



DSP8000

Reference Digital Active Loudspeaker System



The Meridian DSP8000 is the ultimate expression of the art and science of loudspeaker design. Meridian's flagship digital active loudspeaker sets completely new standards for clarity, dynamics, imaging and realism. It is one of few loudspeakers in the world that can accurately reproduce both the power and subtlety of a concert grand piano.

The DSP8000 is designed to reproduce sounds at up to full natural level while providing all the resolution required by high-definition audio sources up to 24-bit. Such demanding dynamics required a new approach to cabinet construction and

selection of advanced drive units. DSP8000 is constructed from the finest materials and all electronic parts are carefully chosen for sound quality. The result is beyond words – listen for yourself.

DSP loudspeaker drivers

Each DSP8000 loudspeaker uses six high-efficiency long-throw custom bass drive units. The bass units are mounted symmetrically in pairs on the sides of the bass cabinet, cancelling vibration in order to minimise interference with the mid-range and treble units. The treble and mid-range drivers are mounted in a separate sealed head assembly.

Product highlights

Meridian's flagship Digital Active Loudspeaker system

'3½'-way DSP active loudspeaker

Now with Meridian's exclusive SpeakerLink interconnection

Curved cabinet featuring advanced laminated damping technology

New filter and buffering design for superb performance

Piano lacquer finish in black or silver; other colours to special order

Cabinet constructed from pressure laminated panels of wood and metal

Eight custom drive units

One 150W power amplifier per bass speaker pair; 100W amplifiers for midrange & tweeter

Max output level 118dB spl

The ultimate expression of the art and science of loudspeaker design

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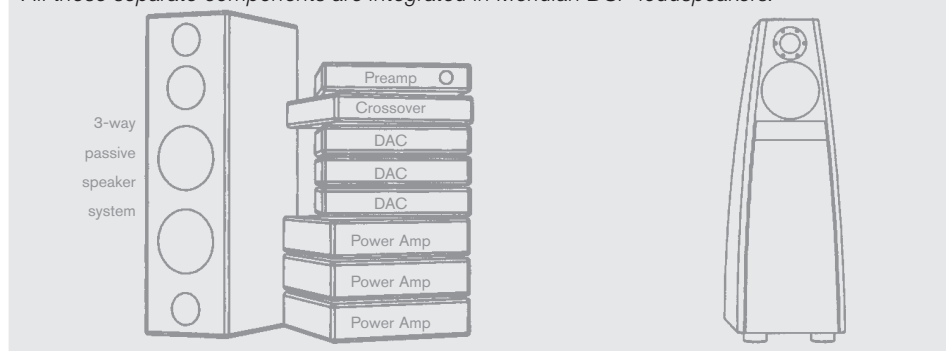
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Meridian DSP Loudspeakers – what's inside?

All these separate components are integrated in Meridian DSP loudspeakers.



The treble unit is a semi-horn-loaded composite dome design with a silver voice coil. The mid-range unit incorporates a cone made from a uniquely light and stiff combination of polymers to give unparalleled transparency.

Power amplifiers

The drivers are fed by five independent high-power low-feedback power amplifiers mounted on a multi-finned extruded heatsink. 150W amplifiers are used to drive each of the three pairs of horizontally-opposed bass units, while separate 100W amplifiers drive midrange and tweeter.

The combination of idealised magnetic design, careful star earthing, and very fast output devices gives the amplifiers extremely low noise, high detail, and fast bass.

The whole electronic assembly is supplied from two substantial toroidal transformers feeding high-quality audiophile-grade capacitors.

Advanced digital processing

The DSP8000 features a new digital upsampling filter system that delivers an impressive improvement in the sound of standard sample rate (44.1/48 kHz)

recordings. The filter is so advanced it can even clear up some flaws in the original recording. In addition, there is a new buffering system for even lower jitter. Overall the result is superb imaging and transparency.

The cabinet

Each DSP8000 loudspeaker is built around a precision manufactured cabinet, which uses innovative design techniques to give exceptionally low coloration and amazing mid-range transparency. The head assembly is a sealed enclosure fabricated from curved pressure-laminated panels, each using multiple layers of selected woods and metal to provide high stiffness and damping. Its narrow tapered shape offers optimum dispersion across a wide listening area. It is supported on the bass enclosure by three machined feet.

Like the head unit, the bass cabinet is constructed from interlaminated panels with extensive bracing. The front panel is 6mm glass and incorporates a window for the matrix display and infrared remote control sensor.

The cabinet stands on triangulated adjustable machined foot assemblies with provision for floor spikes or skids.

Outline Specifications

Performance

- Frequency response in-room 20Hz – >20kHz $\pm 3\text{dB}$ (for inputs at 44.1kHz or 48kHz)
- '3 1/2'-way crossover system
- Linear-phase mid-top crossover; 6th-order Linkwitz-Riley bass-mid crossover
- Output >118dB spl @ 1m on music material
- Noise less than 15dB spl
- Overall distortion typically <0.02% at any frequency or level

Inputs

- SpeakerLink balanced digital (2ch, RJ45)
- S/PDIF unbalanced digital (2ch, phono)
- 32kHz–96kHz sampling rates

Audio Processing

- FIFO memory buffer input for the lowest possible jitter from almost any source
- Four 24-bit D/A converters
- 3x150W amps on bass (1 amp per driver pair)
- 2x100W amps on midrange and tweeter
- All upsampling and processing is performed a 150MHz digital signal processor (DSP)

Construction

- Two separate enclosures: mid/top and bass.
- Horizontally opposed and profiled bass system introduces minimal vibration to the mid/top enclosure
- 6 x 200mm long-throw bass drivers
- 1 x 160mm polypropylene (TPX) mid driver in separate enclosure
- 1 x 25mm dome tweeter, silver wire, short horn-loaded with protective grille
- Black or silver gloss piano-lacquer with glass front bass cabinet
- Also available in other colours to special order

Dimensions

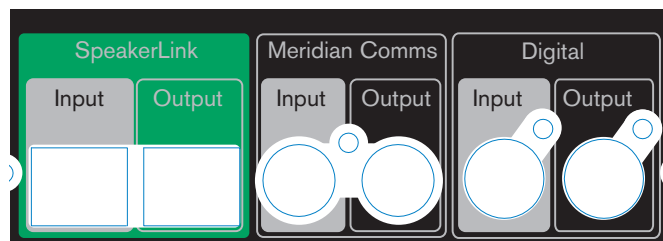
- 1350mm (53.2in) H, 400 (15.7) W, 528 (20.8) D – weight 105kg (231lb) each

Control

- Rear-panel controls for Power On/Off. Full control via MSR+ and RS232
- SpeakerLink carries Comms, serial and balanced digital audio via RJ45/CAT 5

Front display

- Multi-character display with system lights



The DSP8000 now includes SpeakerLink – a new interconnection system that links Meridian components with a single CAT 5 cable, for the ultimate in easy installation.