

**PEAVEY**<sup>®</sup>  
ARCHITECTURAL ACOUSTICS<sup>®</sup>

## **A/A 9040-1<sup>™</sup>** **Constant** **Directivity Horn**

### **SPECIFICATIONS**

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##### **FREQUENCY RESPONSE:**

##### **1 Meter On-Axis in Anechoic Environment**

500 Hz - 16 kHz  $\pm 3$  dB with appropriate equalization  
(Measured using AA 2000T<sup>™</sup> compression driver)

##### **RADIATION ANGLE;**

##### **-6 dB Point of Polar Response**

##### **500 - 1,600 Hz**

Horizontal  $92.5^\circ \pm 7.5^\circ$

Vertical  $83.3^\circ \pm 10^\circ$

##### **1.6 - 5 kHz**

Horizontal  $91.7^\circ \pm 5^\circ$

Vertical  $50^\circ \pm 10^\circ$

##### **5 - 16 kHz**

Horizontal  $91^\circ \pm 5^\circ$

Vertical  $38^\circ \pm 5^\circ$

##### **DIRECTIVITY FACTOR, Q (MEDIAN)**

10.0, +6.6, -4.5

##### **DIRECTIVITY INDEX, Di (MEDIAN)**

10.0 dB, +2.2 dB, -2.6 dB

##### **RECOMMENDED CROSSOVER:**

500 Hz, 12 dB/octave minimum

##### **DIMENSIONS & WEIGHT:**

14.5" (36.8 cm) H x 28.375"  
(72.1 cm) W x 17.875" (45.4 cm) D  
11 lbs. (24.2 kg)

##### **FEATURES:**

- **Constant Directivity**
- **Radial Mouth Geometry**
- **1" Throat**
- **Short-to-Medium Throw**

#### **DESCRIPTION:**

The A/A 9040-1<sup>™</sup> is a constant directivity horn with a nominal beamwidth of  $90^\circ$  horizontal by  $45^\circ$  vertical with a designed low frequency cut-off of 500 Hz. Radial mouth geometry is utilized for precise distribution of sonic energy while maintaining uniform response characteristics. Secondary horn flaring is incorporated into this unit to prevent mid-range narrowing and high frequency lobing.

The A/A 9040-1 is a short-to-medium throw, one inch throat device which exhibits a well controlled dispersion pattern over its entire operating bandwidth. The AA 2000T<sup>™</sup> will mount directly onto the A/A 9040-1, ensuring performance and reliability.

**FREQUENCY RESPONSE**

The frequency response of the A/A 9040-1™ is measured in an anechoic environment at a distance of one meter while using a 2.82 volt swept sine input. This measurement is useful in determining the accuracy in which the enclosure reproduces the input signal. The combination of the low frequency loudspeaker and the constant directivity horn results in a flat response as shown in Figure 1.

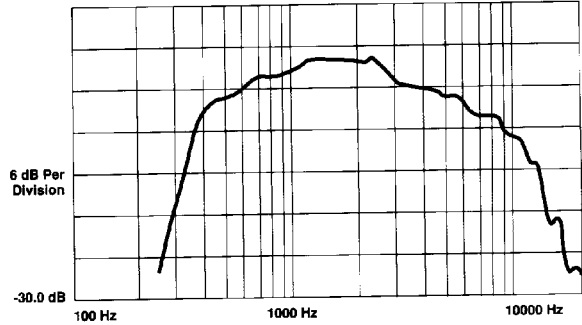


Figure 1. FREQUENCY RESPONSE

**DIRECTIVITY**

Beamwidth and directivity factors are derived from the -6 dB points from the polar plots (see figure 4) 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 speaker placement and installation in the chosen environment. The blending of the components exhibits a desirable beamwidth and directivity factor (Figures 2 and 3) suitable for all permanent installations.

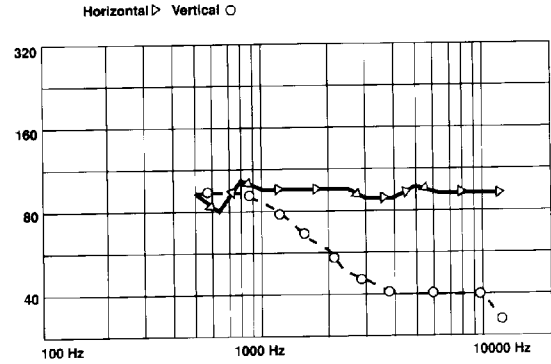


Figure 2. BEAMWIDTH VS. FREQUENCY

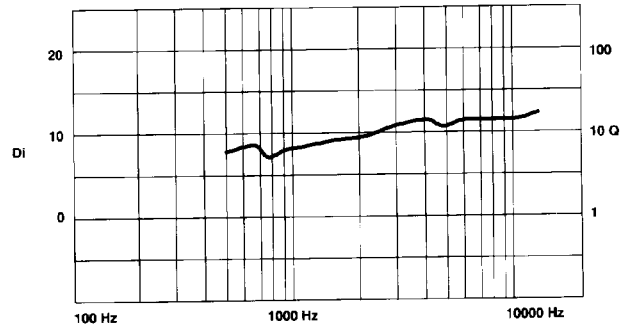
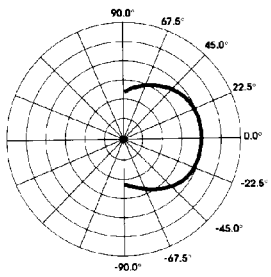


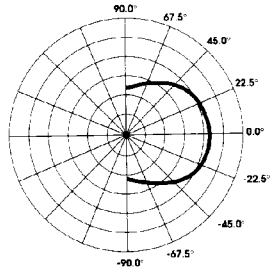
Figure 3. DIRECTIVITY



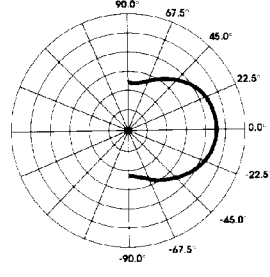
Vertical



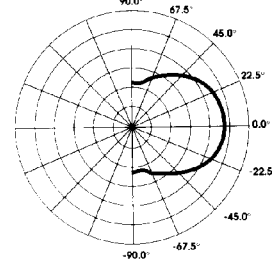
500 Hz



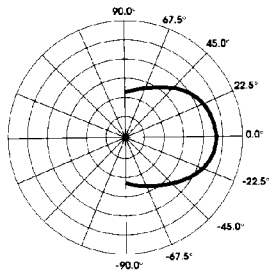
630 Hz



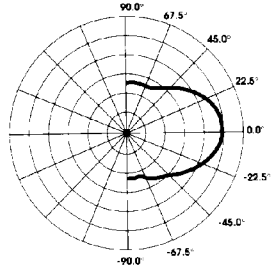
800 Hz



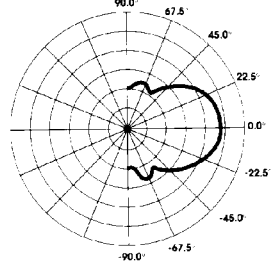
1 kHz



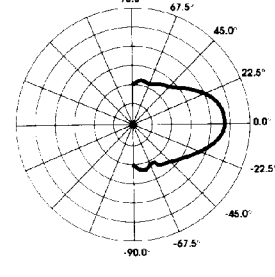
1.25 kHz



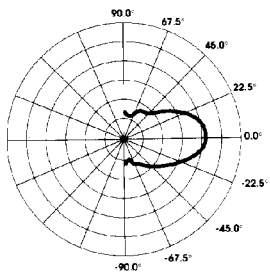
1.6 kHz



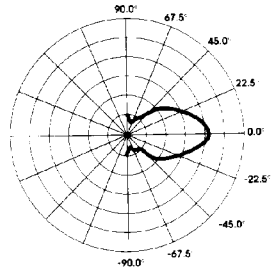
2 kHz



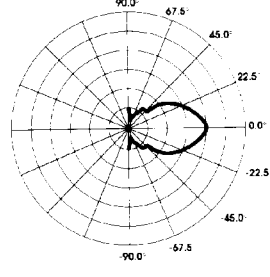
2.5 kHz



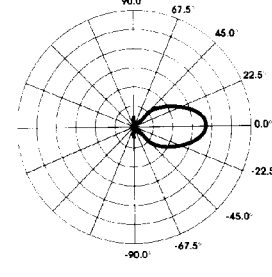
3.15 kHz



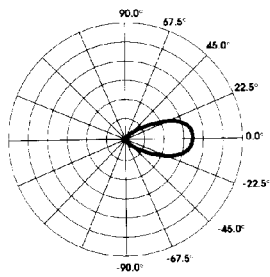
4 kHz



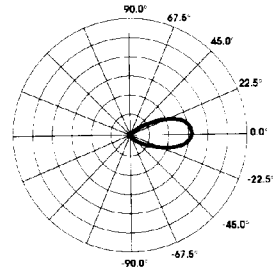
5 kHz



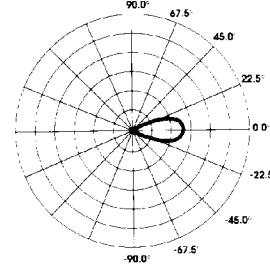
6.3 kHz



8 kHz



10 kHz



12.5 kHz

6 dB  
per division

### 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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Features and specifications subject to change without notice.

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