

Finessed! Simaudio's MOON 390 Pre-Amplifier

by Phil Wright



Crowded House. Iconic 90s band, home to frontman Neil Finn and soundtrack to my daughter's recent wedding. It's also how some audiophiles live: boxes multiplying like Japanese Knotweed, floor space sacrificed in the pursuit of audio nirvana. Guilty as charged.

A single-box solution massages this issue. Think Naim Uniti Atom, GoldNote IS-1000, NAD M10 et al. And if one box means aesthetic harmony then two matching boxes come a close second. More complex, yes – we can option what goes into each box – but the £4,950 / \$5,300 / €5,950 MOON 390 from Canadian company Simaudio keeps it simple. Everything bar the power amplifier.

So the 390 includes streamer, DAC and pre-amp, MM/MC phono input and headphone output. It offers fixed and variable outputs (balanced on one of the variables). With matching MOON 330A power amp it's a neat two-fer, with active speakers we say hello again to one external box.

At the time of writing, the matching 330A power amplifier (£3,700) wasn't available for review. Instead, the twin 400M monoblock versions (£7,200) stepped in. OK – that's three boxes, but even better amplification should show us what the 390 is really capable of.



Multi-talented

It's certainly a flexible beast. With the MOON 390's phono input we can set gain, impedance, capacitance and EQ curve. There's also a ground terminal. That spells admirable attention to detail for an otherwise digital-centric device. A whopping ten digital inputs include 5 two-channel HDMI 2.0 (4k, HDCP 2.2) connections, one of which doubles as an output (ARC). There are also SPDIF, TOSLINK, AES/EBU, USB-A and USB-B connections. So hard drives and PCs are supported, the former accessible by Moon's MiND 2 app (more on that shortly). Two rear-mounted antennae give us wireless streaming. Wired comes via one of two Ethernet RJ-45 sockets that are internally bridged, meaning the MOON 390 can act as a LAN switch. So whilst one connection links to your router the second can connect a smart TV, NAS drive, or similar to the same network. Very neat – au revoir separate network switch and/or lots of cabling. The MOON 390 is Room Ready and MQA certified but Apple's Airplay is a no show. Reportedly due to Simaudio's concern over the potential for obsolescence. Apparently, Airplay 2 works very differently to the original, making upgrading difficult. There's also aptX Bluetooth via an internal antenna.



At the core of its internal D/A converter is ESS Labs' ESS9026Pro chip but with significant modifications applied by Simaudio to its voltage regulation and clocking. An FPGA also forms part of the receiving section of the DAC board and is used for all incoming digital signals, including network streams. As with other FPGA devices, it's potentially field-updatable for future improvements to sound quality or functionality. On sample rates, both the USB and network interfaces go to PCM 384kHz and DSD256, although wireless may struggle further up according to Simaudio. Bluetooth and TOSLINK are more limited as you'd expect – (lossy compressed) PCM 48kHz and 96kHz respectively. AES/EBU, S/PDIF & HDMI sit in the middle at PCM 192kHz, with HDMI handling DSD 64 as well. Don't get too hung up on rates though, the MOON 390 relishes plain old 16/44. Next to the front panel's three Internet radio presets (sooo handy) sits a ¼" headphone output whose amplifier stage is based on the MOON 230HAD, an upmarket DAC / headamp. Output power is 100mW into 600Ω, 800mW into 50Ω.

Overall the MOON 390's spec is well-considered and close to comprehensive.



Looks & build

Like most MOON kit, the 390 is available in black, silver or the two-tone finish that 70% of UK buyers opt for. The review units came in black, the trio exuding a slightly brooding menace.

At 429x89x333mm (WHD), the 390 is a full-width unit but looks sleek and doesn't draw undue attention to itself. Nor do the 400M amplifiers – essentially the same size – and all three units are reassuringly heavy. Simaudio says they shouldn't be stacked because of their reliance on top panel ventilation. A shame – in practice they seem to run quite cool.

Fit and finish are very good, as you would expect at this price level. So too the remote control that was frequently pressed into service at the listening position for volume and input changing duties – for me, it's still easier than pulling up a smartphone.

MiND 2 streaming platform

MOON's streaming platform, now in its second iteration, is a joint development where in-house expertise is supplemented third parties, notably Stream Unlimited who supply network cards and associated software to several high-end manufacturers. MiND 2 differs in that it's a bespoke development, using Stream Unlimited's expertise and some elements of their network card, but not the whole card.

The MOON MiND 2 Controller app is available for iOS and Android. Stuck record alert: Roon bests it, as it does all other music software. Roon's use of metadata is well ahead of the competition. MiND 2 is good though. dCS's Mosaic – also based on Stream Unlimited – looks a bit sharper and is a tad easier to navigate. It doesn't have the large thumbnails of MiND 2 though, which make scrolling through albums easier. So swings and roundabouts, overall an honourable draw.



MiND 2 handles input switching, volume control and management of music via Tune-In Radio, connected USB drives, remote UPnP servers or streaming services. Deezer, HighResAudio, Qobuz, and Tidal all present. On Amazon HD Music Simaudio says that:

"We are currently in discussions for developing the partnership with Amazon to integrate their Music HD Service within the MiND 2 ecosystem. It is looking well, however, we have no release date as of now."

Finally, MiND 2 does multi-room as well – zones can be grouped or run separately as desired. One feature allows streaming of inputs on the 390 to other zones. Including analogue ones – an ADC on the network card converts them to digital – so vinyl can join the party too. Neat. Listeners focused on streaming-only could easily use MiND 2 as their main player but most of my listening was done with the 390 playing Roon endpoint.



Review systems

I ran with a mixed strategy this time out: test the MOON 390 in my usual system, then stretch it with a better one.

System 1 is a Pro-ject Stream Box S2 Ultra / Mytek Liberty DAC / SBooster power supply (£1,800), with Ayre AX-7e amp (\$3,995) and Graham LS6 speakers (£2,300), with Tellurium Q Black II (£270) speaker cables.

System 2 comprises MOON 400M monoblock power amps (£7,200) with a Nordost Heimdall 2 XLR cable (£900) and Spendor Classic 1/2 speakers (£5,500). Speaker cables are the same TQ Black II.

The second system is familiar, courtesy of many hours spent on a forthcoming Spendor vs Spendor review. Similar in tone to System 1, the common denominator is thinwall 'BBC' loudspeaker. But this setup offers greater depth and body, and oodles more detail (of the non-etched variety).

The Pro-ject / Mytek combo and a dCS Network Bridge were plumbed into the MOON 390 in System 2 to isolate specific aspects of performance.

And for personal audio, Meze's 99 Classic headphones (£280) would exercise the MOON's ¼" headphone socket, a £400 Arcam rHead headphone amplifier playing counterpoint. Being a vinyl abstainer – I don't have the room – I wasn't able to test the 390's phono input.



Sound quality – System 1

Back to that Crowded House look. A bit of clutter doesn't take away from the homely feel of my abode of 12 years. I do get tidy urges though. Everything back in its place, things cleaned up, the textures and colours of the books easier to appreciate, the design touches more discernible, even the fire seems to burn more brightly. Nothing has fundamentally changed, it's just fresher.

Inserting the MOON 390 (via passthrough on the Ayre to bypass its pre-amp) has the same effect: it tidies things up. Compared to the Pro-ject, Mytek, & Ayre Pre-Amp the bottom end is better defined. A slight bloat that I hadn't previously noticed was removed. With that comes a lighter tonal balance but the MOON 390 sounds more convincing – palpability goes up half a notch, music comes across with greater density. A reduction in top-end glare is also apparent, particularly on simpler music.

Overall, the MOON 390 takes an already good sound and refines it further rather than re-shaping it. Not different, just better: subtlety and nuance are its strong suits.

I've heard this change in my system before – when the pre-amp was taken out of the circuit, as it is here. Is that the crux of it, is the MOON 390's pre-amp noticeably better than the Ayre's? Or are the improvements more down to the 390's streamer and DAC? Time to step up and find out.

Sound Quality – System 2

With the MOON 390 now driving the 400M monoblocks & Spondors, things sound right from the off – the 'do no harm' test is passed. Everything is bigger and fuller than the Ayre/Graham system but also nicely controlled, no weak links apparent. Think Anthony Joshua rather than Andy Ruiz (OK second time around).

The system obviously has size and power advantages but that doesn't always translate to a well-measured sound. Here it does, but how much of that is down to the MOON 390? Switching to the Project / Mytek / SBooster front end, connected via a balanced input to the MOON 390, proved interesting – clear differences emerged. We get a slightly less detailed but sweeter top end from the MOON 390's streamer & DAC compared to the Project / Mytek, which has a more explicit presentation with greater detail but is a little uncouth in places (more of a live feel – shades of Klipsch speakers there). The Project / Mytek is possibly too strident on stirring orchestral music from Telarc where rasping brass overreaches slightly. Conversely the same track – “Olympic Fanfare” by Erich Kunzel – shows the MOON 390's internal streamer & DAC to be marginally softer in the bass too, the Project / Mytek having the edge on control. There's no clear winner, personal tastes will drive our choice. Even my vote for the Project / Mytek overall is equivocal, the refinement of the MOON 390 alluring.



dCS Network Bridge

Plumbing the dCS Network Bridge streamer into the MOON 390's AES/EBU input reminds me how good the dCS is. It also shows how stonkingly good the MOON's own streamer can sound. The Kunzel track is resolved slightly better by the dCS and bass has a tad more definition, but the differences are small, we need to listen hard to hear 'em. That's a good result for the MOON given the dCS Network Bridge sells for £3,600 and the MOON 390 is £4,950.

Headphones

The rHead and MOON 390 play in the same league but with different styles through Meze 99 Classics. Detailed listening reveals the Arcam as riper, particularly lower down where the 99s can be a little (over?) enthusiastic. In Arcam hands, music is less detailed but has greater drive. In contrast, the MOON 390 trims any excess bass fat and digs up more detail. The sound is clearer, rendering individual instruments more discernible. It's also a little cooler, slightly matter of fact.

The MOON 390 gets my nod over the Arcam – that bass blip with the rHead / Meze combination niggles. Different 'phones or a touch of EQ and preferences might change though. Bottom line – the MOON headphone output is well designed, clearly not an afterthought or convenience feature.

Conclusions

Each aspect of the MOON 390 is a strong performer. Its streamer is top-notch and the DAC compares well. Meaning the improvements brought to System 1 were courtesy of the 390's pre-amplifier section.

Yes, it was interesting to play the Pro-ject/ Mytek combo through the MOON, to dabble with the dCS. For normal listening not once was I tempted to do this – the MOON 390 sounds really good as a whole, giving us considerable finesse and refinement. And no, that doesn't limit it to jazz or classical. The MOON 390 pulled more detail from Metallica's "Enter Sandman" whilst surrendering nothing on physicality.

Operationally speaking, the 390 is a delight, its intelligent design simplifying the considerable complexity. The functionality is also beautifully judged, the little touches like the flexible phono stage or the HDMI inputs almost as impressive as broad connectivity. And the lack of Airplay isn't unreasonable given the 390's expected lifespan – it has a 10-year warranty.

The Simaudio box performs well but it isn't flashy. It earns our respect over time rather than demanding it in the first few hours of use. Potential buyers should ensure an extended demo. A class act, the MOON 390 is really well sorted.