Musical Fidelity M1 HPA (£499)

S tyled to match the M1 DAC, the first product in this new Musical Fidelity series, the M1 HPA comes with the claim that it 'will drive any headphone with complete linearity and low distortion'. It has analogue and USB inputs, but doesn't provide any further digital inputs or processing. Like the other models tested, the HPA uses a Burr-Brown DAC from Texas Instruments, Japan.

The back panel looks refreshingly uncluttered, with just a USB port and three pairs of RCA phono sockets. These include one analogue input, plus the main preamp analogue output, which, like the headphone jack, is under the control of the front-panel volume knob; and finally there's a Loop output which simply passes signals from analogue input through the unit. This does not provide output from a USB source.

Dominating the front panel is the typically gigantic Musical Fidelity volume knob, which makes the button for on/off duty and the USB/Line source selection toggle switch look even tinier than they are. Two headphone jacks are provided, but (unlike the Lehmann arrangement) neither of these has a cut-out function in order to mute the preamp output.

ENGAGINGLY LIFELIKE

Starting with the USB input and 'Perfect Fit,' the voice had a delicacy I hadn't noticed with the Chord or Lehmann, for example, as you heard and felt the singer breathing. The hand-claps sounded like hands, and the backing vocals seemed to have gained substance.

With Jazz At The Pawnshop, the M1 HPA again gave an engaging sound, with an effortless sense of detail and a better sense of space than I heard with the

RIGHT: Analogue input, variable preamp output, and a loop output passing analogue-input signals only

RIGHT: There are two headphone jacks, but without the Lehmann's line output muting. A toggle switch selects USB or analogue input

Firestone or Chord. With the Dave Brubeck Quartet and Time Out it sounded impressive once more, even though, to be very picky, I didn't feel it gave quite the same degree of impact and realism to Desmond's alto sax as heard via the Lehmann.

On the Beethoven symphonies recording, I felt that the Musical Fidelity sound was again very close to that of the Lehmann, with just a slightly more rounded character, but nevertheless it was very coherent and listenable.

CD brought out an attractive, well-detailed sound from the Musical Fidelity. With 'Perfect Fit,' it was also rhythmically convincing and let the music flow.

With the club-atmosphere opening of Jazz At The Pawnshop, the M1 HPA was persuasive, giving you the clinking glasses and noodling instruments in a lifelike way. Once the band steamed in, there was life and bounce to the music, with Georg Riedel's bass sounding fuller than with the Firestone, but rhythmically compelling.

Things also worked out well when the M1 HPA tried its luck with Ry Cooder's 'Little Sister.' Here the bass was strong but tight and purposeful, and the complex mix of guitar sounds was well resolved to give a foot-tapping, involving result.

Sound Quality: 85%

HI-FI NEWS LAB REPORT

While none of the USB headphone amplifiers in our test suffer output impedances any greater than 120ohm (many high-end preamps do far worse), the HPA enjoys the lowest 1ohm source and is capable of sustaining a full 1W into low impedance (30ohm) cans. It's the beefiest car-driver of our group.

Otherwise, we can see that the response [black trace, below] is deliberately rolled-off at low bass frequencies (~3dB/20Hz with CD data and ~1.8dB/20Hz with 48kHz data via USB), possibly to prevent the over-excitation of some headphones.

The -3dB A-weighted S/N ratio is in keeping with the 15-bit performance we've come to anticipate from isochronous USB interface/DAC solutions but at least the spectrum is impressively free of PSU noise or digital artefacts. Low-level linearity is good to about ~100dBFS and, overall, the HPA is the 'cleanest' of the group even if conventional harmonic distortion is not vanishingly low at 0.015% from 20Hz-20kHz. It is, however, reasonably uniform with frequency. Jitter is low too at 310ps.

The USB input is in line with the frequency response break of all the other USB inputs.

Above: USB in/headphone out frequency response [black trace] with distortion vs. frequency [red trace] at ~100dBFS

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>USB input</th>
<th>Headphone output</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>90dB</td>
<td>90dB</td>
</tr>
<tr>
<td>1000</td>
<td>90dB</td>
<td>90dB</td>
</tr>
<tr>
<td>20,000</td>
<td>90dB</td>
<td>90dB</td>
</tr>
</tbody>
</table>

Max. headphone output level/impedance: 5.2Wms / 10ohm
A-weighted S/N ratio (USB in)2V out, re. 0.008Vfs: 89.6dB
Digital jitter (USB in, 48kHz): 310ps
Distortion (USB in, 20Hz-20kHz, -10dBFS): 0.015% - 0.047%
Frequency response (USB in, 20Hz-20kHz): -1.8dB to -0.5dB
Stereo separation (USB in, 20Hz-20kHz): 49dB - 84dB
Resolution at 90dB: ±0.5dB
Power consumption: 14W
Dimensions (WxHxD): 220x100x330mm

APRIL 2011 | www.hifinews.co.uk | 43
GROUP TEST VERDICT

ALL FIVE MODELS, I HAVE TO SAY, DELIVERED AT LEAST A COMPETENT AND LISTENABLE SOUND, AND NONE OF THEM SEEMED TO PRODUCE ANY MAJOR FREQUENCY RESPONSE ABERRATIONS WITH THE LOW-IMPEDANCE AUDIO TECHNICA PHONES. AS FOR THE USB CONNECTION, THE FIVE UNITS WORKED INSTANTLY AND SEAMLESSLY WITH MY COMPUTERS.

FIRESTONE AUDIO’S LIBBY DOES OFFER THE RANGE OF STANDARD DIGITAL AUDIO INPUTS AS WELL AS THE USB OPTION. IT SOUNDED GOOD WHEN USED AS A DAC ON THE COAX INPUT. I TRIED FIRESTONE’S OVERSAMPING OPTIONS BUT DIDN’T DETECT ANY SIGNIFICANT BENEFIT.

TAKEN IN ISOLATION, IT SOUNDED FINE ON THE USB INPUT, AND ON CD – ALTHOUGH THE BUILT-IN ADC SEEMED AN UNNECESSARY COMPLICATION. BUT CLOSE COMPARISON SHOWED THAT IT WAS BETTERED BY BOTH THE LEHMANN AND THE MUSICAL FIDELITY.

ON OUR SAMPLE, THERE WAS ALSO A VERY SLIGHT MECHANICAL HUM OR BUZZ WHICH MIGHT BE A LITTLE ANNOYING IF YOU WERE LISTENING IN A QUIET ENVIRONMENT, SAY, LATE AT NIGHT. IN THE END I FELT THAT THE LIBBY WAS NOT QUITE A MATCH SONICALLY FOR THE BEST OF THE OTHER UNITS, WHILE ITS SPECIAL FEATURES DIDN’T SEEM USEFUL ENOUGH TO MAKE IT GOOD VALUE.

STYLISH UK BUILD
AVox’s USB 7 D/A Mk II also provides a choice of digital inputs. AGAIN, I FELT IT PERFORMED WELL ENOUGH AS A DAC, WITH GOOD DETAIL AND SPACE IN THE SOUND. BUT WITH ITS VERSATILE DAC FUNCTIONS AND ITS MIC INPUT THIS IS REALLY A PRODUCT FOR THE MUSIC TECHNOLOGY MARKET, RATHER THAN ONE THAT WILL INTEGRATE WITH A HI-FI SYSTEM AS A HEADPHONE AMP, E.G., IT DOESN’T HAVE AN INPUT TO FEED ANALOGUE SOURCES TO YOUR HEADPHONES.

CHORD’S TOUCAN SOUNDED FINE IN MOST RESPECTS, DELIVERING A SOUND THAT WAS EXTREMELY DETAILED AND REVEALING. ON SONIC GROUNDS I FELT THAT IT WAS ONLY BETTERED BY QUITE A SMALL MARGIN BY THE REMAINING TWO MODELS IN THE GROUP, AND THIS MIGHT JUST BE A MATTER OF TASTE. THE CROSS FEED FUNCTION COULD BE BENEFICIAL WITH CLOSED-BACK HEADPHONES, BUT WASN’T WITH THE MODERN SEMI-OPEN TYPES I USED.

JUDGED PURELY ON PERFORMANCE AND FACILITIES, THE TOUCAN IS EXPENSIVE, BUT YOU HAVE TO FACTOR IN ITS STYLE APPEAL, AND INDEED THE FACT THAT IT’S BEAUTIFULLY BUILT IN THE UK. IF YOU’RE SMITTEN WITH OWNING A CHORDETTE COLLECTION, IT’LL BE A MUST-HAVE, UNLESS YOU DECIDED ON THE TOUCH BLUETOOTH VERSION.

EXPENSIVE, BUT YOU HAVE TO FACTOR IN ITS STYLE APPEAL

ALMOST AN EVEN MATCH
This leaves us with the Musical Fidelity M1 HPA and the Lehmann Black Cube Linear, which on their USB inputs were very close in sound quality, and both very good. On a quick informal comparison, you might be hard-pressed to choose between the two.

In the end, I felt that the Lehmann could sound marginally better on USB. Built to a high quality standard in Germany, this is a cleverly engineered product, with some neat features and it’s very compact. Used purely as a headphone amplifier, it will sit neatly and unobtrusively in your rack. And

MAKE A VERY GOOD SOUNDING PREAMP TOO. ON EXCELLENT SOUND, FACILITIES, AND PRICE FOR MONEY, THE M1 HPA IS A CLEAR WINNER.

ABOVE: Musical Fidelity’s H1 HPA offers best value, with the most persuasive sound on analogue input and the ability to perform very well as a system preamp. Lehmann’s European-built Black Cube Linear USB is excellent too, but at higher cost.