MR902-16HF HIGH FREQUENCY
CONSTANT DIRECTIVITY
HORN/DRIVER

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 4º
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: 60º or 40º

Vertical Dispersion: 40º or 60º

Polar Pattern: See Figure 4

Directivity Factor Q (R0): 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)

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® 60º x 40º 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.
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)
Legend:
solid line = HORIZONTAL
dotted line = VERTICAL

Figure 4. Polar Response Charts (using 1/3 octave bands of pink noise)
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.

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