



emaoustics

TECHNICAL DATA SHEET

R6

COMPACT PRECISION PASSIVE POINT SOURCE

The EM Acoustics Reference Series of loudspeakers is not simply another iteration of a familiar slim profile form-factor. Rather, the series is the physical result of our ambition to redefine what is possible from a loudspeaker of this kind. A benchmark in physical and sonic elegance, possessing exceptional headroom and stability across all demands, the Reference Series represents the ultimate no-compromise option for point source applications.

FEATURES AND BENEFITS

- Two-way passive design
- Unrivalled headroom
- Natural, open and elegant voicing
- Unique crossover approach combined with FIR for unrivalled impulse response
- Interchangeable wide (110 x 50) and narrow (80 x 50) rotatable waveguides
- 2 x 6.5" neodymium LF/MF, 2.5" annular HF drive units
- Flexible rigging and mounting options
- Impact and weather-resistant black or white finishes as standard
- RAL colour and permanent outdoor use options

APPLICATIONS

- Small to medium theatre and musical theatre events
- Small to medium live sound reinforcement
- Theatrical fills & delays
- Houses of Worship
- Conference, corporate and audio-visual



Expanding the Reference Series still further, the R6 is a 2-way passive system engineered to convey the elegance, performance and headroom of the Reference Series in a compact, discreet and versatile package. Intended to bridge the application gap between the R5 and the R8, the R6 retains the same DNA as its siblings, delivering truly abundant audio that defies its physical size. This makes the R6 perfect as a powerful front fill or theatrical delay, or for sleek reinforcement in a corporate or audio/visual setting, or subtle and sympathetic deployment in Houses of Worship. With a surprising overall output that defies its physical size, the R6 is also capable of discreet front-of-house reinforcement in smaller live music settings.

The slim enclosure contains a pair of state-of-the-art 2" (51mm) voice coil 6.5" (165mm) neodymium LF/MF drivers, and a 2.5- inch (64mm) voice coil annular HF compression drive unit. The use of a ring diaphragm HF unit retains the ultra-low harmonic distortion levels that the Reference Series has become renowned for. Just as with the other models in the series, this HF drive unit feeds one of two alternate waveguides, which are direct derivations from the ground-breaking work undertaken on the other models in the series. The

result is that these waveguides possess not only an incredibly natural tonal character, but unparalleled consistency of response both on and off-axis.

As with other Reference Series models, the R6 is supplied as standard with both waveguide options; a wide dispersion 110° x 50° for shorter throw applications and a narrower dispersion 80° x 50° option for controlled coverage over longer distances. Minutes of physical work and a simple change of preset in the amplifier and the R6 can transform from a wide dispersion to a narrow and vice versa – offering excellent flexibility for rental users and installation customers alike. Which waveguide is installed – and crucially which orientation that waveguide is in – is easily identifiable without removing the front grille.

An entirely unique approach to crossover design marries the components together. The highly advanced crossover, in conjunction with the FIR processing functions of the our range of Advanced System Amplifiers, allows each drive unit to be used to the optimum extent. The combination of drive units, bespoke waveguide design

and FIR processing yields flat frequency and phase responses and a consistency of sonic character across demand which is unrivalled by any loudspeaker in this class.

The use of intelligent bracing means the R6 retains the longevity and sonic advantages of a genuine plywood enclosure, whilst keeping weight remarkably low. The enclosure is coated with an impact and weather-resistant polyurethane finish which will enable the R6 to stand up to the most adverse conditions. This finish is available in both black and white as standard, however custom RAL colour matching options and permanent outdoor enhancements are also available.

The front grille is manufactured from stainless steel for enhanced lifespan and this is backed by an acoustically transparent fabric to complete the discreet appearance.

Intelligent handle placement combined with multiple threaded rigging points and a quick-release keyhole flying plate system ensure the R6 is easy and simple to handle and install both permanently and whilst on the road.

The architecture and construction of the R6 combined with EM Acoustics' state-of-the-art FIR processing liberates each component to achieve levels of sonic performance never yet attained by a loudspeaker of this size and form factor.

TECHNICAL SPECIFICATIONS

ENCLOSURE TYPE:	Two-way passive point source
DIMENSIONS (HxWxD):	(HxWxD) 516 (20.3) x 220 (8.7) x 300 (11.8) mm/(ins)
NET/SHIPPING WEIGHT:	23/27kg (50.6/59.4lbs)
FREQUENCY RESPONSE ¹ :	80Hz – 20kHz ±3dB
SENSITIVITY ² :	95dB
DISPERSION ³ :	Wide 110° x 50°, narrow 80° x 50°, both rotatable
DRIVE UNITS:	LF/MF: 2 x 2" (51mm) voice coil, 6.5" (165mm) neodymium drive units HF: 2.5" (64mm) voice coil neodymium annular compression drive unit
LOUDSPEAKERS PER AMPLIFIER (maximum for full loudspeaker SPL):	DQ6: 1 per channel, DQ10: 2 per channel, DQ20: 4 per channel Di06: not recommended, Di10: 1 per channel, Di20: 2 per channel
LOUDSPEAKERS PER AMPLIFIER (recommended absolute maximum) ⁴ :	DQ6: 2 per channel, DQ10: 3 per channel, DQ20: 4 per channel Di06: 1 per channel, Di10: 2 per channel, Di20: 2 per channel
POWER HANDLING:	600W RMS, 1200W program
MAXIMUM SPL ⁵ :	125dB continuous, 131dB peak
NOMINAL IMPEDANCE:	8 ohms
CROSSOVER:	Asymmetric internal passive
CONNECTORS:	2 x Neutrik® speakON™ NLT4MP
ENCLOSURE:	15mm (5/8") & 25mm (1") multi-laminate Birch plywood – rebated, screwed and glued Finished in impact and weather-resistant textured polyurethane
RIGGING & HARDWARE:	Quick-release keyhole flying system, 8 x M8 threaded fittings Supplied with PM-61 polemount adapter for stand mounting
GRILLE:	Hex punched stainless steel backed with acoustically transparent fabric
OPTIONS:	Colours/Weather Protection
ACCESSORIES:	FC-R6v vertical flying cradle FC-R6h horizontal flying cradle CASE-R6 dual enclosure touring flightcase

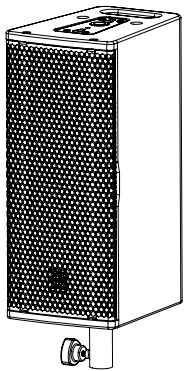
NOTES ON MEASUREMENT CONDITIONS:

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.

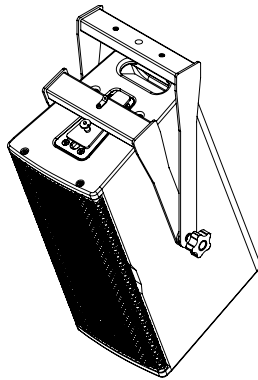


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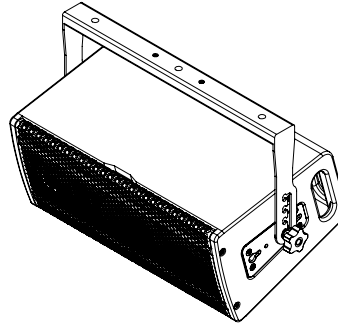
RIGGING ACCESSORIES



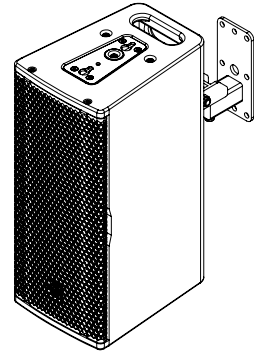
PM-61



FC-R6v



FC-R6h



WHH75

ENCLOSURE OPTIONS

R6 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. R6 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

