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TQ-425DP

QLIGHT™ SERIES ENGINEERING INFORMATION

The TQ-425DP is a digitally self-powered low frequency loudspeaker enclosure designed for use in mobile speech and music sound reinforcement applications as well as in a wide range of fixed installations. It offers exceptional ease of use by combining the entire electro-acoustic system in one convenient, easily transportable package.

It consists of two 4" voice-coil, 15" neodymium low frequency drivers in a compact vented enclosure, optimally tuned to reproduce high sound pressure levels at bass and sub-bass frequencies, together with a very powerful two channel amplifier module.

The TQ-425DP features a new generation of innovative digital power amplifiers, utilising revolutionary 96kHz DSP technology to give operating efficiency in excess of 90%.

Two independent Class D amplifier channels are provided—accessible at the rear of the cabinet—each capable of delivering 800 watts rms into 8 ohms, and powering each of the two low frequency drivers independently to give optimal performance from the drive units. This gives the capability to reproduce transients accurately with ample headroom, while the limiters protect the drive units from being overdriven. A Neutrik Powercon connector provides AC input to the unit via a mains rocker switch—the switch-mode power supply is auto-sensing over a range from 100 volts to 240 volts—and 3-pin XLR's are used for input and filtered link out connections. A gain control provides ±6dB of trim to allow the required balance to be acheived between subs and mid-highs depending on the ratio of cabinets and the room conditions.

The enclosure is constructed from 3/4" (18mm) birch plywood, heavily braced internally, glued and screwed together for maximum strength. It is finished in a durable black semi-matt textured paint (also available in TurboBlue™ textured paint). The loudspeaker drive units are protected by a reticulated foam/expanded steel mesh grille.

Flush handles are provided for easy lifting and carrying, and a pole mount socket is included on the top of the cabinet to allow mid-high enclosures to be mounted at the correct distance above the subwoofer.

The TQ-425DP is fitted with four heavy duty wheels to enable easy transportation.

FEATURES

- Self-powered
- Class D amplifiers
- 96kHz DSP
- High efficiency
- Pole mount socket

APPLICATIONS

- Front of house
- Drum fill
- Theatre
- Houses of Worship
- Corporate / industrial

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DIMENSIONS (HxWxD)	836mm x 511mm x 632mm (32.9" x 20.1" x 24.9")
NET WEIGHT	68kg (149.6lbs)
COMPONENTS	2 x 15" (381mm) LF drivers
FREQUENCY RESPONSE[1]	45Hz - 200Hz ±4dB
MAXIMUM SPL	132dB continuous[4], 138dB peak[5]
CONSTRUCTION	18mm (3/4") birch plywood; rebated, screwed and glued. Finished in black semi-matt textured paint. Recessed carrying handles. Integral 36mm pole mount socket. Four heavy duty wheels
GRILLE	Powder coated perforated steel with acoustically transparent reticulated foam
CONNECTORS	Signal: (2) x XLR 3-pin wired pin2 hot; Mains: Neutrik Powercon
FLYING HARDWARE	M10 internal rigging points
OPTIONS	Optional colour: TurboBlue™ textured paint

POWER AMPLIFIER

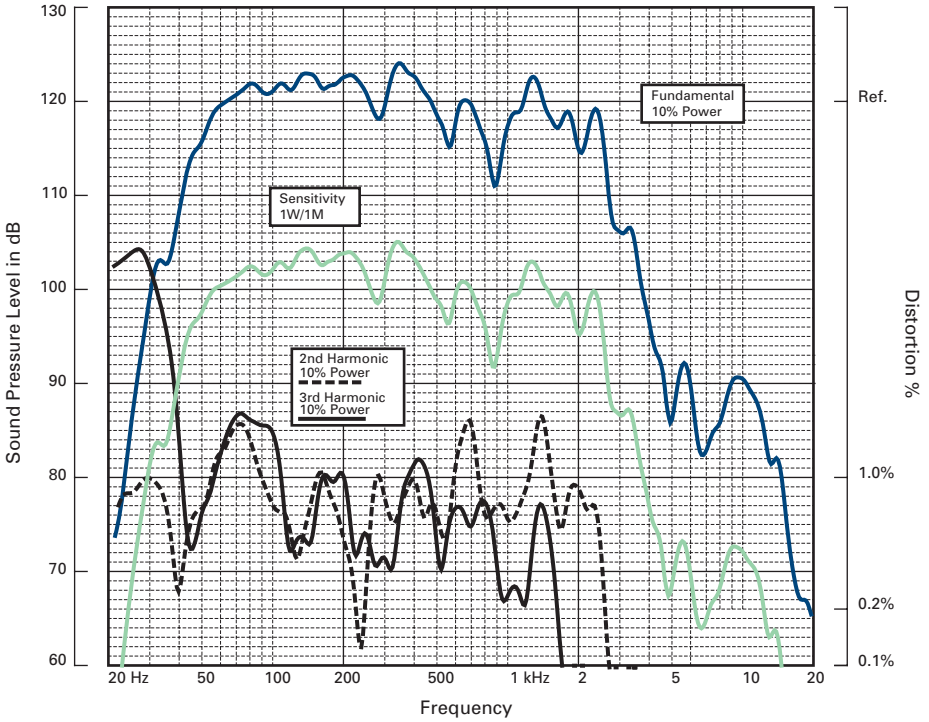
TYPE:	Class D
POWER OUTPUT:	LF: 800 watts continuous @ 8Ω (1kHz, 0.01% THD)
DYNAMIC RANGE:	110dB
INPUT IMPEDANCE:	10kΩ
POWER REQUIREMENTS:	100V to 230V AC, 50/60 Hz

SPARES AND ACCESSORIES

LS-1526	15" (381mm) LF loudspeaker
RC-1526	Recone kit
MG-425	Replacement grille
FS-425S	Flying strip short
FS-425L	Flying strip long

Notes
[1]Measured on axis
[2]Average over stated bandwidth
[3]Average over stated bandwidth
[4]Unweighted diode-clipped pink noise. Measured in a half space environment
[5]Verified by subjective listening tests of familiar program material, before the onset of perceived signal degradation

FREQUENCY RESPONSE



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 full 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.

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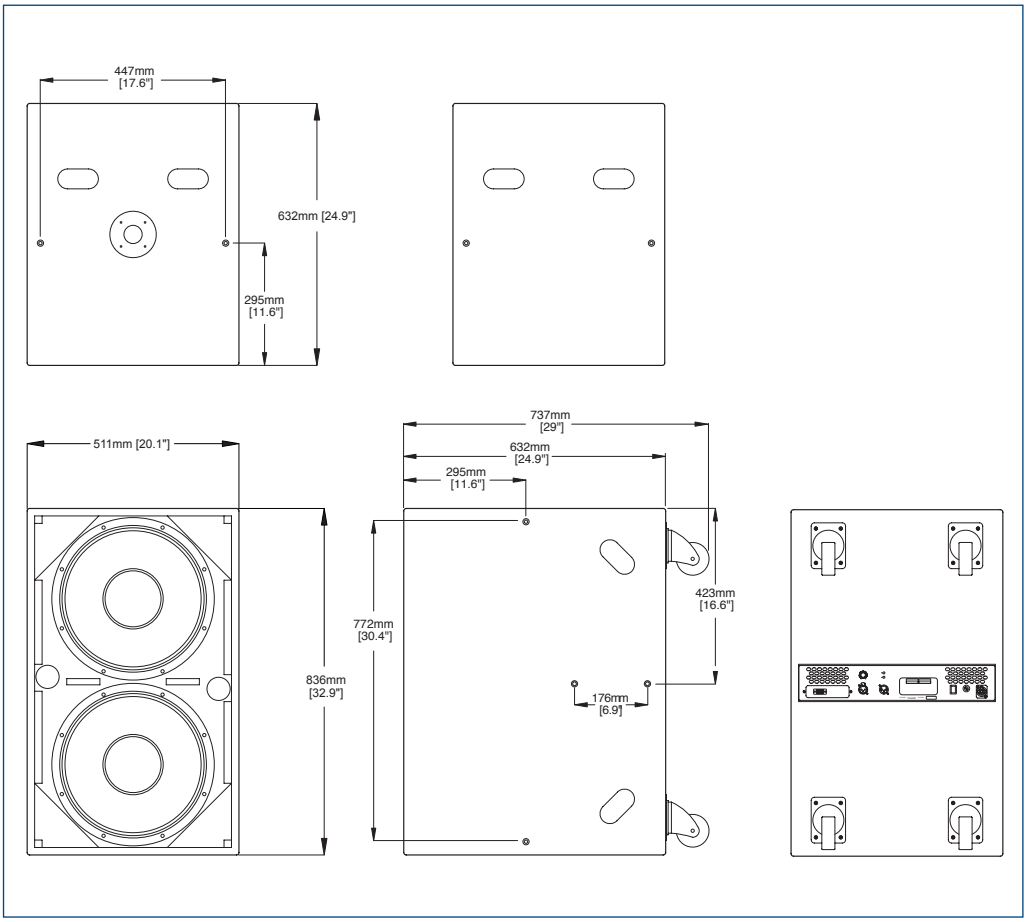
ARCHITECTURAL & ENGINEER'S SPECIFICATIONS

The loudspeaker shall be of the digitally self-powered low frequency type, consisting of two reflex loaded 15" (381mm) low frequency loudspeakers in a vented enclosure together with an integrated Class D power amplifier and DSP module. Performance specifications of a typical production unit shall be: Frequency response, measured with swept sine wave input, shall be flat within ±4dB from 45Hz to 200Hz. Maximum SPL (peak) measured with music program at stated amplifier power shall be 138dB. Dimensions: 836mmH x 511mmW x 632mmD (32.9" x 20.1" x 24.9"). Weight: 68kg (149.6lbs). The loudspeaker system shall be the Turbosound TQ-425DP. 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. A range of flying and lifting hardware shall be available.

DIMENSIONS



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