

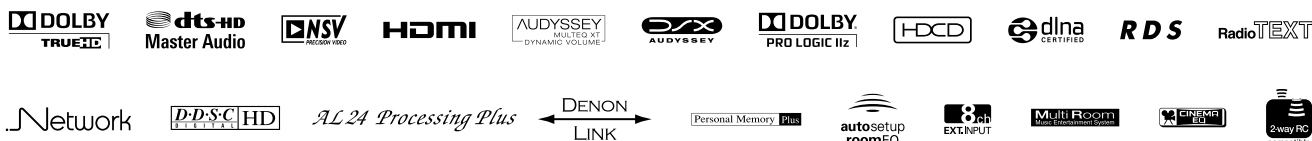
# AVR-4310

AV Surround Receiver

# DENON

## A/V Surround Receiver featuring Advanced Connectivity, Network Audio and Photo Streaming and an interface that enhances your level of entertainment enjoyment

The AVR-4310 is a 7-channel A/V surround receiver that not only offers DENON LINK 4th and high-bit i/p conversion and scaling along with other acclaimed Denon audio and video technologies, but also lets users enjoy a wide variety of media such as Network Audio and Photo Streaming



### Features

#### New features

- HDMI Clock Control via DENON LINK 4th
- Clock Jitter Reducer available for all digital inputs
- Audyssey DSX processing
- Dolby Pro Logic IIz processing
- High bit i/p converter and scaler up to 1080p
  - Multi cadence detection for SD and HD video signal
  - Digital noise reduction and enhancer
- 6 x HDMI in (1 x front panel)
- 2 x HDMI out (Repeater and Scaler)
- USB digital direct connection for iPod (audio only)
- Enhance network capability
  - Napster online subscription based service support (Napster Germany and Napster UK)
- Sleep timer function

#### State-of-the-art Denon Solutions for Maximising Content Quality

- Identical quality and power for all 7 channels, 130W x 7ch
- Dynamic Discrete Surround Circuit, D.D.S.C.-HD
  - New dual 32-bit floating point high precision DSP processors
  - AL24 Plus processing, to dramatically enhance the music listening experience
  - Differential D/A Converters
- Stable power supply for high-quality sound and picture playback
- Compressed Audio Restorer to enhance digital music files
- Dolby TrueHD and DTS-HD Master Audio decoders
- Denon's high picture quality circuitry, to enhance enjoyment of existing DVDs
- Video digital noise reduction, to optimise effects for both SD and HD content
- Vertical Stretch (supporting the CinemaScope aspect ratio)

#### Connectivity & Future-ready Expandability

- Internet Radio and Network audio/photo streaming from PC/MAC, server
- Mass storage support USB for audio and photo playback (MTP compatible)
- 3 source / 3 zone capability
- Power amplifier, assign for zone 2 or 3

#### Ease-of-use

- Advanced GUI, Superimposed on HDMI (up to 1080p)
- Dual HDMI outputs enabling simultaneous output to video projector and flat panel
- Audyssey Dynamic Volume, for real-time volume adjustment
- Audyssey Dynamic EQ selects the correct frequency response and surround volume levels on a moment by moment
- Audyssey MultEQ XT Auto setup and Room EQ
- 2-line fluorescent display on front panel
- Three Quick Select Buttons
- EL pre memory & learning remote control unit +zone remote control unit

#### Others

- Remote Installer Access via DPMS
- PC setup via Ethernet (Web setup)

## State-of-the-art Denon Solutions for Maximising Content Quality

### • HDMI Clock Control via DENON LINK 4th

DENON LINK is proprietary high-quality digital audio transmission technology that utilizes a real-time balanced transmission system to protect the signal from external noise. With the more advanced Denon Link 4th used in an HDMI connection, for HD audio read from Blu-ray disc as well, the master clock that operates the D/A converter of the A/V surround receiver is transmitted to the player, enabling the circuitry to be operated while sharing the same clock in order to achieve digital audio transmission with negligible jitter. Sound localization becomes more precise, and a greater sense of space is produced in the sound images. When combined with a Denon Blu-ray player that supports Denon Link 4th, users will be able to enjoy the level of sonic quality that is expected from HD audio.

### • Clock Jitter Reducer available for all digital inputs

The Clock Jitter Reducer thoroughly suppresses fluctuations on the clock waveform to remove distortion from the digital audio signal and minimize adverse influences on sound quality.

### • Support for new surround extension

By assigning 7 channels of power from the AVR-4310's built-in power amp to individual channels, you can create and enjoy your own custom surround mode.

### - Audyssey DSX processing

Audyssey DSX extends 5.1-channel and 7.1-channel sound sources to a wider and higher dimension. A sound that is wider to the left and right is achieved by adding a sound source (LW/RW) that is wider than the usual placement of the front (FL/FR) speakers, and a greater sense of height in sound space is achieved by adding a sound source (LH/RH) in the upper area between the FL(FR) and LW(RW) channels.

### -Dolby Pro Logic IIz processing

Dolby Pro Logic IIz is surround technology that adds front height channel sound sources above the front left and right speakers to enable 7.1-channel playback for 5.1-channel program sources or 9.1-channel playback for 7.1-channel sources such as Blu-ray. Since the dimension of height is being added to the conventional surround sound, you can experience sound movements above you while watching movies or playing games. With music, the sound space of a concert hall is more realistically reproduced.

- **Minimum Signal Path for clear audio and video signal**
- **Direct Mechanical Ground Construction, embodying concepts for thorough vibration resistance**
- **Digital / analog separate windings**
- **Compressed Audio Restorer to enhance digital music files**

### Connectivity & Future-ready Expandability

#### • 6 x HDMI in (1 x front panel)

An HDMI input has been provided on the front panel for quick, easy connection of an external devices such as a video camera or game console.

#### • USB digital direct connection for iPod (audio only)

The AVR-4310 has USB ports for digital audio input from an iPod to let you enjoy music in high-quality sound made possible by acclaimed Denon audio technologies such as DDSC-HD and the combination of AL24 Processing and high-performance D/A converters. You can also operate the system while viewing information from the iPod, including music information, on the TV screen through the AVR-4310's GUI function. Simply use the USB cable that came with your iPod to connect it to the AVR-4310.



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### Main Specifications

#### Power amplifier section

Rated output \*THD figures are power amp stage values.

Front L/R 130 W + 130 W  
(8 ohms, 20 Hz - 20 kHz, THD 0.05 %)  
170 W + 170 W  
(6 ohms, 1 kHz, THD 0.7%)

Centre 130 W  
(8 ohms, 20 Hz - 20 kHz, THD 0.05 %)  
170 W  
(6 ohms, 1 kHz, THD 0.7%)

Surround L/R 130 W + 130 W  
(8 ohms, 20 Hz - 20 kHz, THD 0.05 %)  
170 W + 170 W  
(6 ohms, 1 kHz, THD 0.7%)

Surround Back L/R 130 W + 130 W  
(8 ohms, 20 Hz - 20 kHz, THD 0.05 %)  
170 W + 170 W  
(6 ohms, 1 kHz, THD 0.7%)

#### Preamplifier section

**Input sensitivity/impedance**  
PHONO (MM) 2.5 mV  
Audio inputs 200 mV/47 kohms

**Output level/Load impedance**  
Audio outputs 1.2 V

#### FM section

Tuning frequency range 87.5 - 108.0 MHz  
Usable sensitivity 1.5 µV (14.8 dBf)

#### AM section

Tuning frequency range 522 - 1611 kHz  
Usable sensitivity 20 µV

#### General

Power supply AC 230 V, 50 Hz  
Power consumption 780 W (Standby 0.1 W)  
Dimensions (W x H x D) 434 x 171 x 414 mm  
Weight 15.8 kg

- **Audio/video playback and control for iPod with optional dock (ASD-11R)**
- **Includes dedicated zone remote control unit**
- **2way remote ready (optional: Denon RC-7000CI/RC-7001RCI)**

### Ease-of-use

#### • Advanced GUI, Superimposed on HDMI (up to 1080p)

The AVR-4310 is equipped with an easy-to-view Graphical User Interface (GUI) featuring visual menu displays and hierarchical directories. The hierarchical directory displays let you easily see where you are and what settings you want to make. Operation has been simplified as well. These menu displays can also be output to the monitor over HDMI.

- **Auto surround mode**
- **Audio level memory, capable of correcting different signal levels for each input device**
- **Variable subwoofer crossover switching**

### Others

- **AMX, Crestron third party IP control support with RS-232C port**
- **150mA Trigger output**
- **IR Remote in/out ports**

### Ports

| In                                   |              |  |
|--------------------------------------|--------------|--|
| HDMI                                 | x 6          |  |
| Component                            | x 3          |  |
| S-Video                              | x 7          |  |
| Composite (Video)                    | x 7          |  |
| Analog Audio (Tuner included)        | x 10         |  |
| Analog EXT. Input                    | 7.1ch        |  |
| DENON LINK 4th                       | x 1          |  |
| Digital Optical                      | x 3          |  |
| Digital Coaxial                      | x 3          |  |
| Out                                  |              |  |
| HDMI Monitor                         | x 2          |  |
| Component Monitor                    | x 1          |  |
| S-Video Monitor                      | x 1          |  |
| S-Video                              | x 2          |  |
| Composite Monitor                    | x 1          |  |
| Composite (Zone2)                    | x 1          |  |
| Analog Audio REC                     | x 2          |  |
| Audio Preout (Zone2 / Zone3 / 7.1ch) | x 3          |  |
| Digital Optical                      | x 1          |  |
| Phones                               | x 1          |  |
| Other                                |              |  |
| Microphone Port                      | x 1          |  |
| Dock Control Port                    | x 1          |  |
| FM Tuner Antenna                     | x 1          |  |
| AM Tuner Antenna                     | x 1          |  |
| Ethernet                             | x 1          |  |
| USB (selectable front or back panel) | x 2          |  |
| RS-232C                              | x 1          |  |
| Remote Control In/Out                | In 1 / Out 1 |  |
| DC12V 150mA MAX. trigger out         | x 2          |  |

\*Premium silver version is also available.

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