datasheet

THL-2

HILIGHT™ SERIES ENGINEERING INFORMATION

The THL-2 is a switchable bi-amp/passive 3-way full range enclosure incorporating Turbosound's unique transducer loading principles in a powerful trapezoidal one-box format. It is designed to provide high quality sound reinforcement in the range from 55Hz to 20kHz in primary sound reinforcement systems.

The enclosure complement consists of a custom reflex-loaded 15" low frequency driver, a custom 6.5" cone mid-range driver loaded with TurboMid™ device, and a 1" high frequency driver on a proprietary 90° x 40° horn flare.

The cabinet is constructed from 5/8" (15mm) marine grade birch plywood, finished in a durable TurboBlue™ semi-matt textured paint, and includes flush handles and cloth/expanded steel mesh grille.

Two quick release RT-767 ring type flying points are fitted to the top of the cabinet for suspending the enclosure in permanent installations, with a further RT-767 point on the rear of the cabinet for setting downward inclination. Eight M6 internal T-nuts are also provided to enable the THL-2 to be suspended using FF-2 flying strips. Two Neutrik Speakon NL4MP connectors are provided on a recessed rear panel for input and loop out connections.

Recommended complementary products:

THL-818, THL-828 low frequency enclosures

TSW-721, TSW-124 sub-bass enclosures

LMS-D6, LMS-D4 loudspeaker management systems

FEATURES

Ultra low distortion

Seamless midrange

Wide dispersion

APPLICATIONS

Nightclub / theatre

Mobile PA systems

Point source clusters

Turbosound

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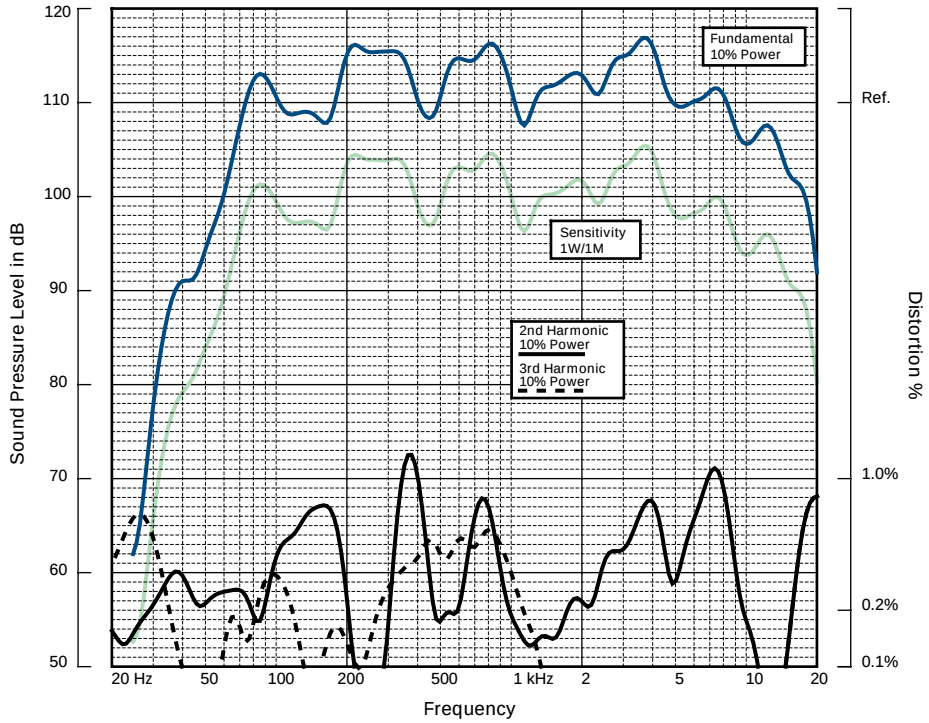
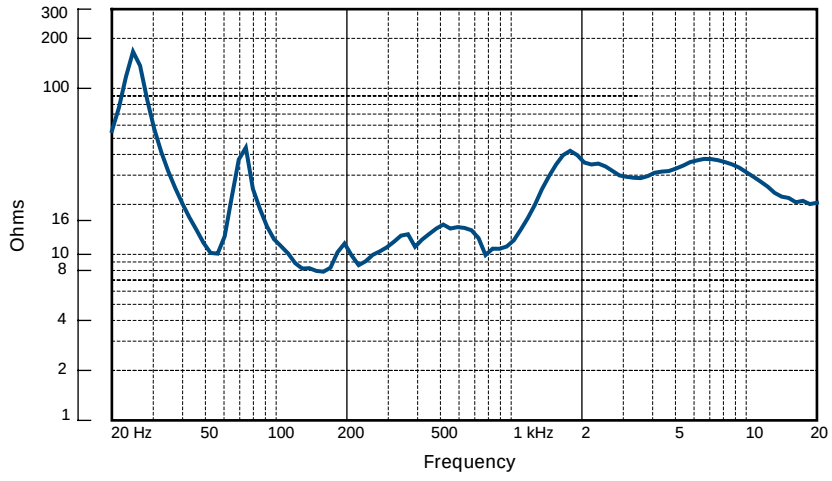
DIMENSIONS (HxWxD)	857mm x 512mm x 413mm (33.6” x 20.2” x 16.3”)
NET WEIGHT	44kg (96.8lbs)
COMPONENTS	1 x 15” (381mm) LF driver, 1 x 6.5” (165mm) MF driver on a TurboMid™ device, 1 x 1” (25mm) HF compression driver
FREQUENCY RESPONSE[1]	55Hz - 20kHz ±4dB
NOMINAL DISPERSION[2]	90°H x 40°V @-6dB points
POWER HANDLING	LF: 300 watts r.m.s., 600 watts program, 750 watts peak; MF/HF: 150 watts r.m.s., 300 watts program, 375 watts peak Recommended amplifier power: LF: 600 watts @ 8 ohms, MF/HF: 300 watts @ 16 ohms
SENSITIVITY[3]	100dB, 1 watt @ 1metre
MAXIMUM SPL	127dB continuous[4], 133dB peak[5]
CROSSOVER	Bi-amp mode: recommended crossover point at 1k3Hz, 24dB/octave slope Linkwitz-Riley Passive mode: internal passive crossover at 1k3Hz and 8kHz, third order high pass
NOMINAL IMPEDANCE	LF: 8 ohms, MF/HF: 16 ohms
CONSTRUCTION	15mm (5/8”) birch plywood throughout; rebated, screwed and glued. Finished in TurboBlue™ semi-matt textured paint. Two recessed carrying handles
GRILLE	Cloth/expanded steel mesh
CONNECTORS	(2) Neutrik Speakon NL4MP, wired (passive mode) pin 1+: positive, pin 1-: negative; (active mode) pin 1+: LF positive, pin 1-: LF negative, pin 2+: MF/HF positive, pin 2-: MF/HF negative
FLYING HARDWARE	Compatible with RT-767 ring type fittings (3 places); (8) M8 internal T nuts for FF-2 flying strips
SPARES AND ACCESSORIES	LS-1512 15” (381mm) LF loudspeaker RC-1512 Recone kit for LS-1512 LS-6501 6.5” (254mm) MF loudspeaker RC-6501 Recone kit for LS-6501 CD-165 1” (25mm) HF compression driver RD-165 Replacement diaphragm for CD-165 MG-2 Replacement cloth/expanded metal grille FF-2 Flying strip (2 required per enclosure) for permanent installations RT-767 Ring-type flying rings (set of 3)

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



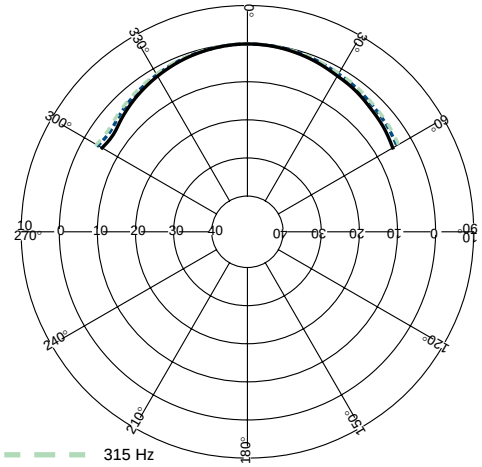
IMPEDANCE

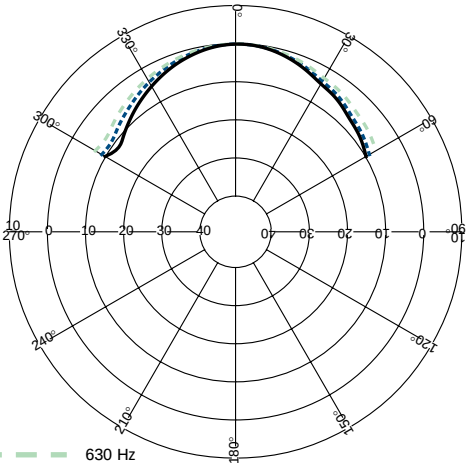


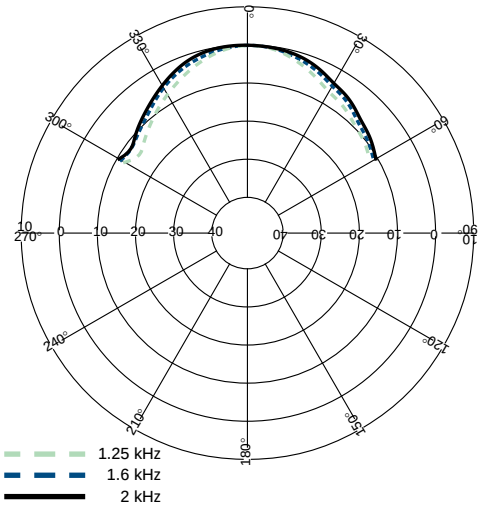
NOTES ON MEASUREMENT CONDITIONS

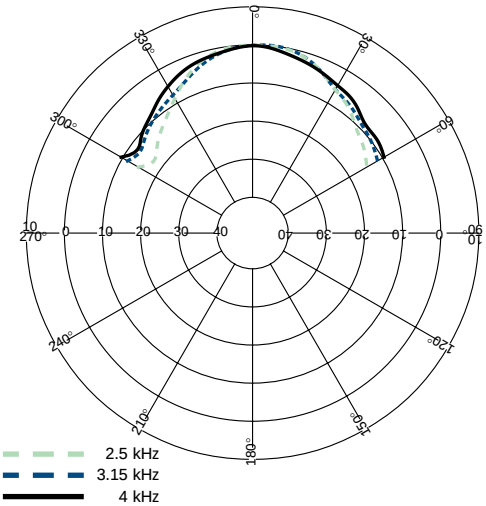
Impedance A constant current circuit was used to measure the impedance. **Frequency response** The frequency response shown was obtained by feeding a swept sine wave through the system in a half space environment. The position of the microphone was vertically on-axis at a distance of 2 metres, then scaled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

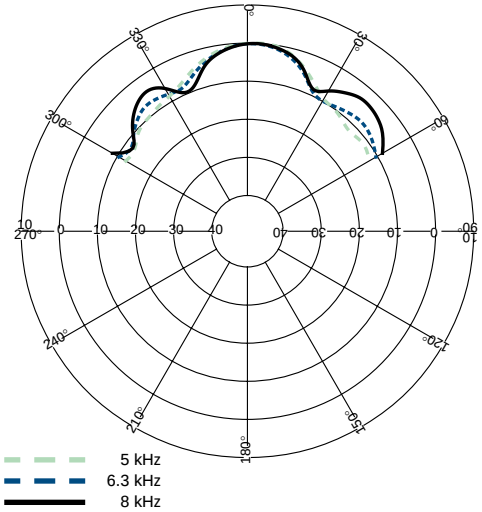
HORIZONTAL THIRD OCTAVE POLARS

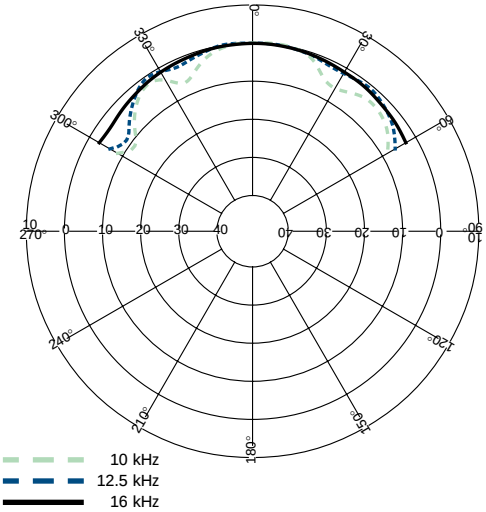




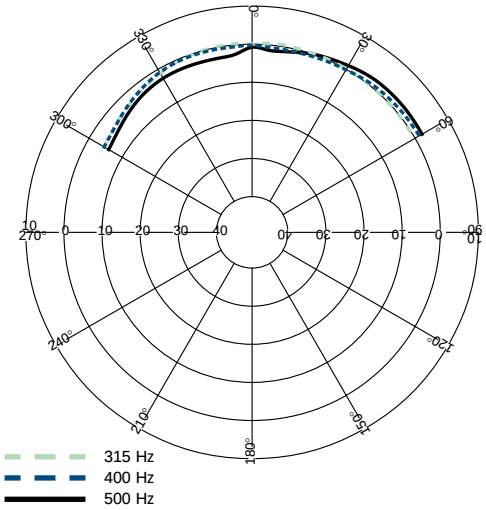


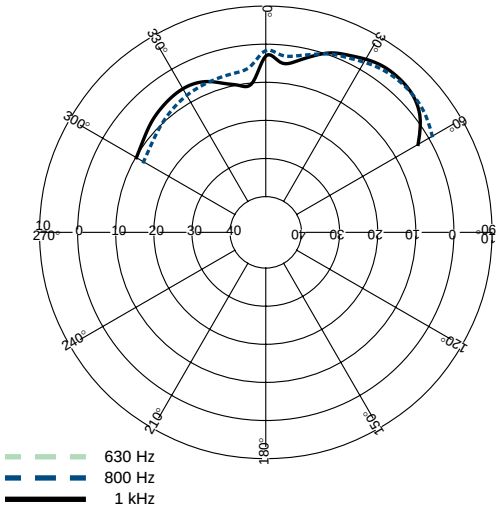


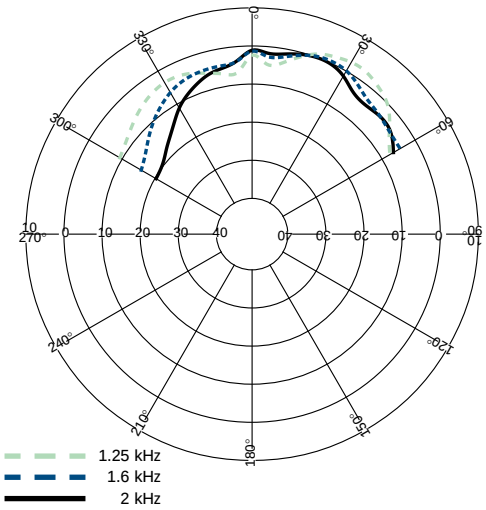


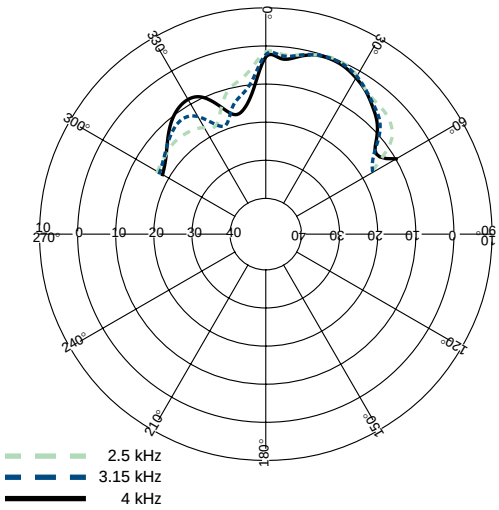


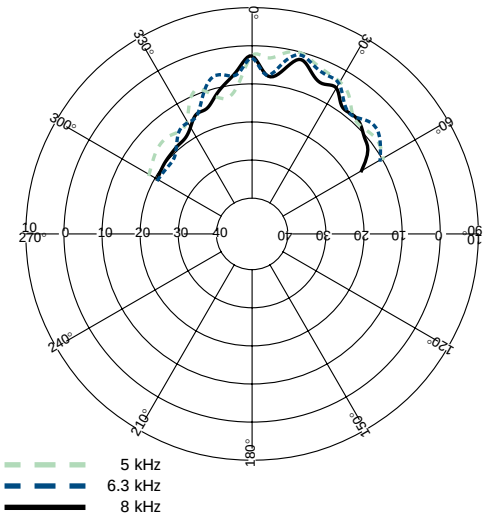
VERTICAL THIRD OCTAVE POLARS

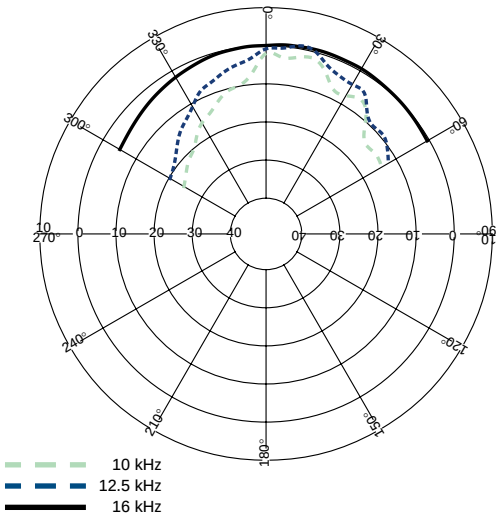




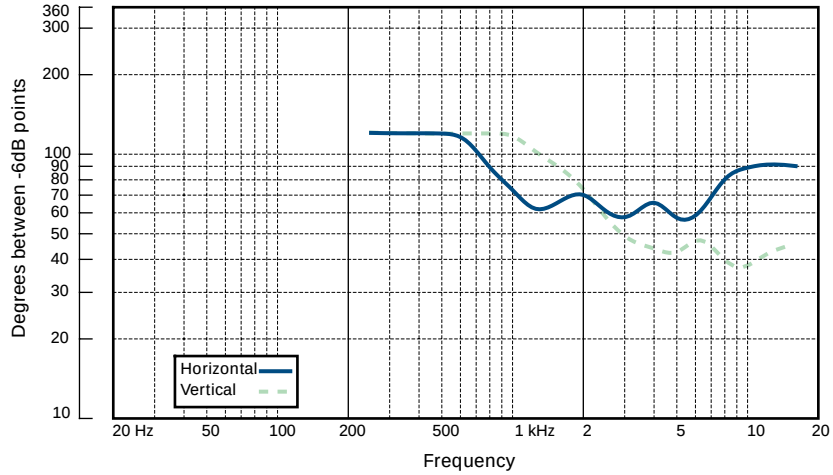




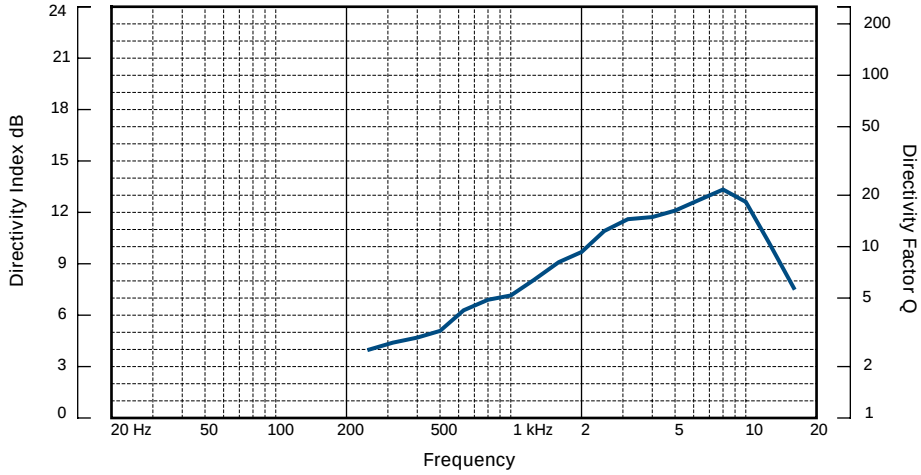




BEAMWIDTH

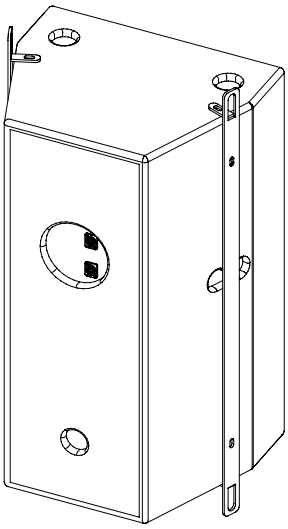


DIRECTIVITY

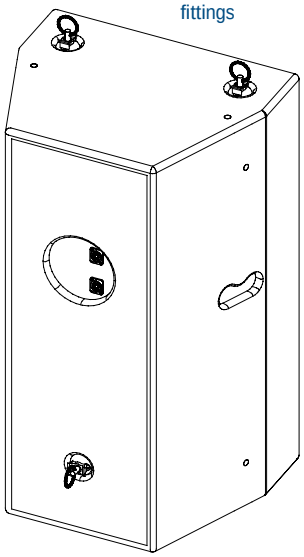


FLYING HARDWARE

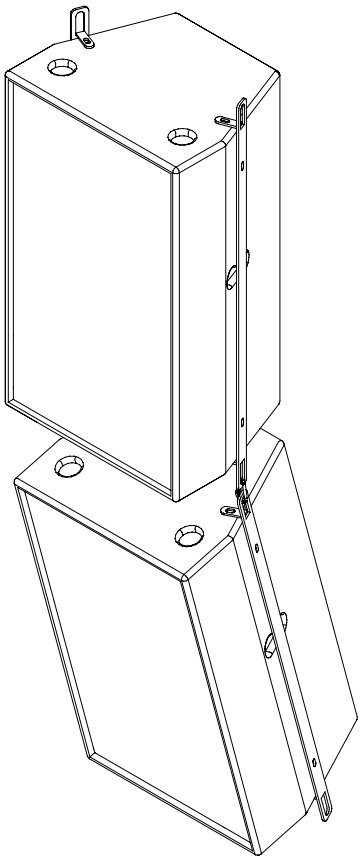
The THL-2 may be flown or permanently installed using a variety of specially designed flying and lifting hardware. Single units are flown using either FF-2 flying strips (two required per cabinet) which are attached to the sides of the cabinet, or using the optional RT-767 quick release ring type fittings (set of three required per cabinet). Downward inclination is set by using the tilting point provided on the rear of the cabinet.



FF-2 flying strips



RT-767 ring type fittings



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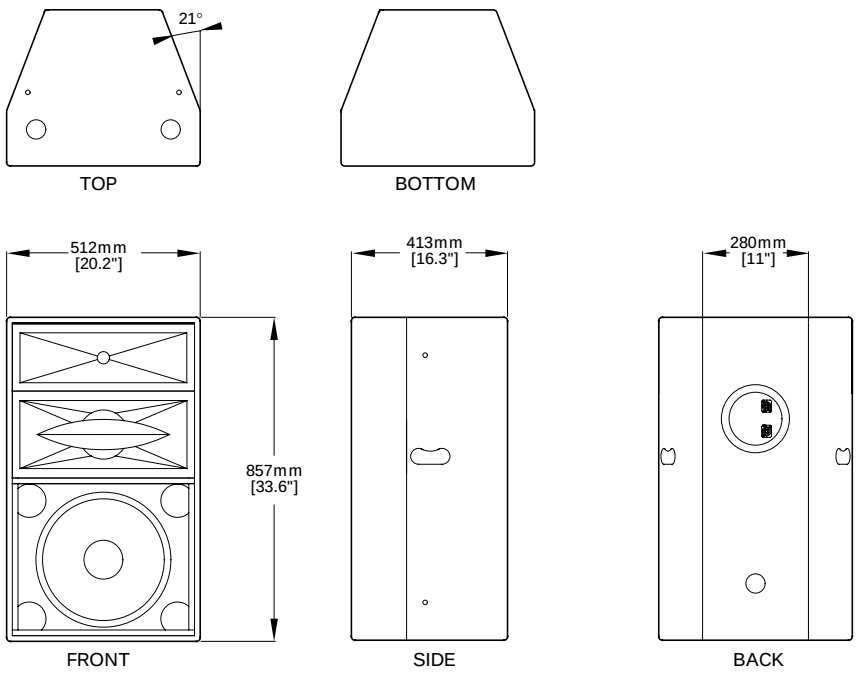
HILIGHT™ SERIES ENGINEERING INFORMATION

ARCHITECTURAL & ENGINEER'S SPECIFICATIONS

The system shall be of the switchable bi-amp/passive full range trapezoidal type consisting of one 15" (381mm) low frequency loudspeaker, one 6.5" (165mm) mid frequency cone driver loaded with a TurboMid™ device, and one 1" (25mm) high frequency compression driver on a proprietary horn flare. 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 ±4dB from 55Hz – 20kHz. Nominal impedance shall be LF: 8 ohms, MF/HF: 16 ohms. Power handling shall be LF: 300 watts r.m.s., 600 watts program, 750 watts peak; MF/HF: 150 watts r.m.s., 300 watts program, 375 watts peak. Sensitivity, measured with 1 watt input at 1 metre distance on axis, mean averaged over stated bandwidth, shall be 100dB. Maximum SPL (peak) measured with music program at stated amplifier input shall be 133dB. Dimensions: 857mmH x 512mmW x 413mmD (33.6"H x 20.2"W x 16.3"D). The loudspeaker system shall be the Turbosound THL-2. 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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