



EXCLUSIVE

Ultimate DVD

Meridian's 800/861 V3 combo promises the ultimate in optical disc replay from (nearly) all formats, alongside the ability to control any desired speaker combination

EDITOR'S CHOICE

HI-FI CHOICE
magazine

Few components leave this reviewer lost for words, but Meridian's 800-series is so extraordinary, it's hard to know where to begin. One can describe the 800 and 861 as two large, hefty and beautifully crafted black-and-lacquer-finished components. But 'component' isn't quite the right word for devices that have more in common with a mainframe computer than hi-fi's traditional 'black box'.

Modular hardware construction and card-based electronics lie at the heart, and this has various implications. You don't 'buy' one of these and then figure out how to connect it up. Instead you 'specify' each according to your particular requirements. Which provides the flexibility to change things later if you

SMART LINKING

Because a piracy-plagued music industry panicked at the prospect of allowing access to the raw digital datastreams for the SACD and DVD-Audio 'high bandwidth' multi-channel music formats, early players covering both formats have been fitted with multiple analogue digital outputs.

This represents a major drawback, because both bass and time delay management require digital signal processing. While this would normally be carried out within the AV processor, the prohibition on high-band digital outputs means it has hitherto had to be performed within the player, duplicating costly facilities, and effectively handicapping the performance.

Meridian's 800-series Version 3 models are the first to break this mould (closely followed by Denon - see page 42). They include the MHR (Meridian High Resolution) Smart Link connections which transfer high-band digital data in a proprietary encrypted form (with approval from the 4C copy protection entity), from the 800 player to the powerful 861 processor. Other brands including TAG McLaren Audio have also announced plans to link players and processors in the digital domain, and more will presumably follow in due course. So in theory the current clumsy arrangements with multiple analogue outputs and inputs should eventually disappear.

VERDICT

**MERIDIAN
800 V3
DVD-A/V player
& 861 V3
digital processor**
**£10,805 &
£10,000**

Brilliantly versatile and flexible combo for playing nearly all optical disc formats, through to any multi-channel amp/speaker configuration that takes your fancy.

Lacks the ultimate transparency and delicacy of similarly high end stereo-only hi-fi. Needs expert help with installation.

CONCLUSION

Billed by Meridian as the most advanced optical disc player on the planet, and for once such claims have justification. Probably the best DVD-Audio player money can buy and a lot more besides.

KEY FEATURES

MERIDIAN 800

- Flexible modular construction
- Upsamples discs to 24-bit/96kHz
- Encrypted digital output via Smart Link

MERIDIAN 861

- Multi-room compatible
- Automatic mode and speaker management
- Up to ten outputs at 96kHz/24-bit
- Unified bass management for all formats
- MHR Smart Link digital input
- Flexible modular construction
- All six channels have current feedback circuits

want to, or if new technology comes around - which it has a habit of doing in the surround sound field. Software updates are also available when appropriate, via Internet downloads.

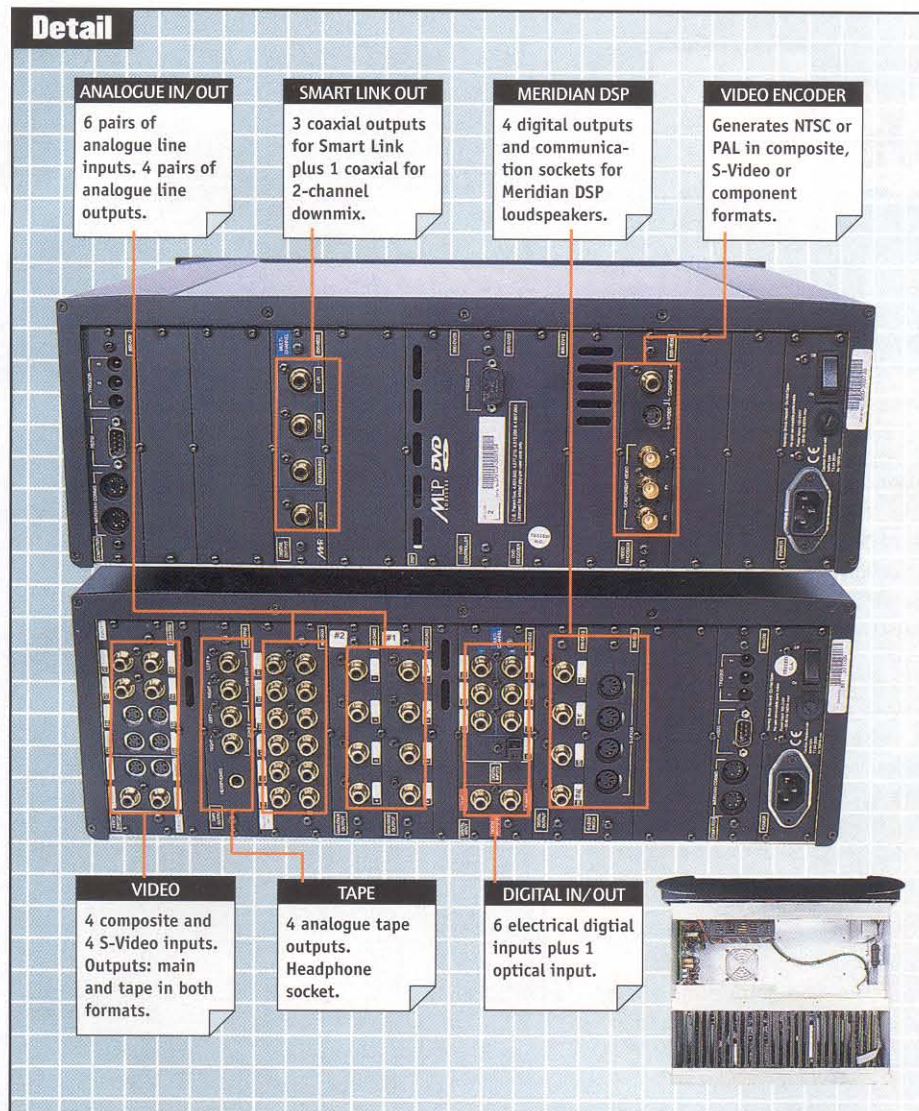
Don't, however, use the internet to buy this kit on the cheap. In my view a trained and experienced dealer is absolutely essential, first in planning the system and hence the components, and subsequently carrying out the installation. Despite having played around with hi-fi kit for more than thirty years, I wouldn't attempt to install this gear without expert assistance (partly because a PC is part of the set-up procedure, and I've always used a Mac). Once this is all done, however, the whole thing is a joy to use, thanks to a nicely laid out (if bulky) remote control, and a degree of built-in 'intelligence'.

The 800 is the source component. It usually comes with a single CD-ROM-type drive mounted in one of two drive bays. It's primarily intended to replay CD and DVD (both Video and Audio) optical discs to the highest possible standards, and can additionally handle CD-R, Video CD, MP3 and DVD-R, plus presumably Uncle Tom Cobley and all. It can be used alone (ie without the 861), feeding Meridian's DSP speaker systems directly, and offers considerable flexibility in configuring both inputs and outputs, the latter including Meridian's encrypted digital Smart Link (see box). This new Version 3 incarnation also features much enhanced digital processing power and uses 48-bit internal resolution, and upsamples all the various formats (including the movie soundtracks) to 24-bit/96kHz prior to sending the data on its way.

The 861 Digital Surround Controller takes both the signal and the control digital data from the 800, and performs the necessary data processing to generate, where appropriate, the multichannel surround soundfields. No shortage of choice here - too much perhaps, as cycling through the 14 DSP modes takes a while and is apt to breed indecision.

Plenty of real estate on the remote, but with components of this complexity, it has a lot to do.

Detail



"I have to admit a degree of cynicism towards DVD-Audio. Yet the Meridian experience turned any such preconceptions completely on their head."

Again, the Version 3 upgrades involve dramatically increased processing power, partly used to enhance the internal operating architecture. Its volume control cleverly combines analogue and digital techniques and is designed to avoid the disadvantages of both.

The remote control is more of a tabletop than a hand-held affair, which might or might not be to taste, but it does at least have superior button layout and differentiation to most hi-fi handsets.

PERFORMANCE

Most Meridian customers are likely to combine an 800/861 with the company's DSP/active loudspeakers. That was the original plan here, but unfortunately a van, fully loaded with the equipment for this review, was stolen.

We therefore ended up with the

800/861 combo, plus a DSP5000 centre speaker and a pair of DSP33s for the surround channels. I used my regular stereo system to supply the main front left/right channels – a Naim NAP500 power amp driving various loudspeakers, notably Tannoy TD12s, B&W Nautilus 800 Signatures and Spendor S8s.

Meridian's individual approach to operational ergonomics can prove a tad confusing at first. But I soon got used to it, found it made sense, and very much enjoyed the way it helped me find my way around. I love the way this combo thinks for itself, whatever optical disc format you choose to play. For CD replay, for example, our 861 was set up to use stereo/direct when the CD input was selected, but automatically chose Trifield surround if the DVD input was selected.

DVD-Audio might be the 'glamour'



Meridian's 800 series components are complex and flexible beasts – it is a good idea to get professional help both when you're deciding on the configuration and for the installation itself.

music format for this combo, but in practice it is going to spend most of its time in the immediate future replaying regular stereo material. And while it does a very fine job of straight stereo playback, it seems a waste to tie it down to two-channel replay, and I found myself listening in Trifield mode most of the time. This is an excellent way of handling regular stereo material, with some notable advantages over the two-channel approach. Above all, its action is very subtle, adding just enough synthesised surround channel info to remove the slightly 'boxy' quality of the normal listening room, and just enough centre-front to nail down the front soundstage stability and focus.

An equally pleasant surprise is how good DVD-Audio sounds through this Meridian system. I haven't really been blown away by DVD-A as yet, mainly because none of my favourite albums are available in the format, and have to admit a degree of cynicism towards it. Yet the Meridian experience turns any such preconceptions on their head. The format might currently be software-limited, but the best discs sound exceptionally engrossing and entertaining, with great delicacy and transparency.

Movies are equally well handled, DVD-Video discs delivering fine picture quality, as well as a superior rendition of the soundtrack, thanks to the upsampling. Off-air movies are well handled too, via Dolby Pro-Logic II's Movie mode.

In the final analysis, the Meridian combo perhaps just lacks the delicacy, transparency and tension in straight stereo mode to match a high end stereo-only system of similar price. But that's arguably an irrelevance, as the *raison d'être* for these components is their ability to create surround sound experiences that arguably transcend mere stereophony, and take domestic sound reproduction to a new level of enjoyment and involvement. 

Meridian 01480 445678

www.meridian-audio.com

ALSO CONSIDER

TAG MCLAREN DVD32R/AV32R EX
£3,995/£2,749

Tour de force of engineering that produces a combination of picture and sound quality that is a benchmark for the industry.

MARANTZ DV-1251/SR14EX MKII
£2,500/£3,300

Superb build combined with smooth, powerful and grounded sound and excellent video performance combined with a weighty 7.1 channel amp of considerable prowess.

PIONEER DV-747A/AV-AX10
£899/£2,700

The only 100 per cent format-compatible disc player on the market is also a great CD player while the matching amp not only sounds superb but sets itself up automatically.

Technical report: Meridian 800/861

Meridian's 800 series player and processor partnership is a technical tour de force

Rarely has a product insinuated such elegant simplicity and yet proved so devilishly intricate to set up. This is because, instead of the usual on-screen display, Meridian has endowed its 800 series with bi-directional PC control via an RS232 interface. This PC software interrogates the attached 800-series components to determine which analogue, digital, video cards and associated hardware are installed. Here we see why PC control is useful, because the menu software must adapt to your choice of Meridian's plug-in cards.

THE SOFTWARE

Fig 1 shows a pic of the 861 set-up software, detailing the configuration of an all-analogue 5.1 channel system. For our listening tests, Meridian had set up its 800 DVD-A player and 861 processor for large analogue front speakers but used digital feeds to service its partnering, active centre and rear speakers. The speaker menu incorporates 'Layout' (shown) with tabs for Sizes, Distances, Crossovers, Precision (for digital connections), Phase/Gain and Connections. The level of sophistication and flexibility offered by this combination of software and hardware is quite unsurpassed.

THE HARDWARE

The 800 DVD-A player is based around a DVD-ROM drive with a proprietary FIFO buffer for both audio and video data and custom software for disc management and MLP processing. The 800 will decode multichannel DVD-A, Dolby Digital and dts to 5.1 channels, which are then upsampled and transmitted as pairs of encrypted 96kHz/24bit datastreams, a format described as MHR (Meridian High Resolution). Two-channel, 192kHz DVD-Audio is downsampled to 96kHz/24bit data.

Three of these connections carry a full 5.1 channels of data to the 861 processor which includes 'Meridian EZ' processing to create additional side channels. True 7.1-channel Dolby EX decoding can only be accommodated by passing a raw Dolby bitstream from the 800 to be decoded fully in the 861. Otherwise, the

861's digital inputs are crystal-locked, buffered and will also accept normal S/PDIF data from 44.1kHz-96kHz (CD and DVD).

PERFORMANCE

Jitter from CD amounts to just 130psec via the 800/861 combination and falls to as low as 30psec with 96kHz/24-bit data – one of the lowest figures ever. The 861 is equipped with four, two-channel 192kHz DACs, although there's no further upsampling performed unless the digital input is S/PDIF at 44.1kHz or 48kHz. Distortion at peak output (0dBfs or 3.03V max at Volume = 93) is <0.0017% across the audible frequency range, and <0.007% at -20dBfs with two and multichannel audio.

Fig 2 illustrates the supremely low level of ultrasonic noise and distortion (<0.004%, black trace) achieved by this combination, replaying an extreme 40kHz signal at -3dBfs (96kHz/24-bit DVD-A). Only the relatively poor rejection of digital 'images' (77dB re 40kHz, as shown) is less than state-of-the-art, but this is a function of the digital filter. Stopband rejection with 44.1kHz and 48kHz digital audio is better than 105dB. Meanwhile, the splash of orange-coloured noise behind is a comparable signal derived from an SACD player, showing its characteristic increase in out-of-band noise. Consequently, the 800/861 should offer a more consistent level of performance with different choices of amplifiers.

With DVD-Audio, errors in linearity are within 0.2dB to -118dBfs, which is very close to a true 20-bit performance and limited only by analogue, rather than digital circuitry. Its response is -0.3dB down at 20Hz (low bass) but flat to 45kHz (beyond audibility) unless "HS Output" is selected on the 861, which invokes a steep cut beyond 32kHz, reaching -1.8dB at 45kHz. Interestingly, this also affects CD replay, imposing an HF cut of -0.9dB with "HS" selected and -1.75dB without.

Otherwise, the 861's response is also influenced by speaker configuration. Bass management is controlled by the 861

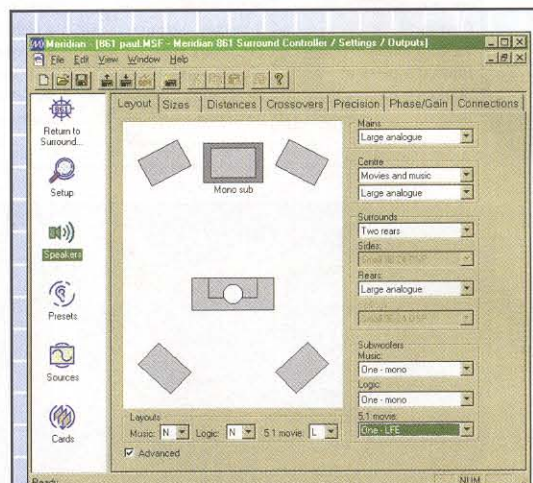


Fig 1

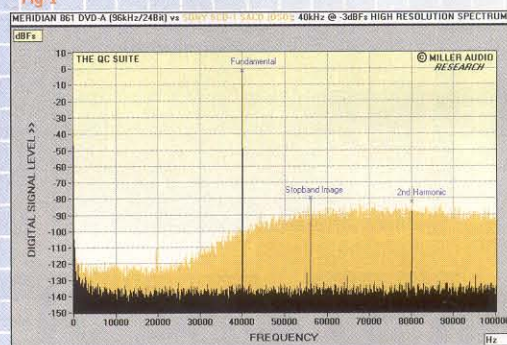


Fig 2

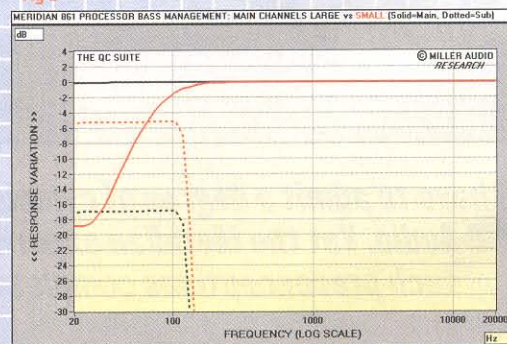


Fig 3

Fig 1: A screenshot from Meridian's PC-based set-up menu. Comprehensive is putting it mildly.

Fig 2: A supremely clean decode of a 40kHz signal (96kHz/24bit DVD-A data) compared to an equivalent DSD (SACD) player.

Fig 3: Perfectly executed bass management. Low bass from "Small" speaker channels (red) is redirected to the sub (red, dotted) without overload.

and Fig 3 shows how the nominally flat response enjoyed by "Large analogue" speakers (black trace) is rolled off below 120Hz if they are switched to "Small analogue" (red trace) via Meridian's PC-based menu. The equivalent subwoofer output is also shown (dotted traces), with the increased level reflecting the amount of bass that's being redirected from main to sub.

Meridian's bass management is expertly handled. Even in the most extreme cases (front=Large, centre/rear=Small, no sub), no overload is encountered with peak-level material provided the volume setting is not increased beyond 76. In short, the 800/861 is a *tour de force* whose modular architecture promises even more to come. 