



## MSE-156/159 passive fullrange touring loudspeaker

### FEATURES AND BENEFITS:

- signature EM Acoustics passive crossover for unprecedented frequency & phase response
- two dispersion options in identical physical enclosure
- rotatable HF for maximum flexibility
- tour-friendly rigging and mounting options

EM Acoustics set out to create the finest two-way medium format loudspeakers possible, and the results are the MSE-156 and MSE-159. The two loudspeakers are narrow and wide dispersion variants of the same product. Utilising our latest passive crossover topologies, and the utmost in drive unit technology, these loudspeakers are completely passive yet outperform many bi-amplified or processed designs. The MSE-156/159 is ideal for front-of-house duty for medium to large venues, or as a powerful fill loudspeaker for larger systems.

The MSE-156/159 is a two-way passive loudspeaker, using a 4" (102mm) voice coil 15" (381mm) neodymium low frequency transducer. This low frequency drive unit is coupled via the internal passive crossover network to a 4" (102mm) diaphragm, 1.4" (36mm) exit neodymium high frequency transducer. This drive unit loads onto a constant-coverage horn, which yields not only consistent response throughout its operating band across the whole coverage pattern (60 degrees by 40 degrees for the MSE-156, 90 degrees x 60 degrees for the MSE-159, both rotatable) 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. Incorporated within the enclosure are multi-use rigging plates, which allow suspension of the loudspeaker swiftly and safely in a variety of ways. The primary rigging system utilises keyhole plates & ball-lock pins to allow attachment or removal of hardware in seconds.

Each plate (top & bottom of the enclosure) provides four exposed-thread M10 rigging points as well as the keyhole mounts, and an M8 safety/pull-back point is provided on the rear of the enclosure. A 35mm polemount socket is provided discretely on the underside for stand mounting. The enclosure also includes two heavy-duty steel bar handles, and a pair of Neutrik SpeakON™ NLT4MP connectors for input & enclosure link. Lastly, a tough hex-punched grille backed with acoustically transparent fabric protects the drive units from damage. The grille can be quickly removed to rotate the HF waveguide if required. The enclosure is finished in black or white textured paint as standard, however RAL colour matching and weather resistant options are also available.

The MSE-159 requires a single amplifier channel, and should be used with professional power amplifiers capable of delivering 1000-1500W RMS into an 8-ohm load. For optimal results, the EM Acoustics AQ-10 power amplifier should be used.

<b>ENCLOSURE TYPE:</b>	two-way passive, reflex loaded
<b>DIMENSIONS (HxWxD):</b>	707 (27.8) x 440 (17.3) x 450 (17.7) mm/(ins)
<b>NET/SHIPPING WEIGHT:</b>	43/45kg (94.6/99lbs)
<b>FREQUENCY RESPONSE<sup>1</sup>:</b>	65Hz – 20kHz +/- 3dB
<b>SENSITIVITY<sup>2</sup>:</b>	98dB
<b>DISPERSION<sup>3</sup>:</b>	60 x 40 (MSE-156) or 90 x 60 (MSE-159), rotatable
<b>DRIVE UNITS:</b>	15" (381mm) neodymium LF cone drive unit 1.4" (36mm) exit neodymium HF compression drive unit
<b>POWER HANDLING:</b>	750W RMS, 1500W program
<b>MAXIMUM SPL<sup>4</sup>:</b>	130dB continuous, 136dB peak
<b>NOMINAL IMPEDANCE:</b>	8 ohms
<b>CROSSOVER:</b>	asymmetric internal passive
<b>CONNECTORS:</b>	2 x Neutrik SpeakON™ NLT4MP
<b>ENCLOSURE:</b>	15mm (5/8") multi-laminate Birch plywood – rebated, screwed & glued. Finished in impact resistant textured paint
<b>RIGGING &amp; HARDWARE:</b>	keyhole quick-release top & bottom 8 x M10 threaded mounting points (4 top/4 bottom) 1 x M8 threaded mounting point on rear 2 x steel bar handles 1 x 35mm polemount socket
<b>GRILLE:</b>	hex punched steel backed with acoustically transparent fabric
<b>OPTIONS:</b>	Colours/Weather Protection
<b>ACCESSORIES:</b>	FC-159v vertical flying cradle VFA-159 variable angle flying bracket FC-159h horizontal flying cradle
<b>SPARE PARTS:</b>	DU-1505 15" drive unit CDU-1402 1.4" exit HF compression drive unit RK-1505 recone kit RD-2001 replacement HF diaphragm PX-MS156 passive crossover assembly (MSE-156) PX-MS159 passive crossover assembly (MSE-159) RFG-159 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.

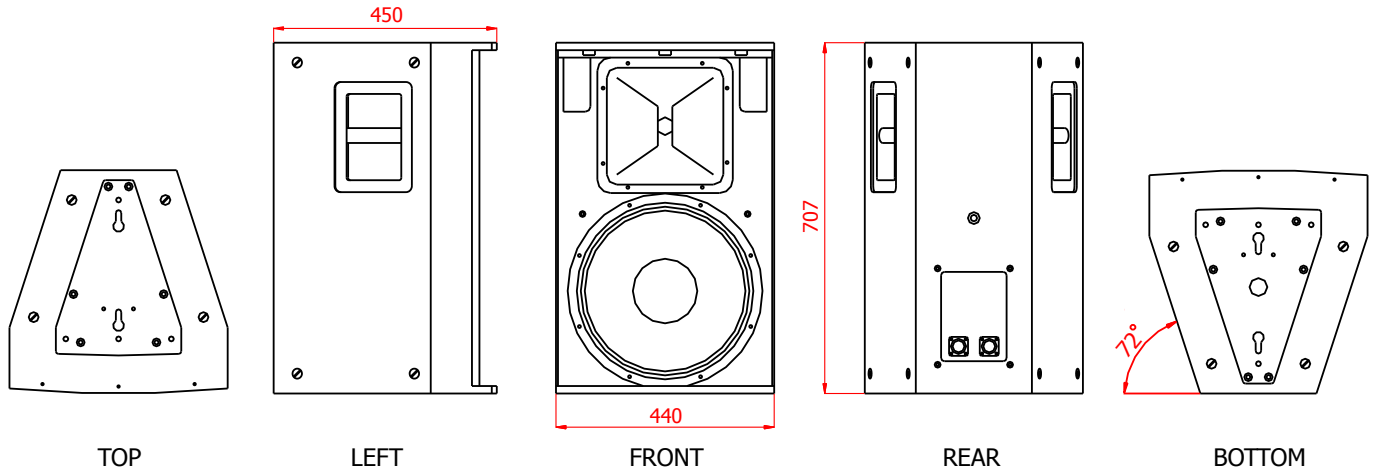
<sup>3</sup>Nominal dispersion, measured in an anechoic environment and averaged over stated bandwidth

<sup>4</sup>Calculated and verified by subjective listening test of familiar program material.

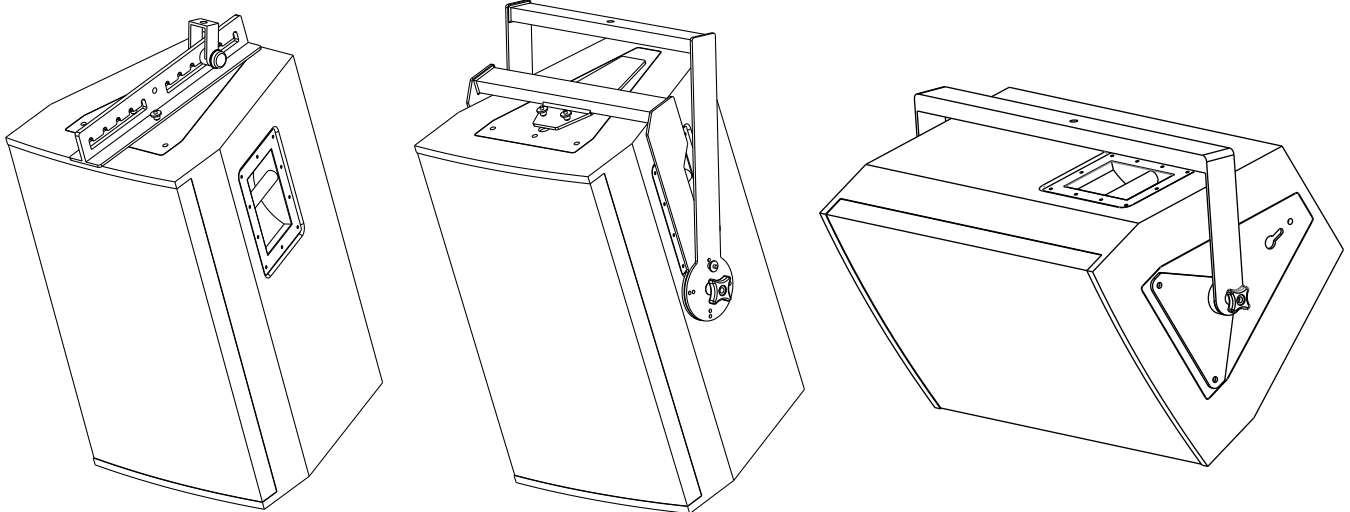
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**ENGINEERING DRAWING**



**RIGGING ACCESSORIES**



**VFA-159**

**FC-159v**

**FC-159h**

**ENCLOSURE OPTIONS**

MSE-156/159 enclosures are supplied as standard in black or white. Any RAL colour can be supplied on request (extended lead time and setup charges apply). Weather protection options are also available to give enhanced protection to the loudspeaker when used outdoors for extended periods of time.