	Sets the unit to mute the audio output.
<b>-80.0 dB to +16.5 dB (0.5 dB increments)</b>	Sets the level to the specified volume level.

## AutoPowerStdby

Sets the amount of time for the auto-standby function. If you do not operate the unit for the specified time, the unit will automatically go into standby mode.

<b>Off</b>	Does not set the unit to standby mode automatically.
<b>2 hours, 4 hours, 8 hours, 12 hours</b>	Sets the unit to standby mode when you have not operated the unit for the specified time. For example, when "2 hours" is selected, the unit will switch to standby mode if you do not operate it for 2 hours.



- (U.K. model) Set to "8 hours" by default.
- (Australia model) Set to "Off" by default.
- Just before the unit enters standby mode, "AutoPowerStdby" appears and then countdown starts in the front display.

## ECO Mode

Enables/disables the eco (power saving) mode.

When the eco mode is enabled, you can reduce the unit's power consumption.

<b>Off (default)</b>	Disables the eco mode.
<b>On</b>	Enables the eco mode.

### Notes

- Be sure to press ENTER to restart the unit after selecting a setting. The new setting will take effect after the unit is restarted.
- When "ECO Mode" is set to "On", the front display may become dark.
- If you want to play audio at high volume, set "ECO Mode" to "Off".

## DC OUT

Configures the DC OUT jack setting.

### Power Mode

Selects how to supply power to the Yamaha AV accessory connected to the DC OUT jack.

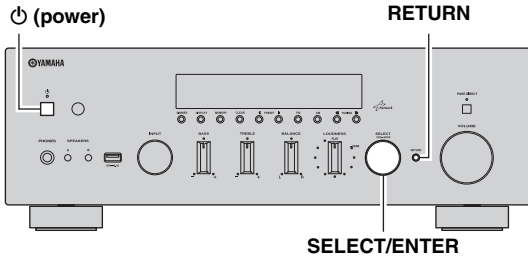
<b>Cont (default)</b>	Supplies power through the DC OUT jack continuously regardless of the power state (on/standby) of the unit.
<b>Sync</b>	Supplies power through the DC OUT jack only when the unit is turned on.

# Configuring the system settings (ADVANCED SETUP menu)

Configure the system settings of the unit while viewing the front display.

**1 Turn off the unit.**

**2 While holding down RETURN on the front panel, press ⏻ (power).**



**3 Rotate SELECT/ENTER to select an item.**

**4 Press SELECT/ENTER to select a setting.**

**5 Press ⏻ (power) to set the unit to turn off and turn it on again.**

The new settings take effect.

## ADVANCED SETUP menu items

Item	Function	Page
SP IMP.	Changes the speaker impedance setting.	38
REMOTE ID	Selects the unit's remote control ID.	38
INIT	Restores the default settings.	39
UPDATE	Updates the firmware.	39
VERSION	Checks the version of firmware currently installed on the unit.	39

## Changing the speaker impedance setting (SP IMP.)

SP IMP. " 8ΩMIN

Change the unit's speaker impedance settings depending on the impedance of the speakers connected.

### Settings

<b>4 Ω MIN</b>	Select this option when you connect 4-ohm speakers to the unit.
<b>8 Ω MIN (default)</b>	Select this option when you connect 8-ohm or higher speakers to the unit.

## Selecting the remote control ID (REMOTE ID)

REMOTE ID " ID2

Change the unit's remote control ID so that it matches the remote control's ID (default: ID2). When using multiple Yamaha AV receivers, you can set each remote control with a unique remote control ID for its corresponding receiver.

### Settings

ID1, ID2 (default)

### ■ Changing the remote control ID of the remote control

**1 To select ID1, while holding down the ID, hold down numeric key "1" for more than 3 seconds.**

**To select ID2, while holding down the ID, hold down numeric key "2" for more than 3 seconds.**

Once the remote control code is successfully registered, "Rem: Success" appears on the front display.

If "Rem: Fail" appears on the front display, registration has failed. Repeat from Step 1.



The registered remote control codes (p.40) are not cleared even if you change the remote control ID.



## Restoring the default settings (INIT)

INIT " " " " CANCEL

Restores the default settings for the unit.

### Choices

<b>ALL</b>	Restores the default settings for the unit.
<b>CANCEL</b>	Does not perform an initialization.

## Updating the firmware (UPDATE)

UPDATE " " " " " USB

New firmware that provides additional features or product improvements will be released as needed. Updates can be downloaded from our website. If the unit is connected to the Internet, you can download the firmware via the network. For details, refer to the information supplied with updates.

### ■ Firmware update procedure

Do not perform this procedure unless firmware update is necessary. Also, make sure you read the information supplied with updates before updating the firmware.

- 1 Press SELECT/ENTER repeatedly to select “USB” or “NETWORK” and press DISPLAY to start firmware update.**

### Choices

<b>USB</b>	Update the firmware using a USB memory device.
<b>NETWORK</b>	Update the firmware via the network.



If the unit detects newer firmware over the network, “NewFwAvailable” appears as the “Information” menu item in “Network Setup”. In this case, you can also update the unit’s firmware by following the procedure in “Updating the unit’s firmware via the network” (p.43).

## Checking the firmware version (VERSION)

VERSION " " XX.XX

Check the version of firmware currently installed on the unit.



- You can also check the firmware version in “Update” (p.37) in the “SETUP” menu.
- It may take a while until the firmware version is displayed.

# Controlling external devices with the remote control

You can use the unit's remote control to operate external devices (such as CD players) if you have registered the remote control code of the external device.

## Notes

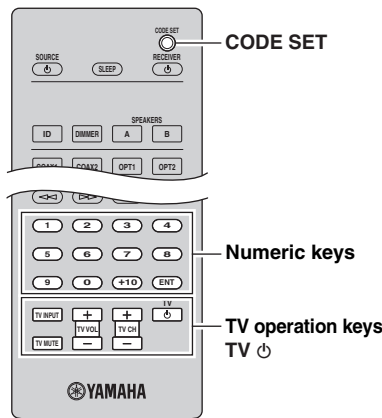
- You cannot control an external device that does not have a remote control sensor.
- Ensure that the remote control ID of the external device is set to "ID1". If any other ID is selected, the remote control operations may not work properly.
- If the unit's remote control is without batteries for more than 2 minutes, the registered codes may be cleared. If this happens, insert new batteries and register the codes again.

## Registering the remote control code for a TV

You can use the unit's remote control to operate a TV if you have registered its remote control code.



You can also register your TV's remote control code to the unit's input selection keys (p.41). This would allow you to use the cursor keys or numeric keys to operate the TV (this function may not be available on some TV models).



## 4 Use the numeric keys to enter the 4-digit remote control code.

Once the remote control code is successfully registered, "Rem: Success" appears on the front display.

If "Rem: Fail" appears on the front display, registration has failed. Repeat from Step 2.

## TV operations

Once you have registered the remote control code for your TV, you can control it using the TV operation keys, regardless of the input source selected on the unit.

TV operation keys	INPUT	Switches the video inputs of the TV.
	MUTE	Mutes the audio output of the TV.
	TV VOL	Adjust the volume of the TV.
	TV CH	Switch the channels of the TV
	TV	Turns on/off the TV.

## 1 Refer to "LIST OF REMOTE CONTROL CODES" (end of this manual) to find your TV's remote control code.



If there are multiple remote control codes, register the first code in the list. If that does not work, try the other codes.

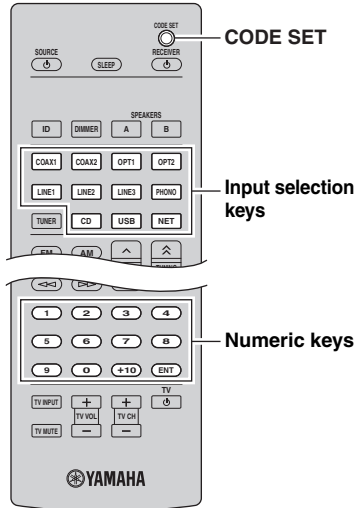
## 2 Press CODE SET using a pointed object such as the tip of a ballpoint pen.

Perform each of the following steps within 1 minute. Otherwise, the setting will be canceled. If this happens, repeat from Step 2.

## 3 Press TV .

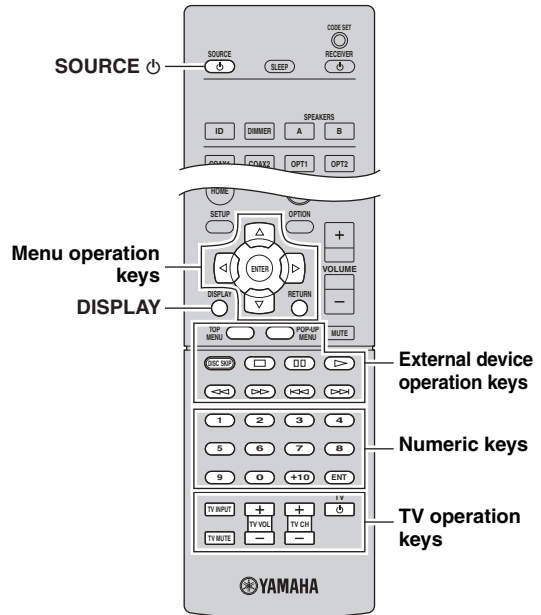
## Registering the remote control codes for playback devices

You can use the unit's remote control to operate playback devices if you have registered their remote control codes. You can also use the input selection keys to change the playback devices that are controlled by the remote control, because their remote control codes are assigned to the input selection keys.



## Playback device operations

Once you have registered the remote control code for your playback device, you can control it using the following keys after selecting the input source or scene.



- 1 Refer to "LIST OF REMOTE CONTROL CODES" (end of this manual) to find the remote control code for your playback device.



If there are multiple remote control codes, register the first code in the list. If that does not work, try the other codes.

- 2 Press **CODE SET** using a pointed object such as the tip of a ballpoint pen.

Perform each of the following steps within 1 minute. Otherwise, the setting will be canceled. If this happens, repeat from Step 2.

- 3 Press the **input selection key**.

For example, press CD to set the remote control code for the playback device connected to the CD jack.

- 4 Use the **numeric keys** to enter the 4-digit remote control code.

Once the remote control code is successfully registered, "Rem: Success" appears on the front display.

If "Rem: Fail" appears on the front display, registration has failed. Repeat from Step 2.

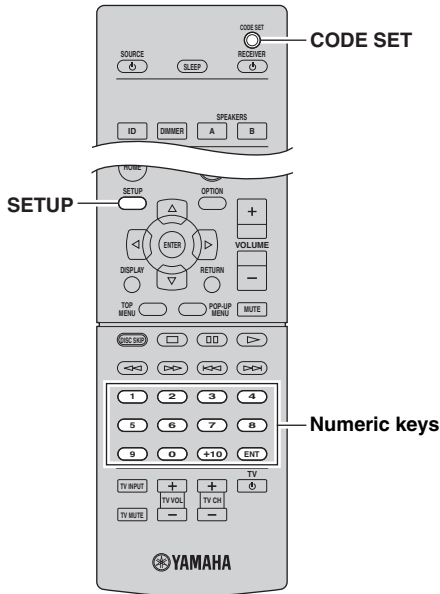
<b>SOURCE</b>		Turns on/off the playback device.
<b>Menu operation keys</b>	<b>Cursor keys</b>	Select an item.
	<b>ENTER</b>	Confirms a selected item.
	<b>RETURN</b>	Returns to the previous state.
<b>DISPLAY</b>		Switches information on the display.
<b>External device operation keys</b>	<b>TOP MENU</b>	Displays the top menu.
	<b>POP-UP MENU</b>	Displays the pop-up menu.
		Stops playback.
		Stops playback temporarily.
		Starts playback of the selected song/video.
		Searches forward/backward (by holding down).
		Searches forward/backward (by holding down).
		Skips forward/backward.
<b>Numeric keys</b>		Enter numerical values.
<b>TV operation keys</b>		Control the TV (p.40).

### Note

These keys work only if the corresponding function is available on your playback device and if the device can be operated with an infrared remote control.

## Resetting remote control codes

You can reset the remote control codes assigned to each input selection keys to the factory default.



---

**1 Press CODE SET using a pointed object such as the tip of a ballpoint pen.**

Perform each of the following steps within 1 minute. Otherwise, the setting will be canceled. If this happens, repeat from Step 1.

---

**2 Press SETUP.**

---

**3 Use the numeric keys to enter “9981”.**

Once the remote control code is successfully registered, “Rem: Success” appears on the front display.

If “Rem: Fail” appears on the front display, registration has failed. Repeat from Step 1.

# Updating the unit's firmware via the network

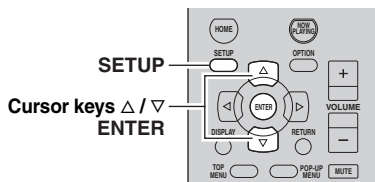
New firmware that provides additional features or product improvements will be released as needed. If the unit is connected to the Internet, you can download the firmware via the network and update it.

## Notes

- Do not operate the unit or disconnect the power cable or network cable during firmware update. Firmware update takes about 20 minutes or more (depending on your Internet connection speed).
- If the unit is connected to the wireless network via a wireless network adapter, network update may not be possible depending on the condition of the wireless connection. In this case, update the firmware using the USB memory device (p.39).



You can also update the firmware using the USB memory device from the “ADVANCED SETUP” menu (p.39).



**1 Press SETUP.**

**2 Use the cursor keys to select “Network Setup” and press ENTER.**

**3 Use the cursor keys to select “Information” and press ENTER.**

If new firmware is available, “NewFwAvailable” appears on the front display.



**4 Press RETURN to return the previous state.**

**5 Use the cursor keys to select “Update” and press ENTER.**



**6 To start the firmware update, press ENTER.**

The unit to restart and the firmware update starts.



To cancel the operation without updating the firmware, press SETUP.

**7 If “UPDATE SUCCESS” appears on the front display, press ⏻ (power) on the front panel.**

The firmware update is complete.

# Troubleshooting

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

## ■ General

Problem	Cause	Remedy	See page
<b>This unit fails to turn on.</b>	The protection circuitry has been activated three times consecutively. If the unit is in this condition, the standby indicator on the unit blinks when you try to turn on the power.	As a safety precaution, capability to turn on the power is disabled. Contact your nearest Yamaha dealer or service center to request repair.	—
	The power cable is not connected or the plug is not completely inserted.	Connect the power cable firmly.	—
	The impedance setting is incorrect.	Set the impedance to match your speakers.	11
	The protection circuitry has been activated because of a short circuit, etc.	Check that the speaker wires are not touching each other and then turn the power of this unit back on.	10
	This unit has been exposed to a strong external electric shock (such as lightning or strong static electricity).	Set this unit to standby mode, disconnect the power cable, plug it back in after 30 seconds, then use it normally.	—
<b>No sound</b>	Incorrect input or output cable connections.	Connect the cables properly. If the problem persists, the cables may be defective.	10
	No appropriate input source has been selected.	Select an appropriate input source with the INPUT selector on the front panel (or one of the input selection keys on the remote control).	14
	The SPEAKERS A/B switches are not set properly.	Turn on the corresponding SPEAKERS A or SPEAKERS B.	14
	Speaker connections are not secure.	Secure the connections.	10
	Output has been muted.	Turn off the mute.	8
	The Max volume or Initial volume setting is set too low.	Set the setting to a higher value.	37
	The component corresponding to the selected input source is turned off or is not playing.	Turn the component on and make sure it is playing.	—
	The audio output of a device connected to a digital audio input (COAXIAL 1-2/OPTICAL 1-2 jacks) is set to other than PCM.	Set the audio output of the connected device to PCM.	—
<b>The sound suddenly goes off.</b>	The protection circuitry has been activated because of a short circuit, etc.	Set the speaker impedance to match your speakers.	11
		Check that the speaker wires are not touching each other and then turn the power of this unit back on.	10
	This unit has become too hot.	Make sure the openings on the top panel are not blocked.	—
	The auto power standby function has turned this unit off.	Change the auto power standby (“AutoPowerStdby” in the “SETUP” menu) to a longer setting or turn off.	38
<b>Only the speaker on one side can be heard.</b>	Incorrect cable connections.	Connect the cables properly. If the problem persists, the cables may be defective.	10
	Incorrect setting for the BALANCE control.	Set the BALANCE control to the appropriate position.	15

Problem	Cause	Remedy	See page
<b>There is a lack of bass and no ambience.</b>	The + and – wires are connected in reverse at the amplifier or the speakers.	Connect the speaker wires to the correct + and – phase.	10
<b>A “humming” sound can be heard.</b>	Incorrect cable connections.	Connect the audio plugs firmly. If the problem persists, the cables may be defective.	10
	No connection from the turntable to the GND terminal.	Make the GND connection between the turntable and this unit.	10
<b>The volume level is low while playing a record.</b>	The record is being played on a turntable with an MC cartridge.	The turntable should be connected to this unit through the MC head amplifier.	—
<b>The sound is degraded when listening with the headphones connected to the CD player or the tape deck connected to this unit.</b>	The power of this unit is turned off, or this unit is set to standby mode.	Turn on the power of this unit.	14
<b>The sound level is low.</b>	The loudness control function is operating.	Turn down the volume, set the LOUDNESS control to the FLAT position, and then adjust the volume again.	15

■ Tuner

Problem		Cause	Remedy	See page
FM	<b>FM stereo reception is noisy.</b>	The particular characteristics of the FM stereo broadcasts being received may cause this problem when the transmitter is too far away or the antenna input is poor.	Check the antenna connections. Try using a high-quality directional FM antenna.	12
			Switch to monaural mode.	17
	<b>There is distortion, and clear reception cannot be obtained even with a good FM antenna.</b>	There is multipath interference.	Adjust the antenna position to eliminate the multipath interference.	—
	<b>The desired station cannot be tuned in with the automatic tuning method.</b>	The signal is too weak.	Try using a high-quality directional FM antenna. Try using the manual tuning method.	12 17
FM/AM	<b>NO PRESETS is displayed.</b>	No preset stations are registered.	Register stations you want to listen to as preset stations before operation.	18
	<b>WRONG STATION is displayed.</b>	An invalid FM/AM frequency has been input.	Input a frequency that can be received.	17
AM	<b>The desired station cannot be tuned in with the automatic tuning method.</b>	The signal is weak or the antenna connections are loose.	Tighten the AM antenna connections and orient it for the best reception. Try using the manual tuning method.	— 17
	<b>Automatic station preset does not work.</b>	Automatic station preset is not available for AM stations.	Use manual station preset.	18
	<b>There are continuous crackling and hissing noises.</b>	The noises may result from lightning, fluorescent lamps, motors, thermostats or other electrical equipment.	Try using an outdoor antenna and a ground wire. This will help somewhat, but it is difficult to eliminate all noise.	—
	<b>There are buzzing and whining noises.</b>	A TV set is being used nearby.	Move this unit away from the TV set.	—



■ USB and network

Problem	Cause	Remedy	See page
<b>The unit does not detect the USB device.</b>	The USB device is not connected to the USB jack securely.	Turn off the unit, reconnect your USB device, and turn the unit on again.	—
	The file system of the USB device is not FAT16 or FAT32.	Use a USB device with FAT16 or FAT32 format.	—
<b>Folders and files in the USB device cannot be viewed.</b>	The data in the USB device is protected by the encryption.	Use a USB device without an encryption function.	—
<b>The network feature does not function.</b>	The network parameters (IP address) have not been obtained properly.	Enable the DHCP server function on your router and set “DHCP” in the “SETUP” menu to “On” on the unit. If you want to configure the network parameters manually, check that you are using an IP address which is not used by other network devices in your network.	36
<b>The unit does not detect the PC.</b>	The media sharing setting is not correct.	Configure the sharing setting and select the unit as a device to which music contents are shared.	—
	Some security software installed on your PC is blocking the access of the unit to your PC.	Check the settings of security software installed on your PC.	—
	The unit and PC are not in the same network.	Check the network connections and your router settings, and then connect the unit and the PC to the same network.	13
	The MAC address filter is enabled on the unit.	In “MAC Filter” in the “SETUP” menu, disable the MAC address filter or specify the MAC address of your PC to allow it to access to the unit.	36
<b>The files in the PC cannot be viewed or played back.</b>	The files are not supported by the unit or the media server.	Use the file format supported by both the unit and the media server. For information about the file formats supported by the unit, see “Playing back music stored on media servers (PCs/NAS)”.	25
<b>The Internet radio cannot be played.</b>	The selected Internet radio station is currently not available.	There may be a network problem at the radio station, or the service may have been stopped. Try the station later or select another station.	—
	The selected Internet radio station is currently broadcasting silence.	Some Internet radio stations broadcast silence at certain of times of the day. Try the station later or select another station.	—
	Access to the network is restricted by the firewall settings of your network devices (such as the router).	Check the firewall settings of your network devices. The Internet radio can be played only when it passes through the port designated by each radio station. The port number varies depending on the radio station.	—
<b>The application for smartphone/tablet “NP Controller” does not detect the unit.</b>	The MAC address filter is enabled on the unit.	In “MAC Filter” in the “Network Setup”, disable the MAC address filter or specify the MAC address of your smartphone/tablet to allow it to access to the unit.	36
	The unit and smartphone/tablet are not in the same network.	Check the network connections and your router settings, and then connect the unit and smartphone/tablet to the same network.	—
<b>Firmware update via the network is failed.</b>	It may not be possible depending on the condition of the network.	Update the firmware via the network again or use a USB memory device.	39

■ Remote control

Problem	Cause	Remedy	See page
<p><b>The remote control does not work nor function properly.</b></p>	<p>Wrong distance or angle.</p>	<p>The remote control will function within a maximum range of 6 m (20 ft) and no more than 30 degrees off-axis from the front panel.</p>	<p>9</p>
	<p>Direct sunlight or lighting (from an inverter type of fluorescent lamp, etc.) is striking the remote control sensor of this unit.</p>	<p>Reposition this unit.</p>	<p>—</p>
	<p>The batteries are weak.</p>	<p>Replace all batteries.</p>	<p>—</p>
	<p>The remote control ID and this unit's ID do not match.</p>	<p>Switch the remote control ID or this unit's ID.</p>	<p>38</p>
	<p>The remote control code was not correctly set.</p>	<p>Try setting another code of the same manufacturer using "LIST OF REMOTE CONTROL CODES" at the end of this manual.</p>	<p>—</p>
	<p>Even if the remote control code is correctly set, there are some models that do not respond to the remote control.</p>	<p>Use the supplied remote control for the components.</p>	<p>—</p>
	<p>You did not press the input selection key corresponding to the component you are trying to control.</p>	<p>Press the input selection key corresponding to the component you are trying to control, and then press the desired remote control key(s).</p>	<p>—</p>

## Error indications on the front display

Message	Cause	Remedy
<b>Access denied</b>	Access to the PC is denied.	Configure the sharing settings and select the unit as a device to which music contents are shared (p.25).
<b>Access error</b>	The unit cannot access the USB device.	Turn off the unit and reconnect your USB device. If the problem persists, try another USB device.
	The unit cannot access the iPod.	Turn off the iPod and turn it on again.
	The connected iPod is not supported by the unit.	Use an iPod supported by the unit (p.21).
	There is a problem with the signal path from the network to the unit.	Make sure your router and modem are turned on.
Check the connection between the unit and your router (or hub) (p.13).		
<b>Are you still there? *</b>	The Pandora service was not operated for 8 hours or more.	Press ENTER to resume playback.
<b>Check SP Wires</b>	The speaker cables short circuit.	Twist the bare wires of the cables firmly and connect to the unit and speakers properly.
<b>Licensing err *</b>	Access from the outside of the region for pandora service.	Access from the inside of the region for pandora service.
<b>No content</b>	There are no playable files in the selected folder.	Select a folder that contains files supported by the unit.
<b>No device</b>	The unit cannot detect the USB device.	Turn off the unit and reconnect your USB device. If the problem persists, try another USB device.
	The unit cannot detect the iPod.	Turn off the iPod and then turn it on again.
<b>Not signed in *</b>	The unit is not signed in to the Pandora service.	Sign in the pandora service.
<b>Please wait</b>	The unit is preparing for connecting to the network.	Wait until the message disappears. If the message stays more than 3 minutes, turn off the unit and turn it on again.
<b>Read only mode *</b>	The Pandora service is maintaining, it cannot access.	Access after waiting for a while.
<b>RemID Mismatch</b>	The remote control IDs of the unit and the remote control are not identical.	Change the remote control ID of the unit or the remote control (p.38).
<b>Skip limit *</b>	Skip operation in Pandora service has reached its maximum.	Skip operation cannot be performed any more.
<b>Suspended acct *</b>	The Pandora service account is unusable.	Try another account.
<b>Unable to play</b>	The unit cannot play back the songs stored on the iPod for some reason.	Check the song data. If it cannot be played on the iPod itself, the song data or storage area may be defective.
	The unit cannot play back the songs stored on the PC for some reason.	Check if the format of files you are trying to play is supported by the unit. For information about the formats supported by the unit, see "Playing back music stored on media servers (PCs/NAS)" (p.25). If the unit supports the file format, but still cannot play back any files, the network may be overloaded with heavy traffic.
<b>Version error</b>	Firmware update is failed.	Update the firmware again.

\*Australia model only

# Trademarks



“Made for iPod,” “Made for iPhone,” and “Made for iPad” mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards.

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This receiver supports network connections.

# Specifications

## AUDIO SECTION

- Minimum RMS Output Power  
(20 Hz to 20 kHz, 0.04% THD, 8 Ω) ..... 80W + 80W
- Dynamic power per channel (IHF)  
(8/6/4/2 Ω) ..... 105/125/150/178 W
- Maximum power per channel [Europe model only]  
(1 kHz, 0.7% THD, 4 Ω) ..... 105 W
- IEC power [Europe model only] (1 kHz, 0.04% THD, 8 Ω)..... 84 W
- Power band width  
(0.06% THD, 40W, 8 Ω) ..... 10 Hz to 50 kHz
- Damping factor (SPEAKERS A)  
1 kHz, 8 Ω ..... 150 or more
- Maximum effective output power (JEITA)  
[Asia and General models only]  
(1 kHz, 10% THD, 8 Ω) ..... 115 W
- Input sensitivity/Input impedance  
PHONO (MM) ..... 3.5 mV/47 kΩ  
CD, etc. .... 200 mV/47 kΩ
- Maximum input signal  
PHONO (MM) (1 kHz, 0.003% THD) ..... 60 mV or more  
CD, etc. (1 kHz, 0.5% THD) ..... 2.2 V or more
- Output level/Output impedance  
CD, etc. (Input 1 kHz, 200 mV)  
REC OUT ..... 200 mV/1.0 kΩ  
Subwoofer OUT ..... 4.0 V/1.2 kΩ  
Cut off frequency ..... 90 Hz  
CD, etc. (Input 1 kHz, 200 mV, 8 Ω)  
PHONES ..... 410 mV/470 Ω
- Frequency response  
CD, etc. (20 Hz to 20 kHz) ..... 0 ± 0.5 dB  
CD, etc., PURE DIRECT on (10 Hz to 100 kHz) ..... 0 ± 1.0 dB
- RIAA equalization deviation  
PHONO (MM) ..... ± 0.5 dB
- Total harmonic distortion  
PHONO (MM) to REC (20 Hz to 20 kHz, 3 V) ..... 0.025% or less  
CD, etc. to SPEAKERS  
(20 Hz to 20 kHz, 40.0 W, 8 Ω) ..... 0.015% or less
- Signal to noise ratio (IHF-A network)  
PHONO (MM) (5 mV input shorted) ..... 87 dB or more  
CD, etc., PURE DIRECT on  
(200 mV input shorted) ..... 100 dB or more
- Residual noise (IHF-A network) ..... 30 μV
- Channel separation  
CD, etc. (5.1 kΩ input shorted, 1/10 kHz) ..... 65/50 dB or more
- Tone control characteristics  
BASS  
Boost/Cut (20 Hz) ..... ± 10 dB  
Turnover Frequency ..... 350 Hz  
TREBLE  
Boost/Cut (20 kHz) ..... ± 10 dB  
Turnover Frequency ..... 3.5 kHz
- Continuous loudness control  
Attenuation (1 kHz) ..... -30 dB
- Gain tracking error (+16.5 to -80 dB) ..... 0.5 dB or less
- Digital input  
OPTICAL  
COAXIAL  
Support audio sample rate ..... 32 kHz to 192 kHz

## FM SECTION

- Tuning range  
[U.S.A. and Canada models] ..... 87.5 to 107.9 MHz  
[Asia and General models] ..... 87.5/87.50 to 108.0/108.00 MHz  
[U.K., Europe, Korea, Australia models] ..... 87.50 to 108.00 MHz
- 50 dB quieting sensitivity (IHF, 1 kHz, 100% MOD.)  
Mono ..... 3.0 μV (20.8 dBf)
- Signal to noise ratio (IHF)  
Mono/Stereo ..... 71 dB/69 dB
- Harmonic distortion (1 kHz)  
Mono/Stereo ..... 0.3%/0.5%  
Antenna input ..... 75 Ω unbalanced

## AM SECTION

- Tuning range  
[U.S.A. and Canada models] ..... 530 to 1710 kHz  
[Asia and General models] ..... 530/531 to 1710/1611 kHz  
[U.K., Europe, Korea, Australia] ..... 531 to 1611 kHz

## GENERAL

- Power supply  
[U.S.A. and Canada models] ..... AC 120 V, 60 Hz  
[General model] ..... AC 110-120/220-240 V, 50/60 Hz  
[Korea model] ..... AC 220V 60Hz  
[Australia model] ..... AC 240 V, 50 Hz  
[U.K. and Europe models] ..... AC 230 V, 50 Hz  
[Asia model] ..... AC 220-240 V, 50/60 Hz
- Power consumption ..... 190 W
- Standby power consumption ..... 0.1 W or less  
Network standby on ..... 2.0 W Typical
- Maximum power consumption  
[General model only] ..... 380 W
- Dimensions (W × H × D) ..... 435 × 151 × 387 mm  
(17-1/8" × 6" × 15-1/4")
- Weight ..... 9.8 kg (21.6 lbs)

\* Specifications are subject to change without notice.

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This code grew slowly over time without much design or planning, with features being tacked on as required.

It's not representative of my normal coding style.

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<b>TV</b>		Aventura	0051	CMS Hightec	0282	Elcit	0339
A.R. Systems	0320	Awa	0277, 0282	Coby	0197	Electa	0348
Acme	0342	Axion	0156	Colorlyme	0008, 0026	ELECTRO TECH	0343
Acura	0323, 0343	Baird	0282	Commercial Solutions	0021	Electroband	0055, 0107
ADC	0337	Bang & Olufsen	0180, 0339	Concerto	0008, 0026	Electrograph	0176
Admiral	0054, 0178, 0336, 0337, 0339, 0346, 0347	Basic Line	0282, 0320, 0323, 0340, 0343, 0350	Concorde	0323, 0343	Electrohome	0008, 0026, 0052, 0055
Advent	0158	Bastide	0282, 0342	Condor	0161, 0277, 0320, 0323, 0342, 0350, 0351	Element	0230
Adventura	0057	Baur	0320, 0349	Contec	0179, 0277, 0323, 0342, 0343, 0344	Elin	0277, 0320, 0323, 0342, 0349, 0350
Adyson	0277, 0282, 0342	Bazin	0282	Contec/Cony	0012, 0058	Elite	0320, 0340, 0350
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Alcyon	0171	Bradford	0058, 0179	Cytron	0152	Euro-Feel	0337
Alleron	0059	Brandt	0322, 0345	Daewoo	0007, 0008, 0026, 0037, 0053, 0167, 0266, 0275, 0277, 0282, 0315, 0320, 0323, 0331, 0335, 0342, 0343, 0350, 0381, 0465	Euroline	0349
Allorgan	0282	Brilliant	0182	Dainichi	0277, 0340	Euroman	0161, 0277, 0282
Allstar	0320, 0350	Brinkmann	0320	Dansai	0277, 0282, 0320, 0337, 0349, 0350	Euromann	0320, 0337, 0342, 0350
America Action	0179	Brionvega	0320, 0339, 0349, 0350	Dantax	0161, 0349	Europhton	0277, 0282, 0320, 0341, 0342, 0350
AMOi	0276	Britannia	0277, 0282, 0342	Dawa	0320	Expert	0321
Amplivision	0161, 0282, 0321, 0342	Brockwood	0008	Daytron	0007, 0008, 0026, 0323, 0343	Exquisit	0320
Amstrad	0320, 0323, 0337, 0340, 0343	Broksonic	0109, 0179	De Graaf	0346	Fenner	0323, 0343
Amtron	0058	Bruns	0339	Decca	0282, 0320, 0342, 0349, 0350	Ferguson	0322, 0345, 0349
Anam	0179, 0343	BTC	0340	Dell	0145, 0245	Fidelity	0277, 0320, 0342, 0346
Anam National	0052, 0058	Bush	0269, 0282, 0283, 0304, 0320, 0323, 0328, 0332, 0340, 0343, 0344, 0346, 0348, 0349, 0350, 0372, 0382, 0463, 0470, 0472	Denver	0358, 0362	Filsai	0282
Anglo	0323, 0343	byd:sign	0093	Desmet	0320, 0349, 0350	Finlandia	0346
Anitech	0171, 0320, 0323, 0337, 0343	Candle	0008, 0026, 0050, 0057	Diamant	0320	Finlux	0171, 0282, 0320, 0339, 0341, 0342, 0349, 0350
Ansonic	0161, 0168, 0320, 0323, 0341, 0343	Capsonic	0337	Diamond	0277	FIRST LINE	0342, 0343, 0350
AOC	0008, 0026, 0050, 0053	Carena	0320	DiamondVision	0135, 0143	Firstline	0277, 0282, 0320, 0323
Apex	0039, 0111, 0217	Carnivale	0050	Dimensia	0049	Fisher	0019, 0161, 0282, 0339, 0342, 0344, 0351
Arcam	0277, 0282	Carrefour	0344	Disney	0219	Flint	0320, 0350
Arcam Delta	0342	Carver	0010	Dixi	0282, 0320, 0323, 0343, 0349, 0350	Formenti	0171, 0277, 0336, 0339, 0342, 0349
Aristona	0320, 0349, 0350	Cascade	0320, 0323, 0343	Dream Vision	0461, 0498	Formenti/Phoenix	0277
Arthur Martin	0321	Casio	0367	DTS	0323, 0343	Fortress	0336, 0339
ASA	0339, 0347	Cathay	0320, 0349, 0350	Dual	0282, 0320, 0342	Fraba	0161, 0320
Asberg	0171, 0320, 0350	CCE	0183, 0282	Dual-Tec	0342, 0343	Friac	0161
Astra	0343	Celebrity	0055, 0107	Dumont	0008, 0030, 0062, 0282, 0339, 0341, 0342	Frontech	0282, 0323, 0337, 0343, 0346, 0347
Asuka	0277, 0282, 0337, 0340, 0342	Celera	0039	Durabrand	0031, 0051, 0179, 0215	Fujitsu	0059, 0069, 0074, 0075, 0282
Atlantic	0277, 0320, 0342, 0349, 0350	Centurion	0320, 0349, 0350	Dux	0349	Fujitsu General	0282
Atori	0323, 0343	Century	0339	Dwin	0178	Fujitsu Siemens	0504, 0505, 0507, 0510, 0511
Auchan	0321	CGE	0161, 0171	Dynatron	0320, 0349, 0350	Funai	0051, 0058, 0059, 0112, 0113, 0115, 0118, 0119, 0179, 0337, 0488, 0489
Audiosonic	0161, 0282, 0320, 0340, 0342, 0343, 0349, 0350	Changhong	0039	Dynex	0228, 0231	Futuretech	0058, 0179
AudioTon	0161, 0282, 0342	Chimei	0273	EIZO	0509	Galaxi	0320, 0351
Audiovox	0058, 0179, 0194	Cimline	0323, 0343			Galaxis	0161, 0320
Ausind	0171	Citizen	0007, 0008, 0026, 0050, 0058				
		City	0323, 0343				
		Clarion	0179				
		Clarivox	0349				
		Clatronic	0161, 0171, 0282, 0320, 0323, 0337, 0340, 0342, 0343, 0350, 0351				

Gateway	0176, 0177, 0241	Hitachi	0008, 0012, 0026,	Kamp	0277, 0342	Manesth	0282, 0320, 0337,
GBC	0323, 0343, 0344		0066, 0084, 0092,	Kapsch	0347		0342, 0349, 0350
GE	0008, 0021, 0023,		0093, 0120, 0172,	Karcher	0161, 0320, 0342,	Marantz	0008, 0010, 0026,
	0026, 0027, 0031,		0173, 0255, 0270,		0343, 0349		0050, 0204, 0320,
	0034, 0049, 0052,		0271, 0282, 0320,	Kawasho	0008, 0026, 0055,		0349, 0350
	0056, 0209		0335, 0338, 0342,		0277	Marelli	0339
Geant Casino	0321		0344, 0346, 0347,	KEC	0179	Mark	0277, 0282, 0320,
GEC	0282, 0320, 0342,		0365, 0382, 0448,	Kendo	0161, 0320, 0341,		0323, 0349, 0350
	0347, 0349, 0350		0456, 0467, 0482,		0346	Masuda	0282
Geloso	0323, 0343, 0346		0484, 0487	Kenwood	0008, 0026, 0050	Matsui	0282, 0320, 0323,
General Technic	0323, 0343	Hornophon	0320, 0350	KIC	0282		0342, 0343, 0344,
Genexxa	0320, 0340, 0347,	Hoshai	0340	Kingsley	0277, 0342		0346, 0349, 0350,
	0350	Huanyu	0277, 0342	KLH	0039		0455
GFM	0128, 0227	Hygashi	0277, 0282, 0342	Kloss Novabeam	0057, 0058	Matsushita	0017
Giant	0282	Hyper	0277, 0282, 0323,	Kneissel	0161, 0168, 0320	Maxent	0147, 0176
Gibraltar	0008, 0030, 0050,		0342, 0343	Kolster	0320, 0350	Mediator	0320, 0349, 0350
	0062	Hypson	0282, 0320, 0321,	Konka	0340	Medion	0320, 0337, 0343
GoldHand	0277		0337, 0342, 0348,	Korpel	0320, 0349, 0350	Megapower	0140
Goldline	0320		0349, 0350	Korting	0161, 0339	Megatron	0026, 0031
GoldStar	0007, 0008, 0012,	Hyundai	0141	Kosmos	0320	MElectronic	0277, 0282, 0320,
	0026, 0031, 0050,	Iberia	0320	Koyoda	0343		0323
	0053, 0161, 0277,	ICE	0277, 0282, 0320,	KTV	0007, 0050, 0058,	Melvox	0321
	0282, 0320, 0323,		0323, 0337, 0340,		0179, 0183, 0282,	Memorex	0019, 0026, 0031,
	0342, 0343, 0346,		0342, 0343, 0350		0342		0053, 0054, 0137,
	0349, 0350	ICeS	0277	Kyoto	0277, 0282		0215, 0323, 0343
Goodmans	0246, 0272, 0282,	Ilo	0148, 0153	Lasat	0161	Memphis	0323, 0343
	0320, 0323, 0337,	IMA	0058	Lenco	0323, 0343	Mercury	0320, 0323
	0343, 0344, 0349,	Imperial	0161, 0171, 0320,	Lenoir	0323, 0342, 0343	Metz	0339
	0350, 0462, 0473,		0347, 0350, 0351	Leyco	0320, 0337, 0349,	MGA	0008, 0026, 0031,
	0477	Indiana	0320, 0349, 0350		0350		0050, 0053
Gorenje	0161, 0351	Infinity	0010	LG	0031, 0053, 0066,	Micromaxx	0337, 0343
GPM	0340	InFocus	0250, 0327, 0363,		0116, 0117, 0140,	Microstar	0337, 0343
GPX	0129		0479, 0508		0161, 0164, 0175,	Midland	0007, 0021, 0023,
Gradiente	0240	Ingelen	0347		0195, 0269, 0277,		0027, 0030, 0056,
Graetz	0347	Ingersol	0323, 0343		0282, 0300, 0309,		0062
Granada	0171, 0282, 0320,	Initial	0153		0317, 0320, 0323,	Minerva	0171
	0321, 0342, 0344,	Inno Hit	0171, 0282, 0320,		0328, 0342, 0343,	Minoka	0320, 0350
	0346, 0349, 0350		0323, 0340, 0342,		0346, 0349, 0350,	Mintek	0153
Grandin	0340, 0343, 0348,		0343, 0349, 0350		0366, 0368, 0377,	Mitsubishi	0008, 0026, 0031,
	0349	Innovation	0337, 0343		0466, 0471, 0478		0053, 0066, 0084,
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Grundig	0160, 0161, 0171,		0238	Liesenk	0349		0178, 0289, 0320,
	0310, 0320	Inteq	0030	Liesenkotter	0320		0339, 0344, 0350,
Grunpy	0058, 0059, 0179	Interactive	0161	Life	0337, 0343		0376
Haier	0157, 0233	Interbuy	0323, 0343	Lifetec	0320, 0323, 0337,	Mivar	0161, 0168, 0171,
Halifax	0277, 0282, 0337,	Interfunk	0161, 0320, 0339,		0343		0277, 0282, 0342
	0342		0347, 0349, 0350	Lloyds	0323	Monivision	0140
Hallmark	0008, 0026, 0031	International	0277	Loewe	0161, 0168, 0265,	Montgomery Ward	
Hampton	0277, 0282, 0342	Intervision	0161, 0282, 0320,		0320, 0330, 0352		0054
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	0320, 0323, 0342,	Irradio	0171, 0320, 0323,	Logik	0054	Motorola	0052, 0178
	0343, 0344, 0349,		0340, 0343, 0349,	Luma	0320, 0323, 0346,	MTC	0008, 0026, 0050,
	0350		0350		0349		0053, 0161, 0277
Hantarex	0320, 0323, 0343	Isukai	0320, 0340	Lumatron	0282, 0320, 0346,	Multi System	0349
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Harvard	0058, 0179		0348, 0350	Luxman	0008, 0026		0320, 0323, 0341,
Harwood	0320, 0323	ITT	0343, 0347	Luxor	0282, 0342, 0346		0342, 0343, 0344,
Havermy	0178	ITV	0320, 0343, 0349	LXI	0010, 0019, 0021,		0346, 0349
HCM	0282, 0320, 0323,	Janeil	0057		0026, 0027, 0031,	Murphy	0277, 0342
	0337, 0342, 0343,	JBL	0010		0049, 0111	NAD	0026, 0031, 0111
	0348	JC Penney	0007, 0008, 0026,	M Electronic	0342, 0343, 0345,	Naonis	0346
			0027, 0049, 0053,		0347, 0349, 0350	NEC	0008, 0026, 0050,
Hema	0282, 0323		0056	MAG	0096		0052, 0053, 0072,
Hewlett Packard	0192	JCB	0055, 0107	Magnadyne	0339, 0341, 0349		0103, 0282, 0344
Higashi	0277	Jensen	0008, 0026	Magnafon	0171, 0277, 0341,	Neckermann	0161, 0282, 0320,
HiLine	0320	JVC	0012, 0014, 0015,		0342		0339, 0342, 0346,
Hinari	0320, 0323, 0340,		0056, 0064, 0065,	Magnavox	0008, 0009, 0010,		0349, 0350, 0351
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	0350		0297, 0314, 0344,		0033, 0048, 0050,	Net-TV	0176
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		Kaisui	0277, 0282, 0320,		0337, 0343	New World	0340
			0323, 0340, 0342,	Magnum	0054	NewTech	0282, 0320, 0323
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Nikko	0026, 0031, 0050		0380, 0383, 0452, 0459, 0460	Rex RFT	0337, 0346, 0347 0161, 0168, 0339		0138, 0165, 0170, 0178, 0198, 0229, 0262, 0278, 0279,
Noblisko	0171, 0277, 0341, 0342		0011, 0032, 0033	Rhapsody R-Line	0277 0320, 0349, 0350		0291, 0308, 0312, 0336, 0344, 0354, 0370, 0449, 0450, 0451, 0464, 0474, 0476, 0481
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Norcent	0201	Phoenix	0277, 0320, 0339, 0349, 0350	Robotron Rowa	0339 0277, 0282, 0400, 0403, 0494		0476, 0481
Nordic	0282	Phonola	0007, 0008, 0050 0008, 0026, 0094, 0095, 0161, 0320, 0345, 0347, 0349, 0350, 0458, 0480	Royal Lux RTF	0161 0339	Sheng Chia	0178
Nordmende	0339, 0345, 0347, 0350	Pioneer	0345, 0347, 0349, 0350, 0458, 0480	Runco Saba	0030, 0050, 0062 0298, 0322, 0339, 0345, 0347	Shogun	0008
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Oceanic	0321, 0347	Polaroid	0039, 0142, 0202, 0234	Sambors Sampo	0171, 0341 0007, 0008, 0026, 0050, 0176, 0400	Siesta	0161
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Optimus	0017, 0019	PROVIEW	0096, 0246	Sony	0008, 0019, 0068, 0070, 0071, 0099, 0161, 0168, 0223, 0237, 0277, 0282, 0288, 0295, 0323, 0342, 0344, 0369, 0469	Soundwave	0320, 0349, 0350
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## CD

Yamaha 5082, 5095, 5114

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## CD Recorder

Yamaha 5083

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## MD

Yamaha 5080, 5081, 5086

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## Tape

Yamaha 5084, 5087

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## Tuner

Yamaha 5066, 5085, 5088, 5090, 5092

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## LD

Yamaha 2080

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## Amplifier

Yamaha 5019, 5020, 5098

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## Apple TV

Apple 2241

“Apple TV” is a trademark or registered mark of Apple Inc.

## ■ For U.K. customers

If the socket outlets in the home are not suitable for the plug supplied with this appliance, it should be cut off and an appropriate 3 pin plug fitted. For details, refer to the instructions described below.



The plug severed from the mains lead must be destroyed, as a plug with bared flexible cord is hazardous if engaged in a live socket outlet.

## ■ Special Instructions for U.K. Model

### IMPORTANT

THE WIRES IN MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

Blue: NEUTRAL

Brown: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

Make sure that neither core is connected to the earth terminal of the three pin plug.

## Information for Users on Collection and Disposal of Old Equipment and Used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.



For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.



By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.



**Pb**

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

### [Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

### Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.



**Important Notice: Guarantee Information for customers in EEA\* and Switzerland****English**

For detailed guarantee information about this Yamaha product, and Pan-EEA\* and Switzerland warranty service, please either visit the website address below (Printable file is available at our website) or contact the Yamaha representative office for your country. \* EEA: European Economic Area

<http://europe.yamaha.com/warranty/>

