

Naimstream champion

Exclusive! Can Naim's new high-performance streamer improve on the standard of its own CD players? **Malcolm Stewart** gives the answer...

The number of digital streaming devices available to the hi-fi enthusiast continues to grow on an almost daily basis. Each player seems to have a distinct musical character and its own particular selection of features.

Take the new Naim NDX, for example. This truly versatile machine provides network music replay, internet radio, digital iPod/iPhone

connectivity and USB playback straight out of the box. Its integral DAC is available to external sources – CD players, set-top boxes and the like – through three S/PDIF inputs. There is also an optional module for any buyer who wants to include FM/DAB radio.

DAC magic

The player follows Naim tradition in being performance-upgradeable



TALKING POINT
SYSTEM AUTOMATION is a worthwhile addition to the increasing complexity of today's Naim systems. System automation merely entails linking all the components with a cable terminated in 3.5mm jacks. After a few moments spent configuring each device (a once-only task), the next time you select, say, UPnP as a source on the NDX, it will switch the DAC to the appropriate input and then select the DAC input on the pre-amplifier – all from one action on a single remote control. The automation can also be controlled by an iPhone or iPad app.

through the addition of an XPS or 555PS power supply, along with the external Naim DAC. You should probably regard adding the DAC as an icing-on-the-cake move, because the integral DAC in the NDX is based on the same technology and its performance does not lag too far behind. It uses the same innovative, SHARC DSP-based buffering with fixed clocks, along with Naim's proprietary 16 times oversampling and low generated noise, digital filtering algorithms. The three S/PDIF inputs – two transformer-isolated coaxial and one buffered optical – will all accept signals at up to 24-bit/192kHz resolution.

To stream music from computers and NAS (Network Attached Storage) units, the NDX uses the well-established UPnP (Universal Plug and Play) protocol. Naim has also written its own version of this for its sources, the HDX and UnitiServe, which can also act as UPnP servers. We tested the NDX using these and the more widespread



Asset and Twonky servers installed on two NAS drives.

The NDX will operate wirelessly 'for convenience' but offers its finest and most reliable performances when connected by wire. As Naim says: "Delivering music over a network is not difficult, but doing it well requires an attention to detail that is still surprisingly rare in today's market."

If you are prepared to pay for a player that boasts numerous features including extensive isolation to ensure the pristine transfer of data, along with Naim's legendary exacting retentiveness about the smallest of details, why should attaching it by a length of Cat5 or Cat6 cable pose any problems? Using wireless with an NDX seems on a par with fitting remould tyres to a Lamborghini.

The player will stream WAV, FLAC, AIF, AAC, Windows Media-formatted content, ALAC (from iPod), Ogg Vorbis and MP3 files from any appropriate UPnP server or USB-connected storage device. The iPod connection is especially

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noteworthy: it is Apple-authenticated and it bypasses the DAC in the device and feeds a digital signal directly to the NDX and its rather more sophisticated and painstakingly optimised Burr-Brown PCM1791A DAC circuitry. This, for example, uses very similar RAM buffer and master-clock jitter-removal techniques as the 'big' Naim DAC.

The NDX, like other digital components in Naim's range features a Ground Selector switch that needs setting according to the rest of the components in your system to avoid earth loops that can, in the worst case, cause audible humming or, in less severe instances downgrade the sound. It has two options: to connect the earth to the chassis or to

leave it 'floating'. If you have a Naim CD player in your system, the floating selection is correct for all other Naim components where a choice is offered. If you are including the NDX in a predominantly non-Naim system, you'll need to take your dealer's advice or trust your ears.

Classic build and value

The NDX is housed in a 'Classic' range, non-magnetic aluminium case, like the HDX hard-disk player, XPS power supply and the Naim DAC: so it is a substantial piece of gear and requires placing on its own shelf on an equipment rack. Whether that shelf is at the top or bottom really depends upon your aesthetic sensibilities. If you like black minimalism, perch it on the top shelf. If you do not, lower down will be fine but, either way you'll find it easiest to control with the n-Stream iPhone app.

The internal construction is as impressive and neat as we have come to expect from the Salisbury factory. The attention to detail is painstaking, especially the way in which the

DETAILS

- PRODUCT:** Naim NDX
ORIGIN: UK
TYPE: Network audio player
WEIGHT: 10kg
DIMENSIONS: (WxHxD) 430x80x310mm
FEATURES:
- UPnP streaming performance
 - iRadio
 - Digitally-connected iPod integration
 - Convenient system integration functions
- DISTRIBUTOR:** Naim Audio
TELEPHONE: 01722 426600
WEBSITE: naimaudio.com



Q&A...

WE SPOKE TO NAIM'S PR, STEVEN N. HARRIS, WHO PLACED THE NDX IN NAIM'S HIERARCHY



HFC: Why would someone who just wanted a streamer buy an NDX when they could save a great deal by buying a UnitiQute instead?

SH: The simple answer is performance. The NDX includes a DSP-based, reclocking, 40-bit, 16 times oversampling DAC – that is similar in design to the multi-award-winning Naim DAC – plus a large power supply. It's also upgradeable with a Naim XPS or PS555. The UnitiQute is not: it is good but the NDX is significantly better and offers greater potential for improvement.

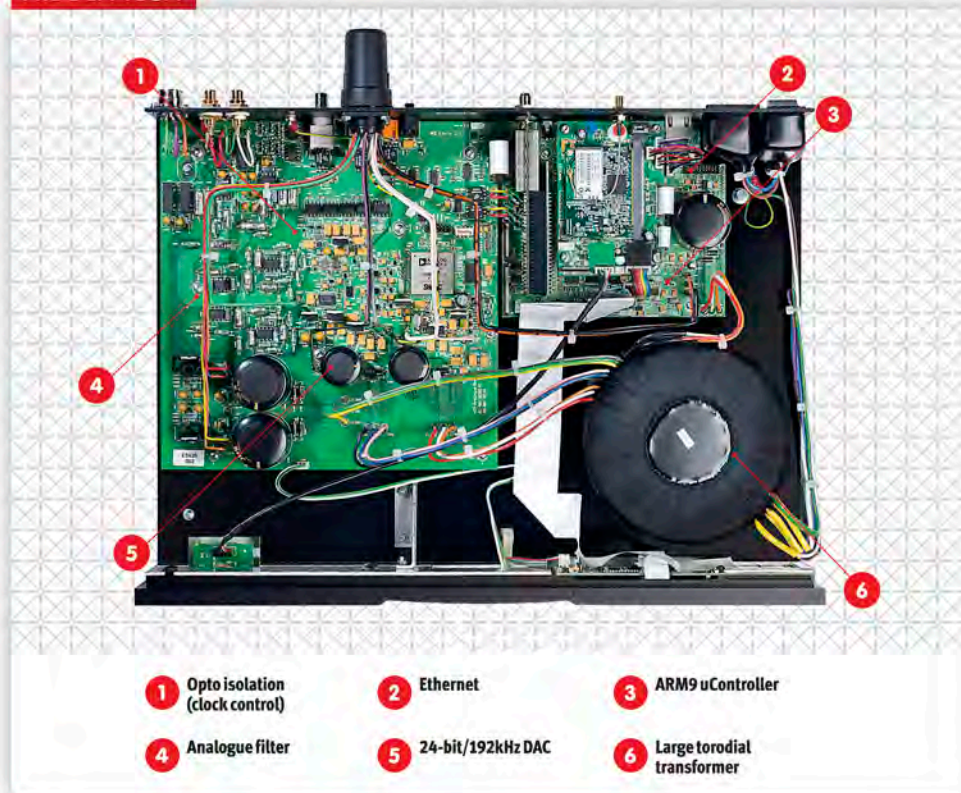
How truly important is the 'new' System Automation function?

Ten years ago the answer would have been 'not especially', but we now live in a world where people expect extreme convenience, as well as a stunning performance. Once one moves to streaming and maybe the iPad or iPod Touch becomes the primary control, then it seems completely logical that the same device should control inputs and volume as well as sources.

Are there any guidelines to follow when connecting an NDX to a network? Is there a list of approved switches and routers, for example?

That is a good question. We are just finalising a document giving advice on networks. To summarise pages of explanation and condense it into a few words is difficult, but we do think that the addition of a separate good-quality switch, to which only the NDX, NAS and UPnP server are connected (along with one connection to the existing network) means that general network traffic is kept away from the 'music'. It is not essential but it does make it simpler to get consistent performance playing high-res material.

HIDDEN TECH



1 Opto isolation (clock control)

2 Ethernet

3 ARM9 uController

4 Analogue filter

5 24-bit/192kHz DAC

6 Large toroidal transformer

wiring is so tidily dressed and precisely routed. Those tiny details might add little to the performance individually, but in combination with the rest their contribution is remarkable.

Its value for money might seem questionable when compared to streaming devices from other manufacturers and, indeed, Naim's own products such as the UnitiQute, but one has to remember that the NDX is more than just a streamer. Its high-quality DAC can be shared with other devices that can exploit its outstanding performance.

Naturally, the NDX offers several control options, including front panel buttons, a remote control handset and (the slickest as far as we are concerned) app for the iPhone/iPod Touch or iPad.

High-end performance

An industry visitor sat and auditioned a few rips on the NDX and admitted: that although he had "never understood all that pace, rhythm and timing stuff" it now made perfect sense. In essence, he walked into the room as a hard-core hi-fi nut, but left as a toe-tapping music lover, with a far more fulfilling appreciation of what makes music so captivating when it is sympathetically reproduced.

The NDX is certainly sympathetic and is so right across the board: it

seems completely musically agnostic, even to the point of relishing high-quality examples of the country genre; the likes of Willie Nelson, Emmylou Harris and Caitlin Rose.

A major appeal of the NDX is that it manages to combine the traditional Naim temporal fluency, with the cosmetic depth and richness that one normally associates with predominantly American high-end equipment. We were surprised to find ourselves concentrating on the timbral qualities of instruments and voices while listening. It effortlessly brings out the single-coil pick-up sting of a raw Telecaster guitar, while being equally effusive about the complex harmonic texture of rosin-coated bows on violins and cello in a string quartet and vividly contrasts the differing tonalities of modern and ancient horns in orchestral ensembles.

Despite the straightforwardness with which the NDX reveals all these fine distinctions and nuances, there is never any impression of the sound being at all disjointed or chromium-plated, a problem that befalls much hi-fi equipment in its attempts to convey detail. The NDX manages to sound natural and unforced at all times and this makes it easy to listen to music that could never be described as 'easy listening'.

CONNECTIONS



- 1** Wireless network connection
- 2** DAB aerial
- 3** Upgrade socket for external power supply
- 4** Conventional and DIN analogue outputs
- 5** Wired ethernet network connection
- 6** RS232 and IR link through for custom install connections
- 7** Digital inputs
- 8** Digital output over BNC

Helping it in this respect is a very well-balanced frequency response with an explicit, but controlled performance, particularly at the extremes of the spectrum. The Telecaster 'sting' is truly apparent, but never offensive or grating; it simply has the realistic incisive tone and resonance of a cranked Tele' over-driving a small valve amplifier head. Meanwhile the bottom end displays quite awe-inspiring power through the Naim DAC, which is itself no shrinking violet in this respect. This pays dividends with bass lines like that on *Money for all* on the David Sylvian album *Sleepwalkers* and less overtly so on works such as José Carreras' *Misa Criolla*, where it creates a truly atmospheric and dramatic impression of the recording space.

Its portrayal of vocal harmonies is sublime. The voices of Caitlin Rose

and backing singer, Rayland Baxter gel magically on *Shanghai Cigarettes* and add a genuine frisson to the song. And that, after all, is what great hi-fi is about: delivering emotional buzzes that make you feel rewarded. The NDX manages that none-too-easy task with alacrity.

In truth, it is vividly revealing of the quality and character of voices, which readily enhances its portrayal of all vocal music. It is a genuinely expressive piece of machinery that not only articulates the words a singer uses, but also communicates the emotions behind them. It is an amazingly plausible and persuasive audio player with all manner of vocal music. It makes listening an experience filled with soul.

The question that remains on everyone's lips, however, is 'is it significantly better than a

HOW IT COMPARES

A COMPARISON of the NDX and the comparably priced CDX2 isn't strictly on a level playing field: the NDX has distinct advantages over the CDX2, not least in terms of being able to play music that exceeds 16-bit/44.1kHz resolution. Even having to overcome these disadvantages does not prevent the CDX2 turning in a performance that is hugely creditable and typically Naim in character.

Ultimately, though, the NDX easily demonstrates why digital streamers represent the way forward. There are no night-and-day differences here, no gaping chasms in the performance of one compared to the other. The type of differences between components at this performance level are rarely black and white: they are more like subtle shifts along a scale of grey shades. However, while they might be subtle, their effects are anything but: the NDX clearly makes music sound far more natural and soulful.

comparably priced Naim CD player?' To discover the answer read the comparison box-out, left.

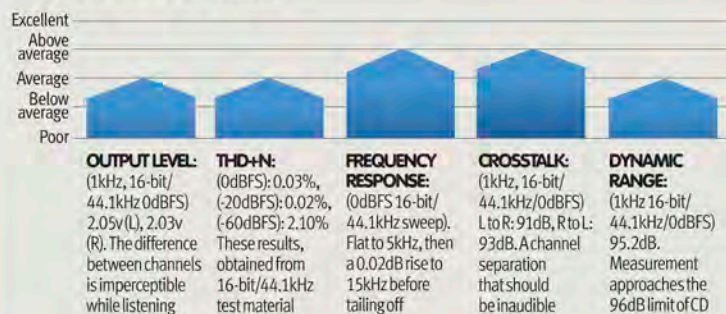
All things considered

The NDX is a classic Naim Classic product that retains all that range's traditional communicative musical personality traits augmented by strong leanings toward the cosmetic presentation favoured by the high-end scene. It's an interesting, rather than schizophrenic mix that might well attract new buyers to the Naim fold. It also has a respectable amount of life style appeal thanks to its slick operation with an iPhone/iPad app and its meaningful integration with iPod products.

Ultimately, though, it is the superlative and supremely communicative performance that makes certain it stands out from the crowd. ●

TECH LABS

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** The ideal combination of vivid performance and understated styling
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Sample was rather finicky about making a network connection
- BUILD QUALITY** ★★★★★ **WE SAY:** After changing the connected GigaByte switch the NDX performed flawlessly
- SPECIFICATIONS** ★★★★★

OVERALL

