

FRAZIER

CAT™ 59/594

Applications

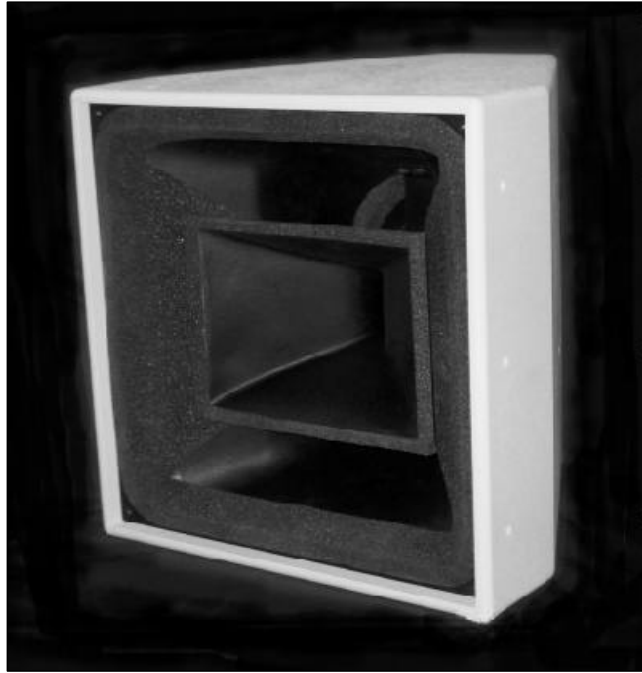
- Arenas
- Stadium Sound Systems
- Houses of Worship
- Performing Arts Theaters
- Music Reinforcement
- Auditoriums

Features

- **Controlled Directivity**(90° x 40° nom.)
- **Sensitivity** - 102/103 dB 1W/1M
- **Bandwidth** - 150Hz-15kHz
- **Power Handling** - 250/500 Watts Pink Noise
- **Production Units** 100% TEF tested

Factory Options

- **Finishes:** Black, White, Outdoor
- **Flying Systems:** Internal braced hard points linked by hardened through rods
- **Higher Power Version (CAT 594)**
- **Complementary LF System (F2510)**



Speaker shown with standard cloth grille removed.

Versatility

The Frazier CAT 59/594 are compact controlled-directivity loudspeakers capable of high acoustic output with relatively little amplifier power. The CAT 59/594 offer compelling performance and packaging benefits, making them extraordinarily versatile sound reinforcement loudspeakers.

CAT Technology, Frazier Quality

The packaging of the CAT 59/594 is the result of discussions with sound system designers and installers worldwide. Computer-aided modeling, design, and testing, combined with critical listening, were all brought to bear in the development process, and the products have developed an impressive track record in critical applications.

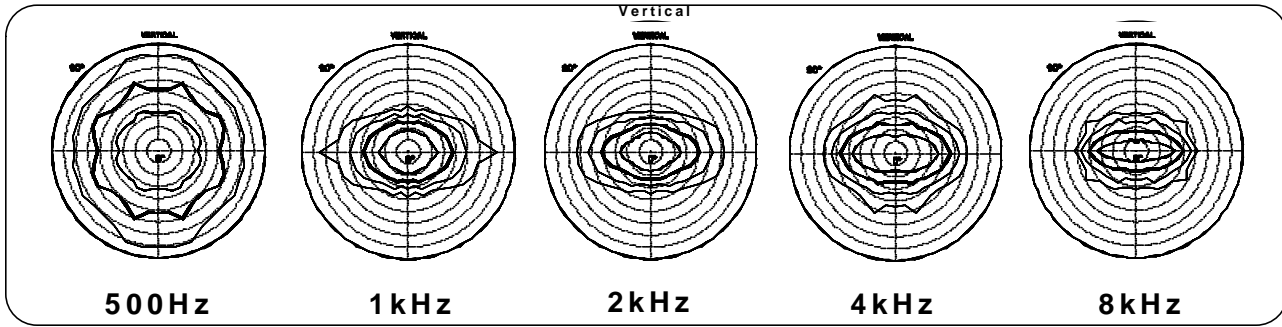
Low and high frequency output from the CAT 595/94 combine acoustically as if radiating from a single device (**Coincident Aligned Transducers**) resulting in a crossover transition that is inaudible and

undetectable at any angle, including on-axis. Benefits of the acoustic performance of the CAT 59/594 include high quality sound to all seats in the coverage area, minimum excitation of the reverberant field, and maximum gain before feedback. TEF[®] testing of every production unit - a Frazier exclusive - is your assurance of product compliance with published specifications.

Package Design

The shape of the CAT 59/594 enclosure minimizes the visual size of the loudspeaker when used singly and reduces the total size of arrays. An available outdoor version is housed entirely in fiberglass and includes standard steel mounting brackets. A low frequency system in a matching package, the F2510, is available. This system may be factory-built into a common enclosure with a CAT 59/594. The CAT 59/594 may also be used with the Frazier F2610 or F2410 subwoofers with excellent results.

Octave Averaged Isobars



Note: Isobars are in 3dB increments (6dB contours in bold); concentric grid is 10 degrees per division.

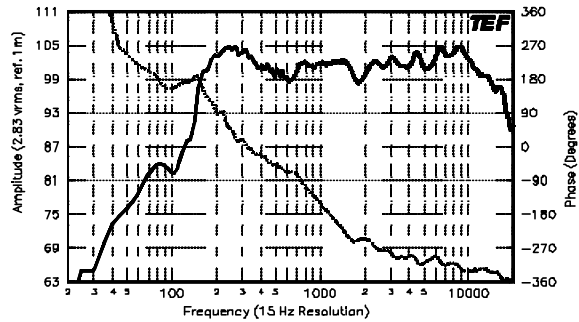
ARCHITECTS' and ENGINEERS' SPECIFICATION

The loudspeaker shall be a two way coaxial system. The low frequency section shall consist of one 10" (254 mm) woofer in an acoustic suspension enclosure driving a constant directivity horn. The high frequency section shall consist of a constant directivity horn driven by compression driver with a 1.75" (44.5mm) {3" (76mm)} voice coil. Low and high frequency sections shall be in temporal alignment throughout the coverage pattern without the use of any device external to the loudspeaker. A passive network shall be installed inside the housing and shall provide element-specific signal treatment and crossover filtering. The system amplitude response shall be within plus or minus 3.5 dB of flat from 150 Hz to 15 kHz on axis. Octave averaged coverage angles (-6 dB relative to on axis levels) shall be 80° horizontal (+14°/-26°), 43° vertical (+3°/-3°) from 1kHz-20kHz; and 80 degrees horizontal (+16°/-26°), 50 degrees vertical (+46°/-11°) from 500 Hz-16kHz. Maximum output capability shall be 123dB (127) continuous SPL at a distance of 1 meter with no more than 250 (500) watts electrical input power. Maximum weight shall be 80 lbs. (36kg) {85 lbs. (39 kg)}, and maximum dimensions shall be 22" x 22" x 21" (559mm x 559mm x 533mm). The loudspeaker shall be the Frazier CAT 59 (CAT 594).

Power Considerations - The power ratings used for Frazier products are derived as specified by the AES (AES2-1984). A pink noise signal is clipped to a 2:1 (6dB) peak/RMS ratio and filtered with with low and high pass filters matched to the device bandwidth. This 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 nominal impedance of the loudspeaker. Thus, the power rating = V^2_{rms}/Z_{nom} . This test is run on several production units as a final validation of the rating.

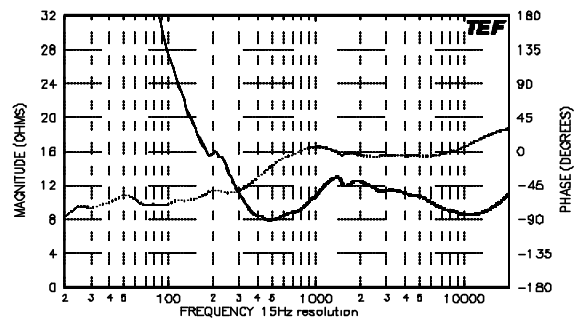
Frequency Response

(CAT 59, 1/6 octave smoothing)



Impedance vs Frequency

(CAT59)



CAT 59 (CAT 594) Specifications

Bandwidth	150Hz-15kHz +/- 3.5dB
Power Handling	250(500)Watts
Sensitivity (2.83vrms/1m)	100(102)dB SPL
Impedance (Nom./Min.)	8Ω/8.1Ω
Transducers: LF	1 ea. 10"(254mm) LF
HF	1 ea. 1.75"(44.5mm) {3" (76mm)} VC
Crossover Frequency	1600Hz
Input Connection	Barrier Terminal Strip
Weight	80lb (36kg) {85lb (39kg)}
Dimensions	21-3/4"H x 21-3/4"W x 20-3/8"D (552mm x 552mm x 518mm)
Construction	GRPhorn with GRP rear housing (outdoor version) or MDF enclosure
Finishes	Black, White, Outdoor

Directivity (Octave Averaged)

Frequency	Coverage (H x V)	Q
250Hz	153°x150°	2.9
500Hz	96°x84°	6.0
1kHz	64°x 46°	17.0
2kHz	77°x39°	19.1
4kHz	94°x39°	14.8
8kHz	80°x49°	26.9

Model Numbers

Black Textured Finish	F1590 (F15940)
White Textured Finish	F1592 (F15942)
Outdoor Version	F1591 (F15941)

Visit <http://www.frazierspeakers.com> acoustic modeling data and mechanical drawing files.

Specifications are subject to change without notice.

CAT59

Form 59R497

FRAZIER

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