

Meridian have gone all the 24-bit way with the revised 508 CD player. Andrew Harrison looks inside and out for the digital catch.

You may be forgiven for wondering why a 16-bit format like Compact Disc needs a 24-bit player. Why use a digital-to-analogue convertor that has many times more resolution than the information it is decoding? Well, the higher resolution DAC within the 508.24 should imbue the player with a better dynamic range and superior resolution of all-important low-level detail, areas where many 16-bit DACs need improvement.

Meridian's 24-bit convertor is based around the Crystal Semiconductors CS4390 IC that can now be found in a variety of players. While this will not instantly turn your CD collection into 24-bit master tapes, it can certainly smooth out many of the rough edges associated with CD. Since digital-to-analogue conversion is a question of number crunching, careful attention to getting the sums right really makes sense. As does adding a little dither noise in the right place, another technique Meridian exploit to increase low-level linearity.

These aren't the only reasons why this player has such a refined sound though. Look inside and you'll see a Philips 12.4 Pro mechanism under the control of Meridian's own servo system. The mechanism itself is mounted in the sliding drawer rather than being fixed within the case. Close the drawer and, unlike most CD machinery where the process is automatic, the player does nothing until you tell it to, whereupon it reads the disc's table of contents, a dot-matrix display informing the world of the usual time and track data. This can be switched off from the front panel or the table-top remote which Meridian are now supplying with the 508.

More evidence that Meridian have taken the design of this player seriously can be seen inside, with the judicious use of ferrite rings around high and low-voltage power



line cabling. These radio-frequency noise suppressers, along with the substantial heavy-gauge steel case, should make for an RF-quiet environment to nurture the cherished digits. And the case itself is effectively damped with a glass plate across the top and foam panels strategically applied within. The eagle-eyed may also spot the metallic green sheen of Nichicon Muse electrolytic capacitors in the class A output stage.

Initial auditioning was carried out with a World Audio 300B power amp and Epos ES22 floor standers, with the Vadis S15 and Musical Fidelity A1001 also drafted in. Early impressions proved this player would thankfully not inspire me to reach for the cotton wool. In fact, quite the opposite - I resorted to a variety of interconnects to tease extra detail from the 508.24. A few that worked well were the Ecosse Reference Optima, Sonic Link Black Rhodium and Kimber Silver. They all showed the Meridian's innately transparent and detailed presentation, which helped to uncover previously hidden sounds on albums I thought I knew - Garbage's 'Stroke Of Luck' yielded extra ambient background effects lurking deep in the mix. The grilling continued with many a torture track loaded to trip up the Meridian.

The Eberle string quartet, playing works by Gates and Bridge, prompted not only extended

listening but a higher volume setting than I would normally endure. The two violins had leanings towards shrillness but only when asked to do so by the nature of the instrument; in other words, what was reproduced was the realistic timbre of an acoustic instrument.

In a different listening room and system, the 508.24 operated in the company of Linn amplification and Kelly KT3 'speakers, but the components with which it truly sang were the MF A1001 and Jamo Concert 8s. The Concert 8s can be a little too disclosing with the wrong front-end or amplifier, but here was a system that blended beautifully. A little softness and loss of absolute pace in the bass was, for me, a small price to pay for the midrange clarity and treble civility on any disc played.

'Teardrop' from Massive Attack's Mezzanine was the final confirmation of the 508.24's pedigree. Deep, deep controlled bass, sublime vocals from Liz Frazer and the snappy rhythm track conspired to build the fabled sonic cathedral.

The final lingering impression Meridian's 508.24 CD player will leave with me is of a machine that could hold its head up in the company of an LP12, which an analogue buff may note is praise indeed. Bomb-proof construction and attractive looks make its hand even stronger.

Meridian 508.24
£1995

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WORLD VERDICT



The Meridian is one of the most capable and audition-worthy CD players around at its price.

Measured Performance
see p111

MERIDIAN 508.24

Meridian pride themselves on digital engineering and the 508.24, like earlier players, turns in a 'perfect' set of results. It has negligible distortion at normal music levels (0dB down to -40dB or so), distortion rising below this level but staying close to achievable minima. Both channels were identical too, so there is consistency in this performance.

Frequency response is nicely flat, as our convolved impulse analysis shows. There's just a slight downward trend toward high frequencies, enough I believe to ensure the sound isn't too bright or glassy. Channel separation was very high and noise very low, although the player seemed not to be muting at digital zero since de-emphasis did reduce noise. However, all this is somewhat academic since normal hiss in itself is not a problem with a CD's 16-bit code. Anything below

-80dB is inaudible and the Meridian 508 measured -112dB without de-emphasis.

Output was high at 2.54V, which puts the player into contention in comparative demonstrations.

The Meridian 508.24 measured very well. It is capably engineered in every area. NK

Frequency response 4Hz-21kHz

Distortion (dB)	left	right
-6dB	0.005	0.005
-30dB	0.006	0.006
-60dB	0.5	0.5
-90dB	29	29
-90dB dithered	15	15

Separation (dB)	left	right
1kHz	118	119
20kHz	107	106

Noise	-112dB
with emphasis	-116dB

Dynamic range

108dB

Output

2.54V

