

Meridian 200 Series

The Meridian 200 Series is now looked upon with fond eyes thanks to its industrial design and technical prowess, but it was a long slow journey for Bob Stuart and his team. **Steve Harris** picks up the tale of its evolution...

It's no accident that Meridian, in the late spring of 1983, became the first British company to offer its own CD player. When the Compact Disc was launched by Philips and Sony, some of the UK manufacturers had rejected or ignored it, while others welcomed it with an awkward embrace. But Meridian had been comfortable with the new medium right away.

It was, in fact, just what Meridian's co-founder and technical director Bob Stuart had been waiting for, because only digital audio sources would allow him to progress his vision for the hi-fi system of the future. Along with other adventurous spirits, Stuart had gained experience with the Sony PCM F1 digital recorder, but now here at last was digital audio for record buyers.

Like any other small, specialist manufacturer, Meridian had to buy in the CD technology from one of the electronics giants that had developed it. At first this just meant buying complete Philips players, taking them apart and modifying

RIGHT: By the time the 200 CD transport and 263 DAC were launched, Meridian's 200-series had already achieved its iconic status



them. And so Meridian's MCD was a modified version of the first Philips model, the CD100.

Philips players, unmodified, also appeared under other brand names that were part of the Philips empire. Badging and finish apart, the Marantz CD63 and Grundig CD-30 which sold in Europe, and the US-market Magnavox FD-1000, were identical to the CD100. But although the MCD was obviously based on the same Philips machine, Meridian added much more to it than its coat of grey Nextel paint.

Inside, the Philips analogue output section was discarded and replaced with Meridian's own, built on a small additional circuit board, with improved grounding and

shielding. Meridian's mods were also said to improve the laser servo performance by speeding up its focus reaction time.

Philips replaced the CD100 with the CD101, and this model then became the basis for the MCD. The revised transport and other changes in the 101 triggered further modifications in the MCD, which now had a direct-coupled output stage with improved filters, while modifications to the power supply improved isolation between stages.

Having developed the MCD, Meridian had plenty of ideas to improve its performance further, but there wasn't much more that could be done within the tight confines of the CD100's casework. The desire



LEFT: Bob Stuart, co-founder and technical director of Meridian back in the early '80s

to extract still better performance led Meridian to add an extra housing underneath to create the Pro-MCD – its official designation, even though it's usually referred to as the MCD Pro.

Apparently, the Pro-MCD was intended as a limited-edition version for broadcasters and other professional users, but it was soon in demand from enthusiasts. The extra lower chassis provided the space needed to include separate, high-quality power supplies for the analogue and digital sections. Selected 5334 op amps provided the final slow roll-off analogue filtering and a phase-invert option.

TAKING CONTROL

Naturally, Bob Stuart could not be content for long with the process of merely buying in players and modifying them. 'That's always a tricky thing to do,' he says, 'Because there's some waste involved, and you also don't have complete control of the product. And we found the more we went into it, the more we learned about playing CD.'

'We'd learned simple things. For example, the MCD Pro, you might remember, had a damping pad, because we'd observed the fact that the player sounded better, if the disc was more stable. And there was outrage about that. People said, "Don't be so ridiculous, if it measures right and all the bits are right..." The same people who thought all power amplifiers sounded the same.'

'I remember being hauled up on the mat by the headmaster, as I called him [Peter Walker of Quad]: "What do you mean, CD players sound different?"'

Stuart had faced the amplifier sound quality debate with his first Meridian electronics range, the 100 Series, launched back in 1977. With their unique slim casework



ABOVE: 'Scoop' – Meridian's 207 CD player graced the cover of HFN/RR in Dec '86



BELOW: In all Meridian's 200 Series CD players, the Philips mechanism was separated from the playback control and analogue stages within a separate enclosure

designed by Meridian's co-founder Allen Boothroyd, these had been successful enough to establish the brand. Meridian had also won plaudits for its early active speakers, but the active principle hadn't caught on with hi-fi buyers.

The next line of electronics, the Meridian Component series, was a truly modular system, a range of ultra-compact separates units which made their electrical interconnections when plugged together, eliminating external connecting wires. They looked neat

and gave the buyer the flexibility to build up a system with only the facilities he/she needed, whether as a complete amplification system for conventional speakers, or providing preamplifier facilities for Meridian active speakers.

But the Component range was not very successful. With CD yet to be established as the primary home music source, the diminutive Component products could seem out-of-scale if placed next to a vinyl record player. They did not have much appeal for conventionally minded hi-fi enthusiasts, even as the CD era dawned. Their distinctive grey Nextel paint finish is now remembered mainly because the MCD was painted that colour to match them.

Despite their reputation for good sound, the MCD and Pro-MCD were outmoded when it came to facilities and convenience of use. There was no remote control and no display to provide track and time information. To find out which track was playing, you had to count along the a row of 15 LEDs to check how many were lit.

Philips had quickly replaced its CD100/101 design with the user-friendly, front-loading CD104, and by 1985, Meridian's rival Mission was using this newer Philips model as the basis for its DAD7000R player.

But Meridian's next CD player would leapfrog the competition, at least in terms of style and sophistication. It came as part of the new 200 Series, announced in 1986.

'With the 200 Series, Meridian successfully made a fresh start'

With this range, Meridian made a completely fresh start, and this time succeeded in establishing a truly distinctive 'brand' that would go on to endure for more than seven years.

This was 'The Intelligent Hi-Fi System,' as Meridian headlined it. 'During Meridian's first decade,' the brochure blurb pointed out, 'hi-fi users witnessed the arrival and in some cases the departure of new formats than in any other 10-year period. Elcaset, Hi-Fi Video, Surround Sound, CD Video, Digital Audio Tape, satellite and cable broadcasting, even a turntable that reads LPs by laser... With even more new sources waiting in the wings, there's no doubt that your investment in hi-fi must be protected by something better than a service warranty. It must be "future compatible."'

SEPARATED AT BIRTH

For now, though, it was almost enough that Meridian was able to build its own CD player, still based on Philips components but very much an original design. This was the two-box 207, which consisted of a separate transport (with integrated mechanism and drawer) and DAC, although they weren't intended to be actually separated. G



AUDIO MILESTONES

Linked by a fixed umbilical connector, they had to be placed side by side or on top of each other.

One thing that Meridian had discovered with the MCD and Pro-MCD was that if the disc vibrated, the servos worked to track the movement as they tracked the disc. So the 207 transport chassis went much further than the MCD's damping pad.

'This whole mechanism,' explained the brochure, 'is housed in a heavy aluminium tube and when the plate glass door slides shut against its soft surround, the spinning Compact Disc is acoustically and mechanically isolated... This aspect of the construction adds a lot to the sound quality of the player and yields the convenience of front-loading without the loss of quality that normally results.'

BOX OF DELIGHTS

The 207's second box contained the DAC, still using Philips' original 14-bit converters, and also provided preamplifier functions to allow direct connection to the power amplifiers in Meridian active speakers. Initially, these were the (analogue) M20, M30 and M60 models, but they were joined in 1989 by the D600 digital active speaker.

As Bob Stuart puts it, 'If we could get the digital signal to the speaker, we could stop worrying about things that plague audiophile thinking, about mix 'n' matching and cables and all that. So the 200 Series also marked the first time we did a digital speaker. We introduced the D600, it had analogue-in and a digital-in. It wasn't the first digital speaker we made, we'd made one before that using a multibit interface, a custom thing. But the thing that allowed the

RIGHT: With its two boxes, the Meridian 207 could be stacked or stood side by side. Pictured here with the 201 preamp (top)



a conventional remote-control handset, so that the buyer did not have to invest in the

lavish 209 master system controller.

'By the time we got to the 206,' says Bob Stuart, 'We were doing all the laser driving ourselves in software. All we were buying was the laser mech and our software was doing the tracking and servo control. We were able to do great error correction. So you'd find that on a disc that did have a defect,

it would play through. We used to spend a lot of time getting that sort of stuff right, you know, driving at perfection! And the CD story went on and on.'

D600 was this feature called S/PDIF – the Sony/Philips Digital Interface Format!

'That wasn't around when CD started, the first players didn't have a digital output, there was no concept of it and there were no chips. After it had been decided it was going to be a standard, it was quite a while before you could get chips to be an S/PDIF receiver. And the very first ones were horrendously tricky to use. But we did the D600 and then an outboard DAC. That was the era of the outboard DAC and separate transport.

'As we went further with CD players, even back then with the 200 Series, we were able to reduce jitter, improve the oscillators and understand the critical placement of the clock. Make the DACs better, because there was a progression in the technology of the D-to-A conversion chips.'

This progression started when Philips replaced its original 14-bit conversion system with a new 16-bit chip, which Meridian first used in the updated 207 Pro of 1988. While the two-box 207 Pro still included preamplifier facilities, Meridian felt that it was time to simplify things.

For the next new model, the 206 of 1989, the construction of the two boxes was the same, but they were now bolted together. The Philips 16-bit DAC system was used but the 207's preamplifier facilities were omitted. However, the 206 came complete with what was by now

'The 16-bit 206 became the 1-bit 'Bit Stream' equipped 206B'

It did indeed. Hard on the heels of its 16-bit DAC came the next development from Philips, the PDM Bit Stream DAC, and once again, Meridian could claim a first. Its upmarket 208 player, introduced in 1990 as a replacement for the 207, was the first UK Bit Stream player, using two Philips DAC3 converters in dual differential mode. The processor half still included remote-controllable preamplifier facilities, now with redesigned circuitry. The 208's initial retail price was just under £1500.

Also in 1990, the 206 became the Bit Stream-equipped 206B, and the 203 Bit Stream outboard DAC was introduced, partnering the 200 transport. In the following

BELOW: By the time of the 206, all that was being bought in was the Philips laser mechanism



AUDIO MILESTONES



LEFT: Allen Boothroyd's iconic industrial design coupled with the 200 Series' solid technical performance makes them very collectable today

year, though, the 206B itself was upgraded with the next-generation Philips 1-bit converter package, the DAC7. And only a year after that, in 1992, the 206 reached its final form, when Meridian switched to the Cirrus Logic Delta Sigma DAC in the 206DS, retailing for £995.

GOING UPMARKET

While the 200 Series products continued, Meridian took its concepts further upmarket with the 600 Series CD transport and the 6000 digital speaker, which was the direct ancestor of today's big Meridian speakers.

Behind the scenes, a four-year period under the aegis of the AGI group ended in 1992, when AGI, which also owned KEF, went into receivership. KEF was then acquired by its present owner Gold Peak. Meridian was to have been sold to US speaker company Polk, but that deal fell through. Instead, happily,

Meridian was refinanced by family interests, and subsequently went from strength to strength. And in 1993, the 200 Series was boldly replaced by the comprehensive 500 Series, encompassing AV as well as digital audio.

By the end of the 1990s, Meridian had launched its flagship 800 Series, and that decade had already seen Bob Stuart and Meridian become heavily involved in the industry battle to establish hi-res audio through DVD-Audio, MLP, the Meridian Lossless Packing compression system which was developed originally for DVD-A, is used today in the Dolby TrueHD codec for Blu-ray.

Looking back, there's no doubt that the 200 Series CD players marked a turning-point for Meridian, but it's difficult to say which specific product was the most outstanding. The 207 was a real landmark, as it embodied the results

of so much experimental work and reflected a deep understanding of digital audio principles, as well as psychoacoustics.

Yet the whole series is fascinating, in the way that it ran the gamut of digital development in that fast-moving early period, from 14-bit through to Delta Sigma. The 208 was the UK's first Bitstream player, but the final 206DS could equally well be hailed as a significant Audio Milestone.

And if any of these products are still prized today, it's because their technical performance, as well as Allen Boothroyd's industrial design, has stood the test of time. Recently, *Hi-Fi News* heard from a reader, David Lord, who had hung on to his 203 DAC specifically for its LED indication of CDs recorded with pre-emphasis. It was the kind of detail that others ignored, but Meridian had taken care of.

Recently, too, there was a post on one of the forums from a contributor who'd acquired a secondhand 200 transport and 203 DAC, liked them, but decided to sell the 203 again only because 'it doesn't work with 24-bit/96kHz.' Ironic, perhaps. Even Meridian could hardly have come up with a 24-bit/96kHz DAC back in 1990. But it's at least partly thanks to Bob Stuart, the creator of the 200 series, that today we have 24-bit/96kHz digital media at all. ☺

BELOW LEFT: The 208 was the first UK-designed and built Bit Stream CD player. It used two of Philips' DAC3 converters in dual differential mode

MERIDIAN 200 SERIES CD PLAYER TIMELINE

- 1977 Meridian is founded by both Bob Stuart and Allen Boothroyd
- 1977 Meridian 100 Series electronics launched
- 1983 Meridian launches MCD player, based on Philips CD100
- 1984 Pro-MCD player introduced, with further Meridian electronics
- 1986 207 CD player/preamplifier announced, part of new Meridian 200 Series
- 1988 207 Pro introduced, using Philips 16-bit DAC
- 1989 206 CD player introduced, again using the Philips 16-bit DAC, preamp functions omitted
- 1990 208 CD player/preamplifier, Bit Stream replacement for 207
- 1990 206B with Bit Stream DAC replaces the multi-bit 206
- 1990 200 transport and 203 Bit Stream outboard converter launched
- 1991 206B upgraded to use the Philips DAC7 Bit Stream chip set
- 1992 206DS introduced, using Delta Sigma DAC from Crystal Semiconductors

