

TCS SERIES ENGINEERING INFORMATION

The TCS-56 is a passive full range two-way loudspeaker enclosure designed for use in primary speech and music sound reinforcement applications.

The loudspeaker complement consists of a custom front loaded 12" low frequency driver and a 1" high frequency compression driver on a 60° x 40° constant directivity horn, matched with an internal passive crossover network.

The large format constant directivity horn exhibits excellent pattern control down to crossover frequency, making the TCS-56 ideal for use in arrays.

The high frequency horn is designed to be removed and rotated through 90°, to suit

applications requiring a 60° x 40° dispersion in a horizontal box format.

The trapezoidal enclosure is constructed from 5/8" (15mm) birch plywood, and incorporates M10 threaded internal steel rigging brackets which are designed to accept standard eyebolts and optional Turbosound mounting hardware, providing a simple and convenient method of flying the cabinet.

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-40 downfill enclosure

TCS-108, TCS-215, TCS-118 subwoofer enclosures

LMS-D6, LMS-D4 loudspeaker management systems



FEATURES

Excellent pattern control

Rotatable HF horn

60° x 40° dispersion

High power handling

APPLICATIONS

FOH loudspeaker system

Houses of Worship

Corporate / industrial

DIMENSIONS (HxWxD)	700mm x 370mm x 389mm (27.6" x 14.6" x 15.3")
NET WEIGHT	22kgs (48.4lbs)
COMPONENTS	1 x custom 12" (305mm) LF driver, 1 x 1" (25mm) HF driver on a custom flare
FREQUENCY RESPONSE¹	60Hz - 20kHz ±4dB
NOMINAL DISPERSION²	60°H x 40°V@-6db points
POWER HANDLING	290 watts r.m.s., 580 watts program, 725 watts peak Recommended amplifier 580 watts @ 8 ohms
SENSITIVITY³	97dB 1 watt @ 1m
MAXIMUM SPL	125dB continuous ⁴ , 131dB peak ⁵
CROSSOVER	Internal passive crossover at 1k6Hz; 24dB/octave high pass, 12dB/octave low pass
NOMINAL IMPEDANCE	8 ohms
CONSTRUCTION	15mm (5/8") birch plywood; rebated, screwed 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	(9) M10 internal steel rigging points
OPTIONS	Optional colours: blue, white, raw birch plywood Rotatable HF horn
SPARES AND ACCESSORIES	LS-1213 12" (305mm) LF loudspeaker RC-1213 Recone kit for LS-1213 CD-107 1" (25mm) HF compression driver RD-107 Replacement diaphragm for CD-107 PX-56 Crossover assembly MG-50 Replacement perforated metal grille CB-100 Ceiling bracket WB-100 Wall bracket

Notes

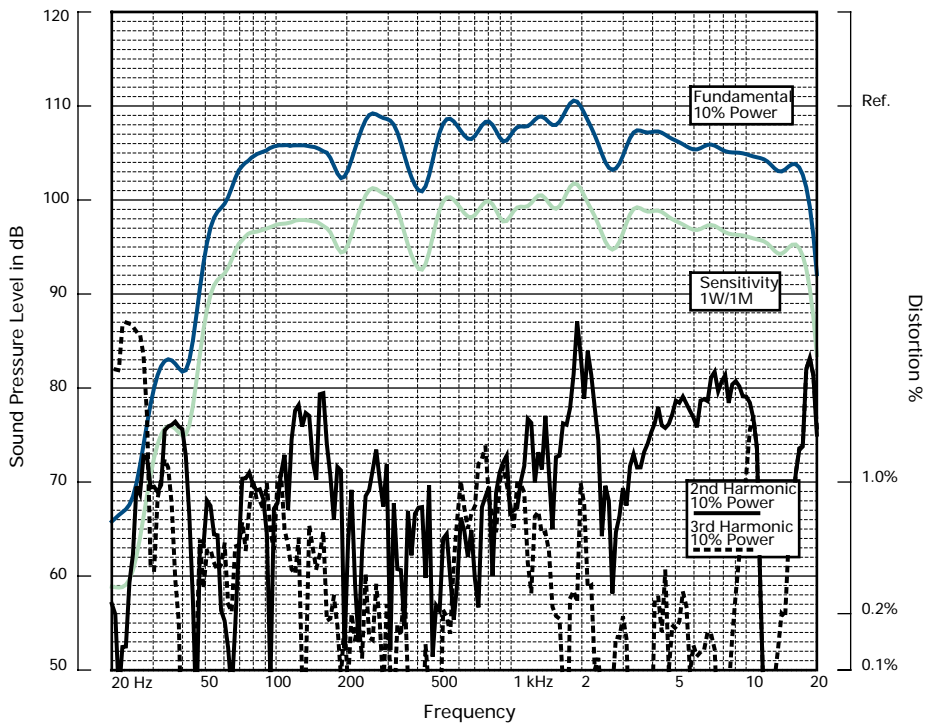
¹Measured on axis

²Average over stated bandwidth

³Average over stated bandwidth

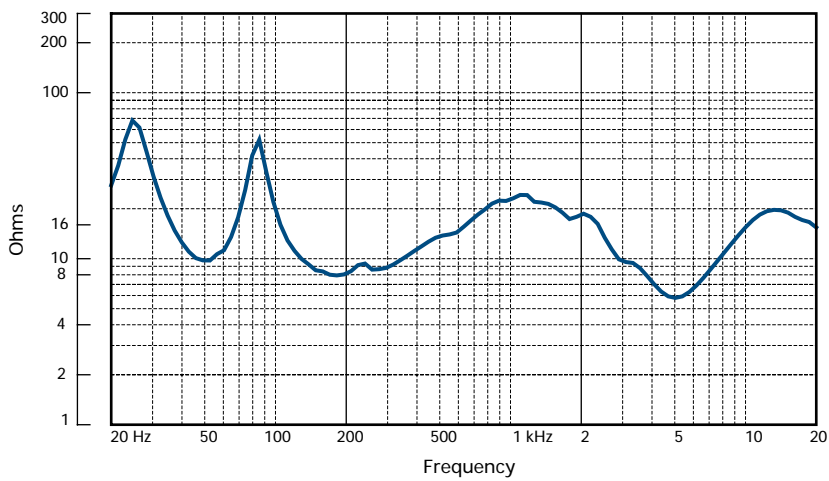
⁴Unweighted diode-clipped pink noise. Measured in a half space environment

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



FREQUENCY RESPONSE

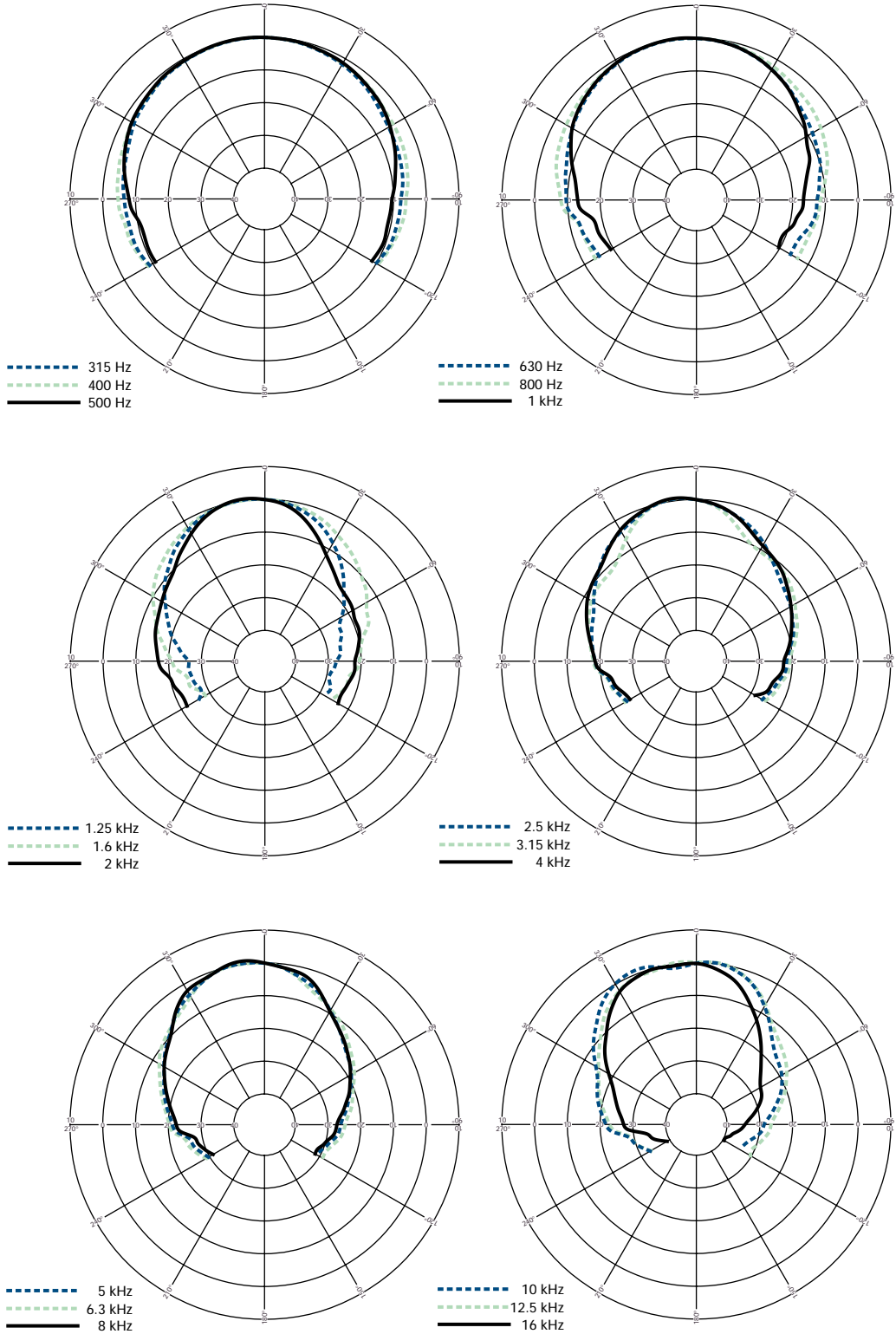
IMPEDANCE



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



VERTICAL THIRD OCTAVE POLARS

