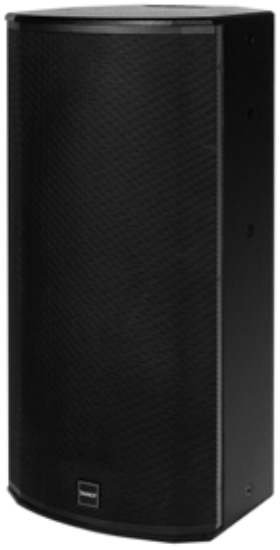
VXP 12.2Q



Product Description

Conceived, engineered and built with precision in the United Kingdom, VXP Series represents a brand new evolution in Tannoy's core philosophies in self-powered loudspeaker design. The Tannoy VXP 12.2Q features the brand new IDEEA™ (IntelliDrive Energy Efficient Amplifier) integrated power module from Lab.gruppen The result is an ultra-reliable and efficient, self-powered loudspeaker offering a punchy and sonically superior solution for medium-scale sound reinforcement. The VXP 12.2Q has been sonically matched with the wider range of VXP Series models, this allows consistency in installations where a mix of products is utilised.

The VXP 12.2Q is built around two discrete transducers, 1 x 300 mm (12") PowerDual™ with Q-Centric waveguide and a 1 x 300 mm (12") bass driverfor greatly improved LF extension, mounted within a compact rugged birch plywood cabinet with aesthetically profiled edges and an Airnet™-backed, powder-coated steel grille. The latest higher power handling 300 mm (12") version of Tannoy's exclusive point source, constant directivity PowerDual drive unit technology, coupled with the QCW device, brings best of both worlds – true point source acoustical performance combined with highly controlled 75 x 40 degree dispersion, resulting in less unwanted shading effects and optimized forward gain. The driver assembly can be rotated 90 degrees in the cabinet to allow for versatile mounting without compromise to dispersion requirements.

The perfectly matched integrated Lab.gruppen IDEEA (IntelliDrive Energy Efficient Amplifier) modules are designed to handle the demands of fixed installation audio, with the inherent extended duty cycles of around-the-clock operation and very high performance demands, while offering the durability, unmatched power output and clarity required by portable applications. To ensure a long and trouble-free service life, IDEEA modules incorporate extensive features to safeguard internal circuits and driver compliment.

At the heart of the IDEEA module is a patented Class D output stage capable of high power levels with very low distortion and minimal current draw – all with a net operating efficiency in excess of 80%. A universal switching power supply accepts any mains voltage from 70 – 265V (+/- 10%) at 50 Hz or 60 Hz through the appropriate IEC cord. In Auto mode, the speaker turns on with signal present and switches to standby mode after 20 minutes of no input, in doing so reducing power consumption to less than 1 W (while in standby). Manual control mode allows the speaker to be turned on and off as required. Also provided is a switchable 90 Hz high-pass filter for use when adding a subwoofer.

Audio connection is via XLR Input and power via PowerCON (included) on rear panel. VXP 12.2Q is available in black or white textured paint finish as standard, with matching grilles, and is also available in custom matched RAL colours as an option.

Features

- 300 mm (12") PowerDual full-range driver with QCW™ delivering best of both worlds – true point source combined with new horn design allowing tight vertical coverage.Discrete 300 mm (12") bass driver for extended LF performance.
- Well defined 75 x 40 degree dispersion for optimum coverage and forward gain
- Peak output of 131 dB
- Integrated Lab.gruppen IDEEA module providing ultra-reliable Class D amplification
- Versatile mounting via optional custom-designed hardware
- Available in black or white textured paint finish; custom colours optional
- XLR input and link, powerCON mains (included)

Applications

- Theatres, Auditoria and Houses of Worship
- Medium scale PA.
- Bars and nightclubs
- Portable and installed corporate AV
- Theme parks and leisure venues
- Gymnasiums and small/medium sports arenas
- Cinemas

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VXP 12.2Q

TECHNICAL SPECIFICATIONS

System	VXP 12.2Q
Frequency response (-3 dB) (1) Full-range mode	60 Hz - 25 kHz
Frequency range (-10 dB) (1) Full-range mode	47 Hz - 30 kHz
Frequency response (-3 dB) (1) Hi-Pass mode	100 Hz - 25 kHz
Frequency range (-10 dB) (1) Hi-Pass mode	80 Hz - 30 kHz
Dispersion (-6 dB)	75 degrees (H) x 40 degrees (V)
Driver complement	1 x 300 mm (12") PowerDual™ with Q-Centric waveguide 1 x 300 mm (12") bass driver
Crossover	Passive 300 Hz and 1.5 kHz
Directivity factor (Q)	13 (averaged 1 kHz to 8 kHz)
Directivity index (DI)	11.1 dB (averaged 1 kHz to 8 kHz)
Rated maximum SPL (2)	125 dB (average) 131 dB (peak)

Distortion

10% Full Power (20 V)	2nd Harmonic	3rd Harmonic
250 Hz	2.49%	0.49%
1 kHz	0.54%	0.73%
10 kHz	7.54%	0.80%
1% Full Power (6.33 V)	2nd Harmonic	3rd Harmonic
250 Hz	0.60%	0.21%
1 kHz	0.20%	0.49%
10 kHz	2.56%	0.10%

Construction

Enclosure	57 litre, 15 mm (enclosure) and 18 mm (front) birch plywood, vented and internally braced.
Finish	Textured black or white paint, with custom colours on request. Powder-coated perforated steel grille, Airnet cloth behind.
Connectors	1 x female XLR (input), 1 x male XLR (link), 1 x Neutrik powerCON
Controls & Indicators	Level Control Power LED (Blue) Signal LED (Green) Limit/Protect LED (Red) Full Range / HighPass Switch (110 Hz) Power Mode Switch Power Switch
Fittings	8 x M10 Flying inserts (portrait or landscape mounting), 8 x M10 yoke bracket inserts. 2 x Integrip carrying handles. Blanking plate for optional VTH pole mount
Dimensions	780 x 370 x 380 mm (HxWxD) 30.7 x 14.6 x 15" (HxWxD)
Net weight	35 kg (77.2 lbs)
Shipped weight	38 kg (83.8 lbs)
Packed quantity	1

Amplifier

Maximum signal input for clip	Input attenuator at Maximum: +4.5 dBu (Hard clip will occur at +14.5 dBu input signal)
Dynamic range	106 dB
Efficiency	> 90%
Damping factor	> 400 ref 8 ohms at 1 kHz
Distortion	< 0.05% @ 1 kHz -3 dB output (22 kHz bandwidth)
Input impedance	10 kohms unbalanced, 20 kohms balanced
Damping factor	> 400 ref 8 ohms at 1 kHz
Distortion	< 0.05% @ 1 kHz -3 dB output (22 kHz bandwidth)

Protection systems

Over current	Output current limiter, always active
Clip limiter	Output voltage clip limiter, always active
Temperature	Over temperature causes protective mute
Brownout	Automatic protection and recovery
Mains	Inrush current limiter
Indicators	1 x Power LED, 1 x Signal LED, 1 x Limit LED (Power LED: Red = Standby, Green = On, Yellow = Temperature protection active)
Amplifier type	Inherently bridged, globally modulated, high performance single channel class D.

PSU specifications

Input connector	Locking Neutrik powerCON
Voltage selection	Universal mains input
Type	High efficiency, regulated switch mode power supply
Efficiency	> 85% typical
Input voltage	100 Vac-240 Vac +/- 10%, 50-60 Hz +/-10%
Mains fuse	Internal
Fuse type	3.15AT
Other features	Inrush current limiter
Standby power consumtion	< 1 W
Idle power consumption	< 15 W
Maximum power consumtion	300 W

Notes
(1) Average over stated bandwidth. Measured at 1 metre on axis in an anechoic chamber.

(2) Unweighted pink noise input, measured at 1 metre in an anechoic chamber.
A full range of measurements, performance data, and Ease™ Data can be downloaded at www.tannoy.com.

Tannoy is committed to a policy of continuous improvement through research and development. Though performance will equal or exceed published specifications,new materials or manufacturing processes could introduce variances. All figures are subject to change without notice. For critical applications, please confirm current specifications with your supplier or visit the Tannoy website at www.tannoy.com.

Ordering Information

PART NUMBER	MODEL NAME	COLOUR	PACKED QUANTITY
8001 6560	VXP 12.2Q	BLACK	1
8001 6561	VXP 12.2Q	WHITE	1

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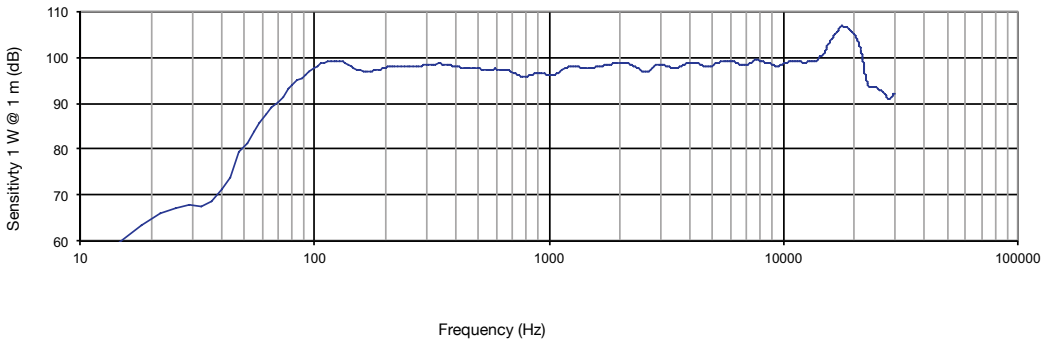
VXP 12.2Q

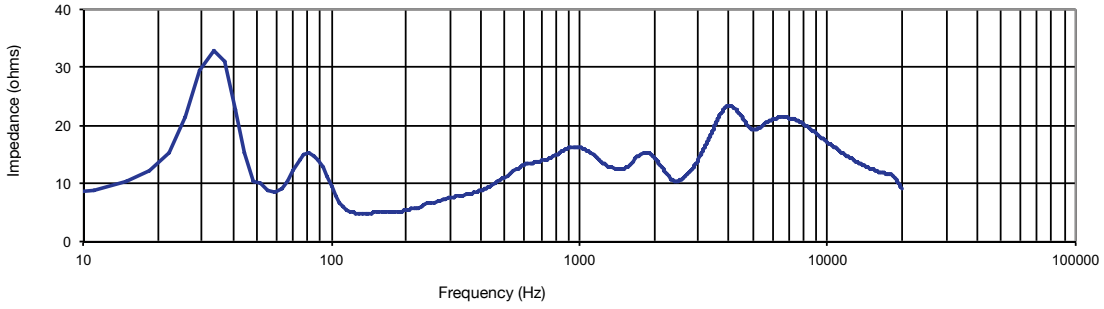
PERFORMANCE MEASUREMENTS

1m on-axis Frequency Response



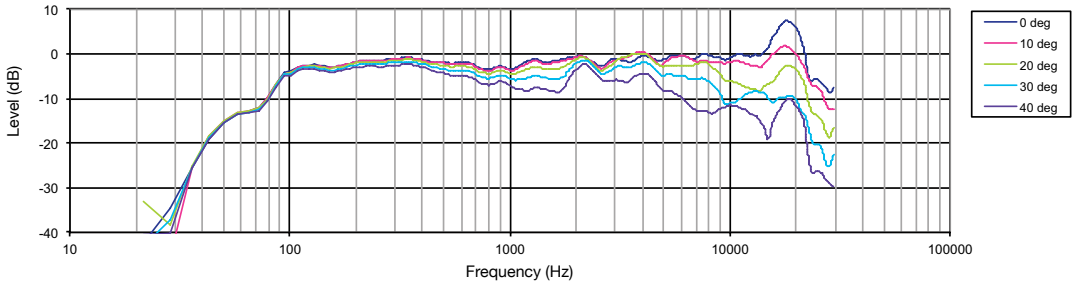
ANECHOIC FREQUENCY RESPONSE

Impedance vs Frequency



IMPEDANCE

Horizontal off-axis Frequency Response



HORIZONTAL OFF- AXIS RESPONSE

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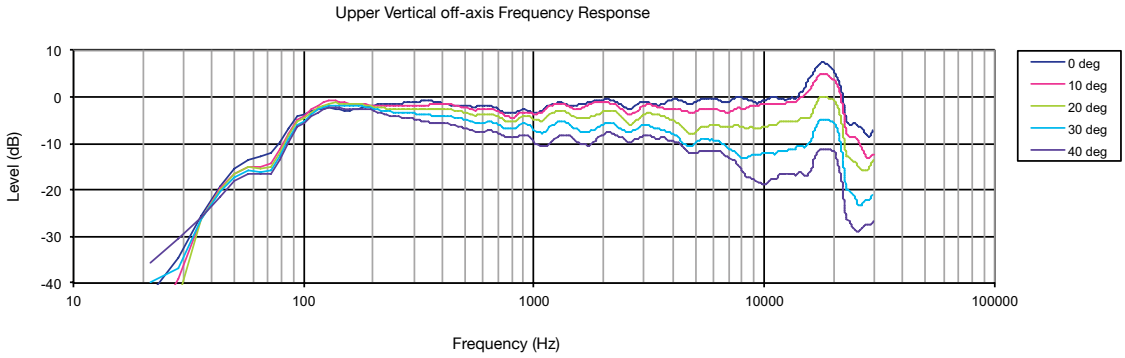
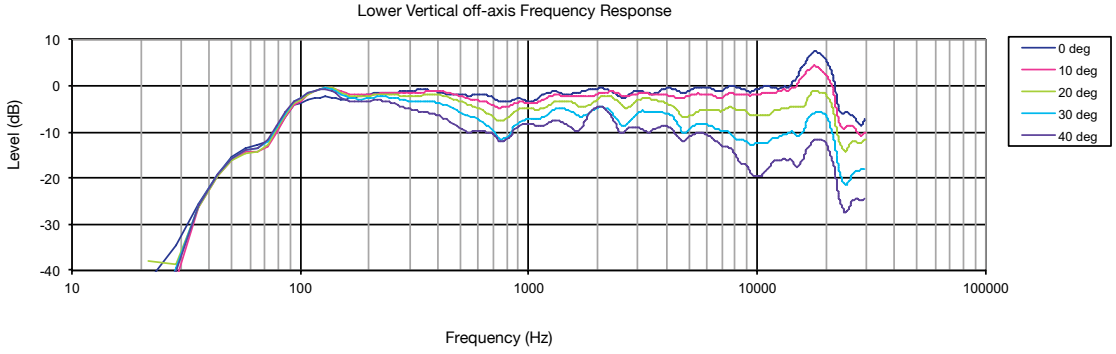
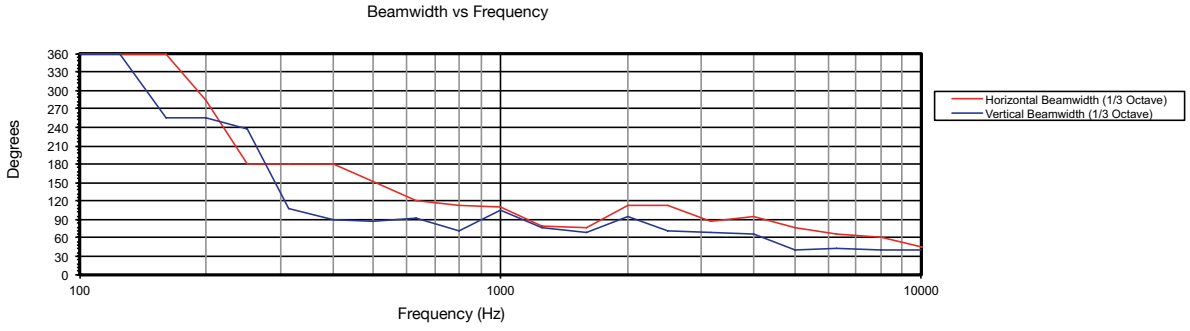
PERFORMANCE MEASUREMENTS



UPPER VERTICAL OFF-AXIS RESPONSE



LOWER VERTICAL OFF-AXIS RESPONSE



BEAMWIDTH

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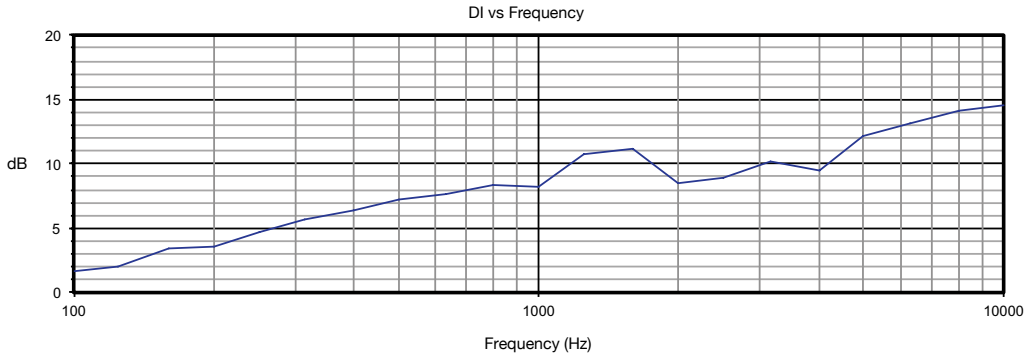
PERFORMANCE MEASUREMENTS



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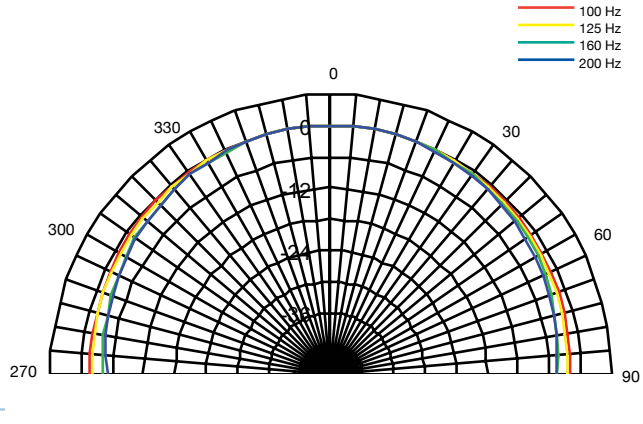
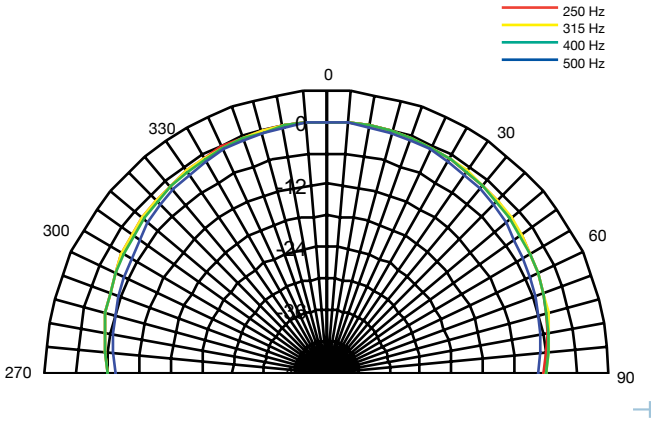
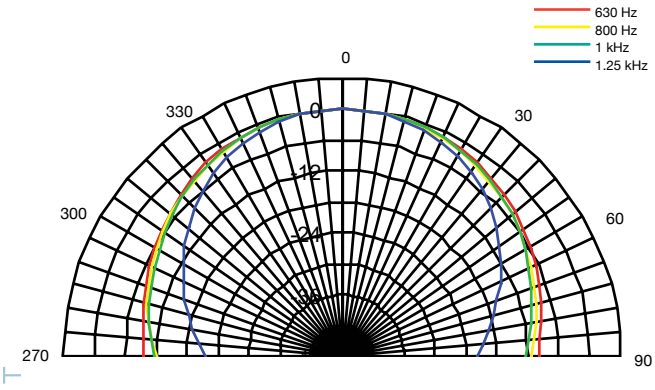
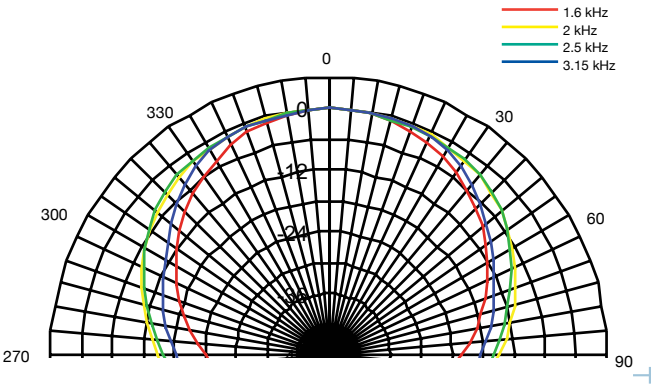
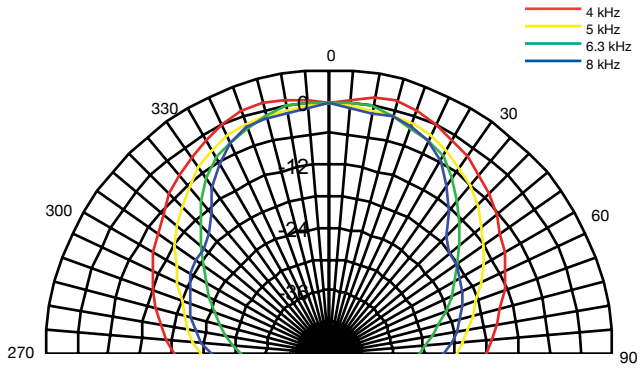
PERFORMANCE MEASUREMENTS - POLAR PLOTS (1/3 OCTAVE) HORIZONTAL

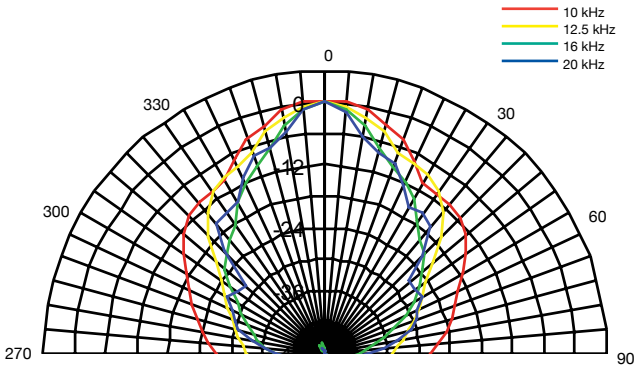












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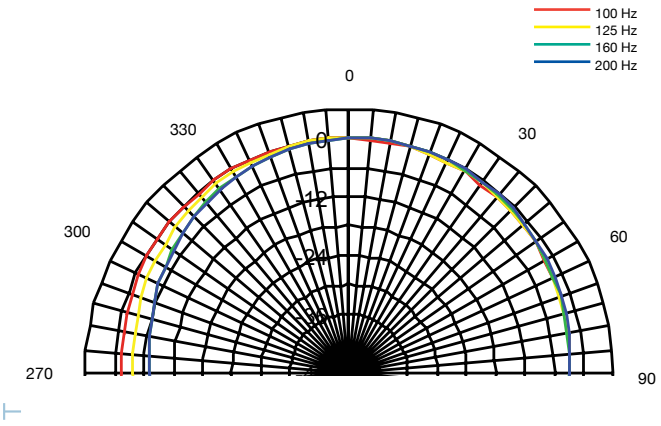
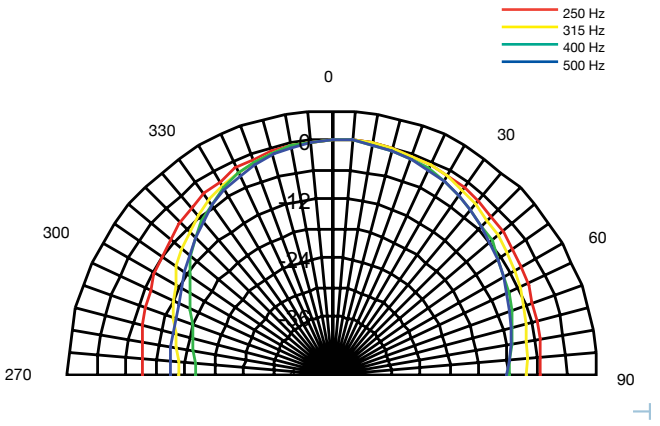
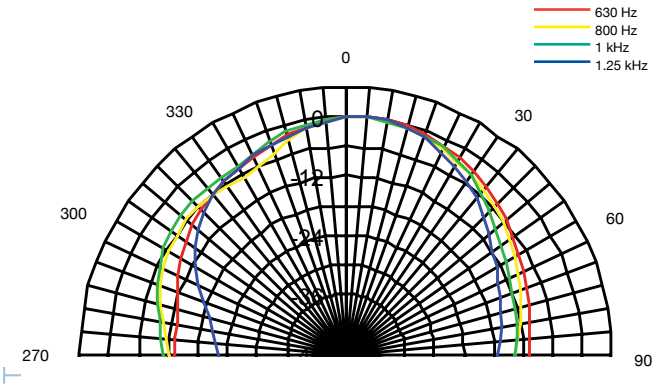
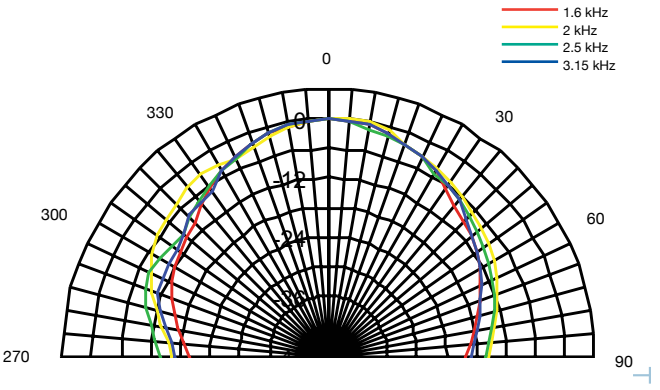
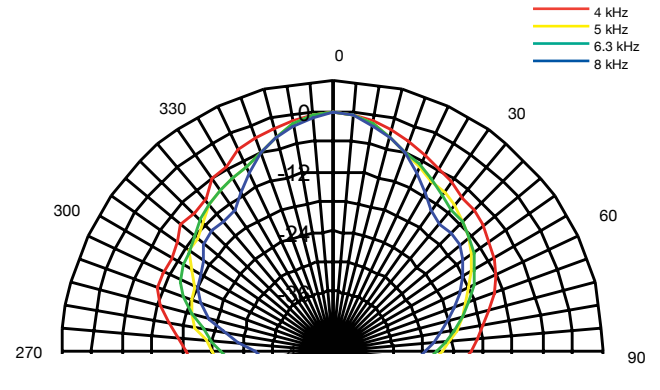
PERFORMANCE MEASUREMENTS - POLAR PLOTS (1/3 OCTAVE) VERTICAL

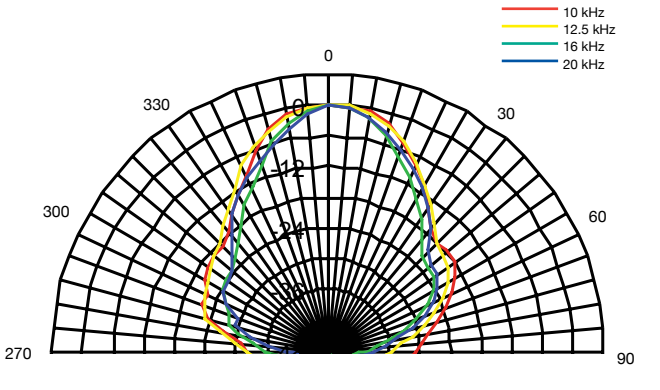












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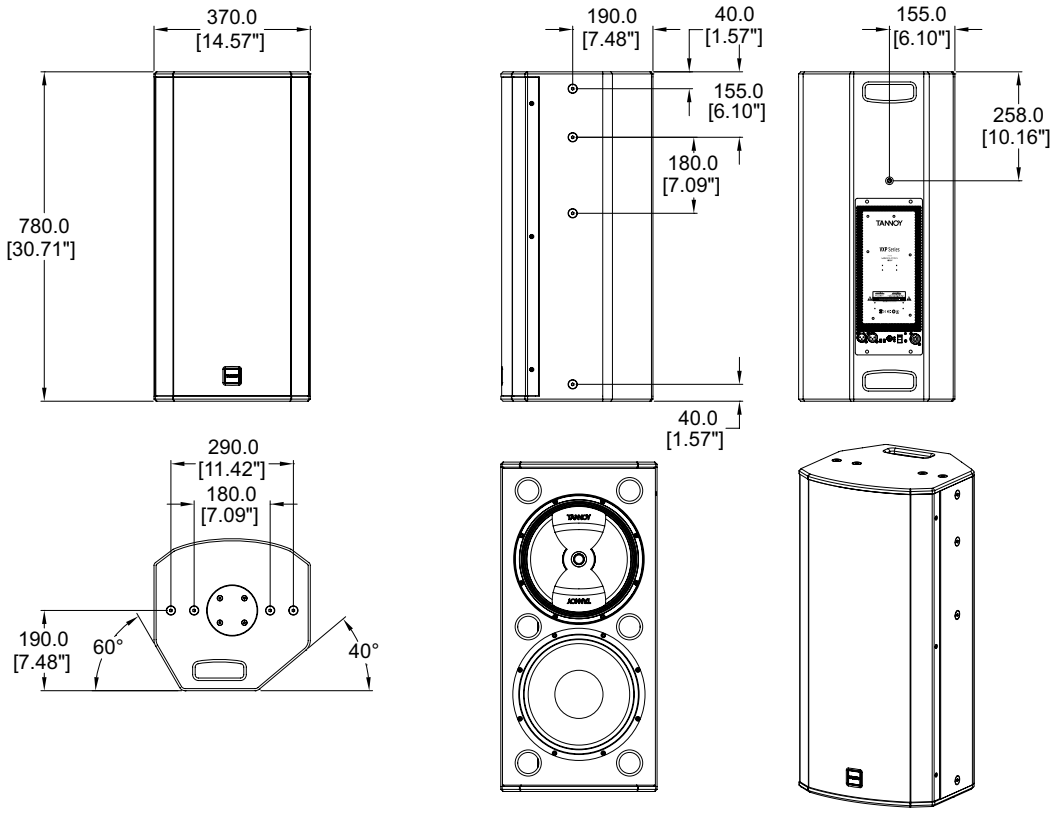
VXP 12.2Q

DIMENSIONAL DRAWINGS



Architect's and Engineer's specifications

The loudspeaker shall consist of a 305 mm (12") full-range, point source Power Dual transducer and a discrete 305 mm (12") bass driver. The low and high frequency elements shall be driven by an integrated single-channel Class D amplifier through an internal passive crossover network operating at 1.5 kHz. A low-pass filter operating at 300 Hz shall limit midrange response of the bass driver to prevent destructive interference. The amplifier module shall incorporate an auto power down (APD) circuit that places the loudspeaker in standby mode with less than 1 W power consumption when input signal is absent for more than 20 minutes, resuming full operation when signal is again present at the input.

Performance of the loudspeaker shall meet or exceed the following criteria: Frequency response measured at 1 metre on axis with swept sine wave shall be 60 Hz to 25 kHz (3 dB) in full-range mode and 100 Hz to 25 kHz in high-pass mode. Rated average SPL shall be 125 dB (anechoic) on axis at 1 metre. The dispersion of the loudspeaker shall be 75 degrees horizontal by 40 degrees vertical (-6 dB).

The enclosure shall be an optimally tuned 57 litre vented 15 mm (0.62") birch plywood cabinet with 18 mm (0.71") birch plywood front baffle. Connectors shall be 1 x female XLR (input), 1 x male XLR (link) and 1 x Neutrik powerCON. The speaker shall be fitted with the following controls and indicators: level control, blue power LED, green signal LED, red limit LED, full range / high pass switch (110 Hz) and a power switch. The enclosure shall be fitted with 8 x integral M10 inserts for flying hardware, 8 x M10 yoke bracket inserts and an integrated carrying handle. There shall be a blanking plate for an optional pole mount adaptor.

The enclosure shall not exceed the following dimensions: 780 x 370 x 360 mm or 30.7 x 14.6 x14.1" (H x W x D). The loudspeaker shall be the Tannoy VXP 12.2Q.

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