

Naim ND 555 and PS 555 DR Combination

by Stephen Priest

Thirteen grand and then I have to spend a chunk more just to get it to light up?' The customer was still on the 'wide-eyed disbelief' side of incandescence, but it looked like he wouldn't take too much of a push to get there. Well, fortunately for him the Naim ND 555 network music player appears on the company price-list in two versions: it's now £13,500 without the 555 PS you need to power it (there's no onboard power supply) or a cool £20,999 for the 'Plug'n'Play' version complete with the second box. I know: "Twenty grand? to play Spotify...??"

There's nothing new about this separate power supply arrangement, at least in Naim-world: the company's NAP 300 and NAP 500 power amps both come with offboard supplies, while anyone exploring the upper reaches of the Salisbury preamp offering will discover extra boxes are required. And of course, the same thing applied to the old CD 555 CD player, of blessed memory.

However, for our jaw-dropped customer, there are further shocks in store: like the NDS it replaced, the ND 555 offers the intriguing possibility of adding a second 555 PS if so desired. In that configuration, one power supply delivers juice to the digital section, the other to the analogue circuitry. In the process, your £20,999 network player becomes a digital front-end with a price-tag just a couple of quid short of £28,000.

So, with wisps of smoke curling up from recently-vacated boots the only remaining sign of that irate customer, what does this three-box 'streamer', the flagship digital product from the Naim factory, bring to the party?

Well yes, it does have a party mode, enabling it to be used with multiple Naim ND-, Uniti or Mu-so units to fill your home with music, but that might just be missing the point of this behemoth of digital audio, reducing it to just something to play streaming music. After all, if that's all you want – a spot of Spotify or a stream of Tidal – there's no shortage of ways of making that happen, and for a lot less outlay. However, look at the ND 555 as Naim's best-ever digital source component – yes, including all those illustrious CD players that went before

it – and it begins to make a bit more sense; live with it for a while, and it becomes entirely addictive.

If you're still harbouring any illusions that this is 'just computer audio', and thus plays second fiddle to physical media, the ND 555 is likely to dispel them. This is a no-compromise player able to outperform just about any other player on the market (and yes, here I include those that spin big black discs as well as those used with 12cm silver ones). Not only that, but it's also amazingly flexible, being able to stream a sports commentary from Internet radio one moment, and a high-res DSD128 file the next, and all at a tap or two on the highly-developed Naim app running on your phone or tablet.

The Naim NDS was already a phenomenal network player and indeed remains so, given that you can now pick up a 'pre-loved' one and an XPS power supply for around the £5000 mark with a bit of 'eyes wide open' eBay shopping. However, when the ND 555 was announced in the Spring of 2018, it moved things along significantly, both in terms of flexibility and performance.

For a start, it gained the Naim 'New Platform' at its core: a combination of hardware and software first used in the current Uniti line-up, and answering all the criticisms that time had overtaken the original Naim network offering. Yes, some work had been done along the line to expand the file format capability, but this was after all a design dating back to the first NaimUniti, launched in 2009. With the new platform, the network Naims not only gained the ability to play files up to 384kHz/32bit and DSD128, but also support for a wider range of streaming services, and futureproofing in the form of Google Cast capability, allowing a much wider range of apps to play to them. Roon-ready status appeared too, opening up yet another way of accessing the players. At the same time, the players' Wi-Fi was also improved, not least thanks to the adoption of the company's StreamCatcher buffer, able to hold a whole track, for more stable wireless streaming of high-resolution files (although wired networking was still the connection of choice). The NDX 2 and ND 555 also gained the large full-colour display seen on the



second-generation Uniti models, replacing the green-on-black (and somewhat failure-prone) read-outs of the originals.

However, on top of all that came a significant rethink/rework of the digital and audio sections of the players, and nowhere so extensive as in the ND 555. Carried over from the NDS was the ‘floating circuit board’ design, in which whole sections of the player are carried on heavy metal plates suspended on springs, for vibration isolation, and requiring transit screws to be removed (very carefully) during installation. Here it’s in an improved form, with two precision-machined brass plates – each weighing 2.6Kg – tuned using Hooke’s Law for immunity to all vibration above 10Hz.

The streaming board was all-new, Naim’s six-layer NP800 streaming section being co-designed by, and exclusive to the company. It’s controlled by the player’s ClockMaster circuitry, which is located near the DACs when in UPnP (network playback) or streaming mode, to reduce jitter. In addition, the streaming board is mounted in its own Faraday Cage, physically isolated from the rest of the player, while the DACs themselves – selected Burr Brown PCM1704U-K resistor-ladder designs chosen purely for their sound – each sit in their own miniature Faraday Cages.

Advice says we bypass the DACs internal digital filter and use the SHARC. This is accurate for most Naim players (e.g. NDX2 with the PCM1792A DAC). However the PCM1704 is a pure mono R2R DAC with no built in digital filter. Burr Brown say use it with their external digital filter chip the DF1704. They obviously do not use the DF1704 and use we the SHARC with their own integer oversampling algorithm converting to either 705.6kHz or 768kHz (depending upon incoming sample rate).

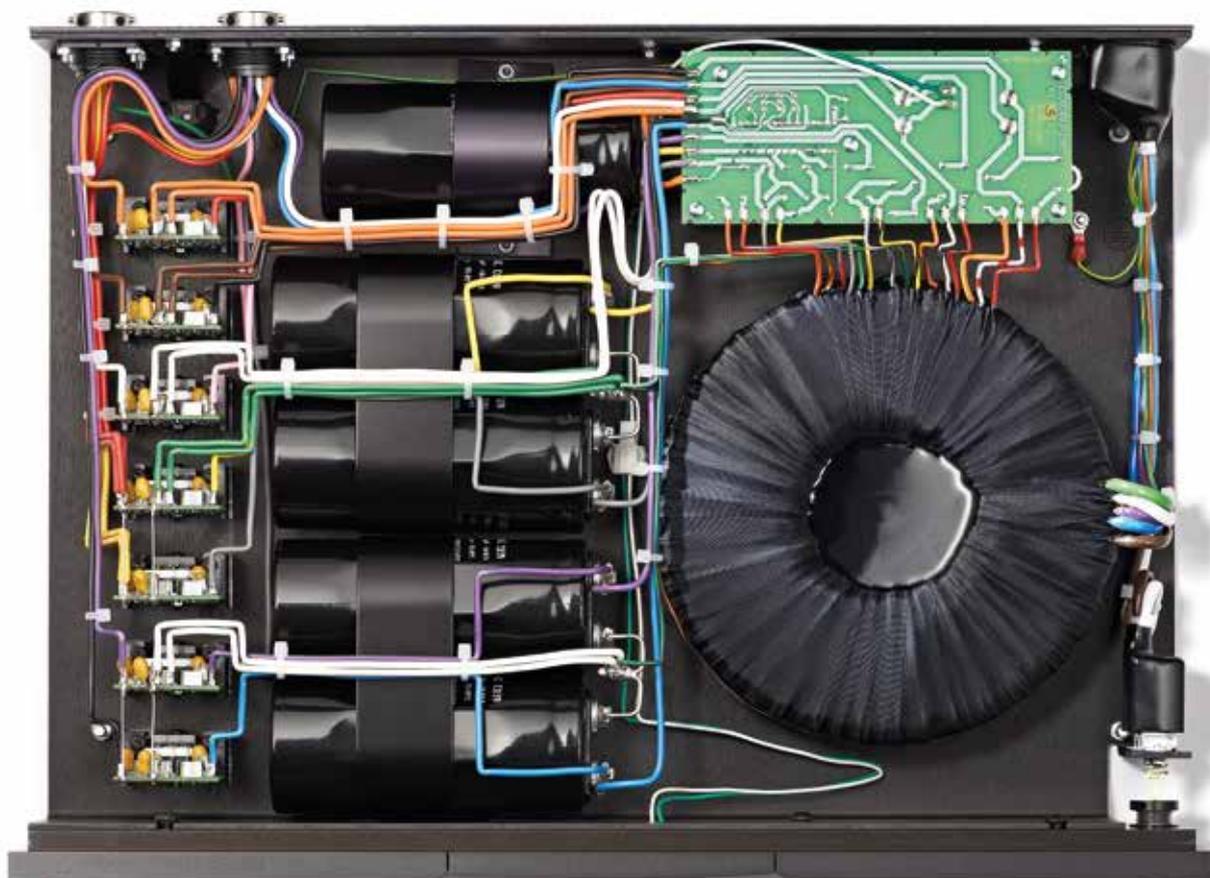
It’s all about accuracy and resistance to interference: the digital signal flows from the inputs to the DACs using I2S, with its separate clock signal, over Low Voltage Differential Signalling, used for its high accuracy and very low radiated field, while a 40-bit SHARC DSP processor is used for jitter-busting (or actually jitter-removing) buffering, and oversampling. When it comes to digital filtering, instead of using Burr Brown’s DF1704 filter chip – the obvious partner for the pure mono R2R DAC design, which has no built-in digital filter – Naim uses the SHARC along with its own integer oversampling algorithm converting to either 705.6kHz or 768kHz (depending upon incoming sample rate).

All this is about as far as you can get from the ‘off the shelf’ streaming solutions found in lesser players. In addition, the ND 555 uses 13 of Naim’s Discrete Regulators – as seen in many of its other ‘DR’-suffixed products – to noiseless clean DC power. Separate regulators are used for the DACs, the clocks and the output stages, and the sections of the player are physically separated right back to the two large multipin Burndy power supply sockets on the rear panel.

And that’s where the idea of the twin power supplies comes in. As standard, with a single 555 PS connected to both Burndy sockets, the 555 PS receives several separate 22V supplies for the analogue section and a mixture of 15V, 12V and 10V supplies for the digital circuitry. Switching over to two 555 PS supplies effectively separates the two sections of the ND 555 all the way back to the mains plugs, and means one is only supplying the analogue section, and the other, the digital.

Given that, when using a single 555 PS, the only ‘point of contact’ between the two sections would be in the transformer ►

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▶ of the power supply, doubling up may seem overkill. However, when discussing the clearly audible effect of using two power supplies with the NDS, the suggestion was that as well as increasing this separation, the strategy reduces the load on each power supply, which might have the effect of bringing about a noise reduction.

But there’s a difference with the ND 555’s design. The impression gleaned at the time of the launch of the new network players back in March 2018 was that the extensive use of the DR technology in the ND 555 might mean the dual power supply strategy would have less of an effect than it did with the NDS. Not that the company wouldn’t suggest trying it, of course – business, after all, is business...

Having run an ND 555 almost since the first review samples escaped into the wild over two years back, I was

pretty sure of a couple of things: one was that both the player and its power supply were more than adequately run in, both having been used daily and kept powered up 24/7, and the 555 PS having been ‘inherited’ from my old NDS. The other? Well, through a variety of amplification and speakers to have passed through my hands during their tenure, there was never any sense of wanting more, of anything being missing – not only is the Naim a superb front-end for reviewing, but it’s also a delight to listen to in ‘off duty’ periods, which to me is a pretty good indicator of the worth of a product: the appeal is visceral, not merely academic.

Having added the second 555 PS to this tried and tested set-up, I’m not at all sure why there was any suggestion that doing so wouldn’t bring distinct benefits: compared with the player with a single supply – and most obvious when ▶

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- ▶ switching back – was an effect not at all removed from that of switching to a more powerful amp and better speakers, such as the added resolution of detail, the extended and more tightly controlled bass, and the sheer dynamic impact.

That this was true via relatively modest amplification – for ‘operational reasons’ not entirely disconnected with other reviewing commitments, I used my Naim Supernait3/HiCap DR combination as much as I did my NAC52/52PS/NAP250’ olive set-up – was even more striking. Not only did this show that the idea of ‘source first’ is alive and well, but it also demonstrated just how well-sorted an integrated amp the SN3 is. Yes, a totally ‘mullet’ system, but with such musical rewards!

In truth, I didn’t find a single album (or indeed track) that sounded better without the extra power supply in place; the weight of the Roger Waters live recordings on Us + Them [Columbia/Legacy] went from impressive to jaw-dropping, with even greater insight into the instruments being played backed up with a great big, tight bass. At the same time, at the other end of the scale, the gentle trio jazz of the new Espen Eriksen Trio set, End of Summer [Rune Grammofon] gained immensely from the tighter focus brought about by the twin-powered Naim.

Not only was every move of drummer Andreas Bye clearly delineated, from the subtlest swish of brush on skin to the punch of his bass drum, but also the resonance of Lars Tormod Jensen’s bass sang out through the mix. But the most astonishing revelation was Eriksen’s piano, which sounded not just like a recording of the instrument but actually as though it was sitting in the space before me, taking me all the way back to the experience of hearing the trio from a front-row seat in a small jazz club. Well, actually in the upstairs room of a well-heeled Surrey golf club, but you get the idea.

The lazy, sleazy groove of the Stones’ Goat’s Head Soup, in its latest remastered DSD64 form [Polydor Japan], sounds magnificently louche with the twin-powered ND 555 delivering the tune, with all the lush layers of guitars, strings and more revealed: the ND 555 with single PSU almost gets there, but this is the full-on effect. Meanwhile, Bach’s anything but ‘Little’ Prelude and Fugue in D major, played by Ulrich Böhme on Rondeau, shows just how well the supercharged

TECHNICAL SPECIFICATIONS

Type: Digital Streamer

Frequency Response: -0.025dB @20Hz; -0.07dB @20kHz

Streaming File Formats: WAV – up to 32bits/384kHz

FLAC and AIFF – up to 24bit/384kHz

ALAC (Apple Lossless) – up to 24bit/384kHz

MP3 – up to 48kHz, 320kbit (16 bit)

AAC – up to 48kHz, 320kbit (16 bit)

OGG and WMA – up to 48kHz (16 bit)

DSD – 64 and 128Fs

M4A – up to 48kHz, 320kbit (16 bit)

Audio Inputs: 2x TOSLink (up to 24bit/96kHz), 1x coax

RCA (up to 24bit/192kHz, DoP 64Fs), 1x coax BNC

(up to 24bit/192kHz, DoP 64Fs), AirPlay, Chromecast

built-in, Internet Radio, RoonReady, Spotify Connect

UPnPTDM(hi-res), TIDAL, Qobuz (hi-res); UPnP Server

Audio Outputs: 1x 5-pin DIN, 1x RCA (switchable)

Dimensions (WxDxH): 432 × 314 × 87mm

Weight: 12.25kg

Price (as reviewed): £27,998

Manufacturer: Naim Audio Ltd

URL: naimaudio.com

Tel: +44(0)1722 426600

network player can bring out not only the sheer air-shifting power of those lower manuals but also deliver the way the sound interacts with the space in which it’s being played. JSB certainly knew how to write a bass-line!

Whether with music such as this or John Williams’ playful march from 1941, which builds from hushed woodwind to the entire marching band thing complete with thundering drums in the hands of the Dallas Wind Symphony under Jerry Junkin in a glorious concert-hall acoustic [on Reference Recordings], the effect is always the same. As the last note decays into digital silence, the only possible reaction is a release of the breath you didn’t realise you’d been holding, closely followed by a another scurry of swipe and click to find something else to play.

Given the advance the ND 555 represented over the NDS, I wasn’t expecting too much of the ‘twin power’ strategy on the newer player, but Naim has done it again. Just when I thought I was enjoying things as much as I could, it’s sidled up, branded hoodie tightly in place against the Autumnal chill, and hissed ‘Now, do you want to try the really good stuff...?’ +