



NAS the way to do it

Can a dedicated audiophile NAS drive deliver a performance upgrade? **Ed Selley** is eager to find out

There is a certain irony to the timing of me reviewing this product. Over the last few issues of *HFC*, I have made my position abundantly clear that I don't believe that going to town on networking accessories is a particularly fruitful approach to upgrading an existing system. No sooner than I have committed those words to print, I find myself in possession of a NAS drive that the manufacturer claims is specifically optimised for audio playback. Me and my big mouth.

The Melco N1A before you here is the more affordable of two bespoke NAS drives that have been designed from the ground up to offer the

highest performance audio playback possible. The company that makes them isn't some young upstart either. Those of you with longer memories will remember Melco from the seventies and eighties where it produced a range of products in the classic high-end battleship school of Japanese electronics. Still under the stewardship of founder Makoto Maki, the company then moved into IT hardware and adopted a name more familiar to the present, Buffalo.

This means that while the N1A is a decidedly specialised proposition, it comes from a company that has a very strong reputation in this field and that it's a genuine piece of clean sheet engineering rather than some

DETAILS
PRODUCT
Melco N1A
ORIGIN
Japan
TYPE
4TB NAS drive
WEIGHT
7kg
DIMENSIONS
(WxHxD)
436 x 70 x 352mm
FEATURES
• Storage 4TB internally
• 2x LAN; 3x USB 3.0; 1x USB 2.0
DISTRIBUTOR
Kog Audio
TELEPHONE
024 77220650
WEBSITE
melco-audio.com

mainstream components in a nice box. In fact, the N1A goes about the business of providing network storage in a way that is completely different to any other device of this nature that I have seen.

The principle difference between what you see here and a conventional NAS drive is how it connects to your streamer. Around the back, there are two Ethernet sockets instead of the more usual one. The N1A is designed to connect directly to your streaming device via the first of these ports. The idea being that by removing the need for the connection to be as fast as possible (even high-resolution audio doesn't represent an especially challenging network load), the connection can then concentrate on performing a single role over a quieter and less data-filled line. As the Melco is the point of connection between the streamer and the router, any additional drives that are hooked up to it will also benefit from this specific output.

As one of the key benefits of a streamer is the control interface, the Melco then has a separate Ethernet port that goes direct to your router. This allows you to communicate with the streamer through it and additionally to use the music on the N1A in other systems and locations. In practise, this works well. While my Naim ND5 XS (*HFC* 352) needs to

have its factory defaults restored, once done I can communicate via the iPad app as before.

To further assist the quality of the audio that the N1A streams, it has a specially designed power supply and casework much more familiar in design terms to a piece of audio equipment than an IT one. This also means that when placed in a rack, it looks very much at home there. It sounds at home too – to all intents and purposes it is inaudible in normal use. One useful feature is the status display, which gives some information on what it is doing at the time and subsequently warns of the need for

It might look like a regular piece of hi-fi kit, but the performance is anything but

any troubleshooting. It's always wise to buy equipment with our ears rather than our eyes, but I don't think it hurts that the Melco is designed to look and indeed feels like a dedicated piece of hi-fi equipment.

The other feature worthy of note is its software. The N1A is produced with a view to being painless to set up even with no prior experience and in this respect it has to be considered as a success. It is able to handle a massive variety of file types including DSD, which can be a sticking point for some network products, and – factory reset on the Naim aside – talks to everything that it is connected to it with no further tinkering. As well as conventional search terms, files can be browsed by type, which is fairly handy. It is extremely fast to load taking well under 30 seconds from first switch on to being good to go. The 4TB storage is hefty, but further drives can be connected to augment this and to provide backup options too. Another feature that should be live by the time you read this is the ability to set it as the default location for files regardless of where you download from.

Finally, a dedicated USB output allows the Melco to be connected to most USB DAC products with no requirement for a driver to be installed, thanks to it being a Linux platform under its skin. The connected device is interrogated, its functionality established and it will then convert any files it has that can't be played natively to ones that can.

Sound quality

A quick test with a Chord Hugo suggests that it does indeed do what it says on the tin, and means that the N1A has some potential outside of use with a streamer. With it connected directly to the Naim and also to a Netgear router on a closed local

network, the results are not night and day, but there are some signs that the direct connection process has some tangible benefits.

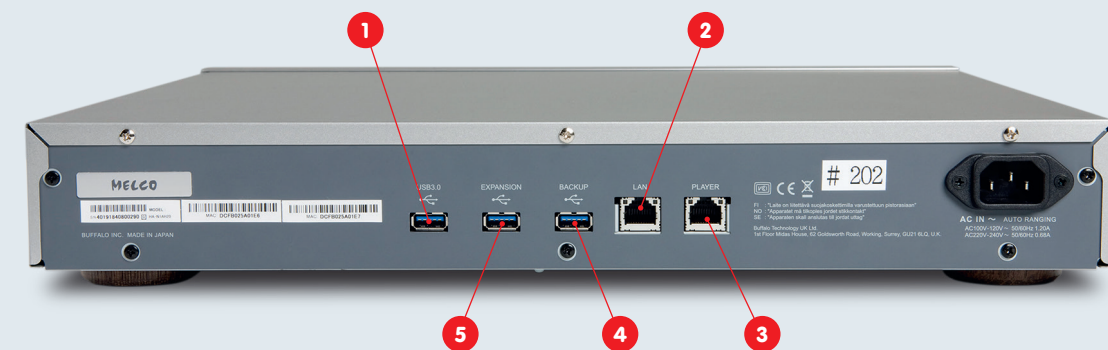
With material copied across from my standard drive, which is itself connected to the same router to allow comparisons between direct and via the router, it ekes out some notable advantages. The easiest way to describe the effect is that presentation takes on a slightly more natural air. With the 16/44.1kHz rip of the Mark Lanegan Band's marvellous *Blues Funeral*, the dense and complex tracks are very slightly opened out and sound less congested.

If you are serious about streaming, this is a very fine one-stop solution

Moving across various pieces of music at a variety of bitrates, this noticeable decongesting of material is consistent. Oddly, the complexity of music doesn't seem to make a great deal of difference to what the Melco does. The pared back simplicity of Jon Allen's *Deep River* still manages to sound a little more fluid and natural in the same manner as Aphex Twin's *Syro* despite the yawning chasm in presentational style between the two albums. Similarly, high-resolution material retains the less digital sound that a lot of material can possess, but listening to an 88.2kHz version of The Police's *Reggatta de Blanc* back to back with my conventional NAS still sees the Melco edge it with a sense of effortlessness to the music that really only becomes apparent when you switch back to the conventional NAS.

At no stage in testing does its impact fundamentally change the presentation of the electronics it is

CONNECTIONS



- 1 USB 3.0 port
- 2 LAN Ethernet port to router
- 3 Ethernet port to streamer
- 4 USB 3.0 backup port
- 5 USB 3.0 expansion port

Q&A

Alan Ainslie

General manager,
Melco Audiophile NAS project



ES: The audio USB connection is an interesting addition, do you see people using the N1A as the source for USB audio to be a growth area?

AA: The nice thing about the audio USB connection is that it is a two-way dialogue allowing the DAC to be matched to the source in terms of sample rate capabilities etc – at least in the new Class 2 implementation. The down side is that unless great care is taken it is not good for audio from a normal computer, as USB is low down the resources allocation, and there are often driver requirements and complications. In the case of Melco USB 3. Class 2 is an ideal situation as the USB 3.0 DAC connection simply gets top priority on the low jitter internal data bus – so from a minimalist hi-fi perspective it is hard to imagine anything more direct and cleaner. Already the signs are that this connectivity is quickly gaining acceptance by audiophiles.

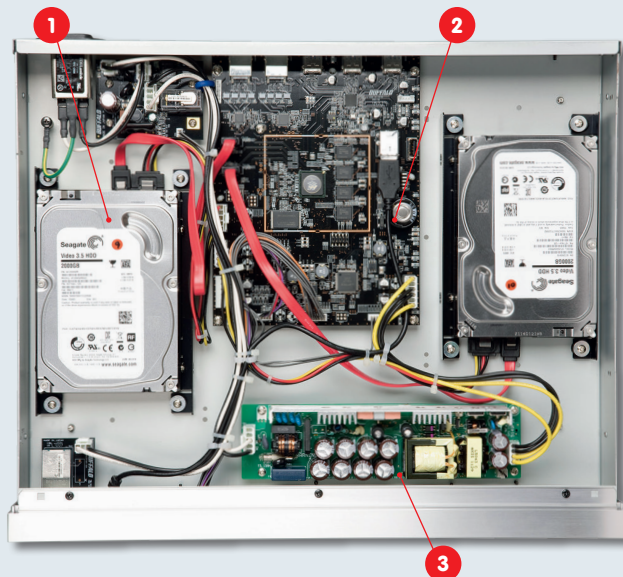
Is the N1A something you see owners upgrading existing NAS based systems to using or a fit and forget device for high-end users buying their first streaming system?

Melco was originally conceived to allow users into the streaming music world without any requirement for computers during setup or requiring any IT knowledge. That includes such essentials as simple backup process as well as easy import of music, easy expansion and direct downloading to the Melco – advantages that are soon evident to existing IT NAS users who, even if experts, have trouble with Rsync and so on.

But as a direct consequence of the fact that Melco is not a redesign of any IT NAS but is totally new engineering from the start, there is the huge sound quality promise as a consequence of the architecture being totally different to IT NAS.

So this creates new markets as people can migrate from IT NAS to Melco for ease and stability, and sound quality. As well as making it far easier for anyone who has been considering the lure of high-definition music to finally make the step.

IN SIGHT



- 1 Low noise HDD on isolation pads
- 2 Mother board with multi-core processor and low jitter system clock
- 3 Industrial grade 60W power supply

HOW IT COMPARES

The Melco is pricey when likened with more conventional NAS drives, but compares favourably with specialist offerings like Naim's Unitiserv. Compared to the £2,290 Naim, the Melco offers double the capacity and superior format handling and playback options thanks to that trick adaptive USB output, as well as a near £700 saving in cost. The Naim's trump card is that it can rip material directly to the internal drive thanks to the CD mechanism built in, which is something that the Melco cannot do. If you are confident in the process of ripping your own CDs, though, the N1A makes a lot of sense in this context.

connected to. The powerful and slightly dark presentation of the Naim ND5 XS is not altered by changing from my standard NAS to the N1A. The most relevant comparison to the effect that it has on a system is something like the IsoTek Evo 3 Sigmas I reviewed in *HFC* 394. If you like the way your system sounds, the addition of the Melco keeps these traits, adding a little extra refinement while it does so. What it cannot do (and to be fair, Melco doesn't claim otherwise) is to resolve presentation issues you might find that you have with a system. When it is used as a conventional NAS – in this case to render the same library in Foobar on a laptop – the performance is the same as my conventional drive, no better or worse – although the excellent format support is as useful here as it is on a streamer.

The burning question with the N1A is how much this gentle boost in performance is really worth to you. There is little doubt in my mind that it is beneficial, but like a number of components that affect the overall performance of a system at an indirect level – mains treatment, equipment supports or as in this case, media delivery – it is really only something worth looking at if you have an existing collection of components that you are content with and you are seeking to extract more performance from, rather than risk upsetting the balance of the whole by changing a more fundamental component. In a performance sense alone, it is not a magic bullet at the price point.

Conclusion

Happily for Melco, the N1A must additionally be judged on more prosaic terms as to how it performs as a NAS drive and here it scores very well. This is undoubtedly an expensive option, but it is simplicity itself to get going and once up and running it provides an impressively flexible operating experience. If you can follow a wiring diagram it is a network audio product that a complete novice could get going in a very short space of time. Once up and running, it can sit in a rack of hi-fi equipment without drawing attention to itself either visually or audibly in a way that more IT-focused competition is unable to achieve. The Melco N1A is a network accessory that manages to deliver both performance and usability commendably well. If you are serious about streaming, this is a very fine one-stop solution to get the very best out of your system ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY

★★★★★

VALUE FOR MONEY

★★★★★

BUILD QUALITY

★★★★★

FEATURES

★★★★★

OVERALL

★★★★★

LIKE: Functionality; build; performance boost over competition
DISLIKE: Expensive compared with a conventional NAS drive
WE SAY: 4TB NAS offering great functionality and impressive sonic performance