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ISSN 1465-5950
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Naim Supernait 3 integrated amplifier

by Jason Kennedy



You can chart the rise and fall of source popularity by looking at the variations in the three iterations of the Naim Supernait. The original version of Naim's largest integrated amplifier launched in 2007 with an onboard DAC. The inclusion of a DAC reflected the demand for enthusiasts at the time wanting to upgrade their CD players in what was effectively the second wave of DAC mania. The next iteration, 2013's Supernait 2, was a line-only affair, reflecting a more purist analogue approach where digital and analogue were considered best kept apart. For the Supernait's third coming this evergreen amp has sprouted a phono stage just in time for the second age of vinyl. At the press launch one wag pointed out that when Supernait 2 appeared without this facility, Naim said that including it would be problematic. The company claimed the sensitive nature of a phono stage would pick up hum from the transformer, and even that its inclusion could compromise the potential of the line inputs. Designer Steve Sells took this on the chin and said that now there was "a desire to do it", which probably means a commercial imperative. Naim has found ways around the problems by

careful placement of the phono stage, essentially putting it as far from the transformer as possible. Given that numerous other brands have achieved this without too much difficulty does suggest that it's not exactly rocket science.

The Supernait 3's phono stage supports moving magnet but not moving coil cartridges. Naim argues that a moving coil cartridge option introduces a plethora of loadings that are unwarranted given the demands of modern vinyl lovers. Those looking to combine the Supernait 3 with a moving coil cartridge have the option of using a Naim Stageline or Superline phono stage (for which a 24V output is available). You can, of course, use any other make of MC phono stage.

The MM phono stage has a standard 47k Ω impedance and 470pF of capacitive loading, again a typical figure which should work with virtually all moving magnets. Naim has chosen its own response curve for the RIAA LF EQ section, which is between the classic and IEC curves. The company described this curve as delivering "a good bass performance with enough very low frequency roll-off to protect the critical mid-band from rumble induced intermodulation." In the Supernait, the phono stage is mounted on a separate board ▶

“Only the eagle-eyed (with their gripping hands) will notice the difference in appearance between a Supernait 3 and its predecessors.”



- ▶ and uses through-hole capacitors with low microphony. This is because with 30dB of gain, a phono amp is considerably more sensitive to vibration than regular line inputs.

Only the eagle-eyed (with their gripping hands) will notice the difference in appearance between a Supernait 3 and its predecessors because the change is limited to that phono stage input. Elsewhere, the Supernait 3 has four line inputs that use both RCA phono and Naim's preferred DIN sockets. These include an AV input that can be set for unity gain, turning the integrated into a power amp for surround duties.

There have also been some significant changes to the power amplifier based on research in Naim's Salisbury HQ into our perception of different types of distortion. This research suggests we are more able to adjust for harmonic distortion than for timing errors: this has been Naim's *raison d'être* since the beginning, but it now has evidence to back up its claims. As a result, Naim's electronics design director Steve Sells and his team *increased* second-harmonic distortion in the Supernait 3's power amp stage, in order to create a circuit that is twice as fast as its predecessor. Specifically, the Supernait 3 removes the cascode stage used in the Supernait 2 (to protect the more delicate devices used in lower level signals) in favour of a single higher power transistor. This approach is not dissimilar to that used in the NAP DR power amplifiers and derives ultimately from the mighty Statement.

Naim continues to use Reed relay input switching with a 'shock absorber' capacitor and constant current supply for a smoother DC supply. It retains the Alps Blue Velvet motorised volume pot from the Supernait 2. As before, power transistors

are insulated with 4mm ceramic (rather than mica) for reduced capacitance, and the PCB is specially mounted to reduce microphony as much as possible for a fixed position design – the bigger Naim products have suspended PCBs. The input sockets are wired rather than fixed directly to the board and the Powerline Lite mains cable connects to a wobbly IEC inlet and has a degree of decoupling in the 13A plug. The large toroidal transformer (as used in the Supernait 2) is aligned for the lowest radiated field in the direction of the phono stage. There is also a large toroidal mains transformer (also as used in the Supernait 2) with excellent power delivery and fast recovery. The output rating remains the same at 80W per channel. You can upgrade the Supernait with a HiCap power supply for the preamp section, but those looking for 'more' usually end up buying a separate pre and power amp. Naim's well-known upgrade path is popular with Naim users because of its products impressive residual value. Headphone users will be interested to note that there is more current available from the Class A amplifier so it will drive more challenging cans.

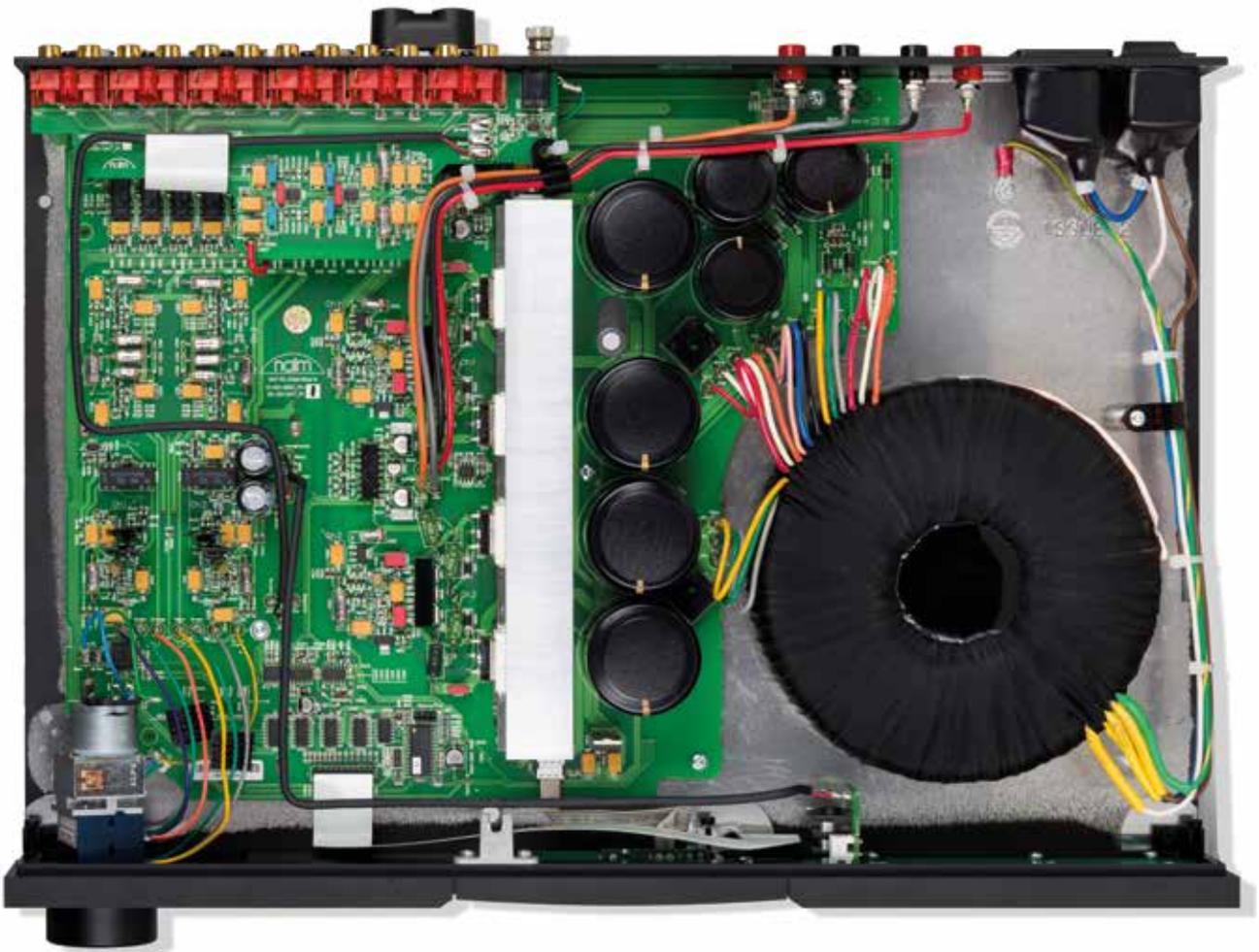
Before the Supernait 3 arrived at *chez* Kennedy, I heard it compared with its predecessor in the dem room of Audience in Bath. It was only a short session, and the speakers used were Focal Sopra No.1 stand-mounts with which I'm unfamiliar. The Sopras are, however, revealing enough to show that the Supernait 3 is considerably tauter and more potent than its predecessor. In particular, the new design has a stronger three-dimensionality of image, together with a more muscular bass. I recall that my first response when hearing the Statement amplifier at its CES, Las Vegas launch was "lummy, ▶

▶ a Naim with bass!”. This was a truth spoken in jest; Naim didn’t put much store in bass but preferred the speed and nimbleness of a relatively dry bottom end. With Statement, that ethos changed and subsequent DR upgrades to Naim’s power amps have imbued those models with bottom-end grunt. Now, the biggest integrated amp in the Naim catalogue has that grunt too. Fortunately, this doesn’t come at the expense of timing, as the Supernait 3 improves on the 2 in this crucial aspect of performance (that is especially crucial to Naim users).

This added heft was present as soon as the Supernait 3 was up and running in my system. My first notes contained words like ‘grunty’ and ‘solid’ when discussing drums and bass guitars. The amplifier provided a lot of drive for rhythm sections and an infectious groove from the speakers, which in the first instance were Bowers & Wilkins 802 D3. These proved a pricey but very revealing partner for this amp and

one that it seemed quite comfortable driving. The Supernait 3 is not the last word in transparency, but it gets to leading edges with gusto, and does indeed have a sense of speed that is in another league to its predecessor. The immediacy of a drum kit first made this obvious, but that sense of speed is a factor that becomes apparent in a lot of different pieces of music. It makes listening a far more engaging experience.

Naim amps have long had a tonal character in some ways the diametric opposite of valve amps, and Naim’s products do not tend to be very open or finessed, especially at higher frequencies. The new Supernait shares these traits partly because there is a slight emphasis on the lower mid which means the type of midrange detail that valve amps excel in is lower in the mix. This emphasis doesn’t become obvious frequently and makes the amp sound a little more relaxed at higher levels without masking too much in the way of detail. I was, however, constantly drawn to the bass lines ▶



“We know that Naim amps boogie: what is more surprising is that they do it so well in integrated amplifier form and deliver robust imaging.”



► it produced. Bass lines are where speed really counts; a lot of amps do quick mids and highs but far too few can do the same at low frequencies, yet how do you expect the system to boogie without it?

We know that Naim amps boogie: what is more surprising is that they do it so well in integrated amplifier form and deliver robust imaging – another anathema to the chrome bumper brigade. I discovered as much by playing Keith Jarrett’s Quartet release of *Eyes of the Heart* [ECM]. This track was spacious enough to paint a vivid picture of the live event and sufficiently rhythmically coherent to make the first sax solo enjoyable. It’s not generally my favourite part, but this amp

proves that if you get all your ducks to arrive at the speaker terminals simultaneously, even brass horns can sound great. When the piano came in the experience changed from entertaining to transfixing, and the next 10 minutes or so were genuinely thrilling.

The results above were achieved with a Naim NDX 2 streamer (albeit not connected with DIN cable), which is known to amp up the timing by a goodly amount on its own. To get a rounder picture I moved over to a Stack Link streamer and iFi Pro iDSD DAC which is more in line with the Supernait 3 price-wise. This iFi/Naim/B&W combo allowed more tonal colour to shine through and maintained a strong sense of pace in the ►

“Separation of detail is impressively strong with this combination of source, amp, and speakers.”

- ▶ context of broader imaging. However, timing wasn't as healthy but good enough to support the magnetic power of music with this amplifier. It was at this point that I finally noticed that only about a quarter of the volume control range could be used; this isn't a disaster, but it would be nice to have less gain. The remote volume is subtle enough to make this range usable, however, and low-level channel-tracking seems better than the previous Supernait.

Separation of detail is impressively strong with this combination of source, amp, and speakers. In this case, tracks display clear space in terms of depth, as well as width and solidity. This system is also very well focussed, which makes for a fully immersive experience that seems a lot more sophisticated than provided by the Supernait 2. This is especially obvious with live material like Frank Zappa's *Roxy by Proxy* [Zappa Records], where the band play individually as they're called out in the intro. Here you get an excellent sense of the placement of musicians on the stage and the atmosphere at the concert.

With PMC fact.8 speakers in place of the 802s the balance became more detailed with lots of presence and excellent rhythm, the bass is tighter yet also well extended. Once more, the timing reeled me in; Herbie Hancock's 'It Ain't Necessarily So' [*Gershwin's World*, Verve] swung with ease, delivering some fine piano playing in the process. I let the tape run (so to speak) and got into his earlier classic 'Chameleon' [*Headhunters*, CBS] where the synth is so juicy and the snap of the snare so immediate. Finally, Joni Mitchell's 'All I Want' [*Miles of Aisles*, Asylum], which inspired a sing-a-long that fortunately no one else had to endure. This system proved to be as compelling a pairing as the Bowers & Wilkins without the same level of detail, perhaps, but effortlessly as engaging.

I also put a Goldring 1042 moving magnet onto the Rega RP10 to get a feel for the phono stage. My immediate reaction is that you'd have to spend considerably more to get the same degree of musicality out of a digital source if it were possible at all. I don't often listen to MMs, but this one is a beauty; it doesn't have the treble extension of a good MC, but with this phono stage, it delivers an addictive groove that reveals precisely why vinyl is still the mass market format to beat.

TECHNICAL SPECIFICATIONS

Type: Solid-state, two-channel integrated amplifier with built-in phono stage, headphone amplifier and remote control

Analogue inputs: One MM phono input (via RCA jacks), four single-ended line-level inputs (via RCA jacks and DIN sockets), power amp in (DIN socket)

Digital inputs: none

Analogue outputs: line output (DIN socket), preamp output (DIN socket), bi-amp (DIN socket), sub (via RCA sockets), variable AV (DIN socket), stream (DIN socket), powered accessory socket 24V, speaker outputs (via 4mm sockets)

Supported sample rates: N/A

Input impedance: Not specified

Output impedance (preamp): Not specified

Headphone Loads: Not specified

Power Output: 80Wpc @ 8 Ohms, 130W @ 4 Ohms

Bandwidth: Not specified

Distortion: Not specified

Signal to Noise Ratio: Not specified

Dimensions (H×W×D): 87 × 432 × 314mm

Weight: 14kg

Price: £3,499

Manufacturer: Naim Audio

Tel: +44 (0) 1722 426 600

URL: naimaudio.com

I have to hand it to Steve Sells and the Naim engineering team. They have taken a design that was already quite refined and bettered it. The notion that speed is more important than harmonic distortion is right on the money. This research helps explain why so many amps that measure correctly leave you underwhelmed when it comes to reproducing music. However, in the context of the Supernait 3, quite simply it improves significantly on its forebears in every respect. Given the success of the Supernait that says a lot! +