

Meridian 596 DVD player

A vision of utility: a combined DVD-Video and CD player that aims to do everything well



PRICE	£2350
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The first in a new sequence of optical disc players in Meridian's seemingly evergreen 500 series, the 596 is a combined CD and DVD-Video player. With on-board decoding for Dolby Digital and MPEG Audio, it is equipped with multiple video outputs and stereo analogue audio outputs plus, of course, a digital output for use with an external surround sound processor, a digital input preamplifier such as 562V, or for direct connection to Meridian DSP loudspeakers. Composite, Component (RGB) and S-Video outputs are provided on the standard model while the alternative SCART equipped version provides Composite and S-Video, RGB, YPrPb (non standard), EuroSCART, Blank (for a second zone) plus Function Select to set the SCART input on the connected television, and automatic 16:9/4:3 aspect ratio setting. Automatic NTSC/PAL switching is incorporated in both versions.

In common with various of its siblings, the 596 employs a CD-ROM drive to achieve the best possible data retrieval from the various disc and format types to which it is addressed: CD, CD-R, MP3 (files held on CD or CD-R), DVD-Video and Video CD. The digital output is to IEC1937, streaming PCM, Dolby Digital (AC-3) or DTS. It

can operate up to 96kHz 24-bit and optionally use Meridian's proprietary high resolution encrypted format, MHR, to feed Meridian decoders or DSP loudspeakers. This would, for example, allow the 596 to be connected to a pair of DSP33 speakers (the new model, or the old upgraded for 96kHz and MHR) as although the 596 has no volume control itself, it will pass on its supplied handset's volume control codes to the DSP loudspeakers via the Comms link and can display their volume setting.

The 596 owes much to Meridian's flagship 800 series. Although not card based it is nevertheless modular, employing separate PCBs to hold the audio, control, video, decoding and output sections. Future software upgrades can be uploaded to its RS-232 port. The boards are dense, six-layer types and make extensive use of surface-mount components. Nine separate regulated power supplies are involved.

Among the many features of digital video are high bandwidth, low noise, and low frame and line jitter. DVD-Video is based on MPEG2 compression, which allows a variable data rate so as to balance programme extent with image definition; this is managed dynamically according to the content of the picture. The 596 employs an optimised decoder in which special attention has been paid to the effects of this changing data rate and to de-jittering. Separate master oscillators are employed for the audio and video circuits. Among the user options are a choice of NTSC black level (0 or 7.5IRE), 16:9/4:3

display, and adjustable time-out for the in-built screen saver.

The 596 lays claim to top-notch replay of standard audio CDs as well as of the mandatory DVD-Video sound formats (AC-3, MPEG and PCM at 48 or 96Hz with up to 24-bit precision). To this end the data is read asynchronously from the drive, checked for integrity and re-read if found wanting, or corrected, and then triple buffered before proprietary FIFO (first in, first out) de-jittering and re-clocking. All this ensures stability and depth of soundstage with ultra low noise. Newly configured 192kHz 24-bit D/A converters are employed for the analogue feed, with the output stage direct-coupled.

Meridian has always written its own software for CD navigation, seeing it as 'the route to better playability and hence better sound'. Naturally the arrangements have been extended here to meet the far more complex requirements of DVD-Video, a system made more elaborate still by the wide degree of choice the disc originator has regarding the various playback options. Meridian claims 100% compliance with the specification and, again, maximum playability with damaged discs.

I never cease to marvel at the 500 series's ability to remain effortlessly up to date both in appearance and technology, and at Meridian's foresight in specifying a modest sized cabinet which would nevertheless be able to house increasingly complex circuits. Also, its determination that eight buttons (the limit of the

series fascia) would be enough for the basic controls of any future unit! True the MSR (Meridian System Remote) handset has four more buttons (the new MSR4 has a total of 48) but it's the same size and style with some of the existing buttons given new or alternative functions, and it has new labelling in light blue.

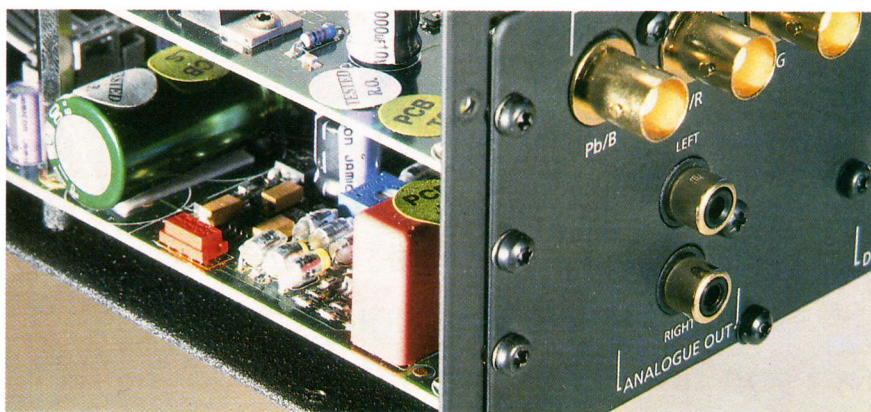
In essence the 596 is a CD and DVD-Video player and in its present form does not support DVD-Audio, though an upgrade may become available, albeit at a price. Currently it has no CPPM copyright protection, no MLP (Meridian Lossless Packing, a mandatory component of the DVD-A specification) and no multi-channel outputs. A more logical choice for DVD-A is likely to be the forthcoming 598 player. Neither does the 596 play SACD, which is hardly surprising given Meridian's involvement with DVD-A. As to DTS-encoded discs, its digital output will stream DTS to an outboard decoder but it has no on-board capability itself, so its analogue outputs will be silent.

For CD it does not offer the balanced output of the 508.24; nor does it provide direct access to index points (no great loss, since indexing never really caught on). Not included on the digital output is Timecode, which many CD-Recorders require in order to identify track information, an omission Meridian claims is for sound-quality as well as copyright protection reasons (rather more the latter, I would suggest). It will not decode HDCD, but as the discs are CD-compatible they will at least play. And it does not stream MPEG audio: MPEG files on a CD-R are decoded and copied to the digital output as uncompressed PCM.

As to DVD-Video, Meridian has always been resolute on the subject of copyright and does not condone modification of its firmware to enable switching of regional coding. Such mods are commonplace elsewhere and the coding of a good number of players can even be set via the handset, requiring no physical intervention whatsoever. Some players are even being supplied region-free now out of the box, a recent example being the Kenwood RDV-995. Meridian sticks to the rules and limits playback to discs intended for the region of its purchase, but the fact that Region One DVD movies often provide additional and/or better content and are readily available by mail order may well affect a purchasing decision.

This is sounding like a diatribe. It's not meant to, but it's important to be clear. What the 596 does it does extremely well.

➔ **MSR4, with 48 buttons**



➔ **Inside, six-layer PCBs; on the back, Composite, Component (RGB) and S-Video outputs**

Although I'm not a hugely experienced video watcher, I have used and/or have had substantial exposure to a fair number of players, including prolonged experience of Meridian's first 500 series player, the 586, in a Meridian Digital Theatre system with a Sèleco overhead projector (not my own set-up, I hasten to add – I'm not that well-heeled). For this test I used a large but excellent Sony television via S-Video. Picture quality is excellent: sharp and stable with fine edge resolution, well-saturated colours and contrast, and very low noise. The output is interlaced only; there's no progressive option (the latest vogue) as Meridian argues that the complex processing required to produce it would add considerably to the cost in such a high quality player, and claims that its interlaced output is 'better than many so-called progressive outputs. Interlacing is optimal, anyway, for many installations. Certainly the picture quality is as good as, or better than, anything I've seen.

The on-screen displays are neatly presented and thought through and include the expected location by chapter or track number, title number or timecode. The 12-character fascia display offers various modes: title and chapter number (DVD) or track number (CD); chapter number and elapsed disc time, elapsed track time or disc remaining time; and blank. It can also show a Meridian system volume setting.

Most DVD players lack a little in refinement when playing CDs so with Meridian's enviable pedigree I was keen to compare the 596 with the 508.24 in my main audio system. (I switched between the 508's balanced and single-ended outputs, though the differences between either of those and the 596 proved consistent.) For much of the listening I used identical pairs of test/sampler CDs, cued to play in sync.

The 596 is a very fine CD player, clearly a kindred spirit to the silky 508 but if anything offering a slightly more detailed sound – the mechanics of gut on strings are a little better resolved. At the same time it is more relaxed, with a little more air

around the musicians. I hadn't expected this result and it makes me eager to hear the new 588 CD player. My only caveat here is the 596's incorporation of a cooling fan which runs all the time, albeit slowly and thus quietly (it is needed because with the DVD circuits the power supply requirements are that much greater). For those with their font-end kit at some remove or in a glass-fronted cabinet this wouldn't be a problem, but for me, with the player less than 1.5m away from where I sit, it is a mild intrusion.

As a DVD player the 596 has few, if any, peers and certainly none at the price. But it is also an extremely capable CD player, well able to uphold Meridian's reputation for designing at the forefront of digital audio.

WORDS IVOR HUMPHREYS

TECHNOLOGY

High accuracy in reading discs is achieved by Meridian's use of a CD/CD-R/DVD optimised precision CD-ROM transport in conjunction with its own software. Data integrity is checked, re-read if necessary, or corrected, to ensure the best possible results. High-precision master oscillators and elaborate custom de-jittering techniques are employed to provide the foundations for high performance in both audio and video. The player has an IEC1937 digital audio output to deliver PCM, Dolby Digital (AC-3) or DTS to home cinema processors and the output can operate up to 96kHz 24-bit with MHR (Meridian High Resolution) for use with Meridian's own systems and DSP loudspeakers.

KEY FEATURES

- CD, CD-R, MP3 (on CD-R), DVD-Video and Video CD replay
- On-board decoding of Dolby Digital and MPEG Audio
- Composite, S-Video and Component/RGB video outputs (SCART version available)