

What is it? Everything!

THE NOVAFIDELITY X45 COMBINES JUST ABOUT EVERYTHING YOU COULD NEED FROM A DIGITAL MUSIC SOURCE. TRUE, ITS SHEER COMPLEXITY MEANS MASTERING IT WILL TAKE TIME, BUT ANDREW EVERARD SAYS IT'S WORTH THE EFFORT

Under its various guises, Korean company Novatron has been in the digital music business as long as most, although to many it may mean nothing more than inexpensive all-in-one ripper/players sold under the Cocktail Audio brand. True, the range – now distributed in the UK by SCV – begins with the *X14*, with speaker terminals fed by its 30Wpc Class D amplification and selling for £689, but right at the top of the line-up is the *X45Pro* at £5099: that's a line/preamp out unit, complete with balanced connections on the end of ESS Sabre *ES9038PRO* digital to analogue conversion, while the company also has *X50* models with purely digital outputs starting from £1829.

The *X45* we have here is perhaps the sweet spot of the range – it's a down-specced version of the *Pro*, but in a unit at £2149, a saving getting on for £3000. . And like all the Novafidelity models, it appears to offer just about everything the digital music enthusiast could want: the distributor describes it as a 'Streamer & Reference DAC', but the manufacturer is rather more forthcoming. This, it says, is a 'a World-Class High-resolution Audio Player and DAC, CD Ripper, Music Server, Network Streamer, Music Recorder, and much more.'

'World-Class'? We'll come to that in a while, but the rest of the claim are pretty much on the money, including the 'and much more' bit: one thing you can safely say about the Novatron products is that they offer an awful lot of stuff for your money, setting the standard for comprehensive specifications others struggle to match.

Before we go further, another note about the pricing of the *X45*: like all the Novatron models, it uses a user-replaceable hard drive – either a 3.5in

HDD or 2.5in HDD or SSD – and so can be bought in a variety of configurations. That £2149 buys you the 'bare bones' version, with no storage fitted, or you can specify it with a 2TB to 8TB HDD, for an additional £140-£300, or with SSDs from 500GB to 2TB, here adding £190-£515 to the ticket.

Given the pricing of the drives if bought alone – a 2TB NAS-class WD Red, designed to be running constantly, will set you back about £75, and a 2TB SSD about £250 – and the ease with which drives can be installed using the drawer-type carrier in the rear of the *X45*, I'd advise the sensible route would be to buy the player and storage separately. Once a drive is installed, the *X45* will format it relatively quickly while you sit back and decide what to do with the money you've saved.

Multiple functions

The Novafidelity can rip CDs from its slot-loading drive to that storage, which can also be loaded with other content from MP3s all the way up to PCM to 384kHz/32bit (including DXD) and DSD256/11.2MHz. It can also back up to attached USB storage via the two USB outputs provided.

In addition you can record to the USB linked storage from the varied digital and analogue inputs, which (as you can see in the picture to the left) run to optical, coaxial and AES/EBU as well as line and moving magnet phono. Recordings can also be made well as from the built-in DAB/FM tuner and Internet radio capability.

Content stored on the hard drive can be played out through a conventional system using RCA and balanced XLR outputs as well as the same array of digital outputs, and the unit also has USB and HDMI audio outputs for use with suitable DACs. The HDMI is also able to feed video to a TV monitor to show the unit's menus.

The *X45* can act as a client/player for network audio, playing music stored on an external NAS, or as a server to feed other network devices from players to wireless music systems. It can also be used as a USB DAC via its Type B asynchronous input, enabling a music-loaded computer to be connected, and is also compatible with streaming services including Qobuz, Spotify and Tidal (with MQA



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X45 Specifications

File formats	Up to 32-bit/384kHz and DSD256, MQA
Streaming services	Airable radio, Tidal, Deezer, Qobuz, Spotify Connect
Network Connectivity	Ethernet (10/100/1000 Mbps)
Wi-Fi	(802.11b/g/n) via optional USB dongle
USB connectivity	2x USB 3.0 host, USB 2.0 (front panel), USB Type B asynchronous
Display	7in TFT
Storage	Internal 3.5in/2.5in HDD or SSD, user specified
Controls	Front panel buttons/jog dial, remote control, remote app or web interface
DAC	Dual ESS ES9018K2M Sabre ³²
Digital Inputs	TOSLink optical, coax RCA, AES/EBU
Digital Outputs	TOSLink optical, coax RCA, AES/EBU, HDMI, USB
Analogue Inputs	Line, MM phono
Analogue Outputs	RCA/XLR fixed or variable level, headphones
UPnP Server/Client	Yes/Yes
Roon-ready	Yes
Online Updates	Yes
Finishes	Silver or black
Size (WxHxD)	441mm x 111 x 330mm



decoding for Tidal Masters), and Roon-ready. You could even use the *X45* as a digital-capable preamp: you can witch the RCA and XLR analogue outputs between fixed level and preout with volume control.

You might think the Novafidelity is all about features and functionality, with audio a secondary consideration, but no: at the heart of the *X45* are dual ESS *ES9018K2M Sabre*³² DACs – one for each channel –, while a 16-core microcontroller looks after the USB DAC functionality. The audio circuitry is powered by a dedicated toroidal transformer, with isolated power supplies for the digital and analogue sections, while a separate switch-mode power supply looks after all the digital control here, which runs on a Dual Core 1.0GHz ARM *Cortex A9* processor, with 1GB of main memory and 8GB of flash.

Getting to grips

Using the basics of the *X45* is pretty simple, but to get to grips with all it can do takes some reading of the comprehensive manual supplied, and also some work on the web interface or the custom remote app, for Android and iOS, which allow operation of the unit in a more comfortable manner.

Firmware upgrades are simple via the unit's network link, and there's plenty of flexibility in the way metadata can be handled: the built-in Gracenote database is pretty good, but one can always connect a computer keyboard if large-scale editing is required. The ripping experience is pretty nippy, with a choice of file formats for stored discs, but loading an extensive library of content onto the hard drive, either over the network link or using a USB device, is a case of 'start it running, then find something more interesting to do for a while.'

The *X45* does have wireless network connectivity available via an optional USB dongle, but the fact it's an option should make it clear it's best used with

a wired Ethernet connection – not for any sonic reasons, but simply because this gives the most stable data transmission, not to mention being a prerequisite if you're going to be moving around larger music files of anything much beyond CD quality.

As already mentioned, it would be easy to assume that with so much going on, this unit won't be any great shakes when it comes to audio quality, but some time spent with the *X45* reveals otherwise; having tried it via both its analogue and digital outputs, into integrated and power amps, as a USB host with a couple of suitable DACs, into an AV receiver via HDMI and even as network client, server and Roon endpoint, I came away impressed with what it can do considering its competitive price.

Yes, it's outperformed by the likes of Naim's entry-level network player, the *ND5 XS 2*, which sells for the same sort of money and delivers better bass grip and extension, greater detail and a sense of finer musical flow; conversely the Naim doesn't offer a fraction of the flexibility of the *X45*. Even to approach the Novafidelity's facilities with the Naim would need at least the addition of a NAS and some ripping hardware, and even then one would be some way short of the *X45*'s facilities.

To say that this digital audio jack of all trades puts up an extremely respectable performance is far from damning it with faint praise: indeed, the degree of musical enjoyment it offers is way beyond expectation, whether streaming low-bitrate radio broadcasts or playing the highest sampling rate DSD files on which one can lay hands.

True, the sound is ever so slightly dry, lacking the bass grip and power one might expect from a truly high-end player, and it slightly diminishes the often remarkable sense of space and airiness often found in 'straight to DSD' recordings, but what it does is much more impressive than what it doesn't.

Price: £4199
cocktailaudio.com
scvdistribution.co.uk