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TXP-121

TXP SERIES ENGINEERING INFORMATION

The TXP-121 is a compact trapezoidal self-powered two-way loudspeaker enclosure designed for use in a wide variety of live sound, corporate rental 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, together with an integrated Class D amplifier module.

The Class D amplifier delivers abundant power to the drive units, separating the frequency bands via a passive crossover network, with optimum headroom being governed by the built-in fast acting limiter circuits. 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.

All operating controls and indicators are provided on the rear panel, including adjustable gain control, power LED, and signal and limit LEDs. Balanced 3-pin XLRs provide input and link out connections from mixing consoles and to additional powered TXP enclosures. A two-stage high-pass filter is user-selectable for stand alone use, or for correct integration when used with a subwoofer. Mains power is supplied via an IEC mains connector with integrated fuseholder.

The trapezoidal cabinet is constructed from 15mm (5/8") birch plywood, and the symmetrical 45° angled sides enable its use as a compact wedge monitor. A dual angle pole mount socket is fitted for FOH 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 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 TXP-121 to be suspended in permanent installations.

FEATURES

- Digitally self-powered
- Compact enclosure
- Trapezoidal shape
- Symmetrical wedge angle
- Integral rigging points
- Dual angle pole mount
- Passive crossover
- HF protection system

APPLICATIONS

- Live sound
- Mobile DJ
- Wedge monitoring
- Corporate rental

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DIMENSIONS (HxWxD)	553mm x 412mm x 352.5mm (21.8" x 16.2" x 13.9")
NET WEIGHT	22kg (48.4lbs)
COMPONENTS	1 x 12" (305mm) LF driver, 1 x 1" (25mm) HF compression driver
FREQUENCY RESPONSE[1]	Full range: 100Hz – 18kHz ±3dB, 50Hz – 20kHz ±10dB High-pass: 125Hz – 18kHz ±3dB, 100Hz – 20kHz ±10dB
NOMINAL DISPERSION[2]	70°H x 40°V @ -6dB points
MAXIMUM SPL	122dB continuous[3], 128dB peak[4]
CONSTRUCTION	15mm (5/8") birch plywood enclosure. Finished in black semi-matt textured paint. Two recessed carrying handles. Integral dual angle pole mount socket
GRILLE	Heavy duty powder coated perforated steel mesh
CONNECTORS	Input: (1) XLR female, Link: (1) XLR male, wired pin 2 hot; IEC mains connector with integrated fuseholder
CONTROLS & INDICATORS	Gain (-∞ to 0dB), 2-stage high-pass filter, mains on/off, limit LED, signal LED, power LED
AMPLIFIER	**TYPE:** Class D **POWER OUTPUT:** 450 watts continuous @ 8 ohms (1kHz, 0.01% THD) **MAX INPUT:** +18dBu **BANDWIDTH:** 20Hz – 20kHz ±0.5dB **POWER REQUIREMENTS:** 100V to 230V AC @ 50/60Hz
FLYING HARDWARE	(3) M10 internal threaded rigging points
SPARES AND ACCESSORIES	LS-1219 12" (305mm) LF loudspeaker RC-1219 Recone kit CD-116 1" (25mm) HF compression driver RD-116 Replacement diaphragm PB-55 Wall bracket, pole mount fixing EB-10 M10 shoulder eyebolt

Notes

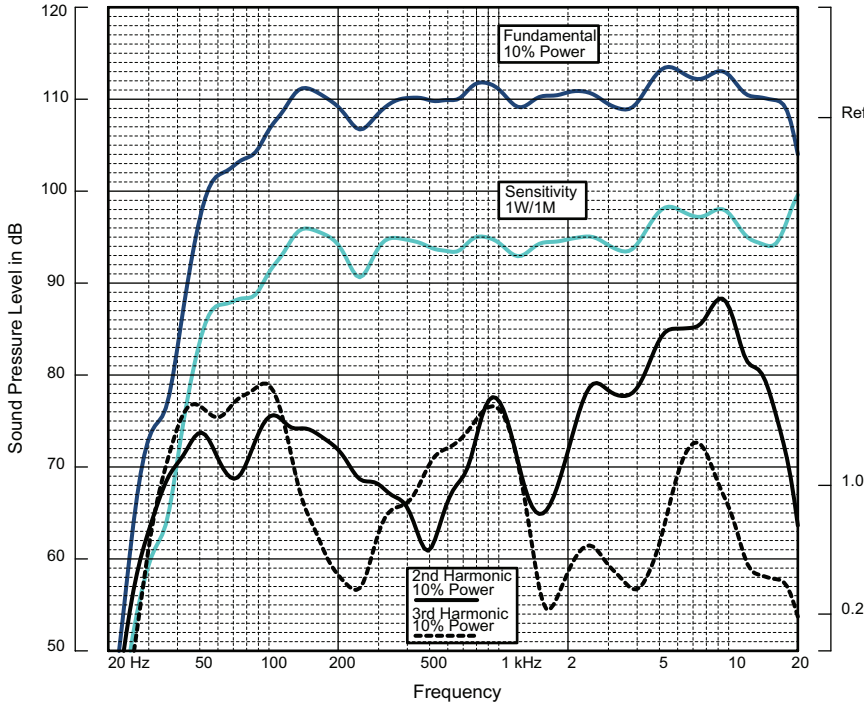
[1] Measured on axis

[2] Average over stated bandwidth

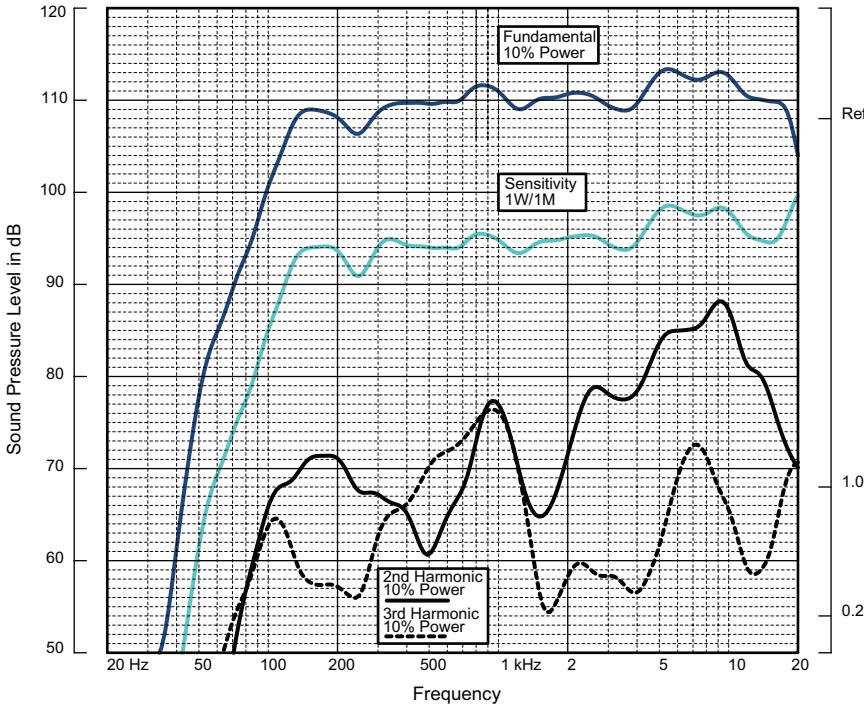
[3] Unweighted diode-clipped pink noise. Measured in a half space environment

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

FREQUENCY RESPONSE (FULL RANGE)



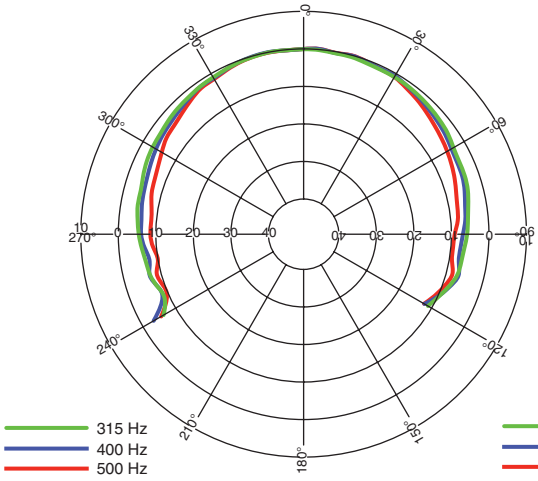
FREQUENCY RESPONSE (HIGH PASS)

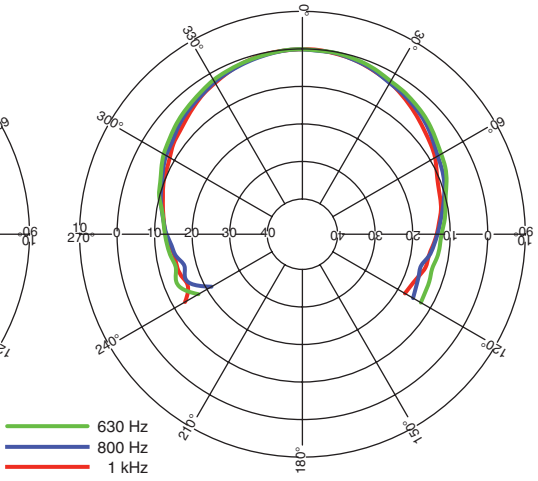


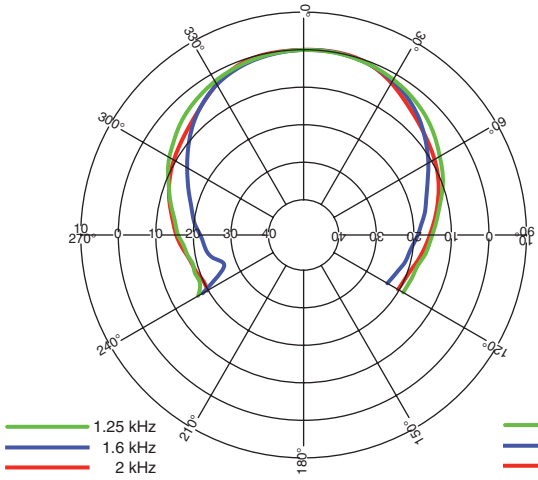
NOTES ON MEASUREMENT CONDITIONS

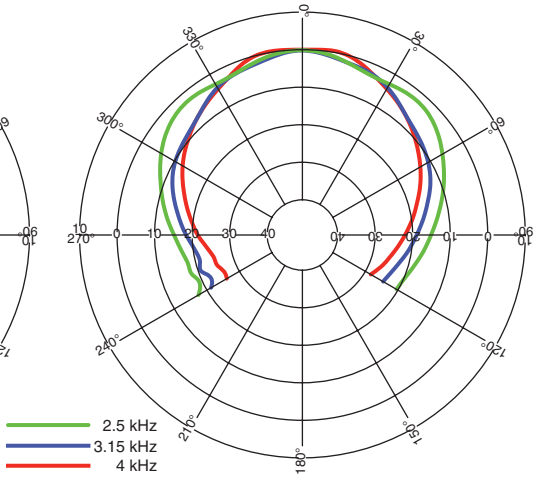
Impedance A constant current circuit was used to measure the impedance. **Frequency response** The frequency response shown was obtained by feeding a swept sine wave through the system in a half space environment. The position of the microphone was vertically on-axis at a distance of 2 metres, then scaled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

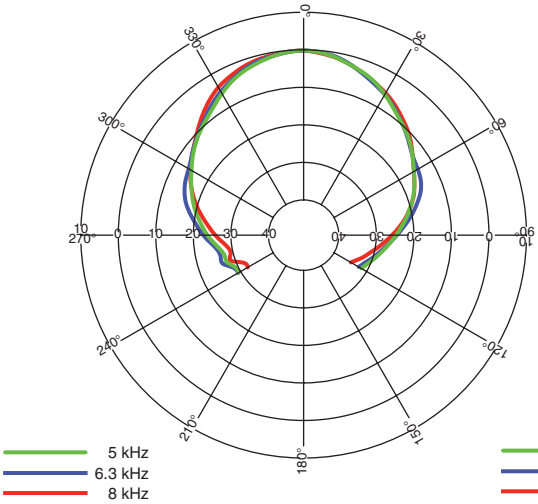
HORIZONTAL THIRD OCTAVE POLARS

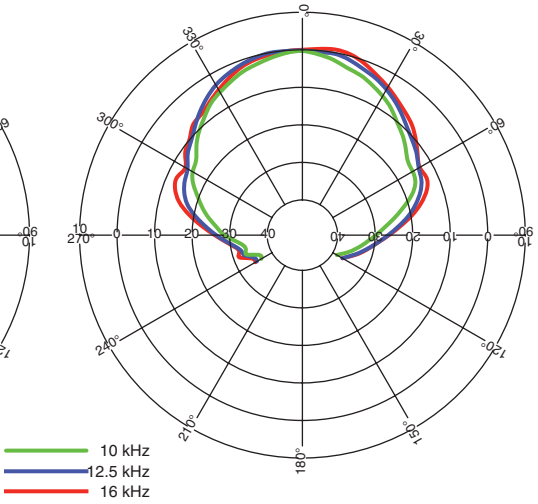




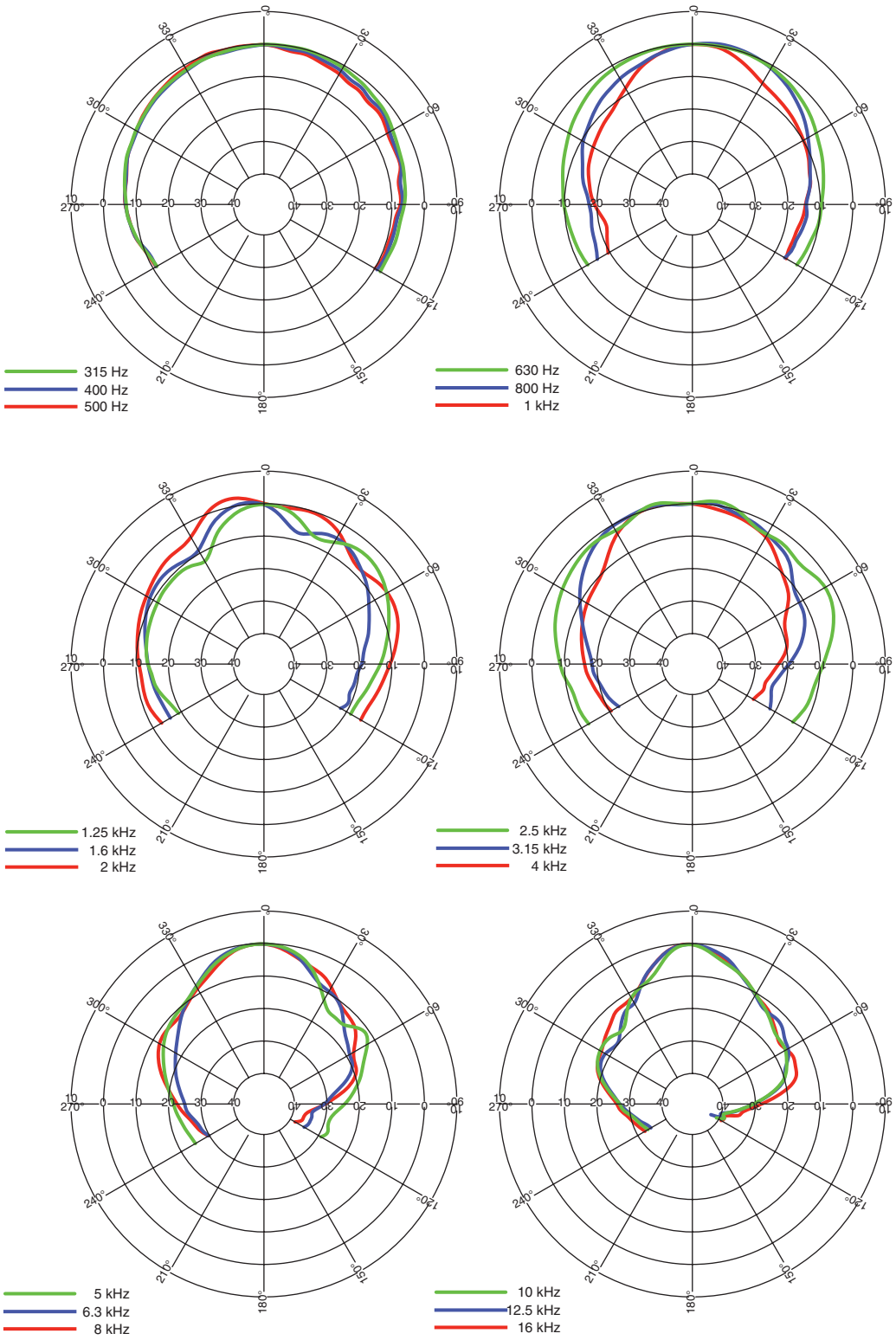








VERTICAL THIRD OCTAVE POLARS

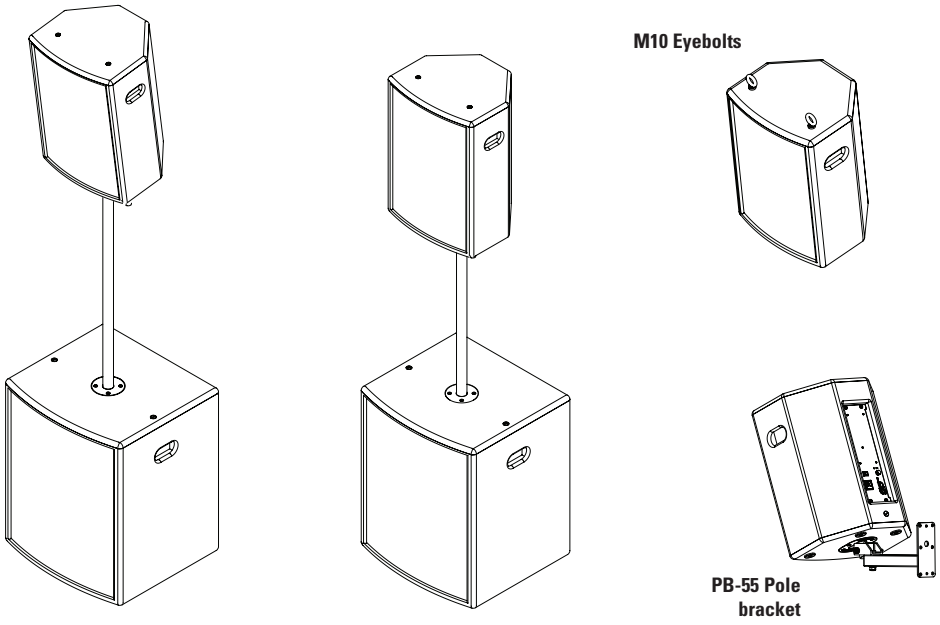


INSTALLATION AND RIGGING HARDWARE

The enclosure is fitted with a dual angle pole mount socket, allowing the cabinet to be mounted on a straight pole over a bass cabinet, or alternatively on a 35mm speaker stand, either vertically or raised higher and angled downwards in order to improve audience coverage.

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.

The PB-55 pole bracket allows cabinets to be wall mounted in permanent installations with a range of adjustment angles.



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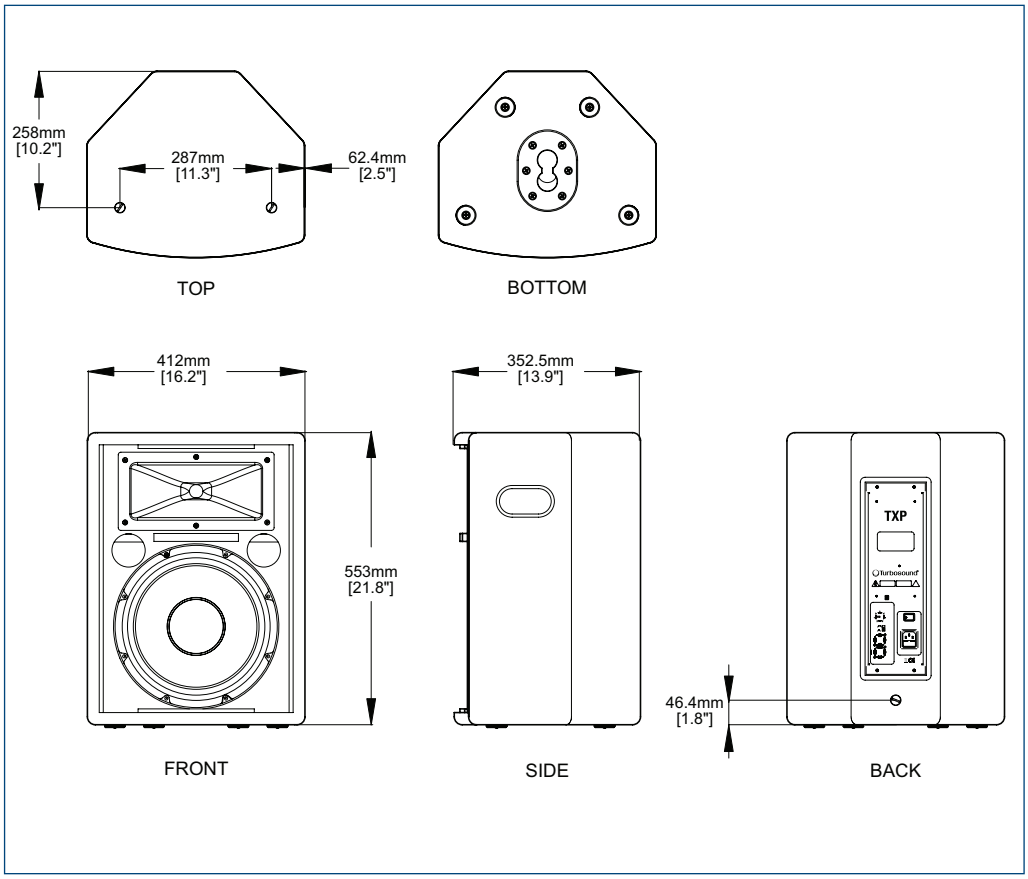
ARCHITECTURAL & ENGINEER'S SPECIFICATIONS

The speaker system shall be of the two-way digitally self-powered type consisting of one 12" (305mm) low frequency driver and one 1" (25mm) high frequency driver together with a Class D amplifier and control electronics module. 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 ±3dB from 100Hz to 18kHz and within ±10dB from 50Hz to 20kHz (full range), within ±3dB from 125Hz to 18kHz and within ±10dB from 100Hz to 20kHz (high pass). Nominal dispersion, at -6dB points, shall average 70°H x 40°V. Maximum SPL (peak) measured with music program at stated amplifier input shall be 128dB. Dimensions: 553mmH x 412mmW x 352.5mmD (21.8"H x 16.2"W x 13.9"D). Weight: 22kg (48.4lbs). The loudspeaker system shall be the Turbosound TXP-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



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