

EXCLUSIVE - MERIDIAN PRIME HEADPHONE AMPLIFIER/DAC/PREAMPLIFIER

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Nov 21, 2013



Meridian Audio has been spreading its wings recently (with the move into in-car with Jaguar Land Rover, and the recent Explorer and Director USB powered units), but no-one really expected the Prime. This is Meridian Audio's take on the headphone revolution, and a mighty fine take on the headphone amplifier it is too.



The Prime is a desktop headphone amplifier with built-in DAC. It's surprisingly fully featured, but Meridian Audio has decided not to baffle people with science and goes for the more prosaic approach on the front panel; so where most hi-fi companies rattle off a list of sample rates on the front panel (which is, let's face it, bewildering to anyone who isn't a fairly well-dunked audiophile), this has a friendly '1x', '2x' or '4x' sample indicator denoting 44/48kHz, 88/96kHz and 176/192kHz respectively (using Meridian's Apodising filter), depending on input from the USB connection. There are no DSD or DXD settings, but I suspect that is beyond the potential

audience for Prime, who are more likely music lovers looking for a good musical hub for their computer than dyed in the wool audiophiles looking for the next big file thing. Also, for those looking for an excuse for an audiophile USB cable, the Prime isn't it... it connects through a USB-A to mini-USB lead, rather than the USB-A to USB-B connection loved by aftermarketers.



There are also two line inputs, selectable from the front panel; one of which is a mini-jack designed to connect to the headphone output of a smart phone or tablet computer. There are even line-level outputs (for active loudspeakers, say Meridian), but these are not disabled as standard when the headphones are placed in circuit; instead you have to hold down the power button on the front panel, and wait for the light to change from white to green.



Meridian has taken a fairly conservative approach to gain. This is a tricky subject for the headphone amp maker; the impedance and sensitivity of headphones and earphones vary from model to model – far more so than loudspeakers – and a volume level that screams with one set of headphones might barely raise a whisper on another. However, Meridian (rightly) feels that headphones with 3.5mm jacks are generally more forgiving than those with larger 1/4" jack plugs;

because devices with 3.5mm jack sockets are more likely to be used with smart phones. Nevertheless, Meridian recommends using headphones with sensitivity higher than 80dBspl/mW or 96dBspl/V, and impedance between 16Ω-1kΩ. This covers almost all currently available headphones and IEMs, with the possible exception of the near-impossible load of the HiFiMAN HE-6. A very clever useful bonus is you can use the two ¼" jacks in full balanced mode, if you have a suitably modified set of headphone cables.



There's a small button between the input selector and the volume control (Meridian's first 'traditional' volume control in decades; everything else has used up/down keys or digitally-controlled jog dials). This is labelled 'ASP' and has three LED-indicated settings 'O', 'i' or 'ii'. No, it has nothing to do with Cleopatra's preferred method of suicide, here ASP stands for Analogue Spatial Processing – Meridian's engineers recognised that most recordings are mixed with an expectation of being played in a room rather than between your ears, and resulting crosstalk that results gives us a sense of stereo imagery and reduces the in-head effect some find so disturbing in headphone replay. ASP has two settings that blend left and right channels, with different amounts of delay, to simulate loudspeakers in the room, while the 'O' position disables the option altogether. Perhaps best of all, it looks every inch the Meridian product, with timeless lines reminiscent of the company's G Series models, writ small. It's not Meridian 'on the cheap', and it's definitely not Toy Meridian, it's just Meridian, but smaller. And that shows how much care is put in the product design here. It feels more solid than almost anything this side of the Burson Audio Conductor, despite its diminutive stature.



I used Prime as a form of desktop controller, running the asynchronous USB link from my iMac (the USB2 driver is built into any near-current edition of OS X, but Windows users will need to follow instructions on installing the relevant USB2 driver). It plays out to a pair of old AVI active Neutron loudspeakers on the desk (when I'm in loudspeaker mood) or through several sets of cans, including a pair of HiFiMAN HE-500s (with Vertere cabling), but often with the robust broadcasters-friends; the Sony MDR-7506 and Sennheiser HD-25-1 II. At first, I thought the need to actively enable and disable the main loudspeakers would be a royal pain, and yes, there have been times where I've been happily nodding along to music through the headphones AND the loudspeakers (really not recommended for those 'Private Browsing' moments), but pretty soon I came to recognise the cleverness of the concept – it means your headphones and loudspeakers are permanently plugged in, and you flip between 'in here' and 'out there' presentations.



The sound both through speakers and especially through headphones is clean and detailed. Make that extremely clean and exceptionally detailed. In the way Meridian products always strive to sound. It's perhaps not the most upbeat sounding headphone system around – it's more about presenting the music honestly and precisely than giving it some kind of imposed rhythmic drive and energy – and odd as it might sound some will want their headphone replay system more coloured than the Meridian Prime presents. But still more will favour the precision of the sound from top to toe.



Classical music is something of an acid test for a headphone amp, as it demands detail, but exposes any brightness or leanness in the presentation. And it works well with the Prime. Vocals especially are also especially articulate in this combination, making a sound that will put you right in the middle of a mix (should you wish) with such 'thereness' that if it were any more real, you'd be an Ear, Nose and Throat specialist.

If anything, the Meridian Prime is almost too conservative in design. Having an even tonality and staying the right side of loud is a good thing for your hearing, but those occasional wig-out sessions that are the reasons I have Led Zep and ZZ Top box sets end up with the volume control at close to three o'clock on the dial. Maybe I'm getting old, but on balance, I'd trade those sessions for the way it plays Mendelssohn with refinement and unforced dynamic range.



ASP is an interesting and useful addition. In use, the two settings do seem to push sounds out of the head, with the first setting slightly bringing out the top-end, the second bringing up the bass and extending the 'virtual speaker' effect wider, with no major trade-offs. I found myself adjusting this on a per-recording basis.

There's one little extra bonus on the cards. Alongside the plug-top ('wall-wart') power supply provided for the Prime, there's a dedicated £800 Meridian Prime Power Supply. Not only does this take on the power supply delivery requirements for the analogue sections, it provides an isolated power feed for the USB DAC section. This Prime Power supply is said to feature five separate 12V, 5W power feeds, so it's not beyond the bounds of possibility that there are some more products in the Prime R&D lab. Note, this isn't based on any secretive conversations between Hi-Fi Plus and Meridian, just idle speculation based on that Prime Power supply and its multiple power feeds.

Meridian's Prime is a clever device. It's designed to be fit and forget, next to your computer and semi-permanently connected to headphones (and presumably loudspeakers). It will drive all bar the most crushing loads and the ASP system is useful, not least because it acts as a bridge between the loudspeaker and headphone worlds. Best of all though, it comes with those long-standing Meridian values of excellent detail retrieval and clean, honest sound built in. Any brand joining the headphone amplifier gladiatorial arena has a fight on its hands, but Meridian seems better equipped than most. The best thing I can say about it is I've used the Prime more than almost any other product in this month's line up, because it has been there whenever I've been sitting at my iMac, and I feel no inclination to remove it, occasional wig-outs notwithstanding.

Technical Specifications

Analogue inputs: 1x 3.5mm mini-jack, 2x RCA stereo line inputs

Digital input: 1x mini-USB

Digital Audio: USB 2.0 Asynchronous USB, 44.1kHz-192kHz at up to 24 bit, Meridian Apodising filter used (driver required for Windows PCs)

Jitter: <90ps p-p

Outputs: 2x RCA stereo pre-outputs, 2x ¼" headphone jacks (can be used in balanced mode), 1x 3.5mm mini-jack

Headphone compatibility

Impedance: 16Ω-1kΩ or more

Sensitivity: higher than 80dBspl/mW or 95dBspl/V

Audio performance

Output noise: <-100dBV CCIR or A-weighted

Frequency response: DC to 200kHz +0/-3dB

Analogue Spatial Processing system

Dimensions (WxHxD): 15x5x15cm

Weight: 0.9kg

Price: £1,200

Manufactured by Meridian Audio

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From Hi Fi+