

Server solution

Music library storage is becoming more important for audiophiles, so Melco's new additions are timely. **Ed Selley** lifts the lid

Hard drive storage systems have been something that an increasing number of hi-fi users require, thanks to rapidly expanding digital music libraries hosting a multitude of different formats. One of the leading companies in this field is Melco. The audiophile division of Buffalo Technology, it was early out of the blocks with a pair of network-enabled storage devices with the flagship N1Z and more affordable N1A models. I was sufficiently enamoured with its virtues when I reviewed the original N1A in *HFC 397* and am suitably keen to be among the first to experience the newly updated N1A/2.

Much of what differentiates this new model from its predecessor is software related and in an encouraging sign, many of these improvements are also being passed on to existing owners of the original mark one models via a software upgrade that can be easily downloaded and installed from the comfort of your home.

At its heart, the N1A/2 is still a Linux-based NAS drive, but Melco has

been hard at work ensuring that it is easier to use and live with than before. As well as offering Ethernet connectivity in the manner of a conventional network-attached storage drive, like its predecessor the N1A/2 is fitted with a USB output that will interface directly with almost any USB DAC without the need for any external drivers.

Fringe benefits

Where the new software builds on its predecessor is that these new features can now be accessed without any additional supporting network hardware at all. Control of the content can be made via the front panel and display, so if you have a distrust of network hardware, you can bypass it altogether. You can also use a CD drive attached to the Melco to play back a disc in real time should you want to check the content. Material can now additionally be played off a USB drive without importing it first. If you do choose to import the material, the N1A/2 uses metadata specialist SongKong to ensure that tagging and art on all of your music files has the best chance possible of being correctly identified

within the library. SongKong is particularly strong at applying durable metadata to WAV files and so is a particular benefit here.

These improvements are partnered with a selection of changes to the hardware that sees an increase in capacity to 6TB split across two drives. These are of the rotary variety rather than the *en vogue* solid-state units, which Melco restricts to its flagship N1ZS/2 (£7,700). If this capacity isn't enough, additional storage space can be connected for

backup, meaning that all but the most exhaustive digital music collections should be accommodated.

A quick glance at the rear panel reveals that one of the USB connections is not like the others. The audio output is now a USB 2.0 that is isolated from the rest of the circuit and uses a Neutrik connector. As most USB audio software is written for USB 2.0, Melco has decided to ensure maximum compatibility by using a socket running to this standard rather than USB 3.0.

There has also been some detail revisions to the basic internal design of the N1A/2. The power supply is isolated by a capacitor bank derived from the more expensive models and the supply itself has undergone some minor updates too. The hard drives are of a new type and have been placed on a vibration-isolating cradle in order to protect them from the outside world. Other niceties like the low-noise display, precision clock and the dedicated Ethernet output to a network player continue as before.

Melco's long-promised dedicated control software has still yet to materialise, but it responds to all streamer control apps that I try out and universal controllers like Bubble for Android work when using it via the USB output.

If this doesn't sound terribly exciting, you can rest assured that Melco isn't looking to get the pulse racing with the N1A/2's specification. Indeed, what this diligent, borderline obsessive work has resulted in is a device that is almost deliberately unobtrusive. Most importantly, this is

The performance via the USB port is discernibly superior to any computer

a completely silent NAS drive. It might have moving parts in it, but you'll struggle to hear them in a normal room even when there's no music playing. The boot-up time from cold is extremely quick and the review sample is utterly stable in the time it is on test.

Externally, the build quality of the N1A/2 is solid, while the carefully assembled casework feels like a traditional piece of hi-fi equipment. The controls are highly responsive and nicely weighted and the OLED display is both informative and easy to read. It sits in a rack like a piece of equipment you would be happy to have visible on show, rather than something that you feel compelled to hide away. Compared with rivals featuring CD mechanisms built in (see *How It Compares* box out), the N1A/2 is always going to be less elegant when you have attached peripheral drives, although this is only likely to

be a short-term configuration when adding CDs to the library.

Initially, testing is done via the dedicated Ethernet output into a Naim ND5 XS (*HFC* 352) and an Arcam rPlay (see p60) networked music streamers and the performance of the N1A/2 is as unobtrusive as its appearance, but after a little while you start to appreciate some of its virtues. Firstly, the review sample arrives with an impressive amount of content on it – something in the order of 9,000 albums – and is sufficiently powerful that it can supply information on this extensive library to streaming control apps in a timely fashion with the minimum of fuss.

Sound quality

Sonically, the whole point of the N1A/2 is that it doesn't draw a huge amount of attention to itself,

although some tests with the Naim ND5 XS in particular are rather illuminating. Using the dedicated output of the Melco by way of a comparison with a generic Synology Diskstation connected to the same router (and taking the time to switch the Naim over to a router connection rather than running through the Melco), reveals that the performance is fractionally less congested and has a slightly more fluid presentation. Listening to a 16/44.1 rip of Wild Beast's *Two Dancers*, the two-part title track comes across as more natural and unprocessed than the same material does from the standard NAS drive.

Interestingly, the Arcam doesn't respond in quite the same way to this test material. The performance of the rPlay is much more consistent across the two different network devices and discerning which one is

which is something that pretty much boils down to luck. Of course, if you spend £400 on a streamer, it is unlikely that a £2,100 NAS drive is going to be on your immediate shopping list, but it is fair to say that the N1A/2 doesn't necessarily deliver an immediately obvious benefit for all network streamers.

Where the N1A/2 really shines is when it's used as a USB source. The simple joy of connecting any suitably equipped DAC via USB is as stable as it is via conventional Ethernet connection and even if you insist on turning it off each evening, it will still reinstate the connection shortly after starting up. More importantly, the sonic performance via the USB connection is discernibly superior than via any computer that I have been able to compare it with – including a newly arrived laptop with solid-state drive.

Connected to a Chord Hugo (*HFC* 386) DAC, the performance feels considerably more organised and cohesive than via a laptop with the same files. Playing a 16/44.1 CD rip of the Manic Street Preachers' *Interiors*, the Melco manages to effortlessly reduce the sense of congestion and compression on

the recording and gives the Chord more space to let it demonstrate its exceptional tonality and spaciousness.

Some tests running the N1A/2 without any form of router are largely successful, but I'm not completely sure that I see any advantages in doing so – I certainly can't discern any sonic differences from running it in this configuration. I can imagine that the idea of setting up some supporting network hardware might not appeal, but I don't find running the Melco without it is a great deal easier, so I'd recommend taking the plunge and trying to get a router up and running at the same time.

One of the reasons for ensuring that the Melco has internet access beyond control convenience is that the CD-ripping functionality is extremely impressive. Using an LG DVD-ROM connected to one of the USB ports, it is able to produce rips that sound imperceptible to the ones made using a laptop and dBPoweramp. SongKong is extremely accurate and quick when it comes to identifying the tracks, while the ability to check the tags of imported files is no less invaluable. As the number of computers with built-in CD drives continues to decline, this ripping functionality is going to become increasingly more significant.

It is important to stress that the N1A/2 moves performance on from its predecessor, even if those differences are not night-and-day ones. The original N1A remains excellent as a server, but the newer model comes across as quieter, more refined and even more unobtrusive than before and the changes to the USB audio connection ensure that this is pretty much a must-have device for USB users.

Conclusion

A proportion of people reading this will no doubt already have made the mental calculations that if they buy products x, y and z, they can replicate this functionality at a saving, and there is no escaping the fact that the Melco is fairly pricey. But this rather misses the point. The N1A/2 is a

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fit-and-forget device that offers an impressive range of brilliantly executed functionality to make your listening experience better. For many of us, this is more than sufficient to grant it a place in our audio system ●

SONGKONG FUNCTIONALITY

One of the key additions to the spec of the N1A/2 is the ability to access the SongKong tagging service. The main argument for the use of SongKong is the means by which it obtains accurate information. As well as a database of material compiled from MusicBrainz and Discogs, the software is able to listen to material and apply tags based on acoustic markers.

These tags can be durably applied to all types of files including WAV and DSD. This is important as neither of these formats supports embedded tagging in the way that FLAC or ALAC material does. As such, tags that can

work fine for one device, can be absent when used on another. SongKong gives you the best chance of ensuring that information is visible on all products you might happen to use. As well as this headline functionality, SongKong offers the ability to identify and remove duplicated material from your library, freeing up space and making for a more orderly browsing experience. This is done via listening to the material rather than simply looking at existing metadata, so SongKong knows when a duplicated name should be present but will identify the same physical song if it has been doubled up.

**HOW IT COMPARES**

The N1A/2 sits between two models from rival Innuos and takes some elements of both. It is more expensive than the Zen MkII XL, but offers more capacity. In turn, the N1A/2 is more affordable than the flagship Zenith, which uses solid-state drives. Both Innuos models have built-in CD mechanisms to aid with ripping and Innuos has its own control software while the Melco relies on third-party offerings. The N1A/2 hits back with a better choice of connectivity, a very useful display and that dedicated USB output. Unless you absolutely must have a CD drive built in, the Melco looks the stronger offering.

**DETAILS**

PRODUCT
Melco N1A/2

ORIGIN
Japan

TYPE
NAS drive

WEIGHT
7kg

DIMENSIONS (WxHxD)
436 x 70 x 352mm

FEATURES

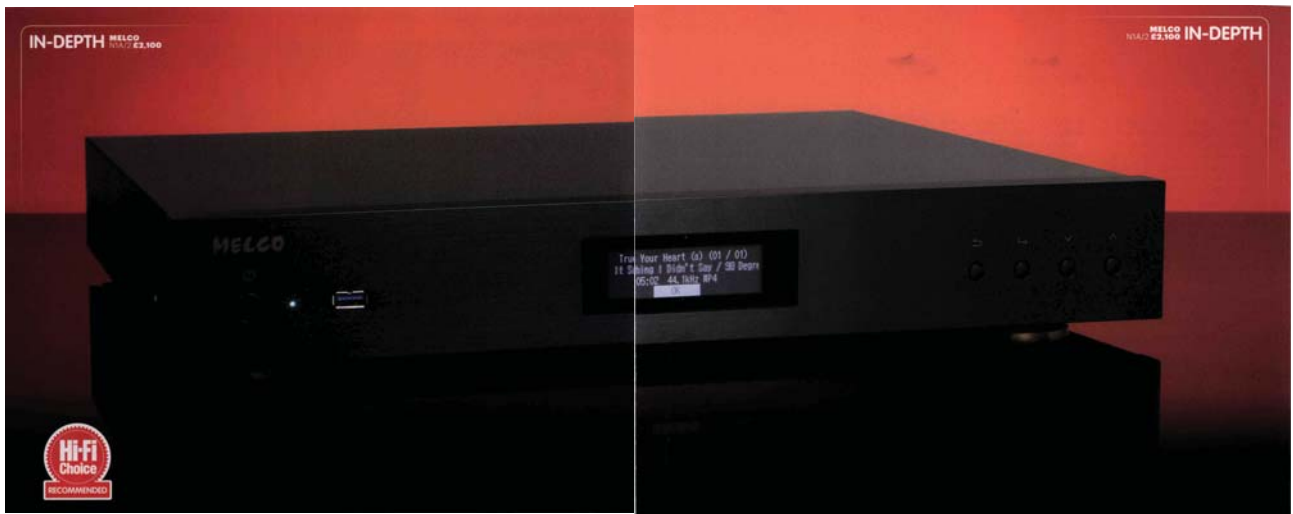
- 6TB internal storage
- Inputs: 2x Ethernet; 4x USB 3.0; 1x USB 2.0

DISTRIBUTOR
Kog Audio

TELEPHONE
024 77220650

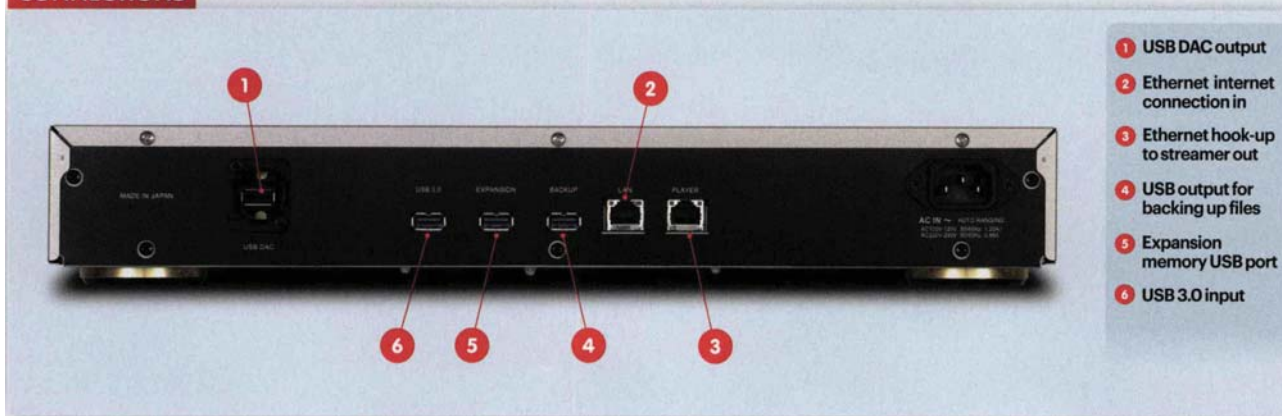
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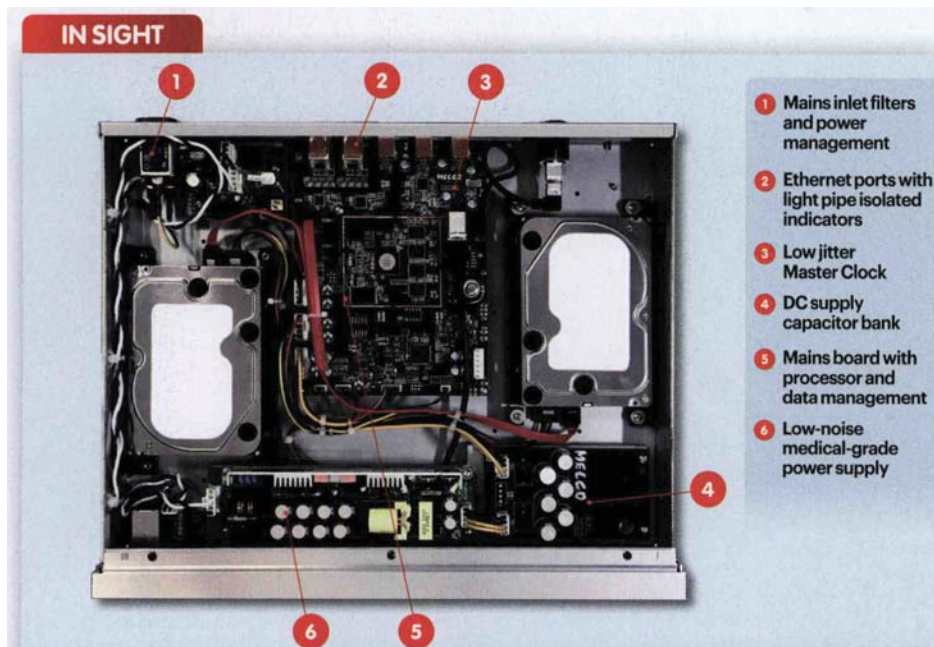
The design is unobtrusive and the OLED screen is a genuine boon

CONNECTIONS



- 1 USB DAC output
- 2 Ethernet internet connection in
- 3 Ethernet hook-up to streamer out
- 4 USB output for backing up files
- 5 Expansion memory USB port
- 6 USB 3.0 input

IN SIGHT



- 1 Mains inlet filters and power management
- 2 Ethernet ports with light pipe isolated indicators
- 3 Low jitter Master Clock
- 4 DC supply capacitor bank
- 5 Mains board with processor and data management
- 6 Low-noise medical-grade power supply