

# Melco N1Z

MARTIN COLLOMS EXAMINES MELCO'S N1Z MEDIA AND MUSIC SERVER WITH ITS SOLID STATE DRIVE



The Melco name may not be familiar to many readers, although this audiophile-oriented Japanese brand did have a pre-1980 presence, as the manufacturer of some high end turntables which were at one time distributed in Britain by Be Yamamura. What is less well known was Melco's subsequent decision to concentrate on the computer component market, specialising in hard drive design and manufacture – specifically the famous Buffalo brand with its billion dollar plus turnover.

The increasing use of hard drives for storing downloaded and ripped digital audio, including basic versions of Buffalo drives in NAS form (network attached server and media store) has led Melco to look to its roots and use its manifest experience and production resources to create a high fidelity music vault under the original audio brand. It is important to note that this *N1Z* and its lower cost brother the *N1A* are not conventional network servers. Rather they are designed to be connected *in line* rather than *to* a network. By design they are high quality music vaults, ideally to be placed local to an audio replay streamer thus presenting the lowest noise and jitter audio feed possible for improved sound

quality. Their network connection mode is that of a feed-through unit rather than a spur, and in this role they constitute the final link to the streamer which actually replays your music. In a sense it can be regarded as a low noise network isolator and filter, opto coupled.

Combined with an audiophile streamer, such as those from Linn, Naim, Chord Electronics or any of the many other choices now available, the Melco concept is a successor to the two-box CD player, replacing a *disc drive* and *DAC* by a *music vault* and *streamer/DAC*, now linked by a network cable rather than a S/PDIF or equivalent data path.

Certainly the audio streamer market has expanded in leaps and bounds in recent years, and many audio enthusiasts now enjoy convenient access to their digital music libraries from network connected hard drive storage. This storage is typically an audio dedicated and configured NAS drive, frequently with a degree of storage redundancy to allow for automatic safe recovery from partial failure of a storage division. For the terabyte or so needed for a good sized audio library, such drives are now so inexpensive that there is no excuse not to have a

few more terabytes lying around for reliable backup (though in many cases some degree of computer literacy is needed to service this activity).

However, even though such systems have been around for some years, many audio enthusiasts who are not particularly computer literate find such systems rather intimidating, especially when they lock up, go wrong, or (worse still) fail, with the attendant worry that painstakingly ripped and downloaded content will be lost. At the very least the system will need a network mechanic to sort it out.

In context it's therefore easy to see the appeal of online streaming, where almost unlimited content at pretty high quality is now provided at the receiving end without significant hardware investment or indeed maintenance requirement – provided a good internet link is available and a subscription paid. These are difficult decisions for the audiophile who correctly senses that high quality rips from his or her own CD library, together with some downloaded hires files, all stored on a local dedicated 'audio' drive, will likely deliver the optimal sound quality, but at what degree of installation and operational difficulty?

This is where the first products in this new range of Melco audio drives come in: the £6,200 audiophile *NIZ* flagship with 1TB of solid state drive (0.5TB in optional RAID1 backup mode, but probably not required), and the similar £1,600 *NIA* with 4TB of spinning hard drives (2TB if 'RAIDed'). The general idea was to create some high reliability, fit and forget music drives with very simple user interfaces, and specifically tailored to the hi-fi separates market. Those consumers who prefer to avoid getting involved in operating computer programs to manage a system would appreciate the way these 'servers' successfully avoid computer based connotations. Rather they may be regarded as a form of digital audio 'transport', a modernised digital audio drive to be placed alongside a matching audiophile streamer/DAC.

Melco has designed in a number of features to make operation much more straightforward, not least a handheld remote control and a control app facility. It also intelligently responds to user actions, such as recognising the connection of a drive with music on it, for example by asking whether it is to be copied into the main store, which may be accomplished with a simple push of the 'yes' button. Furthermore, files from external, internal and entire networked storage locations may also be selected for replay *via* the connected DAC/streamer. Conveniently, the front panel OLED display shows the operating modes, while simple pushbuttons allow the direct input of operational commands. It also has USB3 for superfast music file transfers, including easy local backup of your files. It handles up to 384kHz/32-bit PCM and

5.6MB DSD, and Melco also supplies special low-jitter network cables with precision plugs.

Furthermore I ought to mention the unit's Direct Music Download facility, which should be up and running by the time this review hits the streets. The Melco may be assigned as the recipient from download sites, and purchases may be made directly to this server from anywhere, even from a mobile, and be already filed when you return. Account setting and encryption for the provider is held securely within the Melco, and full error checking is made to ensure a perfect download in your absence, accomplished *via* intelligent file transfer programming. This facility was already working hands-free from highresaudio.de before the *NIZ* left our premises.

Installation was straightforward, connections are automatic, and if required the network address is shown on the display. It has a standard IEC mains cable and front panel on/off switch. The few other buttons cover file selection and copy/backup modes. An inexpensive CD ripping drive may be plugged in, or a program such as dBpoweramp used, with automatic transfer to named files.

### Sound Quality

The *NIZ* proved easy to install, using the remote control in conjunction with the OLED display on the Melco. Tracks on the Melco drive could be accessed rather like a CD player. However, unlike a CD player where only one disc is available, it may be necessary here to navigate a potentially voluminous library of stored music (ideally with some foreknowledge of its contents). While this is one viable way to proceed, its connection to a network can also come into play, by providing access to the control app for the streamer/DAC, and thus a convenient combination of cataloguing and remote player control *via* a pad or smartphone.

We auditioned both operating modes – direct and with a network connected – and were aware of an almost subliminal improvement in signal-to-noise ratio when the rest of the network ahead of it was omitted: a greater sense of calm with sweeter textures on subtle low level detail. Indeed, in some respects the sound was the best I have yet heard for digital audio replay. The quality of a near infinitely distant backdrop heard on some great recordings was particularly rewarding. Here the soundstage seemed to stretch way back, and was combined with excellent detail; mid and treble sounds showed exquisitely fine textures.

Subjectively there was absolutely no denying that the direct arrangement combined the benefits of both low noise and very low jitter, and that this was a

**Review System**

Audio Research *Reference 5SE*, Townshend *Allegri* control units; Vitus *SIA-025*, Naim *NAP300* and Krell *Duo300* power amplifiers; Naim *UnitiServe* network server and S/PDIF source; Naim *NDS Streamer/DAC/555 PS*, Chord Electronics *Hugo DAC*; Wilson Audio *Sophia Series 3*, Magico *S-5* loudspeakers; Naim *FRAIM* racks; Transparent *MM2* and Naim *NAC A5* speaker cables; Transparent *MM2* and Van Den Hul Carbon TFU interconnect cables.

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major step in an audiophile direction. Tonal colours were excellent, image focus approached the state of the art, the noise floor was clearly lowered, and the resolution of fine detail was more than impressive, so for many this will be a clear win-win. The bass was clear and nicely textured with excellent detail and weight, while the low-jitter treble sounded fine-grained and sweet, with an almost liquid quality.

In terms of musical involvement we felt that its immediate and transparent presentation did draw in the listeners, even if inclusion of the Melco drive somehow diluted some of the drive and rhythm in the music tracks played. Timing sounded somewhat elastic.

Instead we savoured the highly refined aesthetic beauty of sound rather than unconsciously stepping into the bear. Think of it as a kind of massive storage memory delay with precision re-clocking for digital audio, and we have heard the rhythm aspect of our music take a step back on other occasions when

working with conceptually similar memory re-clocking processes. It is hard to score a drive, as it is a touch remote from the actual rendering of the music file, but on balance we'd suggest 85 marks.

The *N1Z* has several replay modes, and while it lacks an S/DPIF output, it does have USB. We thought that there might be a USB direct mode (male to male) which would drive the corresponding front panel socket on a Naim streamer, but it was not to be. However, there is a low-jitter computer-style output to a corresponding USB B connection on a DAC, and a modest improvement in sound quality may then be obtained by disconnecting the network cable with all its electronic housekeeping activity, effectively rendering the DAC as a passive receiver. However, the USB direct mode is viable with a Chord *Hugo via* its mini USB plug connection, for example, and sounded very well.

**Conclusions**

This is a well thought out product with particularly good functionality. It fulfils the objective of providing a simple-to-use 'computer free' hard drive music source with very low noise and jitter. The luxury build *N1Z* aims high and is correspondingly costly, but its price still makes sense in the context of an audiophile digital transport, while the 4TB *N1A* at almost one-quarter the price is always available for a small reduction in quality. On balance, both examples may be recommended, except perhaps for diehard rockers, who will have to try it out for themselves, ideally in their own systems.

**SPECIFICATIONS**

Make, model	Melco, N1Z
Type, network location	Pre-programmed server drive Last stage for streamer DAC
Connections	2 x Ethernet, 3 x USB 3.0
USB	USB 2.0 with 5V Power
Build/power	All aluminium, 2x 30W supplies
Drives	2x 512GB solid state (low noise versions)
Clock	Audio grade Low jitter
Ethernet Connection	Light pipe Led 'light off' function
Weight/Price	7kg, 15.5lb, £6,200

**Technology**

Aside from a topology which is nicely directed at ease of use, particular features that distinguish this product are concerned with low jitter, and begin with the very low mechanical noise, and the low leakage electronic switch-mode power supplies, fully separated between the input and output sections. In its buffering and isolation role, the network connections are made with high speed medical grade ground-free optical interfaces for superior isolation and noise rejection. The selected quality solid state drives are specifically reprogrammed to run more quietly electrically, so the usual thrashing around of fast cycling data has been quietened, and very low jitter precision crystal clocks abound.

Thought has also gone in to the custom UPnP server. For example, 'FOLDER view' is accessed right away, so the right start point is provided. It does support DSD and will support multiple UPnP servers including the audiophile's current favourite MinimServer. UK technical support comes from the experienced and enthusiastic Alan Ainslie, who also brought the review unit for *HIFICRITIC* and was an absolute mine of information. A dedicated Melco app is being written right now, and will be compatible with a number of media servers – it's currently shipping with a customised install of *Twonky 7*. On start up, just press the power button and it is ready within 15 seconds. Shut down takes 5 seconds and power interruption is handled safely without intervention by the user. The physical build is comparable in styling and proportion with Linn's digital replay products (silver versions at least), but it also looks fine alongside a number of other products.