



# DENON



## Denon AVR-4308DAB - HD Network Wi-fi 7.1 AV receiver - £1999.99

- An advanced new network-centric, high-definition Home Cinema & Music Powerhouse
- HD Video - HD Audio - DAB Radio - iPod - Wi-fi - Internet Radio - PC/Mac and USB Music & Photo streaming
- Amazingly easier to use than ever before, with a new photo-real graphical interface and new control layout
- Better sound quality than any previous Denon AVR, greater ease-of use, total connectivity and 4-zone multi-room
- Made in Denon's own high-end factory in Shirakawa, Japan

The 4308 is Denon's first DAB Home Cinema receiver, Denon's best-sounding receiver ever and is the first Denon AV product to feature Denon's new 'wave' style industrial design, with a softer sleeker look that belies the massive battleship build quality. All the new technologies that are reliable and ready for prime-time have been implemented.

To reconcile the demands of high-speed HD circuits with those of better sound, Denon's engineers have rethought everything. The new audiophile chassis drastically shortens signal paths, minimises vibrations and prevents audio, video and digital circuits from interfering with each other. Picture and sound from all sources are stunningly good.

### High Definition Sound & Vision

- HDMI 1.3a repeater with 4 inputs and 2 outputs
- Dolby TrueHD and DTS-HD decoders (HDMI 1.3a)
- Deep Colour and xvYCC support (HDMI 1.3a)
- Auto Lip Sync (HDMI 1.3a)
- All analogue and digital video upscalable to 1080p
- DenonLink3 ultra-high-speed audio interface

### Connectivity & Future-ready Expandability

- Full Networking with Wi-fi & Ethernet Built-in
- Selectable USB ports (Front/Rear)
- iPod Ready (using the Denon ASD-1R & newer)
- Music streaming from PC & Mac  
AAC, MP3, WAV, WMA lossless, FLAC
- Photo streaming ditto (JPEG)
- PC setup and control via Ethernet / Wi-fi
- Remote diagnosis, update and upgrade
- Internet Radio V2.0 extended - 7000 + stations
- Network setup (Web Control) function
- Up to 4 zone room-to-room capability

### Sound Quality

- Identical quality and 170 watt power for all 7 channels
- 3 independent power transformers
- 9 independent power supply circuits
- Denon's Dynamic Discrete Surround Circuit HD
- Denon proprietary Advanced AL24 for ALL channels
- New audiophile chassis construction design
- Compressed Audio Restorer for MP3/AAC etc
- DAB Tuner Ultra-sensitive with all info on the GUI
- Pure Direct/Direct/Stereo for digital/analogue inputs

### Ease of Use

- Stunning new photo-real Graphical User Interface
- Front panel setup possible as well
- Unified music interface for iPod and all streaming
- Auto set-up and Room EQ
- Highest Spec MultEQ XT from Audyssey
- New guided back panel layout
- Two remote controls for Main and Sub Zones

## **Denon AVR-4308DAB - HD Network Wi-fi 7.1 AV receiver - £1999.99**

### **The excruciating detail**

High-end picture and sound does not arrive by chance, it is the outcome of decades of experience and development. With the new 08 series and facing the complexity of integrating high-speed HD technologies, Denon engineers have applied their experience and quality philosophy rigorously, as never before.

### **Completely new design of interior structure and circuit layout - Short circuit paths throughout**

The start was the dramatic shortening of signal paths, which in the light of the staggering diversity of features, was only achieved with a completely new design of interior structure and circuit layout. The use of extremely powerful miniature chips in the digital section, six-layer boards with SMD (Surface Mounted Device) modules and compact discrete analogue circuits with top-quality components, has reduced the area required for the boards enormously. Optimum layout of boards for the separated digital, analogue audio, analogue video and CPU sections, has allowed the signal paths, and hence the noise, to be substantially minimised once again.

### **Complex and systematic vibration-inhibiting mechanical design**

Inside the ultra-stable all-metal cabinet, all potential sources of vibration are minimised by means of additional design features: the large main transformer of the power supply is located on a sturdy separate board, mounted like the bias-stabilised/high-current power transistors in the direct vicinity of the feet, giving a mechanical ground.

### **Massive power supplies deliver stunning dynamics and superb signal-to-noise ratios**

Each separate circuit, also including the relevant sockets, can resort to an independent power supply in order to prevent signal harmonics from affecting the sound. Each has at its disposal three transformers providing a total of nine secondary taps. The output stage power supply unit is suitably lavish: a bridge circuit of four top-quality rectifier diodes (each up to 16 A!), provides a fast response to load peaks and large filter capacitors 2 x 18,000 µF specially manufactured for Denon make sure that 4308 can provide sufficient current for even the most dramatic peaks.

### **Denon's D.D.S.C. HD circuit (Dynamic Discrete Surround Circuit – High Definition)**

This unique circuit is based around two ultra-fast Analog Devices SHARC 32-bit floating-point DSPs. One SHARC uses its 333 MIPS power to decode all the current sound formats in the best possible quality, including Dolby True HD (8 x 96 kHz and 24 bit) and DTS-HD. The second SHARC looks after post-processing and equalizing (EQ so the AVR-4308 can match audio data perfectly to the speaker setup and room acoustics.

### **Denon Advanced AL24 Processing Multichannel**

The Field Programmable Gate Array includes the latest Denon exclusive AL processing algorithms. Advanced AL24 expands the resolution of standard audio signals (CD: 16 bit) to 24 bit (bit extension) and also increases the scanning rate to 192 kHz (upsampling), on all channels. The high resolution A/D and D/A converters (24 bit, 192 kHz) operate in an elaborate differential arrangement and the centre master clock oscillator guarantees perfect timing even at high sampling rates, reducing jitter problems substantially.

### **The Compressed Audio Restorer - the most advanced way yet to improve lossy formats like MP3 and AAC**

Precision signal analysis of medium frequency positions and sophisticated processing methods are used to analyse the residual harmonics of conventional MP3, WMA and AAC signals, restore bass and treble components, and thus generate a complete music signal again. Room mapping and dynamic response improve and the often feeble bass is improved. A quick listen will show that Audio Restorer cannot be compared with any conventional circuit.

### **Audyssey MultEQ-XT - the most advanced version of this technology - do not confuse with lesser versions**

Using the receiver interface and a genuine Audyssey calibration mic (supplied), this takes up to 8 measurements around the listening area and uses high resolution equalization filters for satellites and subwoofers. This is the most powerful built-in version of MultEQ for receivers. Even finer digital filters allow precise frequency response correction at the subwoofer (ALFC, Adaptive Low Frequency Correction).

### **Multi-room flexibility and more**

This receiver's multi-source, multi-room output gives entertainment options throughout a home. Listeners can enjoy a surround movie in the main room while a friend watches a different video source in a second room and the kids listen to stereo music in a third. Digital audio signals can even be routed to a fourth room for playback with an additional receiver. The supplied second zone remote can be used anywhere as can the optional two-way wireless RC-7001.

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### True HDMI 1.3a repeater for extended range with 4 inputs and 2 outputs for flexibility

All key HDMI 1.3a features are supported, including Dolby TrueHD and DTS-HD decoders, Deep Colour and xvYCC support, 24fps film support, Auto Lip Sync and 7.1 uncompressed 24-96 audio plus SACD. The two HDMI outputs allow the use of a projector and flat screen in the same system and can be used simultaneously.

### HDMI to HDMI and Analogue to HDMI video conversion/scaling (480p/720p/1080i/1080p)

All video can be processed via the advanced Faroudja DCDi video processing (FLI-2310) chip and upscanned to 1080p. This means that all video sources can be routed to the display via one HDMI cable and look their best. Even Denon's new pictorial on-screen displays can be enjoyed in razor sharp clarity at 1080p.

### Intelligent output stage management for extended multi-zone capabilities

Four assignable speaker pairs offer a wide range of setups with many options for multi-zone use. For example; users can run a 7.1 system for home cinema and then switch to bi-amped stereo for music. If the user switches from surround to stereo or vice versa, the AVR-4308 automatically assigns the output stages to the correct speaker.

### Two switchable USB inputs (front & rear)

#### Dock Control Connector for iPod (with optional ASD-series docks)

The 4308 will play music from almost any source and the advanced Compressed Audio Restorer will improve the quality of all lossy formats. USB ports (front and rear) provide access for all suitably equipped memory sticks, digital audio/video players and hard drives, with full Command and Control functionality and On-Screen data. The AVR 4308 also displays JPEG pictures from USB sources and supports Album Art (cover display) from the iPod or USB.

### Wi-fi & Ethernet networking for integration into existing computer networks

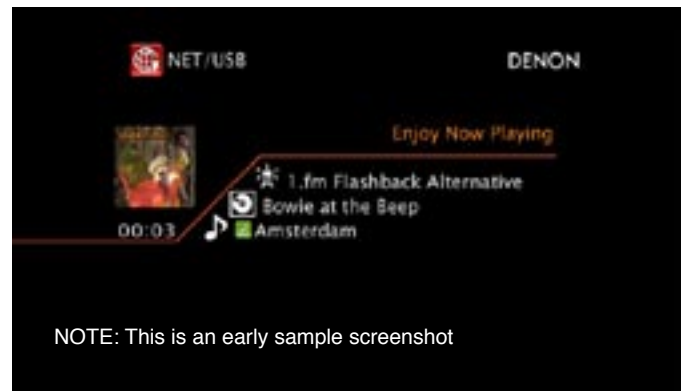
The 4308 can handle not only conventional encoding (WEP) but also state-of-the-art security standards (WPA2 and WPA) providing access to over 7,000 Internet radio stations and podcasts worldwide, audio streaming from DLNA (Digital Living Network Alliance) compatible music servers (Windows Media, TwonkyVision, etc.) in a wide range of formats including MP3, WMA and non-copy-protected AAC files (iTunes-Codec), WMA Lossless and the loss-free FLAC. The AVR-4308 also streams JPEG pictures and album art from compatible DLNA media servers.

### Web & PC/MAC Control functions

Users can set up the receiver from their PC, notebook or even a PDA with network access. Control via a web browser lets users control the receiver remotely over the Internet and can allow installers and Denon service, access for remote diagnosis, system updates, upgrades and backing up all settings to a PC.

### Denon's new graphic user interface (GUI) Easy set-up and a unified music interface

The new graphic user interface (GUI) provides clarity at all times during setup and operation. The user can now superimpose the settings menus on any picture on any output, irrespective of the image format selected, even up to 1080p via HDMI. Multilingual on-screen menus with readily intelligible help texts and attractive pictograms make setting up easier, even for newcomers to home cinema (see l/h picture) . All streamed music whether from an iPod, USB stick or internet radio, now shares the same clear music interface (see r/h picture).



## **Denon AVR-4308DAB - HD Network Wi-fi 7.1 AV receiver - £1999.99**

### **Sound standards:**

Dolby TrueHD, Dolby Digital Plus, Dolby Digital EX, Dolby Digital, Dolby Pro Logic IIx  
DTS-HD Master, DTS-HD High Resolution Audio, DTS-ES, DTS 96/24, DTS Neo:6, DTS,  
Linear Multi-channel PCM - HDCD for audiophile CDs

### **Feature Highlights:**

- HDMI 1.3a interfaces and powerful multi-channel audio decoder for supporting all sound formats, including new, high-resolution technologies such as Dolby TrueHD and DTS-HD (Blu-ray, HD-DVD)
- Full support for enhanced colour resolution (Deep Colour) and extended colour space xvYCC (HDMI 1.3a)
- Auto LipSync (HDMI 1.3a) for automatic synchronisation of picture and sound

### **Exclusive DENON Technology for Hi-Fidelity Sound in the High Definition Era**

- Completely new design of interior structure with optimised circuit design for extremely short signal paths
- Ultra-stable cabinet and systematic vibration-inhibiting design
- Sturdy transformer board, a sturdy equipment base and a heat sink connected to the baseplate direct
- Elaborate power supply unit comprising 3 transformers and 9 separate power supplies
- Interior structure subdivided into sections, separate boards and independent power supplies to avoid interference
- 7-channel output stage with 170 W per channel (6 Ω, DIN)
- Black lacquered aluminium low-profile heat sink for enhanced heat dissipation
- Power supply unit with oversized transformer, high-current-compatible bridge rectifier circuit with four diodes (16 A),
- Filter capacitors manufactured according to DENON specifications (2 x 18,000 µF)
- High-current transistors with bias stabilisation for acoustic excellence under all operating conditions
- Intelligent output stage management (surround back amplifier stages can be assigned to two extra pairs of speakers) allows, for example, a 7.1-channel setup and operation of separate stereo speakers in bi-amping mode

### **Newly Developed D.D.S.C. HD Digital Circuit**

- Completely separate-channel, discrete configuration; processing of audio signals in maximum resolution
- Denon's Advanced AL24 Processing Multichannel (192 kHz upsampling and bit extension to 24bit for all channels)
- Two ultra-fast 32-bit floating-point Analog Devices SHARC DSPs for decoding, post-processing and equalizing
- New enhanced Audyssey MultEQ-Xt calibration with refined algorithm and genuine Audyssey calibration mic
- equalisation for 8 independent listening positions (instead of 6) higher-resolution digital filters in the bass range (ALFC) and extended correction options at medium frequency locations, e.g. for adjustment to horn speakers
- 24-bit/192 kHz BurrBrown D/A converters (4 x PCM1791A) in differential arrangement for 7.1 channels
- 24-bit/192 kHz BurrBrown A/D converters (2 x PCM1804)
- Pure Direct for pure stereo music at the highest quality
- Compressed Audio Restorer for improved sound from data-reduced music material (MP3, WMA, AAC etc)

### **HDTV-ready Video Processing - Four HDMI in and Two HDMI out**

- Two HDMI 1080p (1.3a) outputs for convenient switching between a projector and a plasma/LCD screen
- Complete, bidirectional video conversion with HDMI output (Video ↔ S-Video ↔ Component ↔ HDMI)
- Top-quality 12-bit video A/D and D/A converters
- De-interlacing and scaling of all analogue/digital input signals with Faroudja DCDi technology up to 1080p
- Configurable progressive mode for an optimum picture despite problematical input signals

### **Operating Convenience**

- Brand-new enhanced graphic user interface (GUI) with readily intelligible help texts
- Settings menus can be superimposed on any picture (resolution up to 1080p)
- More clearly arranged grouping and labelling of sockets on the back to make wiring up much easier
- Easier setup (inputs have already been assigned to a certain source but they can be renamed or blanked out)
- Clearly arranged EL-Touch-Panel remote control with punch through
- Second remote control with key functions for everyday use or a convenient multi-zone control (included)
- Two-way wireless (RC-7000CI, RC-7001RCI) for whole house control (optional)

## **Denon AVR-4308DAB - HD Network Wi-fi 7.1 AV receiver - £1999.99**

### **Multi-zone Functions**

- Intelligent output stage management (4 amplifier stages which can be assigned to zones 2 and 3)
- Additional D/A converters for zones 2 and 3 (2-channel)
- Allows the use of digital music sources (CD, Internet radio, audio streaming, USB devices) for zones 2 and 3
- Easier operation due to second remote control and on-screen menus for zone 2

### **Connection Flexibility**

- DAB tuner (L-Band, Band III) for digital radio reception and VHF/MW tuner with RDS
- 2 switchable USB inputs for playing audio files and displaying photographs (JPEGs)
- Use external USB sticks/hard disks/MP3 players and more USB devices
- Dock Control for easy iPod integration (with optional ASD-1R)

### **- Extended network functions**

- Direct integration into wireless LAN networks (WLAN, Wi-fi) and Ethernet interface
- Internet radio with MP3 and WMA support
- Audio streaming from DLNA-compatible music servers
- Extended support for streaming formats: MP3, WMA, AAC, WMA Lossless and FLAC
- JPEG display from compatible DLNA media server or USB stick/hard disk
- Album Art display from iPod, music server or USB
- Web Control (setup and operation of the AV receiver using a web browser from a computer or PDA)

**Sockets - AV Digital:** 4 x HDMI (1.3a) input, 2 x HDMI (1.3a) outputs

### **Sockets - Audio Analogue:**

8 x 2-channel inputs (incl. front), 1 x phono MM  
1 x 7.1-channel input  
2 x 2-channel recorder outputs  
1 x 7.1-channel pre-amp output  
2 x 2-channel pre-amp outputs (pre-out for zones 2 and 3)  
11 x speaker sockets with banana plug-compatible screw terminals plus front panel headphone jack

### **Sockets - Audio Digital and Zone-4**

Inputs: 3 x coaxial, 4 x optical (incl. front), 1 x DENON Link 3rd,  
Outputs: 2 x optical (also for zone 4)

### **Sockets - Video (Analogue):**

Inputs: 3 x Colour component (phono); 7 x S-Video and Composite (incl. front)  
Outputs (main zone, incl. monitor out): 1 Colour component; 3 x S-Video and Composite  
Additional MultiZone Sockets:  
Outputs for zone 2: 1 x Colour component, 1 x Composite, 1 x Pre-out (2-channel audio)

### **Sockets - Zone 3:**

Output: 1 x Pre-out (2-channel audio)

### **Sockets - Other Interfaces:**

2 x USB (front - back), 1 x Ethernet RJ45, 1 x WLAN Wi-fi,  
1 x iPod® Dock Control for optional Denon control docks for iPod  
1 x RS-232C, 1 x control input/output (remote control), 2 x trigger output

### **Specifications:**

|                                      |  |
|--------------------------------------|--|
| Output power (6 Ω, 1 kHz):           | 7 x 170 W - compare to Onkyo and Pioneer 6 Ω specs |
| Output power (8 Ω, 20 Hz to 20 kHz): | 7 x 140 W - genuine full bandwidth power           |
| ECO Standby consumption:             | 0.3 W max.(amazingly low for a receiver like this) |
| Dimensions (W x H x D):              | 434 x 195 x 455 mm                                 |
| Weight:                              | 18.9 kg  |