

# SPECIAL EDITION DSP8000 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. The Meridian Special Edition 8000 is the largest and most powerful of this series. 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, the Meridian Special Edition DSP8000 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 are also provided.

With an ability to deliver the very best from High Resolution sources, including MQA, the performance of the Meridian Special Edition DSP8000 demonstrates why Meridian is widely regarded as the Pioneer of High Resolution Audio.



## PRODUCT HIGHLIGHTS

- New Meridian-designed short-horn-loaded tweeter with a beryllium dome for outstanding transient response and extended frequency range.
- The separate head unit is decoupled from the bass cabinet to reduce coloration, for life-like authentic sound.
- The bass system has its six powerful drive units arranged in opposing pairs, to help cancel cabinet vibration for deep and clear bass.
- 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.
- New DSP provides performance enhancements including the latest implementation of 'EBA' (Enhanced Bass Alignment) technology to provide additional clarity and an open, transparent sound-stage.

# USER FEATURES

- Source information in the loudspeaker display is now also derived from the controller, allowing for additional custom legending. Other enhancements include Bass, Tilt, and Axis presets for enhanced control and a new lowpass crossover design, as well as “ethernet” style SpeakerLink cabling that 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)

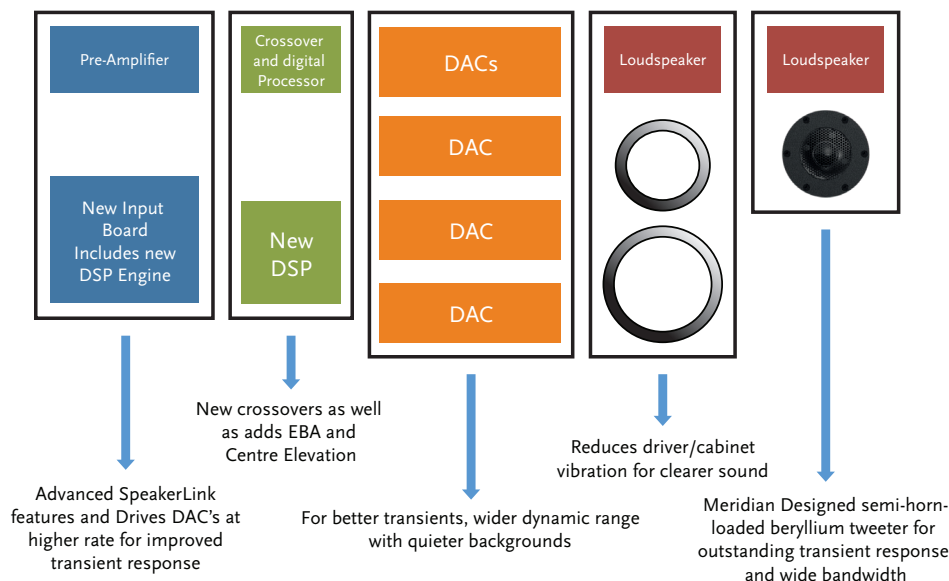
In a loudspeaker, lower frequencies are progressively delayed compared with the MF and HF range. Using a combination of digital filters and time delays for the mid and high frequencies, Meridian's EBA allows the upper bass, mid and high frequencies to “wait” for the low frequencies, delivering perfectly-timed music playback.

## 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 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

Meridian have designed and engineered the DSP8000SE to include two separate enclosures: mid/top and bass. The two enclosures are horizontally opposed and feature a profiled bass system which introduces minimal vibration to the mid/top enclosure.

The 8000SE is manufactured from interlaminated panels with high gloss finish and featuring a glass front. 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.

- 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, maximising authenticity and minimising coloration. You hear the loudspeaker, not the cabinet.

# SPECIFICATION

<b>INPUTS</b>	• Meridian SpeakerLink (RJ45) & S/PDIF digital input
<b>OUTPUTS</b>	• 1 x RJ45 with balanced digital audio and control for 2nd loudspeaker. Carries infra-red pickup for system automation
<b>PERFORMANCE</b>	• Peak SPL: 120dB at 1m
	• Noise less than 15dB spl. Overall distortion typically <0.02% at any frequency or level
	• Frequency response In room within 3dB: 20Hz - over 32kHz
<b>AMPLIFIERS</b>	• 5 x 150W (750W)
<b>BASS DRIVERS</b>	• 6 x 200mm
<b>MID DRIVERS</b>	• 1 x 160mm
<b>BERYLLIUM DOME TWEETER</b>	• 1 x 25mm (1") Meridian piston in short horn, beryllium dome with silver voice-coil.
<b>DSP SPECIFICATION</b>	• 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
<b>DIMENSIONS/WEIGHT</b>	• HEIGHT*: 1305mm [53.2in]      • WIDTH: 158mm [6.2in] tapering to 400mm [15.7in]
	• DEPTH: 210mm [8.3in] tapering to 528mm [20.8in]      • FOOTPRINT (W x D): 400mm [15.7in] x 528mm [20.8in]
	• WEIGHT: 105kg [231lbs]
<b>DISPLAY</b>	• Eight-character display with system lights, can be blanked
<b>POWER</b>	• 20VA standby; 920VA max

\* Without feet/spikes