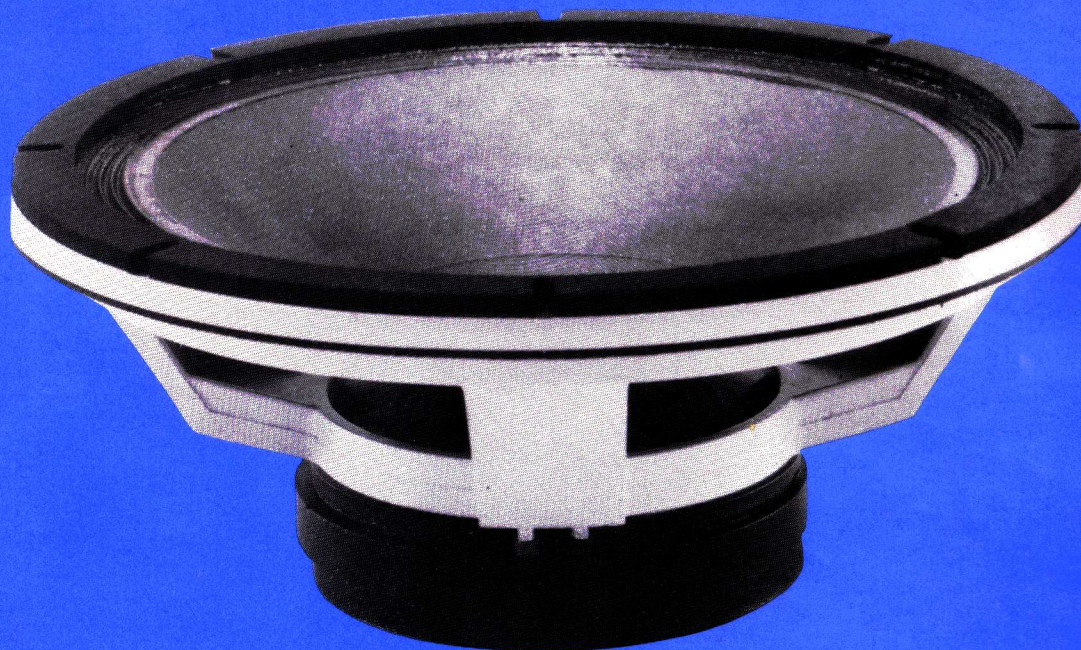


## 421-8LF LOW-FREQUENCY LOUDSPEAKER — PRELIMINARY



### DESCRIPTION

The 421-8LF is a 15-inch low-frequency loudspeaker designed specifically for sound reinforcement and reproduction systems where high power-handling capacity must be combined with high sensitivity and linearity.

The 421-8LF is built on a rigid 16-inch die-cast aluminum frame which is designed for either front or rear mounting. An efficient 4.87 pound ceramic magnet structure backs up a high-power voice coil of edge-wound copper ribbon. The voice coil is wound on an aluminum form

for maximum strength and heat dissipation and then attached to a carefully-molded paper cone. The entire cone/voice coil assembly is mounted to the frame with a flexible yet linear surround and spider. Together, these components make up a loudspeaker that is efficient yet rugged, linear yet tolerant of large amounts of power.

The 421-8LF has a continuous power rating of 100 watts and a frequency response from 35 to 8000 Hz. It is designed for high efficiency, high linearity, low distortion and wide range.

## SPECIFICATIONS

**Type:** Low-frequency loudspeaker

**Power Rating:** 100 watts continuous pink noise band limited from 35 Hz-1000 Hz

**Frequency Response:** 35 Hz-8000 Hz

**Pressure Sensitivity:** 97 dB SPL with 1 watt input of band-limited pink noise from 250 Hz-1000 Hz measured on axis 4 feet from the cone. Equal to EIA rating of 50 dB SPL measured on axis 30 feet from cone with 1 milliwatt input.

**Nominal Impedance:** 8 ohms

**Nominal Free-Air Cone Resonance:** 35 Hz

**Voice Coil Diameter:** 3" (7.62 cm)

**Magnetic Assembly—Magnet Weight:** 4.875 pounds

**Assembly Weight:** 17.5 pounds

**Magnet Type:** Ceramic

**Flux Density:** 14,000 gauss

**Construction—**

**Frame (Basket):** Structurally reinforced die-cast aluminum

**Cone:** Molded fiber

**Cone Suspension:** High-compliance cloth surround with mechanical resistance

**Voice Coil:** Edge-wound copper ribbon

**Voice Coil Support Material:** Aluminum with \*Kapton® insulation

**Maximum Cone Excursion:** 1/2"

**Diameter:** 16" (40.64 cm)

**Weight:** 20 pounds, 11 ounces (9.40 kg)

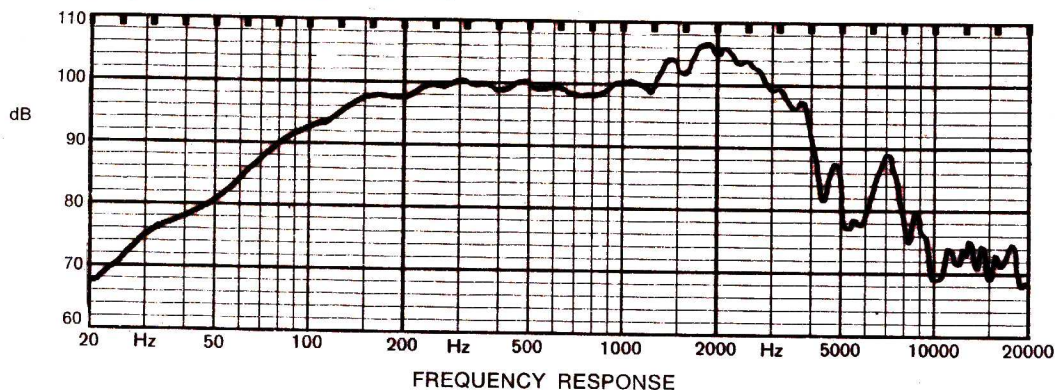
**Mounting Data—**

**Mounting Hole Diameter:** 14 1/8" (35.87 cm) (may be either front or rear mounted)

**Mounting Bolt Centers:** 8 holes equally spaced on 15 1/8" (38.41 cm) diameter circle. Note—Bolt circle can vary from 14 3/8" up to 15 3/8"

**Loudspeaker Depth:** 6 1/4" (15.88 cm)

\*Kapton® is a registered trademark of DuPont.



## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The low-frequency loudspeaker shall have a maximum diameter of 16 1/8" and shall weigh 20 pounds, 11 ounces. It shall have a structurally reinforced die-cast aluminum frame which shall be rigid enough to permit front or rear mounting. 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 14,000 gauss. The loudspeaker shall have a Ceramic permanent magnet weighing not less than 4.87 pounds. The cone-surround area shall be of

high-compliance cloth. The low-frequency loudspeaker shall meet the following performance criteria. Power rating, up to 100 watts of continuous pink noise. Frequency response, uniform from 35 to 8000 Hz. Pressure sensitivity; 97 dB SPL with 1 watt input of band-limited pink noise from 250 Hz to 1000 Hz measured on axis 4' from cone. Nominal impedance, 8 ohms. Nominal free-air cone resonance, 35 Hz.

The low-frequency loudspeaker shall be the ALTEC Model 421-8LF.



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