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Meridian DVD Player

Sales information – 9th November 2000

- DVD-Video, CD, VCD, CVCD and MP3 discs
- Superb picture quality
- Composite, S and Component/RGB video outputs
- SCART version available
- Exceptional CD performance
- Exceptional DVD sound quality
- 96kHz digital out (with MHR)
- High-quality 2-channel output using 192kHz 24-bit DACs
- Full RS232 control and status
- Software updateable
- Modular internal construction facilitates future upgrade

Background

Meridian is the leading high-end manufacturer of music and home theatre components. Our unique product range includes highly acclaimed Surround Processors and outstanding DSP Loudspeakers. Each Meridian system is easy to integrate because our products have generous support for RS232 control, and fully interoperate using proprietary Meridian Comms system.

Meridian has an outstanding reputation for disc players: we built the world's first audiophile CD player in 1984 and introduced the first two-box player (transport and converter) in 1986. Since then, Meridian has remained the undisputed leader of CD, keeping consistently ahead of the field. Our 508.24 CD Player received more than 20 awards including a coveted *Stereophile* Class A rating.

Meridian has been a major force for high quality audio within the DVD Forum during the development of the DVD formats. Bob Stuart, Meridian's founding technical leader has been a prime mover in the development and international standardization of advanced and high-resolution audio formats. MLP, Meridian's lossless compression system, has been adopted as mandatory coding for the upcoming DVD-Audio and DVD-AR systems. Our intimate involvement with the evolution of DVD has allowed us to introduce the most capable and stunning DVD Players.

At the very top of the market Meridian's 800 Reference CD/DVD Player remains the undisputed benchmark; sporting many awards including a Class A+ rating from *Stereophile*.

We are proud now to introduce the 596 DVD-Video player.

Meridian 596

The 596 is a powerful statement by Meridian – demonstrating the quality that can be attained from DVD-Video in an outstanding product which also offers the very best playback of CD, VCD, CVCD and MP3.

596 uses a precision DVD-ROM drive to read information from the discs using a technology developed for the Meridian 800 Series. This drive's precise pickup system is optimised for CD, CDR and DVD.

Inside 596 the construction is modular, and part of the back panel can be exchanged so that functions like audio or video output or disc playback can be upgraded in the future.

The main playback electronics are modular, built using five PCBs which house the control, audio and video decoding and output sections. Advanced digital and analogue electronic construction techniques are combined to provide the highest performance for sound and picture. 596 is built using 6-layer PCBs, 9 separate power supplies, the latest surface-mount technology and components which have been carefully selected to optimize sound and picture quality.

Great care has been taken with the mechanical properties of the disc transport mechanism. An ultra-quiet active control system automatically maintains the laser at the optimum replay temperature.

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The 596 provides multiple video outputs including Composite, S and Component or RGB. Two versions of the player are available. One using BNC connectors for the Component or RGB connection the other using SCART.

For home theatre use, the 596 has an IEC1937 digital audio output to deliver PCM, Dolby Digital (AC-3) or DTS bitstreams to an outboard digital surround processor like Meridian's 561 or 568. The digital output can also operate up to 96kHz 24-bit and optionally use Meridian's patented High Resolution encryption format (MHR) to feed our decoders or DSP speakers. The 596 is fully compatible with other components in the Meridian 500 and 800 Series and is an ideal component in a Meridian Theatre. A Meridian System Remote is included.

Sound Quality

DVD-Video provides many options for audio. The 596 allows unrivalled playback of all the mandatory DVD-Video sound formats: MPEG, AC-3 and PCM at 48 or 96kHz with up to 24-bit precision. While DVD has the potential in the coming years to provide the highest sound quality, we would be mistaken to ignore the very real and lasting importance of CD as a rich and mature music source. Meridian have an established reputation as the best maker of CD players, so naturally we have paid a great deal of attention to ensure that the 596 is also a top-grade CD player worthy of the Meridian name.

The 596 uses a radical technology established in our flagship 800. For all formats the audio and video data are read asynchronously in blocks using a high-speed, high-integrity DVD ROM drive. This data is checked for integrity, if necessary it is re-read or corrected, and is then triple buffered through memory to ensure that the audio and video output timing are completely independent of the mechanical aspects of disc replay. This method gives more secure audio and lower jitter, which equates to a beautifully natural sound combined with incredible stability, depth and lack of noise in the picture.

596 maximizes audio quality for all formats by using another established Meridian technique – FIFO de-jittering. With this method the audio is controlled using very precise master oscillators located within the final output section and this results in extremely low jitter – giving a clear, open, authoritative sound.

The digital output is further de-jittered by precision re-clocking.

The stereo analogue output uses 192kHz 24-bit advanced DACs combined with a superb direct-coupled audiophile-standard output section.

In addition to CD and DVD the 596 can replay MP3 discs giving the best access to play back long-playing audio collections on a main system. MP3 discs can include personal albums (MP3 files optionally grouped as albums by directory) on a Recordable CD (CD-R).

Picture Quality

DVD-Video pictures are stored using the high quality MPEG2 compression system. MPEG2 has a flexible data rate which allows more data to be used for some scenes than others. Because the picture is stored as digital video it has some remarkable qualities – including high bandwidth, low noise, very low frame and line jitter and the potential for deeply saturated colours. To recover this quality 596 employs a carefully optimized MPEG decoder, special attention to the effects of the variable data rate and immaculate care in de-jittering, processing and encoding the resulting video.

The 596 offers a number of video output options and uses advanced circuit techniques, matched phase video filters and a video encoder of the highest studio-grade quality. 596 can provide NTSC or PAL and switches between them automatically.

User selectable video options also include choice of NTSC black level (0 or 7.5IRE) and a screen saver with programmable delay.

Just as with the audio, the video section of 596 uses its own ultra-low jitter master oscillator that ensures that both the picture and sound are independently optimized. As a result, the picture quality from 596 is breathtaking, clear, with low noise and is totally transparent.

Format Handling

The disc formats played by 596 are complex and varied. DVD is especially complex because disc authoring can determine a great deal of the player behavior on a particular disc.

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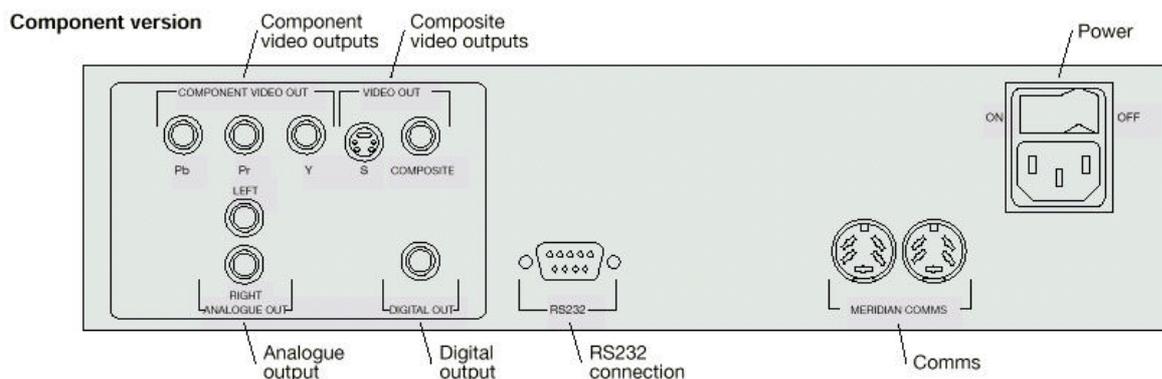
It is vital to provide error-free playback and to precisely reflect the provider's intent. Meridian took the decision (uniquely for a specialist company) to invest in developing disc navigation firmware in house. Consequently the 596 benefits from a very accurate DVD navigator that maintains the maximum playability on damaged discs.

Various trick playback modes are supported including two-speed search, chapter/title/disc repeat, and playback at slow speeds or even in reverse! The CD navigator draws on 15 years' experience in optimizing for maximum sound quality as well as for continuity on damaged, out-of-spec or protected discs. 596 navigates CDs like a Meridian CD player and includes support for programmed sequences.

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Technical Specification

- Formats:** DVD-Video, CD Audio (CD-DA), CD-R, Video CD (VCD), CVCD, MP3.
- Audio outputs:** 1 coax. Digital SPDIF/IEC1937/MHR for transferring PCM up to 96kHz 24-bit or Dolby Digital (AC-3) or DTS bitstreams. 2-channel analogue output. Superb direct-coupled analogue design featuring 192kHz 24-bit conversion. All audio outputs have extremely low jitter due to innovative FIFO and re-clocking scheme.
- Processing:** 596 uses powerful DSP software to provide error correction and on-board decoding for Dolby Digital and MPEG Audio.
- Video features:** Automatic PAL or NTSC encoding on Composite and S-video. NTSC black-level setup adjustable as 0 or 7.5IRE. 16:9 and 4:3 displays supported. Screen saver timeout.
- Standard output:** Composite, S-Video and Component/RGB as above diagram
- SCART variant:** In addition to the Composite and S-video connections the SCART socket provides for the following video options: Composite, S-video, RGB, YPrPb (non-standard), Blank (for 2nd zone) and EUROSCART. Additionally SCART has the following features: Function Select to select the SCART input on the TV and automatically switch 16:9/4:3. Analogue output where appropriate.
- Configuration:** Using extensive on-screen menus, including features/options for Disc, Audio, Video, Meridian System and Parental Control.
- Controls:** Front-panel controls for **Open/Close**, **Play**, **Stop**, **Pause**, **Previous**, **Next** and **Off**. Full RS232 control and status for custom integration or automation.
- Front Display:** 12 character display. Indicators for **CD**, **DVD**, **MP3** and **Repeat**.
- On-screen:** Switchable custom on-screen display allows instant review of disc status.
- Dimensions:** 88mm (3.46in) H, 321 (12.64) W, 332 (13.07) D.
- Power:** Universal supply 100 – 240V, 50 – 60Hz, 25W. Normally off, automatic low-noise fan cooling.

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