You can print more than one page of a PDF onto a single sheet of paper.
Contents

Accessories
Inserting the batteries 5
Operating range of the remote control unit 5

Features
High quality sound 6
High performance 7

Part names and functions
Front panel 8
Display 10
Rear panel 11
Remote control unit 12

Connections
Connecting to a stereo audio amplifier 17
Connecting to a device with digital audio input connectors 18
Connecting the timer device 19
Connecting the power cord 20

Playback
Basic operation
Turning the power on 22
Switching the display’s brightness 23
Switching the Pure Direct mode 23
Setting the top priority playback layer for Super Audio CDs 24
Playing CDs/Super Audio CDs
Playing CDs and Super Audio CDs 25
Playing tracks in a specific order (Program playback) 27
Playing Data CDs and Data DVDs
Playing files 30
Using the timer play function 32
## Settings

<table>
<thead>
<tr>
<th>Setting the Auto Standby mode</th>
<th>33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turning Auto Standby mode off</td>
<td>33</td>
</tr>
<tr>
<td>Turning Auto Standby mode on</td>
<td>33</td>
</tr>
</tbody>
</table>

## Tips

<table>
<thead>
<tr>
<th>Tips</th>
<th>35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Troubleshooting</td>
<td>36</td>
</tr>
</tbody>
</table>

## Appendix

### Playable media

- Discs 40
- Playback order of music files 42
- About discs and files 43

### Cautions on using media

- Inserting a disc 44
- How to handle media 45
- Cleaning discs 45

### Explanation of terms

- Trademark information 49

### Specifications

- Specifications 50

### Index

- Index 53
Thank you for purchasing this Denon product. To ensure proper operation, please read this owner’s manual carefully before using the product. After reading this manual, be sure to keep it for future reference.

**Accessories**

Check that the following parts are supplied with the product.

<table>
<thead>
<tr>
<th>Part</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick Start Guide</td>
<td><img src="Quick_Start_Guide.png" alt="Image" /></td>
</tr>
<tr>
<td>CD-ROM (Owner’s Manual)</td>
<td><img src="CD-ROM.png" alt="Image" /></td>
</tr>
<tr>
<td>Safety Instructions</td>
<td><img src="Safety_Instructions.png" alt="Image" /></td>
</tr>
<tr>
<td>Power cord</td>
<td><img src="Power_Cord.png" alt="Image" /></td>
</tr>
<tr>
<td>Remote control unit (RC-1207)</td>
<td><img src="Remote_Control_Unit.png" alt="Image" /></td>
</tr>
<tr>
<td>R03/AAA batteries</td>
<td><img src="R03_AAA_Batteries.png" alt="Image" /></td>
</tr>
<tr>
<td>Audio cable</td>
<td><img src="Audio_Cable.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Inserting the batteries

1. Remove the rear lid in the direction of the arrow and remove it.

![Remote control with lid removed]

2. Insert two batteries correctly into the battery compartment as indicated.

   - R03/AAA batteries

![Remote control with batteries inserted]

3. Put the rear cover back on.

**NOTE**
- When inserting the batteries, be sure to do so in the proper direction, following the Θ and Θ marks in the battery compartment.
- To prevent damage or leakage of battery fluid:
  - Do not use a new battery together with an old one.
  - Do not use two different types of batteries.
- Remove the batteries from the remote control unit if it will not be in use for long periods.
- If the battery fluid should leak, carefully wipe the fluid off the inside of the battery compartment and insert new batteries.

Operating range of the remote control unit

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

![Operating range diagram]

Approx. 7 m

30°
Features

High quality sound

- High Bitrate and High Sampling with Advanced AL32 Processing Plus
  A high bitrate and high sampling has been achieved with Denon's unique data interpolation algorithm. 16 bit audio signals are converted to a high bitrate of 32 bit and 44.1 kHz sampling signals are up-sampled by 16x to achieve smoother recreation of sound waves. Data interpolation is also used, predicting interpolation points from a large number of surrounding points to provide audio as close as possible to the original sound. This elaborate restoration of data lost during digital recording achieves fine, distortion-free rendering, accurate sound localizing, rich bass and recreation that is faithful to the original sound.

- DAC Master Clock Design for the Ideal Clock
  To make full use of the properties of this unit's semiconductor, it was important to use a highly accurate clock signal for the semiconductor's operations. This model contains 2 new oscillators, one for each frequency. These oscillators are developed to dramatically decrease phase noise caused by frequency displacement, achieving a more stable and more accurate clock than ever before. The master clock is near the D/A converter, reducing jittering to achieve faithful playback.

- Advanced S.V.H. Mechanism & Direct Mechanical Ground Construction
  Each part of the newly developed Advanced S.V.H. Mechanism is made from a different material to suit its purpose, including an aluminum die cast tray. The high weight of these parts improves damping, and the resonance points are also decentralized to provide a high level of damping. The center of gravity of the mechanical parts has been lowered. In addition to reducing internal vibration caused by the rotation of the disc, this also makes the structure resistant to external vibration. A Direct Mechanical Ground construction is also used. Through measures such as placing the power transformer near the feet, this construction thoroughly removes the effects of internal and external vibration and thoroughly prevents transmission of unnecessary vibration and emission of noise.
High performance

- **Supports high-resolution audio sources stored on discs**
  MP3, WMA, AAC, WAV, FLAC, ALAC, AIFF and DSD files that have been recorded onto DVD-R/-RW/+R/+RW or CD-R/-RW discs can be played back on this CD player.

- **Reduced power consumption during standby**
  In consideration of the environment, power consumption during standby has been reduced to 0.1 Watts or better.
Part names and functions

Front panel

1 Power operation button (b)
   Turns power to this unit on and off. (p. 22)

2 Power indicator
   This is lit as follows according to the power status:
   - Power on : Green
   - Standby : Off
Advanced AL32 Plus indicator
When this unit is used in the following ways, Advanced AL32 Processing Plus is activated and this light turns on.
- When a CD is inserted
- When a data disc is inserted
- When “CD” is set as the layer mode of a Super Audio CD

When a DSD file is played, Advanced AL32 Processing Plus stops and this light turns off.

SUPER AUDIO CD indicator
This light turns on when this unit is used in the following ways.
- When a Super Audio CD is inserted
- When “STEREO” or “MULTI” is set as the layer mode of a Super Audio CD

Disc tray
Used to insert a disc.

Play/pause button (▶/■)
Plays the track/Pauses the track.

Stop button (■)
Stops playback.

Reverse-skip button ( ■ ■ )
Returns to the start of the currently playing track.

Forward-skip button (▶▶)
Plays the next track.

DISC LAYER button
This switches the Super Audio CD layer. (See p. 24)

PURE DIRECT button
This switches the Pure Direct mode. (See p. 23)

Remote control sensor
This receives signals from the remote control unit. (See p. 5)

Display
This displays various pieces of information. (See p. 10)

Disc tray open/close button (△)
Opens and closes the disc tray.
Display

1. **Disc media indicators**
   Displays the type of disc that is being played back.

2. **Track number indicator**
   Lights up when displaying the track number.

3. **Downmix indicator (D.MIX)**
   This light turns on when a multi-channel area of a Super Audio CD is played.

4. **Program indicator (PROG)**
   Lights up during program playback.

5. **Random indicator (RAND)**
   Lights during random playback.

6. **Time display indicators**
   - **TOTAL REM**: Lights up when displaying the remaining time in all-track playback.
   - **SING REM**: Lights up when displaying the remaining time in singletrack playback.

7. **Playback mode indicators**
   - ➤: Lights up during playback.
   - II: Lights up during pause.

8. **Repeat mode indicator**
   Lights to match the repeat mode settings.

9. **Information display**
   Displays various information or playback elapsed time and so on of the disc.

10. **Playback format indicators**
    Lights up while a WAV/MP3/WMA file is being played back.

11. **Input signal indicators**
    The respective indicator will light corresponding to the input signal.
    - L: Front left
    - R: Front right
Rear panel

1 **AUDIO OUT connectors**
   Used to connect devices equipped with analog audio inputs connectors or an external amplifier. (p. 17)

2 **DIGITAL AUDIO OUT connectors (OPTICAL/COAXIAL)**
   Used to connect an AV receiver or D/A converter that has a digital input connectors. (p. 18)

3 **IR CONTROL jacks**
   Used to connect Denon network audio players with an IR controller.

4 **AC inlet (AC IN)**
   Used to connect the power cord. (p. 20)
Remote control unit

### Operating this unit

1. **Signal transmitter**
   - This transmits signals from the remote control unit. (☞ p. 5)

2. **Power operation button (Ø)**
   - This turns the power on/off (standby). (☞ p. 22)

3. **DISC LAYER button**
   - This switches the playback layer of a Super Audio CD.
     - “Setting the top priority playback layer for Super Audio CDs” (☞ p. 24)
     - “Playing CDs and Super Audio CDs” (☞ p. 25)

4. **Cursor buttons (△▼◄►)**
   - These select items.

5. **ENTER button**
   - This determines the selection.

6. **Number buttons (0 – 9, +10)**
   - These enter numbers into the unit.
7 RANDOM button
Switches the random playback.

8 REPEAT button
Switches the repeat playback.

9 System buttons
These perform playback related operations.
- Skip buttons (◂◂ / ▶▶)
- Play/pause button (▶ / ▶)
- Fast-reverse/Fast-forward buttons (◂◂ / ▶▶)
- Stop button (■)

10 DIMMER button
This switches the brightness of the display. (p. 23)

11 MODE button
This switches the playback mode. (p. 31)
CLEAR button
This clears the program registration. (p. 28)

PROGRAM button
This sets program playback. (p. 27)

Information button (INFO)
This switches the track information shown in the display during playback.

- You cannot use the SOURCE button for the operation of this unit.
### Amplifier operations

A Denon amplifier can be operated.

1. Power operation button (AMPLIFIER X)
2. DIMMER button
3. ANALOG MODE button
4. MUTE button
5. VOLUME buttons (▲▼)
6. Input source select buttons (INPUT SELECT)

**NOTE**
- The remote control may not operate some products.
## Contents

- Connecting to a stereo audio amplifier 17
- Connecting to a device with digital audio input connectors 18
- Connecting the timer device 19
- Connecting the power cord 20

### NOTE
- Do not plug in the power cord until all connections have been completed.
- Do not bundle power cords together with connection cables. Doing so can result in noise.

## Cables used for connections

Provide necessary cables according to the devices you want to connect.

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio cable (supplied)</td>
<td><img src="image" alt="Audio Cable" /></td>
</tr>
<tr>
<td>Optical cable (Sold separately)</td>
<td><img src="image" alt="Optical Cable" /></td>
</tr>
<tr>
<td>Coaxial digital cable (Sold separately)</td>
<td><img src="image" alt="Coaxial Digital Cable" /></td>
</tr>
</tbody>
</table>
Connecting to a stereo audio amplifier

Use this connection for audio playback via an amplifier.
Connecting to a device with digital audio input connectors

You can enjoy digital audio playback by connecting an AV receiver or D/A converter that has a digital audio terminal to this unit.

NOTE
- Digital audio output stops during playback of the HD layer of Super Audio CDs and files with a sampling frequency of 32 kHz.
Connecting the timer device

This unit can perform timer play when an amplifier and timer device are connected to this unit. (“Using the timer play function” (p. 32))
Connecting the power cord

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

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

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic operation</td>
<td>22</td>
</tr>
<tr>
<td>Playing CDs/Super Audio CDs</td>
<td>25</td>
</tr>
<tr>
<td>Playing Data CDs and Data DVDs</td>
<td>29</td>
</tr>
<tr>
<td>Using the timer play function</td>
<td>32</td>
</tr>
</tbody>
</table>
Basic operation

Turning the power on

1 Press \( \text{on} \) on this unit to turn the power on.
   The power indicator lights green.

- Press \( \text{on} \) on the remote control unit to turn on power from standby mode.

When power is switched to standby

1 Press \( \text{on} \) 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 going on vacation, either press \( \text{on} \) on the main unit to turn off the power, or unplug the power cord from the power outlet.
Switching the display’s brightness

The brightness of the display can be adjusted to one of four levels.

1. Press DIMMER.

   - The DIMMER button also controls the Denon's Integrated Amplifier PMA-2500NE, so the PMA-2500NE can be operated simultaneously with this unit.

Dimmer setting menu

When the Denon PMA-2500NE integrated amplifier is used with this unit, you can set different brightnesses for this unit and the PMA-2500NE by calling the Dimmer setting menu separately.

1. Press and hold DIMMER for more than 2 seconds.

   The dimmer setting menu appears on the display.

2. Use △▼ to change to desired setting.

   | Bright (Default) : | Normal display brightness. |
   | Dim :            | Reduced display brightness. |
   | Dark :           | Very low display brightness. |
   | Off :            | Turns the display off. |

Switching the Pure Direct mode

When the Pure Direct mode is used, the display turns off and digital output stops. This reduces the source of noise that can adversely affect sound quality, enabling high quality playback.

1. Press PURE DIRECT on this unit.

   The display turned off, and Pure Direct playback begins.

   - To turn off this mode, press PURE DIRECT again.

   NOTE

   - In the Pure Direct mode, DIMMER is not available for operation.
   - The display is only turned off during playback.
Setting the top priority playback layer for Super Audio CDs

The layer that is played with priority when the disc is loaded can be set.

1. **Check that no disc is loaded.**
   - If the layer is switched while the disc is being loaded, the playback layer switches for that disc, but the top priority playback layer setting itself does not change.

2. **Press DISC LAYER and switch to the layer you want to set.**

<table>
<thead>
<tr>
<th>STEREO (Default):</th>
<th>Plays back the 2-channel area of the Super Audio CD.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MULTI:</td>
<td>Plays back the multi-channel area of the Super Audio CD. The analog output of this unit outputs a down-mixed 2-channel signal.</td>
</tr>
<tr>
<td>CD:</td>
<td>Plays back the CD layer of the Super Audio CD.</td>
</tr>
</tbody>
</table>

- The layer for playback can also be switched by pressing DISC LAYER on this unit.
- When a disc is loaded after the setting has been made, the contents recorded on the set layer are displayed.
- If a disc that does not contain the layer set for top priority playback is loaded, the contents recorded on another layer are displayed automatically.
- This setting is stored in the memory and is not cleared even when the disc holder is opened or closed or the power is turned off. To change the setting, repeat the procedure above.
- The priority playback layer cannot be set when a disc is inserted or “Open” is shown on the display.
- If the area and layer have not been set for a disc, the priority playback order is as follows:
  1. STEREO
  2. MULTI
  3. CD
Playing CDs/Super Audio CDs

1 Insert a disc.  (☞ p. 44)
   • Press ▲ on the unit to open/close the disc tray.

2 When playing back a Super Audio CD, press DISC LAYER to set the playback layer. (☞ p. 24)

3 Press ▶/■.
   The ▶ indicator lights on the display. Playback starts.

NOTE
   • Do not place any foreign objects in the disc tray. Doing so could damage the set.
   • Do not push the disc tray in by hand when the power is turned off. Doing so could damage the set.
### Operation buttons

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶/II</td>
<td>Playback / Pause</td>
</tr>
<tr>
<td>■</td>
<td>Stop</td>
</tr>
<tr>
<td>◀▶▶▶</td>
<td>Skip to previous track / Skip to next track</td>
</tr>
<tr>
<td>◀▶▶</td>
<td>Fast-reverse / Fast-forward</td>
</tr>
<tr>
<td>0 – 9, +10</td>
<td>Select the track</td>
</tr>
<tr>
<td>RANDOM</td>
<td>Random playback</td>
</tr>
</tbody>
</table>

### Switching the display

Press INFO.

Displays text and time information stored on media.

- The text information is only displayed for Super Audio CD.
- The player can display the following characters:

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
! " # $ % & : ; < > ? @ \ [ ] _ ` { } ~ ^ '( ) * + , - / = (space)
```

### Discs that can be played back

- See “Discs”. (☞ p. 40)
Playing a specific track (Direct searching)

1 Use 0 – 9 and +10 to select the tracks.

[Example]
Track 4:
Press number 4 to select track 4.
Track 12:
Press numbers +10 and 2 consecutively to select track 12.

Playing tracks in a specific order (Program playback)

Up to 20 tracks can be programmed.

1 In the stop mode, press PROGRAM.
The program indicator lights on the display.

2 Use 0 – 9 and +10 to select the tracks you want to program.
[Example]
To program tracks 3 and 12 to be played in that order, press 3, +10 and 2 one after the other.

3 Press ►/II.
Playback starts in the programmed order.

- When REPEAT is pressed during program playback, the tracks are played repeatedly in the programmed order.
■ Checking the order of the programmed tracks

In the stop mode, press ➤➤1. The track numbers are displayed in the programmed order each time the button is pressed.

■ To clear the last track programmed

In the stop mode, press CLEAR. The last track programmed is cleared each time the button is pressed.

■ Clearing the all programmed track

In the stop mode, press PROGRAM.
Playing Data CDs and Data DVDs

This section explains how to playback music files that are recorded onto a CD-R/-RW or DVD-R/-RW/+R/+RW.

There are many music distribution sites on the Internet allowing you to download music files in MP3 or WMA (Windows Media® Audio) format. The music (files) downloaded from such sites can be stored on CD-R/-RW or DVD-R/-RW/+R/+RW discs and played on this unit.

“Windows Media” and “Windows” are the trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.

The audio format types and specifications supported by this unit for playback are as follows. See “Playable files” for details. (p. 41)

- WMA
- MP3
- WAV
- AAC
- FLAC
- ALAC
- AIFF
- DSD
Playing files

1 Load a CD-R/-RW or DVD-R/-RW/+R/+RW disc containing music files into the disc tray. (☞ p. 44)
   • Press ▲ on the unit to open/close the disc tray.

2 Use △▽◁ to select the folder to be played, then press ENTER.

3 Use △▽ to select the file to be played, then press ENTER.
Playback starts.

Operation buttons

<table>
<thead>
<tr>
<th>Operation buttons</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶/II</td>
<td>Playback / Pause</td>
</tr>
<tr>
<td>■</td>
<td>Stop</td>
</tr>
<tr>
<td>◀▶▶</td>
<td>Skip to previous track / Skip to next track</td>
</tr>
<tr>
<td>◀▶</td>
<td>Fast-reverse / Fast-forward</td>
</tr>
<tr>
<td>◀</td>
<td>Moving up a level in the folder tree</td>
</tr>
<tr>
<td>△▽</td>
<td>Select the item</td>
</tr>
<tr>
<td>ENTER</td>
<td>Enter the selected item / Playback</td>
</tr>
<tr>
<td>MODE</td>
<td>Select the playback range</td>
</tr>
<tr>
<td>RANDOM</td>
<td>Random playback</td>
</tr>
<tr>
<td>REPEAT</td>
<td>Repeat playback</td>
</tr>
<tr>
<td>INFO</td>
<td>Switch the display between the elapsed playback time, text information stored in the file and the file format.</td>
</tr>
<tr>
<td></td>
<td>☞ To play another file while playing from a CD-R/-RW or DVD-R/-RW/+R/+RW, press ◀ to display the folder tree, △▽ to select the file to be played, and then press ENTER.</td>
</tr>
</tbody>
</table>
Switching the display

During playback, press INFO.

- Switch the display between the elapsed playback time, text information stored in the file and the file format.
- If a file does not support text information or no track information is recorded, the file name is displayed.
- The player can display the following characters:

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
! " # $ % & : ; < > ? @ \
[ ] _ ` l { } ~ ^ '( ) * + , - . / = (space)
```

- The folder and file numbers are set automatically when the disc is loaded.

NOTE

- Copyright-protected files cannot be played.
  Note that depending on the software used for burning and other conditions, some files may not play or display correctly.

Files that can be played back

- See “Playable files”. (☞ p. 41)

Switching the playback range

In the stop mode, press MODE.

- The playback range of a track can be set.

<table>
<thead>
<tr>
<th>Folder mode:</th>
<th>All the files in the selected folder are played.</th>
</tr>
</thead>
<tbody>
<tr>
<td>All mode:</td>
<td>All the files in the disc are played.</td>
</tr>
</tbody>
</table>

- The folder hierarchy is not displayed when “All mode” is set as the playback range.
Using the timer play function

1. Turn on the power of the connected components. (p. 19)

2. Switch the amplifier’s function to input from the connected unit.

3. Load a disc.

4. Set the audio timer for the desired times.
   - Refer also to the owner’s manual of the audio timer.

5. Turn the timer “On”.
   - The power of the components connected to the timer turns off.
   - When the set time is reached, the power of the different components automatically turns on and playback starts from the first track.

**NOTE**
- The timer play does not support the random play or program play.
Setting the Auto Standby mode

When Auto Standby mode is set to On, if the unit remains in the stopped state and no operations are performed or if there are no input signals for approximately 30 minutes, the unit automatically switches to standby mode.

The default setting is “On”.

Turning Auto Standby mode off

1. Press and hold  for more than 5 seconds to turn the Auto Standby mode off.
   The power indicator flashes once.

Turning Auto Standby mode on

1. Press and hold  for more than 5 seconds to turn the auto standby mode on.
   The power indicator flashes three times.
Contents

Tips

I want to enjoy analog output audio at higher quality 35
I want to playback just the specified folder 35
I want to display Super Audio CD text 35
I want to play the multi-channel area of a Super Audio CD is played 35
I want to play all tracks on a DVD-R/-RW/+R/+RW or CD-R/-RW at random 35

Troubleshooting

Power does not turn on / Power is turned off 36
Operations cannot be performed through the remote control unit 37
Display on this unit shows nothing 37
No sound comes out 38
Sound is interrupted or noise occurs 38
Cannot playback discs 39
I want to enjoy analog output audio at higher quality
- Set Pure Direct which turns digital output and the display off. (p. 23)

I want to playback just the specified folder
- The MODE button to set the playback range to “Folder mode”. (p. 31)

I want to display Super Audio CD text
- This unit supports Super Audio CD text. Press the INFO button to switch the display information. (p. 26)

I want to play the multi-channel area of a Super Audio CD is played
- This unit can play multi-channel audio by downmixing to two channels. Press the DISC LAYER button and set “MULTI”. (p. 24)

I want to play all tracks on a DVD-R/-RW/+R/+RW or CD-R/-RW at random
- Random playback can be set by pressing the MODE button and setting “All Mode” as the playback mode before playback.
Troubleshooting

If a problem should arise, first check the following.

1. Are the connections correct?
2. Is the set being operated as described in the owner’s manual?
3. Are the other devices operating properly?

If this unit does not operate properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. In this case, disconnect the power immediately and contact your store of purchase.

**Power does not turn on / Power is turned off**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause / Solution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power is not turned on.</td>
<td>• Check whether the power plug is correctly inserted into the power outlet.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>• This unit is in standby mode. Press the $ button on the remote control.</td>
<td>22</td>
</tr>
<tr>
<td>Power automatically turns off.</td>
<td>• The Auto Standby mode is set. The Auto Standby mode switches the unit to standby mode when the unit is not operated for approximately 30 minutes.</td>
<td>33</td>
</tr>
</tbody>
</table>
### Operations cannot be performed through the remote control unit

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause / Solution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations cannot be performed through the remote control unit.</td>
<td>• Batteries are worn out. Replace with new batteries.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>• Operate the remote control unit within a distance of about 7 m from this unit and at an angle of within 30°.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>• Remove any obstacle between this unit and the remote control unit.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Insert the batteries in the proper direction, checking the ⊙ and ◎ marks.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>• 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.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• When using a 3D video device, the remote control unit of this unit may not function due to effects of infrared communications between units (such as TV and glasses for 3D viewing). In this case, adjust the direction of units with the 3D communications function and their distance to ensure they do not affect operations from the remote control unit of this unit.</td>
<td></td>
</tr>
</tbody>
</table>

### Display on this unit shows nothing

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause / Solution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display is off.</td>
<td>• Press the DIMMER button, and change the setting to anything other than off.</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>• The display turns off when the Pure Direct mode is on.</td>
<td>23</td>
</tr>
</tbody>
</table>
## No sound comes out

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause / Solution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>No sound is produced. Or sound is distorted.</td>
<td>• Check the connections for all devices.</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>• Insert connection cables all the way in.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Check that input connectors and output connectors are not reversely connected.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Check cables for damage.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Check the amplifier’s functions and controls and adjust as necessary.</td>
<td></td>
</tr>
</tbody>
</table>

## Sound is interrupted or noise occurs

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause / Solution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>During playback from the CD-R/CD-RW/DVD-R/DVD-RW/DVD+R/DVD +RW, sound is occasionally interrupted.</td>
<td>• The sound may skip during playback of a CD-R/CD-RW containing a high-resolution audio source.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• This may be caused by poor recording conditions, or the disc itself may be of poor quality. Use a correctly recorded disc.</td>
<td></td>
</tr>
</tbody>
</table>
### Cannot playback Discs

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause / Solution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot playback when the play button is pressed, or cannot correctly play back a specific part of the disc.</td>
<td>- The disc is dirty or scratched. Either clean the disc, or insert a different disc.</td>
<td>45</td>
</tr>
<tr>
<td>Cannot playback DVD-R/-RW/+R/+RW or CD-R/CD-RW.</td>
<td>- Discs cannot be played back unless they have been finalized. Use a finalized disc.</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>- This may be caused by poor recording conditions, or the disc itself may be of poor quality. Use a correctly recorded disc.</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>- Files are created in a format that is not supported by this unit. Check the formats supported by this unit.</td>
<td>40</td>
</tr>
<tr>
<td>“No Disc” is displayed.</td>
<td>- “No Disc” is displayed if the disc is loaded upside-down or if no disc is loaded.</td>
<td>44</td>
</tr>
<tr>
<td>“Unsupported” is displayed.</td>
<td>- “Unsupported” is displayed if a disc that cannot be played is loaded.</td>
<td>44</td>
</tr>
</tbody>
</table>
## Playable media

### Discs

<table>
<thead>
<tr>
<th>Playable media</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Super Audio CD</td>
<td></td>
</tr>
<tr>
<td>CD</td>
<td></td>
</tr>
<tr>
<td>CD-R</td>
<td></td>
</tr>
<tr>
<td>CD-RW</td>
<td></td>
</tr>
<tr>
<td>DVD-R/-RW/+R/+RW</td>
<td></td>
</tr>
</tbody>
</table>

### Super Audio CD

There are three types of Super Audio CDs:

1. **Single layer discs**
   - Single layer Super Audio CD with just an HD layer.

2. **Dual layer discs**
   - Super Audio CD with a double HD layer, offering extended playing time and high sound quality.

3. **Hybrid discs**
   - Two-layer Super Audio CD with an HD layer and a CD layer. The signals on the CD layer can be played on a regular CD player.

![Types of Super Audio CDs](image)

The HD layer is a layer of high density signals for Super Audio CDs. The CD layer is the layer of signals that can be read on a regular CD player.

- When “MULTI” is selected, down-mixed audio is output to the L and R channels.

### NOTE

- Some discs and some recording formats may not be playable.
- Non-finalized discs cannot be played.
### Playable files

<table>
<thead>
<tr>
<th></th>
<th>Sampling frequency</th>
<th>Bit rate</th>
<th>Bit length</th>
<th>Playable discs</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MP3</strong></td>
<td>32/44.1/48 kHz</td>
<td>32 – 320 kbps</td>
<td>–</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>WMA</strong></td>
<td>32/44.1/48 kHz</td>
<td>48 – 320 kbps</td>
<td>–</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>AAC</strong></td>
<td>32/44.1/48 kHz</td>
<td>16 – 320 kbps</td>
<td>–</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>WAV</strong></td>
<td>32/44.1/48/88.2/96/176.4/192 kHz</td>
<td>–</td>
<td>16/24 bit</td>
<td>✓*2</td>
<td>✓</td>
</tr>
<tr>
<td><strong>FLAC</strong></td>
<td>32/44.1/48/88.2/96/176.4/192 kHz</td>
<td>–</td>
<td>16/24 bit</td>
<td>✓*2</td>
<td>✓</td>
</tr>
<tr>
<td><strong>ALAC</strong> *1</td>
<td>32/44.1/48/88.2/96 kHz</td>
<td>–</td>
<td>16/24 bit</td>
<td>✓*2</td>
<td>✓</td>
</tr>
<tr>
<td><strong>AIFF</strong></td>
<td>32/44.1/48/88.2/96/176.4/192 kHz</td>
<td>–</td>
<td>16/24 bit</td>
<td>✓*2</td>
<td>✓</td>
</tr>
<tr>
<td><strong>DSD</strong></td>
<td>2.8 MHz/5.6 MHz</td>
<td>–</td>
<td>1 bit</td>
<td>–</td>
<td>✓</td>
</tr>
</tbody>
</table>

*1 Copyright [2012] [D&M Holdings. Inc.]
Licensed under the Apache License, Version 2.0 (the “License”); you may not use this file except in compliance with the License. You may obtain a copy of the License at http://www.apache.org/licenses/LICENSE-2.0
*2 This item can only be used to play files with a sampling frequency of 32/44.1/48 kHz.

### Maximum number of playable files and folders

Maximum number of files : 1,000
Maximum number of files in 1 folder : 2,000
NOTE

- Be sure to give files the extension. Files with any other extensions or files with no extensions cannot be played.
- Recordings you have made should only be used for your personal enjoyment, and as per copyright laws may not be used in other ways without permission of the copyright holder.

- Only music files that are not copyright-protected can be played on this set.
  - Contents downloaded from pay sites on the Internet are copyright protected. Also, files encoded in WMA format when ripped from a CD, etc., on a computer may be copyright protected, depending on the computer’s settings.
  - Digital audio output stops during files with a sampling frequency of 32 kHz.
  - The maximum number of files and folders that can be played differs depending on conditions such as the length of the file name or folder name or the number of levels in the folder hierarchy.

Playback order of music files

When there are multiple folders containing music files, the playback order of folders is automatically set when this unit reads the media. The files in each folder are played back in the order in which the files were recorded on the media, from the oldest date and time.

**DVD-R/-RW/+R/+RW and CD-R/-RW**

For playback of files on DVD-R/-RW/+R/+RW or CD-R/-RW, files in all folders on the first layer are played first, next on the second layer, then next on the third layer, and so on in this order.

- The playback order displayed on a PC may differ from the actual playback order.
- The playback order with a DVD-R/-RW/+R/+RW and CD-R/-RW may differ, depending on the writing software.
About discs and files

Music files recorded on CD-R/-RW and DVD-R/-RW/+R/+RW are divided into large segments (folders) and small segments (files). Files are stored in folders, and folders can be placed for storage in a hierarchy. The unit can recognize up to 8 levels of folders.

- When writing music files on a DVD-R/-RW/+R/+RW or CD-R/-RW disc, set the writing software’s format to “ISO9660”. The files may not play properly if they are recorded in other formats. For details, refer to the instructions of your writing software.
Cautions on using media

Inserting a disc

- Set the disc in the tray label side up.
- Make sure the disc tray is fully open when inserting the disc.
- Place the discs flatly, 12 cm discs in the outer tray guide (Figure 1), 8 cm discs in the inner tray guide (Figure 2).

![Figure 1](image1.png)  ![Figure 2](image2.png)

- Place 8 cm discs in the inner tray guide without using an adapter.

**NOTE**

- Only load one disc at a time. Loading two or more discs can damage the unit or scratch the discs.
- Do not use cracked or warped discs or discs that have been repaired with adhesive, etc.
- Do not use discs on which the sticky part of cellophane tape or labels is exposed or on which there are traces of where labels have been removed. Such discs can get caught inside the player and damage it.
- Do not use discs in special shapes, as they may damage the player.

- Do not push the disc tray in by hand when the power is off. Doing so could damage the set.
- If the unit is left in a room full of smoke from cigarettes, etc., for long periods of time, the surface of the optical pickup may get dirty, preventing it from receiving signals properly.

"Unsupported" is displayed if a disc that cannot be played is loaded.
"No Disc" is displayed if the disc is loaded upside-down or if no disc is loaded.
How to handle media

- Do not get fingerprints, oil or dirt on discs.
- Take special care not to scratch discs when removing them from their cases.
- Do not bend or heat discs.
- Do not enlarge the hole in the center.
- Do not write on the labeled (printed) surface with ball-point pens, pencils, etc., or stick new labels on discs.
- Condensation may form on discs if they are moved suddenly from a cold place (outdoors for example) to a warm place, but do not try to dry discs with a hairdryer, etc.
- Do not store discs in the following places:
  1. Places exposed to direct sunlight for long periods of time
  2. Dusty or humid places
  3. Places exposed to heat from heaters, etc.

Cleaning discs

- If there are fingerprints or dirt on a disc, wipe them off before using the disc.
- Use a commercially available disc cleaning set or a soft cloth to clean discs.

Gently wipe the disc from the inside towards the outside.

Do not wipe with a circular motion.

NOTE

- Do not use record spray, antistatic agents, benzene, thinner or other solvents.
Explanation of terms

Advanced AL32 Processing Plus
Equipped with Advanced AL32 Processing Plus, Denon's own analog waveform reproduction technology. The reproducibility of weak signals is enhanced by expanding 16 bit digital data to 32 bit.

AIFF (Audio Interchange File Format)
This is an uncompressed and lossless format for digital audio. Use AIFF files to burn high-quality audio CDs from imported songs. AIFF files use approximately 10 MB of disk space per minute.

ALAC (Apple Lossless Audio Codec)
This is a codec for lossless audio compression method developed by Apple Inc. This codec can be played back on iTunes, iPod or iPhone. Data compressed to approximately 60 – 70% can be decompressed to exactly the same original data.

DSD (Direct-Stream Digital)
One of the audio data recording methods, it is the signal aspect used to store audio signals on a super audio CD, and is Δ-Σ modulated digital audio. It is configured of an array of single bit values at a 2.8 MHz sampling rate.

FLAC
FLAC stands for Free lossless Audio Codec, and is a lossless free audio file format. Lossless means that the audio is compressed without any loss in quality.
The FLAC license is as shown below.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:
• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
• Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
• Neither the name of the Xiph.org Foundation nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.
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MP3 (MPEG Audio Layer-3)
This is an internationally standardized audio data compression scheme, using the “MPEG-1” video compression standard. It compresses the data volume to about one eleventh its original size while maintaining sound quality equivalent to a music CD.

WMA (Windows Media Audio)
This is audio compression technology developed by Microsoft Corporation.
WMA data can be encoded using Windows Media® Player.
To encode WMA files, only use applications authorized by Microsoft Corporation. If you use an unauthorized application, the file may not work properly.

Sampling frequency
Sampling involves taking a reading of a sound wave (analog signal) at regular intervals and expressing the height of the wave at each reading in digitized format (producing a digital signal).
The number of readings taken in one second is called the “sampling frequency”. The larger the value, the closer the reproduced sound is to the original.

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

Downmix
This function converts the number of channels of surround audio to a lower number of channels and plays back according to the system’s configuration.
Bit rate
This is the amount of audio data recorded on a disc that is read in one second.

Finalizing
This process enables CDs recorded with a CD recorder or drive to be played by other players.

Linear PCM
This is an uncompressed PCM (Pulse Code Modulation) signal. Unlike lossy compression audio sources such as MP3, no audio quality or dynamic range deteriorates.
Trademark information

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### Audio performance

- **Analog output**
  - Channels: 2-channels
  - Playable frequency range: 2 Hz – 100 kHz
  - Playable frequency response: 2 Hz – 50 kHz (-3 dB)
  - S/N: 120 dB (Audible range)
  - Dynamic range: 112 dB (Audible range)
  - Harmonic distortion: 0.0006 % (1 kHz, Audible range)
  - Wow & flutter: Below measurable limits
  - Output level: 2.0 V (10 kΩ/kohms)
  - Signal type: 1-bit DSD
  - Sampling frequency: 2.8224 MHz
  - Usable discs: Super Audio CD

- **Digital output**
  - Coaxial: –
  - Optical: –
  - Emission wavelength: –

### Specifications

**Sound output**

- **Analog output**
  - Channels: 2-channels
  - Playable frequency range: 2 Hz – 100 kHz
  - Playable frequency response: 2 Hz – 50 kHz (-3 dB)
  - S/N: 120 dB (Audible range)
  - Dynamic range: 112 dB (Audible range)
  - Harmonic distortion: 0.0006 % (1 kHz, Audible range)
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  - Output level: 2.0 V (10 kΩ/kohms)
  - Signal type: 1-bit DSD
  - Sampling frequency: 2.8224 MHz
  - Usable discs: Super Audio CD

- **Digital output**
  - Coaxial: –
  - Optical: –
  - Emission wavelength: –

**Sound output**

- **Analog output**
  - Channels: 2-channels
  - Playable frequency range: 2 Hz – 20 kHz
  - Playable frequency response: 2 Hz – 20 kHz (±0.5 dB)
  - S/N: 118 dB
  - Dynamic range: 101 dB
  - Harmonic distortion: 0.0015 % (1 kHz)
  - Wow & flutter: Below measurable limits
  - Output level: 2.0 V (10 kΩ/kohms)
  - Signal type: 16-bit linear PCM
  - Sampling frequency: 44.1 kHz
  - Usable discs: Compact Disc

**Sound output**

- **Analog output**
  - Channels: 2-channels
  - Playable frequency range: 2 Hz – 100 kHz
  - Playable frequency response: 2 Hz – 20 kHz (±0.5 dB)
  - S/N: 118 dB
  - Dynamic range: 101 dB
  - Harmonic distortion: 0.0015 % (1 kHz)
  - Wow & flutter: Below measurable limits
  - Output level: 2.0 V (10 kΩ/kohms)
  - Signal type: 16-bit linear PCM
  - Sampling frequency: 44.1 kHz
  - Usable discs: Compact Disc

**Sound output**

- **Analog output**
  - Channels: 2-channels
  - Playable frequency range: 2 Hz – 20 kHz
  - Playable frequency response: 2 Hz – 20 kHz (±0.5 dB)
  - S/N: 118 dB
  - Dynamic range: 101 dB
  - Harmonic distortion: 0.0015 % (1 kHz)
  - Wow & flutter: Below measurable limits
  - Output level: 2.0 V (10 kΩ/kohms)
  - Signal type: 16-bit linear PCM
  - Sampling frequency: 44.1 kHz
  - Usable discs: Compact Disc
General

- **Power supply:** AC 230 V, 50/60 Hz
- **Power consumption:** 25 W
- **Power consumption in standby mode:** 0.1 W or less

For the purpose of improvement, the specifications and design are subject to change without notice.
■ Dimensions (Unit : mm)

■ Weight : 13.7 kg
Index

A
Amplifier ......................................................... 17
Auto Standby ................................................. 33
AV receiver ..................................................... 18

C
CD .................................................................. 25

D
D/A converter ................................................. 18
DATA CD ....................................................... 29
Display ........................................................... 10
Display brightness .......................................... 23

F
Front panel ....................................................... 8

P
Program playback ............................................. 27

R
Rear panel ....................................................... 11
Remote control unit ........................................ 12

T
Timer device ............................................. 19, 32
Tips .............................................................. 35
Troubleshooting ............................................. 36