



## TWO-WAY WIDE-ANGLE SPEAKER FOR DISTRIBUTED SOUND REINFORCEMENT SYSTEMS

The ALTEC 616-8A Ceiling Speaker is designed for distributed sound reinforcement systems where retention of optimum uniform response is important. It is an exacting two-way coaxial speaker capable of meeting the fine precision demanded by equalized sound systems. It is intended for ceiling installation where a wide-angle conical sound distribution pattern is required.

### Features:

- 90° Conical Distribution** — Unlike speakers using a series of domes and multiple vane deflectors, the 616-8A uses a symmetrical exponential horn to attain a uniform 90° conical distribution pattern. Exceptionally uniform response results over the area covered.
- Precisely Matched Duplex Components** — The 15" LF section is a direct radiator with a 4" edge-wound copper voice coil operating in a magnetic field of 10,000 gauss provided by a 2-1/4 pound Alnico V magnet.  
The HF section is a compression driver, almost identical to the ALTEC 806-8A Driver, matched to a symmetrical exponential horn to provide optimum wide-angle coverage. It has a 1-3/4" edge-wound voice coil operating in a magnetic field provided by an Alnico V magnet weighing more than 1/2 pound.  
A special dual, full-section dividing network, with crossover at 1000 Hz, couples the LF cone speaker and HF driver. This network properly shelves the HF driver to match the response of the LF driver. Overall frequency response is 20 Hz to 12 kHz. The speaker is rated to handle 35 watts of continuous power.
- Integrated Assembly** — All components are mounted on the sturdy frame. The network is prewired to the speaker components. A mounting plate is also provided to mount optional accessory ALTEC 15065 or 15066 70-Volt Line Transformers.
- Durable Finish** — The entire speaker assembly is finished in a durable gray enamel and contains a wire mesh grille over the horn opening.
- Choice of Mounting Method** — The 616-8A may be mounted from the front or rear. Front mounting is generally the preferred method for this speaker.

# ALTEC®

A DIVISION OF ALTEC CORPORATION

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# ALTEC 616-8A

## SPECIFICATIONS

Type:	Two-way coaxial duplex loudspeaker	Crossover Network:	1000 Hz dual full-section, prewired and mounted on frame
Power Rating:	35 watts continuous	Dimensions:	15-5/16" dia. x 8-1/2" deep
Frequency Response:	20 Hz to 12 kHz	Finish:	Gray enamel
Pressure Sensitivity:	100 dB SPL at 4' from 1 watt* or 115 dB SPL at 4' from 35 watts (equal to EIA rating of 52.5 dB SPL at 30' from 1 milliwatt)	Weight:	23 pounds
Impedance:	8 ohms	Mounting Data — Baffle Opening:	14-3/16" dia. (front mount) 13-5/8" dia. (rear mount)
LF Cone Resonance:	25 Hz	Mounting Bolt Centers:	14-9/16" dia. (8 or 4 bolts equally spaced)
Voice Coils —		Accessories:	ALTEC 15065 70-Volt Line Transformer ALTEC 15066 70-Volt Line Transformer (see applicable catalog sheet)
LF:	4" diameter, edge-wound copper ribbon		
HF:	1-3/4" diameter, edge-wound copper ribbon		
Distribution Pattern:	90° (conical)		
Magnet —			
LF:	Alnico V, 2.25 pounds, 10,000 gauss flux density		
HF:	Alnico V, 0.531 pound, 14,000 gauss flux density		

\*Measured with band-limited pink noise from 500 to 3000 Hz. Ref.: 0.0002 dyne/cm<sup>2</sup>.

## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The ceiling speaker shall be a two-way wide-angle speaker system with a 15" LF cone radiator, an HF driver, a symmetrical exponential horn and a dividing network. It shall meet the following performance criteria. Power rating, 35 watts continuous. Frequency response, 20 Hz to 12 kHz. Pressure sensitivity, 100 dB SPL at 4' from 1 watt or 115 dB SPL at 4' from 35 watts (equal to EIA rating of 52.5 dB SPL at 30' from 1 milliwatt, measured with pink noise from 500 to 3000 Hz; Ref.: 0.0002 dyne/cm<sup>2</sup>). Impedance, 8 ohms. LF cone resonance, 25 Hz. Distribution pattern, 90° conical. Voice coils; edge-wound copper ribbon, 4" diameter LF, 1-3/4" diameter HF. Magnet; Alnico V, 2.25 pounds LF, 0.531 pound HF. Crossover network; 1 kHz dual full-section, prewired and mounted on frame. The ceiling speaker shall be 15-5/16" in diameter by 8-1/2" deep, shall weigh 23 pounds and shall be finished in gray enamel. A wire-mesh grille shall be provided for the horn opening. A mounting plate shall be provided for mounting an accessory line transformer.

The ceiling speaker shall be the ALTEC Model 616-8A Duplex Ceiling Speaker.