

TSW SERIES ENGINEERING INFORMATION

The TSW-718 is a low-frequency enclosure designed for use in applications requiring accurate and powerful reproduction of bass, and particularly upper bass frequencies, at extremely high levels. Its ability to reproduce low-frequency program material with such integrity makes the TSW-718 ideal for both fixed club installations and medium to large touring PA systems.

The TSW-718 incorporates the TurboBass™ device, a unique patented design which employs a high-velocity partial horn loading technique, giving precise cone control at high power levels. Much of the impact of contemporary dance music is concentrated in the upper bass frequencies. It is in this area that the TSW-718 addresses an increasing demand for accurate, high definition bass reproduction, especially in discotheque and club environments. This ability to provide fast, 'punchy' low frequency reinforcement also makes the TSW-718 ideally suited for use in medium to large PA applications.

The loudspeaker complement consists of two custom-designed 4" voice coil, double-suspension 18" drivers, each unit horn-loaded via a TurboBass™ device, resulting in a large area horn flare which gives excellent low frequency extension. High motor strength is provided by a massive, precision crafted magnet assembly. The enclosure is dimensioned for optimum truck-pack, and features flush handles, EP6 connectors, side driver access panels and heavy duty wheels. The Speakon connectors offer a standardised speaker cable for both high and low frequency enclosures, while the connector pin-outs allow bi-wiring and access to each individual driver. A dedicated fixed installation option (TSW-718i) is also available with XLR connectors but without wheels.



FEATURES

- High definition bass energy
- Very high efficiency
- Two 400W r.m.s. 18" loudspeakers

APPLICATIONS

- Discotheques and clubs
- Mobile PA systems
- Concert touring
- Festivals

DIMENSIONS (HxWxD)	1293mm x 574mm x 770mm (50.9" x 22.6" x 30.3")								
NET WEIGHT	110 kg (242 lbs)								
COMPONENTS	2 x custom 18" (457mm) LF drivers on TurboBass™ devices								
FREQUENCY RESPONSE¹	50 - 250Hz ±4dB								
POWER HANDLING	800 watts r.m.s., 1600 watts program, 2000 watts peak Recommended amplifier power: 1600 watts @ 4 ohms								
SENSITIVITY²	105dB, 1 watt @ 1 metre (average)								
MAXIMUM SPL	136dB continuous ³ , 142dB peak ⁴								
CROSSOVER	Active: recommended point 180Hz (with TFL-760), 24dB/octave low pass Linkwitz-Riley								
NOMINAL IMPEDANCE	4 ohms								
CONSTRUCTION	18mm (3/4") birch plywood throughout; rebated, screwed and glued. Finished in TurboBlue™ semi-matt textured paint. Four recessed carrying handles ⁵ . Four heavy duty wheels ⁵ .								
GRILLE	Cloth/expanded metal								
CONNECTORS	(2) Speakon NL4MP wired pin 1+: positive, pin 1-: negative								
OPTIONS	Installation version, TSW-718i: without handles or wheels. XLR connectors								
SPARES AND ACCESSORIES	<table border="0"> <tr> <td>LS-1804</td> <td>457mm (18") LF loudspeaker</td> </tr> <tr> <td>RC-1804</td> <td>Recone kit for LS-1804</td> </tr> <tr> <td>MG-718</td> <td>Replacement cloth/expanded metal grille</td> </tr> <tr> <td>W-3</td> <td>Heavy duty wheel</td> </tr> </table>	LS-1804	457mm (18") LF loudspeaker	RC-1804	Recone kit for LS-1804	MG-718	Replacement cloth/expanded metal grille	W-3	Heavy duty wheel
LS-1804	457mm (18") LF loudspeaker								
RC-1804	Recone kit for LS-1804								
MG-718	Replacement cloth/expanded metal grille								
W-3	Heavy duty wheel								

All measurements are actual figures taken from real-time testing using stated inputs, free from any filtering or weighting. Therefore actual figures may significantly exceed that of other manufacturers with higher published weighted ratings.

Notes

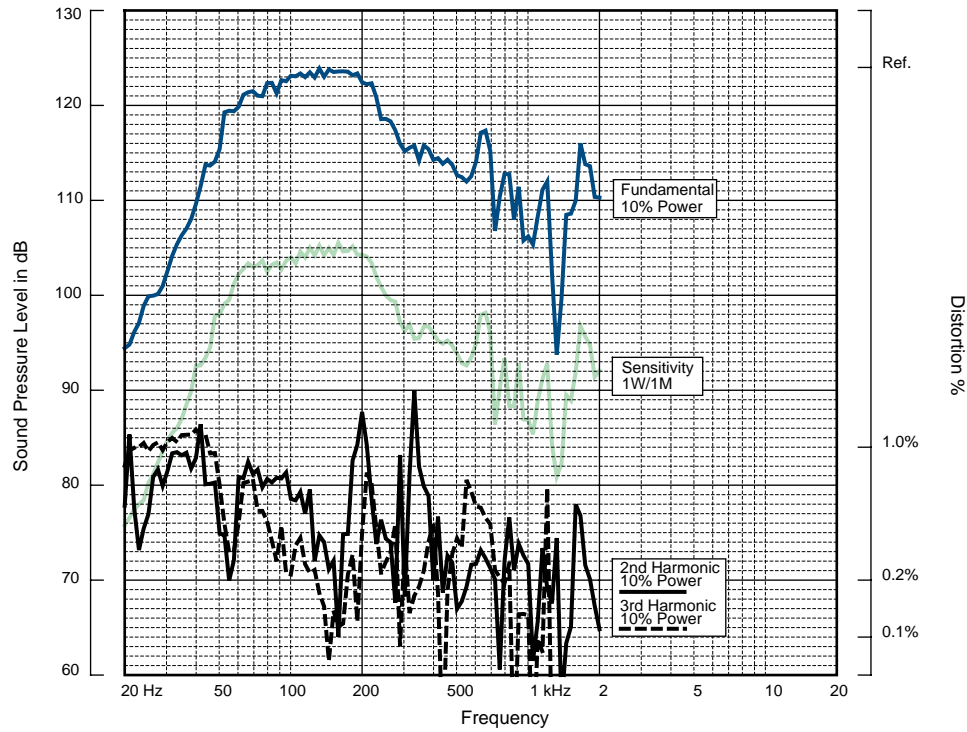
¹Measured on axis, using swept sine-wave input, in a true half space environment.

²Average over stated bandwidth. Measured in a true half space environment (below 100Hz, verified with ground-plane measurement) at 5 Watts @ 3 metres, then scaled to represent 1 Watt @ 1 metre, using a swept sine-wave input.

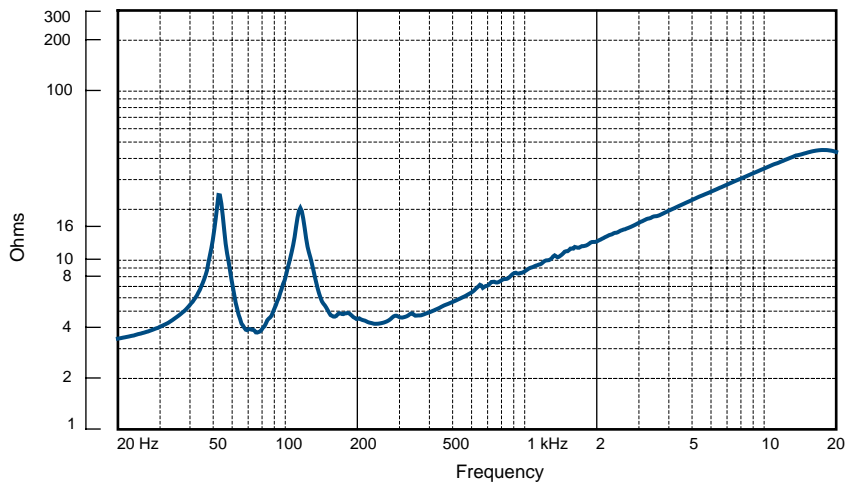
³Unweighted pink noise input, measured at 1 metre.

⁴Verified by subjective listening tests of familiar program material, before the onset of perceived signal degradation.

⁵Not included on installation version.



FREQUENCY RESPONSE



IMPEDANCE

Impedance A common method, 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 true half-space environment, with the microphone on-axis, at a distance of 3 metres. Response below 100Hz verified with ground-plane measurement. **2nd & 3rd Harmonic Distortion** Distortion measurements were obtained using a Brüel & Kjaer harmonic distortion analysis system and comply with AES recommendations for enclosure measurement (AES Paper reference: 2-1984).

NOTES ON MEASUREMENT CONDITIONS

**ARCHITECTURAL AND
ENGINEER'S
SPECIFICATIONS**

The loudspeaker shall be of the low frequency type consisting of two 18" low frequency loudspeakers loaded with patented TurboBass™ devices. 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 50 - 250Hz. 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 105dB. Maximum SPL (peak) measured with music program input at stated amplifier power shall be 142dB. Dimensions: 1293mmH x 574mmW x 770mmD (50.9"H x 22.6"W x 30.3"D). Total enclosure volume shall not exceed 0.51 cu meters (20.12cu ft). The loudspeaker system shall be the Turbosound TSW-718 [TSW-718i]. 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

