

TSB SERIES ENGINEERING INFORMATION

The TSB-212 is a powerful band-pass sub-bass enclosure designed to be used in a variety of installed sound system applications ranging from nightclubs and wine bars to theatres, themed environments and places of worship.

It consists of two high-excursion 12" LF drivers in a birch plywood enclosure. Both drivers are loaded by identical compartments, and are arranged in a force-cancelling mode, which effectively reduces mechanical vibration in the box and minimises the possibility of enclosure movement being transmitted into the venue structure. The ports are optimised for high velocity and low turbulence, and are also designed for symmetrical airflow, reducing distortion both in the port and the drivers. These features combine to produce substantial sub-bass energy from a cabinet of modest dimensions and a space-saving profile.

The TSB-212 provides sub-bass support for several Turbosound enclosures, particularly

models from the QLight™ series. Its quasi-6th order band-pass alignment results in high efficiency in the pass band, and will generate high definition bass energy regardless of its position in the room.

Speakon NL4 input and link connectors are provided on a rear panel box with special cable access bays that allow cabinets to be interconnected and positioned right up to a wall. Cabinets can be stacked, using the fitted rubber feet and matching stacking recesses, in order to increase SPL at bass frequencies.

The enclosure is constructed from 15mm (5/8") birch plywood and is available as standard in black semi-matt textured paint. White semi-matt textured paint is optionally available.



FEATURES

- Very high SPL**
- Equal pressure porting**
- Force-cancelled drivers**
- High excursion coils**
- 1600 watt program rating**

APPLICATIONS

- Nightclubs**
- Live music venues**
- Themed environments**
- Houses of worship**

DIMENSIONS (HxWxD)	420mm x 1000mm x 470mm (16.5" x 39.4" x 18.5")
WEIGHT	47 kg (103.4 lbs)
COMPONENTS	2 x 305mm (12") high excursion LF drivers
FREQUENCY RANGE¹	38Hz to 200Hz @±4dB (useful to 30Hz)
POWER HANDLING	800 watts r.m.s., 1600 watts program
SENSITIVITY²	100dB SPL, 1 watt @ 1 metre
CALCULATED MAX SPL	132dB continuous ³ , 138dB peak ⁴
REC. CROSSOVER	24dB/octave Butterworth high-pass at 30Hz
IMPEDANCE	4 ohms nominal
CONSTRUCTION	15mm (5/8") birch plywood, finished in black semi-matt textured paint
CONNECTORS	2 x NL4MP wired pin1+ positive, pin 1- negative
RIGGING	16 x M10 rigging points
OPTIONS	White semi-matt textured paint
SPARES AND ACCESSORIES	LS-1220 12" LF driver RC-1220 Recone kit for LS-1220

Notes

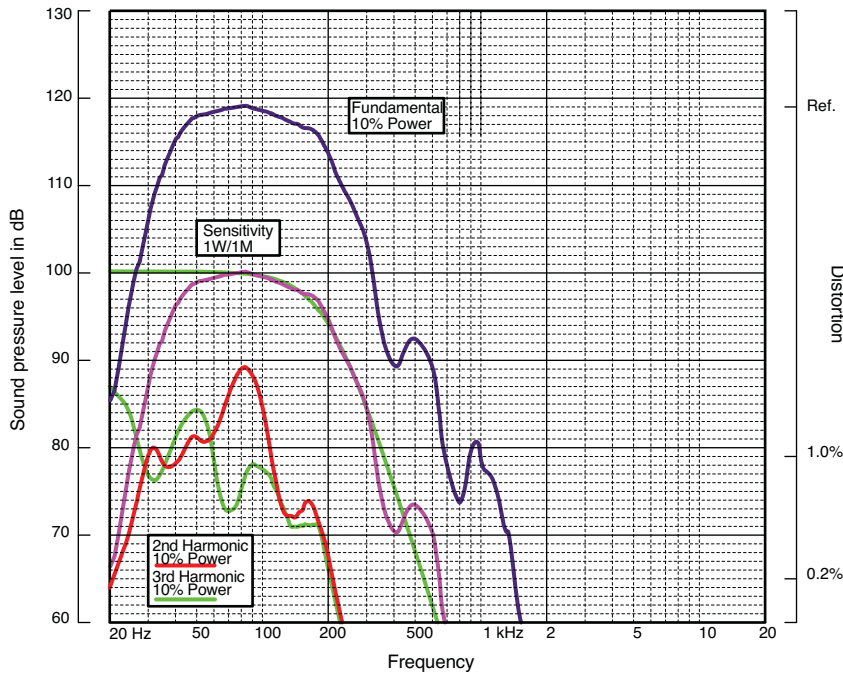
¹Measured on axis

²Average over stated bandwidth

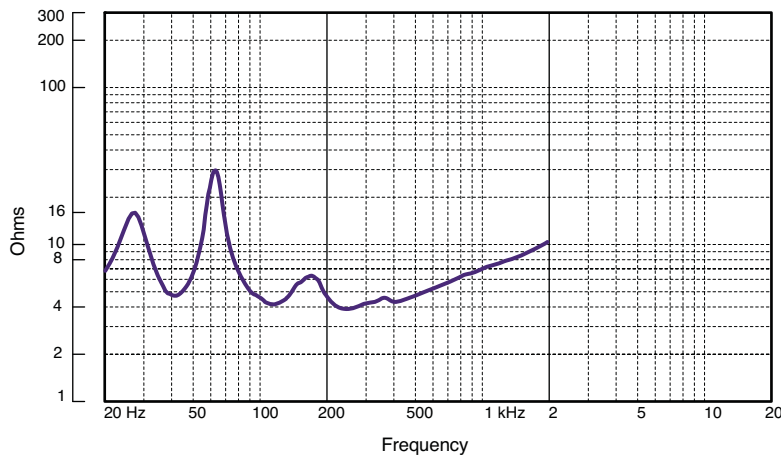
³Unweighted diode-clipped pink noise. Measured in a half space environment

⁴Verified 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 filtered swept sine wave (30Hz Butterworth 4th order high-pass, 200Hz L-R 4th order low-pass) through the system in a half space environment, and then 1/3 octave smoothed. 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** 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 band-pass type consisting of two 305mm (12") LF drivers. Performance specifications of a typical production unit shall meet or exceed the following: Frequency response, measured with a swept sine-wave input, shall be flat within $\pm 4\text{dB}$ from 38Hz to 200Hz. Nominal impedance shall be: 4 ohms. Power handling shall be 800 watts r.m.s., 1600 watts program. 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 input at stated amplifier power shall be 138dB. Dimensions: 420mmH x 1000mmW x 470mmD (16.5" x 39.4" x 18.5"). Net weight: 47 kg (103.4 lbs) The loudspeaker system shall be the Turbosound TSB-212. 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

