

## HILIGHT™ SERIES ENGINEERING INFORMATION

The THL-828.2 is a low frequency loudspeaker enclosure incorporating Turbosound's unique transducer loading principles. It is designed to cover low frequencies in the range from 50 to 180Hz in primary sound reinforcement systems.

The THL-828.2 is designed for use in conjunction with the THL-811 mid-high modular loudspeaker, system control being achieved by the LMS-D6 or A6 loudspeaker management systems, which provide model-specific crossover and limiter functions.

The loudspeaker complement consists of two 4" voice-coil custom 18" low frequency drivers loaded with TurboBass™ devices, producing accurate high-definition bass energy with very low distortion and minimal power compression. The THL-828.2 is capable of producing outstanding electrical to acoustic power conversion, and producing peak sound pressure levels in excess of 141dB.

The enclosure is constructed from 3/4" (18mm) birch plywood and includes flush handles, side driver access panels, steel mesh grille and four heavy duty wheels, and is finished in TurboBlue™ semi-matt textured paint. Speaker connections are made via two rear-panel mounted Neutrik Speakon NL4-MP connectors for fast and reliable set-up and operation, providing input and parallel connections.

The THL-828.2 is dimensioned for optimum truck-pack, sharing with other Turbosound HiLight enclosures a common width of 22.5".

### Recommended complementary products:

THL-811, THL-811S mid high enclosures

THL-2, THL-2H full range enclosures

LMS-D6, LMS-A6 loudspeaker management systems



### FEATURES

High efficiency

Horn-loaded enclosure

### APPLICATIONS

Sound contracting

Discotheques and clubs

Mobile PA systems

<b>DIMENSIONS (HxWxD)</b>	1148mm x 574mm x 718mm (45.2" x 22.6" x 28.3")
<b>NET WEIGHT</b>	95kg (209lbs)
<b>COMPONENTS</b>	2 x custom 18" (457mm) LF drivers on TurboBass™ devices
<b>FREQUENCY RESPONSE<sup>1</sup></b>	50Hz - 180Hz ±4dB Recommended operational range below 250Hz
<b>POWER HANDLING</b>	800 watts r.m.s., 1600 watts program, 2000 watts peak Recommended amplifier power 1600 watts @ 4 ohms
<b>SENSITIVITY<sup>2</sup></b>	104dB, 1 watt @ 1 metre
<b>MAXIMUM SPL</b>	135dB continuous <sup>3</sup> , 141dB peak <sup>4</sup>
<b>CROSSOVER</b>	Active: 180Hz (with THL-811), 24dB/octave low pass Linkwitz-Riley
<b>NOMINAL IMPEDANCE</b>	4 ohms
<b>CONSTRUCTION</b>	3/4" (18mm) birch plywood throughout; rebated, screwed and glued. Finished in TurboBlue™ semi-matt textured paint. Four recessed carrying handles. Four heavy duty wheels
<b>GRILLE</b>	Cloth/expanded metal
<b>CONNECTORS</b>	(2) Neutrik Speakon NL4-MP Wired pin1+: positive, pin1-: negative
<b>SPARES AND ACCESSORIES</b>	LS-1809 18" (457mm) LF loudspeaker RC-1809 Recone kit for LS-1809 MG-828 Replacement cloth/expanded metal grille W-3 Wheel kit (set of four)

Notes

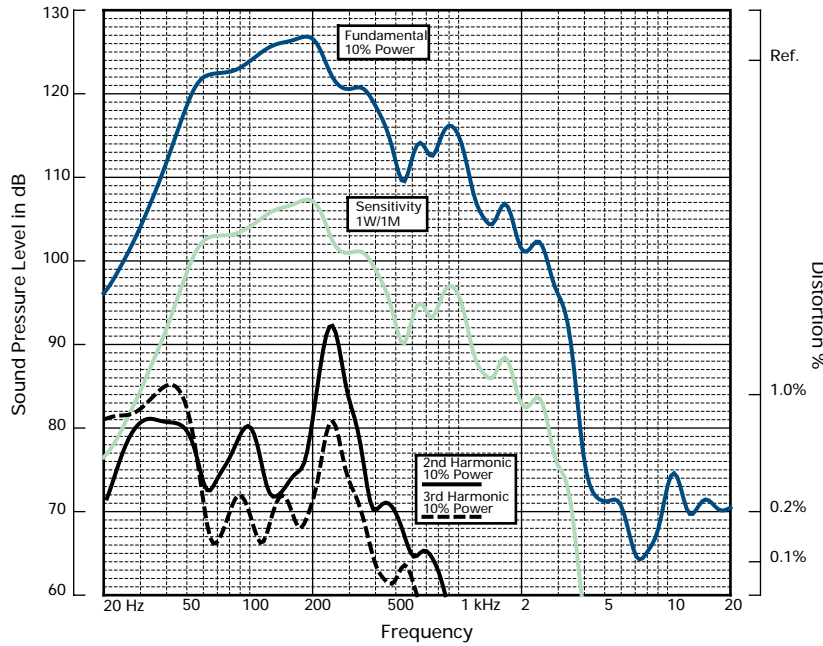
<sup>1</sup>Measured on axis

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

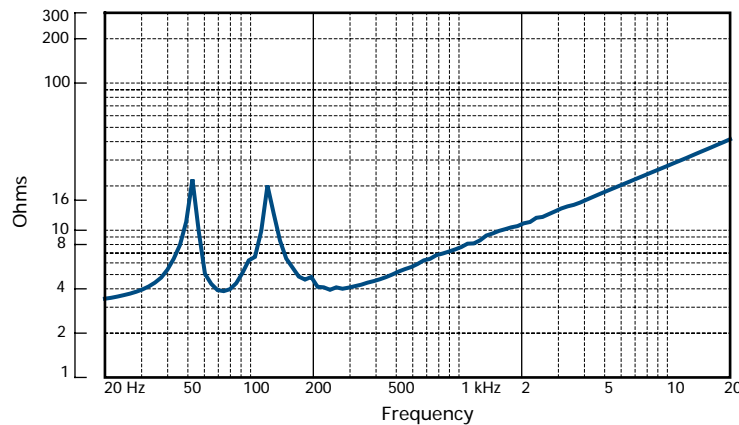
<sup>3</sup>Unweighted diode-clipped pink noise input. Measured in a half space environment

<sup>4</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**

**ARCHITECTURAL  
 & ENGINEER'S  
 SPECIFICATIONS**

The loudspeaker shall be of the low frequency type, consisting of two 18" (457mm) low frequency drivers loaded with TurboBass™ devices. Performance specifications of a typical production unit shall be: Frequency response, measured with swept sine wave input, shall be flat within  $\pm 4\text{dB}$  from 50Hz to 180Hz. Nominal impedance shall be 4 ohms. Power handling shall be 800 watts r.m.s., 1600 watts program, 2000 watts peak. Sensitivity, measured with 1 watt input at 1 metre distance on axis, mean averaged over stated bandwidth, shall be 104dB. Maximum SPL (peak) measured with music program at stated amplifier power shall be 141dB. Dimensions: 1148mmH x 574mmW x 718mmD (45.2" x 22.6" x 28.3"). Weight: 95kgs (209lbs). The loudspeaker shall be the Turbosound THL-828.2. 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**

