

TCS SERIES ENGINEERING INFORMATION

The TCS-35 is a compact trapezoidal passive 2-way loudspeaker for use in a variety of fixed installations such as pubs, cafés, bars, restaurants and clubs.

It consists of an 8" low frequency driver and a 1" titanium high frequency tweeter matched with a third order internal passive crossover network in a trapezoidal cabinet.

The TCS-35 features a wide (120° x 120°) dispersion pattern which allows it to be used in a variety of nearfield, background and surround sound applications. It can also be used as a delay speaker in a larger sound reinforcement system.

The cabinet is constructed from 5/8" (15mm) birch plywood, and it is finished in black semi-matt textured paint (other colours

optionally available). M6 fixing points are provided on the top of the cabinet to permit rigging the enclosure with standard eyebolts. Additional M6 fixing points are provided on the rear of the cabinet for use with optional Turbosound WB-100 and CB-100 brackets, and OmniMount™ and Powerdrive mounting hardware.

A single Neutrik Speakon NL4MP connector and a 4-way terminal strip allow input and loop in/loop out connections to the loudspeaker.

Recommended complementary products:

TCS-108, TCS-215, TCS-118 subwoofer enclosures
LMS-D6, LMS-D4 loudspeaker management systems



FEATURES

- Compact enclosure
- Wide dispersion
- Full range response
- OmniMount™ compatible

APPLICATIONS

- Surround sound
- Background sound
- Pubs and bars
- Cafés and restaurants
- Theme parks

DIMENSIONS (HxWxD)	385mm x 274mm x 286mm (15.2" x 10.8" x 11.3")
NET WEIGHT	9.7kgs (21.3 lbs)
COMPONENTS	1 x 8" (203mm) LF driver, 1 x 1" (25mm) HF tweeter
FREQUENCY RESPONSE¹	55Hz - 18kHz ±4dB
NOMINAL DISPERSION²	120°H x 120°V @ -6dB
POWER HANDLING	200 watts r.m.s., 400 watts program, 500 watts peak Recommended amplifier: 400 watts @ 8 ohms
SENSITIVITY³	89dB, 1W @ 1m
MAXIMUM SPL	115dB continuous ⁴ , 121dB peak ⁵
CROSSOVER	Internal passive crossover network at 3k5Hz
NOMINAL IMPEDANCE	8 ohms
CONSTRUCTION	15mm (5/8") birch plywood; rebated, pinned and glued. Finished in black semi-matt textured paint
GRILLE	Black powder coated perforated steel
CONNECTORS	Neutrik Speakon NL4MP, wired pin1+: positive, pin1-: negative Four way terminal strip for loop in/loop out connection
FLYING HARDWARE	(8) M6 internal fixing points for standard eyebolts, WB-100 and CB-100 brackets, OmniMount™ and Powerdrive brackets
OPTIONS	Optional colours: TurboBlue™, white, raw birch plywood
SPARES AND ACCESSORIES	LS-8070 8" (203mm) LF loudspeaker RC-8070 Recone kit for LS-8070 TW-509 1" (25mm) HF tweeter MG-35 Replacement grille

Notes

¹Measured on axis

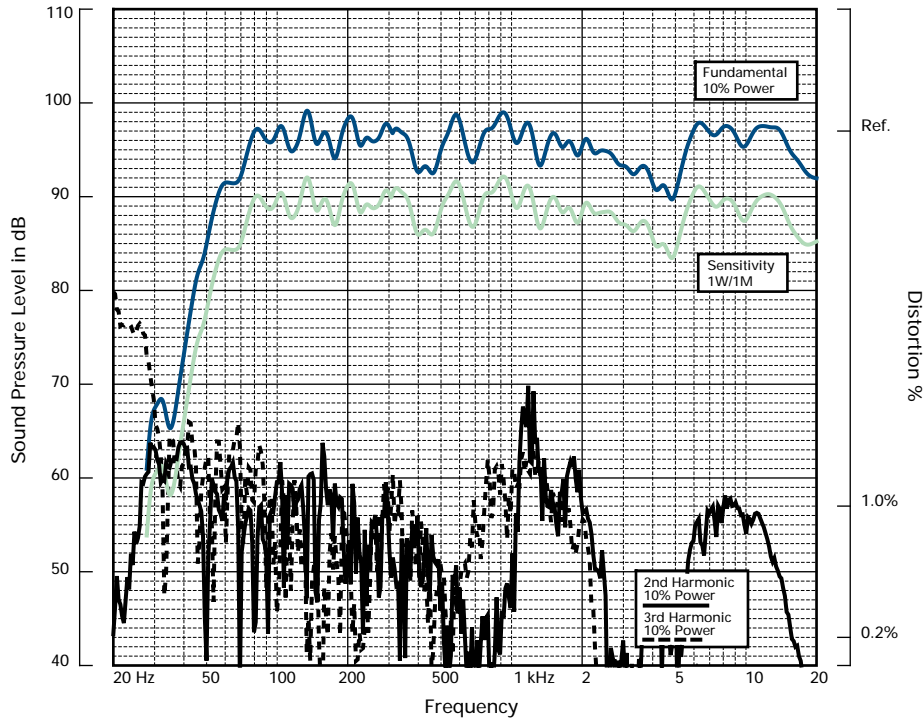
²Average over stated bandwidth

³Average over stated bandwidth

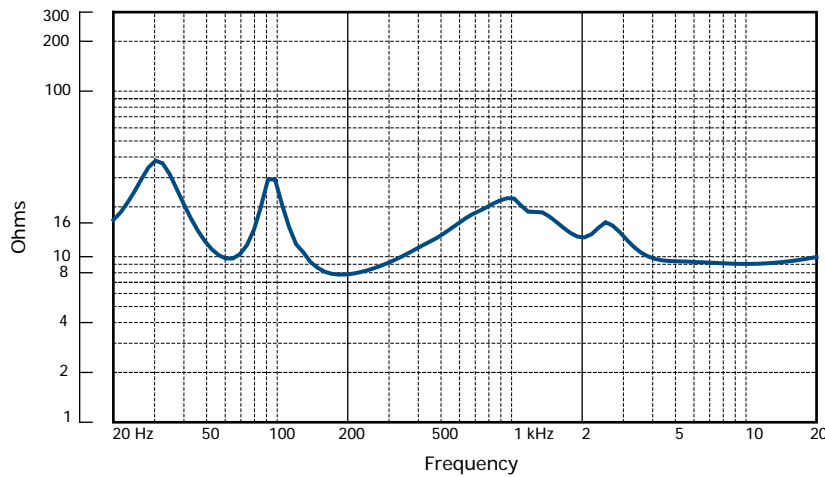
⁴Unweighted diode-clipped pink noise. Measured in a half space environment

⁵Verified by subjective listening tests of familiar program material, before the onset of perceived signal degradation

FREQUENCY RESPONSE



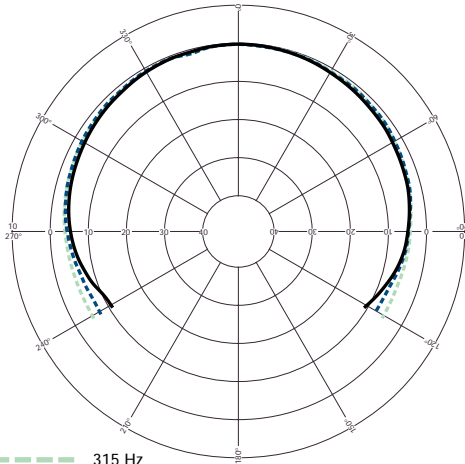
IMPEDANCE



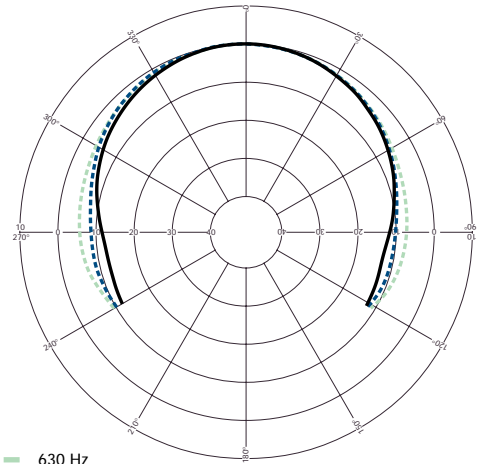
Impedance A constant current circuit was used to measure the impedance. **Frequency response** The frequency response shown was obtained by feeding a swept sine wave through the system in a half space environment. The position of the microphone was vertically on-axis at a distance of 2 metres, then scaled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

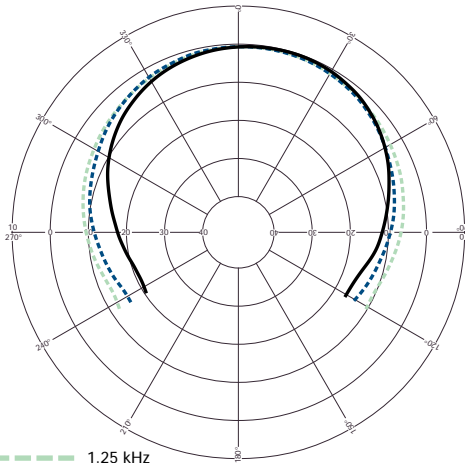
**HORIZONTAL THIRD
OCTAVE POLARS**



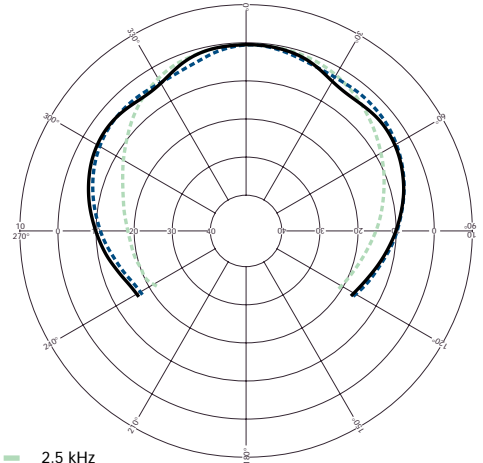
--- 315 Hz
... 400 Hz
— 500 Hz



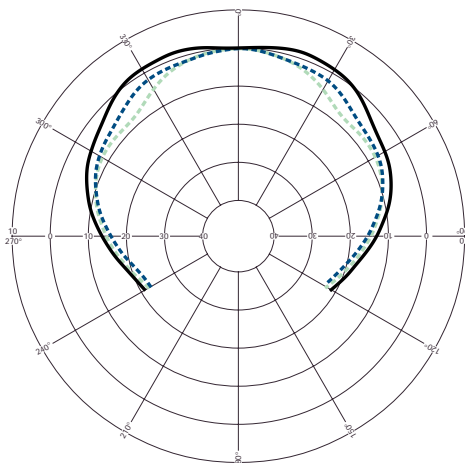
--- 630 Hz
... 800 Hz
— 1 kHz



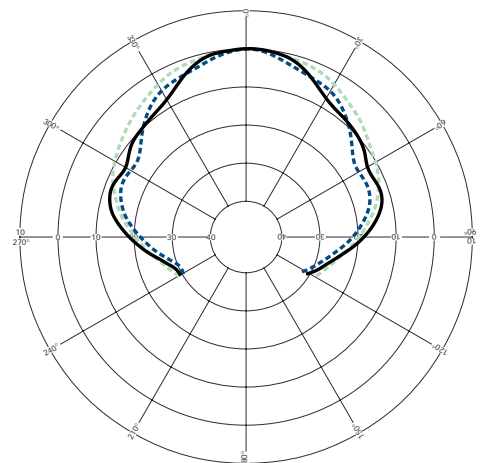
--- 1.25 kHz
... 1.6 kHz
— 2 kHz



--- 2.5 kHz
... 3.15 kHz
— 4 kHz

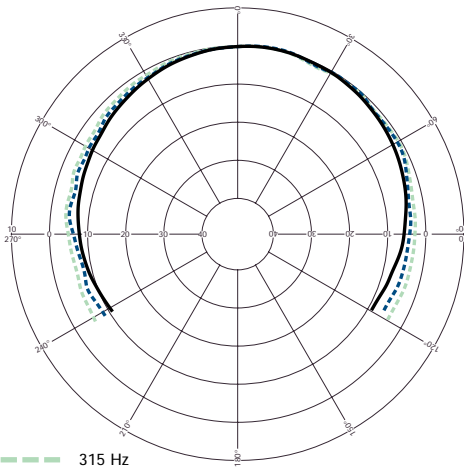


--- 5 kHz
... 6.3 kHz
— 8 kHz

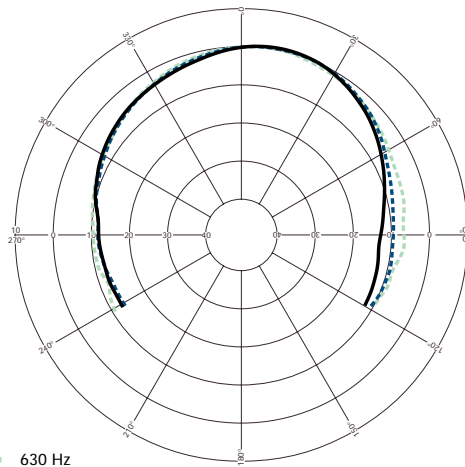


--- 10 kHz
... 12.5 kHz
— 16 kHz

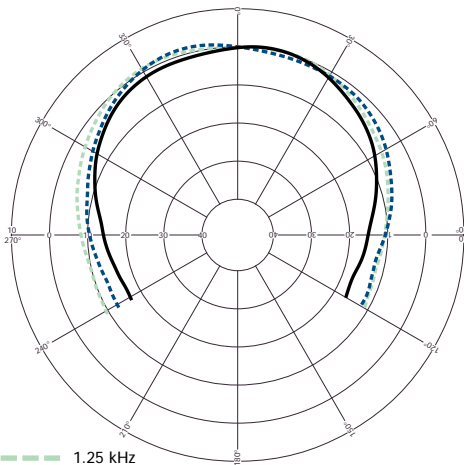
**VERTICAL THIRD
OCTAVE POLARS**



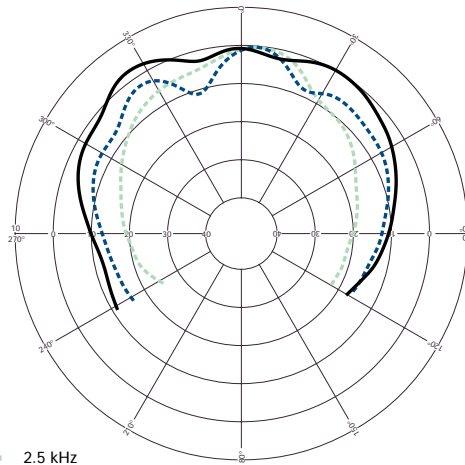
--- 315 Hz
... 400 Hz
— 500 Hz



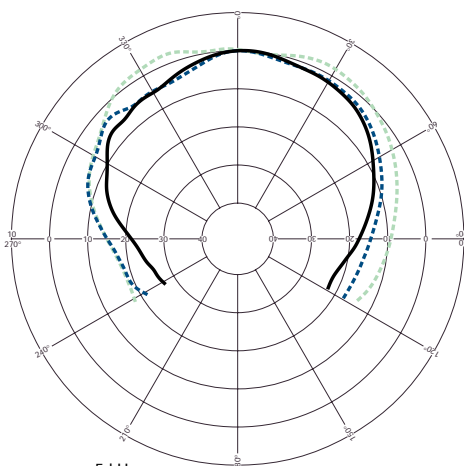
--- 630 Hz
... 800 Hz
— 1 kHz



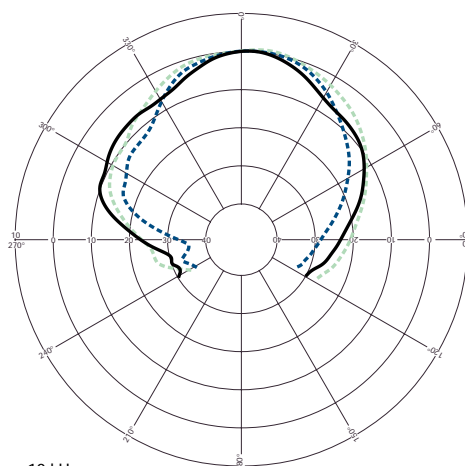
--- 1.25 kHz
... 1.6 kHz
— 2 kHz



--- 2.5 kHz
... 3.15 kHz
— 4 kHz

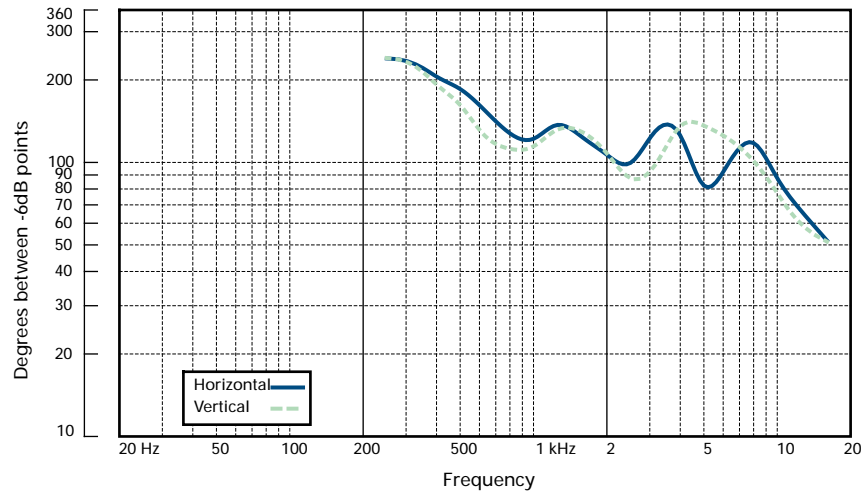


--- 5 kHz
... 6.3 kHz
— 8 kHz

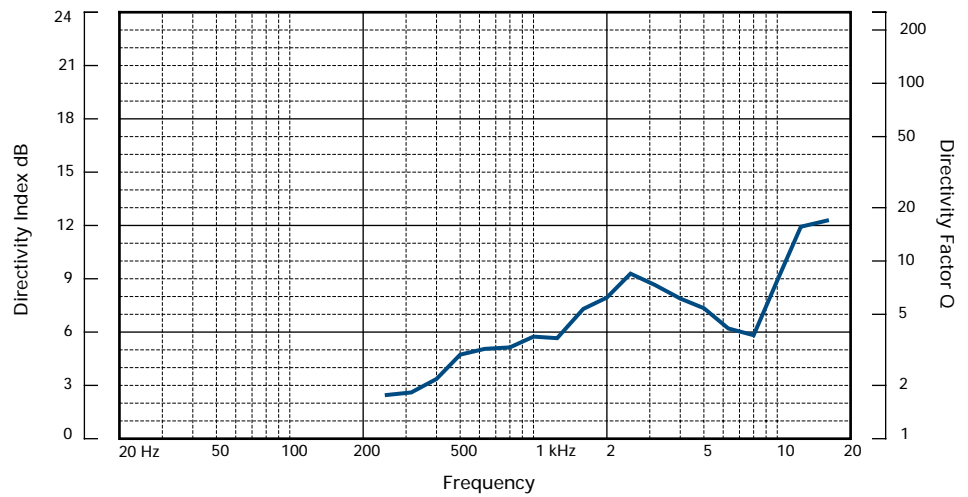


--- 10 kHz
... 12.5 kHz
— 16 kHz

BEAMWIDTH



DIRECTIVITY

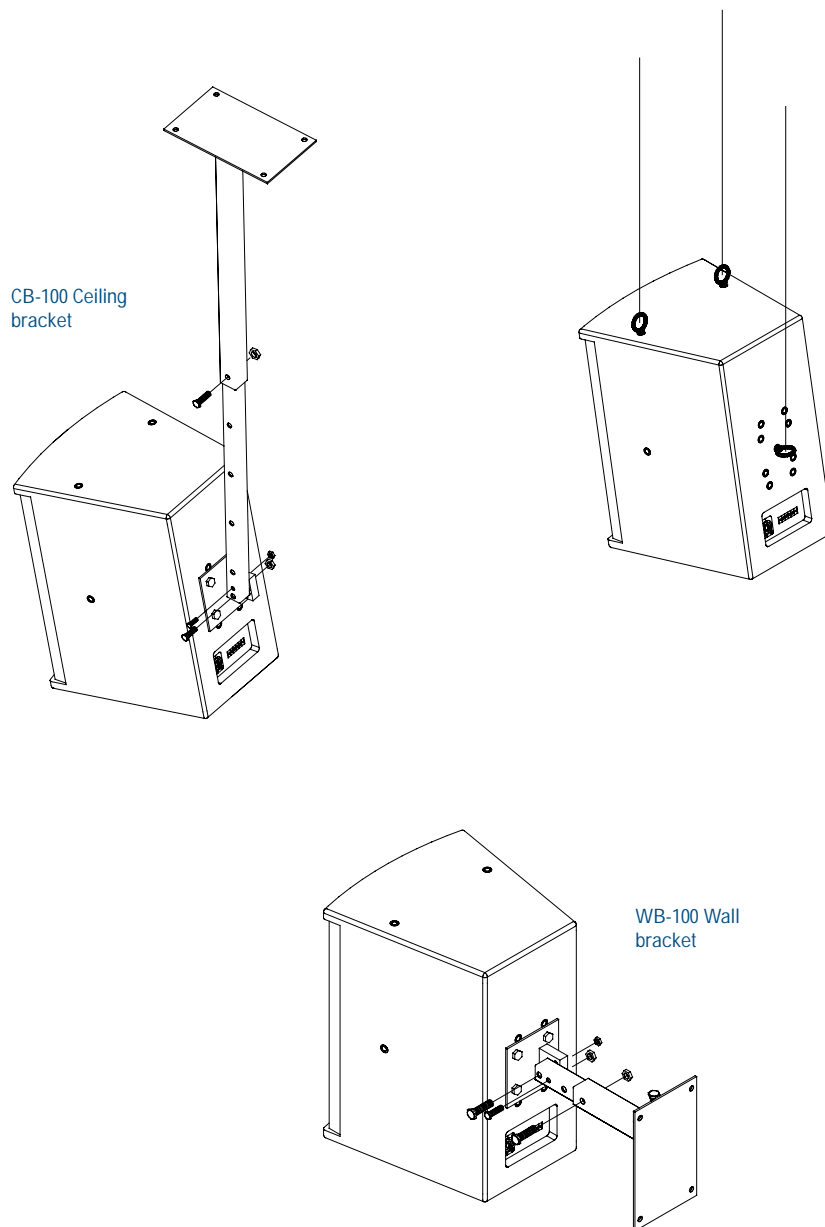


TCS SERIES ENGINEERING INFORMATION

The TCS-35 is fitted with M6 internal fittings on the top and rear of the cabinet which enable it to be permanently suspended from ceilings using standard eyebolts. Downward inclination is achieved by means of the rear fixing point.

**INSTALLATION
 HARDWARE**

The cabinet is also fitted with M6 internal fittings on the rear for use with optional WB-100 wall brackets and CB-100 brackets as shown. The enclosure can be angled and tilted to suit the exact requirements of sound coverage within the venue. The TCS-35 is also compatible with OmniMount™ and Powerdrive brackets.



**ARCHITECTURAL
 & ENGINEER'S
 SPECIFICATIONS**

The system shall be of the two-way passive type consisting of one 8" (203mm) low frequency loudspeaker and one 1" (25mm) high frequency tweeter. 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 $\pm 4\text{dB}$ from 55Hz - 18kHz. Nominal dispersion, at -6dB points, shall average $120^\circ\text{H} \times 120^\circ\text{V}$. Nominal impedance shall be 8 ohms. Power handling shall be 200 watts r.m.s., 400 watts program, 500 watts peak. Sensitivity, measured with 1 watt input at 1 metre distance on axis, mean averaged over stated bandwidth shall be 89dB. Maximum SPL (peak) measured with music program input at stated amplifier power shall be 119dB. Dimensions: 385mm x 274mm x 286mm (15.2" x 10.8" x 11.3"). Net weight: 9.7kg (21.3lbs). The loudspeaker system shall be the Turbosound TCS-35. 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

