

## TCS SERIES ENGINEERING INFORMATION

The TCS-215 is a front-loaded subwoofer designed for use with TCS series 2-way enclosures.

It consists of two custom 3" voice coil 15" low frequency drivers in a compact vented enclosure, optimally tuned for extended low frequency response.

The enclosure is constructed from 3/4" (18mm) birch plywood, heavily braced internally, while the baffles are angled to reduce internal reflections and provide additional system efficiency. It is finished in black semi-matt textured paint (other colours optionally available). A total of nine M10

threaded rigging points are provided on the cabinet, enabling it to be permanently installed using standard eyebolts.

A rear panel connector plate carries a single Neutrik Speakon NL4MP and a 4-way terminal strip for loop in and loop out connections to additional enclosures.

**Recommended complementary products:**

TCS-20, TCS-30, TCS-35, TCS-40 enclosures

TCS-56, TCS-59 enclosures

LMS-D6, LMS-D4 loudspeaker management systems



### FEATURES

2 x 15" sub-bass

Compact enclosure

High efficiency

### APPLICATIONS

Theatre

Houses of Worship

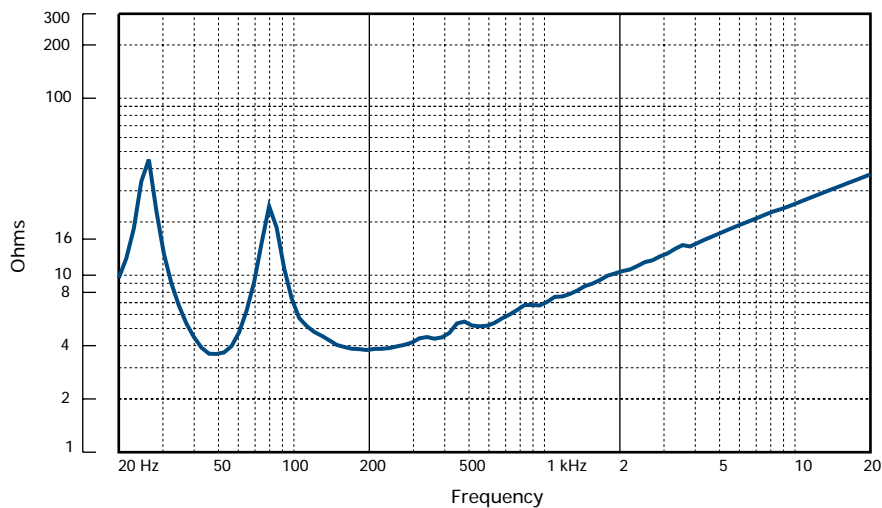
Restaurants / cafés

<b>DIMENSIONS (HxWxD)</b>	730mm x 705mm x 482mm (28.7" x 27.7" x 19")
<b>NET WEIGHT</b>	48kgs (105.6lbs)
<b>COMPONENTS</b>	2 x custom 15" (381mm) LF drivers
<b>FREQUENCY RESPONSE<sup>1</sup></b>	41Hz - 200Hz ±4dB
<b>POWER HANDLIN</b>	800 watts r.m.s., 1600 watts program, 2000 watts peak Recommended amplifier 1600 watts @ 4 ohms
<b>SENSITIVITY<sup>2</sup></b>	99dB 1W @ 1m
<b>MAXIMUM SPL</b>	130dB continuous, 136 dB peak
<b>CROSSOVER</b>	180Hz, 24dB/octave slope, Linkwitz-Riley
<b>NOMINAL IMPEDANCE</b>	4 ohms
<b>CONSTRUCTION</b>	18mm (3/4") birch plywood; rebated, screwed and glued. Finished in black semi-matt textured paint
<b>GRILLE</b>	Black powder coated perforated steel
<b>CONNECTORS</b>	Neutrik Speakon NL4MP, wired pin1+: positive, pin1-: negative Four way terminal strip for loop in/loop out connection
<b>FLYING HARDWARE</b>	(9) M10 internal steel rigging points
<b>OPTIONS</b>	Optional colours: white, blue, raw birch plywood
<b>SPARES AND ACCESSORIES</b>	LS-1515 15" (381mm) LF loudspeaker RC-1515 Recone kit for LS-1515 MG-215 Replacement perforated metal grille

Notes

<sup>1</sup>Measured on axis

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

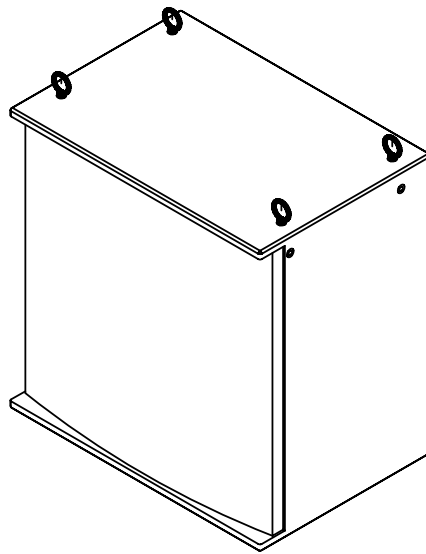


**Impedance** A constant current circuit was used to measure the impedance. **Frequency Response** The frequency response shown was obtained by feeding a swept sine wave through the system in a half space environment. The position of the microphone was vertically on-axis at a distance of 2 metres, then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

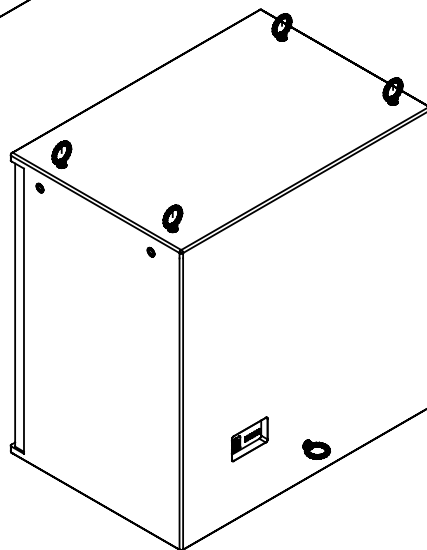
**NOTES ON MEASUREMENT CONDITIONS**

**INSTALLATION  
HARDWARE**

The enclosure is provided with nine M10 rigging points (four on the top, two each on the sides and one on the rear of the cabinet) to enable simple, effective lifting and flying using standard eyebolts (not supplied) as shown below. Downward inclination can be achieved by using the two rigging points towards the front of the cabinet and the single point on the rear.



Front view



Rear view

**ARCHITECTURAL  
 & ENGINEER'S  
 SPECIFICATIONS**

The system shall be of the subwoofer type consisting of two 15" (381mm) low frequency loudspeakers. 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 41Hz – 200Hz ±4dB. 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 99dB. Maximum SPL (peak) measured with music program at stated amplifier input shall be 136dB. Dimensions: 730mmH x 705mmW x 482mmD (28.7"H x 27.7"W x 19"D). The loudspeaker system shall be the Turbosound TCS-215. 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**

