

# 515B Low-Frequency Loudspeaker

515B



The ALTEC 515B is a 15-inch low-frequency loudspeaker with a frequency response from 20 Hz to 1000 Hz. When used in conjunction with ALTEC 288C or 291-16A drivers, N-500C or N-500F dividing network and multicellular horn of the desired size and coverage angle, the 515B becomes an integral part of the identical ALTEC 'Voice of the Theatre'<sup>®</sup> loudspeaker system. These systems are currently installed in a majority of the largest and finest theatres, auditoriums and concert areas.

A structurally reinforced die-cast aluminum frame supports a heavy Alnico V permanent magnet providing high flux density. The frame is rigid enough to permit front or rear mounting. The three-inch diameter voice coil is made from edge-wound copper ribbon. Cone suspension provides exceptionally high compliance.

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, uniform over the full excursion, ensures clarity of bass reproduction at high power levels.

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

**ALTEC**<sup>®</sup>

A DIVISION OF ALTEC CORPORATION

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# ALTEC 515B

## SPECIFICATIONS

<b>Type:</b>	15" low-frequency loudspeaker	<b>Impedance:</b>	16 ohms
<b>Power Rating:</b>	For sound system use with amplifiers having continuous power rating of up to 35 watts	<b>Nominal Free-Air Cone Resonance:</b>	25 Hz
<b>Frequency Response:</b>	20 Hz to 1000 Hz (see Figure 1)	<b>Voice Coil Diameter:</b>	3"
<b>Pressure Sensitivity:</b>	98 dB SPL measured on axis 4' from cone with 1 watt input of pink noise from 500 Hz to 1000 Hz (Ref.: 0.0002 dyne/cm <sup>2</sup> ). Equal to EIA rating of 51 dB SPL measured on axis 30' from cone with 1 milliwatt input. 102 dB SPL measured on axis 4' from cone with 1 watt input of pink noise from 500 Hz to 3000 Hz (Ref.: 0.0002 dyne/cm <sup>2</sup> ) 113 dB SPL measured on axis 4' from cone with 35 watts input of pink noise from 500 Hz to 1000 Hz (Ref.: 0.0002 dyne/cm <sup>2</sup> )	<b>Magnetic Assembly –</b> <b>Magnet Weight:</b>	4.4 pounds
		<b>Magnet Type:</b>	Alnico V
		<b>Flux Density:</b>	14,750 gauss
		<b>Construction –</b> <b>Frame (Basket):</b>	Structurally reinforced die-cast aluminum
		<b>Cone:</b>	Molded fiber
		<b>Cone Suspension:</b>	High-compliance cloth surround with mechanical resistance
		<b>Voice Coil:</b>	Edge-wound copper ribbon
		<b>Diameter:</b>	15-5/16" (38.89 cm)
		<b>Weight:</b>	26 pounds (11.78 kg)
		<b>Mounting Data –</b> <b>Mounting Hole Diameter:</b>	13-5/8" (33.64 cm) (may be either front or rear mounted)
		<b>Mounting Bolt Centers:</b>	4 holes equally spaced on 14-9/16" (36.12 cm) diameter circle
		<b>Loudspeaker Depth:</b>	7-3/4" (19.69 cm)

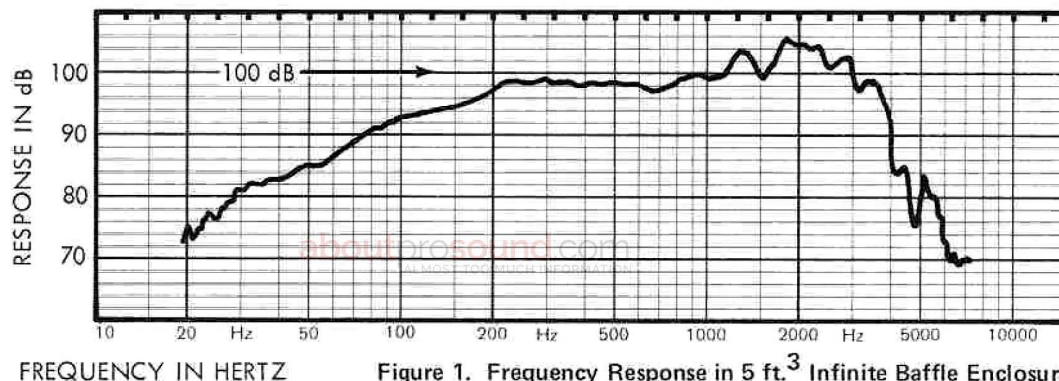


Figure 1. Frequency Response in 5 ft.<sup>3</sup> Infinite Baffle Enclosure

## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The low-frequency loudspeaker shall have a maximum diameter of 15-5/16" and shall weigh 26 pounds. 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 14,750 gauss. The loudspeaker shall have an Alnico V permanent magnet weighing not less than 4.4 pounds. The cone surround shall be of high-compliance cloth. The loudspeaker shall meet the following performance criteria. Power rating, up to 35 watts of program material. Frequency response, uniform from 20 Hz to 1000 Hz when loudspeaker is mounted in a suitable enclosure. Pressure sensitivity, 98 dB SPL when measured on axis 4' from cone with 1 watt input of pink noise from 500 Hz to 1000 Hz (Ref.: 0.0002 dyne/cm<sup>2</sup>). Equivalent EIA rating, 51 dB SPL when measured on axis 30' from cone with 1 milliwatt input. Impedance, 16 ohms. Nominal free-air cone resonance, 25 Hz.

The low-frequency loudspeaker shall be the ALTEC Model 515B.