Chord DSX1000

Take Chord's award-winning QBD76HD DAC, add a network streaming client and stir into some ostentatious but instantly recognisable casework. Hey presto – the DSX1000
Review: **Keith Howard** Lab: **Paul Miller**

An art editor colleague of mine from the days when I was a magazine staffer used to dare me to reject his work by saying, 'Love it or loathe it, you can't ignore it'. The phrase came to mind when I unpacked Chord Electronics' brand spanking new DSX1000 because Chord's brutalist rejection of Bauhaus design edicts offers up a similar challenge in metal. Love or loathe the Chord look, there's no gainsaying that the company is one of the few in the high-end diaspora to have created an aesthetic that is immediately recognisable from across a room, and achieves this without resort to displaying its name in large letters across the fascia. In fact the Chord nameplate is a model of discretion.

You could be forgiven for thinking at first glance that the DSX1000 is a small integrated amplifier, what with its two small forward-facing heatsinks located between the back panel and two rear outriggers. But this is actually a much more significant product for the Maidstone company: its first network player. What it has done to achieve this, in effect, is put its top-of-the-range QBD76 HDSD DAC on the end of StreamUnlimited's Stream700 audio streaming client – an off-the-shelf hardware solution for network audio we've talked of in *HFN* before which includes a 3.5in, 320x240 pixel colour display, supports up to 24/192 FLAC or WAV files via wired Ethernet (26/96 via a wireless connection), provides for internet radio and offers remote control via a smartphone app.

Round the back of the DSX1000 there are just two inputs – a BNC socket for S/PDIF connection and, of course, the Ethernet socket – and just two pairs of outputs, each either unbalanced via a pair of gold-plated phono sockets or balanced via three-pin XLRs: one at fixed level, for connection

to downstream components that have a volume control, and one a variable output, adjusted by an analogue volume control within the DSX1000, which allows for direct connection to a power amplifier.

There are no front controls other than what looks like a jog wheel but is actually a four-points-of-the-compass push-switch for navigating the menu that appears on the screen alongside it. On the other side of the screen is a deeply recessed sensor for the metal-bodied remote control provided.

JUST A DODDLE

Network players are intended, of course, for use remote from the device on which the music files are stored – that's their *raison d'être*. Otherwise you would be crazy to swap the rich music-browsing experience offered by a monitor (even better, a touch-screen monitor) and player software such as JRiver Media Center for the clunkier streamer experience of

navigating music files via a small screen. But my listening room normally has no network running there, so when a streamer is here for review I set up the simplest possible network: my Mac mini, running Windows XP and Twonky Media, acts as the music server, and a Netgear RP614 router provides for Ethernet connection between it and the player.

Using this set-up, getting the DSX1000 to stream music was a doddle. Once Twonky had been selected as the media server, the DSX1000 found my music files and was ready to play them. Navigating and playing the files I found easier using the remote control than the four-way fascia control which, despite my heeding the user manual's injunction to 'Press any button *hard* for select function', didn't always react as intended. I imagine that some buyers would wish that the four-button push-switch also functioned as a volume control, so as to have handy rotary
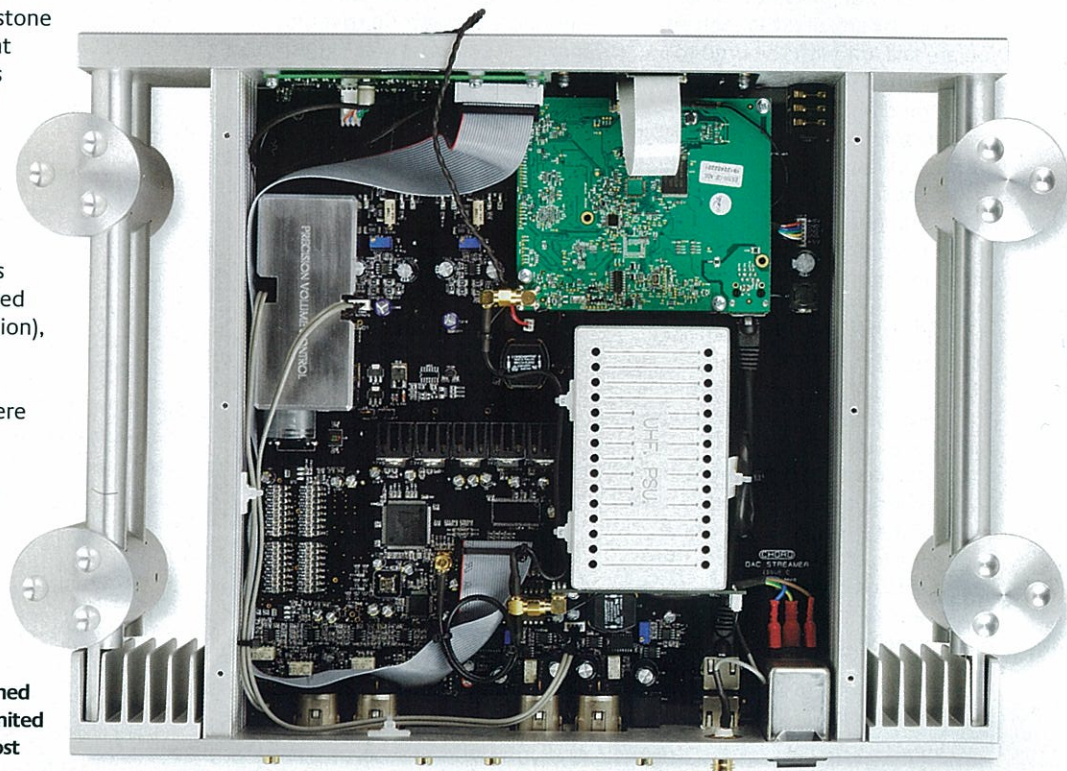
RIGHT: Chord's Pulse Array DAC is lower left (against the output sockets) with screened switchmode PSU adjacent and StreamUnlimited UPnP/DLNA streaming client (green) topmost
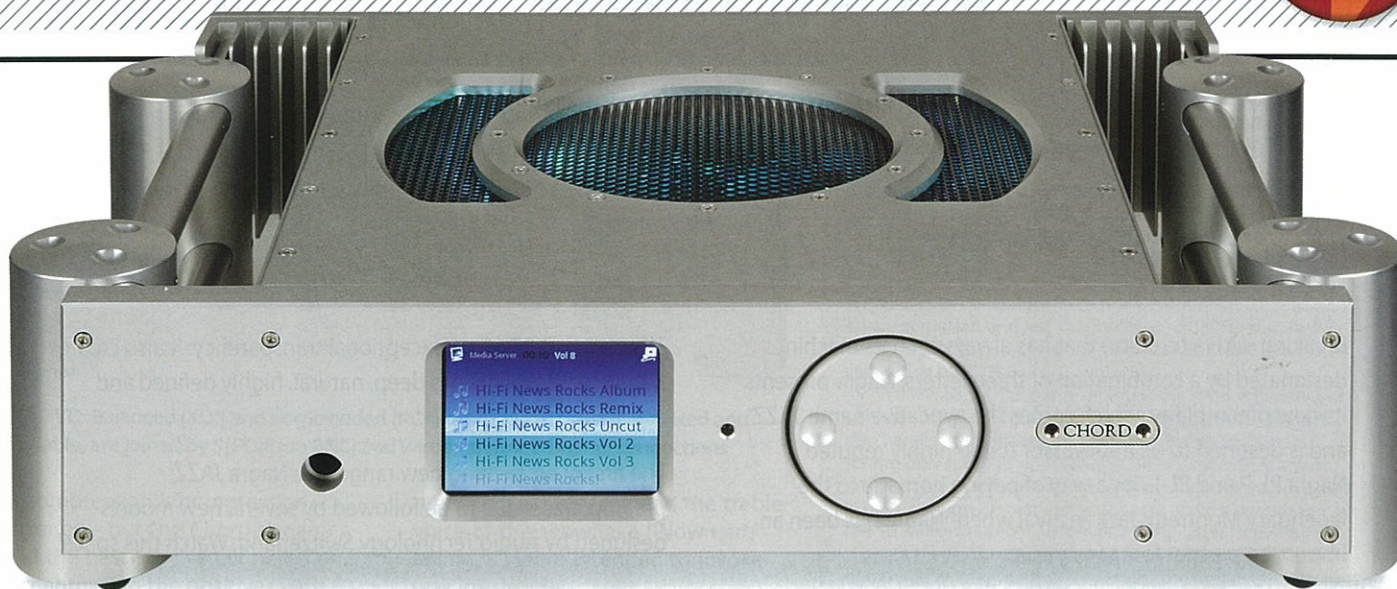
adjustment of output level via the variable output sockets rather than via volume up/down buttons on the remote.

UP WITH THE BEST

With any streamer that offers a local digital input, the first thing I want to try is a comparison between the same files played via that and via Ethernet. My experience is that the two never sound the same despite it being the same data; and as a rule I prefer the result from the local digital input to the streamed version. However, someone from the industry whose opinion I value, doing these comparisons, who hears the same differences as me, puts a different *value* on them, considering the streamed version to be as valid an alternative as the direct digital input.

Actually, after a lot of to-ing and fro-ing, that's what I eventually concluded with the DSX1000 – the two inputs certainly don't sound the same but the differences are essentially presentational. Via the S/PDIF input the sound was a little leaner, sparser and, on some material, arguably more engaging to listen to. Via Ethernet it was a bit warmer, the perspective a little closer,

and the music delivered with a sense of greater weight and control. The call could go either way depending on the recording, partnering equipment, *etc*.

Of more significance to most potential buyers, this initial listening confirmed that the DAC stage of the DSX1000 is right up there with the best: open and lucid sounding and capable of projecting wide, deep and stable images. It's a long time since the likes of the Bricasti M1 and dCS Debussy graced my listening room [*HFN* June '11 and Dec '10], and so making any detailed comparison with them is impossible this far removed. Nevertheless, it was amply evident that Chord's DSX1000 has the same stamp of class about it.

Partnering equipment, throughout the test, was a Naim NAC252/NAP250 pre-power combination and Thiel CS1.6 loudspeakers – items which all shine a harsh light on the quality of the music source. S/PDIF signals were, as usual, provided by a TC Electronic Digital Konnekt

'The Chord certainly helped burnish this piece of rock history'

x32 FireWire interface from the Mac mini, with JRMC v17 as the player software.

OPENING DOORS

Having satisfied myself that I wasn't missing anything by streaming the music, I set about enjoying the DSX1000 – in streaming mode – on a wide range of music old and new, hi-res and lo-res. I began with 'Riders On The Storm' from the remastered *The Best Of The Doors* [Elektra 7559-62468-2]. A friend in Australia was so shocked that I didn't have any Doors albums in my collection that he ordered it for me last year, but once it had arrived I put it on top of a pile of other discs awaiting ripping and it gathered dust. Given its vintage I expected the sound to be grim, so I didn't hurry to play it.

Silly me, because as the electric piano began playing in the left channel over the thunderstorm raging in the background I realised that the sound quality is actually rather good for the era. The DSX1000 did nothing to disguise the rather left-middle-right nature of the stereo but it certainly helped burnish this piece of rock history, making it an unexpectedly pleasant experience to regress pop music's most famous decade.

Encouraged by this I also sought out Led Zeppelin's 'What Is And What Should Never Be' (from *Led Zep II*), a track I normally find too compressed to stomach for very long. It would be exaggerating to say that it was transformed by the DSX1000 ☞

GOING UPSTREAM

StreamUnlimited Engineering GmbH is a Viennese company that has cornered a significant chunk of the market in off-the-shelf network hardware that allows audio equipment manufacturers, lacking the necessary skills in-house, to create streaming products in which they can concentrate their expertise on the parts they know best: the audio circuits. It's a turnkey solution but one that allows customisation of the display to suit the brand concerned. So, for instance, the DSX1000 shows a Chord logo on the screen as it boots up. Any network-connected device which can run media server software such as Twonky Media can be the repository of audio files: not just a computer hard drive but alternatively a NAS (network attached storage) drive. In many setups, in fact, the NAS option is the better one. Not only can NAS drives combine a number of hard disk drives to provide prodigious storage capability, they also support various RAID modes that secure the data against loss due to hard drive failure.

DIGITAL MEDIA PLAYER
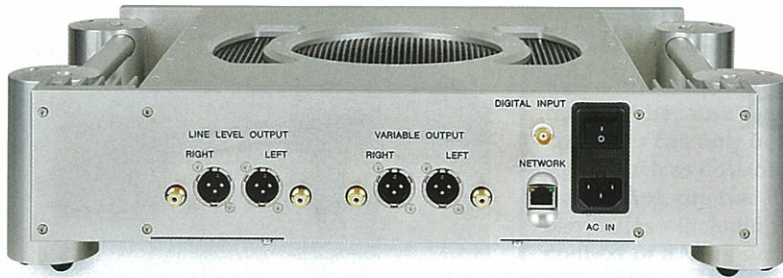
ABOVE: Balanced (XLR) and single-ended (RCA) analogue outputs, both fixed and variable, are joined by S/PDIF (on BNC) and wired Ethernet 'digital' connections

– compression is compression, after all – but the Chord streamer did the best job I've yet heard of accentuating the positives with this track and playing down the negatives. John Bonham's drums were mighty meaty.

Another, very different piece of music which was presented in a new light was the *Presto* from Haydn's String Quartet in D, Op.76 (a free 24/96 download from 2L Records' website). The playing is notable for its drive and commitment, but the recording can easily become hard and harsh on the louder sections – nowhere more so than in the 'd'DA, d'DA, d'DA' phrase that begins the piece. This can very easily get the music off to a disconcerting start.

IT'S SNOW TIME

It was one of the tracks I used for the S/PDIF vs streaming comparison, and there was no doubt that via the former those insistent opening chords were as strident as ever. But when the track was streamed a remarkable change came over it. The energy of the playing was unaffected but the familiar occasional descent into raspiness was removed. I have never heard this track conveyed with such equanimity, particularly those formidable first chords.

Another piece I used for the S/PDIF versus streaming comparison was the 24/96 download of 'Snowflake' from Kate Bush's *50 Words For Snow*. This was a track where I appreciated the leaner, slightly better separated sound via S/PDIF, but the more I listened to the streamed version the more I appreciated its merits – particularly its ability to blend all the elements into an eloquent, immersive, infectious whole. The mesmeric, ethereal effect that I'm sure the

repeated piano figure and the treble voice of the snowflake ('Now I am falling…') were intended to invoke was irresistible.

I am used to Diana Krall's voice bordering on harshness in 'Narrow Daylight' (from *The Girl In The Other Room*), particularly on sibilants, but the Chord placed a much cleaner vocal over the background of a weighty piano sound.

The DSX1000 was also able to cut it with items that can all too easily sound lacklustre – for example, Fred Simon's 'Poetspeak', a laid-back number for jazz trio [Naim Label, 24/96]. There's nothing in your face about this recording: it is naturally distanced, with piano in the middle of the soundstage, double-bass to the left and drums to the right. But the playback system has to have a high level of transparency, when it becomes apparent that the cymbals are particularly cleanly captured and the double-bass is unusually natural in sound quality too. Suffice to say that with the DSX1000 playing this track I was encouraged to settle back for an evening listening session with a tumbler of malt whisky. ⏻

HI-FI NEWS VERDICT

Computer audio provides both non-networked and networked means of listening to music, each with pros and cons. If the network option is for you because you want to be able to listen remote from where your audio files are stored, the DSX1000 will deliver some of the very best sound quality available from a distant hard drive or NAS. As a first step into the audiophile streamer market, it's most impressive.

Sound Quality: 87%

0 [——————————] 100

LAB REPORT

CHORD DSX1000

There are clear parallels between the performance of this DSX1000 and Chord's QBD76HD and QuteHD DACs [*HFN* Sep '11 and '12], all featuring Robert Watts' WTA interpolating filter and Pulse Array DAC technology. The increase in high frequency distortion [blue trace, Graph 1 below] to 0.02% at 20kHz/0dBFs is a 'feature' as is Watts' protection of his IP: impulse data used to measure digital filter performance is detected within the FPGA and the output muted to prevent the time domain response from being analysed! Otherwise, the DSX1000 is truly state-of-the-art with bass and midrange distortion further reduced over the QuteHD to a mere 0.0008% at its peak 5.9V balanced output and just 0.00005% at −20dBFs [see black trace, Graph 1]. The A-wtd S/N ratio is a full 118dB and stereo separation >125dB.

In all respects, the performance of its S/PDIF and network connections yields identical results, although the latter will also handle 32-bit floating-point WAV files up to 192kHz (Chord only specifies up to 24-bit). Jitter is incredibly low at <10psec for 24-bit data at any sample rate from 44.1-192kHz [Graph 2, below]. A number of network audio players based on the StreamUnlimited platform suffer high jitter [see *HFN* Jan '13] but the DSX1000, like the MF CLiC [*HFN* Jun '11], can be numbered among the success stories. The frequency responses are even flatter and more extended than before, achieving a full 20Hz-90kHz span at ±0.2dB with 24-bit/192kHz media and 20Hz-20kHz ±0.04dB with 44.1/48k inputs. Readers may download full QC Suite test reports for the DSX1000's S/PDIF and network audio performance by navigating to *www.hifinews.co.uk* and clicking on the red 'download' button. **PM**
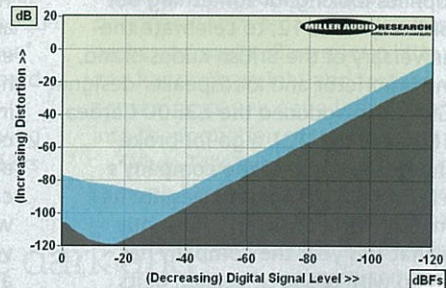
ABOVE: THD vs. 24-bit/48kHz digital signal level over a 120dB dynamic range. S/PDIF and network connections are identical (1kHz/black, 20kHz/blue)
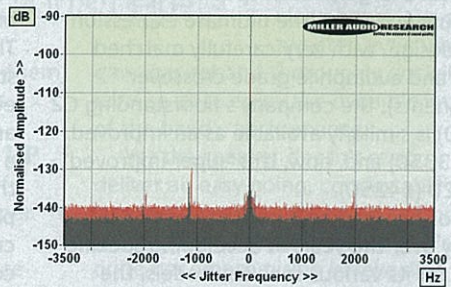
ABOVE: High resolution 24-bit/48kHz jitter spectra, S/PDIF (black) and via network (red). A superb result

HI-FI NEWS SPECIFICATIONS

Maximum output level (balanced)	5.88Vrms at 63-68ohm
A-wtd S/N ratio (S/PDIF / network)	118.1dB / 118.0dB
Distortion (1kHz, 0dBFs/−30dBFs)	0.00077% / 0.00006%
Dist. & Noise (20kHz, 0dBFs/−30dBFs)	0.02% / 0.0028%
Freq. resp. (20Hz-20kHz/45kHz/90kHz)	0dB to −0.04dB/−0.12dB/−0.2dB
Digital jitter (S/PDIF / network)	9psec / 5psec
Res. @ −100dB (S/PDIF / network)	±0.05dB / ±0.05dB
Power consumption	13W
Dimensions (WHD)	420x88x355mm