

**EM Acoustics set out to create the finest two-way medium format loudspeakers possible, and the results are the EMS-156 and EMS-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 EMS-156/159 is ideal for front-of-house duty for medium to large venues, or as a powerful fill loudspeaker for larger systems.**

## FEATURES AND BENEFITS

- 15" neodymium LF, 1.4" exit neodymium HF drive units
- True passive design - no corrective DSP required
- Wide and narrow dispersion variants in identical enclosure footprints
- 35mm pole mount socket
- Rotatable waveguide: 90° x 60° (EMS-159), 60° x 40° (EMS-156)
- Flexible rigging and mounting options
- Impact and weather resistant black, and textured white finishes as standard
- RAL colour and weather protection options

## APPLICATIONS

- Live music venues
- Houses of worship
- Concert touring
- Fills for larger systems



The EMS-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 3" (75mm) 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 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 EMS-156 is the narrow dispersion variant, producing a rotatable coverage pattern of 60° x 40°. The EMS-159 is the wide dispersion variant, producing a rotatable coverage pattern of 90° x 60°.

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 and quick-re-

lease pins to allow attachment or removal of hardware in seconds. Each plate (top and 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 pole mount socket is provided discreetly on the underside for stand mounting.

The enclosure also includes two flush bar handles, and a pair of Neutrik® speakON™ connectors for input and 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, and the orientation of the waveguide can be determined without removing the grille. The enclosure is finished in black impact-resistant textured polyurethane, or white textured paint as standard, however RAL colour matching and weather resistant options are also available.

The EMS-156/159 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 DQ Series Advanced System Amplifiers should be used.

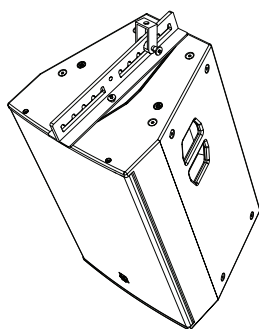
## TECHNICAL SPECIFICATIONS

ENCLOSURE TYPE:	Two-way passive, reflex loaded
DIMENSIONS (HxWxD):	707 (27.8) x 440 (17.3) x 450 (17.7) mm/(ins)
NET/SHIPPING WEIGHT:	43/45kg (94.6/99lbs)
FREQUENCY RESPONSE <sup>1</sup> :	65Hz – 20kHz ±3dB
SENSITIVITY <sup>2</sup> :	98dB
DISPERSION <sup>3</sup> :	60° x 40° (EMS-156) or 90° x 60° (EMS-159), rotatable
DRIVE UNITS:	15" (381mm) neodymium LF cone drive unit 1.4" (36mm) exit neodymium HF compression drive unit
LOUDSPEAKERS PER AMPLIFIER:	DQ6: 1 per channel, DQ10: 2 per channel, DQ20: 4 per channel
POWER HANDLING:	750W RMS, 1500W program
MAXIMUM SPL <sup>4</sup> :	130dB continuous, 136dB peak
NOMINAL IMPEDANCE:	8 ohms
CROSSOVER:	Asymmetric internal passive
CONNECTORS:	2 x Neutrik® speakON™ NLT4
ENCLOSURE:	15mm (5/8") multi-laminate Birch plywood – rebated, screwed and glued. Finished in impact and weather resistant black polyurethane, or textured white paint
RIGGING & HARDWARE:	Keyhole quick-release top and bottom 8 x M10 threaded mounting points (4 top/4 bottom) 1 x M8 threaded mounting point on rear, 2 x flush handles, 1 x 35mm pole mount socket
GRILLE:	Hex punched steel backed with acoustically transparent fabric
OPTIONS:	Colours/Weather Protection
ACCESSORIES:	FC-159v vertical flying cradle FC-159h horizontal flying cradle VFA-159 variable angle flying bracket CM-159 column mount bracket
SPARE PARTS:	DU-1505 15" drive unit CDU-1402 1.4" exit HF compression drive unit RD-2001 replacement HF diaphragm PX-MS156 passive crossover assembly (EMS-156) PX-MS159 passive crossover assembly (EMS-159) RFG-159 replacement grille/fabric

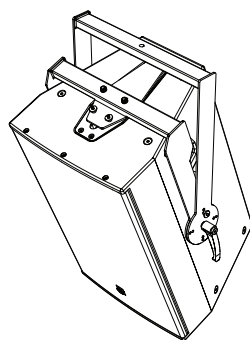
### NOTES ON MEASUREMENT CONDITIONS:

<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.

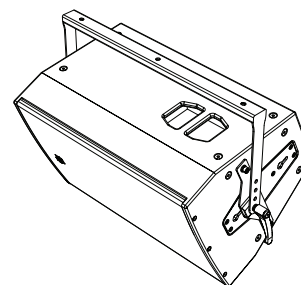
## RIGGING ACCESSORIES



**VFA-159**



**FC-159v**



**FC-159h**

## ENCLOSURE OPTIONS

EMS-156/159 enclosures are available as standard in black 3-step impact resistant polyurethane finish, or white water-based Warnex textured paint. Custom RAL colours can be supplied on request; extended lead times and set up costs apply. EMS-156/159 enclosures can also be supplied as an outdoor version (OD), finished in the same black weather-resistant 3-step polyurethane coating, with stainless steel grilles and weather-resistant connector options, and other cabinet details bespoke to the customer's request. Custom RAL colours are also available for outdoor options by specific quote. Please contact your local EM Acoustics representative for details.

ENGINEERING DRAWING

