



**TSB-212
SUB-BASS LOUDSPEAKER**

QUICK START GUIDE

Turbosound Ltd.
Star Road, Partridge Green
West Sussex RH13 8RY England
Tel: +44 (0)1403 711447 Fax: +44 (0)1403 710155
web: www.turbosound.com

Version 1.0 ©Turbosound 4/05

The TSB-212 is a general purpose band-pass subwoofer designed to add low frequency reinforcement to Turbosound loudspeakers from the IMPACT, TCS, TXD, and TQ ranges.

It utilises two very high excursion 12" low frequency drivers connected in parallel to give a combined impedance of 4 ohms. These drivers are housed in a 15mm (5/8") birch plywood enclosure with stacking feet, multiple M10 internal rigging points and a perforated steel grille. Input and link connections are provided via a pair of Speakon NL4 connector located on a recessed panel at the rear of the cabinet.

Amplifier considerations

Turbosound speaker enclosures should be driven by high quality power amplifiers designed for true professional use. Such amplifiers will have balanced inputs, DC and RF fault protection, and well designed cooling systems for reliability. Turbosound power amplifiers such as the T-45 and T-25 are recommended for this purpose.

The program power listed in the loudspeaker's technical specification is the best guide to the size of amplifier required for general purpose applications. The amplifier should therefore be capable of delivering long term broadband power equal to the loudspeaker's program power rating at the loudspeaker's stated nominal impedance. This approach allows sufficient headroom to generate good dynamic range.

In general, the more powerful the amplifier, the better it will sound, provided that it is not driven into sustained clipping. It should be understood that overdriving an insufficiently powered amplifier is more likely to cause loudspeaker damage – the total energy in a heavily clipped signal is far higher than in an unclipped signal – than operating a more powerful amplifier within its ratings.

RECOMMENDED AMPLIFIER POWER RATINGS:

The amplifier's rated r.m.s. continuous power output (20Hz – 20kHz, per channel) should be equal to the program power handling of the loudspeaker at its nominal impedance.

The TSB-212 is rated at 800 watts r.m.s., 1600 watts program and the impedance is 4 ohms. It should be used with an amplifier capable of delivering long term power of 1600 watts at 4 ohms.

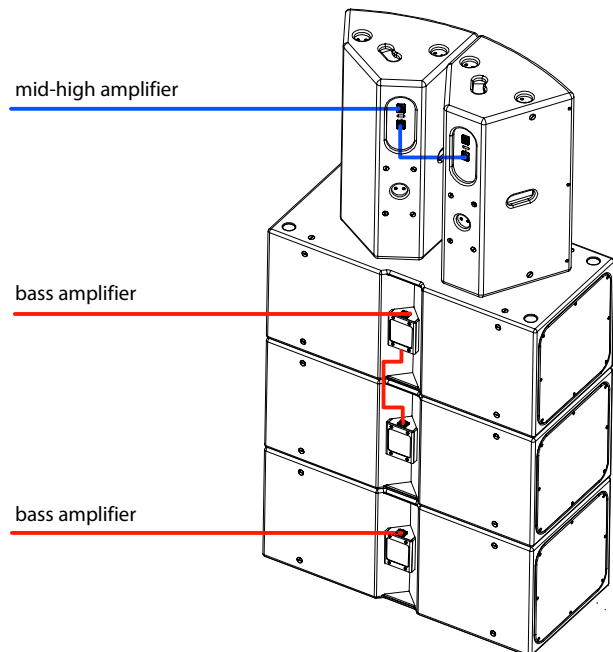
Crossovers

The TSB-212 should be used with a professional quality external electronic crossover providing a 24dB/octave low-pass filter at 125Hz and a 24dB/octave high-pass Butterworth filter at 30Hz, and limiting functions. Turbosound LMS series loudspeaker management systems are recommended for this purpose.

Placement

Single TSB-212 units can generally be placed inconspicuously virtually anywhere in a room, and in particular can be concealed under seating or in custom-built enclosures. Locating the subwoofer against a wall or in a corner is recommended.

When using multiple subwoofers it is preferable to stack these in a block in order to take advantage of mutual coupling between units, which will result in improved bass response and a lower cut-off frequency. Speakon cable interconnects are neatly routed at the rear of the box, allowing a stack to be placed directly against a wall.

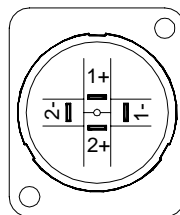


Speakon pin connections

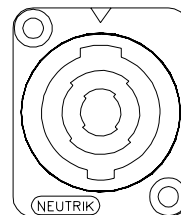
The Speakons are wired as shown below

Speakon pin wiring

- Pin 1+ positive
- Pin 1- negative
- Pin 2+ N/C
- Pin 2- N/C



Back



Front

Technical Specifications

Dimensions	420mm x 1000mm x 470mm (16.5" x 39.4" x 18.5")
Net Weight	47kgs (103.4lbs)
Frequency Response	38Hz to 200Hz @±4dB (useful to 30Hz)
Power Handling	800 watts r.m.s., 1600 watts program
Impedance	4 ohms nominal
Sensitivity	100dB, 1 watt @ 1 metre
Calc Max SPL	132dB continuous, 138dB peak
Recommended Crossover	24dB/octave low-pass at 125Hz, 24dB/octave Butterworth high-pass at 30Hz
Construction	15mm (5/8") birch plywood
Rigging	16 x M10 internal rigging points
Options	TurboBlue or white semi-matt textured paint
Spares & Accessories	LS-1220 12" LF driver RC-1220 recone for LS-1220

WARRANTY

Limited Warranty

This Turbosound loudspeaker product is warranted to the original end-user purchaser and all subsequent owners for a period of two (2) years for loudspeakers from the original date of purchase.

Warranty Coverage

Warranty coverage includes defects in materials and workmanship. It does not include:

- damage caused by accident, misuse, abuse, neglect or modification by any person other than an authorised Turbosound representative,
- damage caused by failure to operate the product in accordance with the instructions contained in the user manual,
- damage occurring during shipment in transit,
- claims based on any misrepresentation by the seller,
- products which do not have the original components as specified in the product engineering information,
- products on which the serial number has been removed or defaced.

Shipping

Should any fault develop with a component of your Turbosound system, please return the product, freight pre-paid, in its original packing carton, along with proof of purchase such as the original bill of sale or receipted invoice, and a description of the suspected fault to Turbosound Ltd. (Att: Customer Service), or your local authorised Turbosound representative. The product serial number must be quoted in all correspondence relating to the claim. Insurance is recommended, as Turbosound or its representatives are not liable for loss or damage in transit. Turbosound will pay for return freight costs should repairs be covered under warranty.

Turbosound Ltd., Star Road, Partridge Green, West Sussex RH13 8RY UK
t: +44 (0)1403 711447 f: +44 (0)1403 710155 www.turbosound.com