

# FRAZIER

## CF499 Full Range System

### *Preliminary Data Sheet*

#### **Applications**

- *Hotel Ballrooms*
- *Convention Centers*
- *Music Reinforcement*
- *Auditoriums*
- *Room Enhancement Systems*

#### **Features**

- *Controlled Directivity (110° conic)*
- *Sensitivity - 97 dB 1W/1M*
- *Bandwidth - 50Hz-15kHz*
- *Power Handling - 300 Watts Pink Noise*
- *Production Units 100% TEF<sup>®</sup> tested*

#### **Options**

- *Multipoint Suspension Systems*
- *Weather Resistant Housing*



*Shown with standard cloth grille removed*

#### ***Building on a Proven Design***

The Frazier CF499 is a general purpose high output three way loudspeaker. Derived from the industry-standard CAT 40 via its more recent CAT 499 variant, the CF499 offers the same excellent directivity and response behavior while adding low frequency bandwidth and output capacity.

#### ***Optimized Directivity***

The CF499 is unique in its use of horns for mid and high frequency sections. This feature is essential in maintaining the desired directivity behavior over the widest possible range of frequencies. The HF horn incorporates a new multitransitional shape that eliminates high-frequency beaming. This horn shape causes no off-axis loss of high frequencies or crossover-range response suckouts common to alternative devices. Systems using the CF499 will generate musical, intelligible full range sound over their entire coverage area.

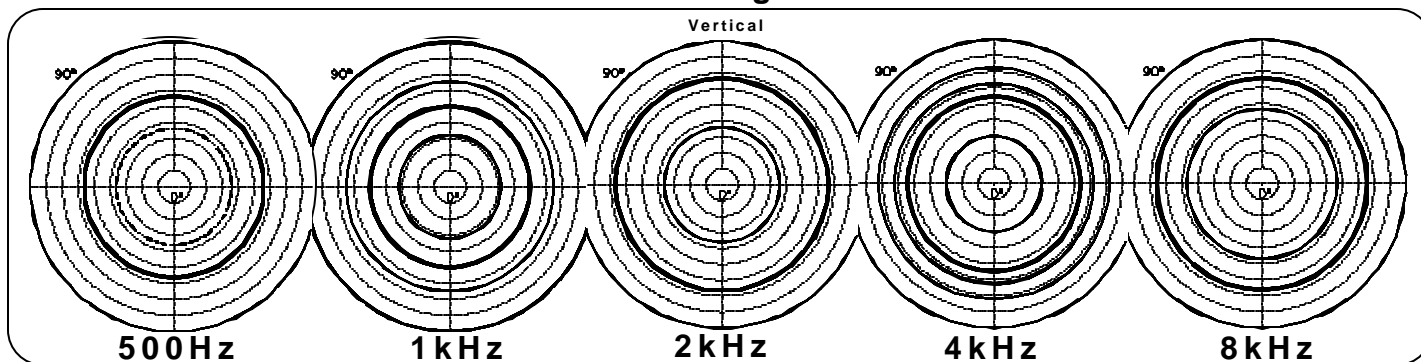
#### ***Coincident Performance***

As with all Frazier coincident loudspeakers, the mid and high frequency sections of the CF599 behave acoustically as a single device, resulting in a crossover transition that is seamless at any angle. The ability to faithfully reproduce complex transient signals enhances both intelligibility and musicality. Every unit is TEF<sup>®</sup> tested before shipment, a Frazier exclusive.

#### ***Maximum Utility***

The CF499 is an outstanding choice for front fill, side fill, distributed, and ambience recovery sound systems. Its combination of broad coverage, vivid transient response, wide bandwidth, and high maximum acoustic output are unmatched among alternative devices.

## Octave Averaged Isobars



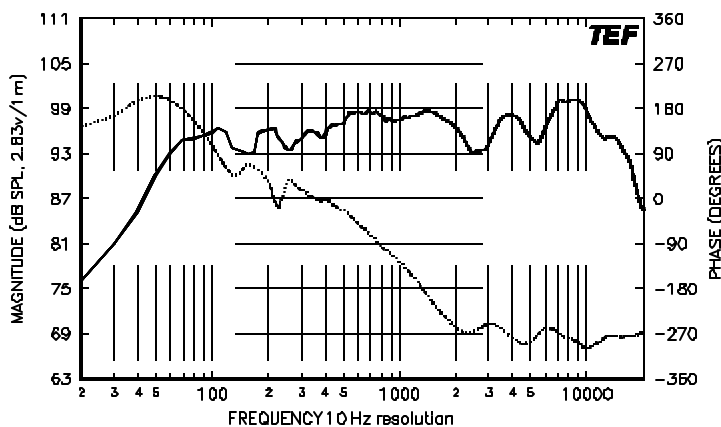
Note: Isobars are in 3dB increments (6dB contours in bold); concentric grid is 10 degrees per division.

### ARCHITECTS' and ENGINEERS' SPECIFICATION

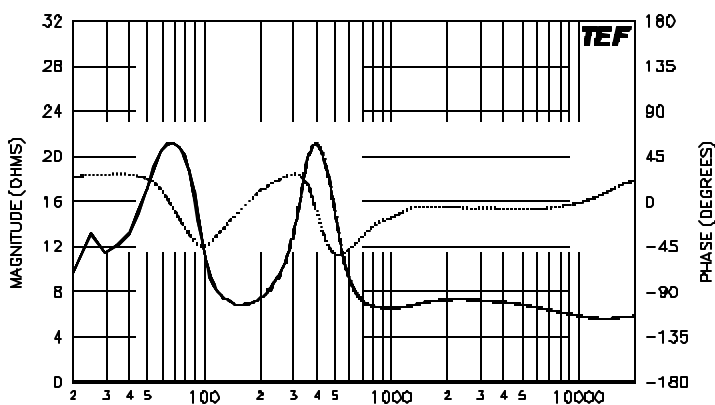
The loudspeaker shall be a three way system with the middle and high frequency components forming a coaxial subsystem. The low frequency section shall comprise a 12" (305mm) woofer. The mid frequency section shall consist of one 8" (203 mm) driver driving a conic directivity horn. The high frequency section shall consist of a conic directivity horn driven by a 1" (25mm) throat, ferrofluid cooled, compression driver. Mid and high frequency signal arrivals shall be in temporal alignment throughout the coverage pattern without the use of any device external to the loudspeaker. An included passive network 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 50 Hz to 15 kHz on axis. Octave averaged coverage angles (-6 dB relative to on axis levels) shall be 118° conic (+18°/-18°) from 500 Hz-16kHz. The loudspeaker shall be capable of producing 122dB continuous SPL at a distance of 1 meter with no more than 300 watts electrical input power. Maximum weight shall be 120 lbs. (54.5kg) and maximum dimensions shall be 17 5/8" wide (387mm) by 33 5/8" tall (880mm) 12" deep (387mm x 305mm). The loudspeaker shall be the Frazier CF599.

**Power Considerations** - The power rating used for the CF499 is 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 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 (1/6 octave smoothing)



### Impedance vs Frequency



### Specifications

<b>Bandwidth</b>	50Hz-15kHz +/- 3.5 dB
<b>Power Handling</b>	350 Watts (See Above)
<b>Sensitivity</b> (2.83vrms/1m)	97 dB SPL
<b>Impedance</b> (Nom./Min.)	8Ω/5.6Ω
<b>Transducers</b>	1 ea. 8"(203mm) MF, 1 ea. 1"(25mm) HF driver, ferrofluid cooled 1 ea. 12" (305mm) LF
<b>Crossover Frequencies</b>	200Hz, 1700 Hz
<b>Input Connection</b>	Recessed Barrier Strip, Neutrik Speakon optional
<b>Weight</b>	102lb (46.4 kg)
<b>Dimensions</b>	17 5/8" (387mm) x 33 5/8" (880mm) x 12" (203mm)D
<b>Construction</b>	(Indoor) MDF panels, GRP horns; (Outdoor) marine plywood panels, GRP

horns

Frequency	Directivity (Octave Averaged) Coverage (H x V)	Q
500Hz	115° Conic	4.5
1kHz	100° Conic	6.9
2kHz	135° Conic	5.1
4kHz	110° Conic	8.7
8kHz	135° Conic	4.7

### Ordering Information

Finish	Part Number
Black	F14990
White	F14592
Weather Resistant	F14991

Call for .dxf CAD files and mechanical drawings.  
Specifications are subject to change without notice.

# CF499

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