Melco N10 Digital Music Library

The two-box approach for flagship music storage and playback

TO FURTHER IMPROVE ITS DIGITAL MUSIC LIBRARY, MELCO HAS OPTED FOR A COMPACT
UNIT WITH A LINEAR POWER SUPPLY BOX – AND NEW MANAGEMENT SOFTWARE

Melco is firmly established as a high-end choice when it comes to music servers, but in recent times it has reinvented its offering to make an even more persuasive case for its products. Back when its music library models first arrived, the suggestion was that they were best considered as sort of audiophile fileservers, with a dedicated Ethernet output designed to feed a network music player while isolating it from everything else on the home network system.

It was an admirable idea, if something of a hard sell: true, the Melco approach was better than plugging player and general purpose network-attached storage device into the kind of hub Internet service providers supply to their customers, but some of us with well-optimised 'music networks', with dedicated servers and Ethernet switching devices failed to hear much advantage in the company's way of doing things.

At which point, something of an 'Oh yes it does', 'Oh no it doesn't' impasse was reached: I understood what the company was trying to achieve, but simply couldn't hear the differences in my own system, and in the meantime the keyboard warriors of the Internet audio forums were having a field day with Melco's claims of features such as audiophile hard drives. That was despite the fact that the Japanese company, founded long ago as a hi-fi manufacturer, later expanded into a maker of computer peripherals, including the Buffalo brand of hard drives, so it should know quite a bit about optimising drives to their task.

Anyway, the reinvention of Melco came when more emphasis was put on the ability of the company's products via their USB outputs, meaning they could be connected directly to a USB DAC, just as one would a home computer. Immediately the range stopped being just expensive servers and became a hi-fi source – a digital transport for a music collection stored either on their internal hard drive(s), or connected via USB or network. And with the USB output also isolated to deliver the purest possible digital signal, isolated from interference from either storage or network, it was designed to outperform even highly optimised 'audio computers'.

Now, with the arrival of the new flagship N10, Melco has taken this thinking one step further: having in the past made units roughly conforming to conventional hi-fi width and dimensions, it's now moved into half-width components, made possible by putting the N10's power supplies into a separate housing, designated PS10, linked to the library/player (N10P) via a multi-core umbilical cable. The result is not just a strategy aimed at even lower EMC noise: it also allows the two sections of this £6,750 player to be placed apart.

A stretch would be better

Or rather it would if the five-pin Neutrik-terminated cable supplied was longer than the rather mean length provided, which limits the user to either placing power supply and player side by side, or stacking them. However good the swish new aluminium casework may be at isolating the 'head unit' from any stray interference from the power box via the two layers of housing involved, that seems to me like a missed opportunity: if I were using the N10 long-term, I'm sure I'd be talking to a friendly third-party cable company about making up a custom link enabling the two units to be placed a bit further apart, or perhaps even on separate shelves.

That said, I have to say I like the new look Melco has adopted, and not just for the N10: this is part of a whole range of matching products designed to expand the functionality of the line-up. At £999 apiece, the company can supply the D100 disc-drive, designed to rip discs and also allow the N10 (and other models) to function as a CD player, while

the E100 is a 3TB storage unit, for back-up and/or capacity expansion. Each of these is the same size as one of the two N10 boxes, and the revised styling has also been applied to the new beginners' Melco, the N100, which we'll come to a little later.

The N10 review sample supplied was actually an N10-H30-E, indicating it comes with 3TB of hard disk storage within. The low-slung units, standing just over 6cm tall, are relatively bereft of controls, beyond a power button on the player which fires up both boxes and a quartet of buttons beside the display: it's better to use a tablet running Melco's own Music app, which is designed for use with tablets rather than phones – it doesn't even appear if you search for it using an iPhone – or a third-party UPnP control app such as Bubble UPnP or Linn's Kinsky.

Actually, there are benefits to the Melco Music app beyond just 'keeping it in the family': as well as controlling an entire music collection stored on or via the N10, it also allows you to buy and download music directly from online services such as highresaudio.com, and also stream from the likes of Qobuz and Tidal. It also brings access to the new Melco Intelligent Music Library software, about which more in the panel accompanying this review.

The new low-profile design of the player has required the design of a similarly slimmed-down internal architecture, while sticking to Melco's maxim of only using custom components, rather than taking the easy route of employing computer or other IT parts. But while it's slimmer, and the result of a thorough overhaul, the N10 board still uses the same processor and topology as you'll find in the company N1-series machines, albeit with new power management designed for greater stability and reliability.

Conventional hard drives

The storage here uses a 2.5in small form factor hard disk drive – rather than solid-state storage – mounted on a heavy plate of stainless steel and then topped off with another plate for damping, heatsinking and acoustic isolation, this creating what Melco calls its Highly Stable Storage System, or HS-S². The main casework of both units is aluminium on a steel chassis, and the units sit on isolating feet.

Music can be ripped to the N10 as easily as it using a computer – I didn't have a dedicated D100 disc drive to hand for the process, but the £25 Samsung drive I use connected to my computer (for use on the rare occasions when I rip discs these days) seemed to do the job pretty well. Or of course one can rip music using a computer, then transfer it to the Melco library using a network connection or even a USB memory device.

But what shouldn't be overlooked is the need to maintain a backup of the content stored on the N10, as re-ripping is a tedious task, and hard drives – all hard drives, even Melco's audio-optimised ones – can, and will, eventually fail. Not having a backup is a corner one cuts at one's peril: I recall my esteemed colleague Jon Honeyball dismaying a visitor to this year's Bristol show when he exclaimed, 'What do you mean, you don't have a backup? Are you suicidal??'

Backups get expensive when you have a collection running into the tens of terabytes, as I do mainly due to storing multiple copies of music in a variety of file formats for testing purposes, but will be less of a problem given the 3TB capacity of the N10. Yes, you could again buy the Melco add-on drive, but otherwise a mains-powered storage solution from a respected company such as WD will cost you around £100 or less, or you could even buy a 3TB desktop NAS from Buffalo – part of the Melco 'family', after all – for around £150, and connect that into your home network. You can also play music directly to the N10 from USB storage, by the way, for which the N10 has two further ports in addition to the one you'll be using to connect your DAC.

The big question

The main thing one needs to ask about the Melco way of doing things is not the obvious point, which is how it compares with using a computer into a suitable USB DAC. It stands to reason that, freed of all the additional functionality of the average home PC or Mac, and given the work the company has done in reducing the chance of interference from either the home network or the 'audio computer' from getting into the signal being sent to the DAC, a device such as the N10 must be giving such a DAC the optimum opportunity to give of its best.

No, the main thing is how the Melco approach of using a highly optimised USB source, plus a DAC, compares with the network audio route, using a dedicated network player to access music stored remotely. I must admit I'm quite a firm adherent to the 'network' approach, not least for the cost-effective large-scale storage it allows – although £1500 or so for a five-bay QNAP loaded with decent-sized WD Red or Seagate Ironwolf hard drives is hardly chickenfeed, and even less so when back-up requirements mean you need the whole thing times two!

I've also been won over by the slick interface some manufacturers' apps offer when accessing music – e.g. Bluesound, HEOS, Linn, Naim – and of course there's also Roon, which offers a cross-platform way of bringing together suitable products from multiple brands.

Specifications

Melco N10/N100
Digital music library

Music formats
PCM to 384kHz/32bit,
DSD64/128/256/512

Connections
Ethernet from network,
dedicated Ethernet 'player' port,
3x USB-Type A

Control
Via front panel,
Melco Music app
or third-party remote control

Internal storage
Small form factor HDD,
3TB in N100, 2TB in N10

Accessories supplied
Dedicated 5-pin DC
power cable (N10),
power supply,
Ethernet and USB cables

Dimensions (WxHxD)
N10 head unit 215x61x269mm
power supply unit
215x61x273mm
N100 215x61x269mm

Prices
N10 £6750
N100 £1800

www.melco-audio.com

With the arrival – at last – of its own app, Melco has addressed some of those valued aspects of network systems, so whether it's right for you will be something of a philosophical question, akin to the old division between network music and the 'Mac and DAC' approach. It's just in this case the computer in question is one highly optimised for music playback, and now has an new interface making it a lot more like hi-fi- to better suit its intended position on the main equipment rack.

During the time I've had the Melco on-site, I've been fortunate to be able to use it with a variety of DACs, and amps with built-in digital-to-analogue conversion, ranging from the likes of the Chord Mojo all the way up to dCS's latest iteration of the Rossini DAC, taking DAC-toting amps including the ATC SIA2-100 also reviewed in this issue and Hegel's H390. And in every case I have been drawn to the same conclusion, which is that the N10 provides a blank canvas on which the DAC you choose can do its stuff: yes, there's a little more detail and definition than you'll get when using, say, a general purpose laptop into the converter in question, but it's of the 'final nuances' level of tuning rather than actually revelatory.

As an experiment, I also used the N10 into the digital input on the Naim ND555 I'm currently using as a network player reference, connecting it via the excellent Mutec MC-3+ USB smart clock interface,

as well as trying the Naim against the Melco through the various amps with digital inputs I had to hand during the review period. Yes, clearly there are some variables here one would ideally like to rule out but, good though the N10 was in these various set-ups, I felt that while there was little in it between the ND555 alone and the N10/Mutec/ND555 chain, when using the Melco as a digital source and the Naim as an analogue one.

True, that's a well-known trait of the ND555, which shows all the Naim hallmarks of rhythmic acuity and close detailing, but with a new-found dose of weight and substance, and of course the price is double that of the Melco even before you've added suitable storage. However, there was nothing in the sound of the N10 used as a digital transport to have me abandoning my current set-up and taking an entirely new approach.

And if I were to start from scratch? Well, that might be a different matter, although I'd have to take a long hard look at the storage capacity available: the 3TB offered by the N10, though more than enough for many, would require some very severe pruning of my current library, although variants of the one-box N1 offer double that, and of course extra capacity can always be added via USB or network connection.

All of which leaves one truly compelling reason for exploring the Melco way of working with the music, as you can read below…

Melco's Intelligent Music Library

During the course of the review period, Melco provided me with a second machine: not only was the N100 the most affordable way into the company's world, at £1800 complete with 2TB of internal storage (and the review sample the first black unit to escape the clutches of the Japanese factory), it also came loaded with the Melco Intelligent Music Library, being rolled out across the range through ongoing firmware updates.

As well as developing the hardware for its products, Melco has long been working on the software involved in managing the content stored on them, this reflecting the change in thinking from purely network-based audio to that role as a USB music source for use straight into an external DAC.

. The Intelligent Music Library software is its latest, and most highly-developed attempt at tackling a subject well-known to anyone heavily involved in what's generally called 'computer music': the

handling of the metadata used to identify music files, and the way it's manipulated to allow browsing, searching and so on.

For many users, that can be a make or break: it's no use having a huge music library if you can't find what you want when you want to play it, and of course different users – and indeed various kinds of music – will place their own demands on the way music is tagged, and how listeners want to access it.

Bringing it all together
That last point is the major plank of the mew software, which has been very much driven by Melco's UK guru Alan Ainslie, and brings together two leading third-party software solutions. JThink's Song Kong music tagger has been offered for a while by Melco, as a solution to enables users to 'fix' incorrect tagging automatically, while having special support for music server software including the excellent MinimServer.