

# MELCO releases new firmware update that adds Direct CD-Import to N1 Music Libraries

## Firmware update V3.00

Available as an Internet Update to existing machines at no cost  
Adds bit-perfect CD import function to all MELCO Music Libraries.

# MELCO



MELCO FIRMWARE  
UPDATE V3.0  
with Direct  
CD-Import

**20th May 2016 – London – MELCO, the audiophile division of leading Japanese computer peripheral company Buffalo Technology, has announced the launch on 20th May 2016 of its latest firmware update to its Digital Music Libraries. Available to all existing and new owners, V3.00 FW enables users to make a once-and-for-all archival quality import of their beloved CD collections onto a MELCO that will never have to be repeated – it will be so good that it cannot be improved.**

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In keeping with the Melco concept of simple operation without sound quality compromise, it is now possible to import and store music using Direct Download from Web Vendors, USB import, or Network Transfer. Additionally, MELCO will now support direct import of music from CDs as either Red Book CD Music Disc (CD-DA), CD Extra, Mixed Mode CD) or CD Rom data disc containing audio files – all with auto format recognition.

This newly developed function allows a user to take CDs from their collection and make a bit perfect import into the MELCO – confident that the sound quality cannot be bettered and safe in the knowledge that if they use the easy MELCO backup routines, the music will be safe and secure.

Set up is simple - the CD is read using a USB connected CD loader direct to the MELCO via the front panel USB socket, or the rear-mounted USB 3.0 socket. (A list of compatible drives will be available on the MELCO web site, although any high-performance drive will deliver the desired performance) The Direct CD-Import function starts automatically once the CD is recognised and the imported music is automatically located within the MELCO in a folder called 'CD-Import' and is date stamped for user convenience.

**Music storage can be selected as either .wav, or .flac with selectable compression ratios including zero compression flac – favoured by audiophiles as there is no unpacking burden for the DAC. Both flac and wav have fully embedded metadata.**

Metadata is derived from the industry leading Gracenote database. This includes high-resolution cover art royalty free and totally legal,. Integration between the metadata download and the internal MELCO UPnP server ensures a comfortable user experience.

As the number of circulating CDs continues to rise, there may be circumstances with conventional solutions whereby the incorrect metadata decision is made by the system. MELCO removes any chance of metadata mistakes or duplications by offering the user the available choices on the front panel display, allowing the selection of the correct album before the download of



Melco's N1ZS10

metadata. This MELCO-developed system safe-guards the user from subsequent time-consuming and frustrating metadata editing. The result is a true archive quality duplication of the users CD library, leaving the user confident that they have the most accurate file and that it will never be necessary to import the CD again.

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Users need to satisfy themselves of local copyright laws before using the MELCO Direct CD-import feature and MELCO specifically does not encourage any copyright infringement.

Supporting the Melco Direct CD-Import feature are the following additional features, all of which are packaged within V3.00 firmware:

### Local USB player:

- Precision Start permitting connected DAC settling time for both PCM and DSD. Music delay is adjustable by the user.
- Automatic hybrid MODE control – auto selects Mode 0 or Mode 1 depending on the Control Point App chosen by the user. Mode 0 or Mode 1 can also be fixed by the user.
- DSD over PCM playback
- Gapless playback – both PCM and now DSD. (NB requires compatible DAC)
- QUAD DSD 11.3MHz or 256fs DSD support .dff and .dsf files
- Further sound quality improvements based on internal data-flow
- Compatibility Enhancement with new embedded drivers for additional external DAC implementations beyond UAC2. Full details will be posted on the Melco-Audio website.

Other features and performance enhancements are in the Release notes on the MELCO website.

### Updated User Guide for Melco N1 Music Library.

To accommodate the new features on the Melco N1 series the User Guide has been revised and is available for download from

<http://d.buffalo.jp/HA-N1A/>

<http://d.buffalo.jp/HA-N1Z/>

### Price and availability

The MELCO V3.0 FW update will be available from 20th May 2016 and is free of charge for existing and new owners of MELCO Digital Audio Libraries.

## MELCO Digital Music Libraries - Explained

### MELCO Direct Streaming Music (DSM)

Regardless of the precautions and optimisations within a digital music source/network player, it all comes to nothing when sensitive music data is put onto a LAN network. Compromises such as commodity grade data cables and data switches designed purely for rapid data transfer all have a detrimental effect on music files. To combat this, MELCO Music Libraries (MML) have a dedicated Ethernet port for direct link to the network player. By removing the necessity for external network switches, this architecture not only ensures the best possible data delivery from the MDML to the player, but also exposes the benefits of carefully engineered precision Ethernet cables.

Additionally, MELCO will now support direct import of music from CDs as either Red Book CD Music Disc (CD-DA), CD Extra, Mixed Mode CD) or DVD/BD data disc containing audio files – all with auto format recognition.

A separate opto-isolated Ethernet port provides a high-quality connection to the LAN, so that the network player will still be connected via the MML and, therefore, can be controlled by iOS or Android devices, whilst also connect to music streaming sites or Internet radio. But for the simplest purest playback of High Resolution music on a network player that has its own control, all that is required is the MML and a precision Ethernet cable. Setting the Melco N1 into Direct Mode activates an internal DHCP server removing the need for any IT devices in the audio system.

### Local USB-DAC Player

The Local USB-DAC player can be used in the same manner as the Network Player. The Local USB-DAC player is simply controlled from a UPnP Control App on a Smartphone or Tablet on the network. The App discovers the N1 & DAC combo as a Digital Media Renderer or Player on the Network as soon as a DAC is connected using a standard USB cable to the N1.

The N1 Local USB-DAC Player supports PCM up to 384 kHz / 32 bit, and DSD up to 11.3MHz quad DSD. Automatic sample rate adjustment is offered to match the capabilities of the connected DAC - e.g. 192 kHz is automatically downsampled to play on a 96 kHz capable DAC. DSD to PCM conversion is also supported, with the conversion of DSD to 24 bit PCM for USB DACs that do not support DSD via a manual setting in the Menu.

The Playlist can be stored either on the N1 (Mode 1) to allow the playlist to be maintained even if the App is out of contact, or on the App itself (Mode 0) for when the App requires it. New firmware allows the N1 to operate in Hybrid Mode whereby the Melco automatically works out the appropriate control mode.

The Melco Local USB-DAC player can be easily controlled by any UPnP control Point (App) and will play music from other UPnP servers on the Network in addition to music stored on the Melco.

### True Audiophile performance

Audio performance is paramount as the industry moves beyond the legacy standards of the CD format. This makes such issues as data integrity and jitter even more critical. For this reason, the MML range uses none of the IT industry norms in creating this solution.

Internal and external data communications are differentiated with separate and isolated power supplies, whilst SSD data management is especially optimised as the requirements for audio are quite different to PC requirements (music data is written infrequently and is rarely modified, rendering the usual SSD lifetime optimisation algorithms as inappropriate, especially as they also tend to impact on data integrity, as they operate in burst as required). The MML uses highly stable purpose-built Audio Grade SSDs designed especially for audio playback, as they have a low level and consistent management algorithm that has zero impact on data integrity. Audio Grade SSD also greatly reduces power supply spikes compared to fast IT SSDs.

All digital processes, including the external Ethernet communications, are derived from a precision ultra-low jitter data clock to ensure total freedom from jitter-induced artefacts on final D/A conversion. The low jitter Ethernet connectivity is provided by RJ45 ports isolated with high grade TDK magnetics. This ensures absolute freedom from interference and noise, which is otherwise fed into sensitive analogue electronics in the playback system. The Ethernet connectors have light-pipe data transfer indicating LEDs, which can be extinguished to provide the purest connection environment.

Power supplies are critical in all high-end audio applications. Not only does the MML separate power supplied for internal and external data communications, but also specially designed components minimise common mode interference, protecting delicate analogue circuitry elsewhere in the playback system. N1Z chassis models benefit from twin medical grade supplies.

## Simple setup – no computers

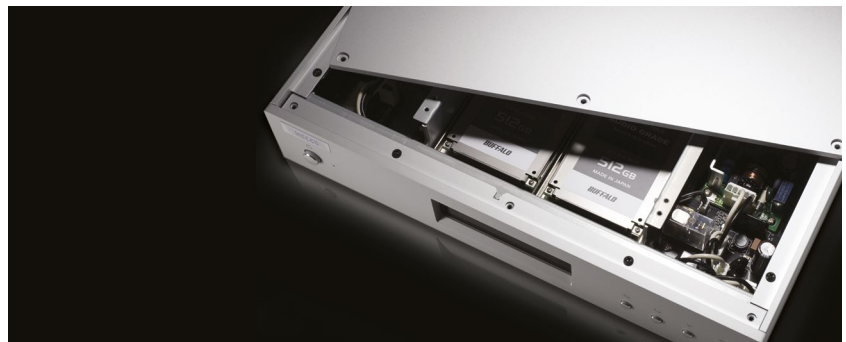
In the spirit of the MML being a true Audiophile source, the MML does not have a web server and does not require a computer to either configure it or to enable it to play. A versatile array of useful customisations is available from the informative OLED front panel display and navigation buttons. During playback, the display shows the selected track along with sample rate. For ultimate audio performance, the display can be switched off during playback.

Storing music files to the MML is simple via the USB 3.0 socket on the rear or over the LAN, whilst backup is easy thanks to the dedicated rear-mounted BACKUP USB 3.0 socket, which automatically offers to start to backup the music data onto any external drive with enough capacity upon connection.

Newly introduced is Melco Direct CD-import allowing archival copies of the users CD collection.

Expansion to over 12Tb is easily achieved by simply adding a USB drive to the dedicated rear-mounted EXPANSION port. No configuration is required – the additional capacity is simply available to store more music.

The simple Hi-Fi style front panel on/off switch means that the MML is up and running after only 15 seconds and can be shut down safely in under five seconds. Were there to be a power cut, all music files remain safe, thanks to the MML's robust software.



## High Resolution Music Download direct to the Melco Music Library

Purchasing habits for music are changing dramatically and the Melco Music Library offers users the ability to download HD music from several online stores directly into the MML without any requirement for external computers other than to confirm the initial purchase – the MML polls all user accounts seeking newly purchased music and will download directly and verify the music files ready for immediate playing.

## Three models of MELCO High Resolution Digital Music Library

The flagship N1ZS10 is provided with SSD storage of 1Tb total capacity, which can be arranged simply to backup internally or to backup externally from the front panel OLED display.

Two completely separate power supplies are provided with additional high capacity MELCO smoothing banks, all housed in a solid H frame reinforced extruded aluminium enclosure. The Japanese TAOC branded isolation feet provide isolation from external influences.

N1ZH60 is essentially the same machine with conventional HDD giving 6TB capacity.

Entry level N1AH40 has 4TB capacity and the operational feature set is identical to the other models.

### **Purpose designed connectivity**

Supporting the N1A and N1Z to allow the absolute optimum performance from MELCO DSM connectivity, a range of precision engineered Ethernet cables are offered in lengths from 0.5 to 3.0 metres. Using a patented locking mechanism, the precise impedance of the cable is carried through to the actual connector, removing a common source of impedance mismatch, data reflections, and consequent data jitter. All four data pairs in the cable are individually screened ensuring maximum data integrity and protecting fragile analogue components within the playback system.

### **About MELCO - <http://melco-audio.com>**

Melco, which stands for Maki Engineering Laboratory Company, was established by Makoto Maki in 1975 in Japan. Maki, an enthusiastic audiophile, established the company to design and manufacture the finest audio components of the time - the undoubted masterpiece of the Melco line being the turntable, introduced into the UK in 1980, which set new standards in music reproduction.

From those early beginnings Melco developed into the largest computer peripherals manufacturer in Japan (BuffaloInc.), offering advanced products based on rigorous R&D, including Wireless routers, Ethernet Data Switches and storage devices such as NAS drives.

Now the Company is proud to revive the highly-respected Melco brand, offering discerning audiophiles high technology networked audio components in the spirit of those much revered early Melco products, while incorporating the very latest research into reliable high performance networked devices and storage.

### **For further information, images, interview requests and press samples, please contact:**

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