

# W8LC Compact Line Array

Compact, high performance three-way line array enclosure

## features

- ▶ Compact, high performance three-way line array enclosure
- ▶ High power - maximum SPL 129dB continuous, 135dB peak (single unit)
- ▶ Superior bass impact - all horn design
- ▶ Wide bandwidth - 60Hz-18KHz  $\pm$  3dB (single unit)
- ▶ True 90° (-6dB) horizontal mid and HF pattern control
- ▶ Very smooth off-axis response - useable out to 120° (-10dB)
- ▶ Compatible with the full-sized W8L Line Array
- ▶ Fast, integral rigging system with variable splay angles
- ▶ Common grid may be used for flying or ground stacking
- ▶ ViewPoint™ array optimisation software
- ▶ Loudspeaker management preset files for a wide variety of configurations



## applications

- ▶ Medium/large scale touring, theatre, stadia, club
- ▶ Compatible with W8L, W8LS and WSXa

The Martin Audio W8LC is a compact line array enclosure designed to bring superb next-generation line array performance to concert, theatre and commercial events. It meets the need for a high power, high bass impact system that is versatile and scalable for a very wide range of applications in the live sound, corporate and fixed installation fields. W8LC grids allow systems to be flown or ground stacked as required.

Though compact in size, the W8LC is a full-bandwidth system and may be used without subwoofers in many applications. Where additional low frequency extension is required, W8LCs may be complemented by the W8LS Line Array subwoofers, WLX horn and reflex loaded subwoofers or WSXa horn loaded subwoofers.

Following the all-horn design philosophy of the full-size W8L Longbow, the W8LC is a 3-way system that combines line array principles with innovative horn loading techniques to produce a very powerful compact line array with impressive dynamic impact.

The low frequency section of the W8LC comprises a horn loaded 12" (300mm)/3" (75mm) coil neodymium 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 W8LC utilizes 2 x 6.5" (165mm)/1.5" (38mm) coil, maximum efficiency drivers to produce 106dB at 1m for a 1W input - a significant efficiency gain over direct radiator systems.

The W8LC's HF section comprises three 1" horn elements to produce a low-curvature vertical wavefront with an efficiency of 109dB at 1m for a 1W input. This optimal HF curvature enables W8LC enclosures within the array to be splayed up to 7.5° without introducing gaps in the HF vertical coverage.

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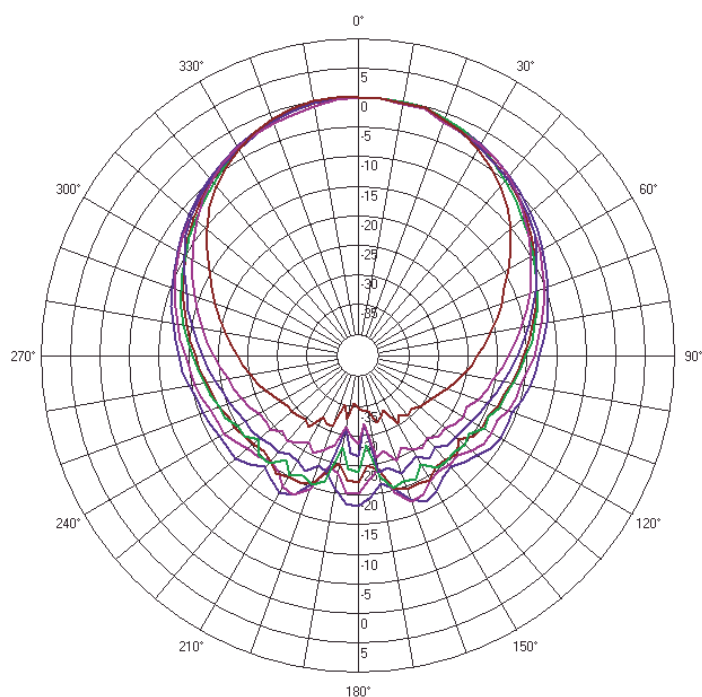


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polar plots

touring and theatre



## W8LC HF Horizontal

3150Hz & 1/3 oct. smoothing  
4000Hz & 1/3 oct. smoothing  
5000Hz & 1/3 oct. smoothing  
6300Hz & 1/3 oct. smoothing  
8000Hz & 1/3 oct. smoothing  
10000Hz & 1/3 oct. smoothing  
12220Hz & 1/3 oct. smoothing

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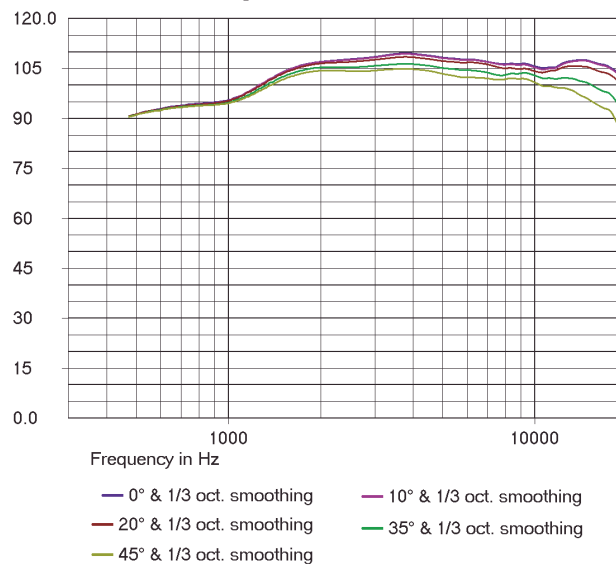


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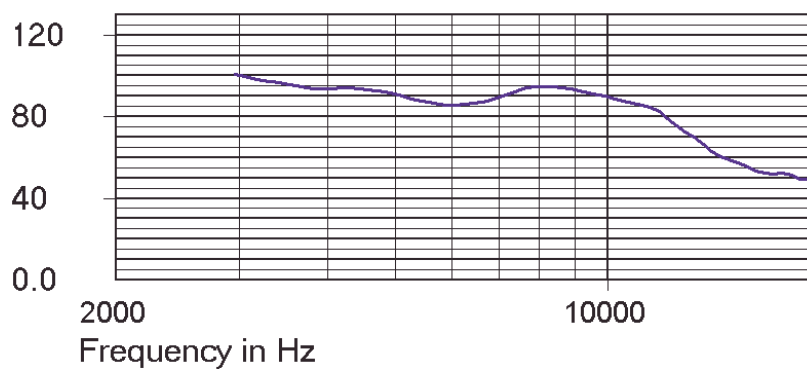
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frequency responses

W8LC HF Horizontal Magnitude in dB SPL/2.83V at 1 meter



W8LC HF Horizontal Beamwidth



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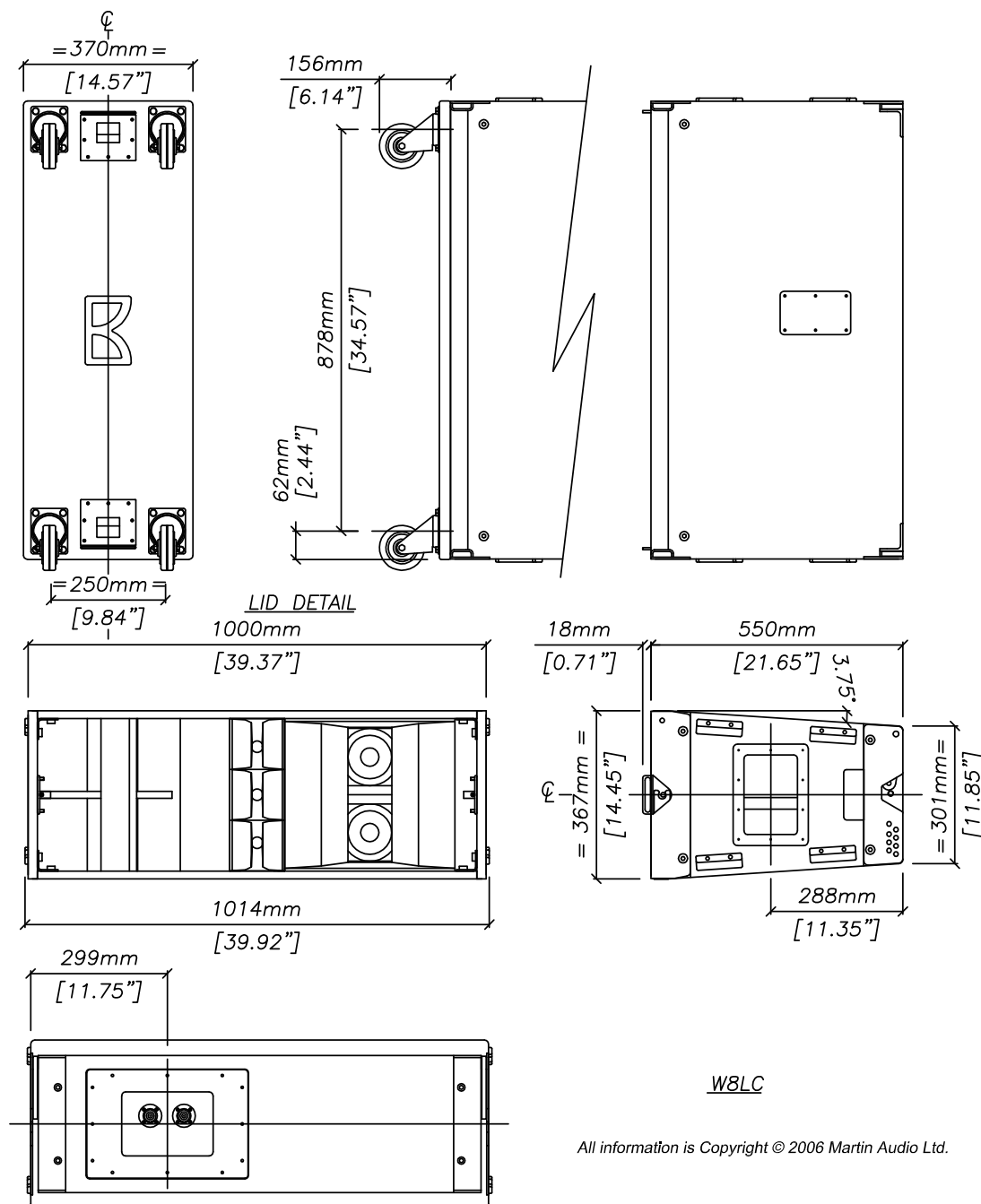


touring and theatre

# W8LC Compact Line Array

Compact, high performance three-way  
line array enclosure

overall dimensions



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## technical specifications

|                               |                                                                                                                                                                                  |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE                          | Three-way line array element                                                                                                                                                     |
| FREQUENCY RESPONSE (5)        | 60Hz-18kHz $\pm$ 3dB                                                                                                                                                             |
| DRIVERS                       | 12" (300mm)/3" (75mm) voice coil, Hybrid® bass horn loaded<br>2 x 6.5" (165mm)/1.5" (37.5mm) coil drivers, horn loaded<br>3 x 1" (25mm) exit HF compression drivers, horn loaded |
| RATED POWER (2)               | LF: 400W AES, 1600W peak<br>MF: 200W AES, 800W peak<br>HF: 100W AES, 400W peak                                                                                                   |
| RECOMMENDED AMPLIFIER         | iK81                                                                                                                                                                             |
| SENSITIVITY (6)               | LF: 103dB<br>MF: 106dB<br>HF: 109dB                                                                                                                                              |
| MAXIMUM SPL (calculated @ 1m) | LF: 129dB continuous, 135dB peak<br>MF: 129dB continuous, 135dB peak<br>HF: 129dB continuous, 135dB peak                                                                         |
| NOMINAL IMPEDANCE             | LF: 8 ohms<br>MF: 8 ohms<br>HF: 8 ohms                                                                                                                                           |
| DISPERSION (-6dB)             | 90° horizontal, 7.5° vertical<br>120° horizontal @ -10dB                                                                                                                         |
| CROSSOVER                     | 300Hz, 3kHz active via DX1.5 or DX2 controller                                                                                                                                   |
| ENCLOSURE                     | Vertical trapezoid with 3.75° wall angle, multi-laminate birch ply construction                                                                                                  |
| FINISH                        | Textured black paint                                                                                                                                                             |
| PROTECTIVE GRILLE             | Black perforated steel                                                                                                                                                           |
| CONNECTORS                    | 2 x Neutrik NL8                                                                                                                                                                  |
| FITTINGS                      | Proprietary rigging system<br>2 x bar handles<br>2 x pocket handles                                                                                                              |
| DIMENSIONS (inc. wheelboard)  | (W) 1000mm x (H) 367mm x (D) 550mm (706mm)<br>(W) 39.4ins x (H) 14.5ins x (D) 21.7ins (27.8ins)                                                                                  |
| WEIGHT (ex. wheelboard)       | 58kg (128lbs)                                                                                                                                                                    |

## accessories

|                    |                     |
|--------------------|---------------------|
| W8LCGRIDASSEMBLY   | Flying grid         |
| W8LCGRIDLIFTINGBAR | Lifting bar         |
| HAM214             | Ground stacking bar |
| HTK175             | Flying Pin          |

### 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 $\pi$ ) space at 2 metres, then referred to 1 metre.
- (6) Measured in open (4 $\pi$ ) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
- (7) Measured in open (4 $\pi$ ) 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 12" (300mm) cone transducer, horn and reflex loaded in a Hybrid® bass system. The mid frequency section shall consist of two 6.5" (165mm) 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 60Hz-18kHz  $\pm$  3dB.

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

Power handling shall be 400W AES, 1600W peak LF, 200W AES, 800W peak MF, 100W AES, 400W peak HF. Rated impedance shall be 8 ohms LF/MF/HF.

Maximum SPL measured at 1 metre on axis shall be 129dB continuous, 135dB peak.

Dimensions (W) 1000mm x (H) 367mm x (D) 550mm (39.4ins x 14.5ins x 21.7ins).

Weight 58kg (128lbs).

The loudspeaker system shall be the Martin Audio W8LC.

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