

# S P E C I F I C A T I O N S



## IMPULSE™ 1580

### Full-Range, Two-Way Enclosure

## SPECIFICATIONS

**Frequency Response, 1 meter, on-axis, swept sine in anechoic environment:**

55 Hz to 19 kHz

**Low-Frequency Cut-Off (-3 dB point):**

55 Hz

**Usable Low-Frequency Limit (-10 dB point):**

47 Hz

**Power Handling:**

300 W continuous (48.9 V RMS)  
600 W program  
1200 W Peak

**Sound Pressure Level, 2.83 V (1 watt) • 1 meter in anechoic environment:**

99 dB

**Maximum Sound Pressure Level:**

122 dB

**Radiation Angle Measured at -6 dB Point of Polar Response:**

500 Hz to 1.6 kHz:

Horizontal: 98° ±18°

Vertical: 90° ±10°

1.6 kHz to 5 kHz:

Horizontal: 76° ±9°

Vertical: 62° ±16°

5 kHz to 16 kHz:

Horizontal: 63° ±17°

Vertical: 39° ±5°

**Directivity Factor, Q (Mean):**

8.5

**Directivity Index, D (Mean)**

9.3 dB

**Transducer Complement:**

One 1505-8 DT Black Widow® woofer  
One 44T™ driver coupled to a CH™-5 constant-directivity horn

**Box Tuning Frequency:**

54 Hz

**Harmonic Distortion:**

1/100 rated power

2nd harmonic:

100 Hz, 0.8%

1 kHz, 0.16%

3rd harmonic:

100 Hz, 0.28%

1 kHz, 0.19%

1/10 rated power

2nd harmonic:

100 Hz, 2.5%

1 kHz, 0.35%

3rd harmonic:

100 Hz, 3.1%

1 kHz, 0.4%

**Input Connections:**

Five-position barrier strip

**Impedance:**

8 ohms (nominal)

5.9 ohms (minimum)

**Crossover Frequency:**

800 Hz

**Enclosure Materials & Finish:**

Painted Finish: *(illustrated)*

3/4" 7-ply Poplar-faced, high-density plywood, gray lacquer paint finish, black grille

Natural Finish:

18 mm 13-ply Baltic Birch, void-free plywood, (ready for finish of user's choice), white grille

**Dimensions (H x W x D):**

29 1/2" H x 21 1/2" W x 17 1/2" D

**Net Weight:**

108 lbs.

## FEATURES

- High power handling
- Metal guard grille
- Integral flying brackets
- 44T Titanium dome compression driver
- 80° x 40° Constant-directivity horn
- 1505-8 DT™ Black Widow® Woofer
- 800 Hz crossover point

## DESCRIPTION

The new Impulse™ 1580 is a full-range, two-way enclosure designed specifically for permanent installation. The cabinet is constructed of 3/4" plywood with 10-gauge steel bracing, permanently attached to the baffle to provide component protection and cosmetic appeal. The two-way system is comprised of a 15-inch, low-frequency driver and a compression driver loaded into a constant-directivity horn supplying the mid and high



frequencies. The frequency spectrum is divided by a two-way passive crossover giving the system a smooth frequency response from 55 Hz out to 19 kHz. As requested by professional sound installers, the Impulse™ 1580 incorporates a terminal strip to facilitate secure lead connection.

### DIRECTIVITY

Beamwidth and directivity factors are derived from the -6 dB points from the polar plots, which are measured in a whole-space anechoic environment. These are specifications which provide a reference to the coverage characteristics of the enclosure. These parameters provide insight for proper enclosure placement and installation in the chosen environment. The Impulse™ 1580 exhibits a desirable beamwidth and directivity factor suitable for all high-level sound reinforcement applications.

### FREQUENCY RESPONSE

This measurement is useful in determining how accurately a given enclosure reproduces an input signal. The frequency response of the Impulse™ 1580 is measured at 1 meter using a 2.83-volt swept sine input. As shown in Figure 1, the selected drivers in the Impulse™ 1580 combine to give a smooth frequency response from 55 Hz to 19 kHz.

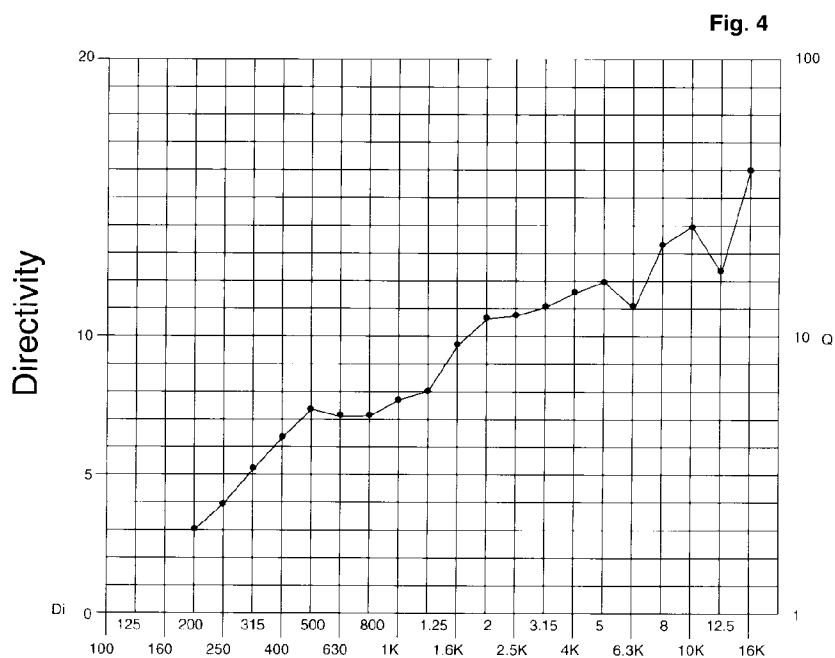
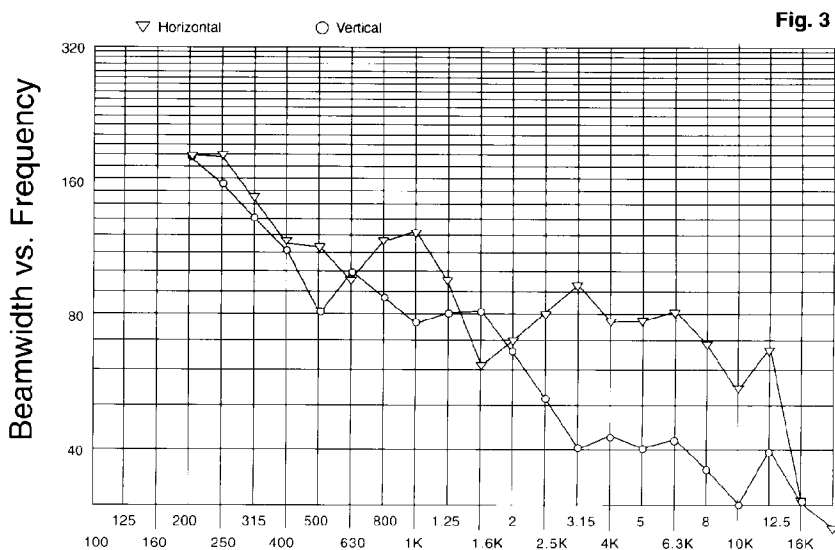
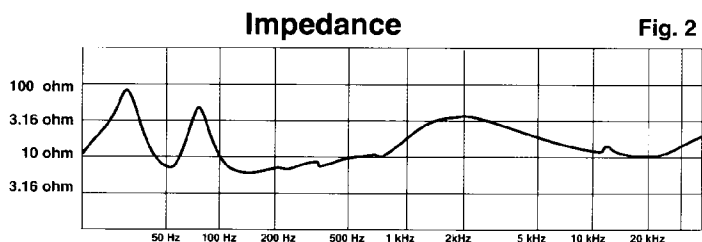
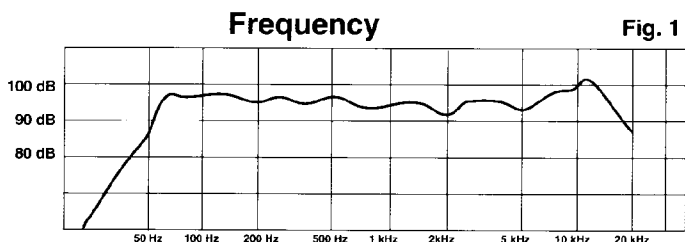
### POWER HANDLING

There are many different approaches to power-handling ratings. Peavey rates this speaker system's power handling using a modified form of the AES Standard 2-1984. Utilizing audio band (20 Hz to 20 kHz) pink noise with peaks over four times the RMS level, this strenuous test signal assures the user that every portion of this system can withstand today's high-technology music. The test signal contains large amounts of very low-frequency energy, effectively simulating the frequency content of live music situations. The full measure of high frequencies in the test signal allow for exposure of the speaker system to synthesized tones that may extend beyond audibility. This rating is contingent on having a minimum 3 dB of amplifier headroom available.

### MOUNTING

8 flying points, 1/2"-13 thread

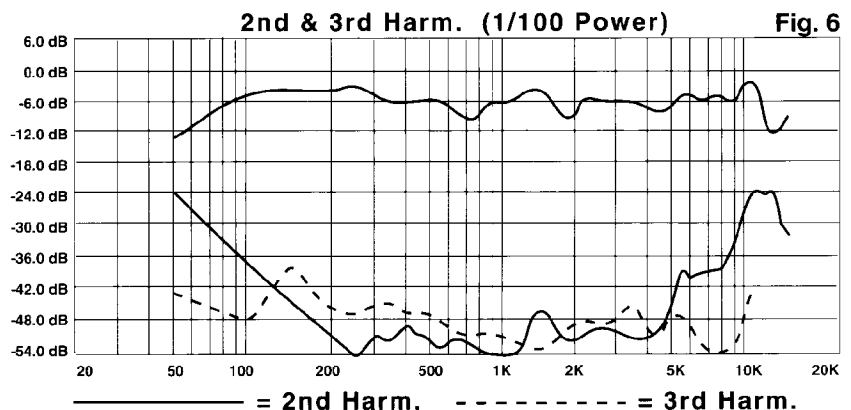
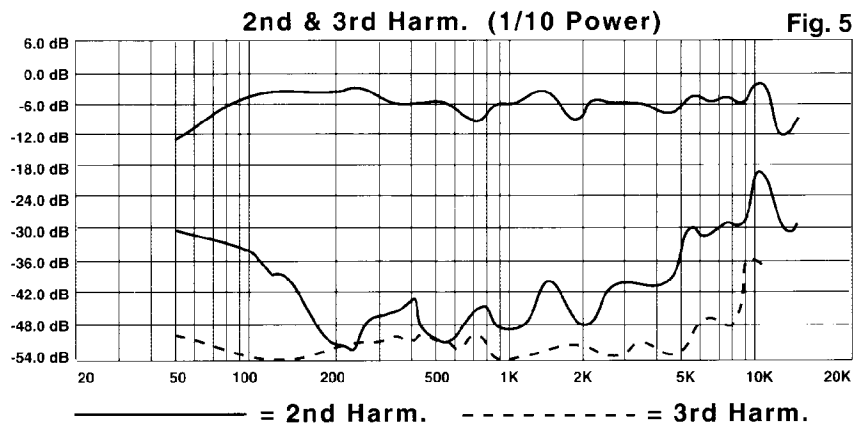
**CAUTION:** Before attempting to suspend this speaker, consult a certified structural engineer. Speaker can fall from improper suspension, resulting in



serious injury and property damage. Other enclosures may be suspended below one Impulse™ 1580. However, the combined weight of additional enclosures and all cables, clamps, and other hardware must not exceed 117 pounds. The Impulse™ 1580 weighs 104 pounds and the maximum combined weight suspended from the uppermost mounting bracket assemblies must not exceed 225 pounds. Maximum enclosure angle 45°. Use only 1/2" forged shoulder machinery eye bolt mil spec MS 51937-5. All associated rigging is the responsibility of others.

## ARCHITECTURAL & ENGINEERING SPECIFICATIONS

The loudspeaker system shall have an operating bandwidth of 55 Hz to 19 kHz. The output level shall be 99 dB when measured at a distance of one meter with an input of one watt. The nominal impedance shall be 8 ohms. The continuous power handling shall be 300 watts, with maximum program power of 600 watts and minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 80 degrees in the horizontal plane and 40 degrees in the vertical plane. The outside dimensions shall be 21-1/2 inches wide-front (14-1/4 inches wide-rear) by 29-1/2 inches high by 17-1/2 inches deep. The weight shall be 104 lbs. The loudspeaker system shall be a Peavey model Impulse™ 1580.



## LIMITED WARRANTY

Peavey Electronics Corporation warrants to the original purchaser of this new Architectural Acoustics product that it is free from defects in material and workmanship. If within one (1) year from date of purchase a properly installed product proves to be defective and Peavey is notified, Peavey will repair or replace it at no charge. (Note: Batteries and patch cords not covered.) "Original purchaser" means the customer for whom the product is originally installed.

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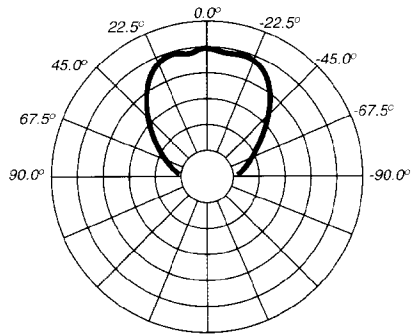
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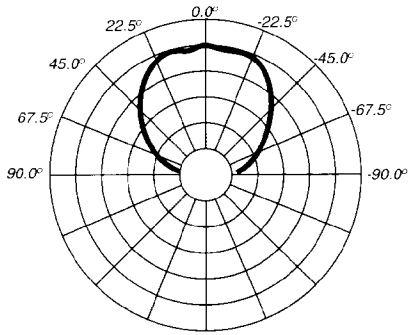


# HORIZONTAL POLAR PATTERNS

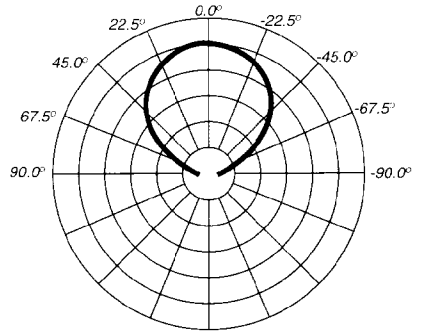
6 dB per division



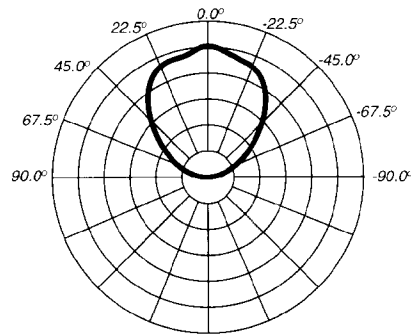
4 kHz \_\_\_\_\_



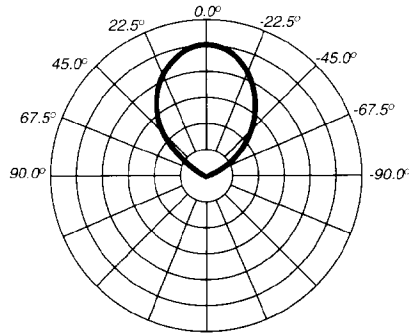
5 kHz \_\_\_\_\_



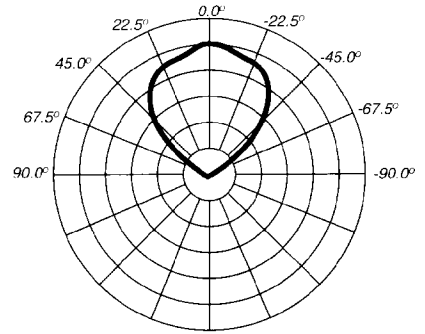
6.3 kHz \_\_\_\_\_



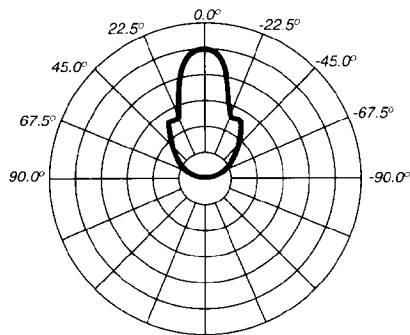
8 kHz \_\_\_\_\_



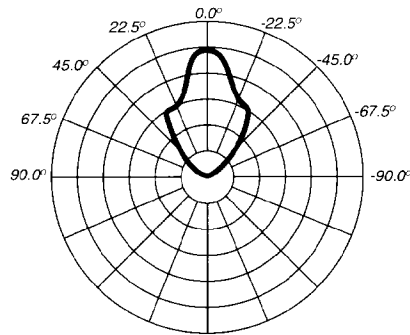
10 kHz \_\_\_\_\_



12.5 kHz \_\_\_\_\_



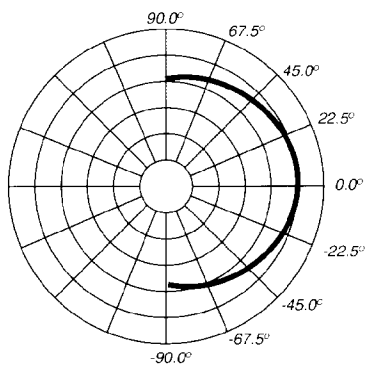
16 kHz \_\_\_\_\_



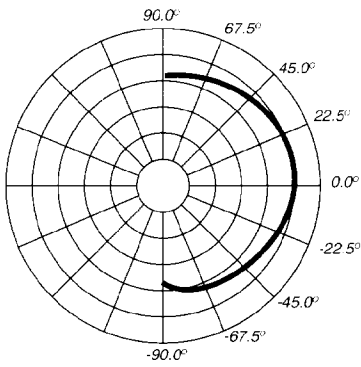
20 kHz \_\_\_\_\_

# VERTICAL POLAR PATTERNS

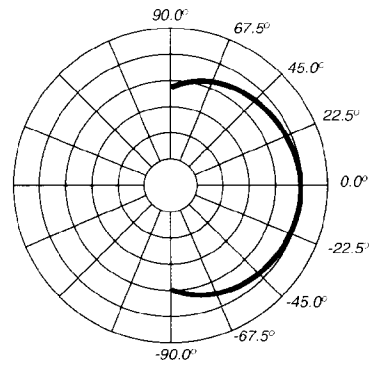
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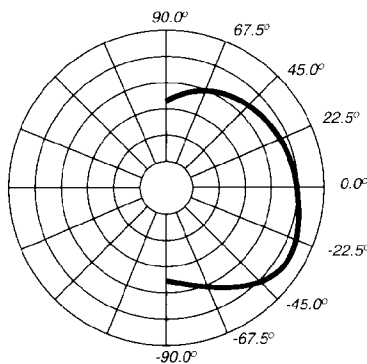
250 Hz \_\_\_\_\_



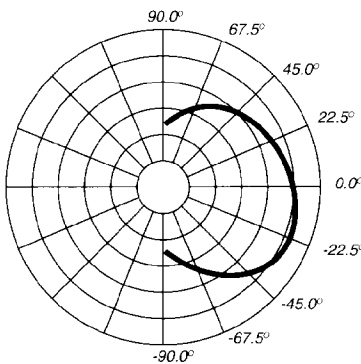
315 Hz \_\_\_\_\_



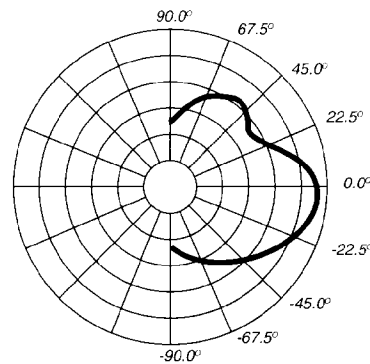
400 Hz \_\_\_\_\_



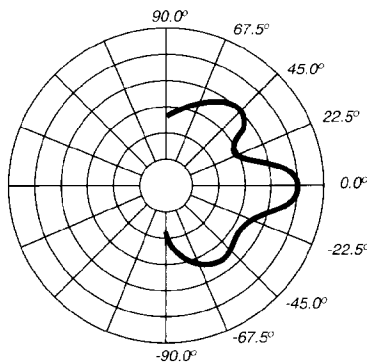
500 Hz \_\_\_\_\_



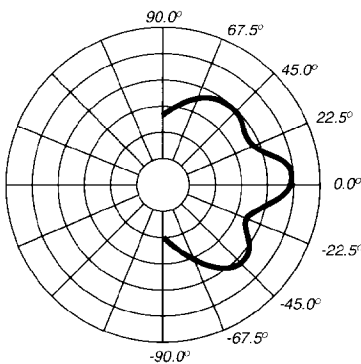
630 Hz \_\_\_\_\_



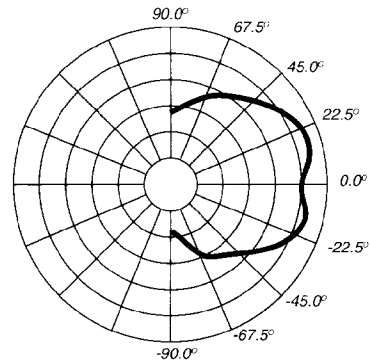
800 Hz \_\_\_\_\_



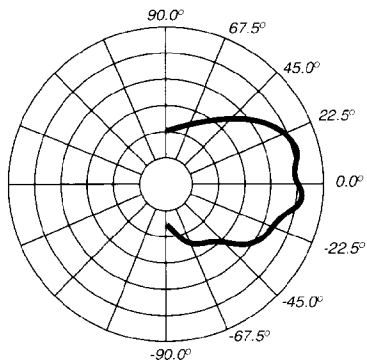
1 kHz \_\_\_\_\_



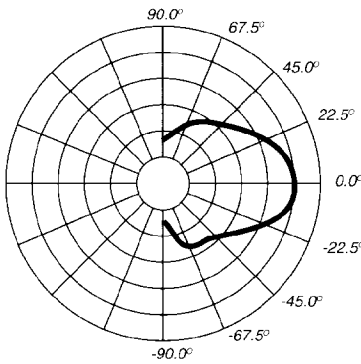
1.25 kHz \_\_\_\_\_



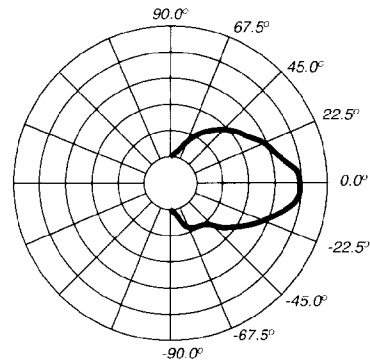
1.6 kHz \_\_\_\_\_



2 kHz \_\_\_\_\_



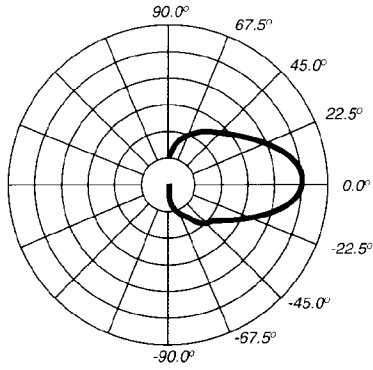
2.5 kHz \_\_\_\_\_



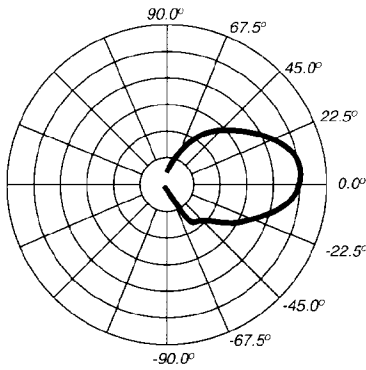
3.15 kHz \_\_\_\_\_

# VERTICAL POLAR PATTERNS

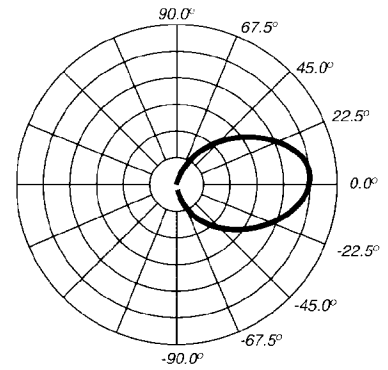
6 dB per division



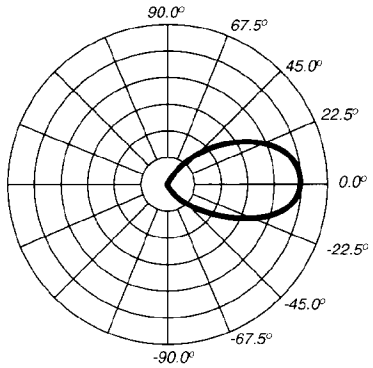
4 kHz



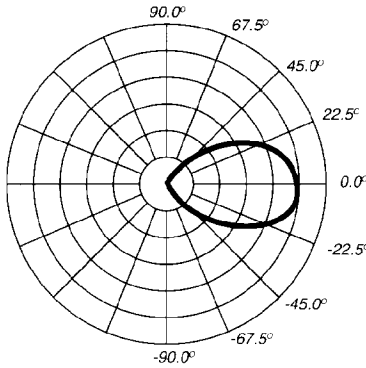
5 kHz



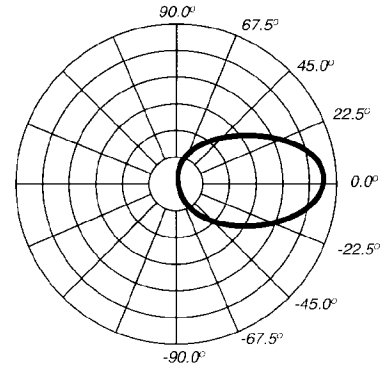
6.3 kHz



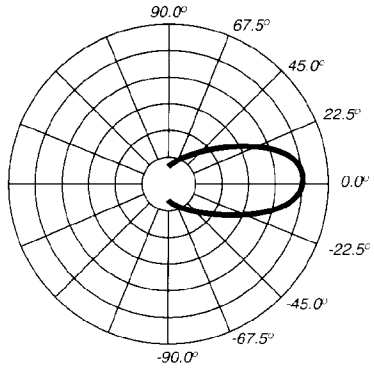
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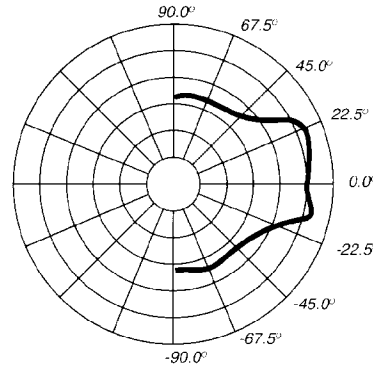
10 kHz



12.5 kHz



16 kHz



20 kHz

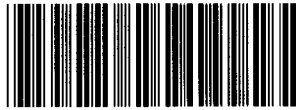
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