

QLIGHT™ SERIES ENGINEERING INFORMATION

The TQ-259 is a passive full range two-way loudspeaker enclosure designed for use in mobile speech and music sound reinforcement applications as well as in a wide range of fixed installations.

The loudspeaker complement consists of a front loaded 12" low frequency driver and a 1" high frequency compression driver on a 90°H x 60°V HF horn, matched with an internal passive crossover network.

The large format constant directivity horn exhibits excellent pattern control down to crossover frequency, making the TQ-259 ideal for use in arrays.

The trapezoidal enclosure is constructed from 15mm (5/8") birch plywood, and it is

finished as standard in durable semi-matt black textured paint. Other colours are optionally available.

The cabinet incorporates the provision for RT-767 ring-type fittings on the top, rear and bottom, enabling it to be suspended and angled in permanent installations as well as in mobile applications.

A rear panel connector plate carries two Neutrik Speakon NL4MP connectors for loop in and loop out connections to additional enclosures.

Recommended complementary products:

TQ-115, TQ-425 subwoofer enclosures

LMS-D6, LMS-D4 loudspeaker management systems

**FEATURES**

Excellent pattern control

High power handling

RT-767 flying points

APPLICATIONS

Front of house array

Theatre

Houses of Worship

Corporate / industrial

DIMENSIONS (HxWxD)	630mm x 363mm x 389mm (24.8" x 14.3" x 15.3")
NET WEIGHT	21kg (46.2 lbs)
COMPONENTS	1 x 12" (305mm) LF driver, 1 x 1" (25mm) HF driver on a custom flare
FREQUENCY RESPONSE¹	60Hz - 20kHz ±4dB
NOMINAL DISPERSION²	90°H x 60°V@-6db points
POWER HANDLING	290 watts r.m.s., 580 watts program, 725 watts peak Recommended amplifier 580 watts @ 8 ohms
SENSITIVITY³	97dB 1 watt @ 1 m
MAXIMUM SPL	125dB continuous ⁴ , 131dB peak ⁵
CROSSOVER	Internal passive crossover at 1k6Hz; 24dB/octave high pass, 12dB/octave low pass
NOMINAL IMPEDANCE	8 ohms
CONSTRUCTION	15mm (5/8") birch plywood; rebated, screwed and glued. Finished in black semi-matt textured paint. Recessed carrying handles on sides and back. Integral pole mount socket
GRILLE	Powder coated perforated steel with reticulated foam
CONNECTORS	(2) Neutrik Speakon NL4MP, wired pin1+: positive, pin1-: negative
FLYING HARDWARE	RT-767 ring type flypoints on the top, bottom and back
OPTIONS	Optional colour: TurboBlue™
SPARES AND ACCESSORIES	LS-1213 12" (305mm) LF loudspeaker RC-1213 Recone kit for LS-1213 CD-107 1" (25mm) HF compression driver RD-107 Replacement diaphragm for CD-107 PX-59 Crossover assembly MG-259 Replacement grille RT-767 Ring-type flying points

Notes

¹Measured on axis

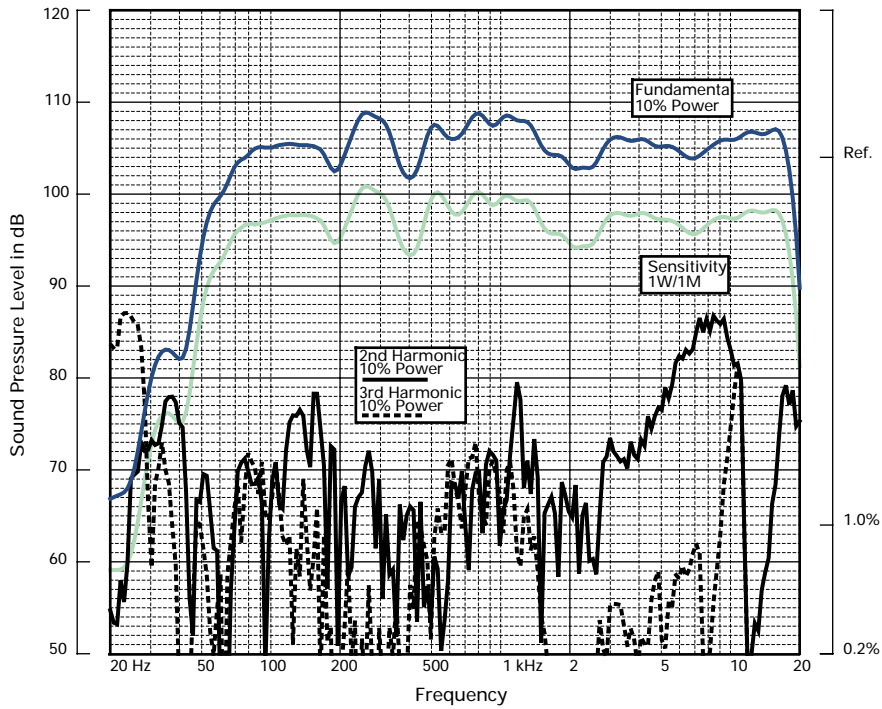
²Average over stated bandwidth

³Average over stated bandwidth

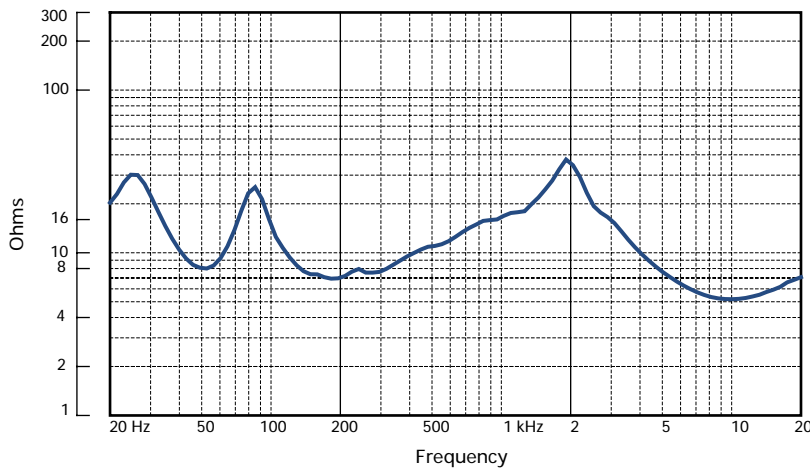
⁴Unweighted diode-clipped pink noise. Measured in a half space environment

⁵Verified by subjective listening tests of familiar program material, before the onset of perceived signal degradation

FREQUENCY RESPONSE



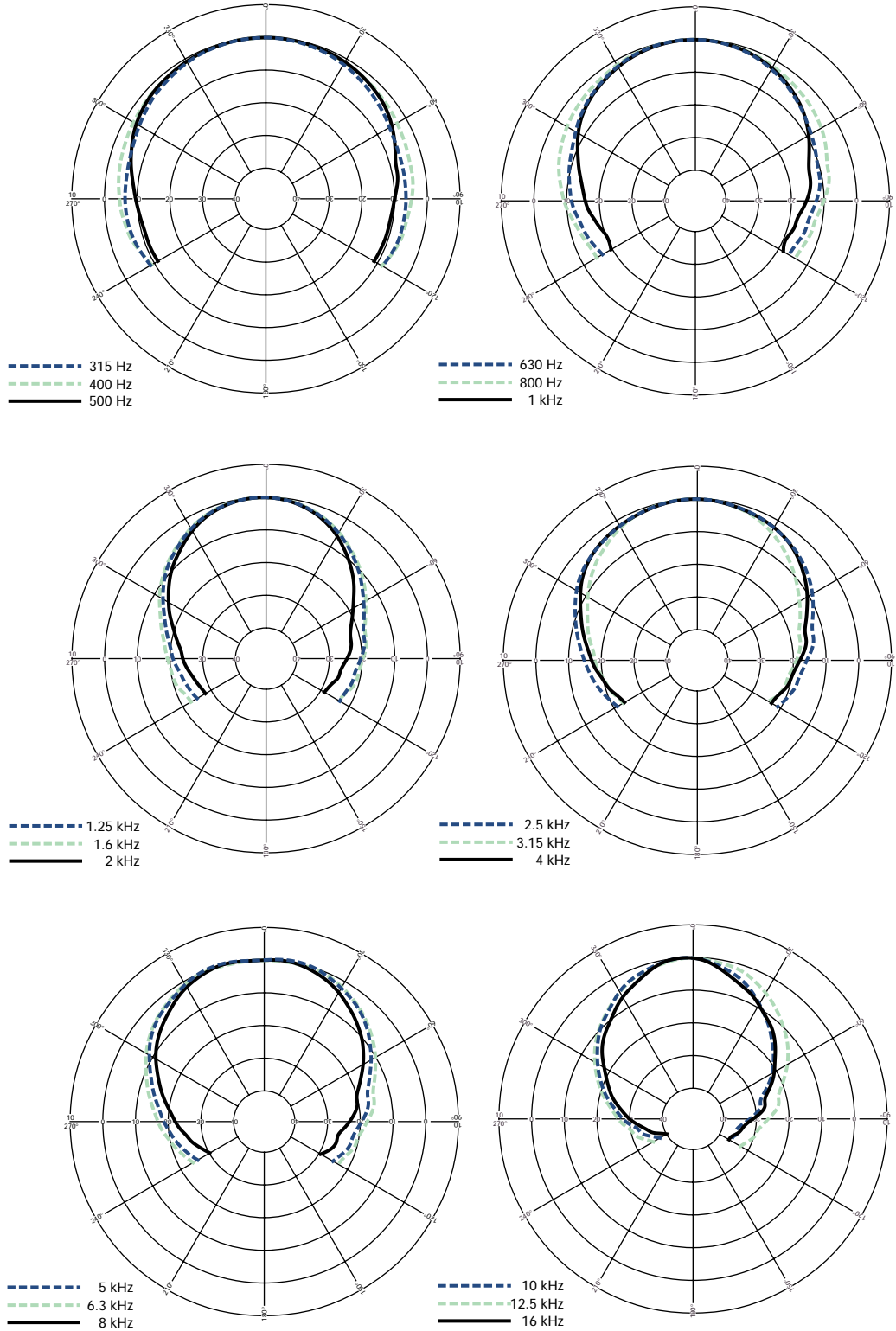
IMPEDANCE



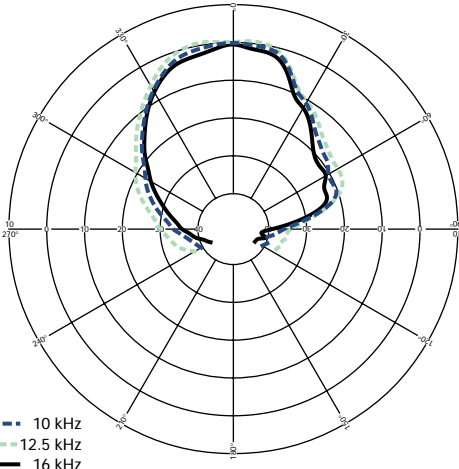
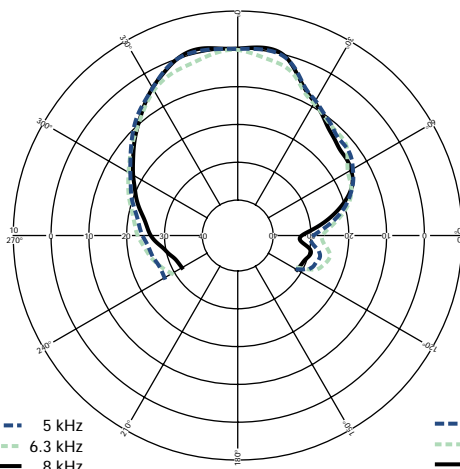
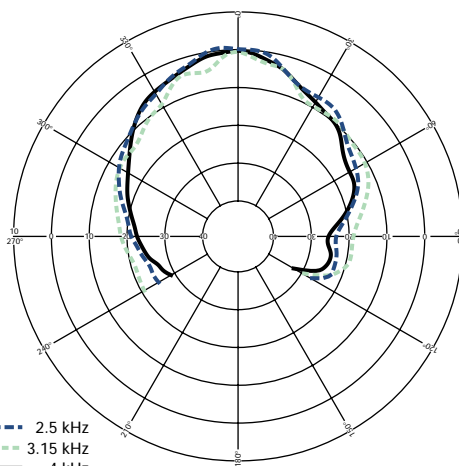
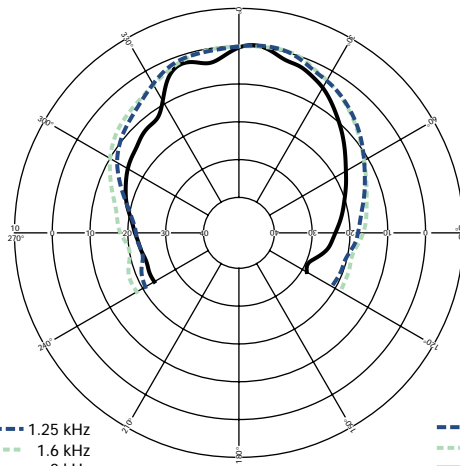
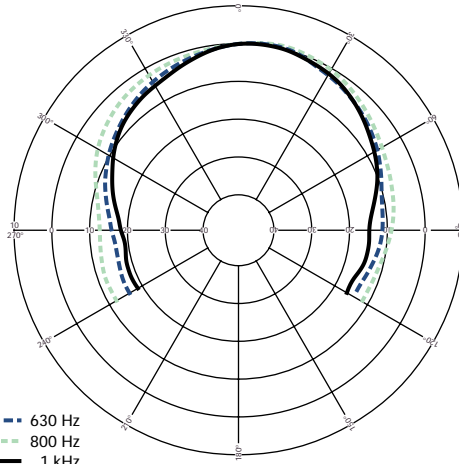
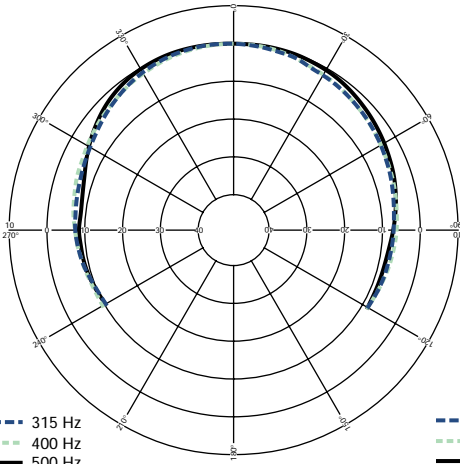
Impedance A constant current circuit was used to measure the impedance. **Frequency response** The frequency response shown was obtained by feeding a swept sine wave through the system in a half space environment. The position of the microphone was vertically on-axis at a distance of 2 metres, then scaled to represent 1 metre. **2nd & 3rd Harmonic Distortion** Distortion measurements were obtained using an Audio Precision harmonic distortion analysis system and comply with AES recommendations for enclosure measurement (AES paper ANSI S4-26-1984). **Data Conversion** All graphs were digitally generated using the APEX custom software system, designed to translate data derived from Audio Precision 'System One' test equipment into AutoCAD™. This program enables graphical information to be plotted to a high degree of accuracy.

NOTES ON MEASUREMENT CONDITIONS

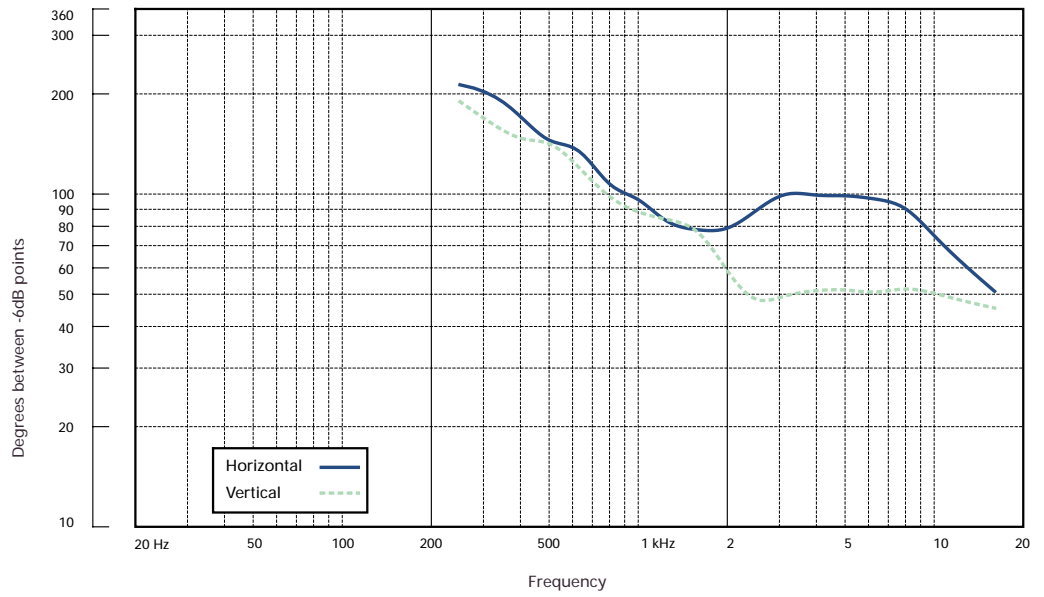
**HORIZONTAL THIRD
 OCTAVE POLARS**



VERTICAL THIRD
OCTAVE POLARS



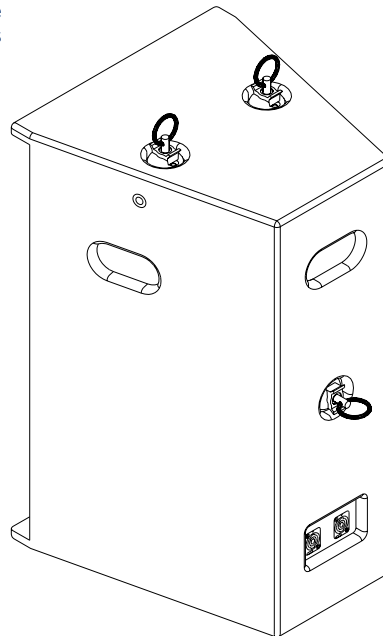
BEAMWIDTH



The TQ-259 is fitted with rigging points on the top, bottom and rear of the cabinet which mate with optional RT-767 ring type flying points, supplied as a set of three. These enable it to be rigged in permanent installations and mobile applications. The rear rigging point provides a means of adjusting the downward angle of the cabinet. Two additional flying points on the bottom of the cabinet allow the TQ-259 to be inverted should it be preferable to position the HF horn closer to the audience. It also possible suspend a vertical column of up to two cabinets deep by connecting the fly points on the top of one cabinet to those on the bottom of another with QL-75 quicklinks or suitable shackles.

**INSTALLATION
HARDWARE**

RT-767 ring type
fly points



ARCHITECTURAL
& ENGINEER'S
SPECIFICATIONS

The system shall be of the two-way passive trapezoidal type consisting of one 12" (305mm) low frequency loudspeaker and one 1" (25mm) high frequency driver on a 90° x 60° constant directivity horn. Performance specifications of a typical production unit shall meet or exceed the following: frequency response, measured with swept sine wave input, shall be flat within ±4dB from 60Hz to 20kHz. Nominal dispersion, at -6dB points, shall average 90°H x 60°V. Nominal impedance shall be 8 ohms. Power handling shall be 290 watts r.m.s., 580 watts program, 725 watts peak. Sensitivity, measured with 1 watt input at 1 metre distance on axis, mean averaged over stated bandwidth, shall be 97dB. Maximum SPL (peak) measured with music program at stated amplifier input shall be 131dB. Dimensions: 630mmH x 363mmW x 389D (24.8"H x 14.3"W x 15.3"D). Weight: 21kg (46.2lbs). The loudspeaker system shall be the Turbosound TQ-259. No other loudspeaker shall be acceptable unless submitted data from an independent test laboratory verify that the above combined performance / size specifications are equalled or exceeded.

DIMENSIONS

