

DSP6000 Digital Loudspeaker DSP6000C Center Channel

Meridian has led the market with their highly acclaimed DSP loudspeaker designs. In fact the DSP6000 – which was introduced in 1990 – is the only loudspeaker to hold the coveted Stereophile Class A rating for four successive years.

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



"Smart Art" is how one owner, an antiques dealer, describes DSP6000s. Their clean, classic lines and hand-rubbed piano lacquer blend into any decor, and belie the fact these slim columns house the world's most advanced home music system: an unmatched technical tour de force comprising twelve drivers, eight amplifiers, six digital converters and crossovers, and advanced sound-shaping computers, all self contained, remote-controlled and requiring no speaker wires.

The tweeter, midrange and woofers are acoustically blended by computers; the benefit is much better three-dimensional music that any conventional hi-fi can offer in stereo or surround modes.

Indeed, DSP6000s are breathtaking in their ability to place musicians in precise locations in your room, with even subtle body movements clearly audible, such as a singer swaying or an instrumentalist stepping up for a solo. Voice and instrument timbre are

utterly natural. The bass plays lower than most human hear, but you can feel it. The highs are smooth and sweet. Music sounds balanced and articulate, with clarity and tiny detail even at low volumes. And the system is easily muscular enough to effortlessly place a live orchestra or rock band in your room; we are serious in this claim.

In audiophile terms: The DSP6000 accepts only digital inputs; its digital crossovers are phase-coherent at all points, impossible with traditional design; each driver band has a dedicated DAC, boosting resolution subjectively beyond 21 bits; computers apply digital signal processing for exceedingly advanced control features; the eight amplifiers assess drivers as part of the electrical circuit for remarkably distortion-free behavior; the only analogue stage is the active loudspeaker link itself

Performance

Frequency response in-room within 3dB from 25Hz to over 20kHz (for inputs at 44.1kHz or 48kHz).
Linear-phase mid-top crossover, 6th-order Linkwitz-Riley bass-mid crossover
Output >114dB 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–48kHz sampling rates

Construction

3-way acoustic reflex system.
2 x 200mm long-throw bass drivers.
1 x 160mm polypropylene mid driver in separate enclosure.
1 x 25mm aluminium-dome tweeter, silver wire, short horn-loaded with protective grille
Black gloss piano-lacquer head unit and black cloth and glass bass cabinet.
Digital input receiver uses unique proprietary Meridian twin phase-lock-loop system.
Four precision 64x 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.
Four 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 1330mm (52.4in) H, 275 (10.83) W, 425 (16.73) D – Weight 65 kg (lbs) each

Digital Signal Processing

Twin Motorola 56001 DSPs running at 32MHz
6th order Linkwitz-Riley crossover at 200Hz
Linear-phase time-aligned crossover at 2.6kHz
Response correction for the whole system
User tone controls
Volume and phase control

System operation

By included Meridian System Remote (MSR) that operates:
Volume, Mute, Source selection
Source control (e.g. of CD or Tuner)
Balance and listening-axis control
Tone control with bass and tilt functions
Room-position correction to optimise for a number of locations including free-standing, wall, corner and cabinet
Absolute phase selection
Display control including blank and options for; source, volume, CD track and time, tuner preset and frequency
Favourite tone-settings memory
Reset function
Rear-panel controls for: Power On/Off
Front-panel four character display with system lights