



**MERIDIAN**

## DSP5200.2

Digital Signal Processing Active Loudspeaker System

**The concept of the Digital Active DSP Loudspeaker, originally introduced by Meridian over two decades ago, provides the most accurate and effective path to high quality sound reproduction. The latest edition of Meridian's smaller loudspeaker, the DSP5200.2, takes this technology to a new high, with a series of technological innovations that deliver superior performance in many areas.**

The DSP5200.2 features the latest internal electronics and software combined with a sophisticated multi-amplifier active loudspeaker topology. The individual drivers, including the dual bass units and the new, high-efficiency tweeter, are each powered by a dedicated amplifier channel. DSP5200.2 also includes the Enhanced Bass Alignment (EBA) system, which ensures that low frequencies are time-aligned across the entire bass range. This provides the bottom-end extension benefits of porting, but retains the exact timing and coherence previously associated only with 'closed-box' designs. The result is deep, tight bass and clarity coupled with clean, clear, audibly-superior low frequency transients.

In common with all Meridian's DSP Loudspeakers, DSP5200.2 uses digital signal processing both for crossover filtering and all other signal processing. Ultra-accurate DSP delivers crossover characteristics and precision that would be inconceivable for any passive, analogue system, for a level of driver integration that is otherwise unobtainable.

The DSP5200.2 benefits from original research at Meridian into digital filtering, featuring a special upsampling filter with especially impressive characteristics and no pre-echo. This 'apodising' filter is so effective that it can correct problems further up the chain – even including correcting faults in the original recording. As a result, conventional 44.1/48 kHz sampled CDs and DVDs sound astonishingly like high resolution recordings.

The DSP5200.2 accepts a digital feed directly from a Meridian controller, CD, DVD player or system controller, handling the



highest resolution bitstreams, eliminating analogue speaker cabling and its associated losses, coloration, and clutter, while SpeakerLink allows it to be driven by a single, low-profile cable.

Meridian's DSP loudspeakers bring unique opportunities for optimization of driver/amplifier/enclosure systems, while giving listeners unprecedented control over music and cinema sound playback.

Many of the features that make the DSP5200 a truly impressive smaller loudspeaker

### Product Highlights

New advanced high-efficiency composite dome tweeter with silver-wired voice coil

Enhanced Bass Alignment (EBA) system ensures that low frequencies are time-aligned across the entire bass range.

Superior power response providing uniform in-room tonal balance

Proprietary 'apodising' upsampling filter improves audio quality of standard sample rate signals

Powerful, compact and elegant digital active loudspeaker with '2½-way' DSP crossover

Self-contained audio system with three custom drivers, three amplifiers, two digital converters, digital crossovers and advanced sound-shaping DSP computers for maximum fidelity

Listener remote control features including bass, treble tilt, listening axis, volume, time-compensated balance and absolute phase

Dynamic bass protection system avoids LF distortion at high levels

Innovative SpeakerLink for simple Cat 5 interconnects

Ultra-rigid cabinet in veneered ply, braced and resin damped for maximum sonic purity

Available in black or white high gloss lacquer finishes as standard, plus the full range of Meridian Select custom RAL colours.

**Meridian Audio Limited**

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DSP5200.2 Horizontal Centre version.

derive from the larger systems in the range. Ideal for more spacious as well as smaller rooms, these loudspeakers will do justice to any system, in almost any environment.

Each self-contained DSP5200 unit combines a '2½-way' crossover design, three custom drivers, three amplifiers, two multi-bit delta-sigma digital converters, digital crossovers and computers to deliver an impressive, powerful and accurate sound with full remote control over bass, treble tilt, time-correct balance, absolute phase, tweeter axis and input.

The latest technology gives the DSP5200.2 uncompromised, precise detail with pinpoint imaging and dimensionality in both stereo and surround. Advanced signal processing packs dynamics and bass into an impressively compact size. DSP controls allow correction of the frequency response in a variety of locations.

The new, high efficiency treble unit is a dual-magnet, semi-horn-loaded composite dome type with a silver voice coil, as used in the DSP7200.2. The dual bass drivers are 160mm long-throw composite designs and the cabinet vents through an extremely effective rear port design. This configuration, along with active operation and DSP correction, delivers a combination of smooth, powerful bass and very low mid-range colouration.

An enhanced basket design with sturdy clamp rings delivers the very best performance from the drivers, which are chosen specifically for their sound.

Whether in a two-channel system or as part of a multichannel home-theatre array, the DSP5200.2 provides precision command of frequency balance, listening axis and timecompensated balance and master volume – all implemented utterly transparently.

The DSP5200.2 is available in vertical format in pairs, as a single vertical centre loudspeaker, or in a horizontal centre-channel version.

The DSP5200.2HC horizontal centre-channel loudspeaker features breakthrough DSP technology, such as Centre Elevation adjustment, which employs results of the latest psychoacoustical research to vary the height of the audio image. Thanks to this unique, proprietary development, the loudspeaker may be placed beneath the screen in a home theatre installation, while the sonic image can be elevated to the centre of the screen image or to align with the main front loudspeakers as desired.

DSP5200.2 includes Meridian's SpeakerLink input/output interfacing architecture, featuring balanced drive and RJ45 connectors for simplicity and elegance of installation via simple, unobtrusive cabling.

The stylish, curved and tapered cabinet both increases stiffness and improves HF dispersion for a more natural top end. Cabinet construction is of 19mm thick multi-layer materials, with proprietary heavy poured resin, and is inherently stiff with superior geometry and damping.

The DSP5200.2 cabinet, like that of the flagship DSP8000, is crafted from Meridian's innovative, multi-layered 'sandwich' of selected woods and metal, formed in curved, pressure-laminated panels that produce almost perfectly vibration- and resonance-free enclosures, for unmatched freedom from coloration.

The exteriors of this unique cabinet is painstakingly finished in Meridian black or white gloss piano lacquer as standard, with the full range of Meridian Select colours available to order.

## Outline Technical Specification

### Performance

- Frequency response in-room within 3dB from 35Hz to over 20kHz. Linear-phase mid/top crossover. Output >108dB spl @ 1m on music material. Noise less than 15dB spl. Overall distortion typically <0.02% at any frequency or level.

### Inputs

- Meridian SpeakerLink in and out (RJ45)
- S/PDIF digital input, 32kHz–96kHz sampling rates at up to 24-bit with MHR support (phono).

### Construction

- '2½-way' acoustic reflex system. Single-port (vertical model) or dual-port (horizontal centre model).

### Drivers

- 2 x 160mm polypropylene bass drivers. 1 x 25mm composite-dome tweeter, silver wire, short horn-loaded.

### Electronics

- Two precision 24/192 oversampling converters for bass/mid and tweeter signals. Active bass/mid crossover. Digital and conversion electronics constructed using advanced surface-mount techniques and partitioned 6-layer printed-circuit boards.

### DSP

- 150MIPS digital signal processor. Digital crossover at 2.6kHz. Response correction for the whole system. Bass protection. User tone controls. Analogue/digital volume and phase control.

### Amplifiers

- Three 75W power amplifiers, one for each driver.

### Display

- Eight-character display with system lights, can be blanked.

### Dimensions

- Vertical model: height: 903mm/36in (without spikes/feet); width: 300mm/12in at base, tapering to 179mm/7in; depth: 356mm/14in at base, tapering to 217mm/8.5in.
- Horizontal centre model: height 200mm/8in; width 734mm/29in; depth: 265.75mm/10.5in at deepest point.

### Weight

- 35kg packed.

E&OE.