

Simaudio MOON 280D MiND 2

If it isn't broken, don't fix it... but Simaudio's MOON 280D outboard DAC is certainly enhanced by the addition of the updated MiND 2 streaming module and app
 Review: **Andrew Everard** Lab: **Paul Miller**

There are two ways to make a network music player. One is to take a streaming platform and integrate a DAC to provide analogue outputs, while the other is to start with a DAC and then build in the network playback capability. The two approaches have their strengths and weaknesses. Typically, the network player with DAC will be just what it says: a full-featured machine, usually complete with a display, but with limited connectivity for external digital sources. The DAC with streaming, meanwhile, will commonly have more digital ins, but sometimes less network audio capability.

Canadian company Simaudio has managed to tread the narrow path between these extremes with its £2950 MOON 280D MiND 2, which is available in black, silver, or silver with a black fascia. That tightrope act is made possible by the integration of its second-generation in-house MiND – Moon Intelligent Network Device – network audio platform. The 280D sits above the company's entry-level MiND 2 network player which sells for £2100 and offers only digital outputs. So the unit we have here is akin to the MiND 2 player with the addition of an £850 integrated DAC, as part of a range going all the way up to the company's £13,500 MOON 780D v2 [HFN Sep '20].

TAKE THE TABLET

The new MiND 2 platform is now common to all the company's streaming devices, bringing with it a range of additional functionality. It's now compatible with both Apple AirPlay 2 and Bluetooth with aptX, while Spotify Connect, Tidal Masters, Deezer Hi-Fi, HighResAudio and Qobuz Sublime+ have also been added – all of course subject to the user having the appropriate subscriptions. In addition, the

RIGHT: PSU board [near left] feeds separately regulated supplies for the Stream 810 Wi-Fi board [blue], the network adapter [brown, underneath] and main audio board with its ES9018K2 DAC [far right]

280D MiND 2 has onboard MQA decoding, is also Roon-ready, and can combine with other MOON devices around the home to offer synchronised multiroom playback.

If there's a downside to the 'DAC with streaming' approach, it's that while a conventional remote is supplied (see p69), it's not going to get you very far when it comes to using the 280D MiND 2 as anything other than a conventional 'dumb' DAC. The absence of a display means it's impossible to navigate the streaming capability, so the answer is an app, named MiND Controller [see boxout, p67].

For those who balk at the need to spend a few hundred pounds on a tablet to 'drive' the MOON DAC – which, by the way, is much more pleasurable an experience than via the largest of smartphone screens – the answer is twofold. First, you'll face the same obstacle with every network-capable product on the market, and second, if you really want to do it on the cheap, you can pick up an Android tablet

for well under £100 from that retailer named after a South American river.

FIDDLE FREE

The network input, available on both Wi-Fi and Ethernet, brings the total number of digital inputs to eight. There are two coaxial, two optical, an AES/EBU input, Bluetooth, and an asynchronous USB port, so a computer can be connected directly. Meanwhile, playback at up to 384kHz/32-bit, DXD and DSD256 is handled natively from the USB and network inputs.

A slight operational quirk on set-up is that the 280D MiND 2 will look for a wired network connection on initial start-up and, if none is found, default to Wi-Fi, for which the usual stub antenna is provided. That happened when I first plugged the unit in, and the only way to then force the wired connection was to power the unit off, then power it up again with the Ethernet plug inserted – that'll teach me to cut corners in my haste to get things singing!





That aside, there's not much to discover here. There's a centre standby button, and three to the left that handle input selection and Bluetooth pairing, with red LEDs alongside to indicate the source chosen, and eleven(!) LEDs to the right to indicate the incoming PCM/DSD sample rates. The latter information is also displayed, in greater detail, via the MiND Controller app.

All that makes the 280D MiND 2 refreshingly fiddle-free, right through to the analogue outputs – on both unbalanced RCAs and balanced XLRs – that are at fixed level. Furthermore, as PM notes in his Lab Report [p69], the company has picked its favoured digital filter setting for the ESS Sabre ES9018K2 DAC and offers no additional user adjustment. This gets my vote as I've wasted far too much reviewing time flicking between all kinds of digital settings on some rival devices.

ON POINT

That directness of set-up and use carries on through to the sound of the DAC, which is direct, to the point, free from any significant foibles, and entirely enjoyable.

'The celebrated bass motif is resonant, deep, yet tight'

Whether used as a conventional DAC or as a network source, the 280D MiND 2 is totally consistent in its presentation of the music, even though buying this device to use it purely as a DAC might seem somewhat perverse, so complete is the network integration here.

So yes, I tried it coupled to a MacBook Air, and indeed from the digital outputs of a couple of legacy source components I had to hand, but I was happiest using

this unit as it is intended – connected to my home network, and fed from my NAS-full of music, as well as various streaming services. And of course, it also saw service as a Roon end-point, where it could handle just about every

format in my music collection.

There's a precision about the sound here that's immensely rewarding, but the MOON 280D MiND 2 never sounds excessively 'technical', as can some extremely revealing digital components. With the crisp rhythms and dark tonal colours of The Soloists of Byzantine Music's *Misa Flamenca* set [Psalmus PSAL037; DSD128], the atmosphere is evoked in striking style,

ABOVE: The 280D MiND 2, available in black or silver/black two-tone finishes, can be operated using the three little buttons, the remote (p69) or the MiND 2 Controller app (boxout, below)

while the focus is always on the vocals and instruments, from solo voices in a reverberant church acoustic to the snap and speed of guitar. Its soundstaging is persuasive and well-focused, too.

STING AND SIZZLE

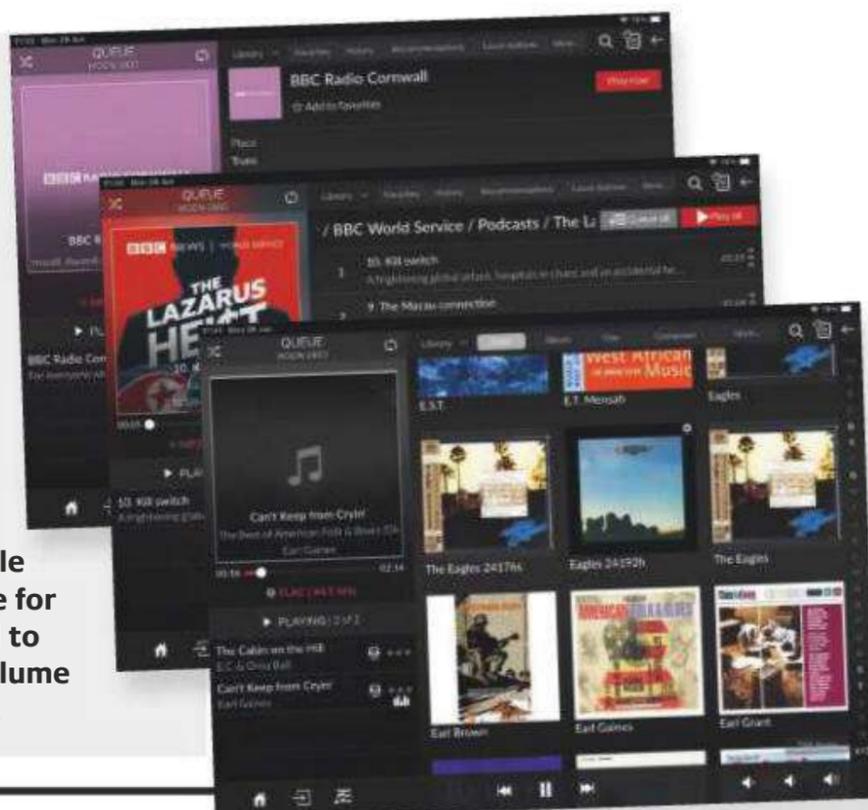
The 280D MiND 2 is also beautifully detailed and well-balanced with Roberta Flack's take on Carole King's 'Will You Love Me Tomorrow?', from the recent 50th anniversary remaster of her *Quiet Fire* album [Rhino Atlantic], with a really intimate view of her voice – as there is throughout the album – and an entirely natural drawing of the accompanying instruments. It's all rather tinglesome, as is the way it helps the system present an entirely 'in the room' perspective.

But this unit can slam, too, as is clear with The White Stripes' much-chanted 'Seven Nation Army', from *Elephant* [Third Man Records TMR200]. Here the celebrated bass motif is resonant, deep, yet tight, while Meg White's percussion has real

MIND CONTROL

MOON's MiND 2 app has been designed as an intrinsic part of its streaming platform – and it shows. Installed on an Android or iOS device – the latter seems just a bit more responsive – it finds the 280D MiND 2 as soon as it's connected to the home network, and then looks after the very small amount of set-up required. Mainly this involves signing in for any of the streaming services you want to use, selecting favourite Internet radio stations and then pointing the device at your local music stores. The 280D MiND 2's 'locked-down' digital design means you can just get on with listening to the music, selecting tracks or albums and adding them to your playlist.

Also available to Tidal users via the app is Tidal Mix, which uses algorithms to create playlists based on past listening preferences, while the various DAC inputs can be selected via the app, and multiple MOON network products combined in synchronised multiroom mode for 'whole house' audio. What's more, with the 280D MiND 2 connected to other MOON components via its 'SimLink', you can also adjust the volume and settings of the amplifier into which the streamer/DAC is playing.



NETWORK-ATTACHED DAC



ABOVE: Wired and wireless network inputs join another six digital inputs – USB-B, two coaxial and two optical S/PDIF, plus AES/EBU. Single-ended (RCA) and balanced outputs (XLR) are joined by RS232 control and 3.5mm ‘SimLink’ triggers

thump, sting and sizzle, the whole impression being of a fresh live performance despite the familiarity. And as for the cover of ‘I Just Don’t Know What To Do With Myself’, this is pleading, then angst-ridden, and then just majestic, the 280D MiND 2 giving it full breathless expression.

DEEP DIVE

What’s more, this streamer/DAC is able to bring this wide-open, yet entirely human-scale, insight to whatever one chooses to play. So Sonya Bach’s *Rachmaninov* recital [Rubicon RCD1058; 192kHz/24-bit] benefits not just from the speed and precision here, but the warmth and generosity of the sound, giving a presentation as gorgeous musically as it is rewarding in hi-fi terms.

Nor are these qualities limited to the playback of gentle, audiophile-quality recordings. With the bonkers bombast of *Origin Of Symmetry (XX Anniversary RemiXX)* by Muse [Warner 96kHz/24-bit download], the 280D MiND 2 allows the listener to get deep into the mix – and

boy, is there a lot of depth there! – while keeping the tracks pounding and driving. It’s all gloriously over the top, but still rather wonderful in its excess, and the streamer/DAC delivers it all.

Arguably its best aspect is the ability to bring out all that

LEFT: The slender but comprehensive-equipped MOON CRM-3 system remote caters for its amps, players and DACs. For the 280D it offers input select and mute



detail while using it to contribute to, rather than distract from, the musical experience. This is clear on the cover of ‘Human Nature’, made famous by Michael Jackson and recorded by Miles Davis live at the Vienne Jazz Festival very shortly before his death [*Merci Miles!*; Rhino R2 653962].

It starts jazz-lite, and then Davis starts to fly into ever-greater improvisations, as part of a cracking set including a smoky cover of Cyndi Lauper’s ‘Time After Time’ and tracks by Prince and Marcus Miller. OK, so it’s not Miles at the height of his powers but, in the hands of the 280D MiND 2, even this very late career recording is as thrilling as the crowd on the night in 1991 found it.

That combination of detail and generous warmth also serves well a large-scale orchestral recording, such the Iván Fischer/Budapest Festival Orchestra Brahms 3rd Symphony [Channel Classics CCS SA 43821; DXD]. Here the might of the orchestra is as impressive as the soundstage focus the 280D MiND 2 conjures up and the way one can listen in to the various sections, not to mention the drama of the great opening movement. ⏻

HI-FI NEWS VERDICT

A fine example of an integrated streaming platform, DAC and control app, the 280D MiND 2 is a stronger proposition thanks to expanded compatibility with streaming services, all accessed through the well-designed, easy to use MiND Control software. It may be something of a plain Jane among a field of rivals with large colour displays, touchscreens and the like, but it sounds excellent and is a delight to use.

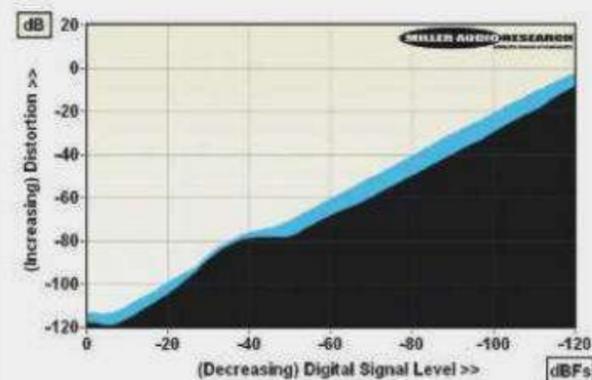
Sound Quality: 86%



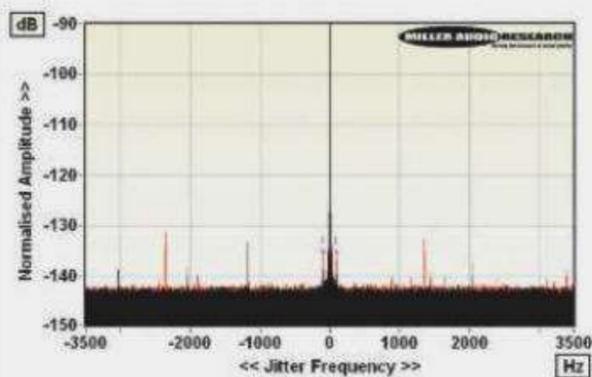
SIMAUDIO MOON 280D MIND 2

Now equipped with the MiND 2 streaming module, the 280D still employs the evergreen Sabre ES9018K2 DAC from ESS in preference to the newer 9028Q2 and 9038Q2 versions. And, credit where due, Simaudio extracts a very fine performance from this ‘low consumption’ DAC from the very low distortion that holds to just 0.0002% over the top 15dB of its dynamic range [see Graph 1, below] and wide 109.0dB A-wtd S/N from its standard 2.04V peak output (the single-ended RCA and balanced XLR outputs are identical). This DAC comes with three pre-installed digital filter options and Simaudio has elected to use the ‘default’ fast roll-off linear phase type which offers a fine 81dB stopband rejection with flat $-0.2\text{dB}/20\text{kHz}$, $-0.9\text{dB}/45\text{kHz}$ and $-2.4\text{dB}/90\text{kHz}$ frequency responses (48kHz, 96kHz and 192kHz, respectively) at the expense of moderately extended pre/post ripples in the time domain.

Simaudio has chosen to use slower/lower-order roll-off minimum phase filters in its costlier MOON DACs [*HFN* Sep ’20] although the use of ESS silicon is a constant, the latter bringing with it supreme levels of jitter suppression [see Graph 2, below] – the correlated residual remaining below 8psec with 48kHz, 96kHz and 192kHz/24-bit sample rates. Because of their proprietary ‘Hyperstream’ architecture, ESS DACs will also usually offer very fine low-level linearity and, once again, the 109dB S/N here is sufficient to resolve signals to within $\pm 0.3\text{dB}$ over a full 110dB dynamic range. Finally, Simaudio MOON’s op-amp based analogue output stage bests its rated 100ohm source impedance with a lower 70ohm measured here (balanced XLR) while the methodical analogue PCB layout confers a wide 125dB stereo separation. This is all very solid stuff. PM



ABOVE: Distortion vs. 48kHz/24-bit digital signal level over a 120dB dynamic range (1kHz, black; 20kHz, blue)



ABOVE: High res. jitter spectrum via S/PDIF and USB (black, 48kHz/24-bit; red, 96kHz/24-bit with markers)

HI-FI NEWS SPECIFICATIONS

Maximum output level / Impedance	2.04Vrms / 70ohm
A-wtd S/N ratio	109.0dB
Distortion (1kHz, 0dBFs/-30dBFs)	0.00010% / 0.0056%
Distortion & Noise (20kHz, 0dBFs/-30dBFs)	0.00015% / 0.0052%
Freq. resp. (20Hz-20kHz/45kHz/90kHz)	+0.0 to $-0.2\text{dB}/-0.9\text{dB}/-2.4\text{dB}$
Digital jitter (48kHz / 96kHz / 192kHz)	5psec / 7psec / 6psec
Resolution (re. -100dBFs / -110dBFs)	$\pm 0.2\text{dB}$ / $\pm 3\text{dB}$
Power consumption	5W (1W standby)
Dimensions (WHD) / Weight	169x34x131mm / 7.5kg