

HIFICRITIC

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Chris Bryant is very impressed by the sound quality of Arcam's new 'Class G' integrated amplifier

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McIntosh MHA100

IS THE ALL-AMERICAN MCINTOSH MHA100 HEADPHONE AMPLIFIER THE 26.5LB ELEPHANT IN THE CHINAWARE SHOP? CAN IT REALLY BE WORTH £4955? JOSÉ VICTOR HENRIQUES REPORTS.

The *MHA100* is McIntosh's first headphone amplifier. It's 'Proudly made in USA', at the factory in Binghamton, near New York, where McIntosh has designed and built all of its electronics in-house, since 1949. I visited the factory some 25 years ago and remember well how proud they were to show me the nursery where all those blue eyed babies are born and their autoformers take their beauty bath in the hot tar tub. One of the USA's most iconic brands, McIntosh is now part of the Fine Sounds Group, along with Sonus Faber, Audio Research and Wadia.

The fascia is classic McIntosh with the dark glass plate decorated by bright and conspicuous blue VU meters. The logo and panel letterings are illuminated by fibre optics and an OLED display shows volume, input selection, digital signal resolution and programmable functions. Remote control is provided, but hands-on volume and other control adjustments are made by large multi-task rotary/pull buttons. A small red toggle switch applies power, although the unit also switches off automatically after a few minutes of idle. A smooth volume control with a digitally controlled attenuator has 0.5dB steps.

The analogue section has single-ended and balanced inputs and outputs, and the heavy duty gold-plated loudspeaker terminals are fed from a 50W/channel stereo amplifier. McIntosh's

Power Guard and Sentry Monitor technologies ensure protection against clipping or mismatched headphones and speakers. A Headphone Crossfeed Director (HXD) feature helps headphones to image more like conventional speaker stereo, and a five-step bass boost control (in 2.5dB steps from 0 to 12.5dB) gives further flexibility. Four digital inputs (USB 2.0 asynchronous, AES/EBU, co-ax, and optical) allow the McIntosh digital engine to upsample and decode digital music at up to 32-bit resolution and 192kHz sample rate.

This adorable 'mini-*MC302*' shares the unique looks and venerated voice of its bigger brothers, and is also a stereo pre-amplifier with an internal DAC and a 50W/ch amplifier. And the amplifier is not just used for speaker listening. When listening to headphones, it drives the output autoformer that impedance-matches to various headphones. When listening to speakers the autoformer is disconnected; when listening to headphones, the speaker binding posts are disconnected; but the same power amplifier drives each mode. Thermal Trak output transistors help it run cool at idle, the built-in bias diode responding almost instantaneously to changes in transistor temperature to avoid any lag in bias adjustment.

I used the *MHA100* as my reference amplifier to test HIFIMAN's fine *HE1000* (see my review in this issue). In a time when a few hundred quid can buy a DSD/DXD compatible octo-speed portable DAC, or a couple of thousand can be invested in a balanced class A headphone amp like the Auralic *Taurus*, the *MHA100* might not even be the best you can buy for this kind of money. (It doesn't even have tubes in it for god's sake!)

So what does the *MHA100* do that the others don't? In short, it allows any headphones to be themselves. That impedance matching and the almost limitless clean power available, supplies high quality headphones drive without imposing any character. Prior to reviewing the HIFIMAN *HE1000*, I tried all kinds of headphones: planar, electrostatics and dynamic, including the McIntosh *MHP1000*, and even some top in-ear types. Invariably they all sounded better with the *MHA100* than with anything else I tried.



JOSÉ VÍCTOR
HENRIQUES

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AUDIO EXCELLENCE



Sources got the same treatment. Chord *Hugo* and iFi *micro-iDSD* were used as a sources for DXD and DSD files, and were allowed wide scope to reveal their innate differences. *Hugo* is the more 'organic', fuller bodied, and really sounds great with DXD 384kHz files. The iFi *micro-iDSD* is drier with a tighter, faster though less extended bass, and is also compatible with native DSD256/512. And though the internal DAC in the *MHA100* is no slouch up to 192kHz, the *Hugo* DAC/ *MHA100* combo sounded reassuring with still higher sampling rate and resolution files and made me feel even more comfortable.

With so many variables involved, it's good to know the *MHA100* stands its ground as a reference you can always count on, provided you engage neither the bass 'tone control' nor the HXD cross-feed feature. Listen to your 'blues' straight. So keeping in mind that the sound of any headphone can only rise up to the level of the source and amplification up stream, my listening impressions follow below

Sound Quality

For this assessment, the *MHA100* was used as a fully fledged headphone amp and DAC. The HIFIMAN *HE1000* were my headphones of choice. I also tested it as a pre-amplifier driving a pair of Focal active loudspeakers, and then as a full amplifier driving a pair of Sonus Faber *Concertinos* – which it did with grace and aplomb.

In headphone mode it sounded transparent, did not get in the way of the music, and can deliver 1W of clean, articulate, transparent, dynamic yet sweet power, here in high level headphone mode using the 150-600 ohm impedance. However, I would not regard it as completely neutral. It has a 'house sound' that's somehow reminiscent of the exquisite French oak undertow of a great American Grand Cru red burgundy.

To supply a few musical examples, soprano Marianne Mellnäs' pure and heavenly voice on Proprius' *Cantate Domino* remains a powerful test. It was recorded to analogue tape in 1976, but our version was a 24-bit 88.2kHz download from HD Tracks. The choir, brass and organ test the recording equipment to its limits, yet miraculously it never sounds congested, opaque or harsh. To my surprise I now discovered subtle shades of contralto in Mellnäs' voice, and found a tenor singing the part of a countertenor. The *MHA100/HE1000* combination helps one hear and 'see' everything, both inside and outside the church. From the beginning of the track, a wuthering low frequency noise seems more and more like traffic noise. I had heard traffic noises

before throughout the whole record, but never to this level of detail.

Bob Dylan's *Infidels* (via Tidal CD streaming) has led many a Dylan fan into infidelity, as they hated the man for it. It's more up tempo than previous recordings, played with rock gusto with a little help from Mark Knopfler (who produced it) and former Rolling Stones' guitarist Mick Taylor. I selected this album for comment because I've never heard it like this before. Drums that have sounded cheesy and bloated have now some real punch and rhythm, and I can finally understand what Dylan is singing. I mean the lyrics, not that I understand what he means. (Fortunately perhaps, because if Dylan means what I think he means, he must have been under the influence of something more than just religious and political bigotry...)

You don't know the meaning of dynamics (-50dB to -10dB in the wink of an eye) until you listen to a truly exceptional DSD256 recording, like the Rondo-Finale of Mahler's Fifth Symphony, played by the Berlin Philharmonic (Native DSD - DSD256 direct recording). This was recorded live in Budapest, and is the closest thing I've heard to an analog direct-cut. It starts ever so softly more as a sonata with fugal elements than a true rondo, until it reaches the climax or apotheosis. That's when you understand the importance of a reproduction system like this one: the rolling of the timpani blows you away at 4:45 and the brass breathes in pure joy like a clean mountain wind. And what is more, if you are a music student you can use this symphony as a tool to study Mahler's introduction to Bach's counterpoint techniques while at the same time following the interaction of the different melodies in the symphony.

Conclusions

I admit my enthusiasm for this McIntosh design and those deep blue eyes, which could have influenced my appreciation. However, since the eyes are the windows of the soul, the *MHA100* certainly has a great musical soul. It may be highly recommended, and indeed I was so delighted with it that I bought the review sample for my own enduring pleasure.

Manufacturer's Specifications

Headphone Power Output	High: 1W/Normal 250mW
Headphone Output Impedance	8-40; 40-150; 150-600 Ohms
Speaker Power Output	50W/ch
Speaker Impedance	8ohms
Sensitivity (Single-ended, Balanced)	300mV, 600mV
Input Impedance	25kohm
Pre-Amp Output	3V (8V max) @ 500ohms
DAC	16-24-bit/32-192kHz
Size (WxHxD)	29.2x14.1x45.7cm
Weight	12kg
Price	£4,995

Ancillary Equipment Used

Headphones:

Dynamic: Audioquest *Nighthawk*, B&O *Beoplay H6*, Focal *Spirit One*, McIntosh *HDP1000*, PSB *PM4U1*, Sennheiser *H800*

Hybrid: Obravo *HAMT1*
Electrostatic: Koss *ESP950*, Stax *009*, King Sound *HS3*

Planar Magnetics: Audeze *LCD-3*, *LCD-X*, *EL-8*, HIFIMAN *HE1000*, HIFIMAN *HE560*, Oppo *PM1*, *PM3*, Ultrasone *Edition 8*

Headamps & DACs: Asus *Essence III*, Chord *Hugo*, iFi *Micro-DSD*, McIntosh *MHA100*, Meridian *Explorer V1*, *V2*, *Director*, NAD *D3020*, Nagra *HD DAC*, NuForce *Micro 3*, Oppo *HAI*.