

W8L

High performance three-way line array enclosure

features

- ▶ High performance three-way line array enclosure
- ▶ High power – maximum SPL 136dB continuous, 142dB peak (single unit)
- ▶ Superior bass impact – all horn design
- ▶ Wide bandwidth – 50Hz-18kHz \pm 3dB (single unit)
- ▶ True 90° (-6dB) horizontal mid and HF pattern control
- ▶ Very smooth off axis response – useable out to 120° (-10dB)
- ▶ Fast integral rigging system with variable splay angles from 0° to 7.5°
- ▶ Viewpoint™ array optimisation software
- ▶ Loudspeaker management preset files for a wide variety of configurations



applications

- ▶ Live sound – open-air venues, arenas, concert halls
- ▶ Fixed installations – multi-purpose auditoria, sports arenas

The Martin Audio Wavefront W8L is a line array system which combines innovative horn loading techniques with line array technology to produce a very powerful line array with maximum dynamic impact. It is a 3-way, full-range system and may be used without subwoofers for many applications. Where very low frequency extension is required, a W8L array will integrate seamlessly with the Martin Audio WSX folded-horn subwoofer in a fully horn-loaded 4-way configuration.

The low frequency section of the W8L comprises a horn loaded 15" (380mm) / 4" (100mm) voice coil driver that is reflex loaded to extend the LF output to below the natural cut-off point of the horn. This Hybrid™ technique marries the very high efficiency of horn loading with the extended low frequency response of a reflex enclosure.

The mid-horn of the W8L utilises 2 x 8" (200mm) / 2" (50mm) coil drivers to produce 108dB at 1 metre for a 1W input. The twin 8" (200mm) mid-horn geometry and short, toroidal 'donut' phase plug work together to maintain a low curvature wavefront and wide 90° horizontal coverage pattern of the mid frequencies right up to the 2.5kHz crossover point.

The W8L's HF section comprise three 1" (25mm) exit compression drivers that couple very smooth horizontal HF pattern control with the high efficiency (113dB/W) required for very longthrow applications.

The proprietary rigging system of the W8L is quick to deploy and allows a wide range of array curvatures to be achieved as called up by the ViewPoint™ array optimisation software. W8L columns are hinged at the front for gapfree HF coverage. Inter-cabinet angles from, 0° to 7.5°, are set by a rotating splay bar at the rear of the enclosure. The 7.5° maximum splay angle allows tight curvature at the bottom of the array, obviating the need for dedicated downfills. All cabinet rigging hardware is integral and remains captive in transit.

W8L systems are designed to be powered by Martin Audio MA4.2s power amplifiers.

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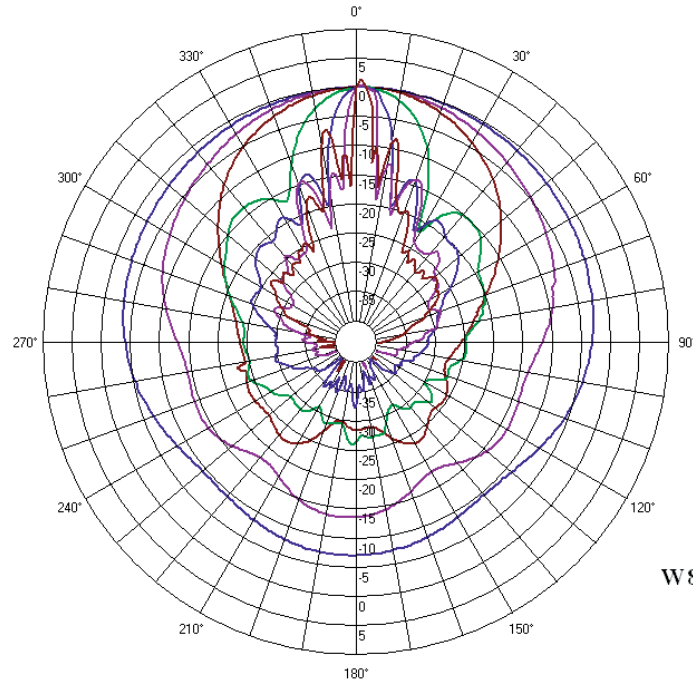


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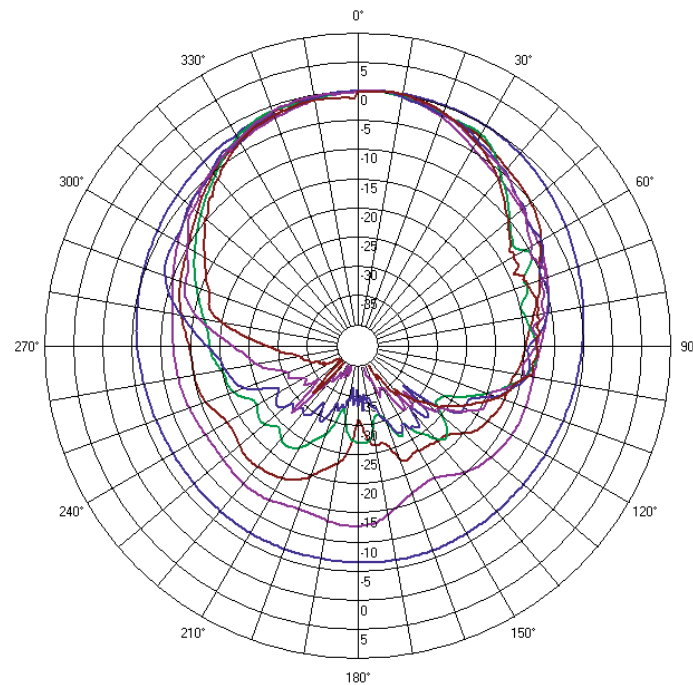
polar plots

touring and theatre



W8L Vertical Line

- 200Hz & 1/3 oct. smoothing
- 400Hz & 1/3 oct. smoothing
- 800Hz & 1/3 oct. smoothing
- 1600Hz & 1/3 oct. smoothing
- 3200Hz & 1/3 oct. smoothing
- 6400Hz & 1/3 oct. smoothing
- 12800Hz & 1/3 oct. smoothing



W8L Horizontal

- 200Hz & 1/3 oct. smoothing
- 400Hz & 1/3 oct. smoothing
- 800Hz & 1/3 oct. smoothing
- 1600Hz & 1/3 oct. smoothing
- 3200Hz & 1/3 oct. smoothing
- 6400Hz & 1/3 oct. smoothing
- 12800Hz & 1/3 oct. smoothing

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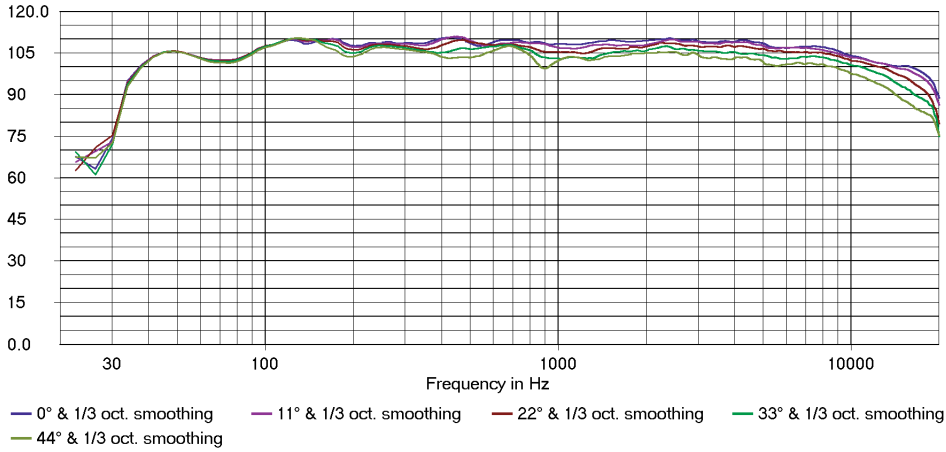


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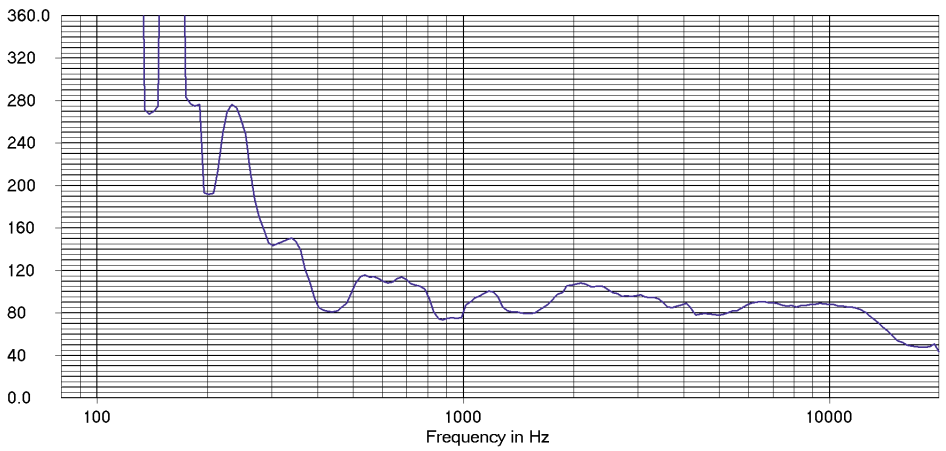
High performance three-way line array enclosure

frequency responses

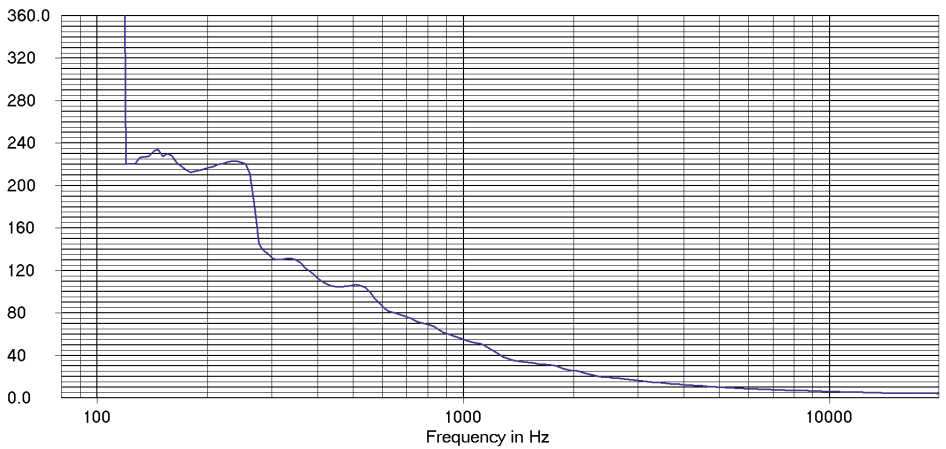
W8L Horizontal Magnitude in dB SPL/2.83V at 1 meter



W8L Horizontal Beamwidth



W8L Vertical Beamwidth



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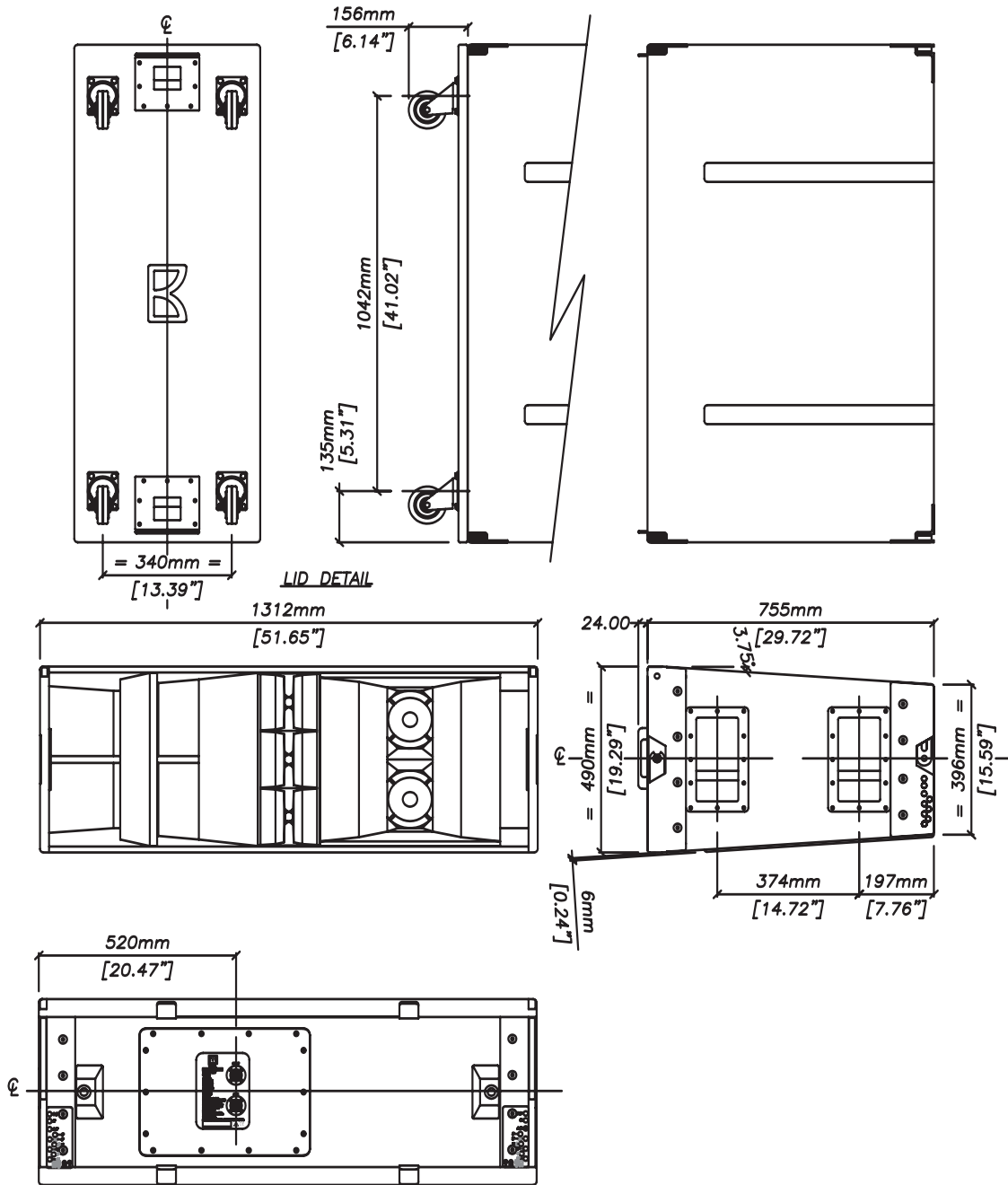


touring and theatre

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overall dimensions



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technical specifications

TYPE	Three-way line array element
FREQUENCY RESPONSE (5)	50Hz-18kHz \pm 3dB
DRIVERS	15" (380mm)/4" (100mm) voice coil, Hybrid™ bass horn loaded 2 x 8" (200mm)/2" (50mm) coil drivers, horn loaded 3 x 1" (25mm) exit HF compression drivers, horn loaded
RATED POWER (2)	LF: 700W AES, 2800W peak MF: 400W AES, 1600W peak HF: 200W AES, 800W peak
SENSITIVITY (6)	LF: 106dB MF: 108dB HF: 113dB
MAXIMUM SPL (calculated @ 1m)	LF: 134dB continuous, 140dB peak MF: 134dB continuous, 140dB peak HF: 136dB continuous, 142dB peak
NOMINAL IMPEDANCE	LF: 8 ohms MF: 8 ohms HF: 8 ohms
DISPERSION (-6dB)	90° horizontal, 7.5° vertical 120° horizontal @ -10dB
CROSSOVER	220Hz, 2.5kHz active
ENCLOSURE	Vertical trapezoid with 3.75° wall angle, multi-laminate birch ply construction
FINISH	Textured grey paint
PROTECTIVE GRILLE	Grey perforated steel
CONNECTORS	2 x Neutrik NL8
FITTINGS	Proprietary rigging system
DIMENSIONS (inc. wheelboard)	(W) 1314mm x (H) 490mm x (D) 755mm (855mm) (W) 51.7ins x (H) 19.3ins x (D) 29.7ins (33.7ins)
WEIGHT (ex. wheelboard)	127kg (279lbs)

accessories

W8LGRIDASSEMBLY	Flying frame
HTK174	Flying pin
HAM09001	Ground stacking bar

Notes

- (1) Measured on-axis in half space at 2 metres, then referred to 1 metre.
- (2) AES Standard ANSI S4.26-1984.
- (3) Measured in half space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
- (4) Measured in half space at 2 metres using band limited pink noise, then referred to 1 metre.
- (5) Measured on-axis in open (4 π) space at 2 metres, then referred to 1 metre.
- (6) Measured in open (4 π) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
- (7) Measured in open (4 π) space at 2 metres using band limited pink noise, then referred to 1 metre.

Trade Descriptions Act

Due to Martin Audio's policy of continuing improvement, we reserve the right to alter these specifications without prior notice. Martin Audio is committed to refining state of the art sound reinforcement, combining in-depth product and field applications research with advanced manufacturing techniques. Every Martin Audio product is built to the highest manufacturing standards and rigorously tested to ensure that it meets the performance criteria specified in the design.

architectural and engineering specifications

The loudspeaker system shall be of the three-way horizontally formatted line array type. The low frequency section shall consist of one 15" (380mm) cone transducer, horn and reflex loaded in a Hybrid™ bass system. The mid frequency section shall consist of two 8" (200mm) cone drivers coupled to a constant directivity horn using toroidal phase devices. The high frequency section shall consist of three 1" (25mm) exit HF compression drivers mounted on vertically coupled waveguides with a constant directivity horn. The enclosure shall be constructed of heavily braced multi-laminate plywood with all flying hardware integral and captive. The loudspeaker shall be operated with a separate dedicated electronic controller.

Performance of the loudspeaker system with its electronic controller shall meet or exceed the following criteria:

Frequency response measured 1 metre on axis shall be 50Hz-18kHz \pm 3dB.

High frequency dispersion at -6dB points shall be 90° H x 7.5° V.

Power handling shall be 700W AES, 2800W peak LF, 400W AES, 1600W peak MF, 200W AES, 800W peak HF.

Rated impedance shall be 8 ohms LF/MF/HF.

Maximum SPL measured at 1 metre on axis shall be 136dB continuous, 142dB peak.

Dimensions (W) 1314mm x (H) 490mm x (D) 755mm (51.7ins x 19.3ins x 29.7ins).

Weight 127kg (279lbs).

The loudspeaker system shall be the Martin Audio W8L.

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