



emacoustics

EMS-51X

COMPACT PASSIVE LOUDSPEAKER

TECHNICAL DATA SHEET

The EMS-51X is an extremely compact loudspeaker intended for a wide variety of applications. It performs beautifully in any scenario where a compact solution is required and displays the SPL capability and headroom for which EM Acoustics has an unmatched reputation. Utilising our latest crossover topologies and the utmost in drive unit technology, this loudspeaker is completely passive yet outperforms many bi-amplified or processed designs. Sharing the DNA of larger boxes and the consistency of voicing apparent across the entire EM Acoustics range, the 51X will integrate elegantly into any distributed system.

FEATURES AND BENEFITS

- Astonishing LF performance for enclosure size
- Premium plywood cabinet for sonic benefit over plastic
- 5" neodymium LF, 1.1" silk dome HF drive units
- True passive design - no corrective DSP required
- Sealed enclosure gives gentle 12dB/octave LF roll off
- Flexible rigging and mounting options
- Horizontal yoke supplied
- Impact and weather resistant black or white finish as standard
- RAL colour options

APPLICATIONS

- Theatrical spot effects
- Fills and delays
- Conferences and meetings
- Corporate and audio-visual
- Cafes and bars
- Studio monitoring

Like its predecessor, the EMS-51X is a two-way passive loudspeaker, using a 1.25" voice coil 5" (127mm) neodymium low frequency transducer. This low frequency drive unit is coupled via the internal passive crossover network to a 1.1" (28mm) diaphragm, studio-grade soft dome high frequency transducer. The enclosure is an infinite baffle design - unusual for a loudspeaker of this size - which gives a much smoother LF roll off and a much more robust low frequency performance than would be expected from an enclosure of this size. Consequently, in some applications the EMS-51X can be used without subwoofer support for lower SPL requirements.

The drive units are housed within a compact, sealed enclosure constructed from premium 12mm (1/2") multi-laminate Birch plywood, intelligently braced to minimise panel deflection. Updated cabinet geometry, 5-axis machined for a modern aesthetic, brings the EMS-51X right up to date. Three M8 threaded fixings are incorporated around the enclosure (one top, one bottom and one on the rear) for attachment of rigging hardware and safeties, as well as a pair of M6 threaded points on the rear which are compatible with Powerdrive WMS50 installation wall brackets.



The enclosure also includes a pair of Neutrik® speakON™ NL4 connectors for input and enclosure link. Lastly, a hex punched stainless steel grille backed with acoustically transparent fabric protects the drive units from damage as well as providing a smart and discreet appearance. The grille can be quickly removed for service purposes. The enclosure is finished in impact and weather resistant black or white polyurethane as standard, and RAL colour matching options are also available.

The EMS-51X requires a single amplifier channel, and the use of external DSP is recommended for system protection with high pass filters and limiters - as such it is recommended to be used with EM Acoustics' range of Advanced System Amplifiers. It is however possible to use other DSP-enabled amplifiers, or conventional amplifiers with external DSP. Suitable DSP settings are provided on the EM Acoustics website. The EMS-51X requires a single amplifier channel capable of delivering 300-500W RMS into an 8-ohm load.



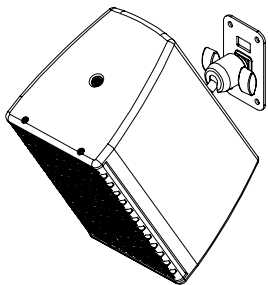
TECHNICAL SPECIFICATIONS

ENCLOSURE TYPE:	Two-way passive, infinite baffle
DIMENSIONS (HxWxD)	250 (9.9) x 140 (5.5) x 169 (6.7) mm/(ins)
NET/SHIPPING WEIGHT:	3.5/4kg (7.7/8.8lbs)
FREQUENCY RESPONSE¹:	80Hz – 20kHz ±3dB
SENSITIVITY²:	89dB
DISPERSION³:	75° conical
DRIVE UNITS:	5" (127mm) neodymium LF cone drive unit 1.1" (28mm) HF silk dome tweeter
LOUDSPEAKERS PER AMPLIFIER (maximum for full loudspeaker SPL):	DQ6: 4 per channel, DQ10: 4 per channel, DQ20: 4 per channel DI06: 2 per channel, DI10: 3 per channel, DI20: 4 per channel
LOUDSPEAKERS PER AMPLIFIER (recommended absolute maximum)⁴	DQ6: 4 per channel, DQ10: 4 per channel, DQ20: 4 per channel DI06: 4 per channel, DI10: 4 per channel, DI20: 4 per channel
POWER HANDLING:	200W RMS, 400W program
MAXIMUM SPL⁵:	113dB continuous, 119dB peak
NOMINAL IMPEDANCE:	8 ohms
CROSSOVER:	Asymmetric internal passive
CONNECTORS:	2 x Neutrik® speakON™ NL4
ENCLOSURE:	12mm (1/2") multi-laminate Birch plywood – rebated, pinned and glued. Finished in impact and weather resistant textured polyurethane
RIGGING & HARDWARE:	3 x M8 threaded mounting points 2 x M6 threaded points for Powerdrive™ WMS50 bracket
GRILLE:	Hex punched stainless steel backed with acoustically transparent fabric
OPTIONS:	Custom Colour
ACCESSORIES:	YK-51X horizontal flying yoke (supplied) BM-41 ball joint adapter WP-41 wall plate
SPARE PARTS:	DU-502 5" drive unit SD-1001 1.1" HF silk dome tweeter PX-51X passive crossover assembly RFG-51X replacement grille/fabric

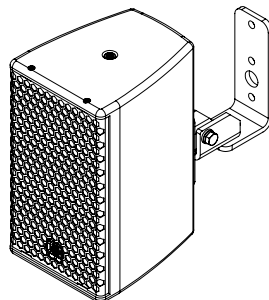
NOTES ON MEASUREMENT CONDITIONS:

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

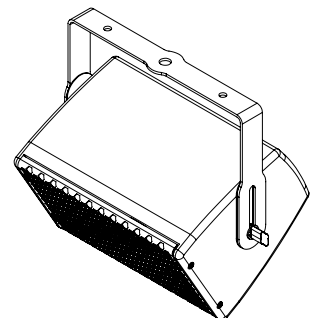
RIGGING ACCESSORIES



WP-41 & BM-41



WMS-50



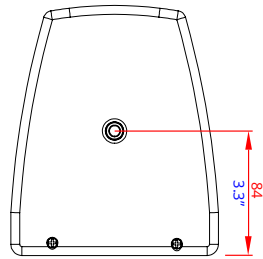
YK-51X

ENCLOSURE OPTIONS

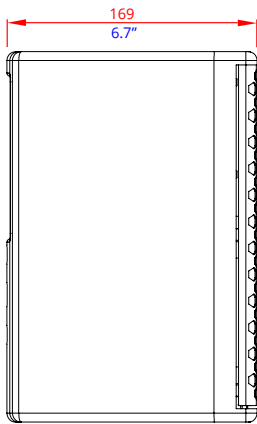
EMS-51X enclosures are available as standard in black or white textured polyurethane finish. Custom RAL colours can be supplied on request; extended lead times and set up costs apply. EMS-51X enclosures are NOT suitable for permanent outdoor use. Please contact your local EM Acoustics representative for details.



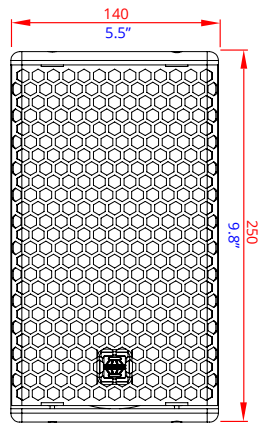
ENGINEERING DRAWING



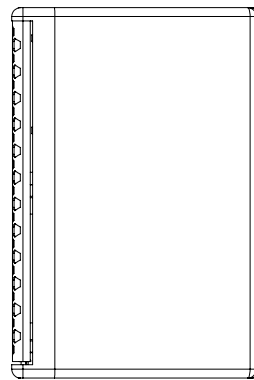
TOP



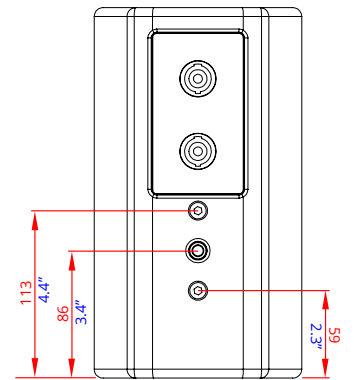
LEFT



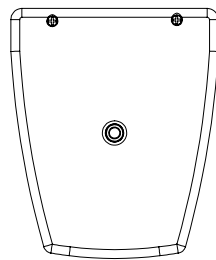
FRONT



RIGHT



REAR



BOTTOM