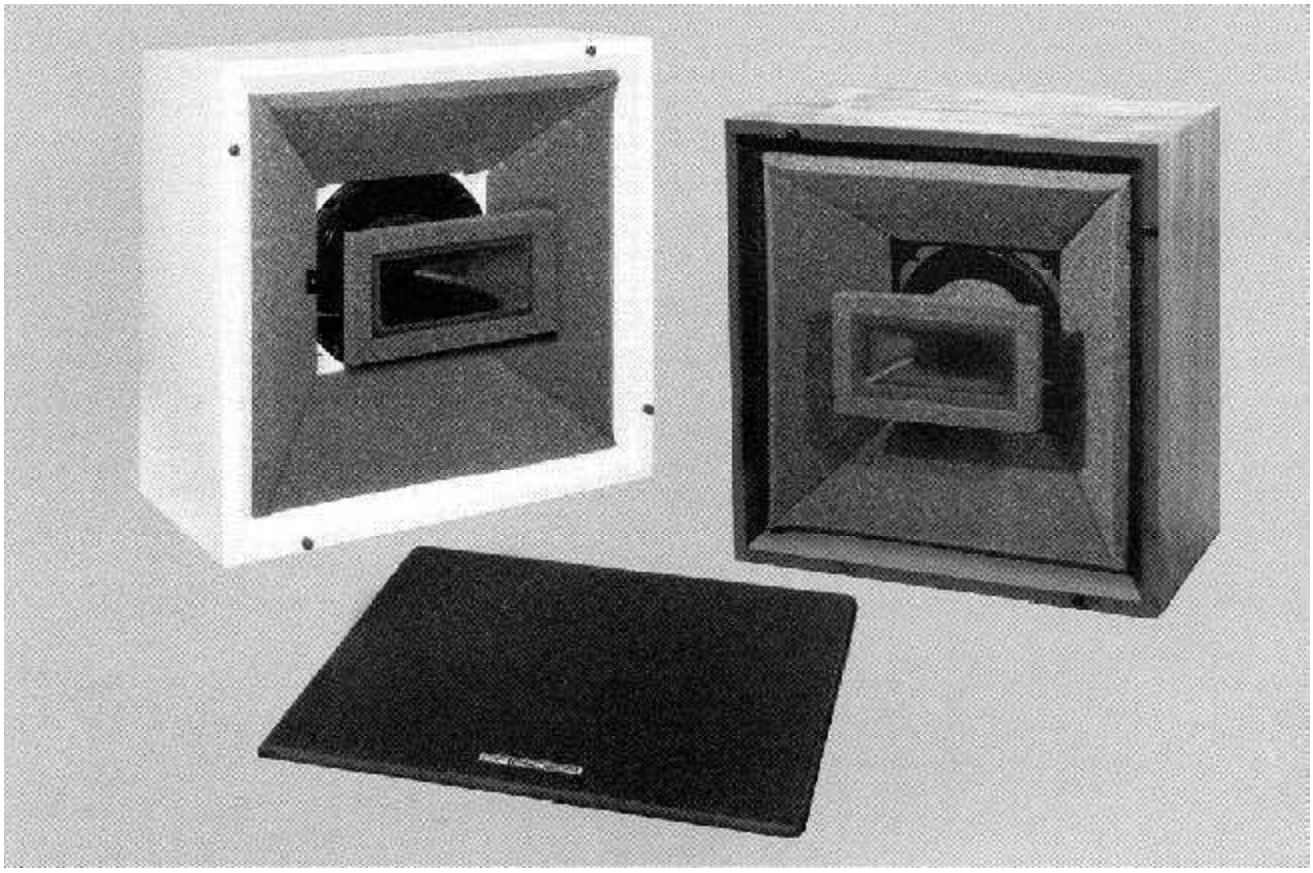
CAT™ 40



Features

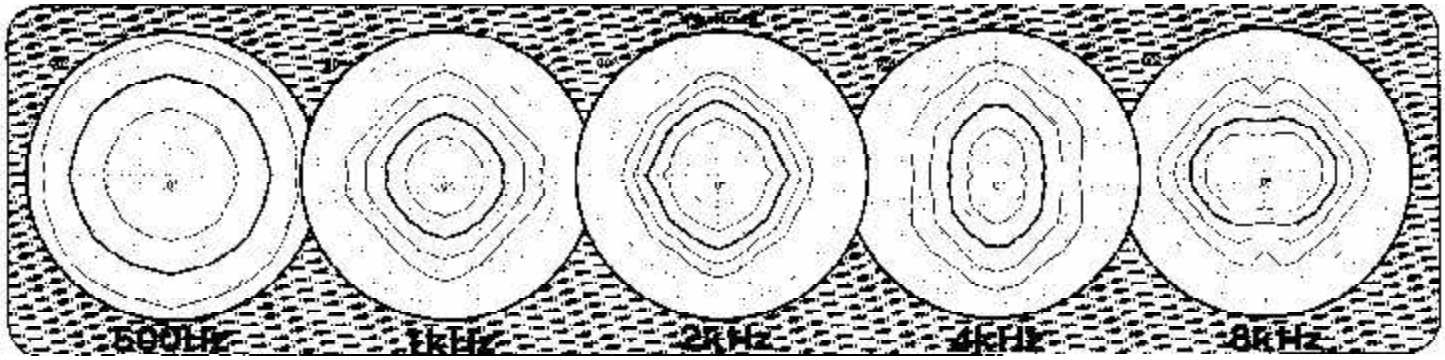
- ***Complete Full Range Loudspeaker***
- ***Controlled Directivity (90°x90°)***
- ***High Power Handling - 100 Watts A.E.S.***
- ***Ferrofluid Cooled High Frequency Voice Coil***

Factory Options

- ***Oak, Walnut, Carpet or White***
- ***Protective Metal Grille***
- ***Transformer***
- ***Ceiling Baffle***

The Frazier CAT 40 is designed for use in a broad range of demanding applications. The CAT 40 makes use of Coincident-Aligned Transducers in a compact system consisting of an eight inch heavy duty woofer in a conic horn-loaded bass reflex enclosure. A high frequency horn with ferrofluid cooled driver is mounted coaxially in front of the woofer. An internal passive network provides crossover, equalization and signal alignment, resulting in acoustic characteristics which are responsible for the CAT 40's real performance advantages: extremely flat amplitude response both on and off axis, uniform directional behavior, and point imaging. In addition, the rapid falloff beyond pattern provides excellent gain before feedback. The beamwidth of the low and high frequency sections is very closely matched throughout the crossover region, eliminating crossover dropout and lobing off axis. The directional behavior of the CAT 40 allows optimal interaction of multiple units when properly arrayed.

Octave Averaged Isobars



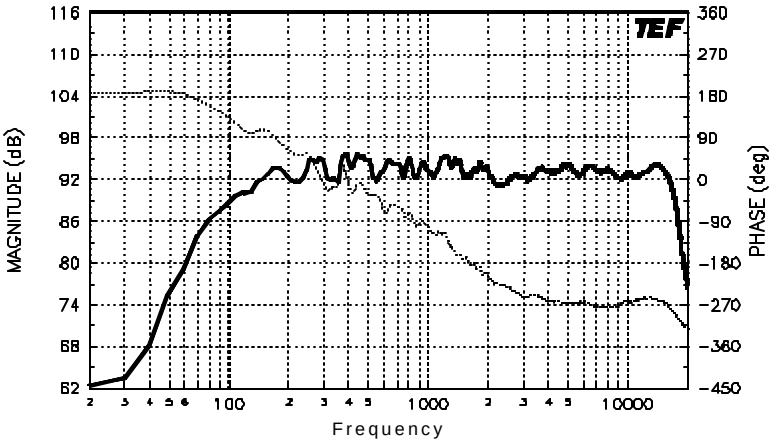
Note: Isobar in 3dB increments (6dB contour in bold); Concentric Grid 10 degrees per division

ARCHITECTS and ENGINEERS' SPECIFICATION

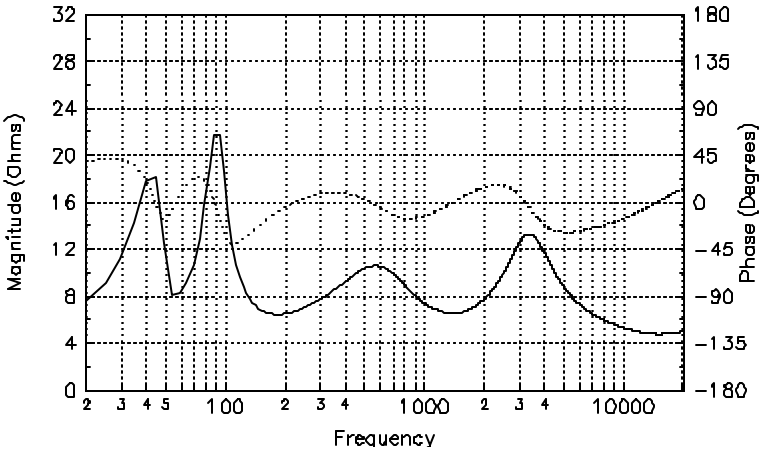
The loudspeaker shall be a coaxial system consisting of an eight in woofer assembled in a vented enclosure of optimum size and porting to produce a flat low frequency response to 70 Hz. The woofer assembly will also directly couple a conic horn section. A high frequency horn assembly consisting of a magnetic fluid cooled one inch dome type driver, is mounted inside the larger horn such that both are aligned. The system shall produce an amplitude response that is plus or minus 3 dB from flat in the frequency range of 70Hz to 17kHz. The off-axis amplitude response shall deviate by no more than plus or minus 5dB over the frequency range 70 Hz to 10kHz at any angle less than 45 degrees from the loudspeaker axis. The loudspeaker shall be capable of providing 112dB SPL at a distance of one meter with no more than 85 watts electrical input power. All enclosure walls shall be 5/8" MDF and all wall joints shall employ lock-miter joinery. The maximum dimensions shall be 17-5/8 inches by 17-5/8 inches by 8-7/8 inches in depth. Maximum weight shall be 34 pounds. The loudspeaker system shall be a Frazier CAT 40.

Power Considerations The power rating used for the CAT 40 is derived by direct experimentation as specified by the Audio Engineering Society (AES2-1984). Full bandwidth pink noise signal is filtered to match the device bandwidth. This signal is also processed by means of a clamping network to ensure a 2:1 (6dB) crest factor. The signal is applied to the loudspeaker for a 2 hour period. All appropriate parameters are checked after this exercise to ensure proper performance. The power rating is set as the upper limit of safe operation and is determined by evaluating the RMS voltage applied during the test and the minimum impedance of the loudspeaker. Thus, the power rating = V^2rms/Znom. This test is run on several production units to ensure valid representation of the product.

Frequency Response (1/6 octave smoothing)



Impedance vs Frequency



Specifications

System Type	Two-way Coaxial
Frequency Response	70Hz - 17kHz
Power Handling	100 Watts (AES)
Sensitivity (2.8v/1m)	95 dB SPL
Impedance (Nominal/Minimum)	8Ω/6.8Ω @ 83 Hz
DC Resistance	5Ω
Components	HF driver, LF driver
Internal Crossover Frequency	2kHz
Input Connection	Screw Terminal Cup
Weight	34 lb
Dimensions	17 -5/8" x 17-5/8" x 8-7/8"
Construction	Med Density Fiberboard
Finishes	Black or White Textured, Oak or Walnut Veneer, Antiscuff

Directivity (Octave Averaged)

Frequency	Coverage	Q
500Hz	120ºx120º	4.9
1kHz	75ºx80º	12.8
2kHz	90ºx90º	10.9
4kHz	60ºx90º	12.8
8kHz	94ºx62º	11.4

Model Numbers

CAT 40 - Black	F1480
CAT 40 - White	F1482
CAT 40 - Oak	F1483
CAT 40 - Walnut	F1484
CAT 40 - Antiscuff	F1485

Drawings and additional data available on request.

CAT40

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