

A black Musical Fidelity M1 HPA Headphone Amplifier. The front panel features a large silver volume knob in the center. To the left of the knob are two small buttons labeled 'POWER' and 'STBY', and a 'USB LINE' input. To the right of the knob are two gold-plated headphone jacks labeled 'HEADPHONES'. The top left corner has a silver badge that reads 'HEADPHONE AMPLIFIER | M1HPA by MUSICAL FIDELITY'.

HEADPHONE AMPLIFIER | M1HPA by MUSICAL FIDELITY

EQUIPMENT REVIEW

Musical Fidelity M1DAC/HPA headphone system

By Alan Sircom

Having bit the bullet with the outstanding HiFiMAN HE-500 headphones, I need to find a headphone amplifier with the sort of clout needed to drive the things well. The latest HiFiMAN designs are not headphone socket-crushing monsters (at least compared to the flagship), but they are relatively hard to drive properly. They need both quality AND quantity, a sound that is refined and dynamic enough to show off what the HE-500 can do, and powerful enough to let them do just that. It's time to cast the net.

Musical Fidelity's M1 Series is a fine prospect for finding the answer to the headphone quest. The pure Class A M1 HPA headphone amp comes with its own USB digital converter (practically everything Musical Fidelity comes with a USB DAC these days, because it's a simple way of getting people on the first rung of the computer ladder) and can drive tough loads. It has two headphone sockets, a whopping great volume dial and a tiny toggle switch to select between its USB or a line input. In theory at least, the HPA could be used as a preamp – and actually a

very good one at that – but most people will use it as a headphone amp. But with less than one Ohm impedance and the provision for driving a 32 Ohm headphone with as much as 1.1V this is a real 'drive anything' device.

It's matched by the M1DAC, a similarly-sized converter that can upsample to 192kHz at full 24-bit precision. Musical Fidelity – alongside Arcam, Cambridge Audio, PS Audio and Theta – lays claim to being the first company to make a DAC (common consent gives this laurel to PS Audio, although Cambridge Audio and Theta made the first CD players split into component parts and Arcam and Musical Fidelity got the first DACs out on the UK and worldwide stages respectively). Regardless, in 1989, Musical Fidelity made the Digilog, one of the first DACs on the market. This means the company has a significant amount of experience in manufacturing DACs (although, like many companies, it took more than a decade off from making DACs when the devices fell from grace). It features the Burr Brown DSD1796 DAC chip, and the version I have runs in isochronous USB mode (a recent revision upgrades that to Async USB, but for that I have a V-Link, a £99 Asynchronous USB to Toslink/Coaxial converter, which limits the player to 24bit, 96kHz). I've been reliably informed what goes into the V-Link goes into the latest versions of the M1DAC, so differences should be slight.

In a way, the system is in near perfect dynamic balance. If you exclude the V-Link, the source component (a late-2010 MacBook Air) the electronics and the Hi-FiMAN all cost roughly the same as one another. I tried some exotic cables, and I tried bog-standard cables and to be perfectly honest there was almost no difference between the two, despite the hundred-fold price differential. This tallies with Grand Wazoo of Musical Fidelity Antony Michaelson's comparatively low opinion of exotic cables. I'd like to investigate this further, to see if it's a headphone thing, or a Musical Fidelity thing. ▶

EQUIPMENT REVIEW / MUSICAL FIDELITY M1DAC/HPA HEADPHONE SYSTEM

▶ There are two sides to this. First the Musical Fidelity combo can drive the HE-500s, but you are looking at about 11 o'clock on the dial to get any really significant gain out of the headphones. However, that's pretty much to be expected... the HE-500s really are a beast to drive.

The bigger point is just how nice the Musical Fidelity combo sounds while it's playing. Because the HE-500 are planar magnetics, they are especially revealing of midrange, and any grain in the system is quickly disclosed. An yet, through the Musical Fidelity duo here they just sound lovely, completely open and insightful as you might expect. From top to toe, the sound is ordered, detailed and just factual. Not some enhanced sense of rhythm and definitely no excessive soundstaging (it's headphones, remember, and images are often in your head; the last thing you want is Kurt Cobain screaming into your pineal gland).

We in the UK are somewhat obsessed with the rhythmic properties of a component, often for good reasons, because if the tempo falls down, the whole sound begins to fail on some very fundamental levels. But that obsession with one aspect of the sound often fails to recognize there are other aspects to contend with. The Musical Fidelity combo is rhythm-neutral, in that it neither enforces nor holds back on the beat. It merely plays whatever was presented to it. What it does instead is deliver controlled power. Not power in the sense of raw energy, power in the guise of control over the headphones. The headphones have a good bass and extended treble, but these can sound respectively loose and harsh if not well controlled, the HPA made the HE-500 sound taut at one end and open at the other and in-between was insightful. As a desktop system, I found myself listening to both my iTunes collection a lot and was all too readily distracted by everything YouTube, because it was so easy to hear what was going on. It could just do with some more volume.

This is not high-end for low-money though. It's a different presentation to how high-end audio sounds today. It lacks what audiophiles might call 'air' or 'shimmer', a sort of floaty quality to sound that is perhaps over-separated and lacking in musical cohesion. While you can listen into the mix (for this, I changed over to a pair of the closed back, folding, curly-cabled de-facto broadcast standard Sony MDR-7506 headphones that are easy to drive, ruthlessly detailed, and not the sort of thing for relaxed listening), I seldom found myself focusing on the instrument lines or the mix itself, and the music retained its cohesion and synergy. If you've spent years listening to the expansive and effusive sound of a lot of modern high-end, the M1 combo might lack some of that faux silken sheen you have become used to. On the other hand, if you like your music sounding like, well, music, this could be the headphone amp to go for. For now, it's a good first choice. +



TECHNICAL SPECIFICATIONS

M1DAC

DAC: 24-bit Delta-Sigma (bit-stream) dual differential, 8x oversampling to 192kHz
Jitter < 12ps peak-to-peak

Linearity: < 0.1dB down to -96dB

Frequency Response: 10Hz-20kHz -0.1dB max

Channel Separation: > 105dB 20Hz-20kHz

Signal to noise: > 119dB 'A' wtd

THD: < 0.0025% 10Hz-20kHz

Inputs: 1x AES/EBU, 1x S/PDIF phono, 1x Toslink, 1x USB

Outputs: 1x RCA phono pair, 1x XLR pair

M1HPA

Output Power: 1.1W into 32Ω

Output impedance: less than 1Ω

Output level: 6.2V max

Frequency Response: 10Hz-75kHz -3dB max

Signal to noise: > 109dB 'A' wtd

THD: < 0.008% 10Hz-20kHz

Inputs: 1x RCA pair (analogue), 1x USB (digital)

Outputs: 1x RCA pair line output, 1x RCA pair pre output, 2x ¼" headphone jacks (front)

Both Products

Dimensions (WxHxD): 22x10x30cm

Weight: 3.4kg

Prices: £399 (M1DAC), £499 (M1HPA)

Manufactured by: Musical Fidelity

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