

AUDIO FILE

Network-enabled media storage device
 Made by: Buffalo Technology, Japan
 Supplied by: Kog Audio Ltd, UK
 Telephone: 024 7722 0650
 Web: melco-audio.com; www.kogaudio.com
 Price: £3750



Melco N1-ZH60

Melco's £3750 N1-ZH60 digital music source is a slimline unit that provides storage, backup and digital playback to a USB-connected DAC or network-connected streaming player. It has recently been updated with two 3TB hard drives.

To the rear are three USB-A hubs, for importing content (including from CD and BD-drives), hosting supplementary storage and backing up, and a fourth to power or recharge other USB devices.

There are also two optically-isolated Ethernet ports. The 'Player' output assigns its own IP addresses,

'The Melco reveals the depths of "big gun" USB DAC solutions'

feeding your network player/DAC directly, while the loop-through LAN input maintains Internet connectivity for streaming radio and other online services. You'll also need this hooked-up if your network player is governed by an Android/Apple app running on a smart device, and if you want to access the media library on the N1-ZH60 itself to push out selected files via USB to an outboard DAC.

There's no remote control so the N1-ZH60's menu must be navigated via pushbuttons to the right of its display. This covers everything from the status of the internal/external drives, the music database and backing up or restoring a full music library, through to defining the appearance of its OLED display.

The 'Settings' menu is where the audiophile should be most attentive. For example, 'USB-DAC' configures the N1-ZH60 to deliver DSF/DSDIFF content natively or downsampled to LPCM.

There's also a USB controller option. In 'Mode 0' the selected playlist resides on the control point app while Mode 1 dumps the playlist onto the Melco unit itself. Mode 1 also allows the N1-ZH60 to recognise any attached USB device by name and invoke an asynchronous transfer of the selected music data.

This driverless USB operation and direct network protocol is all part-and-parcel of the N1-ZH60 looking and behaving like a hi-fi separate rather than a computer peripheral. Its Linux OS is designed to boot-up and close down within a few seconds and is very tolerant of power interrupts. Then there's the bespoke motherboard itself, based around a Marvell Armada 370 SoC (System on Chip). This is deliberately 'slow-clocked' with low-jitter data flow in mind.

Between its LAN and 'Player' ports a severe software filter strips out any housekeeping comms finding its way onto the home network. So, and as the N1-ZH60's 'Player' output is not communicated via a switch, it can send its timed data payload in the correct order with no unnecessary packets (or other DLNA traffic on a shared home network).

The N1-ZH60 comes pre-loaded with a custom version of Twonky Server 8 although it's also possible to install a MinimServer application.

ABOVE: An OLED panel and up/down/enter/back buttons allow the Melco to be configured with ease. The display also reveals attached USB/network devices and DSD streaming capability. It's available in silver or black alloy casework

This offers DOP conversion that supports DSD replay over an Ethernet connection. Melco's own firmware supports DSD over USB.

PROVING THE PUDDING
 What really excites us about the Melcos, and this intermediate model in particular, is its application as a USB transport driving an outboard DAC. Even with a modest DAC such as Chord's Mojo, the improvement in definition, in tonal colour and treble purity was both obvious and not a little startling.

Listening to Joseph Wöfl's little-known string quartets with the Pratum Soloists [Caro Mitás; DSD64], the Melco/Mojo combination revealed so much more of the character of these period instruments as they danced the *Allegros*. Via a laptop these Russian performances had sounded almost mundane, while the Melco revealed their true sensitivity.

The N1-ZH60 can also reveal the hidden depths of 'big gun' USB DAC solutions such as Devialet's Expert 1000 monoblocks, which – despite their inherently fine jitter rejection and substantive signal-to-noise – sounded more dynamic still, with slicker transient detail painted onto even 'blacker' acoustic backdrops.

The close-miked, whistled harmonies of Livingston Taylor's 'Isn't She Lovely' from *The World's Greatest...* [Chesky; 96kHz/24-bit] all but caressed our ears with its rich, silky tone while the Floyd-esque layers of David Gilmour's *Rattle That Lock* [Columbia; 96kHz/24-bit] peeled away before our eyes.

VERDICT

This is a reference-quality front end that combines punch with panache as it draws a veil from the most familiar of recordings to suggest new and ostensibly hidden musical textures. It's a thrilling ride. ⤴

HI-FI NEWS SPECIFICATIONS

LAN (1000BASE-T)	One via router, one direct to player
USB (USB 2.0/3.0)	Three ports plus one 5V charger
Digital jitter (StreamUnlimited)	6120psec (6170psec via PC network)
Digital jitter (Chord Mojo)	<5psec (85psec via PC USB)
Power consumption	14W
Dimensions (WHD) / Weight	350x65x370mm / 7kg