

DSP640.2

IN-WALL DIGITAL ACTIVE LOUDSPEAKER

OVERVIEW

Powered by Meridian's exclusive 'CLASS-M' DSP engine and integrated with 'DYNAMIC' Hi-Res amplifiers, the DSP640.2 is perfect for delivering Meridian's renowned audio quality discreetly in any living or cinema room.

The DSP640.2 uses a new octo-amp design with a bridged pair of amplifiers for each of the four drive-units. Each pair of amplifiers is capable of delivering 100W RMS into 8 Ohms. A single DSP640.2 can deliver full-range sound at an SPL of 105dB at over 9m with bass extension down to 35Hz. With the latest DSP technologies from Meridian also on-board, including Enhanced Bass Alignment, Centre Elevation, Dynamic Bass Protection and L + R mode, the DSP640.2 is an ideal choice whether used in stereo systems, full surround-sound set-ups, soundbar applications or other single-speaker installations.



DSP640.2 Shown with RF600 rough-in box and grille

PRODUCT HIGHLIGHTS

Ultra-shallow (100mm deep) box design delivers full DSP loudspeaker performance in-wall, while the rough-in box and frame system allows for easy installation and precise positioning.

- Audio enhancement technologies built in include Enhanced Bass Alignment (EBA), FIFO buffering, DSP upsampling, apodising filters, Meridian Centre Elevation and Meridian High Resolution (MHR).
- Features 2 x 140mm long throw bass driver and 2 x 85mm wide-range drivers for full-frequency response.
- All-new octo-amp design with Class-D amplifiers with feedback on the output stage which lowers output impedance and reduces distortion and noise to levels experienced by only the best Class-AB amplifiers.
- Each drive-unit powered by a bridged pair of amplifiers; each pair capable of delivering over 100W into 8 Ohms.
- L + R mode to allow a single speaker to be used on its own while still reproducing all the audio present in a stereo recording makes the DSP640.2 a great choice for use as a soundbar below a screen – especially when combined with Centre Elevation.
- Developed for maximum dispersion and listening area plus minimum unwanted diffraction.
- Grille may be painted to match interiors.

USER FEATURES

- The front of the loudspeaker carries the on/off rocker switch, an infra-red receptor window, an RS232 socket and a three-way channel selector rocker switch. When switched to L + R, the loudspeaker plays a balanced mix of left and right audio which is ideal for soundbar applications.
- LED indicators show power and standby status in normal use and are also used to confirm configuration settings during installation.
- All the elements are designed for simple, flexible and precise installation into almost any type of wall.
- 100mm mounting depth for easy mounting and installation.

TECHNOLOGIES

ON-BOARD DSP

On-board DSP provides thermal and dynamic bass protection while retaining very accurate transients, ensuring that when the loudspeaker is played at high levels – even over prolonged periods of time – it always delivers a clean, detailed and accurate sound.

CENTRE ELEVATION

Meridian's Centre Elevation technology which is based on psychoacoustic research raises the perceived image location from an under-screen loudspeaker so that it appears to come from the centre of the screen.

ENHANCED BASS ALIGNMENT (EBA)

Meridian's innovative Enhanced Bass Alignment (EBA) 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.

ENHANCEMENT TECHNOLOGIES

Meridian's unique suite of proprietary technologies includes FIFO buffering, DSP upsampling, apodising filters and MHR (Meridian High Resolution) to get the very best performance from all digital sources.



DSP640.2 Rear



DSP640.2 Connections

CONSTRUCTION

The DSP640.2 is made up of a slim, self-contained, all-metal enclosure with a metal mounting frame. Its purpose-built rough-in wall-box is available separately. The rough-in box is first fitted to the wall, the frame is mounted to it and the loudspeaker enclosure is then bolted to the frame. The rough-in box and frame can be adjusted for various wall materials and depths. A male-to-female IEC mains lead is supplied with the loudspeaker in order to connect it to the powered rough-in box which is wired to power.

- The loudspeaker enclosure is fitted to its frame which is designed for mounting into new-build partition and stud style walls or for retrofitting into stud or brick/stone-built walls.
- The paintable, perforated steel grille supplied with the loudspeaker can be fitted where required. The grille is held in place by powerful rubber-coated magnets which are attached to the aluminium extrusion that forms the front panel of the loudspeaker enclosure.

SPECIFICATION

AUDIO INPUT	• Meridian SpeakerLink connector (RJ45)
AUDIO OUTPUT	• Meridian SpeakerLink connector (RJ45)
PERFORMANCE	• Peak SPL: 1m – 117dB • Bass extension: 35Hz
AMPLIFIERS	• Wide-range drivers (each): 2 x Class D amplifiers bridged for 100W into 8 Ohms • Bass drivers (each): 2 x Class D amplifiers bridged for 100W into 8 Ohms
BASS DRIVERS	• 2 x 140mm long-throw design
WIDE-RANGE DRIVERS	• 2 x 85mm with neodymium magnets
FRONT PANEL CONTROLS	• On/off rocker switch, Fuse holder, IR window • Rocker switch selects “Right”, “L + R”, “Left or Centre” • RS232 socket – 3.5mm minijack (long version – 18.6mm) • LED indicators show power status and configuration settings
PRODUCT DIMENSIONS	• HEIGHT: 1230mm [48.5in]* WIDTH: 203mm [8in] DEPTH: 102mm [4in]
PRODUCT WEIGHT	• 15 kg [33 lbs]
GRILLE DIMENSIONS	• HEIGHT: 1251.3mm [49.25in] WIDTH: 222.5mm [8.73in] DEPTH: 4mm [0.16in]
POWER	• IEC mains connector included in back-box connects to flying lead attached to enclosure

*Excludes frame and cable feed channel

For detailed drawings please contact design@meridian.co.uk

DSP640.2 IN-WALL DIGITAL ACTIVE LOUDSPEAKERS DISCREET UNOBTRUSIVE PERFORMANCE

Powered by Meridian's exclusive 'CLASS-M' DSP engine and integrated with 'DYNAMIC' Hi-Res amplifiers, the DSP640.2 is perfect for delivering Meridian's renowned audio quality discreetly in any living or cinema room.

Featuring high SPL and strong bass performance, the DSP640.2 includes eight power amplifiers delivering 100W per drive unit and L + R mode for the ultimate, high-power soundbar application. It delivers full range sound with an SPL of 105dB at over 4m and bass extension down to 40Hz with no requirement for an additional subwoofer.

With a range of further enhancement technologies on-board including FIFO buffering, DSP upsampling, apodising filters and MHR (Meridian High Resolution), the DSP640.2 offers great flexibility and the best possible performance from any source.



THE DSP640.2 AT A GLANCE



Octa-amp DSP architecture with 8 x powerful amplifiers rated over 100W RMS into 8 Ohms per drive unit, built into the speaker



Huge aluminium heat sink, taking the amplifiers out of the rack and integrating them into the loudspeaker



L+R mode for the ultimate high-power sound bar applications



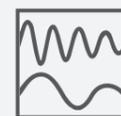
Optimised DSP for horizontal or vertical mounting, ideal for soundbar or centre channel usage



<105dB at 4m, single speaker (117dB @1m)



Meridian's Centre Elevation Technology, raises the audio to match the video on screen



Full range sound with bass extension beyond 40Hz



100mm installation depth, suitable for a wide range of applications

DIGITAL SIGNAL PROCESSING THE ESSENCE OF AUTHENTIC SOUND

Digital Signal Processing (DSP) technology provides the foundation for every Meridian loudspeaker. A completely integrated audio system featuring multiple power amps, precision DACs and unique technologies, Meridian DSP loudspeakers provide more output, more bass and significant control advantages.

With designs suited for a wide variety of applications including living spaces, home theatres and marine, all Meridian DSP loudspeakers deliver unparalleled performance levels.



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THE DSP PATH AT A GLANCE



The DSP Loudspeaker is a complete audio system with DAC's, pre amplifiers, power amplifiers and high efficiency digital crossovers built into each speaker – just add a source.



Advanced listener controls including time-compensated balance, listening axis and Enhanced Bass Alignment – these enable speaker placement flexibility in a variety of environments.



Built in high performance power amplifiers, custom matched to each drive unit for maximum fidelity, control and output.



True, measured Sound Pressure Level (SPL) output for all models.



Features Meridian's proprietary Enhanced Bass Alignment (EBA) technology – bass, mid and treble all reach you at the same time, in perfect alignment.



On-board Digital Signal Processing – no lossy passive crossovers and wasted power.



Inert, rigid cabinet construction – you hear the high quality drive units, not the box.



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