

# 416-8A Low-Frequency Loudspeaker

416-8A



## LOW-FREQUENCY LOUDSPEAKER FOR WIDE-RANGE, TWO-WAY SOUND REINFORCEMENT SYSTEMS

The ALTEC 416-8A is a 15-inch low-frequency loudspeaker of professional quality with a continuous power rating of 30 watts and a frequency response from 20 Hz to 1600 Hz. It is ideal for use in all wide-range public address, sound reinforcement and theatre or auditorium systems.

**Rugged Construction – Rigid Cast Aluminum Frame Heavy Alnico V Magnet for High Reliability** – A structurally reinforced cast aluminum frame supports a heavy Alnico V permanent magnet providing high flux density. The three-inch diameter voice coil is made from edge-wound copper ribbon. Cone suspension provides exceptionally high compliance.

**Smooth Response High Efficiency High Linearity** – Smooth response and extraordinary linearity is achieved by strict adherence to precision design and manufacturing tolerances. Axial retention of the voice coil in a magnetic field that is uniform over the full excursion, assures clarity of bass reproduction at high power levels.

**Low Cone Resonance Low Distortion** – When this fine loudspeaker is installed in a suitable ALTEC enclosure, the low cone resonance eliminates virtually all 'doubling' of self-generation of unwanted harmonic components, reducing distortion to minimal values.

**ALTEC**<sup>®</sup>

1515 S. Manchester Ave., Anaheim, Calif. 92803

# ALTEC 416-8A

## SPECIFICATIONS

Type:	15" low-frequency loudspeaker
Power Rating:	For sound system use with amplifiers having continuous power rating of up to 30 watts of program material.
Frequency Response:	20 Hz to 1600 Hz
Pressure Sensitivity:	99 dB SPL with 1 watt input from warble frequency of 100 to 1600 Hz measured on axis 4' from cone 114 dB SPL with 30 watts input from warble frequency of 100 to 1600 Hz measured on axis 4' from cone Equal to EIA rating of 52 dB SPL with 1 mW input measured on axis 30' from cone (Ref.: 0.0002 dyne/cm <sup>2</sup> for 1 watt input)
Impedance:	8 ohms
Nominal Free-Air Cone Resonance:	25 Hz
Effective Cone Compliance:	1.25 x 10 <sup>-6</sup> cm/dyne
Voice Coil Diameter:	3"
Magnetic Assembly —	
Magnet Weight:	2.4 pounds
Magnet Type:	Alnico V
Flux Density:	12,000 gauss
Construction —	
Frame (Basket):	Structurally reinforced cast aluminum
Cone:	Molded fiber
Cone Suspension:	High-compliance cloth surround with mechanical resistance
Voice Coil:	Edge-wound copper ribbon
Diameter:	15-5/16"
Weight:	17-1/2 pounds
Mounting Data —	
Mounting Hole Diameter:	13-5/8"
Mounting Bolt Centers:	4 holes equally spaced on 14-9/16" diameter circle
Loudspeaker Depth:	7"

## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The low-frequency loudspeaker shall have a maximum diameter of 15-5/16 inches, and weigh 17-1/2 pounds. It shall have a structurally reinforced cast aluminum frame. The voice coil shall be 3" in diameter, of edge-wound copper ribbon and shall operate in a magnetic gap having a flux density of 12,000 gauss. The loudspeaker shall have an Alnico V permanent magnet weighing not less than 2.4 pounds. The cone surround shall be of high-compliance cloth that shall provide 1.25 x 10<sup>-6</sup> cm/dyne effective cone compliance. The loudspeaker shall meet the following performance criteria. Power rating, up to 30 watts of continuous program material. Frequency response, uniform from 20 to 1600 Hz when loudspeaker is mounted in a suitable enclosure. Pressure sensitivity; 99 dB SPL with 1 watt input from warble frequency of 100 Hz to 1600 Hz measured on axis 4' from cone, 114 dB SPL with 30 watts input from warble frequency of 100 Hz to 1600 Hz measured on axis 4' from cone (ref.: 0.0002 dyne/cm<sup>2</sup>). Impedance, 8 ohms. Nominal free-air cone resonance, 25 Hz.

The low-frequency loudspeaker shall be the ALTEC Model 416-8A.

## NOTICE

We recommend that you obtain your Altec products from factory trained authorized Altec Sound Contractors and Distributors. This will assure you of proper installation, a continuing source of knowledgeable advice, service, and quick warranty protection.