

# PRIME HEADPHONE AMPLIFIER



## OVERVIEW

Meridian Prime delivers a lifelike performance from any headphone and is designed to appeal to audio enthusiasts who seek the highest possible performance from conventional analogue audio sources.

Meridian Prime provides three inputs, one dedicated and optimised to USB sources for computer audio, discrete pure analogue inputs on RCA for traditional sources, and a 3.5mm connection for portable devices such as a smart phone or tablet, while Analogue Spatial Processing (ASP) offers “outside the head” listening through headphones.

## PRODUCT HIGHLIGHTS

The Prime Headphone Amplifier offers USB 2.0 asynchronous playback at up to 192kHz/24-bit, featuring Meridian resolution-enhancement technology including low-jitter clocking, upsampling, apodising and MQA.

- Analogue signal path and analogue logic switching throughout.
- 6-layer PC board for maximum signal isolation and enhanced performance.
- Audio components mounted near rearpanel sockets for ultra-short signal path.
- Externally-powered USB input: disconnecting deactivates all digital electronics.
- Headphone-only mode powers down preamp output.
- Relay muting on power-up and powerdown for thump-free operation.
- Handmade in the UK.

## USER FEATURES

- Analogue Spatial Processing offers dual-mode loudspeaker-like listening on headphones – with bypass.
- Elegant and durable metal enclosure design, double-skinned for lower noise which offers the distinctive Meridian look with no visible mounting screws.
- Analogue volume control driven from front panel via flexible coupling to minimise microphony.
- High-quality gold-plated sockets.
- Dual 1/4in stereo headphone sockets with separate-wire grounding (may be used with separately-wired headphones) plus 3.5mm stereo jack.

## TECHNOLOGIES

### MQA –MASTER QUALITY AUTHENTICATED

MQA is a technology that captures the full magic of an original studio performance. Using pioneering scientific research into how people hear, MQA delivers master quality audio in a file that's small enough to stream or download.

### MERIDIAN APODISING FILTER

Meridian's proprietary "apodising" upsampling filter, which maximises digital audio quality and can even improve the sound of older digital recordings.

### "OUTSIDE THE HEAD" ANALOGUE SPATIAL PROCESSING

Most recordings are made with loudspeaker listening in mind. Meridian Prime's headphone outputs also include two Analogue Spatial Processing modes, i and ii, which replace the typical "in the head" experience of headphone listening with a smooth, natural feeling of spatiality that is much more like listening on a pair of loudspeakers in front of the listener.



REAR PANEL LAYOUT

# CONSTRUCTION

Meridian Prime Headphone Amplifier echoes the design elements of any other Meridian product, including the double skinned, bead blasted metal chassis found on Meridian's full size components. This ensures that noise is kept away from critical audio components for lifelike details that are critical for headphone listening.

- Powered by the wall mounted supply provided, or by the similarly sized, and styled, Meridian Prime Power Supply.
- Keeps AC noise well away from the pure analogue stages of the Headphone Amplifier and ensures even higher audio quality.

# SPECIFICATION

INPUTS	<ul style="list-style-type: none"><li>• 1x pair Phono (stereo) (A1). Gain 3dB; 1.4Vrms in for 2Vrms out</li><li>• 1x 3.5mm analogue stereo (A2). Gain 12dB; 500mVrms in for 2Vrms out. Analogue inputs overload capability &gt;40dB</li></ul>
OUTPUTS	<ul style="list-style-type: none"><li>• 1x Asynchronous USB 2.0 interface, 44.1–192kHz ≤24-bit. Jitter &lt;90ps p-p. Apodising filter and upsampling of 44.1/48kHz inputs to 88.2/96kHz; MQA decode and render</li><li>• 1x pair phono (stereo) preamp out. Maximum output 3.1Vrms @ 1kHz, THD &lt;0.001% @ 1kHz up to 3V rms. Crosstalk &lt;-70dB @ 1kHz. Output can be disabled via power button</li><li>• 2x 1/4in A-type stereo phone jacks. Maximum output 3Vrms off load, THD &lt;0.002%. Output impedance &lt;100mΩ. Power output 250mW up to 42Ω. Short-circuit protected</li><li>• 1x 3.5mm stereo phone jack. Max output 3Vrms off-load, THD &lt;0.002%. Output impedance 2.2Ω</li></ul>
PERFORMANCE	<ul style="list-style-type: none"><li>• Output noise (input A1) &lt; -100dBV CCIR or A weighted</li><li>• Frequency response +0/-1dB DC-70kHz, +0/-3dB DC-200kHz</li><li>• 'Out-of-head' Analogue Spatial Processing with dual settings plus bypass (headphone outputs only)</li></ul>
COMPATIBILITY	<ul style="list-style-type: none"><li>• Suitable for impedances in the range 16-1kΩ or more. Suitable for open, closed, in-, on- or over-ear models. Recommended sensitivity &gt;80dBspl/mW or &gt;96dBspl/V</li></ul>
CONTROLS	<ul style="list-style-type: none"><li>• Volume with precise tracking, 70dB range</li><li>• Input switch</li><li>• Processing (off/i/ii)</li><li>• Power including rear output mute</li></ul>
DIMENSIONS/WEIGHT	<ul style="list-style-type: none"><li>• HEIGHT: 50mm [2.0in]</li><li>• WIDTH: 160mm [6.3in]</li><li>• DEPTH: 150mm [5.9in]</li><li>• WEIGHT: 0.9 kg (2.0 lbs)</li></ul>
POWER	<ul style="list-style-type: none"><li>• 12V DC</li><li>• Consumption &lt;0.5W standby</li><li>• &lt;1W in quiescent</li></ul>