

DSP33 and DSP33C Digital Active Loudspeakers

The new DSP33 Digital Active Loudspeaker is a remarkable combination of unique Meridian technologies in a compact package. The result is a loudspeaker which is elegant, articulate and versatile - high technology and high fidelity. The DSP33 is deceptively small. Its bass extension is startling for its size and fully controlled. It projects a dramatic soundstage - detailed yet smooth, grand yet intimate.

The DSP33 is packed with the very latest in audio technology for the new generation of high resolution sources.

Signal Processing

The DSP33's two digital inputs can accept up to 96kHz/24bit sources, including Meridian High Resolution (MHR) streams from Meridian Processors and DVD players.

The unique Meridian DSP processing is performed on a brand new 100 MIPS Motorola DSP, the 56364. Like the other members of the Meridian DSP Speaker family, the DSP33 Signal Processing includes

- FIFO memory buffer input for the lowest possible jitter from almost any source
- Linear-phase crossover for precision drive unit integration not possible with analogue techniques
- Tweeter delay for perfect driver alignment
- 48-bit resolution volume control
- Minimal frequency equalisation to give a frequency response free from drive unit or electronic colouration
- Transparent tone controls
- Absolute phase control and phase-corrected balance control

The extraordinary big box sound of the DSP33 is achieved using exciting new signal processing developments. Meridian's active bass extension deepens the response without excessive woofer excursion. At moderate volumes, a psychoacoustically correct extension filter extends the bass still further. At high volumes DSP bass protection helps prevent the woofers from bottoming. Only the very lowest frequencies are reduced.

Electronics

The electronics of the DSP33 are designed using the very latest techniques. Extensive use of 4 and 6 layer PCBs and surface mount components allow the hardware of Meridian DSP Loudspeakers to be compacted into this cabinet without compromise.

Components are carefully chosen and include many polypropylene capacitors and Van den Hul internal wiring.

The DACs are the very latest 96kHz/24 bit devices.

At the heart of the DSP33 are the twin amplifiers, which make use of our latest research into idealised low feedback amplifier design. These give high power - 85W Bass and 65W Treble. Careful attention to star earthing and high speed bipolar output devices combine to give very fast bass and high resolution. The system has extremely low levels of noise and distortion. The power supply includes a substantial toroidal transformer and audiophile grade capacitors.



Acoustics

The cabinet and drivers owe much to the DSP33's active cousin, the M33, of which Corey Greenburg said *"The first thing I noticed about the M33s was their startlingly clear and detailed midrange"*

The cabinet is manufactured from precision cast and extruded aluminium. This has incredibly low levels of low frequency cabinet resonance. Additional high frequency damping gives the whole system exceptionally little cabinet colouration, for excellent mid-range transparency.

The bass drive units are two parallel 5" woofers with cast alloy chassis and carbon fibre cones. They have very large shielded magnets which provide excellent drive and control. The tweeter is a very high quality 1" aluminium dome with a Neodymium magnet and a protective grille. It is extremely well matched to the woofer and also tonally very compatible with the other speakers in the Meridian range.

Applications

The DSP33 is designed to be used in many different types of system. It is easy to install - for most applications it requires no setting up beyond channel selection with the rear panel switch.

The remarkable bass extension of the DSP33 makes it a wonderful stereo system for moderate sized rooms, or larger rooms if supplemented with D1500 or D2500 Digital subwoofers.

In conjunction with a Meridian Surround Controller, it can be used in any sized theatre - from a main channel in a Meridian Digital Compact Theatre, to a surround speaker in a larger Meridian Digital Theatre. It can be wall mounted using an Omnimount 75 Series bracket.

It can be used either vertically or horizontally mounted as a centre channel. If ordered as a centre, it is supplied with a plinth, which gives rigid support and tilts the centre channel towards the listener, whether sited above or below a television.

Other two channel applications include its use as a Digital 2nd Zone solution, or as a high-end PC multimedia speaker - when connected to the digital output of a soundcard, the RS232 lead supplied allows control over all the functions of the speaker.

Specification

Cabinet:	Extruded/Cast Aluminium, black finish standard, piano lacquer option
Acoustics:	2 Way Infinite Baffle, 5" Shielded Woofer, 1" Aluminium Tweeter
Response:	55Hz-20kHz +/- 3dB
Amplification:	85W woofer, 65W tweeter. 6-200VA.
Signal Processing:	100MHz Motorola 56364, Linear Phase Crossover, 96kHz/24Bit DAC.
Dimensions:	150mm x 295mm x 210mm (5.9" x 15.6" x 8.3"), 9.5kg (21lb) each

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