



emacoustics

## TECHNICAL DATA SHEET

# EMS-101X

## COMPACT PASSIVE LOUDSPEAKER

**The EMS-101X was created to answer a demand for a powerful loudspeaker with a slim front profile for today's sound reinforcement requirements in both temporary use and permanent installation. Powerful drive units and a compact footprint mean the EMS-101X is ideal for monitoring use as well as main loudspeaker duties, and all with the benefits that passive crossover technology brings.**

### FEATURES AND BENEFITS

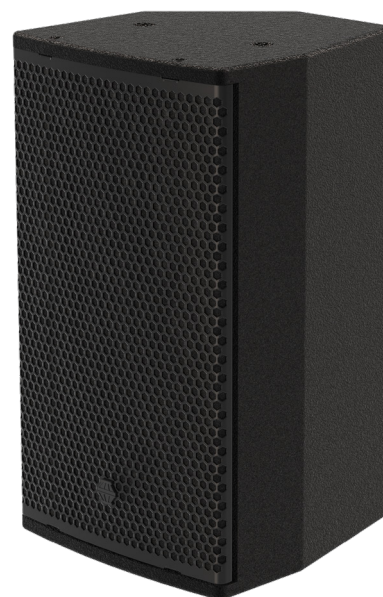
- Asymmetrical multi-angled cabinet for FOH or stage monitor use
- Genuine plywood cabinet for sonic benefit over plastic
- 10" neodymium LF, 1" exit neodymium HF drive units
- True passive design - no corrective DSP required
- Rotatable 90° x 60° waveguide
- 35mm pole mount
- Flexible rigging and mounting options
- Compatible with OmniMount™ and Powerdrive brackets
- Impact and weather resistant black or white finish as standard
- RAL colour and weather protection options

### APPLICATIONS

- Small to medium theatre and touring events
- Small to medium live sound reinforcement
- Houses of worship
- Conference, corporate and audio-visual
- Theme parks

The EMS-101X is a two-way passive loudspeaker, using a 3" voice coil 10" (254mm) neodymium low frequency transducer. This low frequency drive unit is coupled via the internal passive crossover network to a 1.7" (44mm) diaphragm, 1" (25mm) exit neodymium high frequency transducer. This drive unit loads onto a rotatable 90° x 60° constant-coverage horn, which yields not only consistent response throughout its operating band across the whole coverage pattern but also strong attenuation outside of this pattern. The result is a loudspeaker with extremely consistent and predictable coverage, as well as stunning sonic detail – and all with the ease of use that passive crossover technology brings.

The drive units are housed within a compact, vented enclosure. The robust enclosure is constructed from premium 15mm (5/8") multi-laminate Birch plywood, and is heavily braced to minimise panel reflection. Five M8 threaded fixings are incorporated around the enclosure (two top, two bottom and one on the rear) for attachment of optional rigging hardware and safeties. Four M6 threaded fixings on the rear of the enclosure are compatible with OmniMount™ Series 30 and Powerdrive™ Series 75 bracket products. A 35mm pole mount socket is provided discretely on the underside for stand mounting. The enclosure also includes a flush handle on



the rear, and a pair of Neutrik® speakON™ NL4 connectors for input and enclosure link. Lastly, a tough hex-punched stainless steel grille backed with acoustically transparent fabric protects the drive units from damage. The grille can be quickly removed for service purposes or to rotate the HF waveguide – the orientation of which can be determined without removing the grille. The enclosure is finished in impact and water-resistant black or white polyurethane as standard, however RAL colour matching and enhanced weather protected outdoor options are also available.

The EMS-101X requires a single amplifier channel, and the use of external DSP for system protection (high pass filters and limiters) is recommended - as such an efficient solution is one of EM Acoustics' range of Advanced System Amplifiers. Alternative DSP-enabled amplifiers can also be used, or conventional amplifiers with external processing - suitable DSP settings are provided on the EM Acoustics website for this purpose. The EMS-101X requires a single amplifier channel that is capable of delivering 800-1000W RMS into an 8-ohm load.



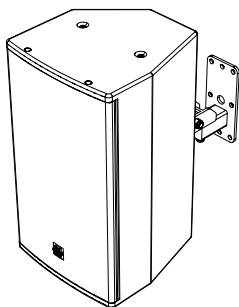
## TECHNICAL SPECIFICATIONS

ENCLOSURE TYPE:	Two-way passive, reflex loaded
DIMENSIONS (HxWxD)	510 (20.1) x 289 (11.4) x 300 (11.8) mm/(ins)
NET/SHIPPING WEIGHT:	15/16kg (33/35lbs)
FREQUENCY RESPONSE <sup>1</sup> :	70Hz – 20kHz ±3dB
SENSITIVITY <sup>2</sup> :	96dB
DISPERSION <sup>3</sup> :	90° x 60°, rotatable
DRIVE UNITS:	10" (254mm) neodymium LF cone drive unit 1" (25mm) exit neodymium HF compression drive unit
LOUDSPEAKERS PER AMPLIFIER (maximum for full loudspeaker SPL)	DQ6: 2 per channel, DQ10: 4 per channel, DQ20: 4 per channel Di06: 1 per channel, Di10: 1 per channel, Di20: 2 per channel
LOUDSPEAKERS PER AMPLIFIER (recommended absolute maximum) <sup>4</sup>	DQ6: 3 per channel, DQ10: 4 per channel, DQ20: 4 per channel Di06: 2 per channel, Di10: 3 per channel, Di20: 4 per channel
POWER HANDLING:	400W RMS, 800W program
MAXIMUM SPL <sup>4</sup> :	124dB continuous, 130dB peak
NOMINAL IMPEDANCE:	8 ohms
CROSSOVER:	Asymmetric internal passive
CONNECTORS:	2 x Neutrik® speakON™ NL4
ENCLOSURE:	15mm (5/8") multi-laminate Birch plywood – rebated, screwed and glued. Finished in impact and weather resistant textured polyurethane
RIGGING & HARDWARE:	5 x M8 threaded mounting points 4 x M6 threaded points for OmniMount™ Series 30/Powerdrive™ Series 75 brackets 1 x flush handle on rear, 1 x 35mm pole mount socket
GRILLE:	Hex punched stainless steel backed with acoustically transparent fabric
OPTIONS:	Custom Colour, enhanced weather protection (OD model)
ACCESSORIES:	FC-101Xv vertical flying cradle FC-101Xh horizontal flying cradle WHH75 installation wall bracket
SPARE PARTS:	DU-1003 10" drive unit CDU-1001A 1" exit HF compression drive unit PX-101X passive crossover assembly RFG-101X replacement grille/fabric

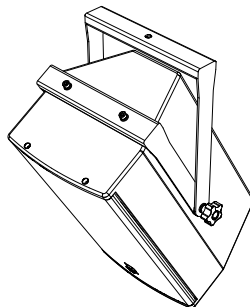
### NOTES ON MEASUREMENT CONDITIONS:

<sup>1</sup>Measured on-axis at 2m in an anechoic environment and referenced to 1m. <sup>2</sup>Measured in half space at 2m with 4W sine wave input and referenced to 1m. <sup>3</sup>Nominal dispersion, measured in an anechoic environment and averaged over stated bandwidth. <sup>4</sup>These loudspeaker quantities are the recommended maximum, and will not drive the loudspeaker to full output. <sup>5</sup>Calculated and verified by subjective listening test of familiar program material.

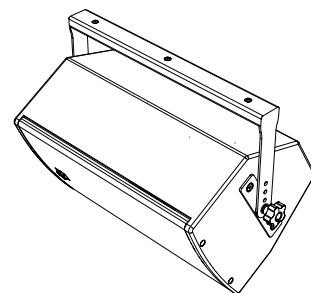
## RIGGING ACCESSORIES



WHH75



FC-101Xv

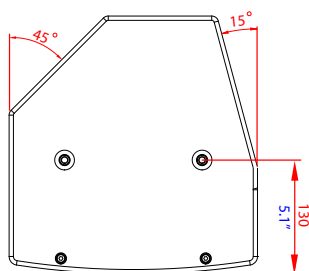


FC-101Xh

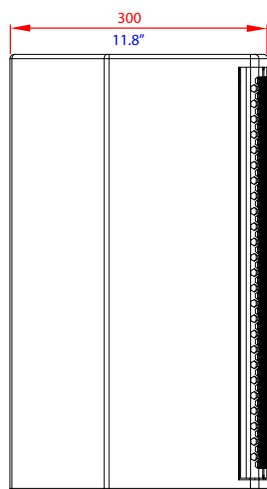
## ENCLOSURE OPTIONS

EMS-101X enclosures are available as standard in black or white textured polyurethane finish. Custom RAL colours can be supplied on request; extended lead times and set up costs apply. EMS-101X enclosures can also be supplied as an outdoor version (OD), with enhanced weather protection features, many bespoke to the customer's request. Please contact your local EM Acoustics representative for details.

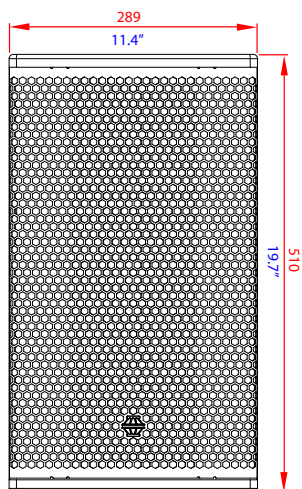
ENGINEERING DRAWING



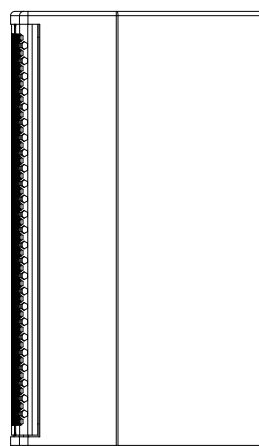
TOP



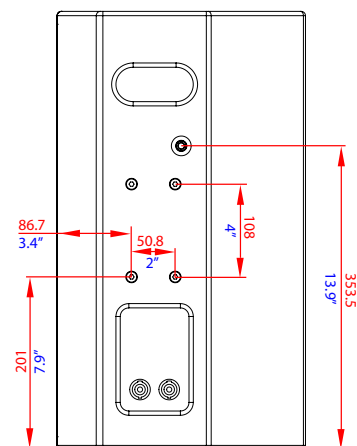
LEFT



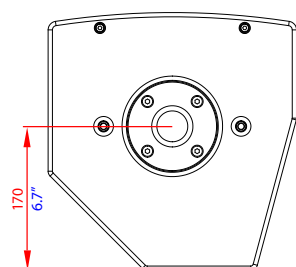
FRONT



RIGHT



REAR



BOTTOM