DENON

DRA-F109
STEREO RECEIVER

Owner's Manual

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

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

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

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

CAUTION:
HOT SURFACE. DO NOT TOUCH.
The top surface over the internal heat sink may become hot when operating this product continuously.
Do not touch hot areas, especially around the "Hot surface mark" and the top panel.

Hot surface mark

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings.
   Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by the manufacturer.
11. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

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

• **DECLARATION OF CONFORMITY**
We declare under our sole responsibility that this product, to which this declaration relates, is in conformity with the following standards:
EN60065, EN55013, EN55020, EN61000-3-2 and EN61000-3-3.
Following the provisions of Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/EC, the EC regulation 1275/2008 and its frame work Directive 2009/125/EC for Energy-related Products (ErP).

DENON EUROPE
Division of D&M Germany GmbH
An der Kleinbahn 18, Nettetal,
D-41334 Germany

A NOTE ABOUT RECYCLING:
This product's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with the local recycling regulations.
When discarding the unit, comply with local rules or regulations.
Batteries should never be thrown away or incinerated but disposed of in accordance with the local regulations concerning battery disposal.
This product and the supplied accessories, excluding the batteries, constitute the applicable product according to the WEEE directive.

Pb

❏ NOTES ON USE

WARNINGS

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

❏ CAUTIONS ON INSTALLATION

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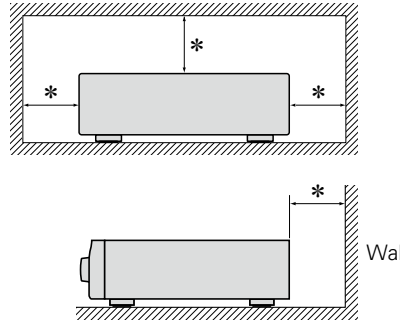
∗ **For proper heat dispersal, do not install this unit in a confined space, such as a bookcase or similar enclosure.**
  - More than 0.3 m is recommended.
  - Do not place any other equipment on this unit.

Getting Started

Thank you for purchasing this DENON product. To ensure proper operation, please read this owner's manual carefully before using the product.
After reading them, be sure to keep them for future reference.

Contents

Accessories

Check that the following parts are supplied with the product.

⑤ ⑤ ⑥

❶ ❷

⑧ ⑨

Features

High quality amplifier
Equipped with 65 W + 65 W (4 Ω) high-quality amplifier circuits. This design lets you hear the details of music on a powerful dynamic foundation.

"Simple & Straight" circuit design for sound purity and free of coloration
DENON's popular Hi-Fi products give you high sound quality based on the "simple & Straight" concept. Circuitry is uncomplicated, signal paths are short, and all adverse influences on sound quality have been minimized.

Digital input for Network player / CD Player / TV
DRA-F109 has the digital audio interface which can receive High-Resolution signal 24 bit / 192 kHz∗.
You can enjoy High-Resolution sound by connecting the network player that supported to playback 24 bit / 192 kHz∗ Audio file.
∗ This unit is not compatible with DIGITAL IN (OPTICAL).

Two line FL display for easy reading, setup, and broadcasting information
The two-line display on the front panel makes setting the timer very easy, and lets you check the time when the system is turned on and off.

Auto Standby mode for save the energy

Cautions on handling

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

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

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

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

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

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

Preparations

Here, we explain the connection methods for this unit.

● **Connecting the speakers** ☞**page 4**

● **Connecting a CD player** ☞**page 5**

● **Connecting a network audio player** ☞**page 5**

● **Connecting a TV** ☞**page 5**

● **Connecting an antenna** ☞**page 6**

● **Connecting the power cord** ☞**page 7**

Connections

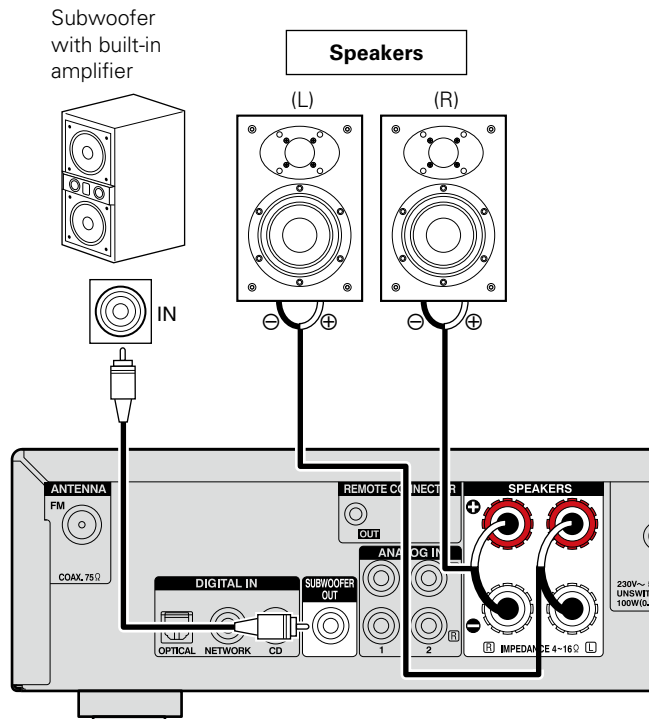For system connections, also see the section "Making system connections" (☞).

Cables used for connections

Audio cable (sold separately)	
Subwoofer cable	
Speaker cable	+ + − −
Optical cable	
Audio cable	L L R R
Coaxial digital cable	

Connecting the speakers

Subwoofer with built-in amplifier

Speakers

(L)　　(R)

IN

ANTENNA
FM

REMOTE CONNECTER
OUT

SPEAKERS

COAX.75Ω

DIGITAL IN

OPTICAL　NETWORK　CD

SUBWOOFER
OUT

ANALOG IN
1　2

230V~ 50/
UNSWITCH
100W(0.43A

R IMPEDANCE 4~16Ω L

When using an SC-F109 (speaker system, sold separately), we recommend using the receiver's optimizing filter.
Signals adjusted for the SC-F109's properties are output. (☞ "Convenient functions").

Connecting the speaker cables

Carefully check the left (L) and right (R) channels and + (red) and – (black) polarities on the speakers being connected to the DRA-F109, and be sure to interconnect the channels and polarities correctly.
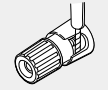
1 Peel off about 10 mm of sheathing from the tip of the speaker cable, then either twist the core wire tightly or terminate it.

2 Turn the speaker terminal counterclockwise to loosen it.

3 Insert the speaker cable's core wire to the hilt into the speaker terminal.

4 Turn the speaker terminal clockwise to tighten it.
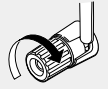
NOTE

- **Disconnect this unit's power plug from the power outlet before connecting the speakers. Also, turn off the subwoofer.**
- **Use speakers with an impedance of 4 to 16 Ω. The protection circuit may be activated if speakers with an impedance other than specified are used.**
- **Connect the speaker cables so they do not stick out of the speaker terminals. The protection circuit may be activated if the wires touch the rear panel or if the + and – sides touch each other (☞ "Protection circuit").**
- **Never touch the speaker terminals while the power supply is connected. Doing so could result in electric shock.**

Connecting a CD player

CD Player

AUDIO

COAXIAL OUT | AUDIO OUT L R

or

ANTENNA FM

COAX.75Ω

REMOTE CONNECTOR OUT | SPEAKERS

DIGITAL IN | SUBWOOFER OUT | ANALOG IN

OPTICAL NETWORK CD | 1 2 | R IMPEDANCE 4~16Ω L
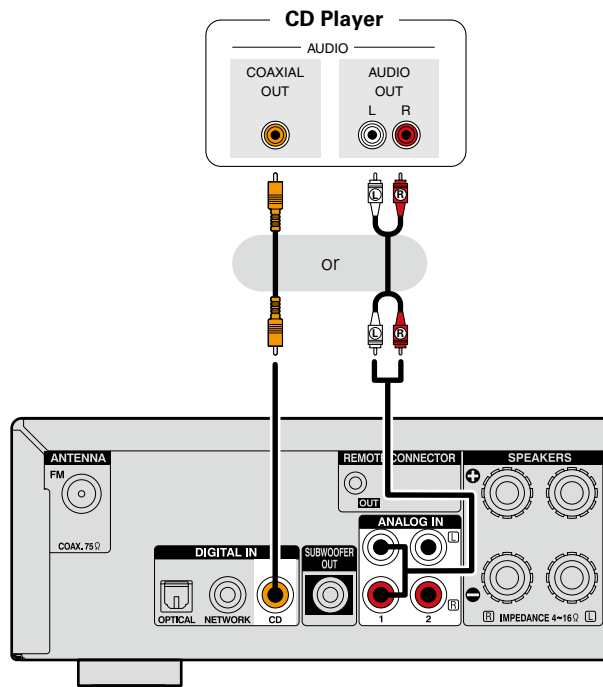
When connecting the DRA-F109 and DCD-F109 (CD player, sold separately), make system connections.
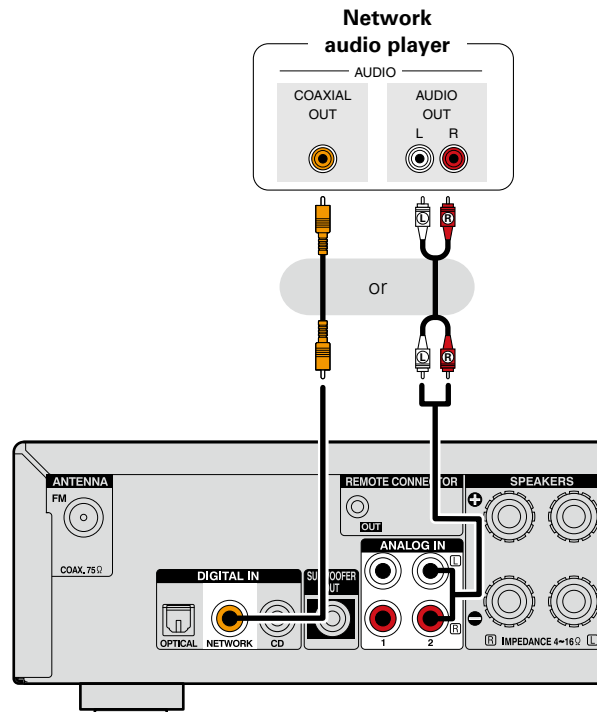**This enables operation using the DRA-F109's remote control unit and the various system functions.**
(**"About system functions")**

To connect DCD-F109 to this unit, use a coaxial digital cable.

Connecting a network audio player

Network audio player

AUDIO

COAXIAL OUT | AUDIO OUT L R

or

ANTENNA FM

COAX.75Ω

REMOTE CONNECTOR OUT | SPEAKERS

DIGITAL IN | SUBWOOFER OUT | ANALOG IN

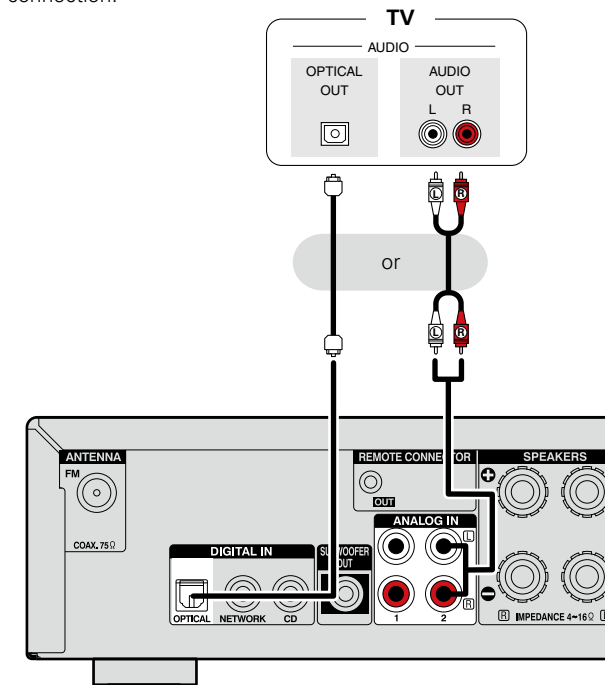OPTICAL NETWORK CD | 1 2 | R IMPEDANCE 4~16Ω L

When connecting the DRA-F109 and DNP-F109 (Network audio player, sold separately), make system connections.
This enables operation using the DRA-F109's remote control unit and the various system functions.
(**"About system functions")**

To connect DNP-F109 to this unit, use a coaxial digital cable.

Connecting a TV

- Select the connector to use and connect the device.
- To listen to TV audio through this unit, use the optical digital connection.

TV

AUDIO

OPTICAL OUT | AUDIO OUT L R

or

ANTENNA FM

COAX.75Ω

REMOTE CONNECTOR OUT | SPEAKERS

DIGITAL IN | SUBWOOFER OUT | ANALOG IN

OPTICAL NETWORK CD | 1 2 | R IMPEDANCE 4~16Ω L

NOTE

- Other digital audio signals than 2 channel linear PCM cannot be input through DIGITAL IN (OPTICAL) connector of this unit.
- When you try to input digital audio signals other than 2 channel linear PCM to this unit, set the digital audio output setting of the TV to 2 channel PCM. For details, see the operating instructions of the TV.

Connecting an antenna

FM (for continental model only)

- Connect the FM antenna included with the unit to enjoy listening to radio broadcasts.
- After connecting the antenna and receiving a broadcast signal (☞page 12 "Listening to FM broadcasts"), use tape to fix the antenna in a position where noise is the lowest.

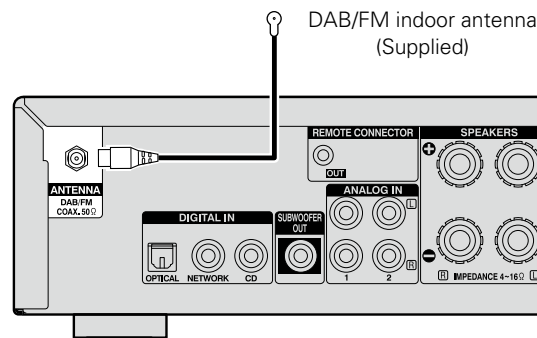FM indoor antenna
(supplied)
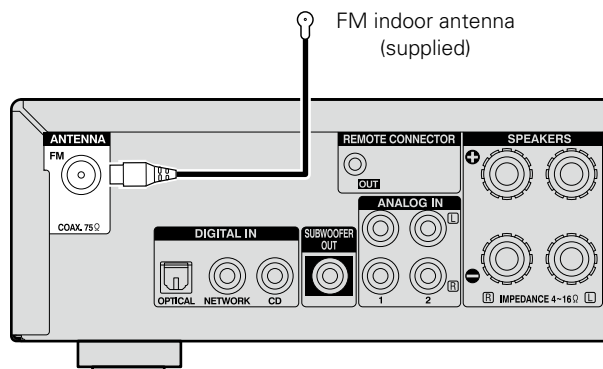
NOTE

- Do not connect two FM antennas simultaneously.
- If you are unable to receive a good broadcast signal, we recommend installing an outdoor antenna. Inquire at the retail store where you purchased the unit for details.

DAB (for UK model only)

❏ Installing the DAB indoor antenna
DAB station reception (☞page 16).
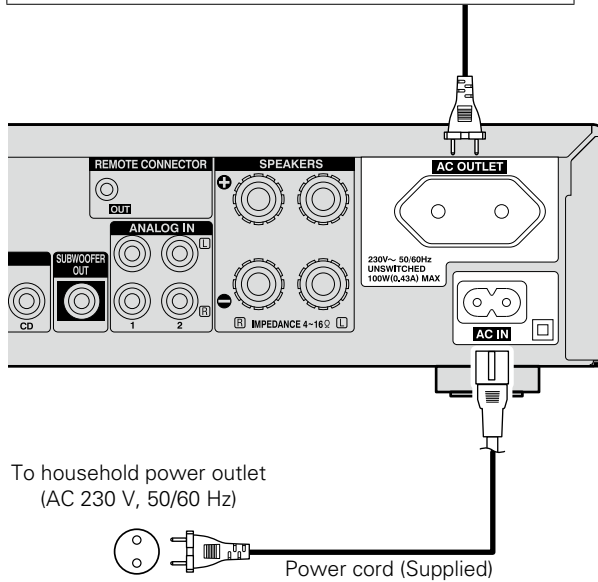
DAB/FM indoor antenna
(Supplied)

Connecting the power cord

Wait until all connections have been completed before connecting the power cord.
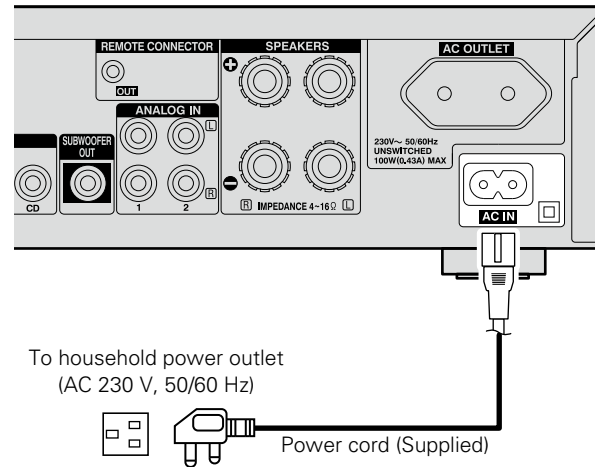
❏ For continental model only

Connecting to the AC OUTLET

UNSWITCHED (Total capacity: 100 W (0.43 A)):
Make sure the total power consumption of the connected devices does not exceed 100 W (0.43 A).

To household power outlet
(AC 230 V, 50/60 Hz)

Power cord (Supplied)

❏ For UK model only

To household power outlet
(AC 230 V, 50/60 Hz)

Power cord (Supplied)

NOTE

• Insert the AC plugs securely. Incomplete connections could cause noise.
  Do not unplug the power cord before the power indicator turns off and the DRA-F109 enters Standby mode.
• Only use the supplied power cord.
• Be sure the power cord is unplugged from the power outlet before connecting or disconnecting it to the AC IN.
• The AC outlet is for use with audio components. Do not use it to connect hair dryers or any equipment other than audio components.

7

Operations

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

8

Basic operation

Preparations

Turning the power on

Press POWER ⏻.
• The power turns on. Press again to set the power to standby.
• Power indicator
Normal standby.....................Off
Power on................................Green
Alarm standby ....Orange
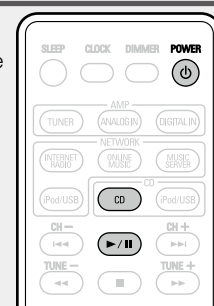
• When the power is turned on, the function that was being used when the power was last turned off is selected (☞page 20 "Last function memory").
• The receiver switches to the low power consumption mode about 30 minutes after it is set to standby.

✎

When the power is in the standby mode, pressing one of the following buttons also turns this unit on.
• ⏻ or **PRESET CALL** on the main unit
• **TUNER**, **ANALOG IN** or **DIGITAL IN** on the remote control unit

NOTE

Power continues to be supplied to some of the circuitry even when the power is in the standby mode. When leaving home for long periods of time or when traveling, unplug the power cord from the power outlet.

❏ Completely turning off the power
Unplug the power cord from the wall outlet.
• Note that the time setting is cleared when the power cord is unplugged from the outlet.
• The settings made for the various functions may be cleared if the power cord is left unplugged from a power outlet for an extended period of time.

Setting the current time (24-Hour display)

【Example】Setting the current time to 10:15 am

1 Press **POWER** ⏻ to turn the power on.

2 Press **SYSTEM SETUP**.
Various types of setting menus are displayed.

3 Use △▽ to select "CLOCK SETUP", then press **ENTER**.

```
        S E T U P
 ↕ C L O C K   S E T U P
```

4 Use △▽ to set the "hours".

```
    C L O C K   S E T U P
 ↕                 1 0 : 0 0
```

5 Press **ENTER** or ▷.
The "minutes" display flashes.

6 Use △▽ to set the "minutes".

```
    C L O C K   S E T U P
 ↕                 1 0 : 1 5
```

7 Press **ENTER** or ▷.
The current time is set, and the normal display reappears.

❏ Checking the current time when the power is on

Press **CLOCK**.
Press once more and the display returns to its original condition.

❏ Checking the current time when the power is set to standby

Press **CLOCK**.
The current time is displayed for 10 seconds.

NOTE

The time cannot be set when in the standby mode. Turn on the power first.

10

Selecting the input source

Press TUNER, ANALOG IN or DIGITAL IN * **to select the input source.**
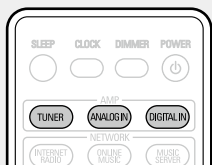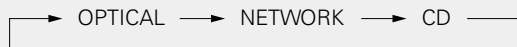The desired input source can be selected directly.

∗ Each time you press **DIGITAL IN**, the input source switches as follows.
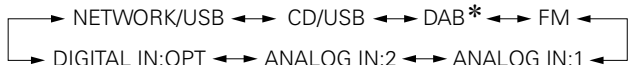
OPTICAL → NETWORK → CD

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

❏ **Using the knob on the main unit**
Turn **SOURCE**.
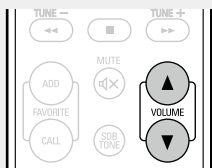• Every time you turn **SOURCE**, the input source switches in the following order.

NETWORK/USB ↔ CD/USB ↔ DAB* ↔ FM
DIGITAL IN:OPT ↔ ANALOG IN:2 ↔ ANALOG IN:1

∗ For UK model only

Adjusting the master volume

Use VOLUME ▲▼ to adjust the volume.
The volume level is displayed.

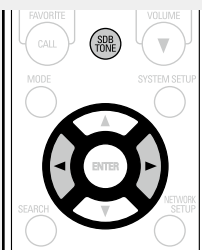【Variable range】

| 00 | – | 59 | , | MAX |

✎

You can also do this by turning **VOLUME** on the main unit.

Adjusting the tone

1 **Press SDB TONE to select the tone parameter to be adjusted.**

SDB → BASS → TREBLE
S. DIRECT ← BALANCE ←
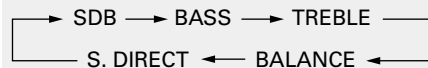
2 **Use ◁ ▷ to adjust the SDB, BASS, TREBLE or BALANCE.**

• To make other tone adjustments at this time, press **SDB TONE**.
• If no operation is performed for 5 seconds, the adjustment is retained and the normal display reappears.

SDB : Emphasize the bass sound (Super Dynamic Bass).

【Selectable modes】 **ON** – **OFF**

BASS : Adjusts the bass sound.

【Variable range】 **−10dB** – **+10dB**

TREBLE : Adjusts the treble sound.

【Variable range】 **−10dB** – **+10dB**

BALANCE : Adjusts the left/right volume balance.

【Variable range】 **+L6** – **CENTER** – **+R6**
Press ◁ when you want to adjust the left channel, ▷ when you want to adjust the right channel.

S.DIRECT : The tone is not adjusted.

【Default settings】
• SDB ·· OFF
• BASS ··· 0dB
• TREBLE ··· 0dB
• BALANCE ······························· CENTER

✎

SDB and BASS can be set simultaneously.

Turning off the sound temporarily

Press MUTE ⊲✕.
The "MUTE ON" is displayed.

✎
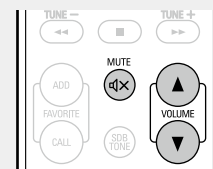
To cancel, press **MUTE ⊲✕** again.
(The mute mode is also canceled when **VOLUME ▲▼** is pressed.)

Switching the brightness of the display

Press DIMMER.

Bright → Dim
Off ← Dark ←
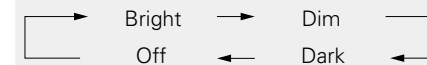
• The display's brightness switches each time the button is pressed.

✎
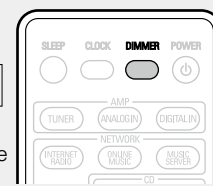
When the system connection is established, the brightness switches on all devices.

Listening to FM broadcasts

Tuning in broadcast stations

Connect the antenna beforehand (☞page 6).

1 Press TUNER to select the reception band.
- When "FM AUTO" is selected: "AUTO" is displayed.
- When "FM MONO" is selected: "MONO" is displayed.

→ DAB✳ → FM AUTO
FM MONO ←

✳ UK model only
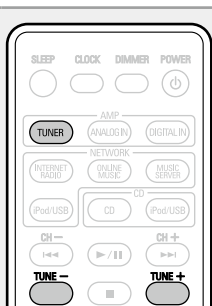
- When the reception band mode is set to "FM AUTO", the "ST" indicator lights when a stereo broadcast is tuned in.

2 Use TUNE −, TUNE + to select the reception band.
When a station is received, the "TUNED" indication will light.

✎

- If the function is set to something other than "FM", press **TUNER** to switch the function to "FM".
- If the signal is weak and stable stereo reception is not possible, select "FM MONO" to receive in monaural.

❏ To tune automatically
Press and hold in **TUNE −**, **TUNE +** to tune in stations automatically.
- Stations whose signal is weak cannot be tuned in.
- In the DAB mode, tuning only moves to receivable stations, so auto tuning is not possible.

❏ To stop auto tuning
Press **TUNE −**, **TUNE +**.

Automatically presetting FM stations (Auto preset)

Up to 40 stations can be preset.

### ❏ Auto presetting with the remote control unit

1 Press SEARCH.

2 Use △▽ to select "FM AUTO PRESET", then press ENTER or ▷.

3 Press ENTER while "PRESS ENTER" is flashing.
Broadcast stations are preset automatically.
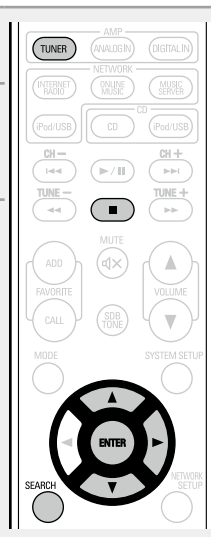
❏ Canceling auto presetting
Press **TUNER** or ■.

✎

Broadcast stations whose antenna signal are weak cannot be preset automatically. If you wish to preset such stations, tune them in manually.

NOTE

When the auto presetting operation is performed, the new presettings overwrite the previous presettings.

❏ Giving station names to preset channels
Names of up to 8 characters can be input.

1 Tune in the preset channel you want to name.

2 Press ENTER twice.
The display switches to the station name input display.

3 Input the station name.
Names of up to 8 characters can be input.
- **0 – 9** button .... Selects the character.
- △, ▽ button..................... Selects the character.
- ▷ button .... Moves the cursor to the right.
- **CLEAR** button................... Deletes the currently selected character.
- Characters that can be input.

A ~ Z, 0 ~ 9, ^ ' ( ) * + , - . / = (space)

4 Press ENTER.
The characters you have input are entered.

- To give names to other stations, repeat steps 1 to 4.

Presetting FM stations manually

Up to 40 stations can be preset.

1 **Tune in the station you want to preset.**

2 **Press ENTER.**
The minimum number display "P−−" for the unregistered preset flashes.

3 **Use 0 – 9, +10 or CH −, CH + to select the number to be preset, then press ENTER.**
The reception frequency and reception mode are preset and the display switches to the station name input display.
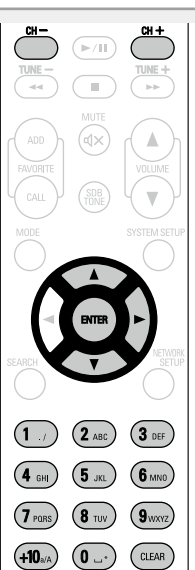
4 **Input the station name.**
Names of up to 8 characters can be input.
- **0 – 9, +10** button .... Selects the character.
- △, ▽ button.................... Selects the character.
- ▷ button .... Moves the cursor to the right.
- **CLEAR** button.................. Deletes the currently selected character.

- Characters that can be input.

A ~ Z, 0 ~ 9, ^ ' ( ) * + , - . / = (space)

- If you do not want to input a station name, press **ENTER** without inputting anything else.
- If you make a mistake when inputting, perform the procedure again. Whatever was previously input is overwritten.

5 **Press ENTER.**
The characters you have input are entered.

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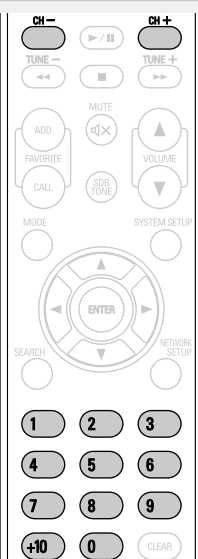
Listening to preset stations

Use 0 – 9, +10 or CH −, CH + to select the preset number.

Operating using the PRESET CALL buttons on the main unit

PRESET CALL on the main unit can be used for switching the preset channel.

RDS (Radio Data System)

RDS (works only on the FM band) is a broadcasting service which allows a station to send additional information along with the regular radio program signal.

The following four types of RDS information can be received with this unit:

❏ RDS search

Use this function to automatically tune to FM stations that provide the RDS service.

1 Press **TUNER** to select "FM".

2 Press **SEARCH.**

3 Use △▽ to select "RDS SEARCH", then press **ENTER** or ▷.

4 Press ◁ ▷.
Automatically begin the RDS search operation.

• If no RDS station is found, "NO STATION" is displayed.

Viewing information during reception

Press **INFO** while receiving a RDS to display the information currently being broadcast.

Freq.*¹ → PS*² → PTY
↑_____ RT ← CT ←_____↓

*1   Frequency
*2   Program service name
       • If a station name is entered, it is displayed

Program Type (PTY)

PTY identifies the type of RDS program.
The program types and their displays are as follows:

NEWS	News	**WEATHER**	Weather
AFFAIRS	Current Affairs	**FINANCE**	Finance
INFO	Information	**CHILDREN**	Children's program
SPORT	Sports		
EDUCATE	Education	**SOCIAL**	Social Affairs
DRAMA	Drama	**RELIGION**	Religion
CULTURE	Culture	**PHONE IN**	Phone In
SCIENCE	Science	**TRAVEL**	Travel
VARIED	Varied	**LEISURE**	Leisure
POP M	Pop Music	**JAZZ**	Jazz Music
ROCK M	Rock Music	**COUNTRY**	Country Music
EASY M	Easy Listening Music	**NATION M**	National Music
		OLDIES	Oldies Music
LIGHT M	Light Classical	**FOLK M**	Folk Music
CLASSICS	Serious Classical	**DOCUMENT**	Documentary
OTHER M	Other Music		

❏ PTY search

Use this function to find RDS stations broadcasting a designated program type (PTY).
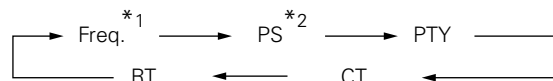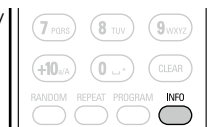For a description of each program type, refer to "Program Type (PTY)".

1 Press **TUNER** to select "FM".

2 Press **SEARCH.**

3 Use △▽ to select "PTY SEARCH", then press **ENTER** or ▷.

4 Use △▽ to call out the desired program type.

5 Press ◁ ▷.
Automatically begin the PTY search operation.

• If no program of the specified type is found, "NO STATION" is displayed.

TP (Traffic Program)

TP identifies programs that carry traffic announcements.
This allows you to easily find out the latest traffic conditions in your area before leaving home.

❏ TP search

Use this function to find RDS stations broadcasting traffic programs (TP stations).
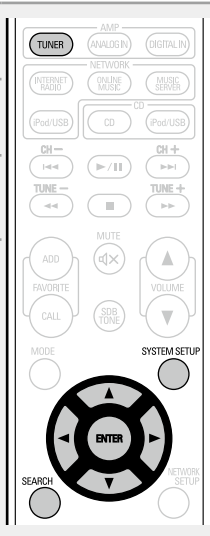
1 Press **TUNER** to select "FM".

2 Press **SEARCH**.

3 Use △▽ to select "TP SEARCH", then press the **ENTER** or ▷.

4 Press ◁ ▷.
Automatically begin the TP search operation.

• "NO STATION" is displayed when there is no traffic information broadcast station.

RT (Radio Text)

RT allows RDS stations to send text messages that appear on the display.

✎

• When the RT mode is turned on while an RDS radio station not offering an RT service is tuned in, "NO TEXT" is displayed on the display, then the mode automatically switches to the PS mode.
• In the same way, the mode automatically switches to the PS mode when the RT service is finished. In this case, the mode automatically switches from the PS mode back to the RT mode when an RT broadcast is resumed.
• The RT mode cannot be set in the FM stations not offering RDS broadcasts.

NOTE

The operations described below selecting "RDS Search" will not function in areas in which there are no RDS broadcasts.

CT (Clock Time)

Use this to correct the time of the clock on the unit.
① During CT reception, press **SYSTEM SETUP**.
The "AUTO Adj mm:ss" is displayed.
② Press **ENTER** to set.
The "RDS   mm:ss" is displayed.
• The time on the set's internal clock is updated to the currently displayed "CT" time.

✎

Do not operate any buttons while the time is being updated. If buttons are operated, CT reception is not possible and the time is not updated.

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Listening to DAB/DAB+ (for UK model only)

❏ About DAB (Digital Audio Broadcasting)

- Since the DAB system is broadcasted in digital format, DAB system can supply crystal-clear audio and stable reception even in mobile objects. DAB is a new generation radio which can provide data service and supplementary multi-media services.
- DAB broadcasts multiple services under one Ensemble that are called service components.
- Each component contains inherent programmes; news, music, sports, and many more.
- Each Ensemble and service component has its label, and users can recognize a current broadcasting station and service contents by using the label.
- The main service component is broadcast as Primary while the others are broadcast as Secondary.
- Also rich character information is serviced through Dynamic Labels; song title, artist composer etc.

❏ About DAB+

- The main difference between DAB and DAB+ is the type of audio codec used.
  - DAB: MPEG2
  - DAB+: MAEG4 (AAC)
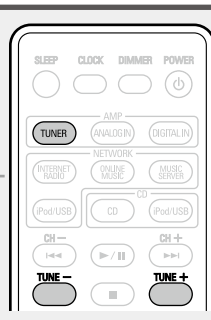- The DRA-F109 can receive both DAB and DAB+ broadcasts.

Tuning in DAB stations

1 Press **TUNER** to select "DAB".

- When a DAB operation is performed for the first time after purchase, auto scanning is performed automatically.

2 Press **TUNE +, −** to select the desired broadcast station.

- The broadcast stations are displayed in the order in which they were scanned.

✎

DAB stations can be stored in the preset memory and played in the same way as FM stations.
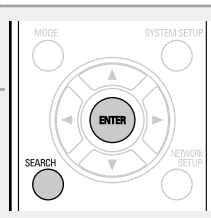- "Presetting FM Stations Manually"
- "Listening to Preset Stations"
- Up to 40 stations can be preset (in addition to FM stations).

Auto scanning broadcast stations

Connect the antenna beforehand.

1 Press **SEARCH** during DAB reception.

2 Press **ENTER** while "PRESS ENTER" is flashing.
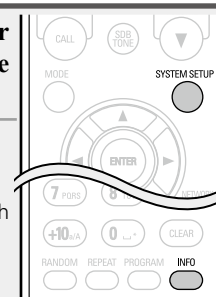The receiver searches for receivable DAB stations.

Switching the reception information for the currently tuned in DAB station

1 Perform steps 1 to 2 under "Tuning in DAB stations" to tune in a DAB station.

2 Press **INFO**.

- The display switches as shown below each time the button is pressed.

① **Data Label Segment :**
Text data included in the broadcast is scrolled.

② **Station Name :**
The service station name is displayed.

③ **Program Type :**
The category of the tuned in station is displayed.

④ **Ensemble Name :**
The ensemble name is displayed.

⑤ **Frequency:**
The frequency is displayed.

⑥ **Signal Quality :**
The reception signal sensitivity is displayed (0 to 8).
- If the reception signal sensitivity is 7 or greater, the program can be received without noise.

⑦ **Audio Information :**
The mode of the currently tuned in station and its bit rate are displayed.

⑧ **Data and Time :**
The current date and time are displayed.
- When **SYSTEM SETUP** is pressed, the set's internal clock is updated to the currently displayed time.

Making the DAB settings

1 Press **SYSTEM SETUP** during DAB reception.

2 Use $\triangle\triangledown$ to select "DAB SETUP", then press **ENTER** or $\triangleright$.

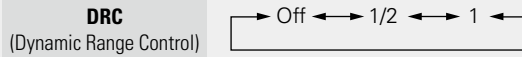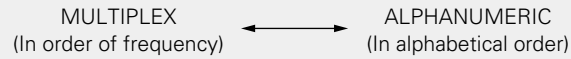*3* Use $\triangle\triangledown$ to select "item", then press **ENTER**.
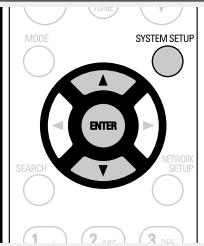
Tuning Aid	The reception sensitivity of the currently tuned in frequency is displayed.

• The program can be received without noise when the cursor move to the right of the sensitivity display. _____|____|_____

Station Order	The service list is created with the auto scan function.

MULTIPLEX ⟷ ALPHANUMERIC
(In order of frequency)   (In alphabetical order)

DRC (Dynamic Range Control)	→ Off ⟷ 1/2 ⟷ 1 ←

DAB Version	The DAB module's version is displayed.

DAB Initialize

When the "DAB Initialize" procedure is performed, all the preset memory settings for the stations and DABs are reset.

1 Press **SYSTEM SETUP** during DAB reception.
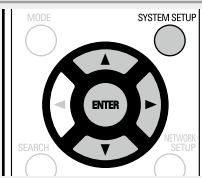
2 Use $\triangle\triangledown$ to select "DAB SETUP", then press the **ENTER** or $\triangleright$.

3 Use $\triangle\triangledown$ to select "DAB INITIALIZE", then press the **ENTER** or $\triangleright$.

4 Press **ENTER**.

• Once initialization is completed, auto scanning is performed automatically.

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Advanced operation

Setting the alarm

The everyday alarm, once alarm and sleep timer can be set.

Alarm order of priority

The order of priority when the times set for the different alarms overlap is as follows:
1. Sleep timer
2. Once alarm
3. Everyday alarm

✎

If the current time is not set, enter alarm setting mode to get time setting mode.

Setting the alarm

• **Everyday alarm ("EVERY DAY")**
   Playback starts and stops (the power turns off) at the set times each day.
• **Once alarm ("ONCE")**
   Playback starts and stops (the power turns off) once only at the set times.
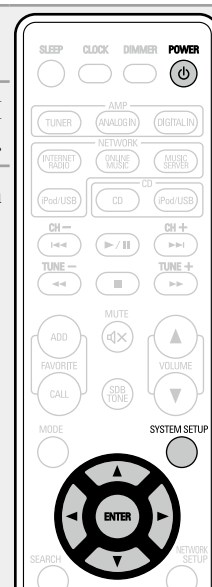
1 Press **SYSTEM SETUP**.

2 Use △▽ to select "ALARM SETUP", then press **ENTER** or ▷.

3 Use △▽ to select the alarm mode, then press **ENTER** or ▷.

```
  M O D E   S E L E C T
‡ O N C E   A L A R M
```

ONCE ⟷ EVERYDAY

4 Use △▽ to select the source, then press **ENTER** or ▷.

```
  S O U R C E   S E L E C T
‡   C D
```

→ iPod/USB ⟷ TUNER ⟷ ANALOG IN:1 ⟷ ANALOG IN:2 ←
      (CD)
→ CD ⟷ iPod/USB ⟷ INTERNET RADIO ⟷ DIGITAL IN:OPT ←
          (NET)

Only when the "TUNER" function is selected

5 Use △▽ to select the preset number, then press **ENTER** or ▷.

• When no name has been registered for the selected preset number, the program service or frequency appears after the preset number is displayed.

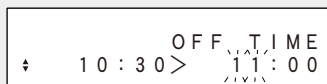**6** Use △▽ to select "hours" for the alarm start time, then press **ENTER** or ▷.

```
  O N   T I M E
‡   1 0 : 0 0 >   0 0 : 0 0
```

7 Use △▽ to select "minutes" for the alarm start time, then press **ENTER** or ▷.

```
  O N   T I M E
‡   1 0 : 3 0 >   0 0 : 0 0
```

18

8 Use △▽ to select "hours" for the alarm stop time, then press **ENTER** or ▷.

```
                OFF  TIME
  ↕   10:30>    11:00
```

9 Use △▽ to select "minutes" for the alarm stop time, then press **ENTER** or ▷.

```
                OFF  TIME
  ↕   10:30>    11:30
```
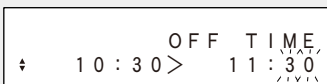
10 Use ◁ ▷ to select "ON" or "OFF" for the alarm, then press **ENTER**.

• The 🕒 indicator lights and the alarm setting is entered.
• The alarm settings are displayed for 3 seconds.

```
  ▾ONCE  ALARM◀ON  ►
   EVERYDAY     OFF
```

```
   ONCE  ALARM ON
  ▴EVERYDAY    ◀OFF►
```

11 Press **POWER** ⏻ to set the power to standby.
Alarm standby mode is set, and the power indicator lights orange.

❏ **Setting the alarm to on or off**
① Press **SYSTEM SETUP**.
② Use △▽ to select "ALARM ON/OFF", then press **ENTER**.
③ Use △▽ to select "ONCE" or "EVERYDAY".
④ Use ◁ ▷ to select "ON" or "OFF" for the alarm, then press **ENTER**. The alarm settings are displayed after this.
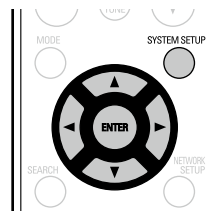
• When set to "OFF", time operation is disabled, but the alarm settings remain unchanged.

❏ **To check the alarm settings**
① Press **SYSTEM SETUP**.
② Use △▽ to select "ALARM ON/OFF" , then press **ENTER**.
③ When "ON" is displayed for the alarm setting, press **ENTER**. The alarm settings are displayed for 3 seconds.

❏ **To change the alarm settings**
Perform the operations at "Setting the alarm" (☞page 18).

❏ **To change the setting while setting the alarm**
Press ◁.
The setting returns to the previous step. Display the setting you want to change, then make the desired setting.

Setting the sleep timer

Use this function to automatically switch the power to the standby mode after a specific amount of time (minutes).
The sleep timer can be set to up to 90 minutes, in steps of 10 minutes.

Press SLEEP during playback and select the setting time.

```
  → SLEEP 90min → 80 → 70 → 60 → 50 ─┐
  └─ SLEEP OFF ← 10 ← 20 ← 30 ← 40 ←─┘
```
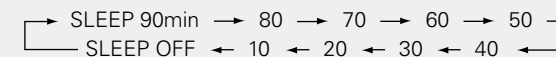
• After about 5 seconds, the setting is entered and the display returns to as it was before.

❏ **Canceling the sleep timer**
Either press **SLEEP** to select "SLEEP OFF" or press **POWER** ⏻.
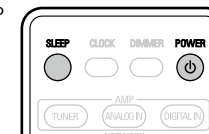
❏ **To check the time remaining until the sleep timer is activated**
Press **SLEEP**.

Convenient functions

Setting the optimizing filter for the SC-F109 speaker system (sold separately)

The receiver's speaker output signal properties are set to be optimal for the SC-F109.
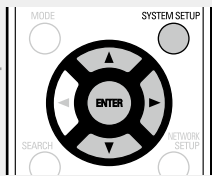
1 Press **SYSTEM SETUP.**

2 Use △▽ to select "SPK OPTIMISE", then press the **ENTER** or ▷.

3 Use △▽ to select "ON", then press the **ENTER** or ▷.
The setting is entered.

Auto standby

When this unit is in the stop state and there is no input signal and operation for 30 minutes, it automatically enters the standby mode.
For the input source "ANALOG IN:1" and "ANALOG IN:2" only, when no operation is performed for eight hours, this unit automatically enters the standby mode.
• The default setting for the Auto Standby mode is "ON".

1 Press **SYSTEM SETUP.**

2 Use △▽ to select "AUTO STANDBY", then press **ENTER** or ▷.

3 Use △▽ to select "ON", then press **ENTER** or ▷.
The setting is entered.
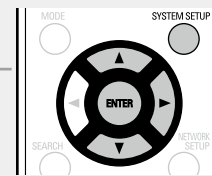
NOTE

In the following situations, the Auto standby function does not operate.
• When the source is "TUNER".

Last function memory

This stores the settings as they were directly before the standby mode was set.
When the power is turned back on, the settings are restored to as they were directly before the standby mode was set.

About system functions

Do not connect any of the past models to this unit with a system cable because they are incompatible.

Device supporting system connections (sold separately)

DCD-F109 (CD player)
DNP-F109 (Network audio player)

What you can do with the system functions

When system connections are made between the DRA-F109, DCD-F109 (CD player, sold separately) and DNP-F109 (Network audio player, sold separately), the operations described below can be performed.

❑ **The DCD-F109 and DNP-F109 can be operated using the receiver's remote control unit**
(☞page 24 "Buttons for operating components connected by system cable")

❑ **Auto power on function**
(☞page 21 "System functions")

❑ **Auto function**
(☞page 21 "System functions")

❑ **Alarm function**
(☞page 21 "System functions")

❑ **Auto standby function**
(☞page 21 "System functions")
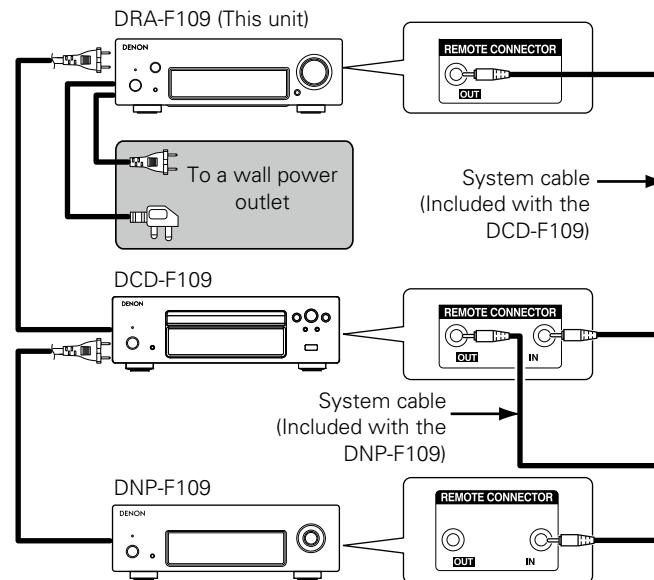
Making system connections

In addition to connection of the audio cables, also connect the system cable.
Also, connect the power cord of the DCD-F109 (CD player, sold separately) to the AC outlet on the back of the receiver (DRA-F109).
Connect the power cord of DNP-F109 (Network audio player, sold separately) to the AC outlet behind DCD-F109 (CD player, sold separately).

Be sure to plug the DRA-F109's power cord into a wall power outlet.

DRA-F109 (This unit)

REMOTE CONNECTOR
OUT

To a wall power outlet

System cable
(Included with the DCD-F109)

DCD-F109

REMOTE CONNECTOR
OUT   IN

System cable
(Included with the DNP-F109)

DNP-F109

REMOTE CONNECTOR
OUT   IN

System functions

Auto power on function

When you press ▶/▐▐, INTERNET RADIO, ONLINE MUSIC, MUSIC SERVER, iPod/USB (NETWORK), CD, iPod/USB (CD), or FAVORITE CALL, the corresponding device is turned on and the source automatically switches on DRA-F109 accordingly.
• When you press ▶/▐▐, the previously selected source is played back.
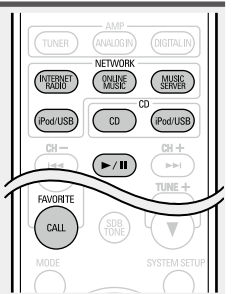
Auto function

When INTERNET RADIO, ONLINE MUSIC, MUSIC SERVER, iPod/USB (NETWORK), CD, iPod/USB (CD) FAVORITE CALL or NETWORK SETUP is pressed, the DRA-F109's source switches automatically.
• The currently playing source stops.
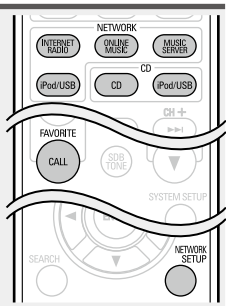
Alarm function

Playback can be performed at a set time using the DRA-F109's alarm function.
• See "Setting the alarm" (☞page 18) for details.

Auto standby function

When the auto standby function is set to ON for any of DRA-F109, DCD-F109 or DNP-F109, the auto standby function is enabled for the entire F109 system.

✎ For the auto standby function, see page 20.

Informations

Here, we list various information related to this unit.
Please refer to this information as needed.

Part names and functions

Front panel

For buttons not explained here, see the page indicated in parentheses ( ).

❶ **Power operation button (⏻)** ·························· ([9])

❷ **Power indicator** ··· ([9])

❸ **PRESET CALL button** ································ ([13])

❹ **SOURCE knob** ·· ([11])

❺ **Remote control sensor** ···························· ([26])

❻ **Display**

❼ **Headphones jack (PHONES)**

When the headphones are plugged into this jack, audio will no longer be output from the connected speakers.

NOTE

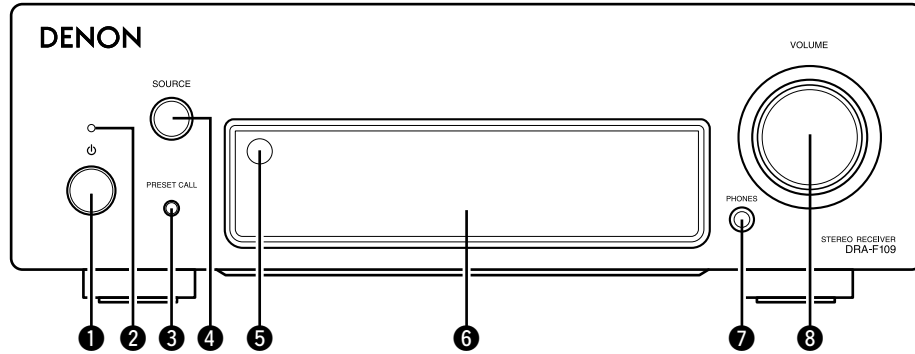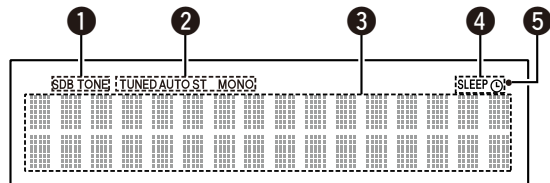To prevent hearing loss, do not raise the volume level excessively when using headphones.

❽ **VOLUME knob** ·· ([11])

Display

For buttons not explained here, see the page indicated in parentheses ( ).

❶ **Tone indicators** ·· ([11])

SDB: Lights when the super dynamic bass function is set to "ON".

TONE: Lights when the tone (bass/treble) is being adjusted.

❷ **Tuner reception mode indicators** ············· ([12])

❸ **Information display**

Various information is displayed here.

❹ **Timer operation indicator**

❺ **Remote control signal reception indicator**

Rear panel

For buttons not explained here, see the page indicated in parentheses ( ).
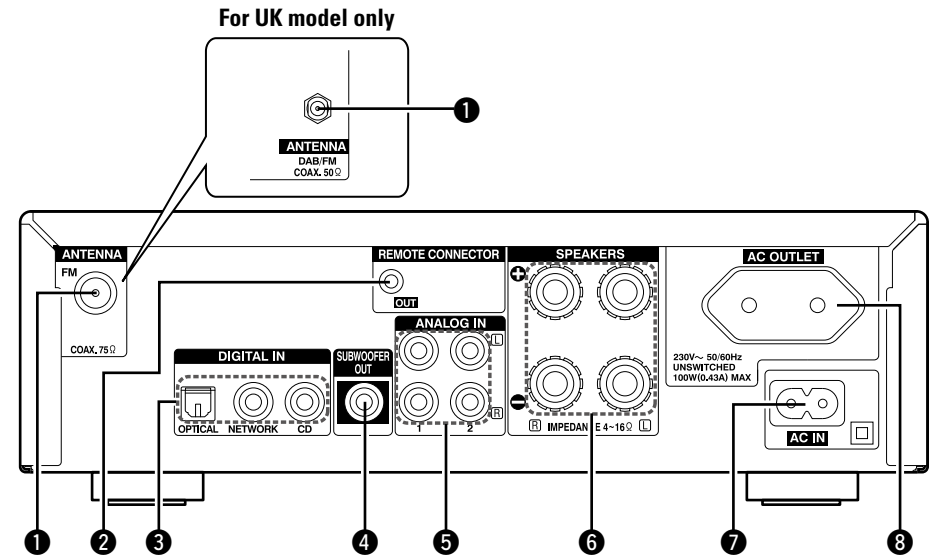
For UK model only

❶ **FM antenna terminal (ANTENNA)**
(for continental model only) ·························· ([6])

DAB/FM antenna terminal (ANTENNA)
(for UK model only) ·· ([6])

❷ **REMOTE CONNECTOR jack** ····················· ([21])

❸ **Digital audio connectors**
(DIGITAL IN) ·· ([5])

❹ **Subwoofer connector**
(SUBWOOFER OUT) ···································· ([4])

❺ **Analog audio connectors**
(ANALOG IN) ·· ([5])

❻ **Speaker terminals (SPEAKERS)** ··············· ([4])

❼ **AC inlet (AC IN)** ·· ([7])

❽ **AC outlet (AC OUTLET)** ····························· ([7])

Remote control unit

Buttons for operating the receiver
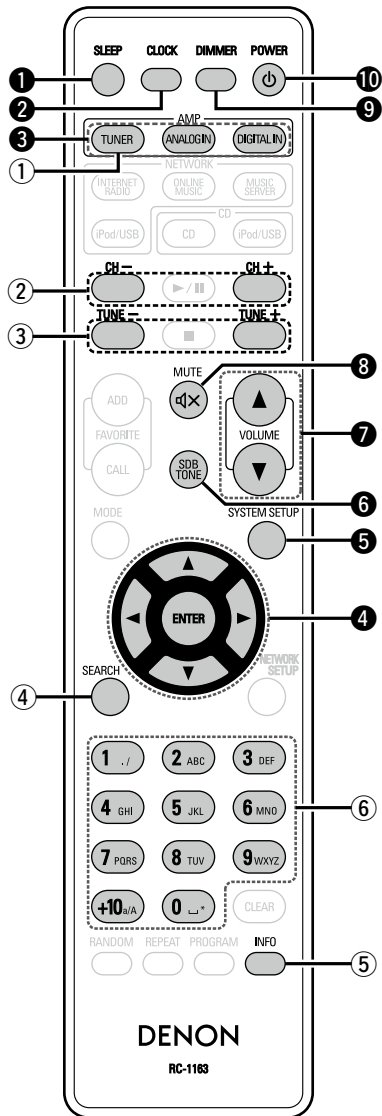
Amplifier operations
The buttons below can be operated regardless of the currently set function.

❶ SLEEP button ·· (19)
❷ CLOCK button ·· (10)
❸ SOURCE buttons (AMP) ···························· (11)
❹ Cursor buttons (△▽◁ ▷) ···················· (10, 18)
   ENTER button ·· (10, 18)
❺ SYSTEM SETUP button
   ··· (10, 18)
❻ SDB TONE button ···································· (11)
❼ VOLUME buttons (▲ ▼) ···························· (11)
❽ MUTE button (◁✕) ···································· (11)
❾ DIMMER button ···································· (11)
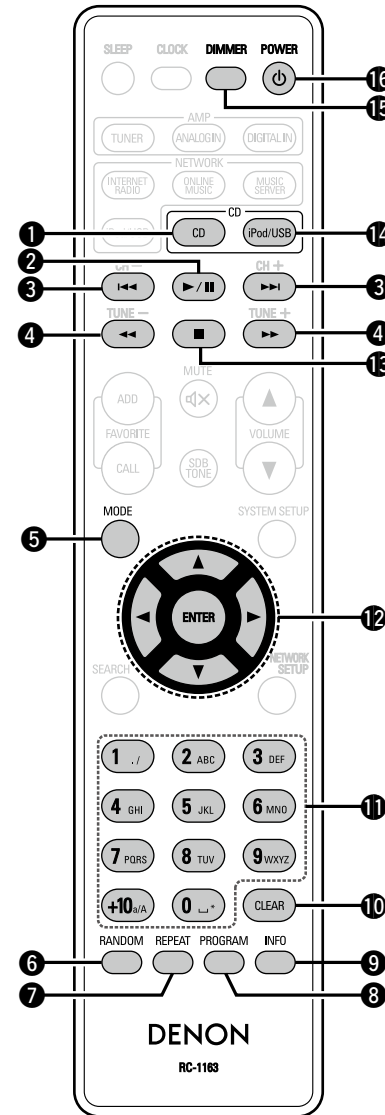❿ POWER button (⏻) ···································· (9)

Tuner operations
The buttons below can be operated when the function is set to "FM".

① SOURCE button (TUNER) ···················· (12, 16)
② Preset channel buttons (CH +, –) ············· (13)
③ Tuning buttons (TUNE +, –) ················ (12, 16)
④ SEARCH button ···································· (14)
⑤ Information button (INFO) ···················· (14, 16)
⑥ Number buttons (0 – 9,+10) ···················· (13)

Buttons for operating components connected by system cable

For system functions and components that can be operated, see "About system functions" (☞page 21).

CD operations
The buttons below can be operated when the function is set to "CD/USB".

❶ SOURCE button (CD)
❷ Play/Pause button (▶/❚❚)
❸ Reverse-skip/Forward-skip buttons (❙◀◀, ▶▶❙)
❹ Fast-reverse/Fast-forward buttons (◀◀, ▶▶)
❺ MODE button
❻ RANDOM button
❼ REPEAT button
❽ PROGRAM button
❾ Information button (INFO)
❿ CLEAR button
⓫ Number buttons (0 – 9,+10)
⓬ Cursor buttons (△▽◁ ▷)
   ENTER button
⓭ Stop button (■)
⓮ SOURCE button (iPod/USB)
⓯ DIMMER button
⓰ POWER button (⏻)
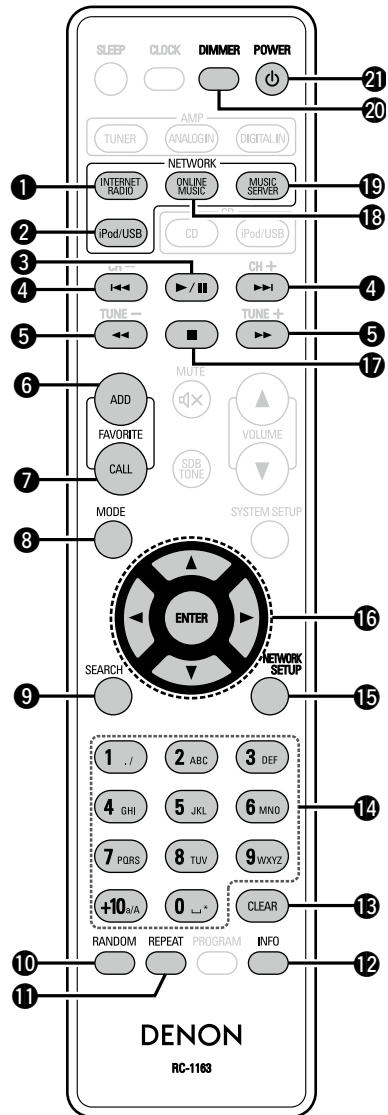
Network audio player operations

The buttons below can be operated when the function is set to "NETWORK/USB".

Q**1** **INTERNET RADIO button**

Q**2** **SOURCE button (iPod/USB)**

Q**3** **Play/Pause button (▶/❙❙)**

Q**4** **Reverse-skip/Forward-skip buttons (❙◀◀, ▶▶❙)**

Q**5** **Fast-reverse/Fast-forward buttons (◀◀, ▶▶)**

Q**6** **FAVORITE ADD button**

Q**7** **FAVORITE CALL button**

Q**8** **MODE button**

Q**9** **SEARCH button**

Q**10** **RANDOM button**

Q**11** **REPEAT button**

Q**12** **Information button (INFO)**

Q**13** **CLEAR button**

Q**14** **Number buttons (0 – 9,+10)**

Q**15** **NETWORK SETUP button**

Q**16** **Cursor buttons (△▽◁ ▷)**

 ENTER button

Q**17** **Stop button (■)**

Q**18** **ONLINE MUSIC button**

Q**19** **MUSIC SEVER button**

Q**20** **DIMMER button**

Q**21** **POWER button (⏻)**

Operations possible by remote control

❏ Operations on the DRA-F109

❏ Operating components connected to the DRA-F109 by system cable

When this unit is connected to the following device (sold separately) with a system cable, it transmits the signals from the remote control unit to the relevant device for performing operations on the device.
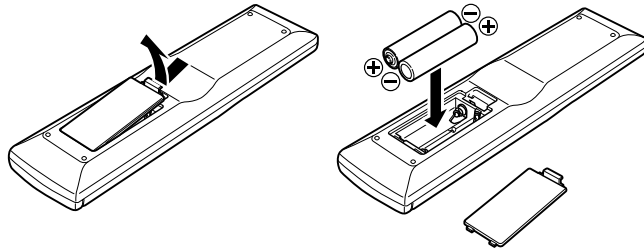
• DCD-F109 (CD player)
• DNP-F109 (Network audio player)

🖉

For instructions on system connections, see "About system functions" (vpage 21).

25

Inserting the batteries

① Remove the remote control unit's rear cover.

② Set two R03/AAA batteries in the battery compartment in the indicated direction.

③ Put the rear cover back on.

- Insert the specified batteries in the remote control unit.
- Replace the batteries with new ones if the set does not operate even when the remote control unit is operated close to the unit. (The supplied batteries are only for verifying operation. Replace them with new batteries at an early date.)
- When inserting the batteries, be sure to do so in the proper direction, following the ⊕ and ⊖ marks in the battery compartment.
- To prevent damage or leakage of battery fluid:
  - Do not use a new battery together with an old one.
  - Do not use two different types of batteries.
  - Do not attempt to charge dry batteries.
  - Do not short-circuit, disassemble, heat or dispose of batteries in flames.
  - Do not keep the battery in a place exposed to direct sunlight or in places with extremely high temperatures, such as near a heater.
- If the battery fluid should leak, carefully wipe the fluid off the inside of the battery compartment and insert new batteries.
- Remove the batteries from the remote control unit if it will not be in use for long periods.
- Used batteries should be disposed of in accordance with the local regulations regarding battery disposal.
- The remote control unit may function improperly if rechargeable batteries are used.

Operating range of the remote control unit

Point the remote control unit at the remote sensor when operating it.

Approx. 7 m

30° 30°
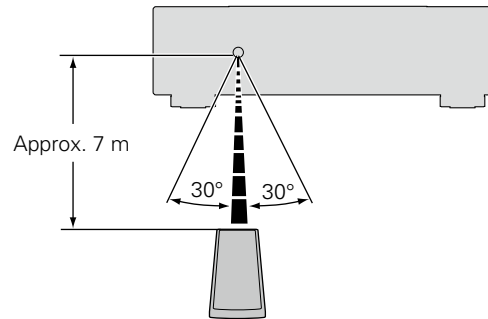
NOTE

- The set may function improperly or the remote control unit may not operate if the remote control sensor is exposed to direct sunlight, strong artificial light from an inverter type fluorescent lamp or infrared light.
- When using 3D video devices that transmit radio communication signals (such as infrared signals etc) between the various units (such as the monitor, 3D glasses, 3D transmitter unit etc), the remote control unit may not operate due to interference from those radio communication signals. If this occurs, adjust the direction and distance of the 3D communication for each unit, and check that the remote control unit operation is not affected by these signals.

Explanation terms

D

Dynamic range

The difference between the maximum undistorted sound level and the minimum sound level that is discernible above the noise emitted by the device.

P

Protection circuit

This is a function to prevent damage to components within the power supply when an abnormality such as an overload, excess voltage occurs or temperature for any reason.

In this unit, the power indicator blinks and the unit enters standby mode when an abnormality occurs.

S

Speaker impedance

This is an AC resistance value, indicated in Ω (ohms). Greater power can be obtained with this value smaller.

Troubleshooting

If a problem should arise, first check the following:

1. Are the connections correct?

2. Is the set being operated as described in the owner's manual?

3. Are the other components operating properly?

If this unit does not operate properly, check the items listed in the table below. Should the problem persist, there may be a malfunction.

In this case, disconnect the power immediately and contact your store of purchase.

【General】

Symptom	Cause	Countermeasure	Page
When the power is turned on, the power indicator does not light and no sound is produced.	• Connection of the power cord is faulty.	• Check that the power plugs are securely inserted into the DRA-F109's AC inlet and the wall power outlet.	7
The power indicator lights but no sound is produced.	• The speaker cables are not properly connected.	• Connect securely.	4
	• The function is not switched to the input source you want to play.	• Switch to the correct function.	11
	• The volume is set too low.	• Adjust the volume to an appropriate level.	11
No sound is produced from one side.	• The speaker cables are not properly connected.	• Connect securely.	4
	• The input cables are not properly connected.	• Connect securely.	5
	• The left/right balance is off.	• Adjust the left/right balance.	11
For stereo sources, the positions of the instruments are inverted.	• The connections of the speaker cables or input cables are inverted.	• Check and remedy the connections.	4, 5

【Remote control unit】

Symptom	Cause	Countermeasure	Page
Set does not work properly when remote control unit operated.	• Batteries are worn.	• Replace with new batteries.	26
	• You are operating outside of the specified range.	• Operate within the specified range.	26
	• Obstacle between main unit and remote control unit.	• Remove the obstacle.	–
	• The batteries are not inserted in the proper direction, as indicated by the polarity marks in the battery compartment.	• Insert the batteries in the proper direction, following the polarity marks in the battery compartment.	26
	• The set's remote control sensor is exposed to strong light (direct sunlight, inverter type fluorescent bulb light, etc.).	• Move the set to a place in which the remote control sensor will not be exposed to strong light.	26

【Tuner】

Symptom	Cause	Countermeasure	Page
Buzzing noise in FM broadcasts.	• The antenna cable is not properly connected.	• Connect the antenna properly.	6
	• Noise interference from a nearby electronic device equipped with a microprocessor, or the radio broadcast signal is weak.	• Reposition the equipment or the positions or directions of the connection cables, antenna, etc.	–

Specifications

❏ Receiver section

Rated output:	2-channel driving
	65 W + 65 W (4 Ω, 1 kHz, T.H.D. 0.7 %)
Dynamic power:	80 W + 80 W (4 Ω)
High frequency distortion:	0.1 % (Rated output: –3 dB), 4 Ω, 1 kHz
Output terminals:	Speaker 4 – 16 Ω
	Suited for headphones/stereo headphones
Input sensitivity:	200 mV / 47 kΩ
Reception frequency range:	FM : 87.50 MHz – 108.00 MHz
	DAB : BAND III 170 MHz – 240 MHz
Reception sensitivity:	FM : 1.2 μV / 75 Ω
	DAB : –93 dBm / 50 Ω
FM channel separation:	30 dB (1 kHz)
FM S/N ratio:	Monaural : 74 dB Stereo : 70 dB
FM harmonic distortion:	Monaural : 0.3 % Stereo : 0.4 %
Tone control:	SDB : 100 Hz + 8 dB
	BASS : 100 Hz ± 10 dB
	TREBLE : 10 kHz ± 10 dB
Frequency response:	10 Hz – 40 kHz (+0.5 dB, –3 dB) (SOURCE DIRECT: ON)

❏ Clock/Timer section

Clock type:	Power line frequency synchronized method (Within ±60 seconds per month)
Timer:	Everyday alarm / Once alarm : One system each
	Sleep timer : Max. 90 minutes

❏ General

Power supply:	AC 230 V, 50/60 Hz
Power consumption:	48 W
	0.3 W (Standby)

∗ For purposes of improvement, specifications and design are subject to change without notice.

Index

Dimensions

Unit : mm

250.0

283.0

22.0

27.0

178.5

44.5

11.0

250.0

DENON

73.0

82.0

9.0

30.0

30.0

190.0

30.0

Weight : 2.6 kg

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