

# 417-8C, 418B, 421A, 425-8A Musical Instrument Loudspeakers

417-8C  
418B  
421A  
425-8A



MODEL 425-8A



MODEL 421A



MODEL 418B



MODEL 417-8C

## Features:

- Rigid Cast-Aluminum Frame
- Edge-Wound Voice Coil
- Heavy Permanent Magnet
- Sealed Against Dust and Dirt
- Wide Range
- Excellent Sound Distribution
- Smooth Response Tailored to Enhance the Musical Instrument
- Greater Power Capacity
- High Efficiency
- High Linearity
- Low Distortion
- Optimum Cone Resonance

ALTEC musical instrument loudspeakers are designed to provide outstanding reproduction of the music sound spectrum when used in sound systems for the largest theatres and auditoriums. Utilizing heavy permanent magnets, rugged die-cast frames, voice coils of the largest practical diameter that are edge-wound with aluminum or copper ribbon, and exceptionally compliant cone-suspension, these musical instrument transducers combine the advantages of long-term operation with unparalleled response throughout the entire musical instrument frequency range.

The smooth response and exceptional linearity of each loudspeaker is achieved by means of strict adherence to precision design and manufacturing tolerances. The axial retention of the voice coil, in a magnetic field uniform over the full excursion, assures the clarity of music reproduction at high power levels. The low cone resonance, when coupled to a properly designed ALTEC enclosure, eliminates virtually all 'doubling' or self-generation of unwanted harmonic components.

The ALTEC 417-8C is a 12-inch musical instrument loudspeaker with a continuous power rating of 75 watts and a frequency response from 60 Hz to 8000 Hz. It is ideal for use in musical entertainment systems of moderate size and coverage area where true high-fidelity reproduction must be combined with high power output.

The ALTEC 418B is a 15-inch musical instrument loudspeaker with a continuous power rating of 100 watts and a frequency response from 45 Hz to 8000 Hz. Its high efficiency and its ability to cover a large listening space with emphatic sound reproduction of exceptional quality has earned it eminent billing for use in the instrumental music field.

The ALTEC 421A, with its outstanding low-frequency response, high efficiency and ability to faithfully reproduce instrumental music at unusually high power levels remains the unchallenged leader in the largest and finest single-source musical sound systems throughout the entertainment world. The 15-inch cone has a frequency response from 35 Hz to 4000 Hz and can handle up to 100 watts of continuous music power; perfect for the throbbing beat of the bass guitar in any 'rock' group.

The ALTEC 425-8A is a 10-inch musical instrument loudspeaker with a continuous power rating of 75 watts and a frequency response from 60 Hz to 8000 Hz. It is ideal for limited-space enclosures where true high-fidelity reproduction must not be compromised in music entertainment systems.



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# ALTEC 417-8C, 418B, 421A, 425-8A Loudspeakers

## SPECIFICATIONS

DESCRIPTION	MODEL 417-8C	MODEL 418B	MODEL 421A	MODEL 425-8A
<b>Power Rating:</b>	For sound system use with amplifiers having continuous power rating of up to 75 watts with program material	For sound system use with amplifiers having continuous power rating of up to 100 watts with program material	For sound system use with amplifiers having continuous power rating of up to 100 watts with program material	For sound system use with amplifiers having continuous power rating of up to 75 watts with program material
<b>Frequency Response:</b>	60-8000 Hz	45-8000 Hz	35-4000 Hz	60-8000 Hz
<b>Pressure Sensitivity:</b>	100 dB SPL w/1 watt input from 600-2400 Hz sweep signal measured on axis 4' from cone 98 dB SPL w/1 watt input from 50-550 Hz sweep signal measured on axis 4' from cone (Ref: 0.0002 dyne/cm <sup>2</sup> for 1 watt input)	100 dB SPL w/1 watt input from 600-2400 Hz sweep signal measured on axis 4' from cone 99 dB SPL w/1 watt input from 50-550 Hz sweep signal measured on axis 4' from cone (Ref: 0.0002 dyne/cm <sup>2</sup> for 1 watt input)	102 dB SPL w/1 watt input from 600-2400 Hz sweep signal measured on axis 4' from cone 100 dB SPL w/1 watt input from 50-550 Hz sweep signal measured on axis 4' from cone (Ref: 0.0002 dyne/cm <sup>2</sup> for 1 watt input)	99 dB SPL w/1 watt input from 600-2400 Hz sweep signal measured on axis 4' from cone 97 dB SPL w/1 watt input from 50-550 Hz sweep signal measured on axis 4' from cone (Ref: 0.0002 dyne/cm <sup>2</sup> for 1 watt input)
<b>Impedance:</b>	8 ohms (other impedances available in production quantities)	8 ohms (other impedances available in production quantities)	8 ohms (other impedances available in production quantities)	8 ohms (other impedances available in production quantities)
<b>Cone Resonance:</b>	69 Hz	55 Hz	40 Hz	72 Hz
<b>Voice Coil Diameter:</b>	3"	3"	3"	3"
<b>Magnetic Assembly –</b>				
<b>Magnet Weight:</b>	2.4 lbs	2.4 lbs	4.875 lbs	2.4 lbs
<b>Assembly Weight:</b>	10.5 lbs	10.5 lbs	17.5 lbs	10.5 lbs
<b>Magnet Type:</b>	Alnico V	Alnico V	Ceramic-Ferrimag V	Alnico V
<b>Flux Density:</b>	13,000 Gauss	13,000 Gauss	14,400 Gauss	13,000 Gauss
<b>Construction –</b>				
<b>Frame (Basket):</b>	Structurally-reinforced die-cast aluminum	Die-cast aluminum	Die-cast aluminum	Structurally-reinforced die-cast aluminum
<b>Cone:</b>	Molded fiber	Molded fiber	Molded fiber	Molded fiber
<b>Cone Suspension:</b>	High-compliance cloth surround with mechanical resistance	High-compliance cloth surround with mechanical resistance	High-compliance cloth surround with mechanical resistance	High-compliance cloth surround with mechanical resistance
<b>Voice Coil:</b>	Edge-wound aluminum ribbon	Edge-wound aluminum ribbon	Edge-wound copper ribbon	Edge-wound aluminum ribbon
<b>Maximum Core Excursion:</b>	1/2"	1/2"	1/2"	1/2"
<b>Diameter:</b>	12-1/8"	15-5/16"	15-5/16"	10-3/8"
<b>Weight:</b>	13 lbs, 6 ozs	14 lbs, 6 ozs	20 lbs, 11 ozs	12 lbs, 11 ozs
<b>Mounting Data –</b>				
<b>Mounting Hole Diameter:</b>	11-1/8" (may be either front or rear mounted)	13-5/8"	13-5/8"	9" (may be either front or rear mounted)
<b>Mounting Bolt Centers:</b>	8 holes equally spaced on 11-9/16" diameter circle	8 holes equally spaced on 14-9/16" diameter circle	8 holes equally spaced on 14-9/16" diameter circle	4 holes equally spaced on 9-5/8" diameter circle
<b>Loudspeaker Depth:</b>	6"	7"	6-1/4"	5-3/8"

## ARCHITECTS AND ENGINEERS SPECIFICATIONS

### 417-8C

The musical instrument loudspeaker shall have a maximum diameter of 12-1/8 inches and weigh 13 pounds, 6 ounces. From 1 watt, it shall have a minimum pressure sensitivity of 100 dB SPL (for 600-2400 Hz sweep signal) and 98 dB SPL (for 50-550 Hz sweep signal) at 4 feet, measured on axis; reference shall be 0.0002 dyne/cm<sup>2</sup>. The loudspeaker shall be capable of withstanding the output of a 75-watt amplifier when the amplifier is driven to its maximum output power with program material. The voice coil shall be 3 inches in diameter, shall be edge-wound with aluminum ribbon and shall operate in a magnetic gap having a flux density of at least 13,000 Gauss, derived from an Alnico V permanent magnet weighing at least 2.4 pounds. Loudspeakers with smaller voice coils or round wire windings shall be unacceptable under this specification. The frequency response shall be uniform over the range from 60 Hz to 8000 Hz when the loudspeaker is mounted in a suitable enclosure. The cone-surround area shall be of high-compliance cloth that shall permit a nominal free-air resonance of 69 Hz. The input impedance of the loudspeaker shall be 8 ohms. The loudspeaker shall include a metal dust cover over the magnetic structure that shall provide a protective seal against dirt, iron particles and magnetic dust.

Any loudspeaker not meeting all of these requirements shall be unacceptable under this specification.

The musical instrument loudspeaker shall be ALTEC Lansing model 417-8C.

### 418B

The musical instrument loudspeaker shall have a maximum diameter of 15-5/16 inches and weigh 14 pounds, 6 ounces. From 1 watt, it shall have a minimum pressure sensitivity of 100 dB SPL (for 600-2400 Hz sweep signal) and 99 dB SPL (for 50-550 Hz sweep signal) at 4 feet, measured on axis; reference shall be 0.0002 dyne/cm<sup>2</sup>. The loudspeaker shall be capable of withstanding the output of a 100-watt amplifier when the amplifier is driven to its maximum output power with program material. The voice coil shall be 3 inches in diameter, shall be edge-wound with aluminum ribbon and shall operate in a magnetic gap having a flux density of at least 13,000 Gauss, derived from an Alnico V permanent magnet weighing at least 2.4 pounds. Loudspeakers with smaller voice coils or round wire windings shall be unacceptable under this specification. The frequency response shall be uniform over the range from 45 Hz to 8000 Hz when the loudspeaker is mounted in a suitable enclosure. The cone-surround area shall be of high-compliance cloth that shall permit a nominal free-air resonance of 55 Hz. The input impedance of the loudspeaker shall be 8 ohms. The loudspeaker shall include a metal dust cover over the magnetic structure that shall provide a protective seal against dirt, iron particles and magnetic dust.

Any loudspeaker not meeting all of these requirements shall be unacceptable under this specification.

The musical instrument loudspeaker shall be ALTEC Lansing model 418B.

### 421A

The musical instrument loudspeaker shall have a maximum diameter of 15-5/16 inches and weigh 20 pounds, 11 ounces. From 1 watt, it shall have a minimum pressure sensitivity of 102 dB SPL (for 600-2400 Hz sweep signal) and 100 dB SPL (for 50-550 Hz sweep signal) at 4 feet, measured on axis; reference shall be 0.0002 dyne/cm<sup>2</sup>. The loudspeaker shall be capable of withstanding the output of a 100-watt amplifier when the amplifier is driven to its maximum output power with program material. The voice coil shall be 3 inches in diameter, shall be of edge-wound copper ribbon and shall operate in a magnetic gap having a flux density of at least 14,400 Gauss, derived from a Ceramic-Ferrimag V permanent magnet weighing at least 4.875 pounds. Loudspeakers with smaller voice coils or round wire windings shall be unacceptable under this specification. The frequency response shall be uniform over the range from 35 Hz to 4000 Hz when the loudspeaker is mounted in a suitable enclosure. The cone-surround area shall be of high-compliance cloth that shall permit nominal free-air resonance of 40 Hz. The input impedance of the loudspeaker shall be 8 ohms. The loudspeaker shall include a metal dust cover over the magnetic structure that shall provide a protective seal against dirt, iron particles and magnetic dust.

Any loudspeaker not meeting all of these requirements shall be unacceptable under this specification.

The musical instrument loudspeaker shall be ALTEC Lansing model 421A.

### 425-8A

The musical instrument loudspeaker shall have a maximum diameter of 10-3/8 inches and weigh 12 pounds, 11 ounces. From 1 watt, it shall have a minimum pressure sensitivity of 99 dB SPL (for 600-2400 Hz sweep signal) and 97 dB SPL (for 50-550 Hz sweep signal) at 4 feet, measured on axis; reference shall be 0.0002 dyne/cm<sup>2</sup>. The loudspeaker shall be capable of withstanding the output of a 75-watt amplifier when the amplifier is driven to its maximum output power with program material. The voice coil shall be 3 inches in diameter, shall be edge-wound with aluminum ribbon and shall operate in a magnetic gap having a flux density of at least 13,000 Gauss, derived from an Alnico V permanent magnet weighing at least 2.4 pounds. Loudspeakers with smaller voice coils or round wire windings shall be unacceptable under this specification. The frequency response shall be uniform over the range from 60 Hz to 8000 Hz when the loudspeaker is mounted in a suitable enclosure. The loudspeaker shall have a structurally-reinforced die-cast aluminum frame that shall be rigid enough to permit front or rear mounting. The cone-surround area shall be of high-compliance cloth that shall permit a nominal free-air resonance of 72 Hz. The input impedance of the loudspeaker shall be 8 ohms. The loudspeaker shall include a metal dust cover over the magnetic structure that shall provide a protective seal against dirt, iron particles and magnetic dust.

Any loudspeaker not meeting all of these requirements shall be unacceptable under this specification.

The musical instrument loudspeaker shall be ALTEC Lansing model 425-8A.

**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.

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