

# Naim Nait XS 3

Naim's latest version of its classic Nait amplifier features not only improved overall performance, but also a built-in phono stage. Whatever will they think of next?

Review: **Andrew Everard** Lab: **Paul Miller**

While it could never hope to match the seemingly annual product replacement cycle of some mass-market brands – and nor, I suspect, would it care to – Naim still maintains a continuous programme of product development that goes on 'behind the scenes' of some of its more attention-grabbing launches. So while all the big news from Salisbury has concerned network-capable audio, as Naim rolls out its 'Future Platform' from the latest Uniti products to new ND-series network players [HFN Apr '19] and second-generation Mu-so models [see p89], in the background the company has been working on its core integrated amplifiers, the Nait series.

There have been Nait's in the Naim range for more than 35 years, the original 'Naim Audio Integrated Amplifier' being launched in 1983, before which the company made only pre/power amps. The latest arrivals are the £2199 Nait XS 3 we have here, and the more substantial Supernait 3, at £3499.

And just in case you think Naim isn't following a path of regular updates, the new amplifiers replace the Nait XS 2 [HFN Jun '14] and Supernait 2 [HFN Nov '13] along with the entry-level Nait 5si, which continues in the range. They, in turn, replaced the original Supernait [HFN Oct '07] and 5i [HFN Jun '06], and 2008's Nait XS. So it seems every five or six years the company reckons it has something new to bring to the integrated amplifier party.

## PICK-UP ARTIST

Though most of the action in Naim's mainstream separates range is in multibox amp systems, from the entry-level NAC 202 and NAP 200 in its Classic series, through the 500 range [HFN May '16] to the flagship Statement preamp and monoblock power amps [HFN Jun '15], it's clear that there's still a vital role for the integrated

**RIGHT:** Power transistors on ceramic insulators are bolted to a heatsink [centre], also screening off the large toroidal transformer and linear PSU [right]. MM phono stage [top left] and motorised ALPs volume [lower left] enhance its flexibility

amps in the lineup. Not everyone wants a rack full of boxes just to play music and the integrations offer a relatively affordable entry point into the Naim eco system.

So, what's new for the XS 3? Well, a cursory glance won't tell you much, for there's still the same simple front panel on the slimline casework, which stands just 7cm tall, a volume knob to the left, selector buttons to the right and a main power switch at the rear. There's been some renaming of the all-analogue inputs, including 'stream' for one of Naim's network players and another labelled 'phono'. So the XS 3, along with the Supernait 3, is one of the first Naim integrated amps for many years to have onboard phono provision.

The XS 3 has five line inputs, on a mix of RCA sockets and Naim's preferred DINs, while the front panel also has a mute

button and, beside it, a 6.3mm headphone socket, driven directly by 'hot-rodding' the preamp stage when a plug is inserted.

## STAR TURN

That MM phono input, while not the only extra here, is definitely the star turn [see PM's boxout, p47]. While Naim isn't making a direct link between this phono stage and the design of its standalone Stageline units, it's clear that experience underlies the thinking. Asked why there's no MC provision,

the company says it wanted to avoid complicating matters with a switchable phono stage, much as it makes separate MM and MC Stagelines. It answers the opinion that anyone spending £2199 on an amplifier, let alone £1300 more on a Supernait 3, will want to use a 'clearly superior' moving-coil cartridge by saying

*'It proves how tight a rhythm unit Sting and Copeland were'*



that, in its experience, there are some very fine upmarket moving-magnet designs out there, and it's not as clear-cut as MM good, MC better. It adds that if you really want to go for a moving-coil, you can always add on one of its Stagelines, for which the XS 3 has an input also capable of delivering 24V power for the phono stage.

## BOXING CLEVER

On which subject, the input provision isn't quite as simple as phono sockets paralleled with DINs. The MM phono is, of course, only on RCAs, with a separate ground post, while there's also one DIN-only 'aux' input. It's also worth noting that both the AV and stream sockets function as both inputs and outputs, and that the AV input can be switched into unity gain, bypassing the volume control, with a rear-panel switch.

Remove the familiar Naim link plug at the rear and you separate the preamp and power amp sections, for example allowing an additional power amplifier to be added, or the amp to be upgraded with an external power supply for the preamp stage. However, you might want to think long and hard before considering the addition of an external power supply to the XS 3, especially given that it'll cost you

in the region of £1000 or more, or almost half the price of the amplifier itself. Having done some brief comparative listening between the XS 3 with and without an offboard PSU, and Supernait 2 and 3 amplifiers, I'd suggest the money for a power supply for the XS 3 would be better spent on going for a Supernait 3 in the first place. After all, if you find yourself missing an extra black box, you can always upgrade the Supernait 3 later!

Finally, the XS 3 has a remote control input, allowing its input selection and volume to be controlled using the Naim app via one of the company's network players. Of course, a conventional NARCOM-5 remote handset is also supplied and there's a mini USB socket for future firmware upgrades, located below the amp's four 4mm speaker output sockets.

In other words, in these respects the XS 3 is just like the XS 2 it replaces, as are other elements of the internal layout, from the reed relay switching for inputs to the motorised ALPS Blue Velvet volume control, the ceramic isolators under the power amp transistors and the galvanically isolated microprocessor used for volume and input control. Naim claims that the XS 3 and the Supernait 3

**ABOVE:** In typical Naim style, the Nait XS 3 keeps things simple: large volume control to the left of the logo, and headphone socket, mute and input selection buttons to the right

are its 'best ever' Nait amplifiers, as one might hope. However, both the XS 2 and SN 2 were kingpins of the company's amplifier range, so some justification is required for replacing them, even though they've had a pretty good run.

## SHIVER-INDUCING

Fortunately the Nait XS 3 more than justifies its existence, and does so even if you're never even going to use that phono stage, strange though it may seem to overlook what is clearly one of the headline features of the new arrivals.

Yes, the XS 3's phono stage is very good indeed, as was shown throughout the time I spent with it and my Rega turntable trawling through my LP collection. There's a lovely warmth and richness to the sound from vinyl, allied to fine detail and a smooth, easygoing quality that makes it a delight to listen to. Playing The Police's *Regatta De Blanc* [A&M AMLH64792] showed the way the XS 3 can track even the fastest of beats while still

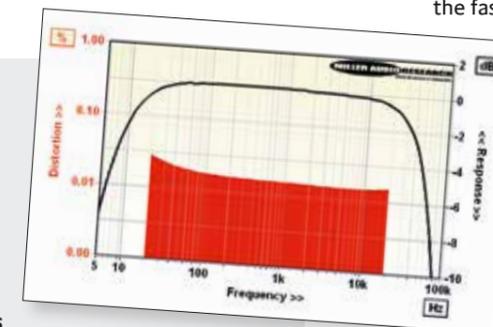
driving the music hard, and proves just how tight a rhythm unit Sting and Stewart Copeland were, at least until they decided to stop playing nicely and start fighting each other! The Nait XS 3 powers through the title track with real warmth and impact, while the guitar

of Andy Summers jangles through 'Walking On The Moon' against the deep bass figures and syncopated drumming. Eee, but it takes y'back...

That ability to create a rich, solid sound while still displaying huge amounts of detail is just as much in evidence with a much more recent LP release, The Dunedin

## REVIVING VINYL

Naim's part-passive/part-active RIAA network has been sensibly judged to offer compatibility with as wide a range of MMs as possible. It offers a +56.8dB gain (an input sensitivity of 1.45mV for 1V preamp output) allied to an input overload of 60mV, or a healthy +24.2dB headroom for an MM offering a 5mV/5cm/sec output. In practice then, this stage has the ideal gain to accommodate high output MCs and enough headroom to avoid clipping with today's beefiest MMs. The 47kohm/100pF loading is also generic while the stage's LF (rumble/warp) roll-off is slightly less aggressive than the IEC amended curve at -0.6dB/20Hz and -6dB/5Hz [black trace, inset Graph]. Capacitor coupling causes the preamp output impedance to increase from 99ohm/1kHz to 321ohm/20Hz. Distortion is only fractionally higher at LF, from 0.015% (300Hz-20kHz) to 0.03%/20Hz – a commendably flat trend [red infill, inset Graph] that's comfortably superior to any likely partnering pick-up. Finally, noise is low, and the 75dB A-wtd S/N ratio commensurate with the very best turntables. PM



## INTEGRATED AMPLIFIER



**ABOVE:** Crowded back panel includes USB upgrade socket, one set of 4mm speaker outputs and a preamp-out/power amp-in link. There's also a PSU upgrade input, variable line out, AV bypass, five line inputs (RCAs/DINs) and MM phono input (RCA)

Consort's 2013 recording of Mozart's *Requiem* [Linn CKH549]. Here the simple purity of the violin and the choir on the 'Lacrymosa' is totally shiver-inducing with the XS 3 driving my Neat Iota Xplorer speakers [HFN Jul '18], and helping them deliver their characteristic 'hanging in space' sound, plus a powerful sense of the surrounding acoustic and the way the building scale of the orchestra fills it.

### TURN OF SPEED

Mind you, the Nait XS 3 is no one-trick pony. As I said, the phono stage is the eye-catcher, but that sonic balance is maintained across the line inputs too, and slotting it into my system in place of the Naim Supernait 2/HiCap DR I've been using off and on for quite a while now, was less of a hardship than I was expecting – or is that dreading? True, the XS 3 doesn't quite have the resolution and swagger even of the Supernait 2 alone, let alone when HiCapped, but this is a decidedly fast and punchy little amplifier by any standards. It certainly has a useful extra turn of speed over the XS 2, as was confirmed by a recent brief back-to-back listen, despite

also offering a richer, more solid delivery of lower frequencies.

Playing Mista Savona's 2017 album *Havana Meets Kingston* [Baco Records BR-CD/17026], which opens in pure Cuban style with the 'Chan Chan' then gradually infuses the music with increasingly obvious Jamaican



**LEFT:** The NARCOM-5 remote caters for volume, balance, mute, input selection and display dimming here

reggae beats, the Nait XS 3's low-down power and clean, controlled midband and top end were just the thing, crunching out the rhythm section of 'Vibracion Positiva' with an impressive mix of big weight and good-time snap.

This is a wonderfully atmospheric album, and that's just how the Nait XS 3 delivered it, even though the deep, deep bass of which the Supernait line is capable was more hinted at than slammed home with firm determination.

What the Nait XS 3 does so well is clarity, that usual foot-tapping Naim thing with an insight that draws you into whatever's being played. And that was the case within about a minute of playing the latest blossoming of Neil Hannon's acerbic view of modern life.

The Divine Comedy's *Office Politics* [Divine Comedy Records Ltd DCRL112CDX] opens with the jaunty rhythms of 'Queuejumper', the words to the song taking down those drivers of German cars who really do own the road, before the album takes a swerve into deeper satire. Here the Naim Nait XS 3 manages to deliver Hannon's catchy ability with a tune while – vitally – ensuring the cutting lyrics are kept smile-inducingly clear. ☺

### HI-FI NEWS VERDICT

While the most obvious attribute of the Nait XS 3 is its inclusion of a phono stage, and a rather good one at that, there's rather more to this amplifier. Naim has also given the power amp a tidy up, delivering better speed and clarity, and thus improving the ease with which music is communicated. It's not a radical change from the old XS 2, but it's a worthwhile gain and adds greatly to the amplifier's appeal.

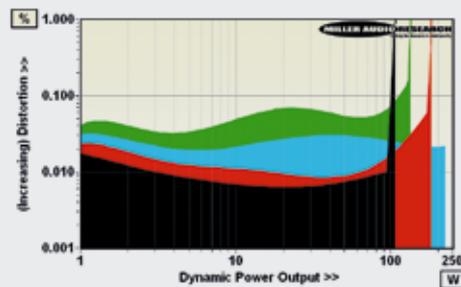
Sound Quality: 83%



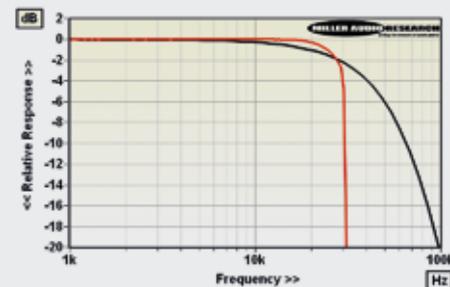
### NAIM NAIT XS 3

Since I last tested Naim's evergreen Nait – the XS 2 in *HFN* Jun '14 – the most fundamental update must surely be the inclusion of a very capable MM phono stage [see boxout, p47]. Retaining the ALPS volume control, reed relays and ceramic insulators for the power transistors, there seems very little change in the technical 'fingerprint' of the Nait. For example, the 2x83W/8ohm and 2x128W/4ohm power output of the XS 2 is mirrored in the 2x85W/8ohm and 2x130W/4ohm measured for the XS 3. Naim has tweaked the Nait's output protection, however, for while the XS 2 delivered 105W, 178W, 275W and 130W under dynamic conditions into 8, 4, 2 and 1ohm, the XS 3 offers an identical 86W/182W into 8/4ohm but mutes with any output above 130W/70W (8.4A) into 2/1ohm loads [see Graph 1, below]. Distortion remains fairly consistent at 0.004-0.009% through the midrange over the rated 1-70W, increasing to 0.035% at 20kHz.

Also unchanged, the overall gain is a little higher than average – higher than necessary to accommodate modern digital sources – at +44.5dB while the A-wtd S/N ratio is just slightly below average at 76dB (re. 0dBW), though it'll never be identified as conspicuously 'noisy'. As with other Naim amps, the output impedance is held high by series resistance to 0.24ohm and the response marginally rolled-off at -1dB/20kHz, continuing to fall away to -21dB/100kHz. While fans of high-rate DSD and 192kHz+ LPCM might balk at this ostensibly curtailed response, in practice it is no bad thing. Moreover, in a one-brand system, the response will be determined by the 28kHz limit of Naim's DACs and streamers [see red trace, Graph 2, and *HFN* May '15, Nov '17, Sep '18, Jan '19 and Apr '19]. PM



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 8.4A



**ABOVE:** Extended high frequency response at 10W/8ohm [black] vs. typical resp. of Naim's DACs [red]

### HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	85W / 130W
Dynamic power (<1% THD, 8/4/2/1ohm)	106W / 182W / 130W / 70W
Output imp. (20Hz-20kHz/100kHz)	0.231-0.245ohm / 0.265ohm
Freq. resp. (20Hz-20kHz/100kHz)	-0.09dB to -1.0dB / -20.8dB
Input sensitivity (for 0dBW/70W)	17mV / 143mV
A-wtd S/N ratio (re. 0dBW/70W)	76dB / 94.5dB
Distortion (20Hz-20kHz, 10W/8ohm)	0.0037-0.035%
Power consumption (Idle/Rated o/p)	10W / 235W
Dimensions (WHD) / Weight	432x70x314 mm / 8.5kg