



Digital know-how

As a maker of digital hubs with audiophile sensibilities, **Lee Dunkley** gets to grips with Novafidelity's latest do-it-all solution

With streaming music readily available at our finger tips, it's sometimes difficult to fathom the best way of combining digital media libraries into one central location to achieve the same effortless tap-to-play scenario that brings together all our digital music. I am sure plenty of us have spent enough time grappling with network-attached storage hardware and CD-ripping software to know that there has to be a more elegant way of cataloguing our music

libraries. Looking at the different kinds of one-box solutions on the market today, it's clear that many companies have been pondering the same questions too, with specialists introducing their own take on models that tackle the thoroughly modern way of accessing our favourite music as effortlessly as possible. Novafidelity – established in 2003 and previously known as Cocktail Audio in the UK, is now distributed by SCV Distribution – already thinks this way. It specialises in exactly this kind

DETAILS
PRODUCT Novafidelity X45
ORIGIN South Korea
TYPE Music server, ripper, streamer and DAC
WEIGHT 7.8kg
DIMENSIONS (WxHxD) 441 x 100 x 330mm
FEATURES
• Up to 8TB HDD storage
• 32-bit/384kHz PCM and DSD256-capable DAC
• Digital inputs: 1x optical; 1x coaxial; 1x AES/EBU; USB-B
• Analogue inputs: 1x RCA; 1x 3.5mm jack
• MM phono stage
DISTRIBUTOR SCV Distribution
TELEPHONE 03301 222500
WEBSITE scvdistribution.co.uk

of solution and has a growing reputation for turning computer-based sound technology into user-friendly audiophile products. The X45 is its latest solution and is neatly described by the company as a reference streamer and DAC, which rather sells it short. It builds on the now discontinued X40 model that we reviewed back in *HFC* 399, and is fitted with a faster Dual Core ARM Cortex A9 processor with Dual ESS ES9018K2M Sabre 32 Reference DAC chips. It adds support for MQA and is Roon ready as well as providing access to Napster, Qobuz, Tidal and Deezer streaming services. The review unit is fitted with a 4TB HDD for our test purposes, which is enough for around 5,200 CDs stored in WAV format. As an aftermarket option, formatted and installed HDDs start from £140 for a 2.5in SATA drive up to 2TB, as well as a 3.5in drive up to 8TB supported via the storage bay at the rear. Quieter 2.5in SDDs up to 2TB are also supported and are usually associated with faster read/write speeds and long-term reliability. In terms of format handling, the X45 claims to rip CDs and supports a

comprehensive range of file types including: WAV, FLAC, ALAC, AIFF, AIF, AAC, M4A, MP3, WMA, CAF, Ogg Vorbis, PCM, M3U and PLS. HD WAV and FLAC files are supported up to 24-bit/192kHz, with DSD up to 24-bit/352.8kHz and DSD256. Build quality is impressive at the price, and the thick aluminium fascia finished in silver looks very smart. It's home to the on/standby button, volume/mute, 6.35mm headphone socket, 3.5mm aux input, slot-loading

CD mechanism, USB port and a large 178mm LCD TFT colour display (1,024 x 600 pixels). Disappointingly given the touchscreen world most of us inhabit, the impressive-looking screen isn't actually touch sensitive – something that I quickly establish as I prod at the icons in an attempt to activate random menu options – and a further rotary control along with four buttons provides front-panel navigation of the system's comprehensive onboard menus. Any disappointment at the lack of touchscreen control is quickly overcome by downloading the system's Novatron Music X app – freely available to iOS and Android devices – to my iPad, which quickly puts me in control of the X45 from

the back panel. Navigating through the comprehensive menus using the app is glitch-free and the X45 quickly accesses its onboard music preinstalled for this review, as well as my own networked content stored on a Melco N1ZH/2 (*HFC* 438).

Sound quality
Connecting the X45 to a Musical Fidelity M6 500i integrated amplifier, things immediately get off to a good start. The slick music library accesses tracks from the networked Melco just as quickly as from its own internal HDD storage, and the sound is instantly appealing. Whether it's a radio station from Airable Internet Radio's streaming service or hi-res content played from a networked drive, it has plenty of punch and detail to make me sit up and listen.

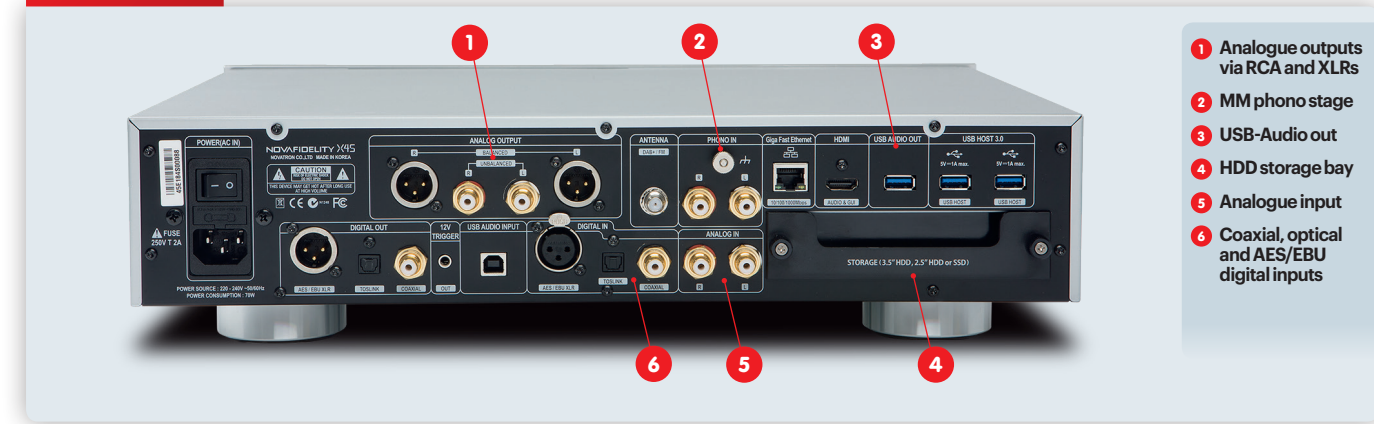
I start things slow and scan the Melco library for something gentle and easy going, settling on *I Want Your Love* from the album *C'est Chic* in FLAC 24/192 form and am instantly impressed. A late-seventies recording with a laidback funk/disco groove, there's plenty of mid-frequency presence and detail in the upper registers. It might not be the richest recording from the disco era and bass can seem a bit lacking at times, but the X45 scythes through the beat throwing out Nile Rodgers' infectious guitar hooks with layers of texture while the tubular bells and Diva Gray's lead vocal are presented confidently in a finely detailed manner that expertly shows off the immaculately recorded Chic hit.

A rip of Newton Faulkner's *Hand Built By Robots* takes around six minutes to complete in WAV format at the highest quality – there are lesser-quality settings and alternative format options to reduce file size and save on disk space, should you so wish. The rip appears quickly in the library with all the disc's metadata retrieved from the

Ripped music has a lovely flow that closely matches the delivery from a CD

the comfort of my sofa. It's a slick app that pretty quickly sees the network-connected unit – although it says it's connected to a Cocktail Audio X45 as this is branding for territories outside of the UK. A button-festooned traditional remote control is supplied, which I put to one side while I first get to grips with the neatly presented app. I'm surprised to see that the app screen can even mimic the layout of the supplied bulky remote control via a tab option on the main menu screen, which is more useful than I first imagine as I begin to unravel the full complexity of the system. Despite its frankly somewhat daunting capabilities, setup is straightforward and I connect the unit via Ethernet to my home network – wireless connectivity is available via an add-on wi-fi dongle that costs £35 and plugs into a USB 3.0 host port on

CONNECTIONS



Q&A

Matt Esau

Head of sales, SCV Distribution



LD: Where does the X45 sit in the Novafidelity range and what type of customer is it aimed at?

ME: The X45 is a streamer including a hi-res DAC, so it is targeted at customers who already have high-quality amplifiers and loudspeakers. It's ranked below the flagship X45Pro, which is a high-end music server using the flagship ES9038PRO DAC chip that supports 768kHz PCM and native DSD512, and offers reference-level sound quality.

What are the challenges involved in designing such a versatile music server and DAC component?

As a maturing brand, the long-term experience accumulated by Novafidelity's in-house R&D centre allows for the implementation of many versatile functions. It takes time and constant development to create a seamless user experience to access these features. Firmware requires regular updates to support customer requests and maintain compatibility as third-party technology evolves.

On a component level, applying dual DACs in the X45 has enabled dynamic range to increase by 3dB. Sound quality is also maximised by removing idle noise and electrical noises through isolated power source circuit design. Working to improve audio performance has involved close attention in these areas to further refine the product.

Do buyers mostly tend to opt for SSD over HDD, and what are the most popular capacities?

Generally buyers chose HDD for its lower cost and higher storage capacity, but for the quietest operational performance SSD is, of course, better. There has been no measured difference in audio performance between the two. The most popular choices are 2TB to 4TB HDD or 1TB to 2TB SSD.



The sleek front panel has all you need to navigate the X45's menus



There are few products that can match the versatility that's on offer in Novafidelity's X45, but Leema Acoustics' Sirius offers a similar degree of flexibility as a music server/DAC/streamer/CD ripper (HFC 438). At £3,995 it's almost twice the price, but the DAC stage is built around a higher grade ESS Sabre 9028 chip, which offers very strong performance indeed. Like the X45, the Sirius is very nicely built and sound quality is top-notch, but unlike the X45, the Leema runs completely silent. Overall, the X45 strikes a great balance between storage, versatility, build and strong value for money.

Gracenote database service (if the license is activated) or Freedb.

As I listen back, there's no discernible difference between the original CD and the ripped version of the album, and the guitar-thumping on *To The Light* is brimming with life and energy. *Teardrop* is assured and the track has a lovely flow that closely matches the kind of delivery you get from a dedicated CD transport. The track's rhythmic timing feels genuinely bang on, but the X45's killer trick is the magical way it conveys the deepest bass notes towards the end of the song, which strips out none of their impressive gravitas following the ripping process.

If you're familiar with the excellent navigational abilities from streaming services like Qobuz and Tidal, the Novatron app will take some getting used to as it goes about doing and displaying things its own way. It's a bit of a learning curve, but the sound remains unaffected. *Do You Wanna Dance* by Cosha – a 16/44.1 stream via Tidal – is a perfect example of how good the X45 is at bringing music to life, showcasing nuances in this multi-layered production that expertly picks out the myriad textures and recording qualities buried on the multiple music samples of varying qualities within the track. This spotlight into a recording is what

lossless and hi-res music streaming are all about, and despite the one-box solution's complexities it has audiophile streaming credentials.

The addition of a moving-magnet phono stage is a pleasant surprise, too. It won't worry dedicated designs, but is generally quiet and has a refined quality to its presentation and is useful for digitising vinyl to the built-in hard drive.

Although ripping and digitising a vinyl collection is a feature that's a little bit lost on me, the X45 handles the process effectively. It might be a little crude and doesn't appear to warrant mention in the comprehensive instruction booklet that I can find, but it's effective and demonstrates

Music displays enough punch and detail to make me sit up and listen

remarkably similar characteristics to the original LP once the recorded file is located in the library using the Browser option.

Conclusion

There's no denying that this is a remarkably capable and flexible unit. There once was a time when do-it-all music solutions would have meant certain compromises, usually in terms of sound quality, but the X45 sacrifices nothing.

It's got a lot to offer if your setup is up to making the most of the impressive performance. Undoubtedly you're going to have to spend some time getting to grips with the vast capabilities, and the more time I spend with it, the more I respect its idiosyncrasies and it rewards with extended use. It's easily the most complete and futureproof digital music source I've spent time with, and so comes highly recommended ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



VALUE FOR MONEY



BUILD QUALITY



FEATURES



OVERALL



LIKE: High specs; flexible features; good quality sound

DISLIKE: Operational quirks; instruction booklet; display screen

WE SAY: A quirky but truly outstanding digital music hub with top-notch sound