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DN-300R

User Guide (English)

Introduction

Please see this guide's *Setup* chapter to learn how to integrate DN-300R with your audio system, and then refer to the *Operation* chapter to start using DN-300R.

Box Contents

DN-300R
Power Cable
Rack Ears and Screws
User Guide
Safety & Warranty Manual

Support

For the latest information about this product (documentation, technical specifications, system requirements, compatibility information, etc.) and product registration, visit **denonpro.com**.
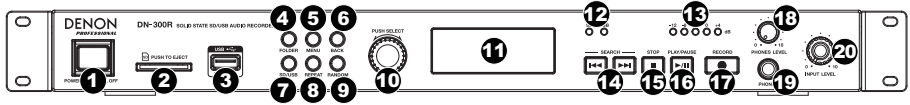
For additional product support, visit **denonpro.com/support**.

Safety Instructions

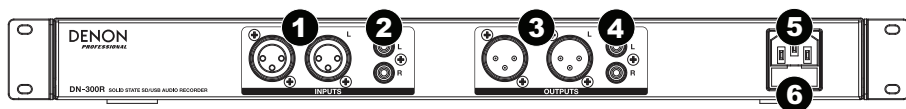|	
Before turning the power on:	Make sure all connections are secure and correct and that there are no problems with the connection cables.
	Power is supplied to some of the circuitry even when the unit is powered off. When the unit will not be used for long periods of time, disconnect the power cable from the power outlet.
About condensation:	If there is a major difference in temperature between the inside of the unit and the surroundings, condensation may form inside the unit, causing the unit not to operate properly. If this happens, let the unit sit for an hour or two while powered 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 cause noise. If this occurs, move the mobile phone away from this unit when it is in use.
Moving the unit:	Before moving the unit, turn off its power and disconnect the power cable from the power outlet. Next, disconnect its connection cables from other devices before moving it.
About care:	Wipe the cabinet and control panel clean with a soft cloth.
	Follow the instructions when using a chemical cleaner.
	Do not use benzene, paint thinner, insecticide, or other organic solvents to clean the unit. These materials can cause material changes and discoloration.
Rackmount warnings: (required rack specifications for mounting the unit in a rack)	EIA standard 19-inch (48.3cm) rack
	1U-size installation compatible rack
	Rack that has a guide rail or shelf board that can support this device.

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Features

Front Panel

1. **Power:** Press this switch to turn DN-300R on or off. Make sure the **power input** is properly connected to a power outlet. Do not turn the unit off during media recording or playback—doing so could damage your media.

2. **SD Card Slot:** Insert an SDHC or SDXC card to this slot.

3. **USB Port:** Connect a mass-storage-class USB device to this port.

4. **Folder:** Press this button to view this list of folders on the active device (SD or USB).

5. **Menu:** Press this button to access the Menu.

6. **Back:** Press this button to move back a level in the Menu.

7. **SD/USB:** Press this button to toggle between **SD**, **USB**, and **SD+USB** recording modes.

8. **Repeat:** Press this button to cycle through the Repeat playback modes. See *Operation > Playback > Playback Modes* for more information.

9. **Random:** Press this button to turn Random playback mode on or off. See *Operation > Playback > Playback Modes* for more information.

10. **Jog Dial:** Turn this dial to select tracks or to edit options shown in the **Display**. Press this dial to confirm a selection.

11. **Display:** This screen indicates the unit's current operation.

12. **SD/USB Indicators:** These LEDs will be lit red to indicate an SD Card and/or USB Device is connected and selected for recording. If another device is connected but not selected for recording, the respective LED will turn blue when playback or recording is stopped.

13. **Input Level Indicators:** Indicates the input signal level from the **Audio Inputs**. If the red LED consistently lights, it is recommended to lower the input level.

14. **Track/Search Buttons:** Press one of these buttons to move to the previous or next track. Press and hold one of these buttons to rewind/fast-forward.

15. **Stop:** Press this button to stop recording or playback.

16. **Play/Pause:** Press this button to start, resume, or pause playback.

17. **Record:** Press this button to start recording. While recording, the button will be solidly lit; when Auto Track is turned On, the button will blink.

18. **Headphone Level:** Adjusts the volume of the headphones.

19. **Headphones Jack:** Connect headphones to this 1/4" (6.35 mm) TRS jack.

20. **Input Level:** Adjusts the volume of the **Audio Inputs**.

Rear Panel

1. **Audio Inputs (balanced XLR):** Use XLR cables to connect an external audio source to these inputs.
2. **Audio Inputs (unbalanced RCA):** Use RCA cables to connect an external audio source to these inputs.
3. **Audio Outputs (balanced XLR):** Use XLR cables to connect these outputs to external speakers, sound system, etc.
4. **Audio Outputs (unbalanced RCA):** Use RCA cables to connect these outputs to external speakers, sound system, etc.
5. **Power Input:** Use the included power cable to connect this input to a power outlet.
6. **Fuse:** If the fuse blows, replace it with a fuse of the same type. Using a fuse with an incorrect rating can damage the unit and/or fuse.
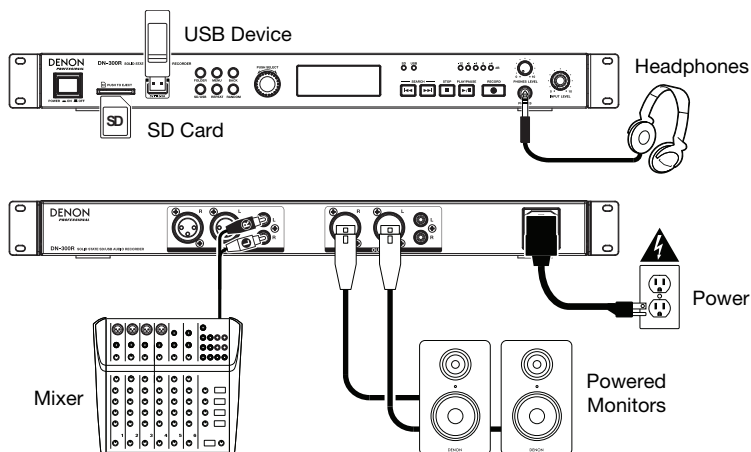
Setup

Important: Connect all cables securely and properly (with stereo cables: left with left, right with right), and do not bundle them with the power cable.

1. Use XLR or stereo RCA cables to connect the outputs of your audio sources to the **Inputs** (**balanced** or **unbalanced**) of DN-300R.
2. Use XLR or stereo RCA cables to connect the **Outputs** (**balanced** or **unbalanced**) to the inputs of your external receiver, amp, powered monitors, etc.
3. After completing all the connections, use the included power cable to connect the **Power In** to a power outlet.
4. Power on all of your input sources.
5. Power on DN-300R.

Connection Diagram

Items not listed under *Introduction* > *Box Contents* are sold separately.

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Operation

Recording

To record files onto a USB device or SD Card:

1. Do one or both of the following:
   - Insert your USB device (mass storage class) into the **USB Port**.
   - Insert your SDHC/SDXC card into the **SD Card Slot** until you hear it "click."
2. Connect your external audio source to the **Audio Inputs** using XLR or RCA cables.
3. If the unit is off, press the **Power** button to power it on.
4. Select your desired media type by pressing the **SD/USB** button.
5. Press the **Record** button to begin recording.
6. When you are finished recording, press the **Stop** button.

Important: Please see *Menu Operation* to learn more about the different settings for Recording.

Playback

To play audio files on a USB device or SD card:

1. Do one of the following:
   - Connect your USB device (mass storage class) to the **USB Port**.
   - Insert your SDHC/SDXC card into the **SD Card Slot** until you hear it "click."
2. If the unit is off, press the **Power** button to power it on.
3. Select your desired media type by pressing the **SD/USB** button.
4. Select an audio file by turning the **Jog Dial** or by pressing the **Track/Search** buttons. If your media contains folders, use the **Folder** button to display the list of folders.
5. To start playback, press the **Play/Pause** button on the unit.

When playing audio files, you can perform any of the following operations:

- **To start, resume, or pause playback,** press the **Play**/**Pause** button.
- **To stop playback,** press the **Stop** button.
- **To rewind or fast-forward through the track,** press and hold one of the **Track/Search** buttons. To resume playback, release the button.
- **To select another folder or audio file,** follow the steps described in *Step 4* above.
- **To remove a USB device,** gently remove it from the **USB Port** when it is **not playing or recording**. (Removing a USB device while it is playing or recording can damage it.)
- **To remove an SD card,** gently press it into the **SD Card Slot** when it is **not playing or recording**. The SD card will spring out, after which you can remove it. (Removing an SD card while it is playing or recording can damage it.)

Important: Please see *Other Information* to learn more about the types of USB devices and SD cards the DN-300R supports.

Playback Modes

Press the **Repeat** button to cycle through the following options:

- **Play All:** Plays back all files on the device and then stops. This is the default playback mode.
- **Play Folder:** Plays all files in the currently selected folder, but not any sub-folders, and then stops. The Play Folder Icon (**F ▶**) appears in the display.
- **Play One:** Plays a single track and then stops. The Play One Icon (**1 ▶**) appears in the display.
- **Repeat All:** Repeats all files on the device. The Repeat Icon (↻) appears in the display.
- **Repeat Folder:** Repeats all files in the currently selected folder, but not any sub-folders. The Repeat Folder Icon (↻) appears in the display.
- **Repeat One:** Repeats a single file. The Repeat One Icon (↻) appears in the display.

Press the **Random** button to cycle through the following options:

- **On:** Shuffles all files on the device or in the selected folder, but not any sub-folders, for random playback. The Random Icon (**R**) appears in the display.
- **Off:** Files are played consecutively in the order of their track number. This is the default playback mode.

Note: You can combine Random playback and **Play All**, **Play Folder**, **Repeat All**, or **Repeat Folder** modes.

Menu Operation

1. Record

1. **Auto Lvl:** Turns Auto Level **On** or **Off**. When Auto Level is **On**, the recording level for the **Inputs** is automatically kept around **-3 dB** (±3 dB).

2. **Rec Mode:** Sets how and what kind of files are recorded from the following options:
   - **Mono:** Records a single mono file (left channel only) to your selected device(s).
   - **Stereo** (default)**:** Records a single stereo file (left and right channels) to your selected device(s).
   - **Dual Mono:** When recording to SD *or* USB, records two mono audio files (left channel only) to the device at the same time. The second file will record at -10 dB to help protect your recording against accidental peaks in the audio source. When recording to SD *and* USB, the same mono audio file will be recorded on both devices.
   - **Dual Stereo:** When recording to SD *or* USB, records two stereo files (left and right channels) to the device at the same time. The second file will record at -10 dB. When recording to SD *and* USB, the same stereo audio file will be recorded on both devices.

      Note: Dual Mono and Dual Stereo are only available with **44.1K/16bit** WAV recording.

   If you select one of the Dual recording options, DN-300R will prompt you to test the SD card and/or USB drive to ensure it is compatible with Dual recording functions. Turn the **Jog Dial** to select **Yes**, and press it to confirm. DN-300R will test the SD card and/or USB drive and display whether the test has **passed** or **failed**. Class 10 or greater SDHC/SDXC cards are required when using Dual recording.

3. **Pre Rec:** Turns Pre-Record **On** or **Off**. When Pre-Record is **On**, a 2 second buffer of audio is kept in memory. When the record button is pressed, this buffer is used at the beginning of the recording.

   Note: Pre-Record cannot be used with **48K/24bit** WAV recording.

4. **Auto Track:** Turns Auto Track **On** or **Off**. When Auto Track is **Off**, new tracks must be created manually (by starting and stopping recording). When Auto Track is **On**, the **Record** button will flash, and recording will start and stop based on the options below. Press the **Jog Dial** to choose the options below, then select its value.

   - **Level**: Starts and stops recording when the input level passes a certain threshold. Set to **-24**, **-30**, **-36**, or **-42 dB**.
   - **Time:** Stops recording after a period of time has elapsed. Set to **1 min**, **5 min** (default), **10 min**, **15 min**, **30 min**, **1 hr**, **2 hr**, **8 hr**, **12 hr**, or **24 hr**. You can also press **Stop** to end the recording at any time.

     Note: If using the **8 hr**, **12 hr**, or **24 hr** options, make sure to set the **Format** to **MP3**. WAV files will be too large and stop recording before the set time.

2. Browse

1. **SD:** Select this option to view the contents of an SD card.
2. **USB:** Select this option to view the contents of a USB drive.

3. System

1. **Format:** Select this option to set the recording format. Choose **WAV** (**44.1K/16bit** or **48K/24bit**) or **MP3** (**192Kbps** or **256Kbps**).
2. **Info:** Select this option to view the following information:
   - **Format:** Displays the current recording format.
   - **Rec Mode:** Displays the current recording mode.
   - **Media Size:** Displays the total size of the connected device.
   - **Free Size:** Displays the remaining free space on the connected device.
   - **Time Left:** Displays the remaining recording time on the connected device.
   - **Tracks:** Displays the number of tracks on the connected device.
   - **Folders:** Displays the number of folders on the connected device.

4. Utility

1. **Time/Date:** Displays the current date and time. Turn the **Jog Dial** to switch between the date and time, and press it to edit the current setting. Use the **Back** button to return to the main menu when you have finished editing.
2. **FW Version:** Shows the current firmware version.
3. **Format:** Select this option to format your connected **SD** or **USB** device. Doing so will erase the contents of the device, and cannot be undone.
4. **Default:** Select this option to revert DN-300R to its factory default settings. This cannot be undone.

Other Information

USB Devices / SD Cards

When playing audio files on a USB device or SD card, note the following:

- DN-300R does not charge any connected USB device and does not support USB hubs, USB extension cables, or SD card readers.

- DN-300R supports USB devices that are mass storage class or compatible with MTP.

- DN-300R supports USB devices and SDHC/SDXC cards with a capacity of:
  - o **USB:** 256 MB – 2 TB
  - o **SDHC card:** 4 GB – 32 GB
  - o **SDXC card:** 64 GB – 128 GB

  Note: Class 4 or greater SDHC/SDXC cards are recommended, and Class 10 or greater is required for Dual recording.

- DN-300R supports **FAT16** or **FAT32** file systems only.

- You can have up to **99** folders, and up to **2** folder levels, including the root directory.

- You can have up to **999** audio files. If the USB device or SD card contains more than **1000** files, some audio files may not play or appear correctly.

- File names, folder names, and text characters can use up to **255** characters. Only uppercase letters, lowercase letters, numbers, and symbols can be displayed. Japanese file names will not be shown.

- Copyright-protected files might not play properly and/or may appear as **Unknown File**.

- DN-300R supports the following tag data:

MP3	WAV
o **ID3 tags:** Version 1.x – 2.4	o **ID3 tags:** Version 1.x – 2.4
o **Sample rate:** 44.1 kHz	o **Sample rate:** 44.1, 48 kHz
o **Bit rate:** 64–320 kbps	o **Bit depth:** 16 bit/24 bit
o **Format:** MPEG1 Audio Layer 3	o **Format:** Waveform Audio File Format
o **File extension:** .mp3	o **File extension:** .wav

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Audio File Playback Order

When playing audio files stored within multiple folders, the playback order of each folder is automatically set when the unit reads the media. The files in each folder will play in the same order in which they were added to the media. (This order may appear differently on your computer and/or in your software than it does on the unit.)

The image here illustrates how folders are structured into *levels* on your media.

The folder structure also determines the playback order: For audio files on a USB device or SD card, files in the root level will play, then files in the *first* folder of the first level, then files in the *second* folder of the second level, and so on.

Level 1 (root)   Level 2

Folder 1	File 7
File 1	File 8
File 2	File 9
File 3	File 10

Folder 2	File 11
File 4	File 12
File 5	File 13
File 6	File 14

Troubleshooting

If you encounter a problem, try doing these things first:

- Make sure all cables and other connected devices are properly and securely connected.
- Make sure you are using DN-300R as described in this user guide.
- Make sure your other devices or media are working properly.
- If you believe DN-300R is not working properly, check the following table for your problem and solution.

Problem:	Solution:	Please see:
Power does not turn on.	Make sure DN-300R's **power input** is properly connected to a power outlet using the included power cable.	*Setup*
DN-300R does not produce any sound, or the sound is distorted.	Make sure all cable and device connections are secure and correct. Make sure none of the cables are damaged. Make sure the settings on your device, loudspeaker, mixer, etc. are correct.	*Setup*

Problem:	Solution:	Please see:
No Device appears even when a USB device or SD card is inserted.	Disconnect and reconnect the USB device or SD card to make sure it is securely inserted. Make sure the USB device is of a mass storage class or compatible with MTP. Make sure the USB device or SD card is formatted using a **FAT16** or **FAT32** file system. Do not use a USB hub, USB extension cable, or SD card reader. The unit does not supply power to USB devices. If your USB device requires a power source, connect it to one. Not all USB devices or SD cards are guaranteed to work; some may not be recognized.	*Other Information* > *USB Devices / SD Cards*
Files on a USB device or SD card do not appear.	Make sure the files are of a supported file format. Files that are not supported by this unit will not appear. Make sure the USB device or SD card uses a folder structure that the unit supports: up to **99** folders (up to **2** folder levels, including the root) and up to **999** files. If your USB device or SD card is partitioned, make sure the files are in the first partition. The unit will not show other partitions.	*Other Information* > *USB Devices / SD Cards*
Files on a USB device or SD card cannot play.	Make sure the files are of a supported file format. Files that are not supported by this unit will not appear. Make sure the files are not copyright-protected. The unit cannot play copyright-protected files.	*Other Information* > *USB Devices / SD Cards*
Files on an SD card are not recorded properly (noise, clicks, or incorrect speed).	Make sure the card is Class 4 or greater, or Class 10 or greater if you are using Dual recording.	*Other Information* > *USB Devices / SD Cards*
File names do not appear properly.	Make sure the files are using only supported characters. Characters that are not supported will be replaced with a "**.**"	*Other Information* > *USB Devices / SD Cards*

Appendix (English)

Technical Specifications

Digital Audio System	
System	Media recorder and player
Compatible Media	USB device (mass storage class), SDHC/SDXC Card (Class 4 or greater recommended, Class 10 or greater required for Dual Recording)
Supported File Systems	FAT16, FAT32

Supported File Formats	**MP3:**	**Sampling frequency:** 44.1 kHz
		Bit rate: 192, 256 kbps (recording); 64–320 kbps and VBR (playback)
		Format: MPEG1 Audio Layer 3
		File extension: .mp3
	WAV:	**Sampling frequency:** 44.1, 48 kHz
		Bit depth: 16-bit (44.1 kHz), 24-bit (48 kHz)
		Format: Waveform Audio File Format
		File extension: .wav

Number of Channels	2 channels stereo
Audio Frequency Range	10 Hz – 20 kHz (±1.0 dB, recording; ±0.8 dB playback)
Signal-to-Noise Ratio	**Recording:** > 95 dB **Playback:** > 95 dB (1 kHz, 0 dB, A-weighted)
Channel Separation	**Recording:** > 80 dB **Playback:** > 90 dB (1 kHz, 0 dB, A-weighted)
Wow and Flutter	< 0.001%
Distortion	**Recording:** < 0.008% **Playback:** < 0.006%
Total Harmonic Distortion	< 0.01% (1 kHz, 0 dB, A-weighted)

Inputs	
Balanced XLR	**Nominal Level:** +4 dBu ±1 dBu **Minimum Level:** -40 dBu **Maximum Level:** 20 dBu ±1 dBu **Input Impedance:** 18 kΩ
Unbalanced RCA	**Nominal Level:** -10 dBV (at full scale: -16 dB) **Minimum Input Level:** -19 dBV or higher **Input Impedance:** 22 kΩ ±10%

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Outputs	
Balanced XLR	**Nominal Level:** +4 dBu ±1 dBu **Maximum Output Level:** +20 dBu ±1 dBu **Output Impedance:** 600 Ω ±10%
Unbalanced RCA	**Nominal Level:** -10 dBV ±2 dBV **Maximum Output Level:** +6 dBV ±2 dBV **Output Impedance:** 600 Ω ±10%

General	
Connectors	(2) XLR outputs (1) 1/4" (6.35 mm) headphone output (1) RCA stereo output pair (2) XLR inputs (1) RCA stereo input pair (1) USB port (1) SD card slot (1) IEC power input
Power	**Connection:** IEC **Input Voltage:** 100–240 V~, 50/60 Hz
Operating Conditions	**Operating Temperature:** 41 – 113 °F (5 – 45 °C) **Operating Humidity:** 25 – 85%, no condensation
Dimensions (width x depth x height)	19.0" x 10.0" x 1.7" 483 x 254 x 44 mm
Weight	6.6 lbs. 3.0 kg

Specifications are subject to change without notice.

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