

## QLIGHT™ SERIES ENGINEERING INFORMATION

**The TQ-308 is a compact 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 8" low-mid frequency driver and a 1" high frequency compression driver on a rotatable 100°H x 60°V HF waveguide.

The TQ-308 features Turbosound's Converging Elliptical Waveguide™ (CEW™) technology. The comparatively short flare allows physical alignment of the HF and LF devices, and ensures that the wavefront is shaped smoothly, eliminating reflections in the throat area while giving excellent pattern control. Additionally this design does not suffer from the distortion typical of horns employing diffraction edges. The waveguide can be rotated within the enclosure, making it possible to swap the horizontal and vertical coverage patterns.

The quasi-trapezoidal enclosure has been designed with a 10° side angle on one side and with a 10° and 45° angle on the other. This asymmetrical shape allows the loudspeaker to be used for either front of house applications or as a floor monitor.



The TQ-308 includes rigging points for fitting optional M10 shoulder eyebolts, enabling it to be suspended and angled in permanent installations as well as in mobile applications. It is also fitted with M8 and M6 rigging points which mate with optional Turbosound WB-100 wall brackets and SB-308 swivel brackets, and Omnimount™ or Powerdrive™ wall and ceiling brackets. A pole mount socket is fitted to the bottom of the cabinet for use with 35mm poles and speaker stands.

The cabinet is constructed from 12mm (1/2") birch plywood, screwed and glued together for maximum strength and rigidity, and includes a reticulated foam and steel mesh grille. It is finished in durable black semi-matt textured paint; TurboBlue™ textured paint is optionally available.

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

The TQ-308 must be used with professional quality digital controllers such as the Turbosound LMS-D4.

**Recommended complementary products:  
LMS-D4, TQ-115**

### FEATURES

- CEW™ technology**
- Trapezoidal cabinet**
- Rotatable HF waveguide**
- High power handling**
- M10 rigging points**
- Pole mount socket**

### APPLICATIONS

- Front of house**
- Floor monitor**
- Dry hire and rental**
- Theatre**
- Audio-visual**
- Houses of Worship**
- Corporate / industrial**

<b>DIMENSIONS (HxWxD)</b>	464mm x 270mm x 241mm (18.3" x 10.6" x 9.5")	
<b>NET WEIGHT</b>	11.5kg (25.3lbs)	
<b>COMPONENTS</b>	1 x 8" (203mm) LF driver, 1 x 1" (25mm) HF driver on a Converging Elliptical Waveguide™	
<b>FREQUENCY RESPONSE<sup>1</sup></b>	68Hz - 20kHz ±4dB	
<b>NOMINAL DISPERSION<sup>2</sup></b>	100°H x 60°V@-6db points. Rotatable waveguide allows swap of horizontal and vertical pattern	
<b>POWER HANDLING</b>	250 watts r.m.s., 500 watts program Recommended amplifier power: 500 watts @ 8 ohms	
<b>SENSITIVITY<sup>3</sup></b>	96dB, 1 watt @ 1 metre	
<b>CALCULATED MAX SPL</b>	123dB continuous <sup>4</sup> , 129dB peak <sup>5</sup>	
<b>NOMINAL IMPEDANCE</b>	8 ohms	
<b>CONSTRUCTION</b>	12mm (1/2") birch plywood; rebated, screwed and glued. Finished in black semi-matt textured paint. One recessed carrying handle. Integral pole mount socket	
<b>GRILLE</b>	Powder coated perforated steel with acoustically transparent reticulated foam	
<b>CONNECTORS</b>	(2) Speakon NL4MP, wired pin 1+: positive, pin 1-: negative, pins 2+ and 2- N/C	
<b>FLYING HARDWARE</b>	(9) M10 rigging points for shoulder eyebolts (4) M8 rigging points for WB-100 and Powerdrive™ brackets (1) M8 rigging points for SB-308 swivel bracket (4) M6 rigging points for OmniMount brackets	
<b>OPTIONS</b>	Optional colour: TurboBlue™ textured paint	
<b>SPARES AND ACCESSORIES</b>	LS-8010	8" (203mm) LF loudspeaker
	RC-8010	Recone kit for LS-8010
	CD-110	1" (25mm) HF compression driver
	RD-110	Replacement diaphragm for CD-110
	MG-308	Replacement grille

Notes

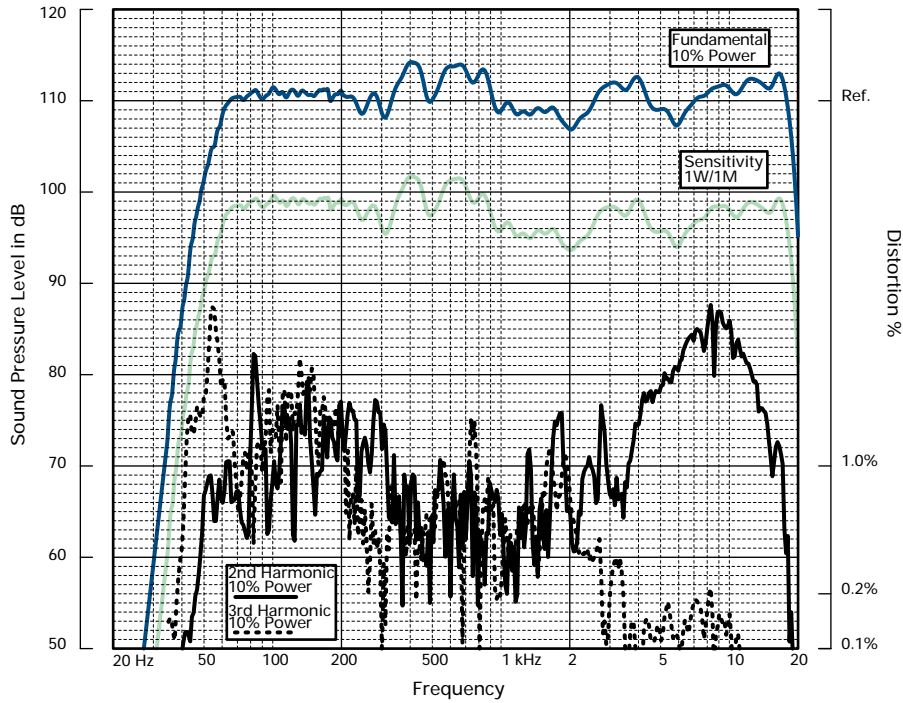
<sup>1</sup>Measured on axis

<sup>2</sup>Average over stated bandwidth

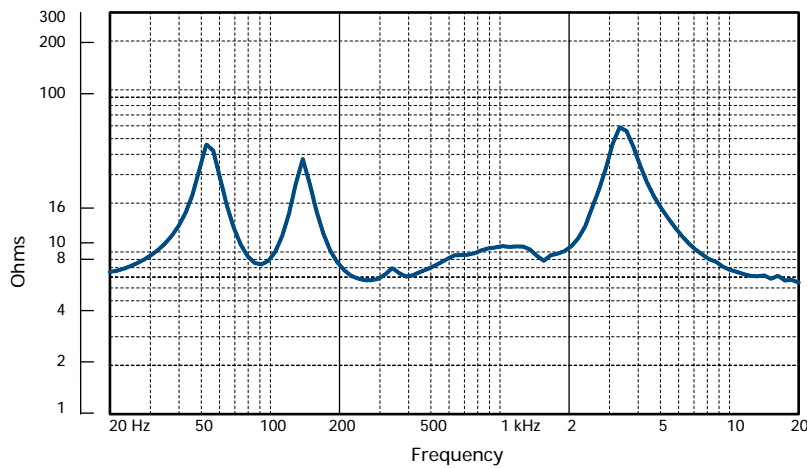
<sup>3</sup>Characteristic sensitivity as measured to IEC 268-5

<sup>4</sup>Unweighted diode-clipped pink noise. Measured in a half space environment

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



**FREQUENCY RESPONSE**

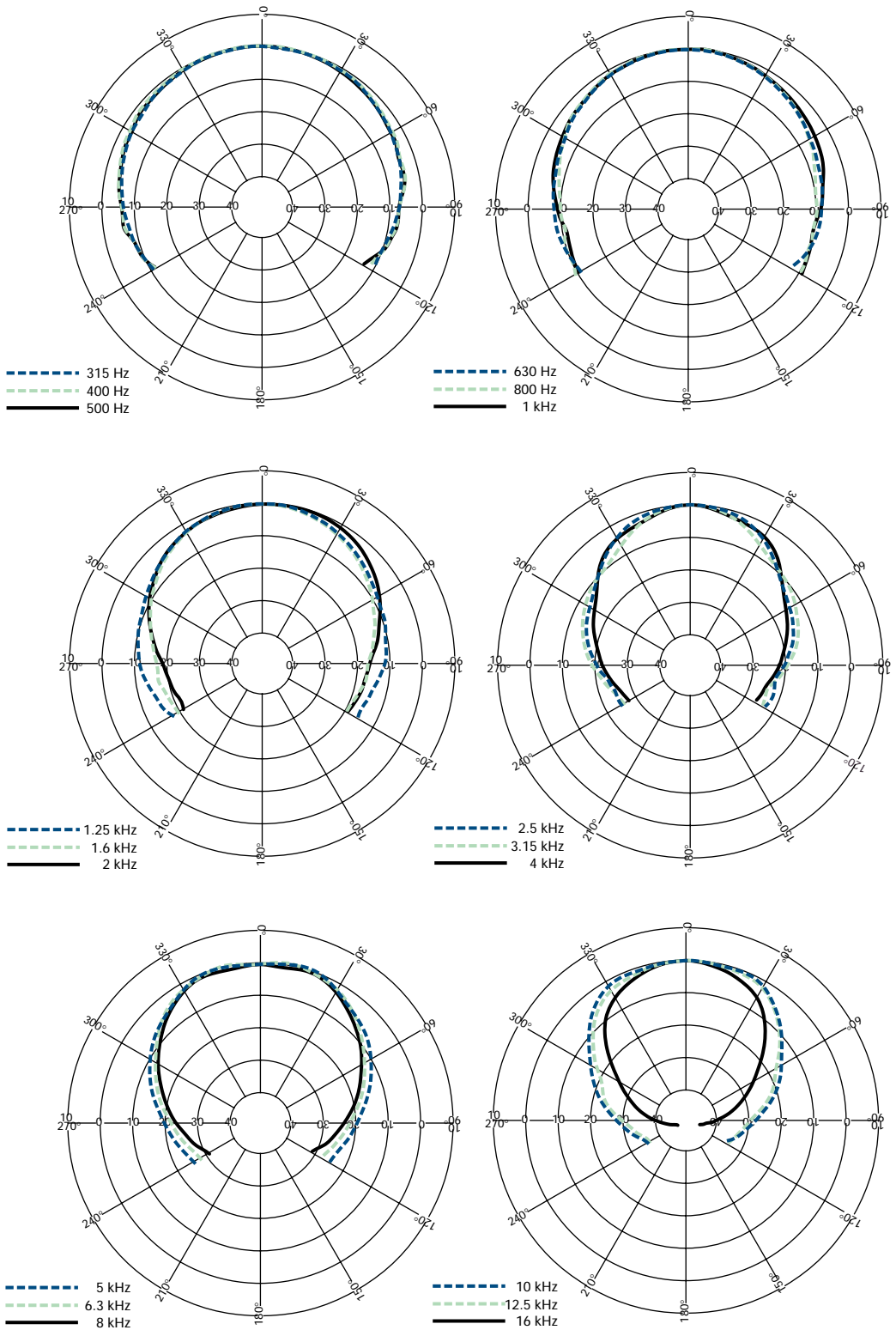


**IMPEDANCE**

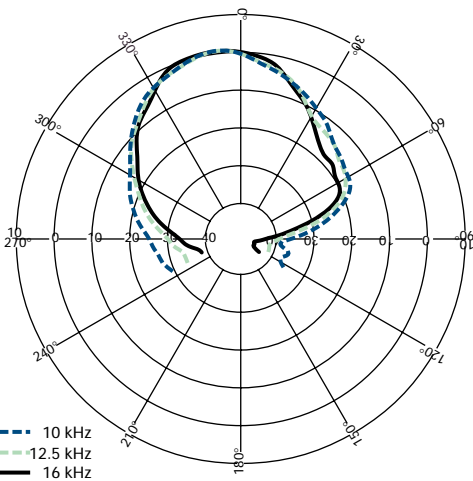
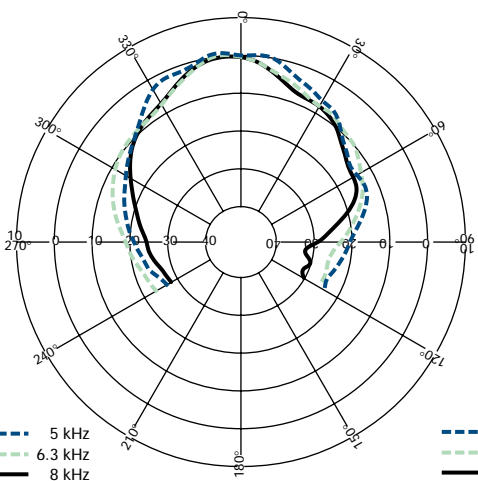
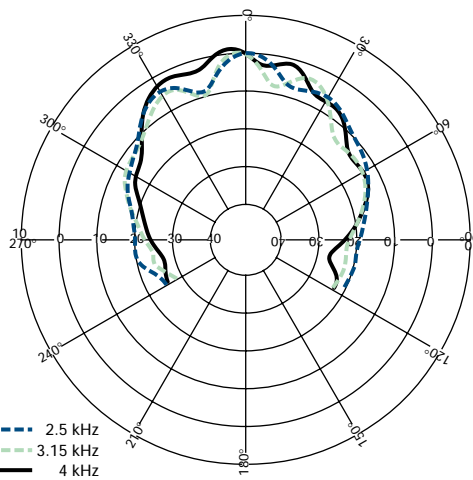
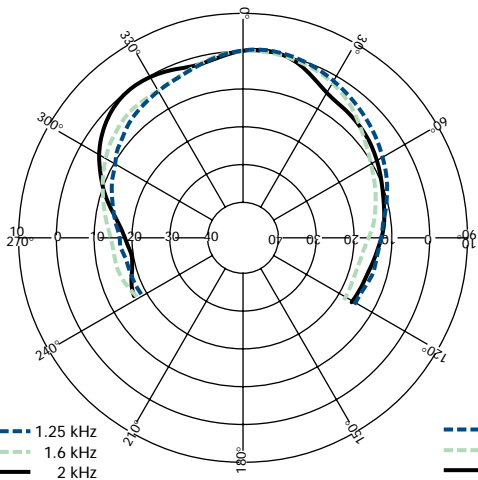
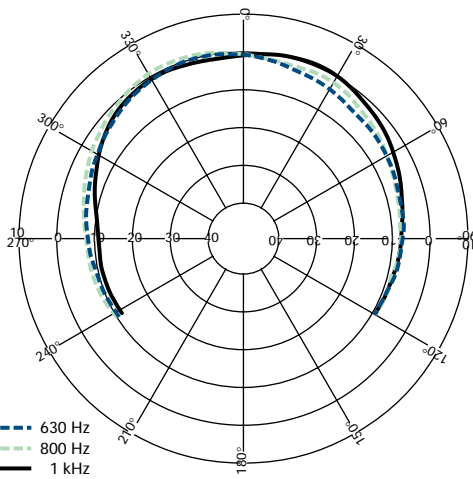
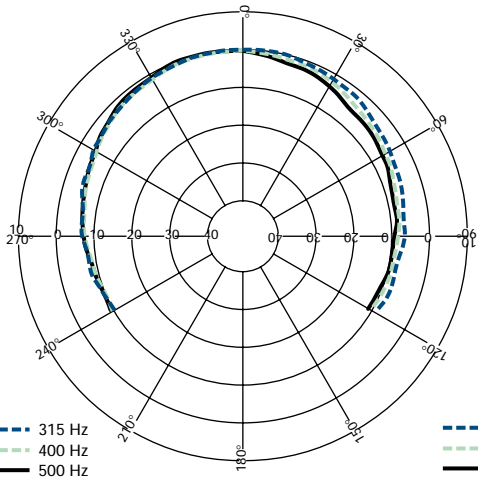
**Impedance** A constant current circuit was used to measure the impedance. **Frequency response** The frequency response shown was obtained by feeding a swept sine wave through the system in a half space environment. The position of the microphone was vertically on-axis at a distance of 2 metres, then 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**

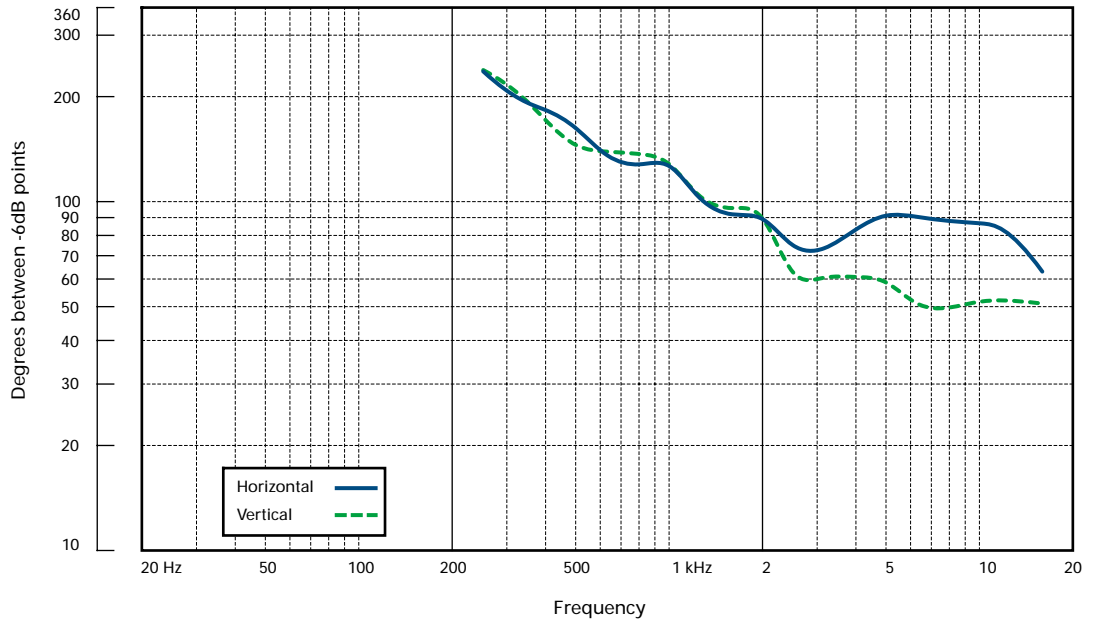
**HORIZONTAL THIRD  
OCTAVE POLARS**



**VERTICAL THIRD  
OCTAVE POLARS**



**BEAMWIDTH**



**QLIGHT™ SERIES ENGINEERING INFORMATION**

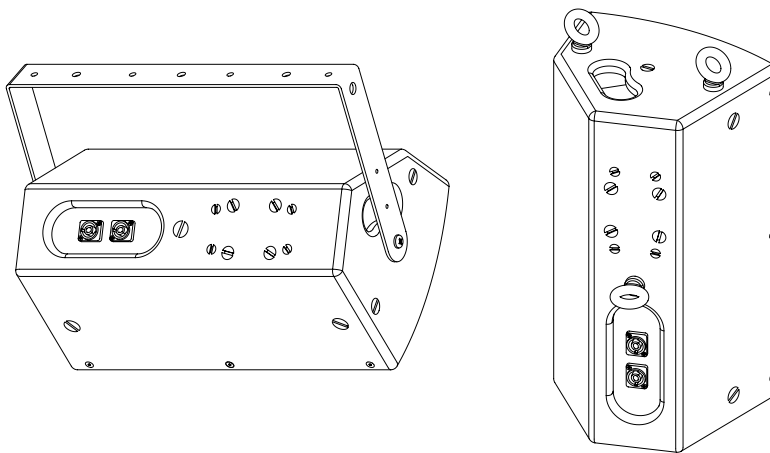
The cabinet is fitted with nine rigging points on the top, bottom and rear for use with M10 shoulder eyebolts, enabling it to be rigged in permanent installations. The rear rigging point provides a means of adjusting the downward angle of the cabinet.

**INSTALLATION  
HARDWARE**

The SB-308 swivel bracket is used for wall or ceiling mounting the cabinet in permanent installations. A scaffold clamp adapter is also available for mobile applications.

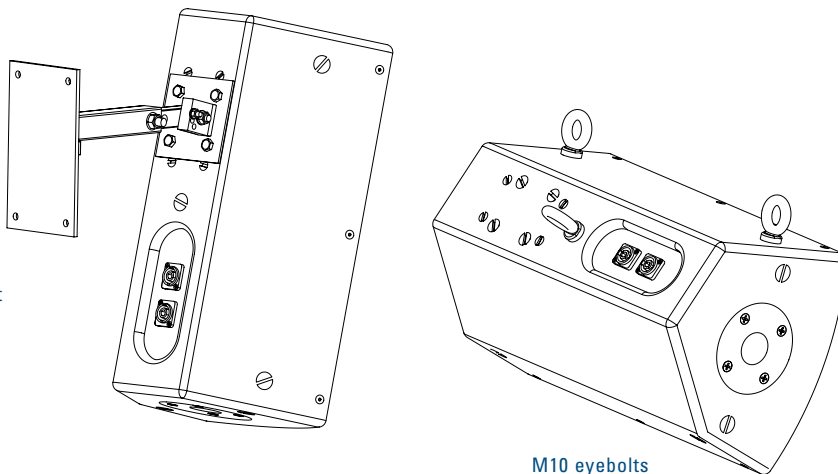
M8 rigging points are provided on the rear panel for use with WB-100, CB-100 and Powerdrive™ wall and ceiling brackets. M6 rigging points are also provided for use with Omnimount™ brackets.

SB-308 swivel bracket



M10 eyebolts

WB-100 wall bracket



M10 eyebolts

**ARCHITECTURAL  
& ENGINEER'S  
SPECIFICATIONS**

The system shall be of the full range, two-way type consisting of one 8" (203mm) LF driver and one 1" (25mm) HF driver on a Converging Elliptical Waveguide™. 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  $\pm 4\text{dB}$  from 68Hz to 20kHz. Nominal dispersion, at -6dB points, shall average 100°H x 60°V. Nominal impedance shall be 8 ohms. Power handling shall be 250 watts r.m.s., 500 watts program. Sensitivity, measured with 1 watt input at 1 metre distance on axis, mean averaged over stated bandwidth, shall be 96dB. Maximum SPL (peak) measured with music program at stated amplifier input shall be 129dB. Dimensions: 464mmH x 270mmW x 241mmD (18.3"H x 10.6"W x 9.5"D). Weight: 11.5kg (25.3lbs). The loudspeaker system shall be the Turbosound TQ-308. 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**

