

SPECIAL EDITION DSP5200 DIGITAL ACTIVE LOUDSPEAKER

OVERVIEW

The Special Edition series of Meridian loudspeakers represent the pinnacle of Meridian's loudspeaker design and development programme and are the most advanced loudspeakers that Meridian has produced to date.

Over 30 years of engineering development, coupled with extensive research in Psychoacoustics into how we perceive sound, have informed every aspect of the Special Edition series.

Built by hand in the UK, each Meridian Special Edition DSP5200 is a Digital Active loudspeaker containing Digital Signal Processing (DSP) technology. This ingenious, yet elegant design means that the loudspeaker enclosure contains the entire system's electronics including its amplification. In common with the other loudspeakers in the Special Edition series, a suite of innovative Meridian technologies is also provided.

With an ability to deliver the very best from High Resolution sources, including MQA, the performance of the Meridian Special Edition DSP5200 demonstrates why Meridian is widely regarded as the Pioneer of High Resolution Audio.



PRODUCT HIGHLIGHTS

- New DSP provides performance enhancements including the latest implementation of Enhanced Bass Alignment (EBA) technology to provide additional clarity and an open, transparent soundstage. New Meridian-designed short-horn-loaded tweeter with a beryllium dome for outstanding transient response and extended frequency range.
- New mechanical clamp rings on the mid-range and bass drivers provide enhanced mechanical stability and further minimise coloration.
- New extended-bandwidth analogue electronics, optimised to deliver maximum performance from high-resolution recordings.

USER FEATURES

- Source information in the loudspeaker display is also derived from the controller, allowing for additional custom legending.
- Bass, Tilt, and Axis presets for enhanced control and a new lowpass crossover design.
- ‘Ethernet’ style SpeakerLink cabling which maintains performance and is easy to install.

TECHNOLOGIES

NEW SPEAKERLINK INPUT BOARD AND DSP

A new SpeakerLink board provides enhanced interoperability between Meridian Controllers and DSP Loudspeakers. Digital Signal Processing has been enhanced for higher clock speeds, giving superb handling of the high sample rates encountered with high-resolution audio sources.

WIDEBAND ANALOGUE ELECTRONICS

Each amplifier has been refined to provide a more lifelike sound, with optimised transient response, extended frequency response and enhanced dynamic range.

MQA –MASTER QUALITY AUTHENTICATED

Special Edition loudspeakers fully support MQA. MQA is a technology that captures the full magic of an original studio performance. Using pioneering scientific research into how people hear, MQA delivers master quality audio in a file that’s small enough to stream or download.

ENHANCED BASS ALIGNMENT (EBA)

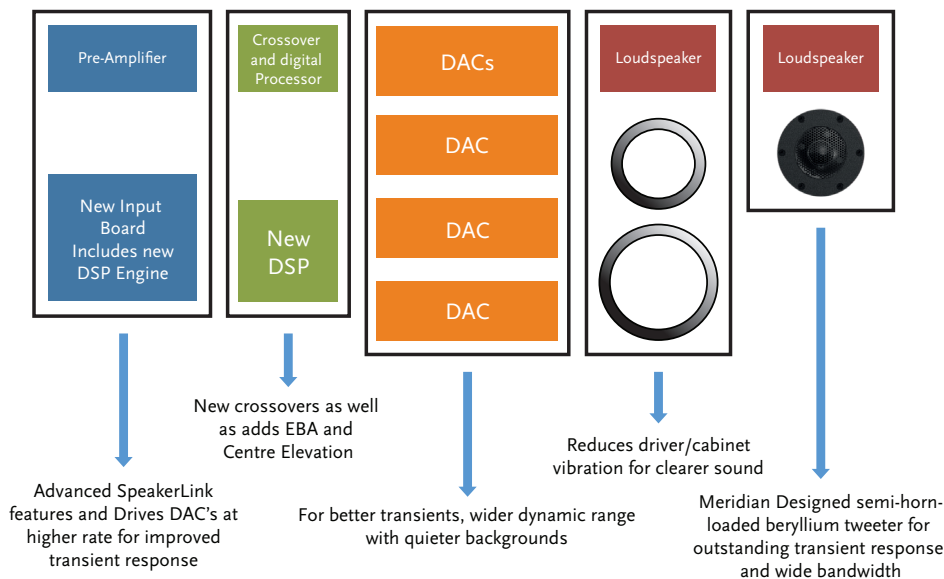
Meridian’s innovative Enhanced Bass Alignment technology uses two different technologies to time-align high, mid and upper bass frequencies with the low bass, resulting in audibly improved bass transients and added life and clarity.

MERIDIAN APODISING FILTER

A unique Meridian filter that avoids pre-ringing, so it can be steeper, cleaning up the effects of early, less efficient filters used in the digital recording process. The result: a better, cleaner sound from recordings both old and new.

FIFO BUFFERING

Meridian’s “First In, First Out” buffering system minimises jitter, ensuring perfect timing and improved clarity. You enjoy a clearer feeling of the instruments and their interrelationship.



CONSTRUCTION

The Meridian Special Edition DSP5200SE is manufactured from interlaminated panels finished in high gloss piano lacquer. Black and High Gloss White are available as standard finishes. In addition custom finishes are available upon request as well as a further 270 RAL colour finishes as part of Meridian's Select programme.

For perfect stability, the loudspeaker stands on adjustable foot assemblies machined from solid aluminium. Meridian utilises "soundless" materials for the enclosure – notably Meridium.

The narrow shape emulates aspects of the human form, which according to psychoacoustic research provides provides a more realistic performance. Soft cabinet edges enhance the visual design, but they also avoid generating unwanted additional high frequency sounds that can blur the soundstage.

- The beryllium-dome tweeter is seven times more rigid than aluminium – the traditional tweeter cone material – and over twice as fast, making it the perfect material for the most natural sound.
- The new beryllium-dome tweeter uses a semi-horn-loaded approach and was designed by Meridian engineers.
- Driver clamp rings ensure that Meridian DSP Loudspeaker enclosures are rigid and free from resonances, You hear the loudspeaker, not the cabinet.

SPECIFICATION

INPUTS	• Meridian SpeakerLink (RJ45) & S/PDIF digital input, , 32kHz–96kHz sampling rates at up to 24 bit with MHR support (phono)
OUTPUTS	• 1 x RJ45 with balanced digital audio and control for 2nd loudspeaker. Carries infra-red pickup for system automation
PERFORMANCE	• Peak SPL: 116dB at 1m • Noise less than 15dB spl. Overall distortion typically <0.02% at any frequency or level • Frequency response In room within 3dB: 35Hz - over 32kHz
AMPLIFIERS	• 3 x 75w (225 w)
BASS DRIVERS	• 2 x 160mm polypropylene long throw bass drivers
BERYLLIUM DOME TWEETER	• 1 x 25mm (1") Meridian piston in short horn, beryllium dome with silver voice-coil
DSP SPECIFICATION	• 2 x Freescale 56367 running at 150MHz • 2 x 24-bit Multi-bit delta-sigma DACs with 128x oversampling • Crossover minimum-phase at 2.6kHz • Bass protection • Response correction for the whole system • User tone controls. Analogue/digital volume and phase control
DISPLAY	• Eight-character display with system lights, can be blanked
DIMENSIONS/WEIGHT	• HEIGHT*: 903mm [35.6in] • WIDTH: 178mm [7in] tapering to 300mm [11.8in] • DEPTH: 220mm [8.7in] tapering to 360mm [14.2in] • FOOTPRINT (W x D): 300mm [11.8in] x 360mm [14.2in] • WEIGHT: 27kg [59.5lbs]
POWER	• 20VA standby: 600VA max

* Without feet/spikes