

QLIGHT™ SERIES ENGINEERING INFORMATION

The TQ-230 is a passive full range two-way loudspeaker enclosure designed for use in a wide variety of theatre, corporate and audio-visual applications, as well as in fixed installations ranging from cafés, bars and restaurants to retail stores and houses of worship.

It consists of two 5" low frequency drivers and a 1" high frequency compression driver on a 100°H x 60°V horn matched with an internal passive crossover network in a vented birch plywood enclosure.

The TQ-230 is magnetically shielded to allow use in proximity to TV screens and computer monitors.

The TQ-230 is designed to provide wide horizontal coverage from a compact, unobtrusive enclosure, and therefore can be used as a theatre under-balcony loudspeaker

or as a delay speaker in a large sound reinforcement system.

Two Speakon NL4MP connectors provide input and loop in / loop out connections to the enclosure, which is constructed from 5/8" (15mm) birch plywood. The standard cabinet finish is black semi-matt textured paint (other colours are optionally available).

Rigging points are provided on the cabinet for use with OmniMount™ 50 series and Turbosound WB-60 wall brackets, while rigging points on the top and sides are used for the SM-60 scaffold bracket. An integral pole mount socket is provided on the bottom of the cabinet.

Recommended complementary products:

TQ-425 subwoofer enclosure

LMS-D6, LMS-D4 loudspeaker management systems



FEATURES

- Full range response
- Compact enclosure
- Magnetically shielded
- Multiple rigging points

APPLICATIONS

- Theatre
- Corporate
- Audio-visual
- Conferencing
- Restaurants / cafés
- Under balcony
- Background sound
- Surround sound
- Delay loudspeaker

| | |
|---------------------------------------|---|
| DIMENSIONS (HxWxD) | 528mm x 210mm x 200mm (20.8" x 8.3" x 7.9") |
| NET WEIGHT | 9.5kg (20.9 lbs) |
| COMPONENTS | 2 x 5" (127mm) LF driver, 1 x 1" (25mm) HF driver on a custom flare. Magnetically shielded |
| FREQUENCY RESPONSE¹ | 70Hz - 20kHz ±4dB |
| NOMINAL DISPERSION² | 100°H x 60°V@-6db points |
| POWER HANDLING | 125 watts r.m.s., 250 watts program, 325 watts peak Recommended amplifier 250 watts @ 8 ohms |
| SENSITIVITY³ | 90dB 1W @ 1m |
| MAXIMUM SPL | 114dB continuous ⁴ , 120dB peak ⁵ |
| CROSSOVER | Internal passive crossover network at 2k8Hz; 18dB/octave high pass, 12dB/octave low pass |
| NOMINAL IMPEDANCE | 8 ohms |
| CONSTRUCTION | 15mm (5/8") birch plywood; rebated, pinned and glued. Finished in black semi-matt textured paint. Integral pole mount socket. Recessed carrying handle |
| GRILLE | Powder coated perforated steel with reticulated foam |
| CONNECTORS | (2) Neutrik Speakon NL4MP, wired pin1+: positive, pin1-: negative |
| RIGGING HARDWARE | M6 internal fixing points for OmniMount™ 50 series and WB-60 brackets M8 internal fixing points for SM-60 scaffold brackets |
| OPTIONS | Optional colour: TurboBlue™ |
| SPARES AND ACCESSORIES | LS-50 5" (127mm) LF loudspeaker RC-50 Recone kit for LS-5025 TW-25 1" (25mm) HF compression driver RD-25 Replacement diaphragm for TW-25 PX-330 Crossover assembly MG-230 Replacement grille WB-60 Wall bracket SM-60 Scaffold bracket |

Notes

¹Measured on axis

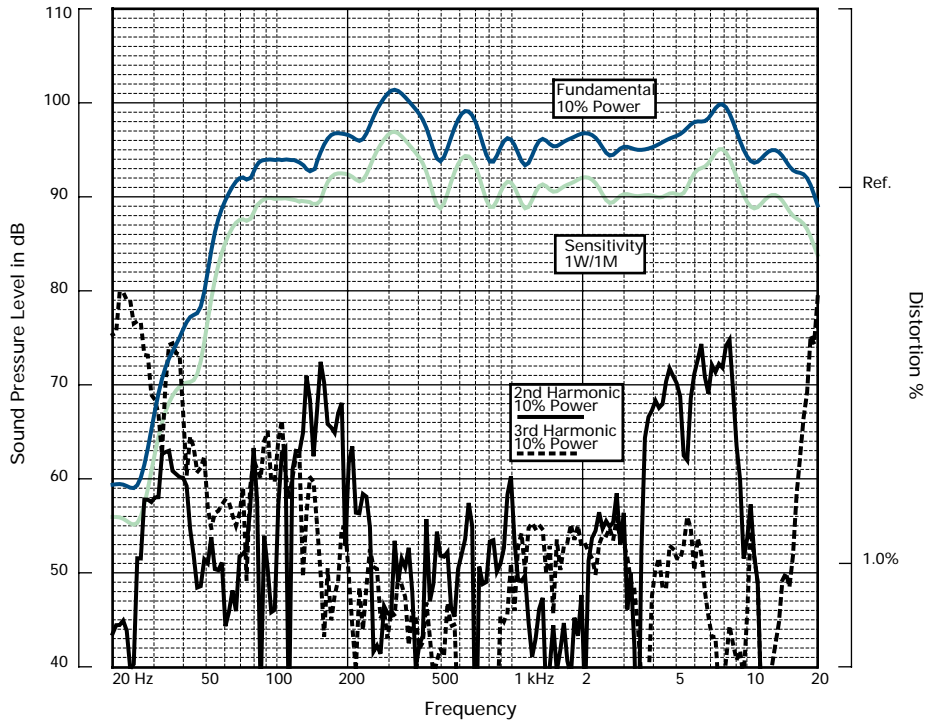
²Average over stated bandwidth

³Average over stated bandwidth

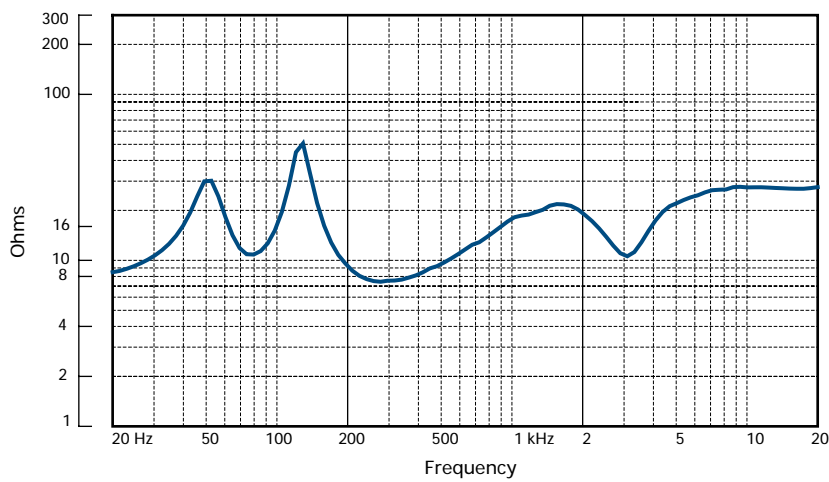
⁴Unweighted diode-clipped pink noise. Measured in a half space environment

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

FREQUENCY RESPONSE



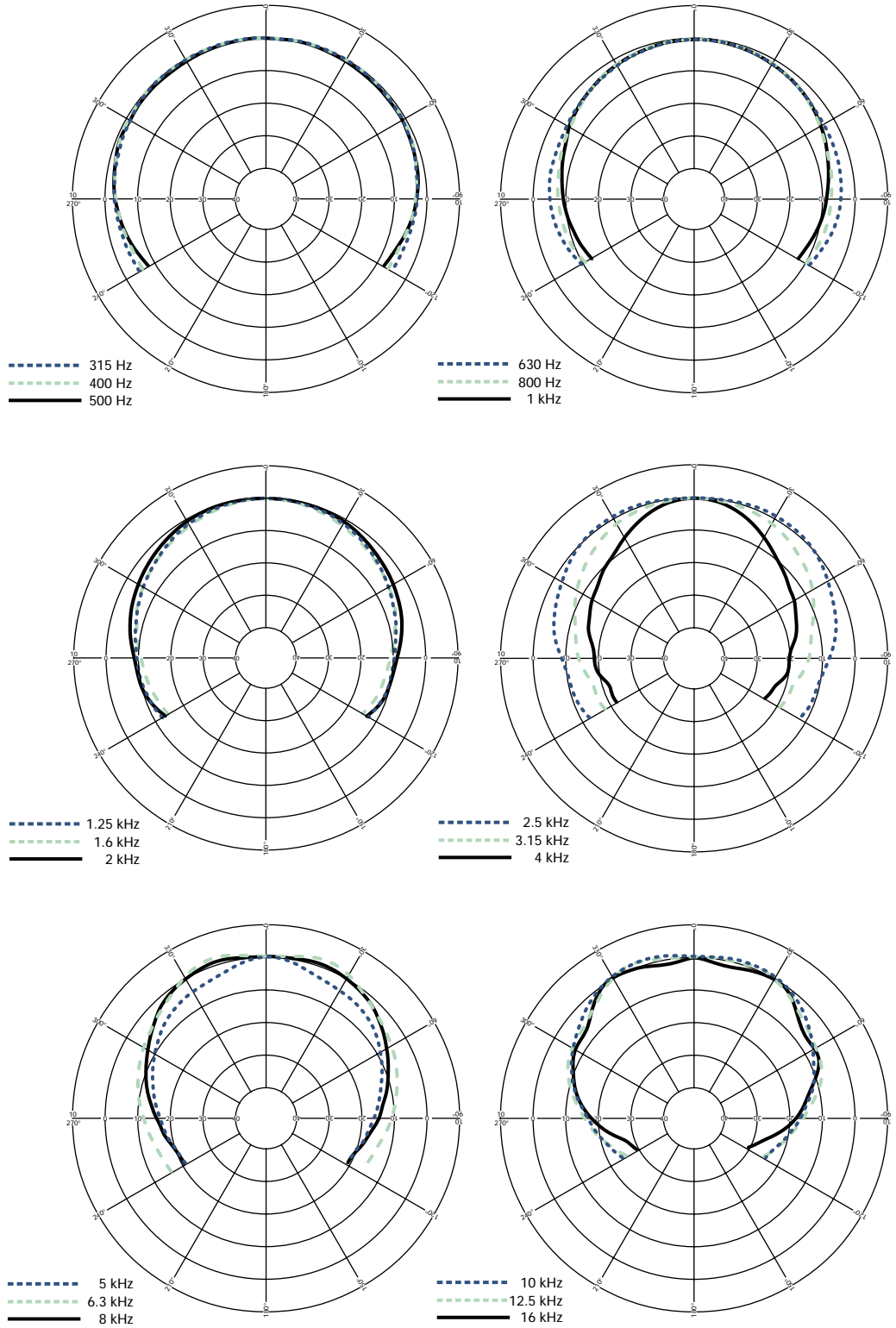
IMPEDANCE



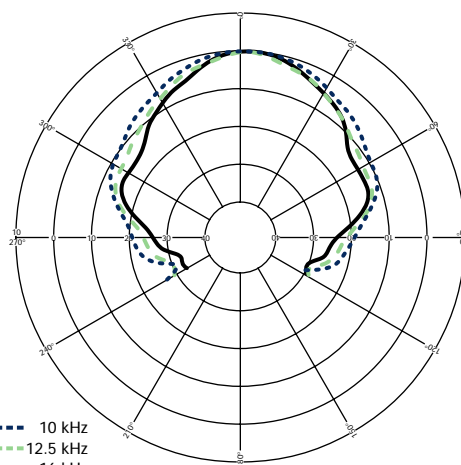
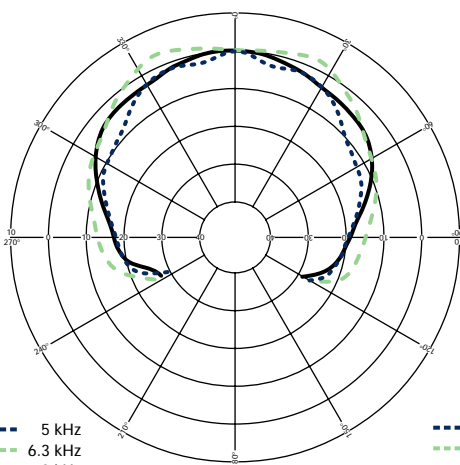
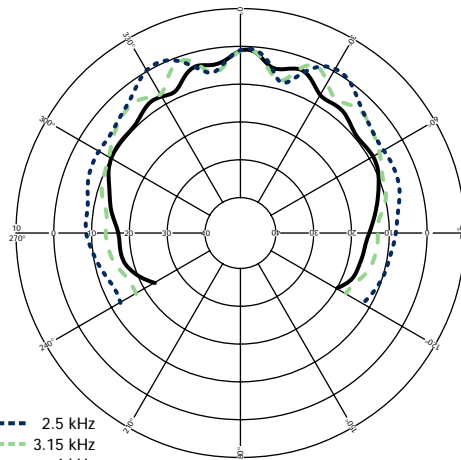
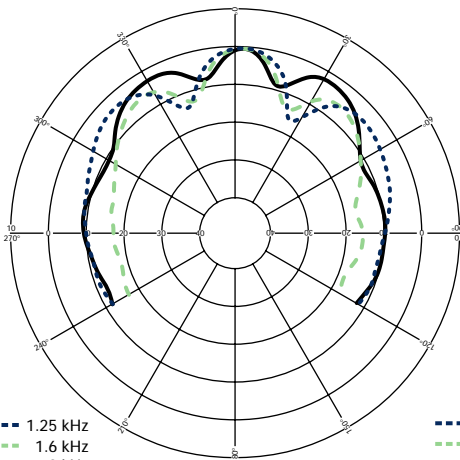
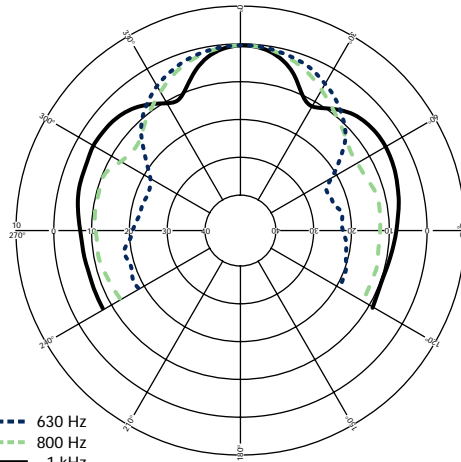
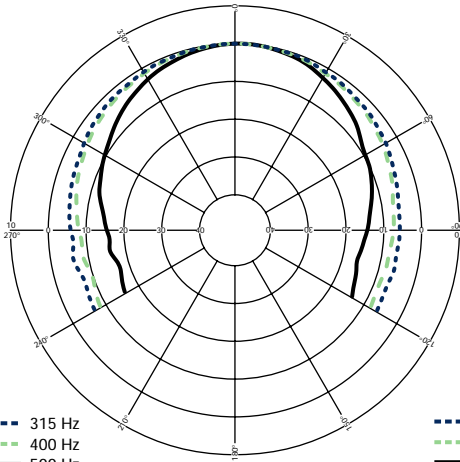
Impedance A constant current circuit was used to measure the impedance. **Frequency Response** The frequency response shown was obtained by feeding a swept sine wave through the system in a half space environment. The position of the microphone was vertically on-axis at a distance of 2 metres, then scaled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

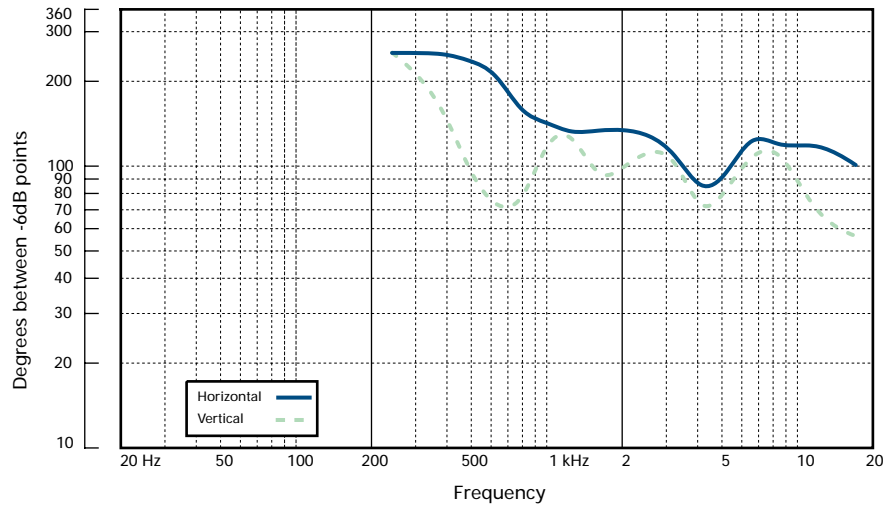
HORIZONTAL THIRD
OCTAVE POLARS



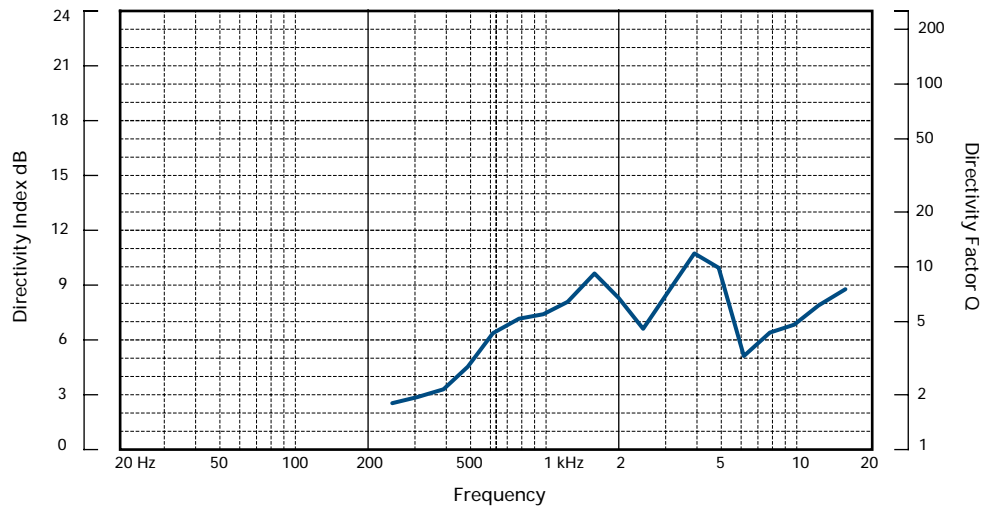
VERTICAL THIRD
OCTAVE POLARS



BEAMWIDTH

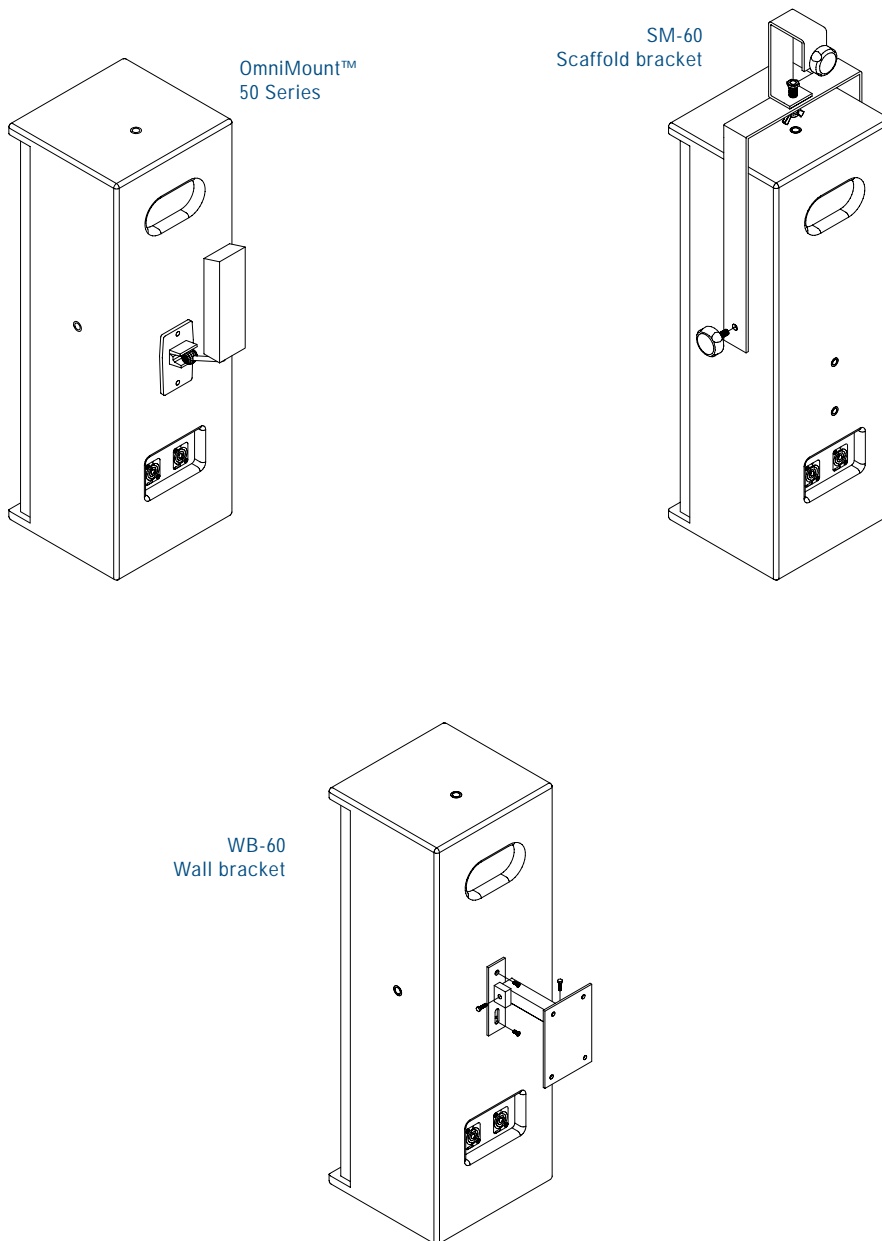


DIRECTIVITY



The TQ-230 is fitted with two M6 internal fixing points on the rear panel which enable it to be permanently wallmounted using the WB-60 wall bracket or OmniMount™ 50 series brackets as shown. M8 internal fixing points are provided on the top and sides of the cabinet for use with the SM-60 scaffold bracket, allowing the cabinet to be suspended from lighting truss or scaffold bars. A pole mount socket enables the TQ-230 to be used with standard 35mm tripod stands and poles.

INSTALLATION HARDWARE



**ARCHITECTURAL
& ENGINEER'S
SPECIFICATIONS**

The system shall be of the two-way passive, magnetically shielded type consisting of two 5" (127mm) low frequency loudspeakers and one 1" (25mm) high frequency driver. 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 70Hz - 20kHz . Nominal dispersion, at -6dB points, shall average 100°H x 60°V. Nominal impedance shall be 8 ohms. Power handling shall be 125 watts r.m.s., 250 watts program, 325 watts peak. Sensitivity, measured with 1 watt input at 1 metre distance on axis, mean averaged over stated bandwidth, shall be 90dB. Maximum SPL (peak) measured with music program at stated amplifier input shall be 120dB. Dimensions: 528mmH x 210mmW x 200mmD (20.8"H x 8.3"W x 7.9"D). Weight: 9.5kg (20.9lbs). The loudspeaker system shall be the Turbosound TQ-230. 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

