

## TXD SERIES ENGINEERING INFORMATION

**The TXD-121 is a compact trapezoidal passive two-way loudspeaker enclosure designed for use in a wide variety of live sound, fixed installation and mobile DJ applications that require professional sound quality in an easily transportable format.**

It consists of a 12" reflex-loaded low frequency driver and a 1" high frequency compression driver on a 70°H x 40°V dispersion HF horn in an optimally tuned trapezoidal enclosure. These high grade components are matched with an internal passive crossover network to ensure a seamless transition between the HF and LF drivers.

The crossover incorporates a two-stage thermal overload protection system which prevents damage to the high frequency driver, reacting instantly to large transient peaks while still allowing wide dynamic range to be maintained. Although the protection system is transparent at normal operating levels, as the level increases the signal is gradually and imperceptibly compressed once the critical threshold has been reached.



The cabinet is constructed from 15mm (5/8") birch plywood, screwed and glued together for maximum rigidity. A pole mount socket is fitted for use with optional 35mm poles and loudspeaker stands. Two recessed flush handles are provided for easy lifting and carrying and four rubber feet are fitted to the bottom of the cabinet. A grey powder-coated perforated steel mesh grille protects the drive units from damage.

Rigging points are provided on the top and rear of the cabinet to enable the TXD-121 to be suspended and angled in permanent installations using shoulder eyebolts.

Rigging points are provided on the rear of the cabinet for use with Turbosound and OmniMount™ wall and ceiling brackets. Two Neutrik Speakon NL4MP speaker connectors are located on the rear panel, providing input and parallel connections to additional TXD series cabinets or bass enclosures.

### FEATURES

- Full range response**
- Compact enclosure**
- Trapezoidal shape**
- Rigging points**
- Pole mount socket**
- Passive crossover**
- HF protection system**

### APPLICATIONS

- Live sound**
- Mobile DJ**
- Fixed installations**

<b>DIMENSIONS (HxWxD)</b>	553mm x 411mm x 352mm (21.8" x 16.2" x 13.9")	
<b>NET WEIGHT</b>	20kg (44lbs)	
<b>COMPONENTS</b>	1 x 12" (305mm) LF driver, 1 x 1" (25mm) HF compression driver	
<b>FREQUENCY RESPONSE<sup>1</sup></b>	60Hz - 20kHz ±4dB	
<b>NOMINAL DISPERSION<sup>2</sup></b>	70°H x 40°V @ -6dB points	
<b>POWER HANDLING</b>	300 watts r.m.s., 600 watts program Recommended amplifier power 600 watts @ 8 ohms	
<b>SENSITIVITY<sup>3</sup></b>	97dB, 1 watt @ 1 metre	
<b>MAXIMUM SPL</b>	122dB continuous <sup>4</sup> , 128dB peak <sup>5</sup>	
<b>CROSSOVER</b>	Internal passive network at 1.8kHz; 12dB/octave high-pass, 12dB/octave low-pass	
<b>NOMINAL IMPEDANCE</b>	8 ohms	
<b>CONSTRUCTION</b>	15mm (5/8") birch plywood enclosure. Finished in TurboBlue™ semi-matt textured paint (optional black). Two recessed carrying handles. Integral pole mount socket	
<b>GRILLE</b>	Heavy duty powder coated perforated steel mesh	
<b>CONNECTORS</b>	(2) Neutrik Speakon NL4MP, wired pin1+: positive, pin 1-: negative, pins 2+ and 2- N/C	
<b>FLYING HARDWARE</b>	(3) M10 internal threaded rigging points (4) M8 internal threaded rigging points for WB-20/CB-55 brackets	
<b>SPARES AND ACCESSORIES</b>	LS-1219	12" (305mm) LF loudspeaker
	RC-1219	Recone kit for LS-1219
	CD-111	1" (25mm) HF compression driver
	RD-111	Replacement diaphragm for CD-111
	MG-121/X	Metal grille
	PX-121/X	Passive crossover network
	WB-20	Wall bracket
	CB-55	Ceiling bracket
	PB-55	Wall bracket, pole mount fixing

Notes

<sup>1</sup> Measured on axis

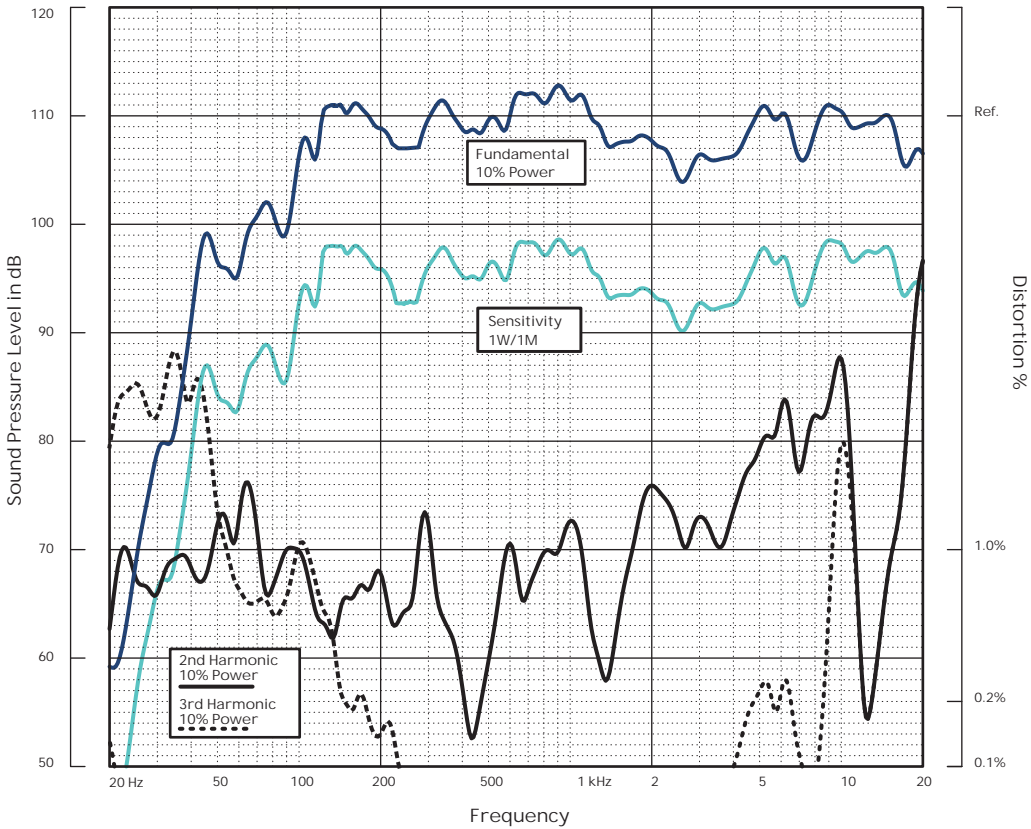
<sup>2</sup> Average over stated bandwidth

<sup>3</sup> Average over stated bandwidth

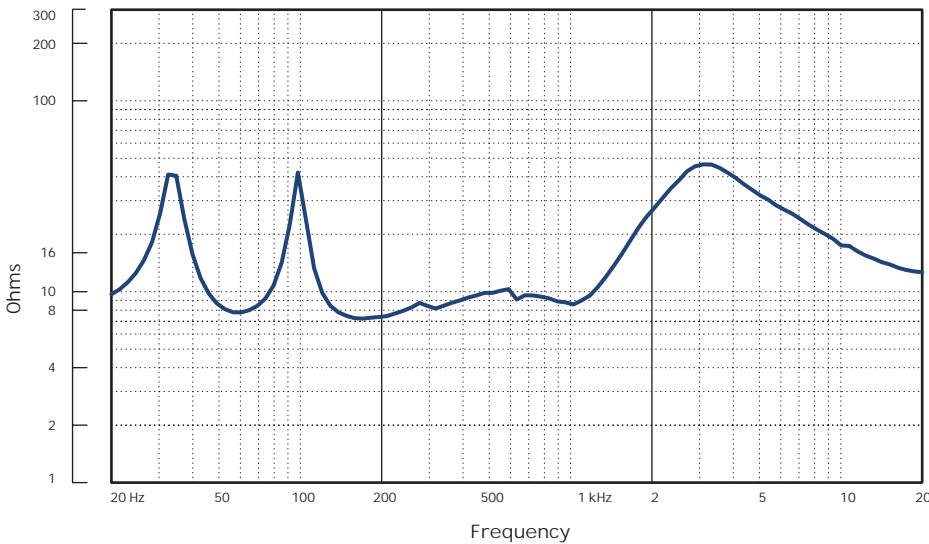
<sup>4</sup> Unweighted diode-clipped pink noise. Measured in a half space environment

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

**FREQUENCY RESPONSE**



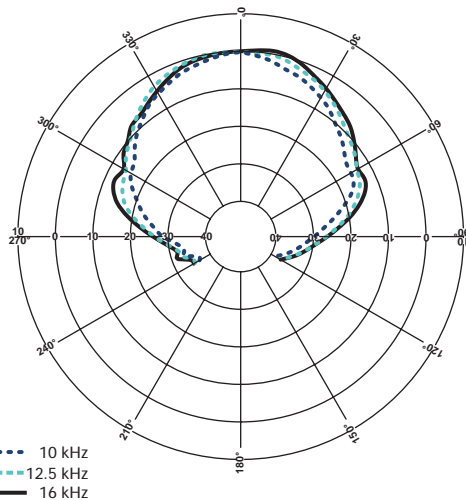
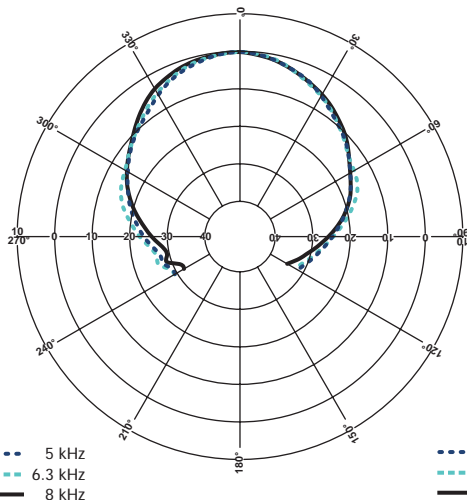
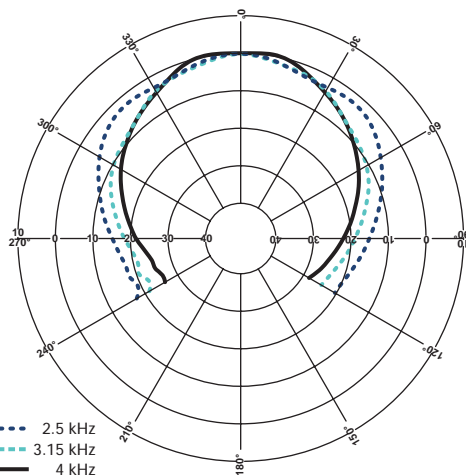
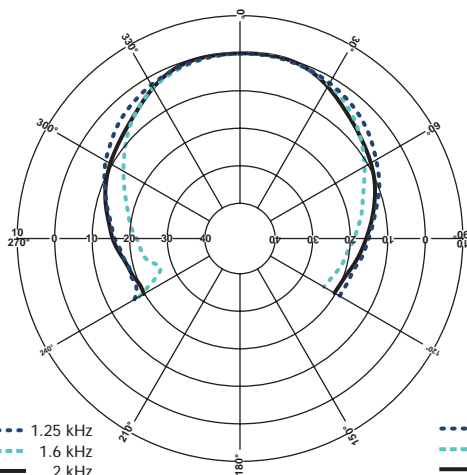
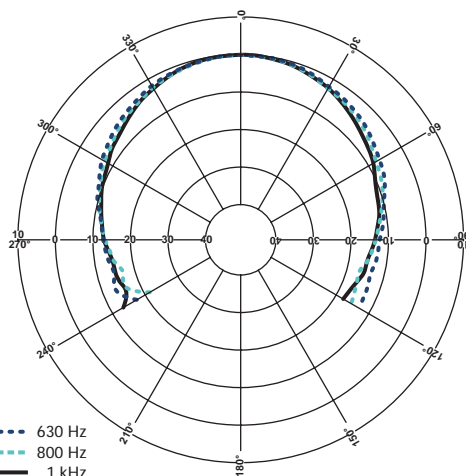
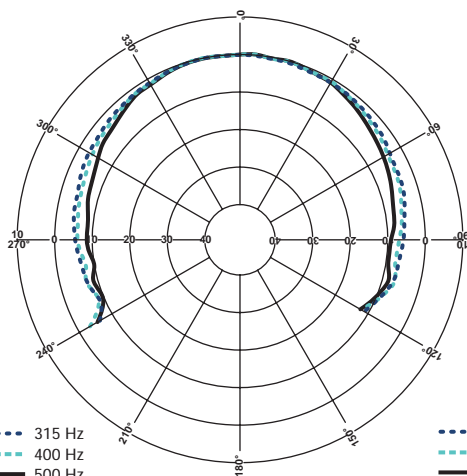
**IMPEDANCE**



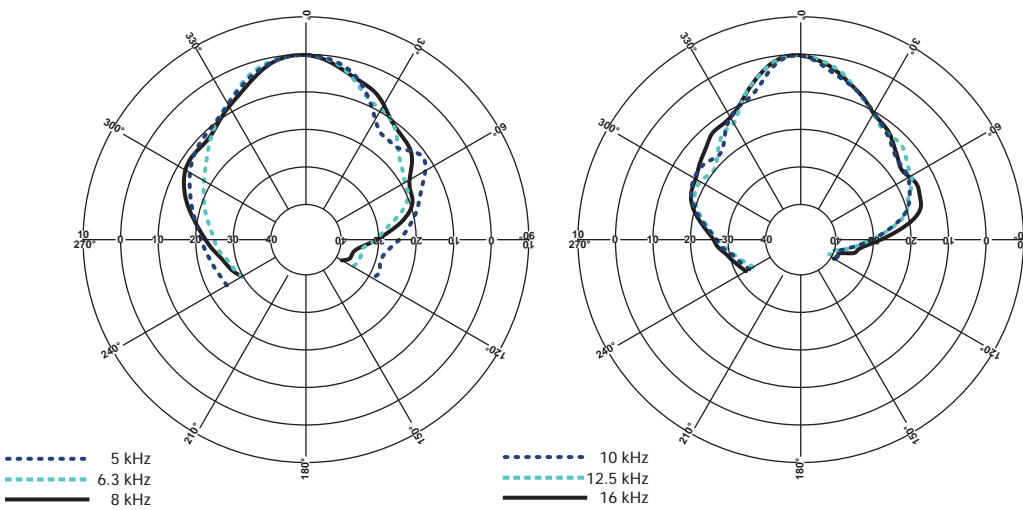
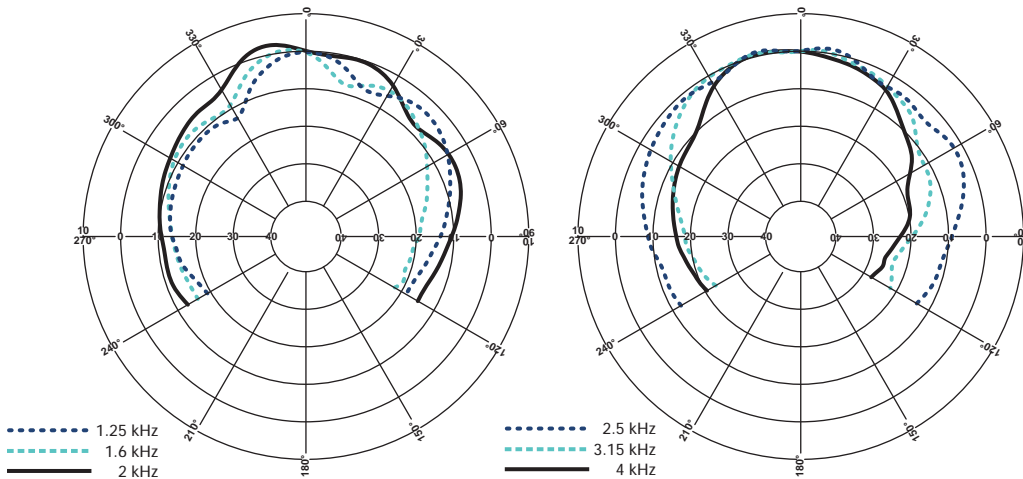
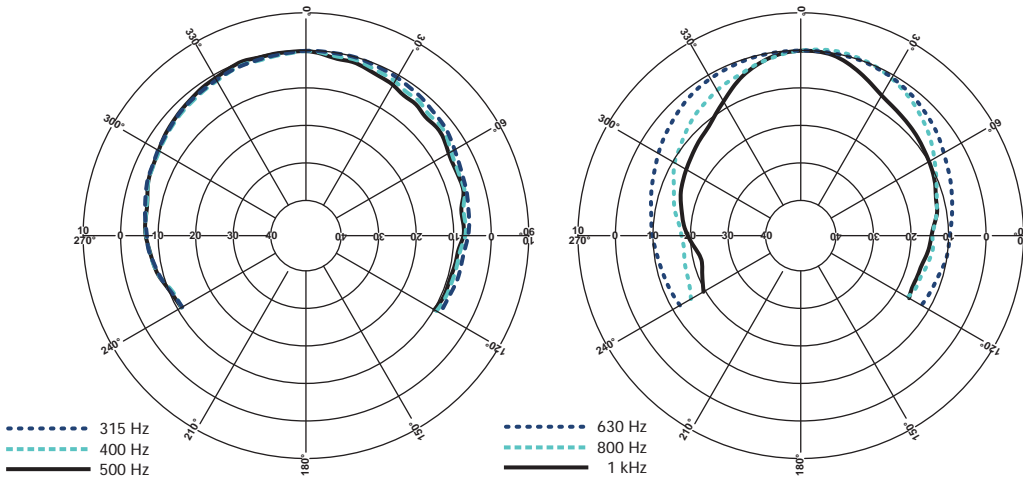
**Impedance** A constant current circuit was used to measure the impedance. **Frequency response** The frequency response shown was obtained by feeding a swept sine wave through the system in a half space environment. The position of the microphone was vertically on-axis at a distance of 2 metres, then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



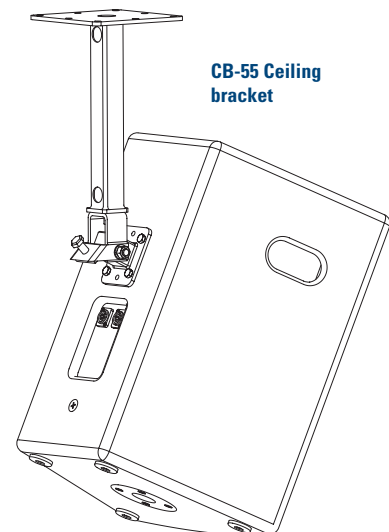
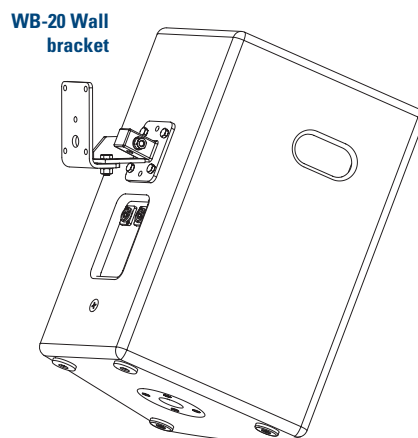
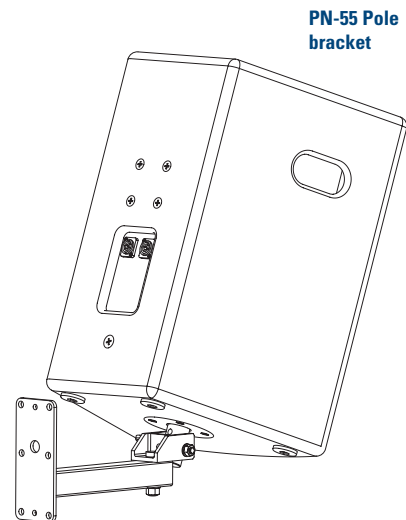
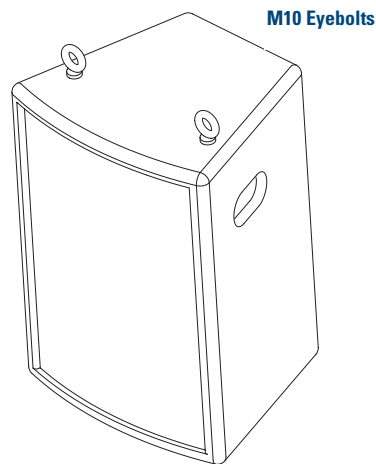
**VERTICAL THIRD  
OCTAVE POLARS**



**INSTALLATION AND RIGGING HARDWARE**

The enclosure is fitted with two M10 rigging points on the top and one on the back, to allow single loudspeakers to be rigged in permanent installations using M10 shoulder eyebolts with a minimum thread length of 20mm. The single back panel rigging point is used to set the desired downward inclination.

M8 rigging points are also provided on the back panel to enable fixed installation use with optional WB-20 ceiling brackets, CB-55 ceiling brackets and PB-55 pole brackets.



**ARCHITECTURAL  
& ENGINEER'S  
SPECIFICATIONS**

The speaker shall be of the two-way passive type consisting of one 12" (305mm) low frequency driver 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 60Hz - 20kHz. Nominal dispersion, at -6dB points, shall average 70°H x 40°V. Nominal impedance shall be 8 ohms. Power handling shall be 300 watts r.m.s., 600 watts program. 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 128dB. Dimensions: 553mmH x 411mmW x 352mmD (21.8"H x 16.2"W x 13.9"D). Weight: 20kg (44lbs). The loudspeaker system shall be the Turbosound TXD-121. 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**

