

PA12F



COMMERCIAL

Reentrant Paging Projector

General Product Description

The PA12F is a 12 watt reentrant paging projector designed for flush-mounting.

The driver uses a rugged phenolic diaphragm, a 1.0 inch voice coil and component parts proven reliable under stressful conditions.

A 15 inch SJTO-18-2 connecting cable, phased and color coded, is provided.

A dispersion angle of $125^{\circ} \pm 25^{\circ}$ is maintained over the frequency range of 600 Hz to 3,000 Hz. Excellent loading is maintained to a low-frequency cutoff of 500 Hz.

The PA12F is constructed of diecast zinc and ABS molded inner horn components that are virtually impervious to bad-weather conditions.

Designed for low-impedance systems, this compact horn has outstanding speech intelligibility and high efficiency.

Architects' and Engineers' Specifications

The loudspeaker shall be an integral driver and reentrant horn having a rugged phenolic diaphragm and a high-temperature-rated 1.0 inch voice coil.

The axial frequency response will extend from 700 to 10,500 Hz and the horn shall exhibit a low frequency cutoff of 500 Hz. Sound pressure level will be 103 dB (1 W/1 M) with a 1,000 to 5,000 Hz pink noise signal applied, and the horn will produce a dispersion angle of 125° at 2 kHz.



The loudspeaker shall be capable of handling a 12 watt, 1,000 to 5,000 Hz pink noise signal with a 6 dB crest factor for a period of eight hours.

The horn shall be diecast zinc with inner horn components of high-impact ABS, fungus-proof, moisture-proof, and capable of satisfactory mechanical performance in extreme or inclement weather.

Finish is mesa tan baked enamel. The Model PA12F is specified.

Specifications:

Frequency Response: 700-10,500 Hz ± 5 dB (see Figure 3)

Power Handling: 8 Hours, 6 dB Crest Factor:
..... 12 watts (500-5,000 Hz pink noise)

Impedance: Nominal: 8 ohms

Sound Pressure Level at 1 Meter, 1 Watt Input Averaged, Pink Noise Band-Limited from 1,000 to 5,000 Hz:
..... 103 dB

Horizontal Beamwidth: 125° @ 2 kHz (see Figure 2)

Vertical Beamwidth: 125° @ 2 kHz (see Figure 2)

Directivity Factor R_0 (Q): 8.5 @ 2 kHz

Usable Low-Frequency Limit: 500 Hz

Construction:

Diecast zinc outer housing in mesa tan finish and high-impact ABS inner horn components

Voice-Coil Diameter: 2.54 cm (1.0 in.)

Magnet Weight: 0.2 kg (0.4 lb)

Magnet Material: Strontium ferrite

Flux Density: 1.0 Tesla

Dimensions:

Diameter: 15.2 cm (6.0 in.)

Depth: 9.2 cm (3.6 in.)

Net Weight: 1.4 kg (3.0 lb)

Shipping Weight: 1.5 kg (3.3 lb)

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Installation

The PA12F can be mounted behind a 12.4 cm (4.87 in.) diameter hole or through a hole 12.7 cm (5.0 in.) in diameter. When mounting from behind, allow a sufficient depth of 9.21 cm (3.62 in.) to accommodate the horn. When mounting through the hole, allow only for the depth behind the flange: 8.89 cm (3.50 in.)

For either installation, the gasket must be attached between the horn's flange and the mounting surface for a weathertight seal.

Polar Response

The directional characteristics of the PA12F were measured by running a set of horizontal/vertical polar responses, in Electro-Voice's large anechoic chamber, at each one-third-octave center frequency. The test signal was one-third-octave pseudo-random pink noise centered at the indicated frequencies. The measurement microphone was placed 6.1 m (20 ft.) from the horn mouth, while rotation was about the

waveguide geometric apexes. These axes of rotation are quite close to the apparent (acoustic) apexes across the frequency range of measurement. Errors attributable to the slight differences between the geometric and acoustic apexes are reduced to an inconsequential level by the relatively long, 20-foot measuring distance. The horn was suspended freely with no baffle. The polar plots shown in Figure 1 display the results of these tests. The center frequency is noted on each plot. The wider plot on each chart is the horizontal polar (-) and the narrower plot is the vertical polar (---).

Beamwidth

A plot of the PA12F's 6 dB-down total included beamwidth angle is shown in Figure 2 for each one-third-octave center frequency.

Frequency Response

Figure 3 shows the axial frequency response of the PA12F. It was measured at a distance of 1 meter, using a swept sine wave.

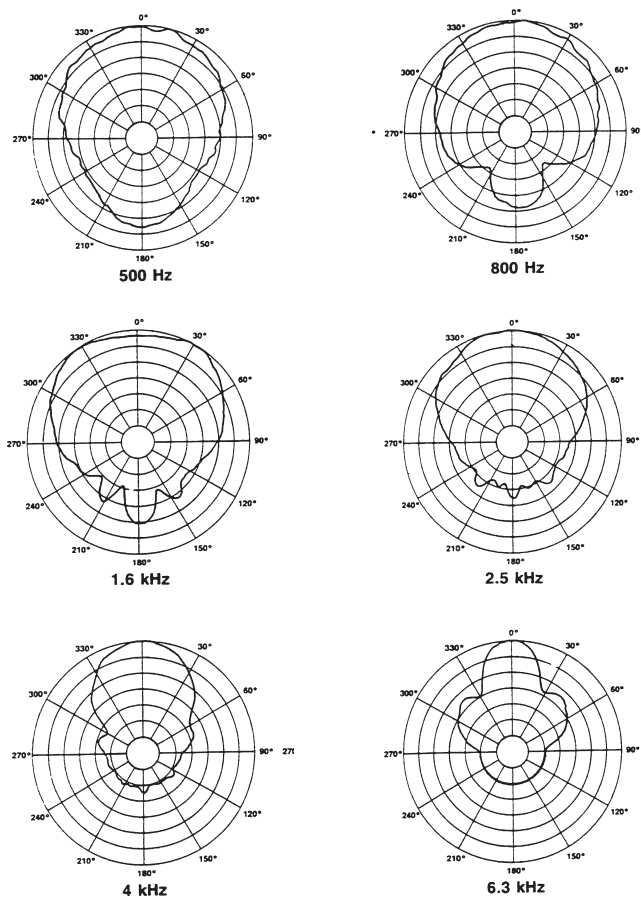


Figure 1
PA12F Polar Response

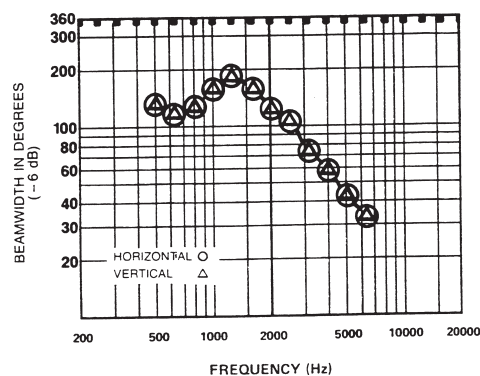


Figure 2
PA12F Beamwidth vs. Frequency

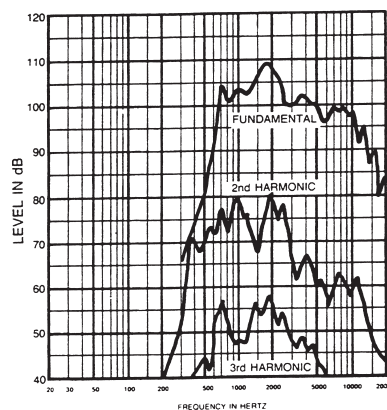


Figure 3
PA12F Frequency Response (1 watt at 1 meter)

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For customer orders, contact the Customer Service department at
800/392-3497 Fax: 800/955-6831

For warranty repair or service information, contact the Service
Repair department at 800/685-2606

For technical assistance, contact Technical Support at 866/78 AUDIO

Please refer to the Engineering Data Sheet for warranty information.

Specifications subject to change without notice.