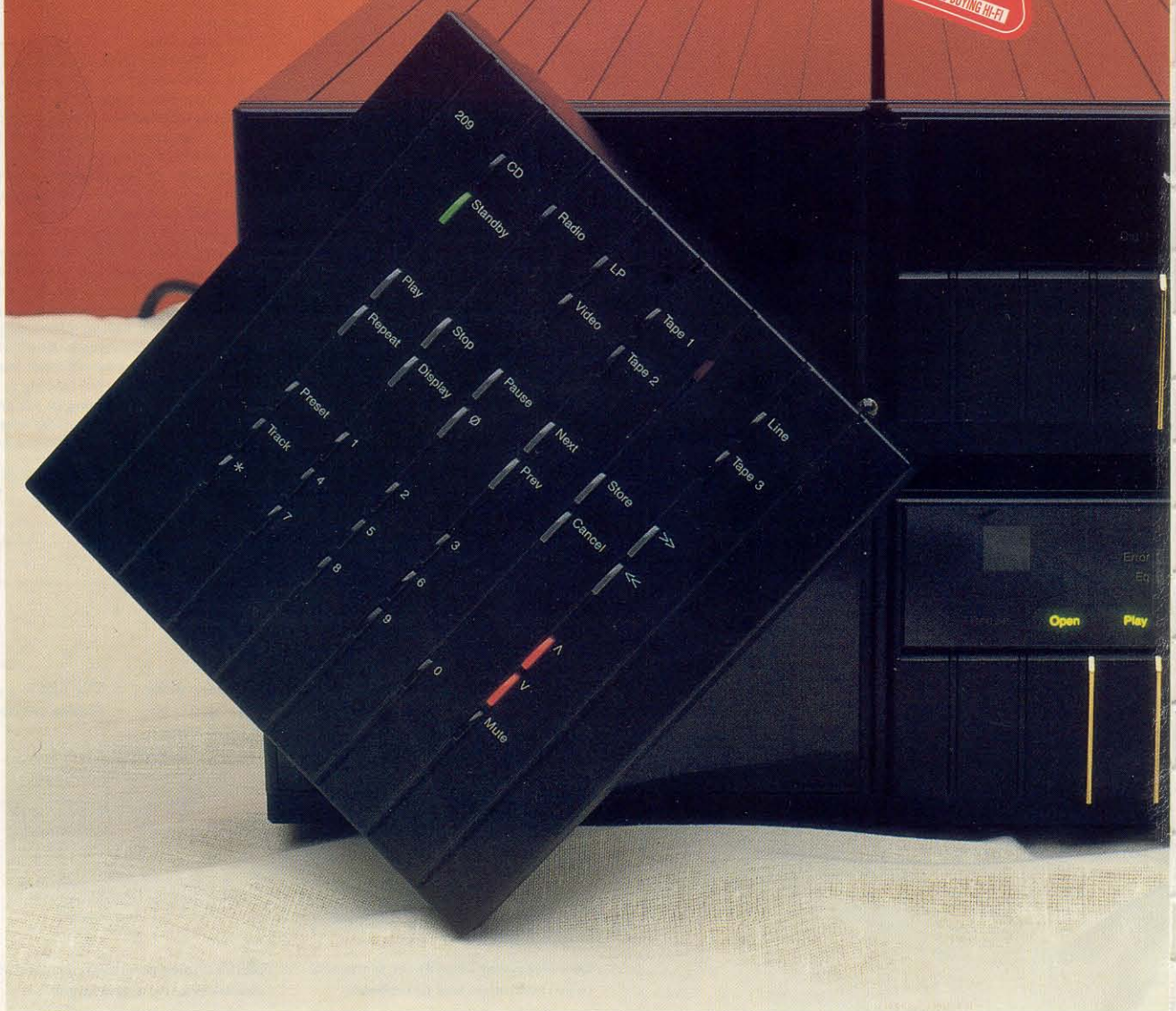




Meridian 602/606

Meridian's flagship D/A converter (the 606) was the first to be updated with Philips' DAC7 Bit Stream technology, but it has yet to receive the 1-bit 'alternative' from Crystal. Perhaps Meridian is simply hedging its bets, reverting to Crystal technology in the 206 (issue 119) and 263 but leaving the rather unwieldy DAC7 in its double-width 606. There's certainly no apparent change in the styling, four digital inputs or phase invert facilities that were included on the original 606 way back in issue 101.

The DAC relies on three separate crystal-based oscillators to capture any of the three possible incoming sample rates (38kHz DBS, 44.1kHz CD and 48kHz DAT), minimising digital jitter without demanding that the digital output adheres to

a strict Class I standard. Naturally, Meridian's accompanying 602 transport is the perfect partner and this model was re-engineered last autumn to accommodate a new suspension.

Once again Meridian has opted for Philips' older die-cast CDM4 mechanism rather than the low-profile CDM9. Furthermore, a new high-stability oscillator and re-clocking circuit improve the flip-flop performance of its digital output, which has been beefed-up with a line-driver amplifier and decoupled using a miniature wide-bandwidth toroidal transformer. The onboard microprocessor has also been updated in line with the 206 and 200, allowing it to handle damaged or partially defective discs while also accepting 'stacked' instructions from the bulky 209 system remote control.

Sound quality

Way back in issues 96 and 101, our listening panel consistently favoured Meridian's cheaper 200 Series transport and DAC over the costlier 602 and 606, regardless of partnering equipment. This time, however, the tables were turned in favour of the 600 Series, the smoother but fuller and more luxurious sound commanding both the interest and admiration of the panel.

Gone was the hazy, dirty quality of the 200 combination, replaced by a very open and expansive acoustic with a pure woodwind sound and powerful vocal dynamics.

The smooth and undemanding balance was especially notable on Lyle Lovett's busy *Friend of the Devil* track, which was uniformly calm despite a loss of bass strength. Indeed, bass often sounds a little



Laboratory Report

TEST RESULTS

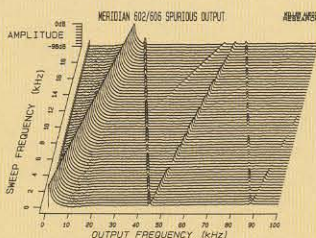
	20kHz	1kHz	20kHz
Channel Balance	0.01dB	0.02dB	0.01dB
Channel Separation	134.5dB	130.9dB	116.7dB
THD vs Level, 0dB	-110.6dB	-106.2dB	-72.9dB
-30dB	-93.0dB	-82.1dB	-50.5dB
-60dB	-59.0dB	-52.6dB	-20.8dB
-80dB	-28.6dB	-30.1dB	+0.1dB
Dithered, -90dB	-17.5dB	-21.4dB	+9.0dB
Dithered, -100dB		-18.1dB	
Dithered, -110dB		-7.5dB	
Resolution @ -60dB		0.00dB	0.00dB
-80dB		+0.04dB	-0.02dB
-90dB		+0.08dB	-0.12dB
-100dB		+0.30dB	+0.50dB
Peak Output Level, L/R	2.397V/2.395V		
Relative Output Level	+1.57dB		
Output Impedance	54.8ohm		
Radio Frequency Spurious		12mV @ 33.87MHz	
0.33Hz Noise Modulation		+4.9dB	
CCIR IMD, 0dB		-99.5dB	
Suppression of stop-band IMD		54.2dB	
De-emphasis Accuracy, 1kHz		-0.05dB	
5kHz		-0.27dB	
16kHz		-0.22dB	
S/N Ratio (A-wtd), w emp, 0LSB		107.8dB	
w/o emp, 0LSB		102.9dB	
Digital input/output(s)		Coax & Opt (Tos)	
Digital output level		453mVp-p	
Digital input impedance @ 1MHz		46.9ohm	
@ 20MHz		56.2ohm	
Digital edge risetime		8.50nsecs	
Clock accuracy		-7.7ppm	
Frequency error at 20kHz		-0.154Hz	
Jitter + noise at -90dB		-25.20dB	
Track Access Time (99)		2.5secs	

It appears that Meridian has made several running modifications to the 606 DAC. The -70dB plot shows an increase in ultrasonic re-quantisation noise of some 2-3dB (around 80kHz) even though the in-band dynamic range is unaltered (see issue 101). Similarly, the V-shaped stop-band images and ripples on the frequency response all come courtesy of the SAA7321, used as a four times oversampling filter.

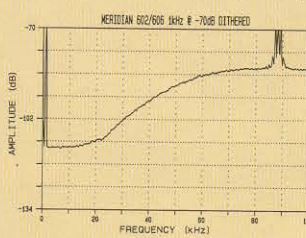
Distortion remains broadly unchanged at 0.0003-0.023 per cent across the audio band although the 108dB signal-to-noise ratio (A-weighted, with emphasis) has now been improved by some 3dB.

Excellent low-level linearity, low jitter plus noise and Class I clock accuracy put the 602/606 into the premier league of transports and DACs. That is until we take a closer look at the (electrical) digital interface. Meridian maintains a low but rising impedance trend of 47-56ohm, which is a quirk of the active digital input. This results in overshoot and reflection of some 25-37 per cent, a foible that also limits its compatibility with competing CD transports.

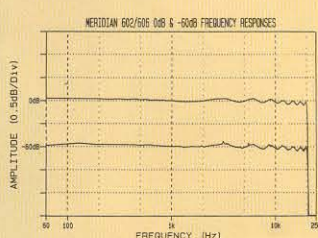
Digital edge rise time is rather sluggish at 8.5nsecs, (rather than the 2.5nsecs boasted by the 200/263), and this situation is exacerbated by a wealth of circulating interference clearly visible on the S/PDIF waveform. This interference coincides with the third harmonic of the crystal clock frequency (33.9MHz), and appears as unwanted RF noise that seeps at a lower level from the main analogue outputs.



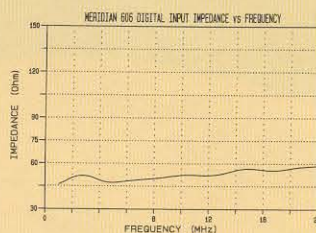
Rippled stop-band images are produced by the primary digital filter.



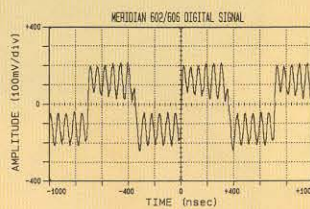
Shows the classic ultrasonic 'bump' of Philips' third order noise shapers.



Ripples caused by four times oversampling filter in Philips' SAA7321.



Active input is revealed by the low but rising impedance trend.



Circulating interference is obvious but has little influence.

diffuse, powdery or 'fluffy' but this track, along with Davy Spillane's *Walker of the Snow*, was free of any coarseness — the guitars, pipes and vocals sounded relaxed but still subtly detailed.

Clearly, this combination has what might be described as an 'expensive sound', which brings a realistic scale and drama to classical works but makes strings sound silky rather than thrilling. For some listeners the performance of this Meridian combination might be too composed but, for others, the freedom from contrived excitement is extremely valuable. Reflecting the former view, one panellist derided the 602/606 for sounding "as neat and tidy as a Dunn & Co shop window". "My foot's gone to sleep," he commented in response to what he considered to be an excessively civilised, prim and proper sound.

Mary-Chapin Carpenter should have sounded raunchy and seductive, he suggested, but here she sounded as if she had "exchanged her negligee for a set of winceyette pyjamas buttoned to the

neck'. An extreme view, but one that summed up the panel's feelings toward the latest 602/606 duet.

Conclusion

In a digital nutshell, this combination has a deliciously smooth, fluid and tidy sound. It may be a little too tidy, civilised or restrained at times but it is always free of

any gritty or hard colorations. It makes for easy listening, but also bubbles with delicate, intricate detail which keeps the spirit of the music alive. Recommended to all save the Motorhead fan club.

Meridian Audio Ltd, 14 Clifton Road, Huntingdon, Cambs PE18 7EJ.
Tel: (0480) 434 334



Verdict

▲ Refined and sober-sounding duet has extra polish.

▼ Still perhaps too cultured for some tastes.

► £3,100.00 RRP

