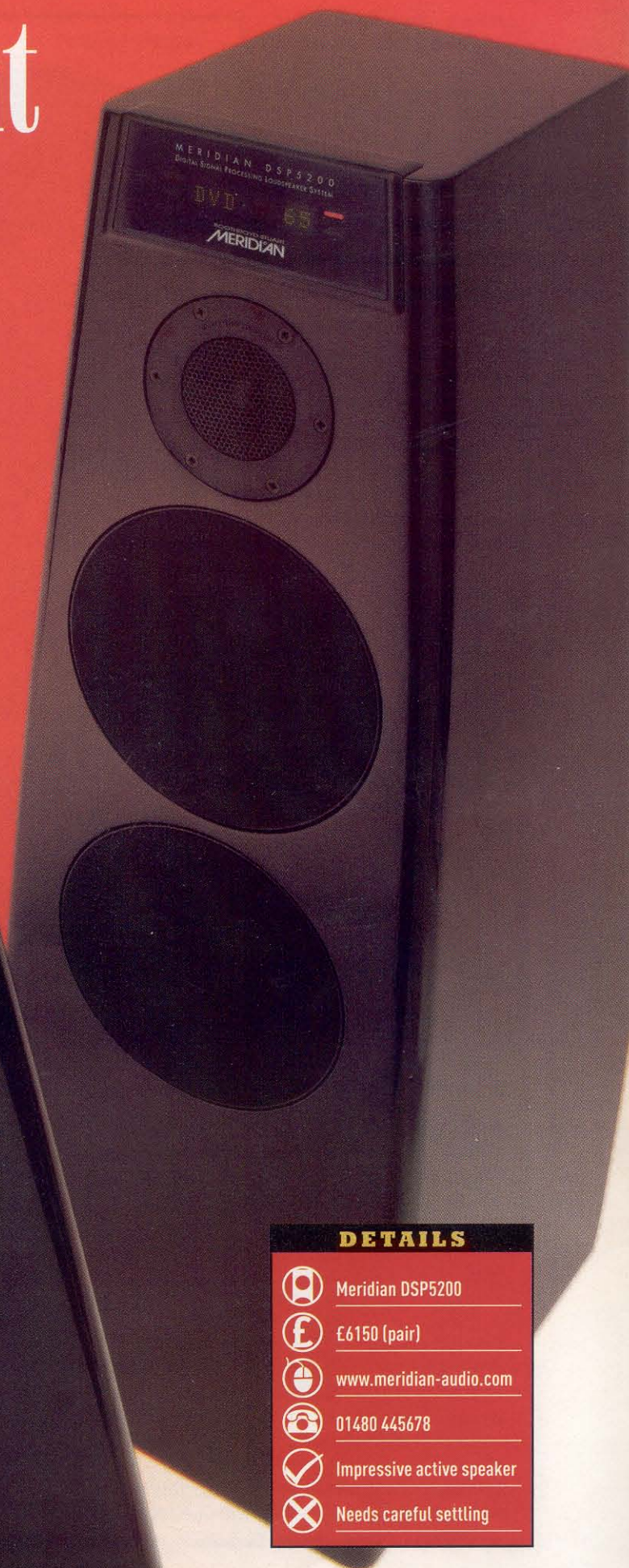


Digital Delight

British audio expert Meridian has bolstered its DSP range of speakers with the smaller and more affordable DSP5200 model with amps included. Ivor Humphreys finds out how it performs...

At first glance it's clear the DSP5200 could only have come from Meridian. A real 'looker', it's got curves in the right places, owing much in this, and indeed many other respects, to the flagship DSP8000 and DSP7000. It differs from them in bringing us Meridian's elevated DSP

and active drive technology in a smaller, more affordable package. Affordable? Yes. The price tag may seem hefty until you consider that each speaker includes three power amplifiers and a DSP system for crossovers, tonal correction and more that is the equivalent of a fair sized PC. All you need, »



DETAILS

-  Meridian DSP5200
-  £6150 (pair)
-  www.meridian-audio.com
-  01480 445678
-  Impressive active speaker
-  Needs careful settling

indeed can, add is a digital input signal (or two).

If you want the works you'll need a Meridian front-end unit such as the G68 Digital Surround Controller but if you'll only ever want to play CDs then just add a Meridian CD player. Disc navigation, volume and much more will be handled by the system all are under control of the supplied Meridian System Remote (MSR). Three boxes (two speakers and a CD player) with small, easily hidden digital interconnects, plus a handset. Nothing could be neater yet more technically complete.

CURVED CABINETS

Curved cabinets have clear benefits over the conventional rectangular enclosure, offering panels that are usually stiffer and always better at dispersing internal sound waves. The DSP5200 cabinet has a pronounced curve to its rear panel and subtle curves to its sides. It is made of a 19mm thick multi-layer ply composite, resin damped and internally braced. The finish is in a choice of real wood veneers or silver or black polyester lacquer and the price is still the same.

This is a 'two-and-a-half way' design using two long throw 160mm polypropylene coned units for bass and midrange and crossing over at 2.6kHz to a 25mm aluminium dome, silver voice coil, short horn loaded tweeter. The cabinet is rebated to allow the units to be mounted flush with the baffle and the bass drivers are retained by metal clamp rings held in place by Allen headed bolts. Individual cloth covered grilles normally hide these two units while the tweeter is protected by an integral metal mesh. A dual



DETAILS

ABOVE: Close-up of cloth grille off one of the two long throw 160mm polypropylene coned units



ABOVE: Electronics are in a module at the bottom rear

rectangular port at the bottom rear of the cabinet provides bass loading. Each drive unit is powered by its own 75W amp (an auto-biasing, error-correcting design based on that developed for the Meridian DSP8000).

The electronics are held in a module at the bottom rear of the

cabinet. Each speaker requires a mains input and there are gold plated S/PDIF phono sockets for the two digital inputs plus a digital carry-through output, a choice of DIN or BNC sockets for the Meridian Comms control system and an RS232 D-socket for optional control from a PC. One speaker is designated master and the other slave, with the cabling running from source to master to slave.

At the top of the cabinet is an eight-digit display panel that normally shows the selected input and volume level but can alternatively show the audio format (e.g. 'MHR 88k') or can be set blank. It is also used to display the various user and

configuration settings described below. Additionally there are three lights to signal which is the master speaker, 88kHz or 96kHz input or clipping.

DIGITAL INPUTS

The digital inputs lock on to any standard signal between 32kHz and 96kHz, with sampling rates of up to 24-bit and support for MHR (Meridian's proprietary high resolution system). The input circuit employs a FIFO (First In First Out) memory buffer aimed at the lowest possible jitter performance with upsampling to benefit the use of 192kHz/24-bit DACs.

The DSP is based around a 150MIPS (150 million

WE LISTENED TO

- Bach Cantata BWV70, Bach Collegium Japan/Suzuki (I BIS-CD-1111)
- Nielsen Symphony No. 5, Cincinnati Symphony Orchestra/P. Järvi (Telarc SACD-60615)
- Rachmaninov Cello Sonata, Conway/Evans (Linn Records CKD 009)

- Takemitsu, Twill by Twilight, London Symphony Orchestra/Knussen (DG 453 495-2)
- Tord Gustavsen Trio, Changing Places (ECM 1843)
- Capercaillie, Nàdurra (Survival SURCD 025)





ABOVE: Eight-digit display panel can display audio formats, settings or input/volume levels



ABOVE: The versatile Meridian System Remote (MSR) comes with the DSP5200 speakers

instructions per second) processor. It is used, among other things to split the frequency range between the drivers (digital crossover); to realise tonal correction in terms of bass level (up to ± 5 dB in 0.5dB steps) and treble tilt (a better implementation than the usual treble control whereby the response is tilted over the entire audio band by up to ± 10 dB in 0.5dB steps; to provide volume adjustment to 48-bit precision in 1dB steps (9dB here is equivalent to a doubling of the loudness); to provide left-right balance (again a better implementation which simultaneously delays and reduces the sound in one speaker); to modify the vertical axis (rather like a balance in the vertical plane) by adjusting

the timing between drivers; and to switch the absolute phase (polarity).

'Deeper' configuration options include master/slave set-up; compatibility with other Meridian units (including the 200 series pre-amp and CD player); the display name shown for any input and the handset button used to select

it; and overall response for boundary, corner or free space positioning and whether or not a subwoofer is involved. This is as comprehensive a system as one could envisage.

Much of such processing

is only possible in the digital domain. Passive analogue crossovers are best kept simple in order to preserve signal integrity, which is why many high-end designs these days employ low-order filters using the minimum of components. Digital crossovers can be matched exactly to the characteristics not only of each drive unit but to the discreet power amplifiers used to power them. This processing can be complex with zero penalties in terms of noise and distortion. The system caters for thermal overload and protection against excessive bass unit excursion without compromising the performance within its safe operating range.

You might think that given such an array of set-up options, finding the optimum configuration in any room might be a long-winded and uncertain procedure. If anything the reverse applies. The basics will be established by the dealer, leaving the user to experiment with the 'primary' control such as treble tilt, bass and balance such as you'd find on any properly appointed integrated or preamp, and the more subtle options of Axis and Phase.

It took a while to settle into the supremely coherent sound of these intriguing speakers. They are almost too smooth,

treble up just a fraction. The sound blossomed, freeing itself from the cabinets most impressively. Clearly these settings are peculiar to the DSP5200 in my room. At this elevated level of fidelity small response changes such as this can assume momentous subjective proportions.

SPECIAL SUBTLETY

Proportion is what this speaker offers. It casts a beautifully structured image that is coherent throughout the range and possessed of that rare level of integration that leaves the ear in no doubt as to its authority. The subtle changes in tonal quality which accompany the gradual opening of an organ swell box, the strikingly powerful, tightly controlled bass (Messiaen *La Nativité*, Olivier Latry, on DG) that can suddenly become manifest where a moment before there was no hint, the effortless proportioning of the *Notre-Dame*, Paris acoustic – this kind of subtlety is very special and convincing.

The same fidelity applies across the board, so the DSP5200 is similarly effective in music of all genres. It has the finesse in detail required of chamber, instrumental and vocal music; the 'slam' and 'speed' of rock. It's simply 'there' when you need it. A sweet and

'You might think that given such an array of set-up options finding the optimum configuration in any room might be long-winded. If anything the reverse applies'

too anonymous. I was troubled by a slight reticence to the sound, an almost introverted quality that failed quite to engage. Fortunately, and to me surprisingly, it was corrected by applying a subtle raise in vertical Axis and by tilting the

discreet top end matches the transparent midrange. A caveat concerns the need to settle these speakers in by careful experiment. They deserve such detailed consideration and are capable of repaying it many times over. $\square$

MERIDIAN DSP5200 - TECH SPECS

Frequency response: 35Hz - >20kHz (± 3 dB)
Output: >108dB SPL@1m
Construction: two-and-a-half way acoustic reflex system
Drivers: 2 x 160mm polypropylene bass drivers; 1 x 25mm aluminium-dome

tweeter, silver wire, short horn-loaded
Amplifiers: Three 75W per amplifiers, one for each driver
Dimensions: 300x903x356 (whd). Width tapers to 179mm at top; depth tapers to 217mm at top
Weight: 35kgs (packed)

THE REPORT

HI-FI NEWS VERDICT

An extremely well thought-out speaker, the DSP5200 delivers high-end performance from a compact, ultra-elegant cabinet. The latest use of Meridian's long proven DSP system elicits a remarkably extended and complete response and tailors it to any given room or positioning. A highly coherent and subtle performer. As impressive an example of the active loudspeaker concept as you'll encounter.