**High-resolution 2-channel 24-bit, 96kHz A/D and S/PDIF format converter**

**Studio-quality analogue to digital conversion**

**Connect personal stereos and analogue components to Meridian DSP Loudspeakers or other S/PDIF inputs**

**Line or headphone level in**

**Converts S/PDIF Optical input to S/PDIF Coax out**

**3.5mm stereo jack, optical S/PDIF and dual phono in**

**Coax S/PDIF phono output**

**USB or DC powered**

**The MPMax 221 Media Player Digital Link, the latest in Meridian's 'MAX' series of problem-solving boxes, overcomes a difficult challenge – getting analogue signals such as a personal stereo into digital products such as Meridian DSP Loudspeakers – with a simple one-piece solution.**

The MPMax 221 allows the headphone or line-level analogue output from a typical personal stereo such as the Apple iPod – or any line-level analogue signal, such as that from a legacy hi-fi component – to be fed directly into a pair of Meridian DSP Loudpeakers, thus making it possible to create a simple and compact replay system suitable, for example, for a bedroom or den, for which no additional components are required: volume control capability is provided by the Meridian loudspeaker remote. The MPMax 221 can also be used to connect analogue and digital optical components to any system which requires an S/PDIF coaxial digital input at up to 24-bit, 96kHz.

The MPMax221 also includes a digital optical input which can be used with devices that offer a digital optical output, allowing a completely digital path. If the audio files played back have been ripped with a lossless format such as FLAC, AAC/Apple Lossless or WMA Lossless, the system can offer full digital audio quality.

The MPMax 221 contains a state-of-the-art 2-channel, multibit Delta-Sigma Analogue to Digital converter and converts analogue input signals at true studio quality – 24-bit word-length, 96 kHz sampling – to match the high-resolution S/PDIF digital coaxial input of Meridian DSP Loudspeakers and components.



# BOOTHROYD STUART
# MERIDIAN©

The vast majority of personal stereos, such as the Apple® iPod® offer a stereo analogue output at headphone level, designed for a 3.5mm stereo jack plug. Some additionally offer line level outputs or even S/PDIF optical outputs. Products like the Apple Airport Express® provide a USB connector as well as analogue/optical digital connectors.

The MPMax 221 Media Player Digital Link allows all these sources and many more to be connected directly to a pair of Meridian DSP Loudspeakers, or to any other system that requires a standard S/PDIF (Sony/Philips Digital Interface) phono input.

The MPMax 221 includes the highest quality of analogue to digital conversion, in keeping with Meridian's long tradition of superb digital and analogue audio engineering. Two channels of conversion are provided, operating at 24-bit, 96kHz resolution – the standard format used both in the studio and by Meridian DSP Loudspeakers. Special attention has been paid to minimising jitter and power supply interference with the conversion process. Audiophile-quality analogue components are coupled with the latest in studio-quality digital conversion technology, optimised for sources and levels of this type.

# MPMAX
### MERIDIAN MEDIA PLAYER LINK

## Outline specifications

| | |
|---|---|
| **MPMax 221** | 2-channel analogue (headphone or line level) to coaxial S/PDIF converter and 2-channel optical S/PDIF to coaxial S/PDIF converter with auto analogue/digital input selection |
| **Output** | S/PDIF coaxial to IEC958 specifications. Phono connector |
| **Line level inputs** | Maximum input level 2.2V (rms) Input Impedance 20kΩ. Dual phono connectors (L&R) |
| **Headphone level in** | Maximum input level 1.0V (rms) Input Impedance 10kΩ. 3.5mm stereo jack socket |

| | |
|---|---|
| **Resolution** | Analogue to Digital conversion: 24-bit @ 96kHz |
| **Signal to noise ratio** | Better than 100dB |
| **THD + Noise** | Better than 84dB at full scale |
| **Indicator** | Green – Analogue to Digital Mode Amber – Optical S/PDIF input present and selected |
| **Power supply** | DC Input 6 to 15V, 150mA (PSU included) USB Supply, 5Vdc 150mA |
| **Dimensions** | 123mm (4.8in) W x 37mm (1.5in) H x 82mm (3.25in) D |
| **Weight** | 300g (12oz) |

The 4-layer printed circuit board used in the MPMax 221 has been carefully designed to provide maximum analogue/digital isolation, and employs the latest state-of-the-art surface-mount parts. On the analogue part of the board, audiophile-quality components ensure that both line-level and headphone level input signals are accurately matched for the conversion process, which is implemented to minimise jitter, power supply noise and other interference. Overall, the A/D conversion quality offered by the MPMax 221 is at such a high level that the only limitations on the quality of the signal will be those of the source component and the playback material.

Multiple inputs are provided. A special 3.5mm jack socket accepts both analogue headphone signals and S/PDIF Optical (mini optical connector) inputs. If the optical input is used in conjunction with a network player or personal stereo or system that supports it, and lossless file formats such as FLAC, Apple Lossless or WMA Lossless are used, the audio signal supplied to the destination system can be identical to the original source material.

Line level inputs are provided in the form of a pair of gold-plated phono connectors. The two analogue inputs are mixed at appropriate gains so as to provide similar levels.

The output is in the form of a single gold-plated phono carrying 24/96 S/PDIF format signals to the destination system.
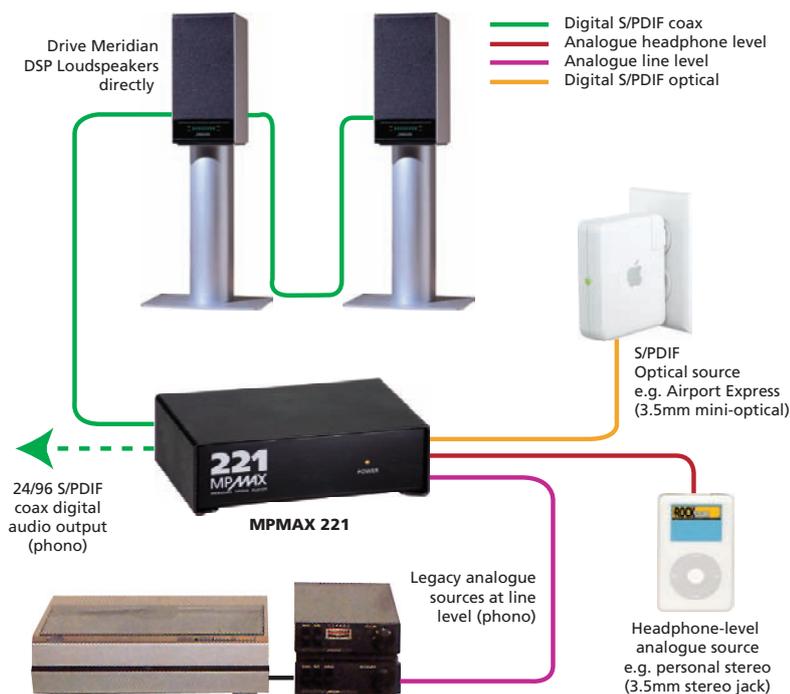
The unit has a B-type USB connector which can be used to power the MPMax 221 as an alternative to the supplied power transformer. The unit will accept 9–15vDC at 150mA.

A two-colour LED power indicator is provided. When S/PDIF Optical signals are detected, the digital input is selected automatically and the LED glows amber, indicating that format conversion mode is operating, converting the optical input signal to S/PDIF Coax (at the sample rate of the source: no sample rate conversion is carried out). If an S/PDIF Optical signal is present, it is selected automatically. The LED glows green to indicate that it is ready to accept analogue inputs.

## Typical applications

*(see diagram below)*

- Connect a personal stereo headphone output to the 3.5mm stereo jack input.
- Connect a personal stereo line level output, a network player's analogue output, or a legacy analogue hi-fi component to the dual phono inputs.
- Connect a S/PDIF Optical source such as a personal stereo, network player or hi-fi component to the 3.5mm jack with a mini optical connector. (Meridian DSP speakers accept standard sample rates from 32 to 96 kHz.)
- Connect an Apple Airport Express unit via mini S/PDIF connectors to the 3.5mm jack input (digital), or connect a 3.5mm analogue stereo jack lead between the two devices. Power the MPMax 221 by running a USB cable from the Airport Express to the MPMax. Stream audio to the Airport Express unit by selecting it in iTunes.



Drive Meridian DSP Loudspeakers directly

Digital S/PDIF coax
Analogue headphone level
Analogue line level
Digital S/PDIF optical

S/PDIF Optical source e.g. Airport Express (3.5mm mini-optical)

24/96 S/PDIF coax digital audio output (phono)

**MPMAX 221**

Legacy analogue sources at line level (phono)

Headphone-level analogue source e.g. personal stereo (3.5mm stereo jack)

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