

Network CD Receiver

# CRX-N560D

OWNER'S MANUAL

Read the supplied booklet "Safety Brochure" before using the unit.







AB

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# Anytime, anywhere, music!

..... וווו

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# More on music

5

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# Awesome! Great sound!!

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# Introduction

Confirm the package contents and useful points of this manual.







## About this manual

- How to operate this unit is described mainly using the remote control.
- Illustrations may differ from actual item depicted.
- "iPod" described in this manual may also refer to "iPhone" or "iPad."
- Symbols:

Indicates precautions for use of the unit and its feature limitations.

Indicates supplementary explanations for better use.

∽ Indicates the corresponding reference page(s).

Change both batteries when the operation range of the remote control decreases.

# Part name

Familiarize yourself with all parts and these functions.

# Front panel



### (1) Remote control receiver

### 2 INPUT

Turn left or right to change the audio source. (The source is shown on the front panel display.)

(3) KM / CM ▷▷ / ▷▷ ( ♡ P.14, 16, 18) PRESET</>> ( ♡ P.27)

④ Ტ (Power) (∽ P.12)

**(5) PHONES** Connect headphones to this jack.

6 Disc tray (~ P.14)

(7) USB jack (~ P.15)

(8) 🗆 (Stop) (🗢 P.14, 16, 18, 29)

(9)  $\triangleq$  (Open/close the disc tray) ( $\bigcirc$  P.14)

#### **10** VOLUME

Controls the volume.

(1) ▷/ 🛛 (Play/pause) (♡ P.14, 16, 18)

12 Front panel display (~ P.7)

## Rear panel



#### 1 Power cable ( P.12)

#### 2 DC OUT terminal

Supplies power to the Yamaha AV accessories from this terminal. When using this, set [Use Accessory] in [System Config] from the option setting, to [YES] ( P.35). For details, refer to the owner's manual supplied with the accessory.

#### ③ NETWORK terminal (~ P.11)

Connects to a network using a commercially available network cable.

- (4) DAB/FM antenna terminal (~ P.10)
- (5) DIGITAL IN 1 terminal (optical input) (~ P.19)
- 6 DIGITAL IN 2 terminal (coaxial input) (~ P.19)
- (7) AUX 1 terminal (RCA input) (~ P.19)
- (8) AUX 2 terminal (mini jack input) ( P.19)
- (9) SUBWOOFER terminal ( $\circ$  P.9)
- (1) SPEAKERS terminal (\$\$\sigma\$ P.9)

## Front panel display



#### (1) Clock

Displays the time when the power is on.

#### 2 TUNED indicator

Lights up when the unit is tuned into a station.

#### **③** Multi information display

Shows various information, such as the clock in standby mode, music information, or radio frequency (alphanumerics only).

#### (4) MUTE indicator

Lights up when the sound is muted (~ P.8).

#### **(5)** Wake-up timer indicator

Blinks while setting the wake-up timer and lights up when the timer is set ( $\checkmark$  P.32).

#### 6 Sleep timer indicator

Lights up when the sleep timer is set (~ P.33).

#### ⑦ Shuffle/repeat indicator

Lights up when you set your iPod, CD, USB device, or computer to shuffle or repeat playback ( $\sigma$  P.20).

#### **8** STEREO indicator

Lights up when the unit is receiving a strong signal from an FM stereo broadcast.

#### **9** Operation indicators

Shows available control buttons A/V/ENTER (P.8) of the remote control.

#### 1 2nd indicator

Appears when the DAB station has a secondary station ( $\backsim$  P.23).



#### Adjusting display brightness

You can adjust the brightness of the front panel display by pressing the **DIMMER** button on the remote control ( $\sigma$  P.8).

• Each press of the button changes the brightness: bright (default), mid dim, or dim.

## Remote control



- (1) Infrared signal transmitter 2 △ (Open/close the disc tray) (♡ P.14) (3) Source buttons Switch the audio source to be played. (4) Numeric buttons (\$\$\circ\$ P.14) (5) HOME (\$\$ P.16, 18, 29) (6) RETURN (~ P.14, 16, 18, 29) (7) Audio control, cursor control buttons ( P.14, 16, 18, 29) (8) DISPLAY (~ P.21) (9) ⊐ (SHUFFLE) (∽ P.20) (1) DAB/FM control buttons (~ P.23, 24, 26, 27) (1) DIMMER (~ P.7) (12) 🔿 (Power) (🗢 P.12) (13) OPTION (~ P.22, 25, 31, 35) (14) NOW PLAYING (~ P.16, 18, 29) (15) VOLUME +/-Controls the volume. (16) MUTE Turns mute on or off.
- (17) ↔ (REPEAT) (∽ P.20)
   (18) TIMER (∽ P.32)
   (19) SLEEP (∽ P.33)

# Preparations

Connect speakers or antenna and turn the unit on.

Do not connect the power cable of the unit until you have finished connecting all cables.

# Connecting the speakers

Remove the insulation from the end of the speaker cable to expose the bare wires.



2 Connect the speaker to the unit, as the illustration shows.

- Prepare speakers and speaker cables separately.
- For connection of the speakers, refer to the owner's manual supplied with them.



- 1 .
- Take care not to allow the bare speaker wires to touch each other or any metal part of the unit. This could damage the unit and/or the speakers.
  - Make sure that left and right (L, R) connections and polarity (red: +, black: -) are correct. If connections are incorrect, the sound will be unnatural.
  - Use speakers of at least 6  $\Omega$  impedance.
  - You can also connect a subwoofer with built-in amplifier to the unit.

## Connecting antenna

- 1 Connect the supplied antenna to the unit.
- 2 Install it with pins where the unit can obtain good reception.



- ÷
- Be sure to stretch out the antenna as the illustration shows.
- If radio reception with the supplied antenna is not satisfactory, a commercially available outdoor antenna may improve reception.

# Connecting to the network

You can play back music files stored on your PC, mobile devices, DLNA\*-compatible NAS, or audio contents on the Internet, by connecting this unit to the network. You can also operate the unit with your mobile device.

\* Digital Living Network Alliance

# Connect the unit to the network as shown on the right.

• Connect with a commercially available STP (shielded twisted pair) network cable (CAT-5 or higher, straight-throughcable).



- For details on Internet connection, refer to the owner's manuals of your network devices.
  - If you are using a router that supports DHCP, you do not need to configure any network settings for the unit. If you are using a router that does not support DHCP, configure the network setting from [Network Config] in the option setting (

     P.35).
  - Wired connections are recommended for devices other than the mobile to ensure high sound quality.
  - 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 this case, change the setting of the security software or network devices.
  - When setting the subnet manually, each server must be connected to the same subnet as the unit ( $\sigma$  P.36).

# Turning on the power

# Plug the power cable into the wall outlet and press ().

- The unit turns on.
- Press 🕲 again to turn off (standby mode).
- "Eco standby" (default) reduces power consumption of the unit while limiting certain features (as shown in the table on the right).

### Canceling the eco standby

### Press OPTION.

• Option menu is shown on the front panel display.

### 2 Cancel the eco standby.

- Set the item in the order of [System Config] -[Power Saving] - [Normal].
- Change the item with  $\blacktriangle/ \blacksquare$  and press 🕮 to set.
- $3 \quad \text{Press} \stackrel{\text{\tiny OPTION}}{\bigcirc} \text{ to finish the option setting.}$



#### Status in standby/eco standby

	Standby	Eco standby
Charging of iPod/USB devices	$\checkmark$	—
Enable/disable the wake-up timer*	$\checkmark$	_
Operation of the source buttons*	$\checkmark$	$\checkmark$
CD load/eject	$\checkmark$	$\checkmark$
AirPlay	$\checkmark$	—
Power-on by the application	$\checkmark$	—
Clock display	$\checkmark$	

\* Operation with the remote control only

#### Option menu regarding power (System Config)

#### (Setting value. Bold: default)

#### **Power Saving**

Configure the power supply settings. (Normal, **Eco**) When you select [Eco], nothing is shown on the front panel display in the eco standby mode.

#### Auto Power Off

Set the time at which the unit enters standby mode if no operation is performed. (Timer 2H, Timer 4H, **Timer 8H**, Timer 12H, OFF)

# Setting the network devices

Configure your devices connected to the network to play back music files stored on your PC or NAS, or configure your mobile device to control this unit.

# PC



Configure the media sharing setting of your PC (\$\$\sigma\$ P.17).

## NAS



### Configure the settings to access your NAS.

- Enable DHCP setting of your NAS if needed.
- For more detailed settings, refer to the owner's manual supplied with your NAS.

## Mobile devices



### Install the dedicated application "NETWORK PLAYER CONTROLLER" to your mobile devices (~ P.18).

- The application supports iPhone/iPad/iPod touch and Android mobile devices.
- The mobile device needs to be connected to the same router as the unit.

# Listening to CD

This unit allows playback of audio CDs and data CDs in which the MP3/WMA files are recorded. For details on playable CDs, see "Supported devices/medias" (P.43).

- 1 Turn INPUT to select [CD]. Or, press <sup>™</sup> on the remote control.
- 2 Set a CD in a disc tray.
  - Press  $\Delta$  to open/close the disc tray.

## 3 Playback starts.

• The remote control functions are shown below.

<b>▲</b>	Skip to the first file of the previous or next folder when playing back MP3/ WMA files.
► II	Play/pause
	Stop
<b>H</b>	Skip to the beginning of the song being played back or the previous song.
►►I	Skip to the next song.
₩	Starts shuffle playback (🏞 P.20).
Ð	Starts repeat playback (🕶 P.20).
1 - 9, 0	Specify the song number.
RETURN	Cancel the song number.
ENTER	Apply the song number.





- Files on a data CD are played back in alphanumeric order.
- When CD playback is stopped, playback will resume from the beginning of the song last played. Pressing while playback is stopped will clear resume playback.

# Listening to iPod/USB devices

This unit allows playback of iPod or USB devices which music files are recorded. For details on playable iPod/USB devices, see "Supported devices/media and file formats" (P.43).

# Playing iPod

- Turn INPUT to select [USB] or press on the remote control.
- Connect the iPod to the USB jack.
  - Prepare the USB cable supplied with your iPod.
  - The source changes to [iPod].
- 3 Playback starts ( $\bigcirc$  P.16).

# **Playing USB devices**

- Turn INPUT to select [USB]. Or, press  $\stackrel{\scriptscriptstyle{\sf USB}}{\bigcirc}$  on the remote control.
- Connect a USB device to the USB port.
- Playback starts ( $\bigcirc$  P.16).





- Some iPods/USB devices may not work properly even if they meet the requirements. Playability of and power supply to all iPods/USB devices are not guaranteed.
- Yamaha and suppliers do not accept any liability for the loss of data saved on an iPod or a USB device connected to the unit. As a precaution, it is recommended to make backup copies of important files.



- Stop playback before disconnecting the USB device.
- An iPod or USB device is automatically charged when it is connected to the unit, except in the eco standby mode.

# Remote control operation for iPods/USB devices

M	Skip to the beginning of the song being played back or previous song (for iPod, press and hold to fast rewind).
	Skip to the next song (for iPod, press and hold to fast forward).
	Stop
►II	Play/pause
⊐\$	Shuffle playback (🗢 P.20)
Ð	Repeat playback (🕶 P.20)





#### Switching the information display of iPod

 When operating your iPod with Yamaha's application "NETWORK PLAYER CONTROLLER," the information display switches to the extended mode.

To switch the information display mode, press and hold the **DISPLAY** button.

- Standard mode (default): Operate your iPod while viewing the screen of the iPod and select a song to play back.
- Extended mode: Operate the remote control while viewing the iPod information shown on the front panel display (browsing operation) and select a song to play back. The remote control functions are as shown below.

▲/▼	Show other item.
ENTER	Confirm the selected item and proceed to the next level or start playback.
HOME	Show the top-level item.
RETURN	Back to the previous item.
NOW PLAYING	Finish browsing and display the playback content information.

# Listening to the songs in the computer

This unit allows you to play back music files such as MP3, WMA, or FLAC (lossless audio data compression format) files stored in the computer (server) connected to the network or NAS. Brows the front panel display and select your favorite music file.

# 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 12 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.
- 3 Click "Turn on media streaming."
- 4 Select "Allowed" from the drop-down list next to "CRX-N560D."
- 5 Click "OK" to exit.

00 .	Library ► N	/lusic ► Album ►		
Organize 💌	Stream 👻	Create playlist 👻		
Dibrary Playlists	Allow Allow Autor	Internet access to home me v remote control of my Player matically allow devices to pla	dia  y my media	st.
🛞 Artis	Turn	on media streaming		ltzmar
<ul> <li>Albur</li> <li>Genre</li> <li>Videos</li> <li>Pictures</li> </ul>	n :	N	Mr. Scruff	







• 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 "CRX-N560D" icon, and click "Allow."
- 4 Click "OK" to exit.

## For a PC or a NAS with other DLNA server software installed

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

# Playing back songs in the PC

1 Press <sup>NET</sup> repeatedly and select [Server].

## 2 Browse and select a song.

▲/▼	Show other item.
ENTER	Confirm the selected item and proceed to the next level or start playback.
HOME	Show the top-level item.
RETURN	Back to the previous item.
NOW PLAYING	Finish browsing and display playback content information.

## 3 Start playback.

►II	Play/pause
	Move to the next or previous song
	Stop
⊐‡	Shuffle playback (🕶 P.20)
Ð	Repeat playback (🗢 P.20)





 If playback is not possible, make sure this unit and the PC (server) are connected to the same router (
 (
 P.11).

#### Operating from your mobile device

Once you install the app "NETWORK PLAYER CONTROLLER" in your mobile device, you can operate the unit with the mobile device.

- Features
- Power-on/off, adjusting volume or other basic operation
- Changing the music source
- Displaying the information of the radio tuner
- Selecting, playing back, and stopping songs
- Playing back songs stored in devices

For downloading the app or the latest information, access to the App Store or Google Play and search "NETWORK PLAYER CONTROLLER."

# Listening to external sources

This unit allows playback of external devices, such as a DVD player or mobile music player. Use the terminal (DIGITAL IN 1/2 or AUX 1/2) according to the device to be connected (~ P.6). For the connection of each external device, refer to its supplied owner's manual.

- Unplug the power cable of the unit and connect the external device to the unit.
  - Prepare commercially available cables for connection.
- 2 Plug the power cable of the unit back into the wall outlet and press (1) to turn the unit on.
- 3 Change the music source.
  - Press <sup>Aux</sup> or <sup>DIGITAL</sup> according to the connecting terminal for the external device you wish to play back.
  - Press <sup>AUX</sup> to change the source to AUX1/AUX2 (analog input), press <sup>DIGITAL</sup> to change the source to DIGITAL IN1/DIGITAL IN2 (digital input).

# 4 Play back the connected external device.

• For details on playback, refer to the owner's manual supplied with the external device.



• Decrease the volume of the unit and the external device before connection. Otherwise, playback volume may be too loud.

# More on playback

You can enjoy music in varied song order or sound quality, and view music information during playback. Operations described in this section apply to all devices, such as PC (server), iPod, USB device, or CD.

# Shuffle playback

### ${\sf Press} \boxdot {\sf during playback}.$

• The shuffle indicator in the front panel display switches as shown below each time you press the button.

≫ALL	Perform shuffle playback.*
Not displayed	Does not perform shuffle playback.

\* The range of shuffle depends on the media being played back.

# Repeat playback

### Press 🗇 during playback.

• The repeat indicator in the front panel display switches as shown below each time you press the button.

<b>¢</b> 1	Repeat the song being played back.	
ALL¢	Perform repeat playback.*	
Not displayed	Does not perform repeat playback.	

\* The range of repeat depends on the playback media.





 Shuffle playback and repeat playback can be performed at the same time (except C1).

## Playback information

Song title, elapsed time, etc., can be shown on the front panel display.

Press Or during playback.

### 5:36∞ ALBUM ≯Meteora

• Display switches in the order as shown below each time you press **DISPLAY**.

USB/iPod/AirPlay/Server	CD
Song title <sup>*1</sup>	Playing time
Album tile	Remaining time of the song <sup>*2</sup>
Artist name	Remaining time of the disc <sup>*2</sup>
Playing time	Song title <sup>*1, 3</sup>
	Album tile <sup>*3</sup>
	Artist name <sup>*3</sup>

- \*1 If the song title cannot be obtained, the file title may be displayed.
- \*2 Only when playing an audio CD.
- \*3 Only when playing an audio CD and when there is information to display.





- Characters shown on the front panel display are alphanumerics only.

# Adjusting sound quality

Use the option setting to adjust sound quality.

- 1 Press  $\bigcirc^{\text{OPTION}}$ .
  - Option menu is shown on the front panel display.
- 2 Press  $\blacktriangle/ \blacksquare$  to select the desired item and press  $\blacksquare$ .
- B Press ▲/▼ to change the setting and press .
  - The setting is applied.
  - Press O to return to the previous item.
  - To cancel the sound quality setting, press  $\overset{\text{OPTION}}{O}.$
  - To set other items, repeat steps 2 and 3.
- 4 Press  $\bigcirc^{\text{OPTION}}$  to finish the option setting.



#### Option menu regarding sound quality

#### (Setting value. Bold: default)

#### Equalizer

Adjusts low frequency [EQ Low], middle frequency [EQ Mid], and high frequency [EQ High]. The setting is also applied when using headphones. (-10 to  $\mathbf{0}$  to +10)

#### Balance

Adjusts the volume balance of the left and right speakers. This setting is not applied when using headphones. (Lch. +10 to **--CENTER--** to Rch.+10)

#### **Music Enhancer**

Regenerates musical elements that are lost through compression.

#### $(\mathsf{ON}, \mathbf{OFF})$

When playing back a high quality music source, such as FLAC or WAV, it is recommended to set to [OFF]. When playing back an audio CD that has not been compressed, this function is not available even if [ON] is set.

# Listening to DAB stations

You can listen to radio of higher quality sound with Digital Audio Broadcasting (DAB) and DAB+ (upgraded version of DAB). Connect the supplied antenna ( $\sim$  P.10) and **perform an initial scan before you tune into DAB for the first time.** 

# Initial scan

### Press $\bigcirc^{\text{RADIO}}$ repeatedly to select [DAB].

- Initial scan starts automatically when you select [DAB] for the first time.
- When scanning is complete, the number of receivable DAB stations is shown on the front panel display momentarily, and the first station stored in station order is played.

# Tuning in DAB stations

### Press $\bigcirc^{\text{RADIO}}$ repeatedly to select [DAB].

- When the unit cannot receive the DAB signal, "Off Air" is shown on the front panel display.
- 2 Press TUNING ()/() to select a DAB station.



Secondary indicator (appears if station has a sub station)





- 1 Press <sup>OPTION</sup> when the source is DAB.
- Option menu is shown on the front panel display.
- 2 Press ▲/▼ to select [Initial Scan] and press (IIII).
  - Initial scan starts and finishes automatically.
- If the initial scan is performed, stored DAB station information and preset DAB stations are cleared.
- This unit can receive only Band III DAB frequencies.

#### Frequency in MHz/Channel label

174.928/5A	176.640/5B	178.352/5C	180.064/5D
181.936/6A	183.648/6B	185.360/6C	187.072/6D
188.928/7A	190.640/7B	192.352/7C	194.064/7D
195.936/8A	197.648/8B	199.360/8C	201.072/8D
202.928/9A	204.640/9B	206.352/9C	208.064/9D
209.936/10A	211.648/10B	213.360/10C	215.072/10D
216.928/11A	218.640/11B	220.352/11C	222.064/11D
223.936/12A	225.648/12B	227.360/12C	229.072/12D
230.784/13A	232.496/13B	234.208/13C	235.776/13D
237.488/13E	239.200/13F		

# Presetting DAB stations

Use the preset function to store your favorite 30 DAB stations.

- Tune in a DAB station you want to preset ( $\bigcirc$  P.23) and press  $\bigcirc^{\text{MEMORY}}$ .
  - Preset number flashes on the front panel display.



- 2 Press  $\blacktriangle/ \bigtriangledown$  to select the desired preset number.
- 3 Press 🛲 to completes presetting.

# Selecting preset DAB stations

1 Press  $\bigcirc^{\text{RADIO}}$  repeatedly to select [DAB].

2 Press PRESET  $\bigcirc/\bigcirc$  to select a preset station.







- To cancel the DAB preset setting, press
- You can change the information of the DAB station shown on the front panel display by pressing the **DISPLAY** button. Display switches in the order as shown below each time you press the **DISPLAY** button.

DLS (Dynamic Label Segment) (default)
ENSEMBLE
CHANNEL/FREQ (Channel label and frequency
SIGQ. (signal quality)
AUDIO FORMAT

#### Deleting a preset station

Use the option setting to delete a preset station.

- 1 Press  $O^{OPTION}$  when the source is DAB.
  - Option menu is shown on the front panel display.
- 2 Press ▲/▼ to select [Preset Delete] and press (PTFF).
- 3 Press ▲/▼ to select the preset number to be deleted.
- 4 Press MER.
  - A preset station is deleted.
- $5~\mbox{Press}^{\mbox{OPTION}}$  to finish the option setting.

# Confirming the reception

You can confirm the DAB signal level. This is useful when you set the antenna.

- 1 Press  $\bigcirc^{\text{OPTION}}$  when the source is [DAB].
  - Option menu is shown on the front panel display.
- 2 Press ▲/▼ to select [DAB Tune Aid] and press .
- 3 Press  $\blacktriangle/ \nabla$  to change the channel label.
  - The measured DAB signal reception level is displayed.



• The level is from 0 (none) to 100 (best).







• When performing DAB Tune Aid and the DAB signal is weak, try adjusting the position of the antenna to obtain good reception.

# Listening to FM radio stations

To listen to FM radio stations, connect the supplied antenna. See "Connecting antenna" (P.10) for connecting the antenna to the unit.



# Presetting FM stations

### Auto preset

Tunes in stations with good reception and presets them automatically.

- Press <sup>RADIO</sup>.
   Press and hold <sup>MEMORY</sup> for 2 seconds or more.
- 3 Press O
  - Auto preset starts and when it finishes, "Completed!" is shown on the front panel display.





 If station reception is weak, you can tune into a station manually by pressing the **TUNING** *«/>* button repeatedly.



• Auto preset replaces all currently-stored stations with newly-stored stations.



- You can preset up to 30 FM stations.
- To cancel the auto preset, press



### Manual preset

- Tune into a station you want to store (☞ P.26).
- 2 Press O
  - Preset number flashes on the front panel display.

536⊷ Preset Memory FMØ1 105.60MHz≥

- 3 Press  $\blacktriangle/ \lor$  to select the desired preset number.
- 4 Press for preset the station.

# Selecting preset FM stations

1 Press  $\bigcirc^{\text{RADIO}}$ .

2 Press PRESET  $\langle \rangle / \rangle$  to select a station.







• To cancel manual preset setting, press

#### Deleting a preset station

Use the option setting to delete a preset station.

- 1 Press O when the source is FM.
  - Option menu is shown on the front panel display.
- To cancel deleting preset stations, press O
- 2 Press ▲/▼ to select [Preset Delete] and press (INF).
- 3 Press  $\blacktriangle/\nabla$  to select the preset number to be deleted.
- 4 Press MER.
  - The preset station is deleted and [Deleted!] is shown on the front panel display.
- 5 Press OPTION to finish the option setting.

## Radio Data System (U.K. model only)

The unit can receive Radio Data System information.

## Press $\overset{\mbox{\tiny DISPLAY}}{\bigcirc}$ when the source is FM.

• Each press of the button changes the information displays shown below.

Frequency (default)

PTY (Program Type)

RT (Radio Text)

CT (Clock Time)





 If the signal transmission of the Radio Data System station is too weak, this unit may not be able to receive Radio Data System information completely. In particular, RT (Radio Text) information uses a lot of bandwidth, so it may be less available compared to other types of information.

# Listening to Internet radio

You can listen to world-wide radio stations via Internet. Make sure that the unit is connected to the Internet properly (*•* P.11).

- 1 Press <sup>™</sup> repeatedly to select [Net Radio].
- 2 Browse the Internet and select a radio station.

### 536∞ NetRadio ■Station List

• The remote control functions are shown below.

▲/▼	Shows other item.
ENTER	Confirm the selected item and proceed to the next level or start playback.
HOME	Show the top-level item.
RETURN	Back to the previous item.
NOW PLAYING	Finish browsing and display the playback content information.

## 3 Playback starts.

• To stop playback, press 🖲.



-**X** 

• Playback information can be shown by pressing the **DISPLAY** button while Internet radio is played back. Information changes as shown below each time you press it.

Radio station name (default)
Song title
Playing time

• You can register your favorite Internet radio stations to the "Bookmarks" folder by selecting [Net Radio] as the source on the unit and then accessing the following website with the web browser on your PC.

http://yradio.vtuner.com/

To use this feature, you need the vTuner ID of the unit and your e-mail address to create your personal account. You can check the vTuner ID (MAC address of the unit) in [Network Info] ( P.36) in the option setting.

# Listening to the Music with AirPlay

The AirPlay function allows you to play back iTunes/iPod music on the unit wirelessly via a network. Make sure that the unit and your PC or iPod are connected to the same router (r P.11).

# Playing iPod

- Turn on the unit and display the playback screen on the iPod.
  - If the iPod recognizes the unit, 🔽 is shown on the screen of the iPod.
- 2 Tap 🗔 and select the unit's name.
  - The source automatically switches to [AirPlay] and playback starts (except in the eco standby mode).



# Playing iTunes

### Turn on the unit and start iTunes.

• If the iTunes recognizes the unit, 🔊 is shown on the screen of iTunes.

## 2 Click 🗔 and select the unit's name.

• The source automatically switches to [AirPlay] (except in the eco standby mode).

## 3 Play back songs with iTunes.





- You can also use the unit and remote control to play back, pause, stop, and skip songs.
- To control iTunes playback with the remote control, you need to configure the iTunes preferences to enable iTunes control from remote speakers in advance.

General	Playback	Sharing	Store	Parental	Devices	Advanced
Device backups						
						Delete Backup
Prevent iPor	ds, iPhones, a	and iPads fri	om syncing	automatica	ly	Delete Backup
Prevent iPor	ds, iPhones, a	and iPads fr	om syncing the data o	automatica	ly Jer will be	Delete Backup

#### **Clearing AirPlay**

• Tap/click and on the iPod/iTunes screen and select a device other than CRX-N560D from the speaker list. Or, change the source to other than AirPlay.

# Using the clock

Once you set the clock, you can play your favorite song or radio program as an alarm.



#### 5 Press $\bigcirc^{\text{OPTION}}$ to finish the option setting.

3

4





• The clock setting will be lost if you disconnect the power cable from the wall outlet for about a week. Set the clock again.



• The clock format (12-hour/24-hour) can be changed if you press the **DISPLAY** button while setting the clock.

# Setting the wake-up timer

Music or beep will be started at the time you set.

### Press and hold $\bigcirc^{\text{TMER}}$ .

• [Timer Setting] and time are shown on the front panel display, and **(())** and hour flash.

Timer Setting

## 2 Set the following items, 1 to 3.

- Press ▲/▼ to select a setting value and press to set the item.
- The display switches to the next item.
- To cancel the setting, press OPTION.

#### 1 Start-up time

Set the hour and minute.

### 2 Volume

Can be set between [5] to [59], and [MAX].

### 3 Repeat

Repeat: Wake-up timer sounds everyday at the set time. No Repeat: Wake-up timer sounds once.

#### Continue to the next page ➡





- Wake-up timer is not available when [Power saving] is set to [Eco]. Set it to [Normal] (

   P.12).
- You can also set the wake-up timer using the option setting.
  - 1 Press OPTION.
  - The setting menu is shown on the front panel display.
  - 2 Press ▲/▼ to select [Timer Setting] and press @m.
  - 3 Perform step 2 on the left.
  - 4 Press  $\overset{\text{OPTION}}{O}$  to finish the option setting.
  - 5 Set the music source, play back the source, and press (1).

• When the setting completes, [Completed!] is shown and (() lights up on the front panel display.

#### B∞CD Completed!

## 3 Press ().

- The unit enters the standby mode and the beep sounds at the time you set.
- If you wish to play back music at the time you set, select an audio source and play it back before pressing (a) in this step. See (\*) at the bottom of tips on the right for details on audio source playback.

# Sleep timer

You can set the time to elapse which the unit automatically enters to standby mode.

### Press $\stackrel{\text{\tiny SLEEP}}{\bigcirc}$ several times to select the time.

- Time can be selected from 30/60/90/120 min., or OFF.
- 😰 lights up shortly after the time is selected, and the sleep timer is set.
- To cancel the sleep timer, press  $\overset{\text{sleep}}{O}$  again.





- If the source is removed from the unit after the wake-up timer is set, the unit will beep at the start-up time.
- If any music source is played back at the start-up time, (()) flashes and playback will continue.
- After setting the wake-up timer, you can enable or disable it by pressing the **TIMER** button when the unit is on.
- To stop the beep, press or **(**); otherwise, it will stop after 60 minutes.
- \* When the music source is set to AUX, Server, DIGITAL IN, or AirPlay, the unit beeps at the startup time.

# Updating the firmware

When new firmware is released, a message to update your current firmware will be shown on the front panel display (when the unit is connected to the Internet only). In this page, an updating method via a network using the option setting is shown.

## 1 Press $\bigcirc^{OPTION}$ .

- The option menu is shown on the front panel display.
- 2 Select [System Config] with ▲/▼ and press .
- 3 Select [Firm Update] with  $\blacktriangle/\checkmark$  and press (area).
- 4 Select [Network] with  $\blacktriangle/\P$  and press  $\blacksquare$ .
  - Update starts.

### NET UPDATE S2:Writing 56%

- When update finishes, messages are shown in the following order: "Update success.", "Please...", and "power off!."
- Unplug the power cable from the wall outlet and plug it back after about 30 seconds.
  - Update is applied.





- Do not operate the unit or disconnect the power cable and network cables while updating.
- - Once the message prompting update is shown on the front panel display, it will not be shown again, even if you do not perform updating. However, when you turn on the unit after the power cable has been disconnected from the wall outlet for a while, the message will be shown.
  - When Internet speed is not fast enough or 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, try again or update the firmware using a USB memory device. The firmware can be downloaded from the Yamaha Website.

## To update the firmware using a USB memory device

You can download the firmware to the USB memory device, and connect that USB memory device to the USB jack on the unit.

• Select [USB] in step 4 and press the **ENTER** button to start the update.

# **Option settings**

Option settings allow you to configure the unit to suit how you will use it.





## **Option menu list**

Menu	Sub menu	Default	Function	
Preset Delete*1 ( <b>~</b> P.24, 27)			Deletes preset stations.	
Initial Scan <sup>*1</sup> ( <b>~</b> P.23)			Scans all receivable frequencies and registers them in the unit.	
DAB Tune Aid	d* <sup>1</sup> ( <b>~</b> P.25)		Shows the level of received DAB signal.	
	EQ Low	0	Adjusts low frequency.	
Equalizer (• P 22)	EQ Mid	0	Adjusts middle frequency.	
(	EQ High	0	Adjusts high frequency.	
Balance ( <b>~</b> P.22)		CENTER	Adjusts the volume balance of the left and right speakers.	
Music Enhancer (🕶 P.22)		OFF	Enables/disables Music Enhancer.	
Timer Setting (🏞 P.32)			Sets the wake-up timer.	
	Network Status		Shows connection status of the unit and network.	
Network MAC Address			Shows MAC address.	
Info	System ID		Shows the system ID.	
Network Name			Shows the name of the unit that appears on the network.	

Menu	Sub menu	Default	Function	
	DHCP Enabled	YES	Enables/disables DHCP.	
Network	IP Address	0.0.0.0	Confirms and sets the IP address.	
	Subnet Mask	0.0.0.0	Confirms and sets the subnet mask.	
Config	Def. Gateway	0.0.0.0	Confirms and sets the default gateway.	
	DNS Server(P)	0.0.0.0	Confirms and sets the primary DNS server.	
	DNS Server(S)	0.0.0.0	Confirms and sets the secondary DNS server.	
Clock Setting			Sets clock of this unit (🅶 P.31).	
	Power Saving	Eco	Sets the eco standby ( <b>~</b> P.12).	
System Config	Auto Power Off	Timer 8H	Sets the unit into standby mode automatically ( ${f  ilde {\sf P}}$	
	Use Accessory	NO	Selects whether or not to supply power to a Yamaha accessory connected through the DC OUT jack.	
	Firm Version		Shows the firmware version of the unit.	
	Firm Update	Network	Updates the firmware of the unit ( <b>~</b> P.34).	

Advanced Setup (& P.35)	MAC Add.Filter	OFF	Specifies the MAC address (up to 5) and restricts access to this unit of network components. (Operation with AirPlay is not affected even if [MAC Add.Filter] is set to [ON].)
	Factory Reset		Resets the unit's settings to factory default.

\*1 Only when the radio is played back

# Troubleshooting

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

### First, check that the connectors of each cable are securely inserted in to jacks on each device.

## General

Problem	Cause	Solution	
The unit enters the standby mode soon after the power is turned on. The unit does not operate properly.	The power cable is not properly connected.	Connect the power cable firmly.	
The power does not turn off.	The internal microcomputer has frozen, due to an external electric shock (such as lightning or excessive static electricity) or to a drop in the power supply voltage.	Hold down $\mathbf{\Phi}$ on the front panel for more than 10 seconds to initialize and reboot the unit. (If the problem persists, unplug the power cable from the wall outlet and plug it again after 30 seconds or more.)	
	No appropriate source has been selected.	Select an appropriate source with INPUT on the front panel or the source buttons on the remote control ( $\sigma$ P.5, 8).	
No sound.	Speaker connections are not secure.	Secure the connections ( ${f \sim}$ P.9).	
	The volume is minimum or mute.	Turn up the volume.	
The power is suddenly turned off	The sleep timer may be set ( P.33).	Turn on the unit and play the course again	
The power is suddenly turned on.	Auto Power Off is set (& P.12).	- Turn on the unit and play the source again.	
The clock setting has been cleared.	The power cable has been disconnected or there was power outage.	Connect the power cable, and set the clock again ( P.31).	
Sound is heard from the speaker on one side only.	Source device or speakers are not connected properly.	Connect the source device or speaker cables properly ( ${m  au}$ P.9, 19). If the problem persists, the cables may be defective.	
There is noise interference from digital or high-frequency equipment.	This unit is too close to the digital or high-frequency equipment.	Place this unit farther away from such equipment.	
	The remote control may be operated outside its operation range.	Operate the remote control within its operation range ( ${f \sim}$ P.12).	
The remote control does not work or does	The remote control sensor on this unit may be exposed to direct sunlight or strong lighting such as an inverter type fluorescent lamp.	Change the orientation of lighting or the unit, or location of the unit.	
not runction property.	The battery may be worn out.	Replace the batteries with new ones ( $\checkmark$ P.4).	
	There are obstacles between the sensor of this unit and the remote control.	Remove the obstacles.	

## Network

Problem	Cause	Solution
The network feature does not function.	The network parameters (IP address) have not been obtained properly.	Enable the DHCP server function on your router and set [DHCP Enabled] of [Network Config] in the option menu to [YES] 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 ( $ \mathbf{O} \mathbf{P}.36 $ ).
Playback stops (songs cannot be played back continuously).	There are unsupported files in the server.	Remove the files (including image files or hidden files) which the unit does not support, from the folder being played back.
	The media sharing setting is not correct.	Configure the sharing setting and select the unit as a device to which music contents are shared ( $\checkmark$ P.17).
	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.
The unit does not detect the PC.	The MAC address filter is enabled on the unit.	In [Advanced Setup] in the option menu of the unit, set [MAC Add.Filter] to [OFF] ( $\ref{eq:thm:set}$ P.36).
	Your PC is connected to the secondary SSID of a router supporting multi SSID.	When your PC is connected to the secondary SSID, access to the device connecting to the primary SSID or LAN is restricted (only Internet access is available). Connect your PC to the primary SSID.
	Multiple routers are connected between your network devices (double router).	Disconnect Internet temporarily, check the local network, and connect the network device you wish to use to the same router.
The files in the PC cannot be viewed or played back.	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 ( $\checkmark$ P.44).
Some files cannot be played back with the unit.	You are trying to play back files with DRM (Digital Rights Management) purchased on iTunes Store.	Files with DRM (Digital Rights Management) purchased on iTunes Store cannot be played back.
The Internet radio cannot be played.	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.

Problem	Cause	Solution
	The MAC address filter is enabled on the unit.	In [Advanced Setup] in the option menu of the unit, set [MAC Add.Filter] to [OFF] or specify the MAC address of your mobile devices to allow it to access to the unit ( $\checkmark$ P.36).
The application dedicated to mobile	The unit and mobile devices are not in the same network.	Check the network connections and your router settings, and then connect the unit and mobile device to the same network.
devices does not detect the unit.	Your mobile device is connected to the secondary SSID of a router supporting multi SSID.	When your mobile device is connected to the secondary SSID, access to the device connecting to the primary SSID or LAN is restricted (only Internet access is available). Connect your mobile device to the primary SSID.
	Multiple routers are connected between your network devices (double router).	Disconnect Internet temporarily, check the local network, and connect the network device you wish to use to the same router.
Update of the firmware via network failed.	The network connection is unstable.	Try updating again after a while. Or update the firmware via USB memory ( ${f \sim}$ P.34).

# **i**Pod

Problem	Cause	Solution
	The iPod is not connected properly.	Reconnect the iPod to the USB jack ( $oldsymbol{\sigma}$ P.15).
No sound.	The iPod software version is out of date.	Download the latest iTunes software from Apple's website to update the iPod software version.
	The iPod is in the process of connecting with the unit.	Please wait for a while.
	The iPod is not supported by this unit.	Use a supported iPod ( P.43).
	The iPod is not connected properly.	Reconnect the iPod to the USB jack ( ${m \sigma}$ P.15).
The iPod cannot be operated by the iPod, unit, or remote control.	The iPod software version is out of date.	Download the latest iTunes software from Apple's website to update the iPod software version. If the problem cannot be solved, even with the latest software, reset the iPod.
	When the display mode for iPod is set to the standard mode, the unit or remote control cannot control an iPod. When in the extended mode, iPod does not function for controlling itself.	Check the display mode ( ${f \sim}$ P.16).
The playback information is not shown on the front panel display.	The iPod does not support display of playback information.	This function is only available with an iPod suitably supported by this unit ( ${\bf r}$ P.43).
	The display mode is set to the standard mode.	Change the display mode to the extended mode ( ${f \sim}$ P.16).

#### Troubleshooting

Problem	Cause	Solution
	The iPod is not connected properly.	Reconnect the iPod to the USB jack ( <b>~</b> P.15).
The iPod does not charge up.	The iPod is not supported by this unit.	Use a supported iPod (🗢 P.43).
	The unit is in the eco standby mode.	Set [Power Saving] to [Normal] with the option setting ( ${m  au}$ P.12).

# Disc

Problem	Cause	Solution
Playback does not start after a disc is set. Some button operations do not work.	The disc set into the unit may not be compatible.	Use a disc supported by the unit ( ${f \sim}$ P.43).
	The disc may be dirty.	Wipe the disc clean ( P.43).
Playback does not start immediately after pressing $\sum / \Pi \Omega$ on the unit or $\sum \Pi \Omega$	The disc set in the unit may not be supported.	Use the disc supported by the unit ( $oldsymbol{\sigma}$ P.43).
the remote control (stops immediately).	If the unit was moved from a cold to warm place, condensation may have formed on the disc reading lens.	Wait for an hour or two until the unit adjusts to the room temperature, and try again.

# **USB** devices

Problem	Cause	Solution
The unit does not detect the USB device.	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 ( ${f \sigma}$ P.15).
	The file system of the USB device is not FAT16 or FAT32.	Use a USB device with FAT16 or FAT32 format.
Folders and files in the USB device cannot be viewed.	The data in the USB device is protected by the encryption.	Use a USB device without an encryption function.

## **DAB** reception

Problem	Cause	Solution
Cannot tune into any DAB stations.	The initial scan operations were not performed.	Perform the initial scan operations ( $\frown$ P.23).
The initial scan operations are not successful and [Not Found] is shown on the front panel display.	The DAB signals are too weak.	Use the DAB Tune Aid feature to conform the best position of the antenna ( ${\bf \ \ P.25)}.$
	The positioning of the antenna is not optimal for DAB reception.	
	There is no DAB coverage in your area.	Check with your dealer or WorldDMB online at http://www.worlddab.org for a listing of the DAB coverage in your area.
There is noise interference (e.g. hiss, crackle or jitter)	The antenna needs to be repositioned.	Readjust the position of the antenna ( $\sim$ P.10).
	The DAB signals are too weak.	Use the DAB Tune Aid feature to conform the best position of the antenna ( $\checkmark$ P.25).
The DAB station information is not shown or is inaccurate.	The DAB station may be temporarily out of service, or the DAB station information is not provided by the DAB broadcaster.	Contact the DAB broadcaster.

# FM reception

Problem	Cause	Solution
FM stereo reception is noisy.	The antenna is not connected properly.	Make sure the antenna is connected properly and change the position of the antenna ( $\backsim$ P.10).
	The radio station you selected may be far from your area, or the antenna input is poor.	Use a commercially available outdoor antenna. For details, consult a specialist store.
Automatic tuning does not work.	The radio station you selected may be far from your area, or the antenna input is poor.	Use a commercially available outdoor antenna. For details, consult a specialist store.
		Use the manual tuning method (  P.26).
Cannot select a preset radio station.	The preset (memory) may have been erased.	Preset radio stations again (🇢 P.26, 27).
There is distortion, and clear reception cannot be obtained even with a good FM antenna or an outdoor antenna.	Multipath reflection or other radio interference may have occurred.	Change the height, direction, or placement of the antenna.

# Messages on the front panel display

Message	Cause	Solution
Unknown	There is a problem with the signal path from your iPod to this unit.	Reconnect the iPod.
	The iPod/USB device being connected is not supported by the unit.	Use a supported iPod/USB device (  P.43).
	The iPod software is out of date.	Download the latest iTunes software from Apple's website to update the iPod software version.
Timer not work	The unit is in the eco standby mode.	Set [Power Saving] to [Normal] with the option setting ( P.12).
Quarcurrant	The connected iPod/USB device is not supported by the unit.	Disconnect the iPod/USB device, turn off the unit, and turn it on again. If this does not
Overcurrent	iPod/USB device is not connected properly.	solve the problem for the USB device, it is not playable on the unit.
Unplugged	iPod/USB device is not connected firmly.	Disconnect the iPod/USB device and reconnect it ( P.15).
	The disc set in the unit may not be supported by the unit.	Use a disc supported by the unit ( ${f \sim}$ P.43).
No Disc	The disc may be dirty, or foreign objects may be attached to it.	Remove the disc and then wipe the disc clean.
	Disc is set upside-down.	Set the disc with the labeled side facing up.
No Songs	The disc does not contain playable files.	Set a disc with playable files ( ${f \sim}$ P.43).
Initializing	The unit is starting up.	Wait until the message disappears. If the message stays more than 3 minutes, turn off the unit and turn it on again.
Loading	The unit is loading the specified file/contents.	Wait until the unit finishes loading.
No Content	Selected folder does not contain playable files.	Select a folder with playable files ( ${f \sim}$ P.44).
Not Connected	The unit is not connected to the Internet.	Check the Internet connection.
Unsupported	You are trying to play back a file which the unit does not support	Play a file supported by the unit ( ${f \circ}$ P.44).
No Operation	You are trying to open the disc tray while setting the option menu.	Open the disc tray after the option setting is finished.
Access Denied	Access to the PC is denied.	Configure the sharing settings and select the unit as a device to which music contents are shared ( $\sim$ P.17).
Access Error	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.43).
	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) ( ${f \sim}$ P.11).
Version Error	Firmware update is failed.	Update the firmware again.

# Supported devices/media and file formats

# Supported devices/ medias

### PCs

PC with Windows Media Player 11 or Windows Media Player 12 installed.

#### NAS

NAS that is compatible with DLNA version 1.5.

#### **USB** devices

- This unit supports USB mass storage class devices (e.g., flash memories or portable audio players) using FAT16 or FAT32 format.
- Do not connect devices other than USB mass storage class devices (such as USB chargers or USB hubs), PCs, card readers, an external HDD, etc.
- USB devices with encryption cannot be used.

### iPod

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

(As of August 2013)

#### Note

iPod is licensed on the condition that individuals perform privately duplication and playback of uncopyrighted material or material legally approved of duplication and playback. Infringement of copyright is prohibited by law.

### Discs

• This unit is designed for use with audio CD, CD-R/RW (ISO 9660 format) with any of the following logos printed on the disc or the disc jacket.

#### Audio CD



#### CD-R/RW



- \* Discs which bear one of the following. FOR CONSUMER FOR CONSUMER USE FOR MUSIC USE ONLY
- 8-cm discs are playable with this unit. Set a disc in the inner recessed area of the disc tray.

#### Notes on discs

- Do not set any other type of disc other than stated above in this unit. Doing so may damage the unit.
- CD-R/RW cannot be played back unless finalized.
- Some discs cannot be played back depending on the disc characteristics or recording conditions.
- Do not use any non-standard shaped discs such as a heart-shaped disc.
- Do not use discs with many scratches or a crack on their surface, or warped/glued discs.

#### **Handling discs**

• Do not touch the surface of the disc. Hold a disc by its edge or center hole.



- Use a soft-tipped pen when writing on the label side of a disc.
- Do not put tape, seal, glue, etc., on a disc.
- Do not use a protective cover to prevent scratches.
- Do not set foreign object on the disc tray.
- Do not set more than one disc in this unit at one time. This could cause damage to both this unit and the discs.
- If a disc becomes dirty, wipe it with a clean, dry soft cloth from the center out to the edge. Do not use record cleaner or paint thinner.



- Do not use any lens cleaners as they may cause malfunction.
- Do not expose discs to direct sunlight, high temperature, high humidity, or dust.
- When a disc is not being used, remove it from this unit and store in an appropriate case.



# File format

File format the unit supporting is as follows.

### DLNA/USB

- The unit supports playback of WAV (PCM format only), MP3, WMA, MPEG-4 AAC and FLAC files (1- or 2-channel audio only).
- 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.
- Digital Rights Management (DRM) contents cannot be played back.

### Discs

- The unit supports playback of MP3 and WMA files with a sampling rate of up to 48 kHz.
- The unit is compatible with both constant and variable bitrates of from 8 to 320 kbps for MP3 files, and from 16 to 320 kbps for WMA files.
- This unit can play back a maximum of 512 files, 255 folders (maximum of 511 files in a folder).
- Digital Rights Management (DRM) files cannot be played back.



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.

"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.

Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.

AirPlay, iPad, iPhone, iPod, iPod nano, iPod touch and iTunes are trademarks of Apple Inc., registered in the U.S. and other countries.



#### Fraunhofer Institut Integrierte Schaltungen

MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.

etwork

This unit supports network connections.



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#### Windows™

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

Internet Explorer, Windows Media Audio and Windows Media Player are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

#### Android™

Android and Google Play are trademarks of Google, Inc.





Digital Audio Broadcasting Digital Audio Broadc The unit supports DAB/DAB+ tuning.

# **Specifications**

#### **Player section**

	Media		CD, CD-R/RW
CD	Audio format		Audio CD, MP3, WMA
		Туре	Semiconductor laser GaAs/GaAlAs
	Laser	Wave length	790 nm
		Output power	10 mW
iPod	Supported iPo	d	
(digital	Supported iPhone		See page 43.
connection)	Supported iPad		
USB	Supported file format		MP3, WMA, MPEG4 AAC, WAV*, FLAC* * up to 192 kHz/24 bit
	Input connector	AUX1	Stereo L/R: RCA
AUX IN		AUX2	3.5 mm stereo mini jack
	Input connector	DIGITAL IN 1	Optical
DIGITAL IN		DIGITAL IN 2	Coaxial
	Interface		100Base-TX/10Base-T
Network	Internet radio		vTuner service supported
	PC client function		DLNA Ver. 1.5 (DMP/DMR function) supported
	Supported file format		MP3, WMA, MPEG4 AAC, WAV*, FLAC* * up to 192 kHz/24 bit
	AirPlay		AirPlay supported

#### Amplifier section

Maximum output power	32 W + 32 W (6 Ω 1 kHz, 10% THD)
Total harmonic distortion AUX1 1 kHz/12.5 W	0.05% or less
EQ control	EQ High (treble)/EQ Mid (middle)/EQ Low (bass): ±10 dB
Headphones	Stereo L/R: 3.5mm stereo mini jack Adapted impedance: 16 $\Omega$ - 32 $\Omega$

#### General

Power supply	U.K. model	AC 230 V, 50 Hz
	Australia model	AC 240 V, 50 Hz
Power consumption		44 W
Power consumption in the standby mode		6 W or less
Power consumption in the eco standby mode		0.5 W or less
Dimensions (W $\times$ H $\times$ D)		215 × 110 × 288 mm (8-1/2 × 4-3/8 × 11-3/8 in)
Weight		2.7 kg (6.0 lbs.)

(As of August 2013)

Specifications are subject to change without notice.

#### **Tuner section**

Tuning range	DAB	174 to 240 MHz (Band III)
	FM	87.50 to 108.00 MHz

# Information about software

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### About ASN.1 object dumping code

ASN.1 object dumping code, copyright Peter Gutmann <pgut001@cs.auckland.ac.nz>, based on ASN.1 dump program by David Kemp <dpkemp@missi.ncsc.mil>, with contributions from various people including Matthew Hamrick <hamrick@rsa.com>, Bruno Couillard <bcouillard@chrysalis-its.com>, Hallvard Furuseth <h.b.furuseth@usit.uio.no>, Geoff Thorpe <geoff@raas.co.nz>, David Boyce <d.boyce@isode.com>, John Hughes <john.hughes@entegrity.com>, Life is hard, and then you die <ronald@trustpoint.com>, Hans-Olof Hermansson <hans-olof.hermansson@postnet.se>, Tor Rustad <Tor.Rustad@bbs.no>, Kjetil Barvik <kjetil.barvik@bbs.no>, James Sweeny <jsweeny@us.ibm.com>, and several other people whose names I've misplaced.

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.

### About FLAC codec Library

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