



Full moon

Do you need a DAC with headphone amplifier functionality? **Ed Selley** thinks Simaudio might just have the answer

Canadian company Simaudio is the latest brand to pitch into the DAC and headphone amp fray with its Moon NĒo 230HAD. This isn't its first foray into this category – the larger 430HA headphone amp can be equipped to function in this way but is substantially more costly. The 230HAD is smaller and simpler, but pitches in at a more practical price point. This becomes more appealing still when you realise that the simple casework hides a rather sophisticated piece of equipment.

The Moon is built around the increasingly popular ESS Sabre

chipset and as a result has the sort of file and sample rate handling that might be expected of a digital device today. The USB input will decode PCM at sample rates up to 32-bit/384kHz as well as DSD256. The USB connection is joined by two coaxial and one optical input that are all 24-bit/192kHz capable.

So far, so conventional, but the Moon deviates from the norm by adding an analogue input for its fourth input. This input is truly analogue, in that at no stage does the 230HAD perform any form of analogue-to-digital conversion on the signal. This includes the volume

▶ DETAILS

PRODUCT
Simaudio
Moon NĒo 230HAD

ORIGIN
Canada

TYPE
Headphone preamp
& USB DAC

WEIGHT
2.8kg

DIMENSIONS
(WxHxD)
178 x 76 x 280mm

FEATURES
● 32-bit/384kHz
USB input
● Inputs: 2x coaxial
and 1x optical
digital; 1x RCA
analogue
● Fixed and variable
RCA outputs

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control where Simaudio has opted for a conventional analogue volume pot rather than adjustment in the digital domain. The amplification used internally is also unusual. The 230HAD makes use of a transconductance stage in the circuit that generates an output current proportional to the input voltage. This can't be used for the entirety of the circuit, and it is unusual to find it being used at all.

This volume control can be used to adjust the level of headphones that are connected via the 6.35mm jack socket, but also alters the volume level of a pair of RCA sockets on the rear panel allowing it to act as a preamp. Alternatively, if you don't want the volume control in the circuit, a second pair of fixed RCA outputs is fitted for operation at line level. Line level in this instance is a rather beefy 4V, which may prove a little on the high side for some partnering amps and result in unwanted noise.

The half-width casework is a little on the sober side, but is well built and

logically laid out. The large volume control has a reasonable amount of fine adjustment, which makes the business of setting the correct level on headphones easy. Simaudio supplies a remote, which while rather unattractive gives useful control of the major functions and works well even at fairly tight angles.

There are front panel indicators for the input selected and the sample rate currently playing, but for reasons that aren't immediately obvious, this doesn't take the form of a conventional ascending scale. Instead there are indicators for DSD, 44.1 and 48kHz with additional x2 and x4 lights. As such, a 44.1kHz file will light the single indicator up whereas a 24-bit/96kHz file will light the 48kHz indicator and the x2 indicator at the same time. This does technically reduce the number of indicators needed, but the down side is that it isn't always immediately obvious what resolution a track is being played in at first glance.

Like many of its rivals, the Simaudio needs a dedicated USB driver to work with a Windows machine – Mac owners don't need to worry about such things. It also works flawlessly with the USB 3 output from a Melco N1A NAS drive (HFC 397), which acts as the main media source for the majority of testing alongside a Naim ND5 XS (HFC 352) used to test the coaxial and analogue inputs.

Sound quality

Kicking off with the Moon being used as a fixed-level DAC, a few aspects of the performance make themselves felt straightaway. It has a presentation that is utterly unforced. The 24/44.1 download of Carbon Based Lifeforms' *Hydroponic Garden* is a massive, brooding slab of electronica and it simply opens out as a vast and spacious soundfield in front of the listener. The performance drips with



The closest rival is Naim's DAC V1 (£1,350), which has been updated to include DSD support and uses an analogue volume control. The performance of both is excellent with the Naim showing a little more punch and willingness to groove, while the Moon has an effortlessness to its presentation that can make it a more forgiving partner with some lower-quality recorded material. The Naim has more digital inputs and no analogue ones, and there's also a matching power amp that can be used to form a compact setup. While the 230HAD doesn't have a matching power amp, it does have the MiND streaming front end to enable it to turn into a UPnP streamer.

detail and nuance, which is delivered without any sense of strain or indication that parts of the recording are being given undue prominence.

Neither is this the preserve of big thundering bits of dance music. The wonderfully intimate *Despite The Snow* by Emily Barker is laden with emotion, but the Moon doesn't do anything to overdo it. There's still the same impressive detail and space and Barker's vocals are rendered with magnificent texture and body, but it all comes together in a way that allows you to enjoy listening to the music rather than examining it like a piece of forensic evidence.

If you ask the 230HAD to pick up the pace and deliver something with a

The Moon offers an impressive amount of functionality and does all of it well

bit more attack to it like the 24/88.2 version of Kraftwerk's *Minimum Maximum* it responds well. There is the slightest sense that the flowing beats of *Tour de France Etape 1* are slightly more languid than they are with some of the competition, but it never feels slow or restrained. It also has truly superb bass extension with detail and definition that helps it sound consistently believable.

Given the impressive range of high-resolution formats supported, it isn't too much of a surprise to discover that it is impressive when fed high-quality files. What is even more pleasing is that the fundamental characteristics of the 230HAD don't change with standard CD rips. Ali Farka Toure's *Savane* is delivered with the same fluidity and effortlessness shown with hi-res material and even the less-than-stellar recording of Editors' *An End Has A Start* is delivered with refinement and scale.

Switching to headphones shows the Moon has considerable strengths in this area too. Simaudio stipulates that the 230HAD is designed with "reasonably sensitive" headphones in mind and its performance with the benign Beyerdynamic T70 (HFC 361) is impressive. That same sense of effortlessness and space that is apparent via the RCA inputs also makes its presence felt here. There is sufficient power on tap to drive the T70 to a decently loud level and even substituting it for the rather tougher Oppo PM-3 (HFC 410) doesn't affect things unduly.

As a preamp, it is also a confident performer. The fitting of an analogue volume control means it feels much more like a conventional – albeit compact – preamp than many rivals equipped with digital volume controls. It also does a fine job of retaining the characteristics of equipment connected via the analogue input. The Naim ND5 XS shows a darker, more forceful presentation via RCA than it does being decoded by the 230HAD via the coaxial connection. The other benefit of this functionality is that if you are intending to use it as a line-level device, but – as has been the case here – find the level on the fixed 4V output to be too high, you can use the variable output to wind it down a little.

Conclusion

DAC preamp units are becoming increasingly popular with plenty of models to choose from, but the 230HAD stands out from the pack. Within a fairly compact chassis, this is a device that manages to offer an impressive amount of functionality and most importantly does all of it well. It is no stretch of the imagination to see it being used as either a line-level DAC, preamp or headphone amp and delighting owners in any of these roles ●

CONNECTIONS



- 1 Optical digital input
- 2 Two coaxial digital inputs
- 3 32-bit/384kHz-capable USB input
- 4 Analogue fixed line-level output
- 5 Analogue variable line-level output

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Refined and effortless performance; good spec and build

VALUE FOR MONEY ★★★★★ **DISLIKE:** High line-level output; ugly remote control

BUILD QUALITY ★★★★★ **WE SAY:** A flexible and well thought out product that works well across a number of different roles

FEATURES ★★★★★

OVERALL

