



DSP5000C

DSP Centre-channel Loudspeaker

Sales information
1st December 2001

Background

Meridian has led the market with their highly acclaimed DSP loudspeaker designs. These combine excellent acoustic and drive-unit technology, with multiple built-in power amps and unique performance-enhancing DSP and digital conversion systems. The Meridian DSP loudspeaker is the ultimate expression of the speaker builder's art.

Meridian DSP5000C

The centre channel supplies dialogue in movies, and sharpens the musical stage. It can also add tremendous energy and should not be dismissed lightly when assembling a surround system.

The DSP5000C is a single-box DSP loudspeaker in a front-facing format that can be effectively built into system cabinets.

The DSP5000C is heavily shielded for use near the largest television screens. Like every Meridian digital active speaker, it carries all necessary electronics on board, including three 75-watt amplifiers, two converters, digital crossovers and a complement of powerful computers.

Using Digital Signal Processing (DSP), internal computers adjust bass, treble and absolute phase while remaining sonically transparent. The same DSP system also provides equalisation settings to allow optimum performance when installing a DSP5000C in one of five common room positions: free-standing, wall-bound, above or below a TV, or behind a projection screen.

The DSP5000C uses linear-phase digital crossovers. With no phase shift, a digital crossover brings voices and instruments into sharp relief.

The DSP5000C blends seamlessly with other Meridian equipment, but can also be adjusted, using its powerful DSP, to match any high quality stereo system.

Although horizontally disposed, the DSP5000C is not only a centre speaker. If you prefer the horizontal or shelf-mounting format, it can be used in stereo pairs, or for any position in a surround system.

Acoustic system and format

The DSP5000C is a powerful 2.5-way active acoustic reflex design. The bass system uses two 160mm long-throw composite bass drivers. This configuration, along with the active and DSP correction, delivers a combination of smooth powerful bass and very low mid-range colouration.

The tweeter is the Meridian 25mm aluminium-dome, silver-wire tweeter used in all the DSP loudspeakers.

- **2.5-way active loudspeaker with DSP crossover**
- **Self-contained audio system, each comprising three custom drivers, three amplifiers, two digital converters, digital crossovers and advanced sound-shaping DSP computers**
- **Remote controlled and requiring no unsightly speaker cables**
- **Listener control over features including bass, treble tilt, listening axis, volume, time-compensated balance and absolute phase**
- **Cabinet constructed from MDF, braced and damped and finished with wood veneer**
- **DSP for correcting response to speaker placement**
- **Maximum output level up to 108dB spl**

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Technical Specification

- Performance:** Frequency response in-room within 3dB from 35Hz to over 20kHz.
Output >108dB spl @ 1m on music material.
Noise less than 15dB spl.
Overall distortion typically <0.02% at any frequency or level.
- Inputs:** Two digital inputs to SPDIF standard; 32kHz–96kHz sampling rates at up to 24 bit; MHR support. (A future software update will enable support for 192kHz.)
- Construction:** 2.5-way acoustic reflex system.
2 x 160mm polypropylene high-efficiency long-throw custom drivers.
1 x 25mm aluminium-dome tweeter, silver wire, short horn-loaded with protective grille.
Cabinet constructed from high-density MDF. Integral magnetic shielding and user-changeable real wood veneer acoustic damping side panels.
FIFO memory buffer input for the lowest possible jitter from almost any source.
Two precision 128x oversampling converters for bass, mid and tweeter signals.
Analogue gain and filtering using proprietary Meridian Class-A discrete amplification.
Digital and conversion electronics constructed using advanced surface-mount techniques and partitioned 4-layer printed-circuit boards.
Three 75W power amplifiers, one for each of the drivers.
Power amplifiers use a unique feedback topology and precision local error-correction systems to achieve a performance equivalent to the conversion system.
- Dimensions:** 195mm (7.7in) H, 670 (26.38) W, 275 (10.83) D
Weight 32kg (71lb) each
- DSP:** 100MHz Motorola digital signal processor.
Digital crossover at 2.6kHz.
Response correction for the whole system.
Bass protection.
User tone controls.
Volume and phase control.
- Controls:** Rear-panel controls for power On/Off.
MSR and RS232 port provide control over bass, treble tilt, listening axis, volume, time-compensated balance and absolute phase.
- Front display:** Eight-character display with system lights, can be blank.

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