



Denon AVR-X2500H
AV receiver with HEOS

Do you need more?

If seven channels is sufficient for your surround-sound needs, Denon has a mid-priced receiver that offers a great deal for the price, including HEOS streaming and multiroom support.

SUMMARY

Denon AVR-X2500H
AV receiver with HEOS
Price: \$1599

- + Excellent all-rounder
- + Very good video processing
- + HEOS support
- Slightly weird DLNA DSD behaviour
- No DAB+ tuner

How much of an AV receiver do you need? If you're shopping for one, it's a real and fundamental question, together with your price level. Clearly we'd all love to have the very top-of-the-line stuff, like Denon's delicious AVC-X8500H home theatre amplifier which we reviewed recently, and which I was using until a few weeks ago, or the Marantz and Yamaha range-toppers also featured in this issue.

But the receiver sitting at the centre of my home theatre system as I write this is this relatively modest Denon AVR-X2500H. Price? Just a little more than one quarter of the cost of the AVC-X8500H. And you know what? I'm finding it strangely satisfying.

Equipment

That's partly because Denon has been quite clever in recent years at choosing the most, well, 'relevant' features to retain at each price point, while shedding the less necessary things.

One necessary thing is a good number of amplifier channels. The Denon AVR-X2500H has seven of them, each rated at 95 watts into 8 ohms (two channels driven) across the full audio bandwidth at inaudibly low levels of distortion. All the amps also support 4-ohm loads, albeit with a mode switch to ensure the output isn't overdriven.

But I should note that it is limited to those channels, there being no pre-amplifier outputs (apart from that for the subwoofer) to allow expansion, so it is limited to seven channels. You can have 7.1 channels or 5.1.2 channels, but not 5.1.4 or 7.1.2, even with the

additional of power amplifiers. That said, as I've often mentioned, two overhead channels deliver, in my view, something like ninety per cent of the experience of four overhead channels.

Of course, the receiver supports Dolby Atmos and DTS:X, along with both companies' systems for enhancing regular surround by extracting and using height content.

Well, it hasn't dropped everything that's almost useless. It still has composite and component video inputs and outputs. I think I'd have preferred the audio pre-outs, but then I don't have any gear that relies on analogue video connections. Or, indeed, much that could use them even if I wanted to.

But there's plenty of digital connectivity, including eight HDMI inputs (all support UHD and HDCP 2.2) and two HDMI outputs. The only weakness there is that both S/PDIF inputs are optical. If you have, say, a CD player with coaxial digital out, you'll be out of luck. (There must be different versions of this receiver in different markets, for the downloadable manual does show the presence of a coax input.)

And of course there's both Wi-Fi and Bluetooth. The Wi-Fi is dual band with support up to the 802.11n standard. The Bluetooth only supports the basic SBC codec, without the higher quality aptX variants or AAC.

The resurgence of vinyl continues. This receiver has phono inputs for mm cartridges (and an earthing point). Last year's model didn't.

Setting up

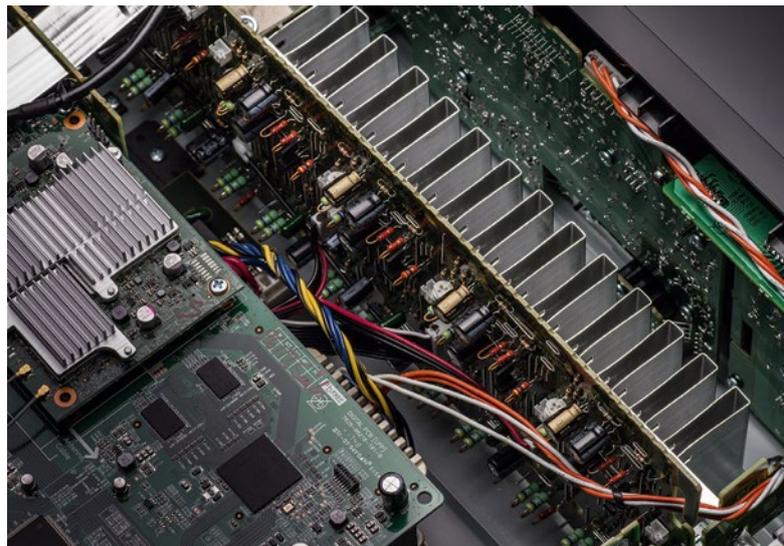
This receiver uses the Audyssey MultEQ XT system for speaker and room calibration. Note, this is not Audyssey MultEQ 32. I suppose it uses lower resolution to do its digital signal processing. I can't say that I found it deficient, and clearly things have been improving with Audyssey MultEQ in recent years. I've often complained about auto calibration systems picking the wrong speaker sizes and crossover frequencies for my speakers. Not this time. They were all exactly what I would have chosen had I done it manually.

The system does ask for at least three measurement positions, and up to eight. It also suggests, when you get to the end, that you switch on Audyssey Dynamic EQ. Don't. That's like a supercharged Loudness control. The idea is seductive, but it ignores that we are used to the different frequency balances we hear at low levels. 'Correcting' them makes things sound artificial.

All that's part of a wizard that guides you through setting up everything, from wiring the loudspeakers (it even illustrates how much insulation to strip), though Audyssey, to connecting to your home network. The easiest way to connect to the internet is just to plug in via Ethernet. But there are multiple ways of setting up Wi-Fi, including using an iOS device to feed network connection information directly to the receiver.

One small thing, but important in my view: the full menu system can be used properly without a picture on the TV (although there is a full OSD, of course). Got a problem that needs fixing in the picture? You can play with the menu. Want to change something when you're listening to music and don't want to

► Denon's receiver design uses discrete high-current amplifiers on all channels, with each rated at 95W into 8 ohms (two channels driven across the full audio bandwidth at inaudibly low levels of distortion). All the amps also support 4-ohm loads, albeit with a mode switch to ensure the output isn't overdriven.



switch on the TV? Same thing. That also works with the 'Option' button, which brings up a context sensitive menu of adjustments.

Audio

As I said at the outset, this receiver left me strangely satisfied, despite having so recently experienced Denon's high-end home theatre amplifier. I guess in part that was because I was using high-quality, but well-behaved loudspeakers. If you're going with truly exotic speakers you'd probably want more in the amplifier department.

But for all reasonable conditions, most people will love the performance of the Denon AVR-X2500H. The Dolby Atmos and Dolby Surround decoding was excellent, as was DTS:X. The two-ceiling-speaker version of overhead sound worked very nicely to add

to the encompassing feeling of movies. I also played quite a few LPs using this receiver and its phono input. By default the input level was a touch on the low side. This is not a problem so long as I remembered to reduce the level before playing something on another input. But taking a lesson from my time with the AVC-X8500H, I explored the menus and found the ability to adjust the relative level of the inputs by up to 12dB in either direction.

Video

One of the things you should do with this receiver is change the video settings, especially if you have a recent, high quality UltraHD TV. By default, the receiver is set up for "standard 4K 60p 4:2:0 8-bit video signals". But if you go into the "Video/4K Signal Format settings" and change it to "Enhanced", the receiver



HDMI inputs

The Denon offers a healthy eight HDMI inputs (including one on the front), and all are fully compatible for 4K UHD signals. There are two HDMI outputs.

Audio inputs

There's now a turntable input in addition to line level inputs. Both digital inputs are optical, without coaxial in.

Speaker options

The seven speaker outputs are labelled for surround but can be configured to deliver two ceiling channels for a 5.1.2 Atmos system. No expansion is possible.



“you can do things like play an LP using the phono input of this receiver, and have the sound go to any or several rooms, in your home...”

supports “high quality 4K 60p 4:4:4, 4:2:2 or 4K 60p 4:2:0 10-bit video signals”.

In the “Video/Output Settings”, I see that you can now choose a Video mode of “Bypass”, which eliminates all video processing. That means no OSD layered over the program video, but if you want the greatest purity, and the ability to change the volume without it being indicated on-screen, this is excellent.

The receiver can scale up all inputs to UHD output. And I have to say, it did a remarkably good job of it. When I put on my 576i/50 test clips, they looked way sharper on a 65-inch UHD TV than they should have, way more detailed. And both sharpness and increased detail was managed without much in the way of visible picture distortion. Furthermore, I used these clips because they are effective at disclosing weaknesses in progressive-scan conversion. They failed to disclose any weakness at all on that front.

How about 1080i/50, you ask? Well, on my usual torture tests there was just one slight slip at the most difficult point, where the film-sourced content was briefly treated

as video-sourced. And that was it. I’d say this receiver stands in the top decile for progressive scan conversion with 50 hertz content.

Network audio

As you’d expect, this receiver has strong network audio capabilities. Perhaps the most likely way people will use it will be with the HEOS app. As with all modern Denon network-capable gear, this receiver can become a player as part of a multi-room HEOS system, but it can be handily used with the app standalone. One rare capability of the HEOS system is piping inputs from one device to another. So if you do have other HEOS devices throughout your home, you can do things like play an LP using the phono input of this receiver, and have the sound go to any room, or several rooms, in your home.

Using the HEOS app, the receiver happily played my high resolution FLAC files (up to 24 bit, 192kHz sampling), and DSD in both regular and double speed versions. The sound was a delight. The unit also works as a DLNA renderer so I was able to send the same files using other apps. Oddly, while everything else worked fine I noticed that when I sent DSD to the receiver using my preferred BubbleUPnP app (on Android), the receiver reported it was receiving not DSD, but 16 bit, 192kHz PCM. Other DLNA player apps produced the same result. I went through the settings of the DLNA software on my NAS to see if I’d somehow switched on some kind of transcoding function, but all that was switched off. I do like to sort out these anomalies. In this case I couldn’t. I also tried a couple of different types of server software on the NAS, and a couple of different

apps, all with the same result. One upside: the HEOS app couldn’t play DSD256 tracks because the receiver doesn’t support that format. But somehow these also were turned into 16-bit 192kHz PCM when played with regular DLNA software. (Although people who purchase DSD256 music are unlikely to appreciate the conversion.)

Conclusion

The Denon AVR-X2500H is a first-class mid-priced AV receiver that will do just about everything that most users could want. The addition of a phono input has simply enhanced its versatility. — *Stephen Dawson*



SPECS

Denon AVR-X2500H

\$1599

Power: 7 x 95W (8 ohms, 20-20,000kHz, 0.08% THD, two channels driven)

Inputs: 8 x HDMI, 2 x component video, 2 x composite video, 4 x analogue stereo, 2 x optical digital, 0 x coaxial digital, 1 x USB, 1 x Ethernet, WiFi, Bluetooth, AM/FM antennas

Outputs: 2 x HDMI, 1 x component video, 1 x composite video, 1 x 0.1 pre-out (2 sockets), 7 pairs speaker binding posts, 1 x 6.5mm headphone

Zone: 1 x analogue stereo, assignable amplifiers

Other: 1 x set-up mic

Dimensions (whd): 434 x 167 x 341mm

Weight: 9.4kg

Warranty: Three years

Contact: QualiFi

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