

CD CREDIBILITY

John Atkinson reviews Meridian's £675 PRO-MCD CD player



HARDLY A MONTH SEEMS TO GO BY WITHOUT A new 'audiophile' CD player being offered to the world's music lovers. 'Audiophile' CD player: surely the terms are mutually exclusive, any true believer remaining loyal to black disc? Well, many people believe that part of the continuing problem with CD sound – if there is a problem, of course – is that the main proponents of the system are large corporations from whom they wouldn't buy as simple a piece of kit as an amplifier, let alone a CD player. Obviously the way would then be open for small companies, whose reputations depend on the sound quality of their products, to plug the resultant gap in the market. Dealers who previously held no truck with digits would be able to allow their customers to buy one of the 'approved' players; customers who yearned for CD but couldn't live with the ignominy of owning a player without a 'real hi-fi' name on the front could buy one without feeling guilty.

And that, broadly, is indeed what has happened. A number of companies have stepped into the breach, marketing machines with good sound quality, but perhaps even more importantly, tinged with that essential dash of street credibility. In the UK, first Meridian then Mission led the way, introducing machines based on Philips chassis. Whereas the Mission used the '104, the Meridian MCD was a reworking of the now nearly four year-old CD-100/101 chassis, with Bob Stuart's magic wand waved over power supply and analogue circuitry. The general verdict was that the MCD did, indeed, sound better than the standard Philips machine, although the last time I auditioned it (*HFN/RR* May 1985), I felt the edge at that time to be with the Mission machine.

Designers don't stand still, of course; last summer's CES in Chicago saw the unveiling of Bob Stuart's latest thinking on CD players in the form of the PRO-MCD. Still based on the '101 chassis, the PRO-MCD is a very much more thorough attempt at getting the best from silver disc, and is the result of considerable listening tests carried out in conjunction with Decca, where CD playback could be directly compared with the digital mastertape. Wags amongst you will no doubt remember Decca organising a series of tests (*HFN/RR* May '84) which showed that a group of reviewers apparently couldn't distinguish CD from mastertape. In the more relaxed circumstances surrounding Meridian's comparisons at Decca, differences were indeed audible, leading to circuit improvements to render them less so. (With such success, it would appear, that Decca's John Dunkerley, responsible for engineering those fine Montreal SO/Dutoit recordings, has gone on record as saying that the PRO-MCD is the 'best-sounding CD player he has tested'.)

A top-loading machine like its progenitors, the PRO-MCD has only the basic facilities and primitive programming. Does this matter? I think not, having used the ergonomically identical Marantz CD-63 for three years now. And if you can live with the spartan facilities of a Linn... As with that classic turntable, the sophistication lies under the skin.

Although the basic diecast metal chassis and optical system are the same as in the MCD – a refreshing change from Philips' new plastic machines – the player height has been increased to allow the fixing of a tray underneath which contains an additional pcb and power supply. The new board houses the two familiar Mullard TDA-1540 14-bit DACs, one for each channel, and is fed the corrected, digitally filtered and oversampled digital data stream from the screened main board. The reconstructed analogue signals are filtered and de-emphasised via 5534 op-amp circuitry, with further 5534s used for the output. Good quality passive components are

used and, unlike the MCD, the PRO-MCD dispenses with output coupling capacitors altogether. Gold-plated phono sockets are used.

The extra power supply, based on a small Avel-Lindberg transformer, supplies bipolar voltage rails, regulated with good quality '317 and '337 ICs, to the analogue circuitry and a separately regulated 5V to the logic chips, in order to ensure the maximum isolation between the digital and laser servo circuitry and the analogue signal handling. In this way, any extra current demand on the servo power supply will not modulate the rails of the output or D/A sections, one reason put forward by Bob Stuart for audible differences between players. Neither will there be switching noise interference from the digital circuitry on the analogue supply. Bob Stuart has also looked at such matters as minimising jitter on the crystal 'clock' and optimising the operation of the focus and track following servo mechanisms.

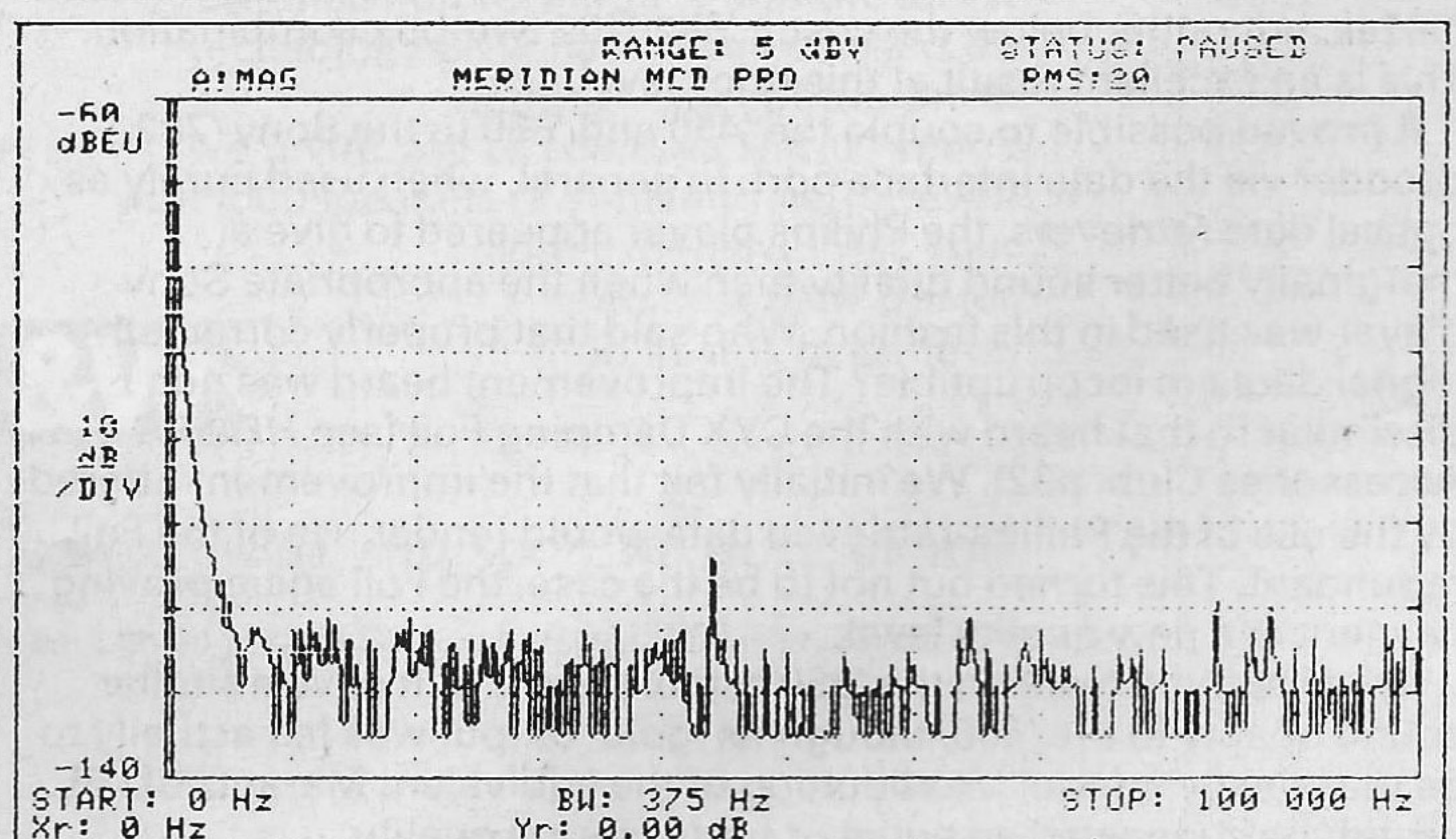
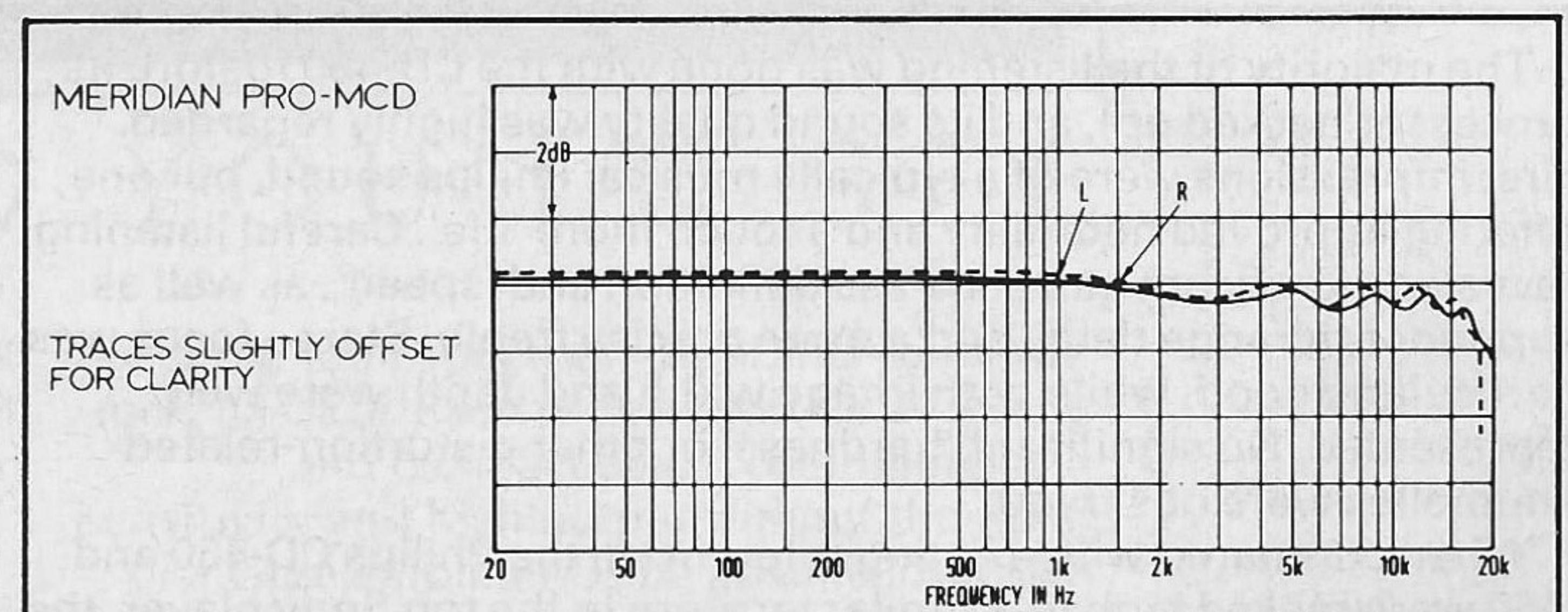
There is a master power switch on the unit's rear, in practice this is left on permanently so that the signal-handling circuitry is constantly powered; the standard Philips on/off switch on the front panel just powers up the laser and transport, its 'off' position being labelled 'SB' for stand-by as with the MCD.

The front panel is effectively identical to that of the MCD, but with the addition of a four-LED vertical display on the left of the tray. Apart from a standby-on indicator, LEDs indicate whether the CD being played is pre-emphasised or not, whether the Absolute Phase (signal polarity) is inverted or not – a switch under the display inverts the signal in the digital domain – and indicates the presence of corrected errors and interpolated-errors. More on these later. The final feature is the permanent fixing of the floppy rubber mat recommended by Meridian to subdue vibrations in the disc.

Measuring...

The measurements were carried out by Paul Crook and are comparable with those obtained by Martin Colloms in his review of the original MCD (*HFN/RR* January 1985). The basic frequency response shows the slight ripples in the upper band due to the Bessel characteristic of the analogue filtering. Inconsequential in themselves, these are superimposed on a slight rolling-off trend, which might suggest a lack of 'air' to the sound quality. The pulse response is typical of the acausal 'perfect filter' shape due to the digital filtration, and is notably free from ringing. Unlike the original MCD, the PRO is basically non-inverting.

Broadly, the measured performance is very similar to the basic MCD, differences being confined to the fine detail. In particular, the levels of ultrasonic spurious were significantly lower than the MCD. Channel separation is also between 6-15dB better, probably reflecting the better power supply arrangements. In some areas,



however, noise and linearity, things were actually slightly worse, presumably due to the extra electronics in the signal path, though I would imagine this is irrelevant.

The resolution measurement is somewhat puzzling as it indicates a slight expansion of the signal at low levels. A -90dB level actually reproduces as -95dB, compared with the original MCD which showed slight compression, -90dB registering as -87.5dB.

Listening . . .

The majority of the listening was done with the Meridian PRO-MCD feeding variously a Krell KSA-50 or KSA-100, either direct or via an Audio Research SP-10 preamp. I preferred the sound with the preamp in circuit; make of that what you will, but it may have something to do with the 4m of Monster Interlink Reference between pre and power amplifiers. Loudspeakers were Apogee Scintillas in the main, with Celestion SL600s pressed into service for the days when I was feeling a little more realistic.

The mat did give an audible improvement; the Absolute Phase switch worked as expected with recordings which were coherent enough for it to be effective; neither of the error lights came on at any time — that surprised me as I expected at least some of my discs to be corrupt. Apparently not.

Enough of the preliminaries. Did the PRO-MCD significantly change my lifestyle? Did I forswear vinyl? Did I lose the right to wear my *HFN/RR* Golden Ears badge with pride?

I'll pass by the answers to those questions. The most notable attribute of the PRO-MCD sound was the absence of high frequency nasties, an absence sufficiently marked that a visiting American audiophile felt the sound to be 'mellow'. I took that as high praise: too often in hi-fi, a forward balance is mistaken for transparency and over-bright high frequencies compared with those experienced live taken for increased 'detail'. With each change of equipment I have been striving for an increase in transparency without a concomitant rise in HF; to keep the response flat but more nearly approaching the quality of live high frequencies; to keep the speed and attack also typical of real life without lapsing into a soggy mess. The Meridian is 'mellow', yes, but without a loss of high frequency detail or 'speed'.

Until the Meridian PRO-MCD came along, the best reproduced 'space' I had heard from CD was from Ivor Humphreys' Sony 502' on Quad ESL-63s. Far from lacking 'air', the PRO-MCD gave an image of similar solidity to the Sony, there not being any sense of restriction other than the boundaries of the recorded acoustic. Cyprien Katsaris' piano performances of Beethoven symphonies on Teldec, were more believably pianistic, for example.

On top of that, there was a relative freedom from upper midrange grain and hash which meant that even CDs which previously I had found to be a little 'hard' were rendered more acceptable. The recent CBS Mahler 4 may have been co-engineered by Tony Faulkner but I find it a little thin-sounding; via the Meridian such image subtleties as the harp delicately pointing the pizzicato bass in the third movement were intelligible without hyperbole. And on perversely-engineered recordings such as the grotesquely close-miked Glenn Gould *Goldberg Variations*, it became easier to accept the anomalies. (You could also follow Mr Gould's vocalising more clearly — a mixed

blessing I'm sure you'll agree.)

As with good analogue, it was as if the listener has to do less work translating the sound into music. During the last couple of years I have been going through an infatuation with the soundscapes conjured up by harpist Andreas Vollenweider. On his latest CD, *White Winds*, there is a track consisting of lightly struck handbells and what sounds like bunches of keys, rattled to taste. Both on my elderly Marantz and on Philips' new CD-150, there is far less differentiation, both between the timbres of the sounds compared with the Meridian, and between their subtle positioning in the depth plane. And the introduction to *White Winds*, where electric harp ripples and shimmers above a glorious pedal bass note has considerably more 'authority'.

Summing up . . .

During the time the PRO-MCD was living in my home, circumstances dictated that my record deck was out of action. For three weeks, therefore, my listening was almost entirely devoted to CD via the Meridian machine. And do you know, I didn't miss the Linn as much as I feared. In fact, something must have been very right with the system as on a number of occasions I found myself following one disc with another with another, a chain of musical association unbroken by interruptions arising from dissatisfactions with the sound. (Audio Research owners will be familiar with the phrase 'SP-10 nights'.)

The Meridian must therefore be doing something well, or at least nothing particularly nasty, to give that degree of musical enjoyment. The only CD players I have heard to rival the transparency of the PRO-MCD have been the top Sonys, the '502 and '552/'702, both of which are more expensive (one slightly, the other very much so). I have to admit that a return to the Linn was still welcome, but if you put CD sound quality uppermost and can live with the limited facilities, this Meridian is for you. I suspect that it will be the first CD player to be regarded as a 'classic'. ♪

Meridian Pro-MCD

	20Hz	1kHz	20kHz
Channel balance	0.00dB	0.01dB	0.10dB
Channel separation	108dB	105dB	80dB
Channel phase difference	3	2	1
Total Harmonic Distortion (20kHz bandwidth inc. noise)	0dB -10dB -60dB -80dB	-96.7dB -85.0dB -82.3dB -43.8dB -19.4dB	-85.6dB
Intermodulation Distortion			
L+R 0dB, 19/20kHz		-84.9dB	
L+R -10dB, 19/20kHz		-73.5dB	
Frequency response L/R	+0.1/+0.1dB	0/0dB	-1.2/-1.1dB
Output level, 0dB		2.06VV	
Output impedance		12ohms	
De-emphasis		Correct	
Track access time (Tr15 YEDS2)		14s	
Mechanical noise		Low	
Error correction		>900µm gap, >800µm dot	
S/N Ratio			
20Hz-20kHz unwt'd	97dB (emph)	99dB (not emph)	
CCIR/ARM	91dB (emph)	95dB (not emph)	
Spuriae (to 100kHz)	-68 to -114dB	(varies with signal level)	
Resolution at -90dB	-4.8dB (L)	-6.7dB (R)	