Network-enabled media storage device
Made by: Métronome Technologie, France
Supplied by: Absolute Sounds Ltd
Telephone: 0208 971 3909
Web: www.metronome-technologie.com; www.absolutesounds.com
Price: £13,998

AUDIO FILE

Métronome Music Centre 1

More than a little French flair is brought to this comprehensive and very user-friendly all-in-one CD-ripping, network-attached music storage/digital audio player

Review: **José Victor Henriques** Lab: **Paul Miller**

Sure enough, the market abounds with numerous very affordable network-attached storage devices, and various of these are also equipped with a disc drive and ripping facility. By the same token there are many plug-and-play USB DACs available that 'do the job' but that no self-respecting audiophile would give house room. The same goes for cables, of every stripe.

So the fact that specialist audio companies are stepping into this otherwise cost-focused void is perhaps no surprise. Melco paved the way with its N1Z [*HFN* Feb '15] and N1A 'music libraries' [*HFN* Aug '15] right up to the new N1ZS20/2 [*HFN* Jun '17]. The new, and long-awaited Music Centre 1 (MC1) from French brand Métronome is the latest entrant to this embryonic market – although, and unlike the Melcos, this particular 'audiophile NAS' comes complete with an integrated CD drive and ripper.

SLEEK 'N' STURDY

Measuring 450x115x435 (whd) and weighing no less than 12kg – mainly thanks to the heavy metal casework used and the three PSU transformers housed within [see PM's boxout] – the MC1 is nothing if not sturdily built. Yet it manages to look stylish too. Internal storage is based on multiple 1TB SATA HDDs while the Schaffner-filtered power supply boasts six independently regulated lines. Mechanical noise was low, but still audible in the quiet of the night.

The casework is damped internally in a bid to avoid resonance, and is laterally ventilated. Dominating the fascia to the right is an iPhone-sized touchscreen while to the left sits the CD slot. 'Power' and 'Eject' buttons in the middle complete the clean look. A front USB input would have been welcome, but on such a pretty face it would look like a scar. Meanwhile, the unit sits well balanced atop three round, flat feet to which you can add the supplied Delrin cones for superior isolation.

To the rear of the MC1 can be found a short Wi-Fi antenna, the Ethernet input, two USB inputs for USB thumb drives or external USB hard drives, one asynchronous (DSD-ready) USB output to a DAC, one each of AES/EBU, S/PDIF and optical Toslink outputs, plus a mains socket and power switch. Without an analogue output in sight you'll need an associated outboard DAC to connect to a preamp, integrated or headphone amplifier.

Before you connect the MC1 using an Ethernet cable you have to switch the unit on and follow the set-up steps shown on the touchscreen. All that's needed then is to download the free app for Android or iOS, accept and validate the device via the screen and you are ready to go.

FILE STREAMING

According to the manual, the MC1's USB type B input can handle FLAC, WAV, DSF, DFF, OGG and MP3 formats along with high-res files up to 384kHz/32-bit. I found that the unit can also read from a storage device and stream AIFF files and MQA encoded FLACs to an external DAC, which the manual surprisingly fails to mention.

Of course, the MC1 also plays CDs or rips them in WAV or FLAC format – there's a Teac DV-W28SS-VM5 mechanism

RIGHT: Métronome's linear PSU design [far right] feeds multiple 1TB SATA drives [up to 6TB, centre], a slot-loading TEAC CD/DVD drive [top], a digital I/O board [bottom] and microcontroller-based server mainboard [top left]

ABOVE: Elegant but deceptively simple, the slot-loading drive will read and/or rip your CDs while the colour touchscreen allows direct and instant access to your stored music library

inside – with the automatic recovery of all tags, including cover and artwork. It also reads USB thumb drives and is able to create playlists from high-res music stored internally or on an external hard drive or NAS, though the latter requires a computer.

The MC1 will also stream music over your home network, either via Ethernet or the supplied wireless antenna, from portable devices and DLNA-compatible smartphones. However, unlike some of the MC1's rivals, there's no support for either Tidal or Spotify.

As I mentioned, there are many streamers/CD rippers on the market today that offer the same features as the MC1 – and more – and for a fraction of the price. The Innuos Zenith II, now in Special Edition guise, comes to mind, even though it doesn't have a touchscreen display. But both the modest Korean Cocktail Audio X30 and Bluesound Vault 2 include an internal DAC and come in at a fraction of the price of the MC1. And both also rip CDs and support Tidal! Furthermore, you can enjoy the same functions the MC1 offers using a PC, NAS device and JRiver Media Server software that costs 50 bucks.

Truth be told, I use an Oppo transport when playing my CDs but I wish it were a Métronome Calypso. We've all heard the argument that bits are bits and CDs sound the same no matter what we play them on, right? Well, even when things have the appearance of being equal, some audio devices are clearly more equal than others.

Liberty, equality and fraternity notwithstanding, being rich gives you a head start when it comes to enjoying the finer things in life. And the Métronome MC1 is a gourmet music server that makes the *dégustation* of 'virtual' media a thorough pleasure. If you can't tell the difference between French cuisine and fast food, then by all means go for a hamburger instead.

> 'Ola Gjeillo's piano sounded gorgeous on "North Country II"'

The MC1 is like a Captain's Log in which you record the navigation notes you need to sail your oceans of music – no matter the vastness of your collection. You no longer require a sextant to locate your music now it is no longer physical. Métronome's touchscreen display, or a smartphone and the free app downloadable from the Google and Apple stores will guide you by the (pop) stars.

And for those who might, perhaps with some justification, reject the MC1 as just another French fashion industry product, take it from me that it sure looks and sounds better than most, despite not having any 'analogue sound' of its own.

In practice, the performance also depends on the DAC used, but somehow the MC1 manages to improve DAC performance, lowering jitter to vanishing levels (see PM's Lab report, p53). One final note is that the unit plays DSD via USB only.

SMOOTH OPERATOR

For the listening I used an iFi Audio micro iDSD DAC, a Chord Mojo headphone amp/DAC [*HFN* Jan '16] – as used by PM for his lab work – and a Meridian Explorer V2 headphone amp/DAC, either hooked up directly to a pair of Hifiman HE1000 headphones, or connected via analogue interconnects to a McIntosh MHA100 headphone amplifier. This also doubled as a stereo amplifier to drive a pair of Sonus faber Concertino loudspeakers.

Opening the MC1 library I discovered that it already contained two albums: *Rachelle Ferrell* by the American soul singer of the same name, released in 1992 [Capitol Records CDP 7 93769 2] and *Intime* by Christophe from 2014 [Capitol Music France 377 678-4], the latter recorded in a Paris studio before a small and 'intimate' audience, as its title suggests. Both sets sounded smooth and analogue-like at Red Book sample rates. Indeed, the ambience on *Intime* and the sound of clapping was particularly natural.

The manual states that the MC1 'rips CD tracks in high-resolution files (lossless WAV files, 16-bits/192kHz)'. So I ripped a CD of Philip Catherine's *Transparence* album [Inak 8701 CD] in WAV format (you can opt for FLAC to save space). The CD took a good ten minutes to rip, 'due to multiple verifications' according to Métronome.

Once finished, the album was visible in the Library with album cover and titles. And there was no 'upsampling' whatsoever. Plain 44.1kHz/16-bit Red Book stuff. ⇨

DIGITAL WITH FLAIR

A glance across at our 'lid off' photograph instantly reveals the bright blue, Talema brand encapsulated mains transformers that we've seen at the heart of other Métronome products [see CD8 player, *HFN* Jun '16]. Unlike the compact Melco 'music libraries' which employ switchmode PSUs, Métronome has always employed substantial linear PSUs in all its digital audio products. No fewer than three transformers are used here, feeding separate power supplies for the storage bay (the 1TB SATA drive can be upgraded to 6TB with the option of HDD or SSD types), the CD/DVD drive and main processor. The latter, a Freescale iMX6 processor from NXP, is buried under the heatsink on the main PCB and includes Ethernet and USB controllers plus a Neon 'Media Processor Engine'. This board is connected via USB and Ethernet hubs to the back panel interface board and – importantly – to a separate USB-to-S/PDIF format converter driving these more conventional digital outputs. Métronome proudly claims to have developed '100% of the electronics and software' within the MC1, including the modified Linux OS and the custom control app. PM

ABOVE: No analogue outs as the Métronome MC1 offers wireless and wired network access, two USB ports to read from external drives, one USB out for connection to an offboard USB DAC, S/PDIF out on coax and Toslink optical plus balanced AES/EBU

When played via the MC1 the copy was barely distinguishable from the CD played on an Oppo BDP-95EU transport using the same iFi Audio micro iDSD DAC. At times I even thought it sounded better, though perhaps I was being influenced by the jitter results detailed in PM's Lab report, having read this before I began my listening.

GOT MY MOJO WORKING

To test the high-res capabilities of the MC1, I changed to the Chord Mojo. Not because the iFi Audio micro iDSD couldn't cope with the task. In fact it goes all the way up to native DSD512. The reason for the switch was that the Mojo's LED buttons with their bright rainbow colours (they have an uncanny resemblance to a chameleon's eyeballs) make it easier to check a file's native resolution at a glance.

For sceptics of the virtues of higher-resolution files I usually throw in Rachel Podger & Brecon Baroque playing the *Largo* from Bach's Concerto For Two Violins BWV 1043 at 44.1kHz, 96kHz, 192kHz and DSD [Channel Classics CCS SA34113].

The Mojo duly turned sequentially 'Red' in the face, then 'Green' – perhaps with envy (what wonderful violin playing!) – then felt 'Blue' as expected and finally got 'Pink' with pleasure. Not White (Mojo's DSD indication)? Does the MC1 stream DSD as PCM I wondered? I decided to explore this matter further, even though I suspected it might be due to the Mojo's DOP conversion.

I also have Mahler's Symphony No 3, Budapest Fest Orch/Iván Fischer from Native DSD [JLBFO Mahler3, ID:1720; Channel Classics CCSSA38817], as DSD64, DSD128, DSD256 and DXD downloads. The Mojo stayed 'Pink' (352kHz) every time whatever the file sample rate, even at Quad DSD, while the DXD file prompted the 'Violet' indication of LPCM at 384kHz.

However, the iFi Audio micro iDSD clearly indicated the presence of DSD256 with its pin-point 'Blue' LED. I concluded that the MC1 streams DSD as native DSD while the DACs 'live in a box of paints', to quote Joni Mitchell in the song 'A Case Of You'. I could drink a case of Métronome and still be on my feet.

What about MQA-encoded FLAC files? Both 'North Country II' – a 96kHz track by Ola Gjeilo from the album *Stone Rose* [2L-048] – and the DXD 'Mozart: Violin Concertos, D Major *Allegro*', by Marianne Thorsten & Trondheimsolistene [2L-038-MQA2016] received the red flag from Chord's Mojo, which does not support MQA decoding, indicating a baseband 44.1kHz file.

However, replacing this with a Meridian Explorer V2, the latter's blue LED immediately certified the file as 'Master Quality Audio', and Ola Gjeillo's piano sounded gorgeous at the unpacked sample rate of 96kHz, while the DXD file was unfolded to 192kHz – the maximum sample rate the Explorer V2 can muster.

HI-FI NEWS VERDICT

The Metronome Music Centre One does not have a sound of its own, so it's inevitably hard to evaluate its performance. Nevertheless, as PM's Lab Report report reveals, the MC1 is certainly capable of making associated DACs sound better due to a reduction in jitter. Though not without quibbles, in some ways this might very well be the best digital 'transport' money can buy – albeit at a Dior price.

Sound Quality: 87%

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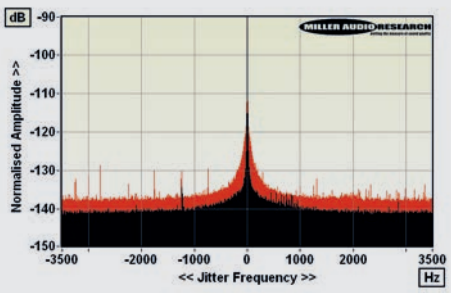
LAB REPORT

MÉTRONOME MUSIC CENTRE 1

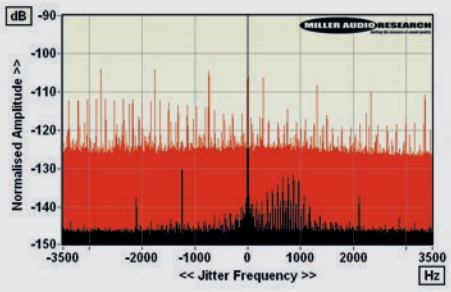
Bearing in mind the similarity in the data storage/delivery 'role profile' of Métronome's MC1 and Melco's N1ZS20/2 [*HFN* Jun '17] a technical comparison between the two, and conventional NAS or PC/Mac USB solutions, has proved very instructive indeed. Performance is best inferred via an attached streaming player or DAC, however a USB DAC with excellent data recovery/reclocking may not express a significant difference in S/N or jitter. Similarly, a DAC with high levels of inherent jitter will suffer the same distortion sidebands regardless of the coherence of the digital data at its input.

Typically, it's the semi-portable USB hub-powered DAC/headphone amp solutions that provide us with the best indicator of incoming data integrity and circulating noise. So, driven directly from Métronome's USB audio output iFi Audio's micro iDSD, which already benefits from a fine jitter rejection (~140psec), was improved to <10psec [see Graph 1, below]. Moreover, there was a worthwhile gain in A-wtd S/N to 108.3dB, suggesting the MC1/iDSD exercises some superiority over the N1ZS20/iDSD tested last month.

Combining the MC1 with Oppo's HA-2SE [*HFN* Dec '16] also bested the Melco/Oppo pairing's A-wtd S/N ratio by 1dB (to 101.9dB) while jitter fell from 460psec to 275psec. Again, the MC1/RHA Dacamp L1's S/N improved by another 1dB to 104.3dB and jitter to <10psec, as did the MC1/NuForce µDAC5 at 101.6dB and <10psec. However, while the Métronome MC1 seemed to improve on the Melco N1ZS20/2 in terms of S/N and *correlated* jitter, the same analysis also resolved a cluster of (very low-level) uncorrelated interference around 12.8kHz. This is just visible on Graph 1 but much more obvious with the RHA Dacamp L1 and Chord Mojo [black, Graph 2] where, ironically, it is exposed by the impressive reduction in *white* noise. **PM**



ABOVE: 48kHz/24-bit jitter spectra from an iFi Audio iDSD DAC – 'standard' FIR filter – over USB (red, via standard PC) and direct (black, via Métronome MC1)



ABOVE: 48kHz/24-bit jitter spectra from a battery-powered Chord Mojo over USB (red, via standard PC) and direct (black, via Métronome MC1)

HI-FI NEWS SPECIFICATIONS

Data inputs	Wireless/Wired LAN (1000BASE-T)
Digital audio outputs	USB 2.0, AES/EBU, Coaxial, Toslink
Digital jitter (IFi Audio iDSD BL)	<10psec (140psec via PC USB)
Digital jitter (Chord Mojo)	<10psec (85psec via PC USB)
Power consumption	24W
Dimensions (WHD) / **Weight**	450x115x435mm / 12kg