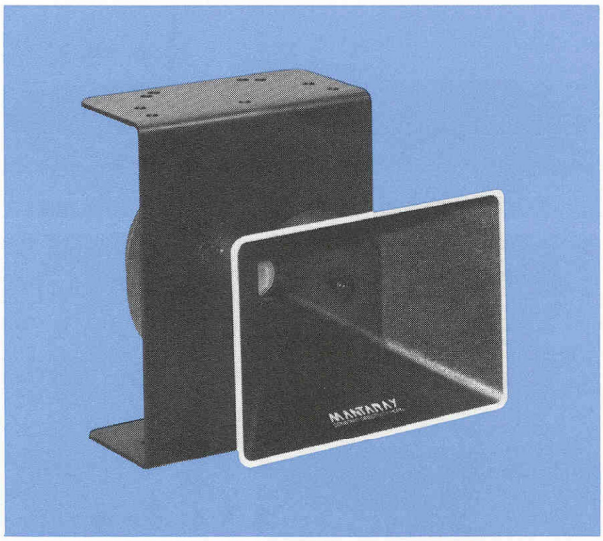
ALTEC LANSING

MR902-16HF HIGH FREQUENCY CONSTANT DIRECTIVITY HORN/DRIVER



DESCRIPTION

The Altec Lansing MR902-16HF is a high-performance UHF device designed to enhance the high-frequency response of three-way and four-way professional and commercial sound systems. No ordinary 'super-tweeter', the MR902-16HF is a **complete UHF system,** including:

Mantaray® 60° x 40° Constant Directivity Horn
Virtually eliminates the 'beaming' problems of conventional super-tweeters (see polar diagrams)

902-Type Driver
With patented Tangerine® phase plug, low-mass aluminum diaphragm, and new linear ferrite magnetic structure

Protection Capacitor (−3 dB at 2500 Hz)
Helps avoid damage due to turn-on/turn-off transients and unexpected low-frequency signals such as dropped microphones

Multi-Position 'Stack-and-Splay' Mounting Bracket
In the illustration of Figure 1, we've shown just a few of the many ways the MR902-16HF can be mounted in or out of an enclosure, by itself or in groups to build a multi-unit UHF system.

This combination of features plus high performance make the MR902-16HF an ideal choice for the 'top-end' of a wide variety of sound systems ranging from discotheques and club sound systems to large scale entertainment-oriented auditorium and concert-hall sound systems.

SPECIFICATIONS:

Type:	High Frequency Constant Directivity Horn/Driver
Power Capacity:	15 watts of continuous pink noise (2500 to 20,000 Hz)
Frequency Response:	2500 to 20,000 Hz
Pressure Sensitivity:	103 dB-SPL measured at 4' on axis with 1 watt input of pink noise, band-limited from 5000-20,000 Hz (Ref.: 20 μPa)
Nominal Impedance:	16 ohms
Horizontal Dispersion:	60° or 40°
Vertical Dispersion:	40° or 60°
Polar Pattern:	See Figure 4
Directivity Factor Q (R_θ):	See Figure 3
Directivity Index DI:	See Figure 3
Recommended Crossover Frequency:	5000 Hz or higher
Construction—	
Magnet Type:	Ferrite
Magnet Weight:	40 ounces (1.18 kg)
Flux Density:	1.85 T
Magnetic Structure Weight:	6 pounds (2.72 kg)
Diaphragm:	Aluminum
Voice Coil:	1.75" (4.45 cm) diameter edgewound copper
Replacement Diaphragm:	Part No. 34852
Protection Capacitor:	6 μF, 50 V, P/N 15-01-122682
Mounting:	U-bracket for stacking with variable splay
Dimensions:	7-1/4"H x 6-5/8"W x 7-5/16"D 18.4 cm H x 15.3 cm W x 17.8 cm D
Finish:	Black textured horn, gray enamel driver, black enamel painted bracket
Weight:	7.4 pounds (3.35 kg)
Shipping Weight:	8.4 pounds (3.8 kg)

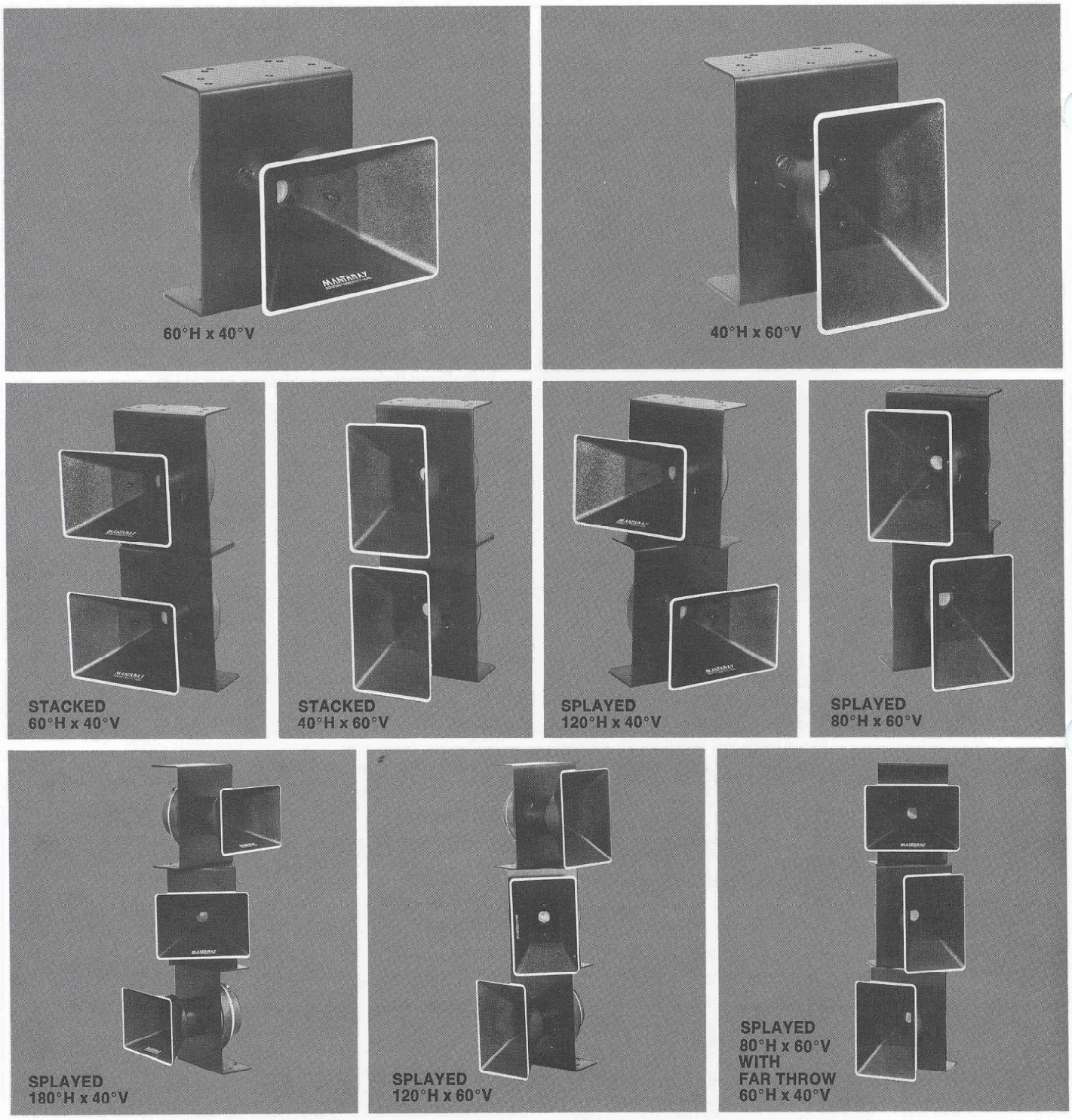


Figure 1. Typical mounting arrangements of MR902-16HF

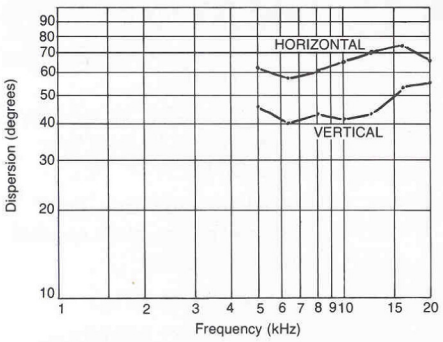


Figure 2. Dispersion Angle vs Frequency

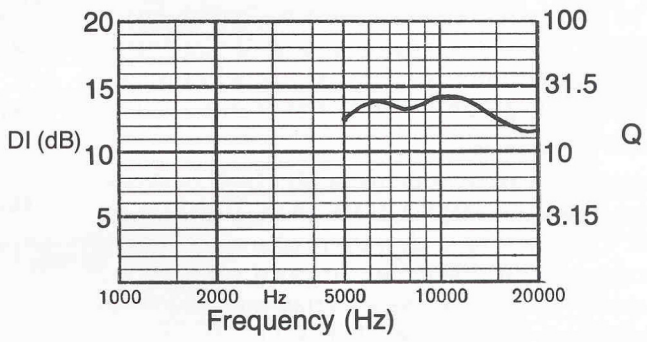
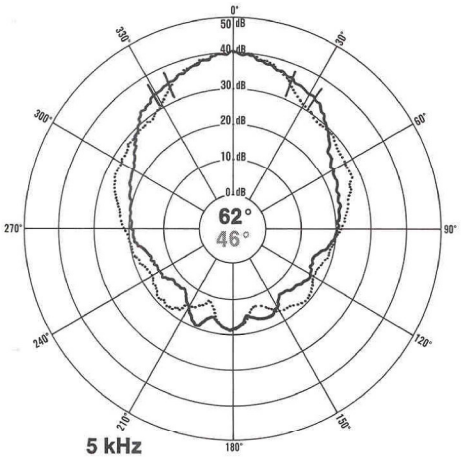
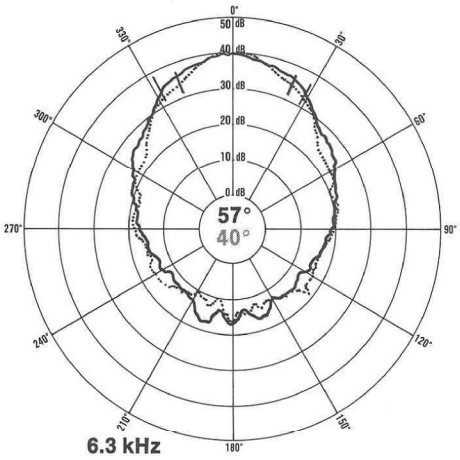


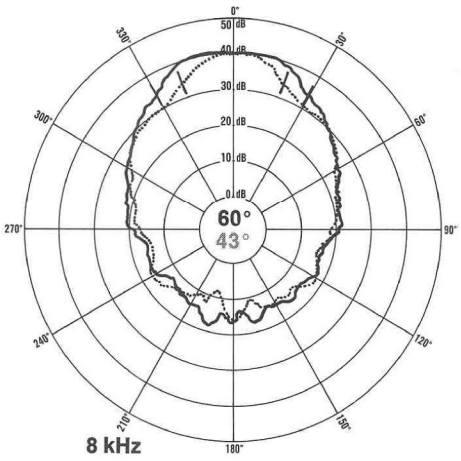
Figure 3. Q and DI vs Frequency
(DI = 10 Log Q)



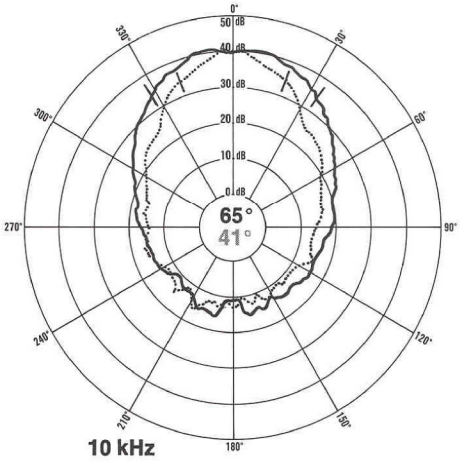
5 kHz



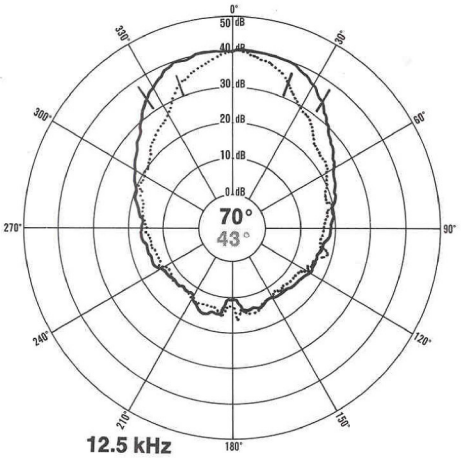
6.3 kHz



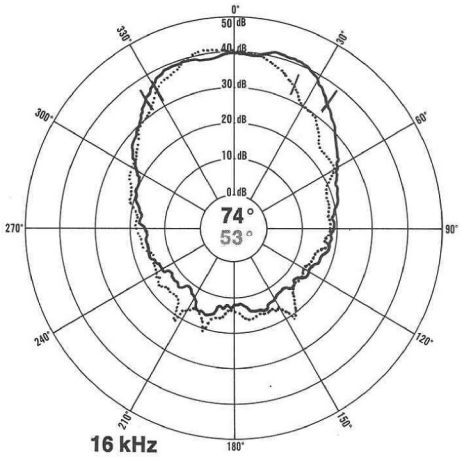
8 kHz



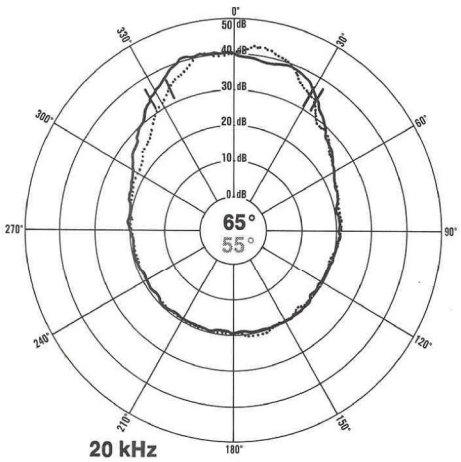
10 kHz



12.5 kHz



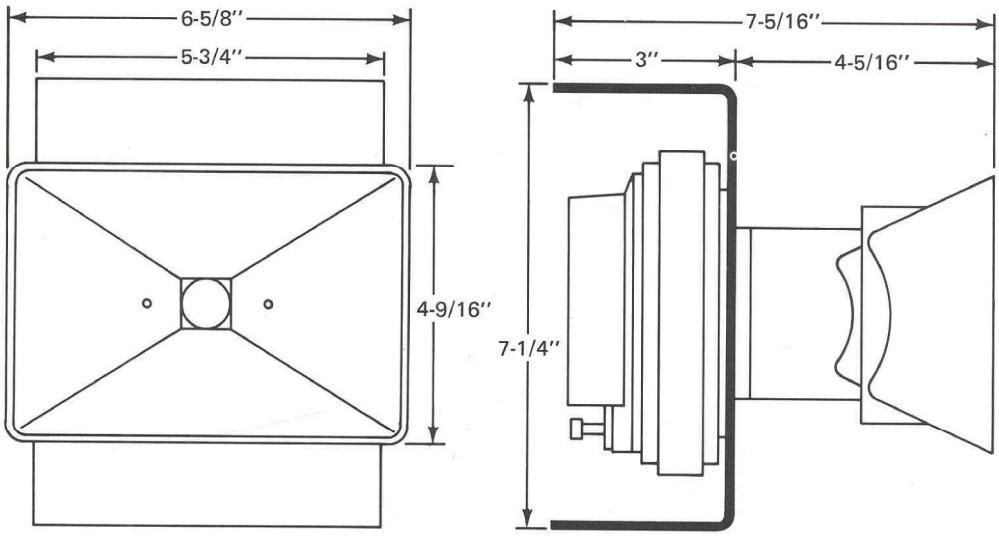
16 kHz



20 kHz

Legend:
solid line = HORIZONTAL
dotted line = VERTICAL

Figure 4. Polar Response Charts (using ⅓ octave bands of pink noise)



ROW 1 (1 : 3)

ROW 2 (3 : 7)

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The UHF loudspeaker system shall include a constant-directivity high-frequency horn. The UHF system shall meet the following performance and structural criteria. Power rating, 15 watts of continuous pink noise (2500 to 20,000 Hz). Frequency response, 2500 to 20,000 Hz. Pressure sensitivity, 103 dB SPL when measured at 4' on axis with 1 watt input of band-limited pink noise from 5000 to 20,000 Hz (Ref.: 20 μPa). Nominal impedance, 16 ohms. Dispersion, 40° or 60° in either horizontal or vertical plane. The voice coil shall be of edgewound aluminum and have a diameter of 1.75" and shall operate in a magnetic field of 1.85 T derived from a ferrite magnet weighing at least 2-1/4 pounds. The diaphragm shall be of aluminum.

A U-bracket shall be supplied which will enable the loudspeakers to be stacked in patterns of variable splay. Dimensions, 7-1/4" high x 6-5/8" wide x 7-5/16" deep. Weight, 7.4 pounds.

The loudspeaker shall be the Altec Lansing Model MR902-16HF.

ALTEC LANSING

P.O. BOX 26105, OKLAHOMA CITY, OKLAHOMA 73126-0105, U.S.A.