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GREEK GOD OF SOUND

The ideal DAC for big digital libraries and even bigger wallets

Ideon Audio IΩN

Digital-to-Analogue Converter

- True esoteric performance in every way
- Versatile configurations

- No remote control or optical input

RRP **from $27,900**

Ideon Audio fits firmly into the Audio Esoterica camp. At $27,900, this IΩN DAC is far from the Greek company's flagship model. Indeed, the Athens-based brand notes that the IΩN benefits from "trickle-down technologies and R&D gained" from working on its top-of-the-range Epsilon DAC.

THE EQUIPMENT

After lugging the significant weight of the carton-ensconced DAC up the stairs, I was surprised at how compact the extracted unit was. While a little wider than a standard component at 46cm, it is only 8cm tall and 30cm deep. Even so, it weighs a very hefty 13kg. This is one sturdily built device.

One reason why the carton was so heavy was that underneath the cardboard, the DAC was packed within a nice sock within a sturdy metal travel case. Ideon Audio's Australian distributor, Absolute Hi End, confirmed this is standard packaging for the IΩN. No matter where you are, Ideon clearly wants your high-end DAC to arrive in perfect condition.

Four versions of this unit are available. This silver-finished review model ($25,900), simply the 'IΩN DAC', also comes with a black finish ($28,550). Then there is the 'IΩN & Pre-amp' variation in silver ($35,950) and black ($36,500) whose name speaks for its distinction: it has preamplification built-in. The rear panel of the DAC-only IΩN simply features cutouts for the balanced and unbalanced inputs and outputs offered by the DAC/preamp version.

The design is simplicity itself. The only controls are a rear-panel power switch and a front-panel dial that can be turned, pressed and hold-pressed to control

The thing about DACs at this level is not so much the chip employed but what's around it. And that's Ideon Audio's specialty

the unit. There is no remote control (the preamp version does come with one, however). The front panel also hosts a four-line screen displaying all the information that you need, such as the selected input and input format (PCM or DSD), the output level, the sampling frequency, and the digital output filter currently engaged.

The default output level is fairly hot: 8.8 volts RMS FS via the balanced outputs, and 4.4 volts via unbalanced. The Medium level is -3dB, while Low (which I mostly used so that the output was in line with my other gear) is -6dB. If you select Variable, the dial can act as an attenuator.

You get a choice of seven digital filters, none of which is (thankfully, in my opinion) a NOS one.

Joining the aforementioned outputs are three digital inputs: a USB Type-B for connecting computers or laptops, a coaxial (RCA), and one that can be configured as either a BNC socket for another digital audio input, or an AES/EBU-capable balanced XLR socket for a professional digital connection. There is no optical input.

Inside handling the core digital-to-analogue conversion is an eight-channel Hyperstream ESS 9028PRO DAC chip supported by Ideon Audio's own in-house-developed firmware. But the thing about DACs at this level is not so much the chip employed but what's around it. And that's Ideon Audio's specialty.

Such important design aspects are the sturdiness of the casing, the unique ultra-low-noise power supply that features additional noise-suppression technology, the 'triple distillation' noise-elimination system on the USB input, and the modular upgradability of the whole design, to give just some examples.

Eliminating noise on the USB input is vital. Over the years I have used several DACs that worked rather well… until they were plugged into a noisy PC via USB, at which point they allowed significant and sometimes clearly audible noise from the USB connection through to the analogue outputs. There was no danger of that happening here, and I wouldn't quibble in the slightest with Ideon Audio's A-weighted 122dB signal-to-noise ratio.

The IΩN supports PCM audio up to 24-bit/192kHz via the coaxial and AES/EBU inputs, and up to 32-bit/384kHz via the USB input, which can also play ball with 8x native DSD (DSD512).

I checked the non-USB inputs with signals from 16-bit/44.1kHz to 24-bit/192kHz and they worked perfectly.

COMPUTER USE

If you're connecting a Windows PC, you should install Ideon's custom DAC driver software and set your playback software to use its ASIO interface, or at least the WASAPI interface. That will allow it to deliver bit-perfect digital sound to the IΩN.

If, for some reason, you want to use the (default) Windows Direct Sound driver, you should change a setting. When I first checked the properties of the IΩN using the Manage Audio Device control applet on a Windows 11 notebook, it showed support for all PCM sampling rates from 44.1kHz to 384kHz, but only with 16 bits of resolution. That's easily fixed by tapping the little upward carat near the right end of the Windows taskbar to reveal hidden icons, and there you should see a red-coloured stylised 'T'. Click on that and the 'Ideon Audio USB Audio Device Control Panel' will open. Click on the 'Format' tab and ensure the drop-down list under 'Output' is set to '2 channel(s), 32 bits'. That will allow Direct Sound to use 16, 24 or 32 bits.

From a Windows computer, using JRiver Media Center 27, all my test tracks (bar two) were supported. They included DSD256 and DSD512 when delivered as direct DSD using ASIO (they don't work in DoP format) and 24-bit/384kHz PCM.

DSD64 and DSD126 (in DoP format), along with all those PCM formats, also worked fine using the WASAPI interface.

Neither 705.6kHz nor 768kHz PCM (via the ASIO driver) worked, producing horribly distorted sound, but that's not the end of the world as no such music tracks are available anyway.

When I switched over to a Mac — I must say, my Mac Mini looked very swish sat atop the IΩN! — things were excellent with PCM and terrible with DSD. Macs use 'Core Audio', and with them running JRiver Media Center 27 you can choose either Mac-managed Core Audio or an exclusive Core Audio connection to your external USB device. My initial efforts with DSD

THE DAC-only IΩN I tested simply has the preamp-facilitating sockets filled in

produced a horrible rattle sound.

My theory was inadequate bandwidth, so I experimented and it turned out that, as with Windows, MacOS recognised the IΩN as a 16-bit unit. As JRiver doesn't allow direct DSD on the Mac, it uses DoP (DSD over PCM), which places the raw DSD data in the bottom 16 bits of a 24-bit container and places DoP flags in the top 8 bits. I'm guessing that the DAC was consequently receiving only two thirds of the DSD stream, along with some random bits.

This is easily fixable: open up the Audio Midi Setup app in the MacOS launcher (its icon resembles a piano keyboard) and change the default format under 'IDEON USB Audio' to '2-ch 24-bit integer 44.1kHz'. The sampling frequency doesn't matter because it automatically changes. Both forms of DSD (via DoP) then played successfully — and audibly beautifully — through the IΩN.

There seems to be a setting in the USB connection that makes both Windows and MacOS think they should default to 16 bits with the IΩN. I wonder whether Ideon could change that for hassle-free use, if that is even possible. I tried three other DACs from different brands; none had this problem.

Finally, I should note that, unlike the Windows machine, the Mac didn't recognise the DAC's 32-bit capability. That probably doesn't matter; while 32 bits is often used in audio processing, I've never seen 32-bit music. That said, the Mac recognised the 32-bit capability in those other DACs I tried.

LISTENING SESSIONS

While I checked the unbalanced output performance, which sounded fine, I predominantly used the IΩN DAC's balanced outputs during testing. After all, if you're spending this much money on a DAC, presumably your preamplifier supports balanced inputs. I almost exclusively used the 'Fast Roll-Off Linear Phase' filter setting, too. (I know many listeners prefer the slow roll-off settings from ESS and similar DAC chips, but personally I like this one, which I have measured as by far the most accurate in reconstructing original signals.)

Such is its shrewd transparency, the IΩN even revealed little unexpected gems I was previously unaware of

As for partnering equipment, I mostly used McIntosh's C2800 tube preamplifier (which I also had a review sample of at the time) and MC312 power amplifier, driving Dynaudio Contour 20i loudspeakers. For sources, there was, of course, the Mac Mini and Windows 11 notebook (USB), plus a WiiM Pro streamer (coaxial). I had a slight dilemma testing the AES/EBU input since none of my sources sport those outputs, so I employed a workaround: I connected via optical a Cambridge Audio CXC CD transport to the RME ADI-2 Pro FS R Black Edition DAC/ADC, which was then used to convert the audio signal to AES/EBU before being fed to the IΩN.

I began by luxuriating in a collection of 24-bit/192kHz jazz recordings from the famous Blue Note label, mostly from the late 1950s to the mid-60s. A little informal

The DAC & preamp version offers RCA and XLR pre-outs (2) and inputs (4)

categorisation is in order here. In the early 60s, the recording quality for pop and rock music was almost uniformly poor by modern standards. For classical music, it was often pretty good, although not as transparent as it would become in later decades. Jazz music from that period, however, is typically stunning, largely because the ensembles tended to be small, the microphones were high in quality, and the mixing (the performances were usually 'live' in a studio) and post-production were minimal. Blue Note albums are fine examples of this.

Streaming *Melancholy Mood* from Horace Silver's Blowin' the Blues Away (1959), I was stuck first by the superb realism of Silver's piano, especially the carefully placed left hand with the multitude of overtones produced by each chord. The coherence was simply perfect, unable to be improved upon. Eugene Taylor's bass was further back and naturally shared much of the same frequency space as the piano's bassy notes, but that didn't impede it from coming through the mix as a distinct and whole instrument.

The title track of John Coltrane's Blue Train (1958) covers the broader range of jazz ensemble instruments, each of which was again magnificently conveyed and easily separated from the others. Such is its shrewd transparency, the IΩN even revealed little unexpected gems I was previously unaware of, such as the occasional overpressure on Lee Morgan's trumpet against the microphone, which adds a touch of intimacy to the virtuosity.

I noticed no significant difference between 16-bit/44.1kHz CDs via AES/EBU and CD-standard audio from a NAS device delivered via the WiiM streamer (coax).

In 1998, George Martin released the In My Life CD album, comprising mostly Beatles songs covered by his "friends and heroes". I tend to find Beatles covers underwhelming, but under Martin's management most of the tracks here are extremely good, particularly the second one, a lounge bar rendition of *A Hard Day's Night* sung by, surprisingly, an impressively professional Goldie Hawn. Again, nothing was hidden through the system — not even Hawn's intimate vocal presentation due to a slight microphone compression.

Onwards with the female vocals! The early EP by George (the Aussie indie group, not the Beatles producer) from 2000, Bastard Son/Holiday, is one of those independently produced CDs that appeared when reasonably priced, decent-quality recording technology first became available. It's created with a touching, unprocessed naivety and is all the better for it (the professionally produced follow-up album is, in my view, inferior). Through the IΩN DAC, this clean, unadorned (unadulterated?) performance was presented exactly as it is. Katie Noonan's pure vocals on *Holiday* soar over an exciting mix full of life and vigor, and listening to it was equally exciting, with everything present and placed as it should be.

Over to the USB input, I sat down with 2014 album Four Foot Shack by Les Claypool's Duo De Twang, with its stomp version of Primus' *Jerry Was a Race Car Driver* and an utterly undisco-like *Stayin' Alive* cover. Claypool, as usual, provides not only voice and bass underpinning but as often as not also the higher strings on his bass act in place of a rhythm guitar. Turned up loud, as it should be, all this was delivered with fine coherence and fitting dynamism. The soundstage basked in an excellent sense of space and air, both around the instruments and between them.

Finally, I listened to a rip of Tchaikovsky's Capriccio Italien from my NAS via the Mac. Telarc actually fibs on the box of the DVD Audio disc from which I ripped it, claiming that the stereo version is 24-bit/88.2kHz. While it is indeed 24 bits, the original DSD has been converted to 44.1kHz. That apart, the recording is unprocessed, as was Telarc's wont, and it positively shined through the IΩN DAC. The full orchestral sound was gorgeously layered, wide and deep yet precise in placement. The bass drum here is provided without filtering or compression (also Telarc's way), and at its climax the DAC turned it into full-blooded bass for the rest of the system to cope with as best it could.

In short, not one aspect of the Ideon Audio DAC's sonic performance could even in the slightest way be impeached, passing every test I threw its way with flying colours.

CONCLUSION

If you want cutting-edge digital-to-analogue conversion provided at the highest possible level, need no more than three source devices handled and are fortunate enough to be shopping at this kind of price level, you really ought to experience Ideon Audio's IΩN DAC before making any firm decisions. It may not be the Greek brand's top-tier model, but in no way does it fall short of delivering high-end audio bliss.

Stephen Dawson

SPECS & CONTACT

Design: ESS 9028PRO DAC
Inputs: USB Type-B, coaxial digital (RCA), coaxial digital (BNC), AES/EBU (XLR)
Outputs: unbalanced RCA, balanced XLR
Supported digital formats: PCM up to 32-bit/384kHz, DSD128 (DoP), DSD512 (native)
Total harmonic distortion (THD): -110dB (A-weighted 20Hz-20kHz)
Signal-to-noise ratio (SNR): >122dB (A-weighted 20Hz-20kHz)
Channel separation: >130dB
Dimensions (HWD): 8 x 45 x 30cm
Weight: 13kg
Warranty: Seven years

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