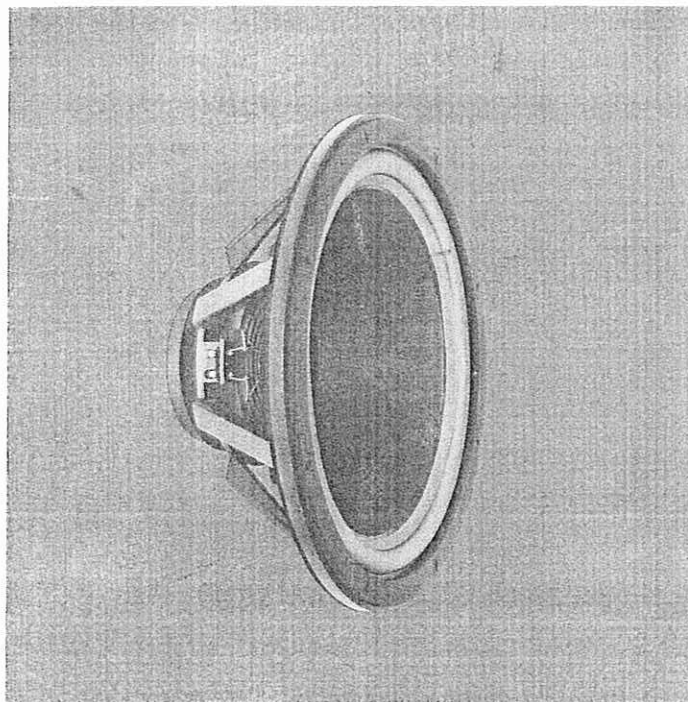




# 3182 LOW FREQUENCY LOUDSPEAKER ...PRELIMINARY



## DESCRIPTION

The Altec Lansing Model 3182 18-inch low-frequency loudspeaker is part of Altec's new generation of woofers. Each loudspeaker in this line was engineered for a very specific use. The 3182 is designed specifically for the reproduction of extremely **low frequencies** with **minimum distortion**.

The 3182, when used with the recommended Altec 8182 24-cubic foot vented enclosure, provides a 3 dB down frequency of 23 Hz with an optimum Thiele-Small alignment. This system provides optimum utilization of the 3182's capabilities.

Power handling for the 3182 is 300 watts when measured by the new AES standard specifications. The 3182 will handle 600 watts of program material when mounted in the 8182 or other suitable enclosure.

As with all Altec professional series woofers the 3182 is built with a structurally reinforced die-cast frame. The ferrite magnet structure coupled with an exceptionally high power voice coil provides low distortion even at very high sound levels.

The 3182 is unsurpassed in performance at a very attractive price.

## SPECIFICATIONS

Frame Diameter:	18"
*Power Rating:	600 watts program material 180 watts (E x I) continuous pink noise band-limited 20-1000 Hz
Frequency Response (Hz):	20-2000
*Pressure Sensitivity (1 watt (E x I) with pink noise band-limited 100-1000 Hz):	91.0 dB at 4 feet 92.7 dB at 1 meter
*Maximum Sound Pressure (Full power (E x I) with pink noise band-limited 100-1000 Hz):	113 dB at 4 feet 114.7 dB at 1 meter
Impedance:	8 ohms nominal
Recommended Enclosure:	8182 (24 ft <sup>3</sup> ) System F <sub>3</sub> : 23 Hz

Maximum Excursion Before Damage (Peak to Peak):	1.80 in.
Voice Coil Diameter:	3 in.

### Thiele-Small Parameters—

Free-Air Resonance (f <sub>s</sub> ):	18 Hz
Equivalent Volume Compliance (V <sub>AS</sub> ):	35 ft <sup>3</sup>
Total Q (Q <sub>TS</sub> ):	0.40
Electrical Q (Q <sub>ES</sub> ):	0.51
Mechanical Q (Q <sub>MS</sub> ):	1.81
Reference Efficiency (η <sub>0</sub> ):	1.1%
D. C. Resistance (R <sub>E</sub> ):	6.4 ohms
Peak Linear Displacement (X <sub>MAX</sub> ):	0.50 in.
Peak Linear Volume Displacement (V <sub>D</sub> ):	88.4 in. <sup>3</sup>
Effective Surface Area of Driver Diagram (S <sub>D</sub> ):	177 in. <sup>2</sup>

### Additional Parameters—

Effective Piston Diameter:	15 in.
Voice Coil Inductance:	5.7 mH
BL Factor:	14.5
Magnet Type:	ferrite
Magnet Weight:	48 oz.
Flux Density:	10,000 gauss
**AES Power Rating:	300 watts (band-limited 20-200 Hz), free air

### Mounting Information—

Baffle Opening Diameter:	15 5/8" (38.89 cm)
Mounting Bolt Circle Diameter:	17 1/8" (43.97 cm)
Loudspeaker Depth (front mounting):	7 1/2" (19.05 cm)
Loudspeaker Depth (rear mounting):	8 1/2" (21.59 cm)
Weight:	22.5 lbs (10.2 kg)

\*Based upon use in recommended Altec 8182 enclosure

\*\*AES Recommended Practice Specification of Loudspeaker Components Used in Professional Audio and Sound Reinforcement (J. Audio Eng. Soc., Vol. 30, No. 3, 1982 March).

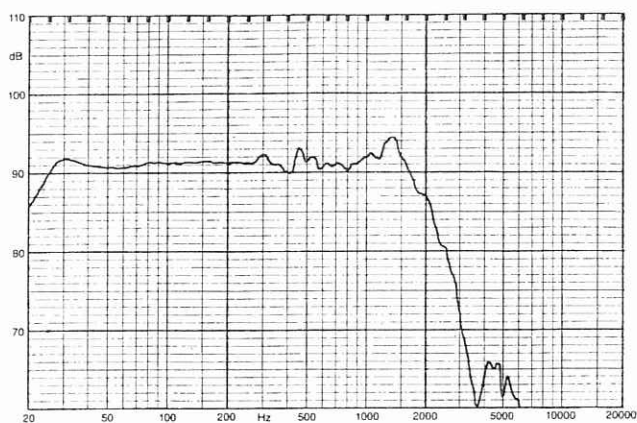


Figure 1. Frequency Response

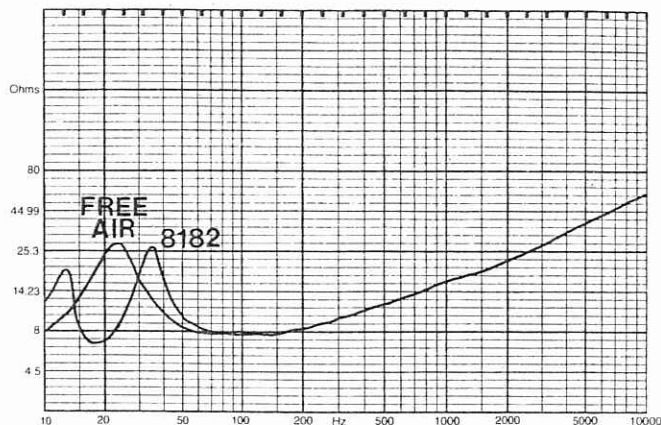
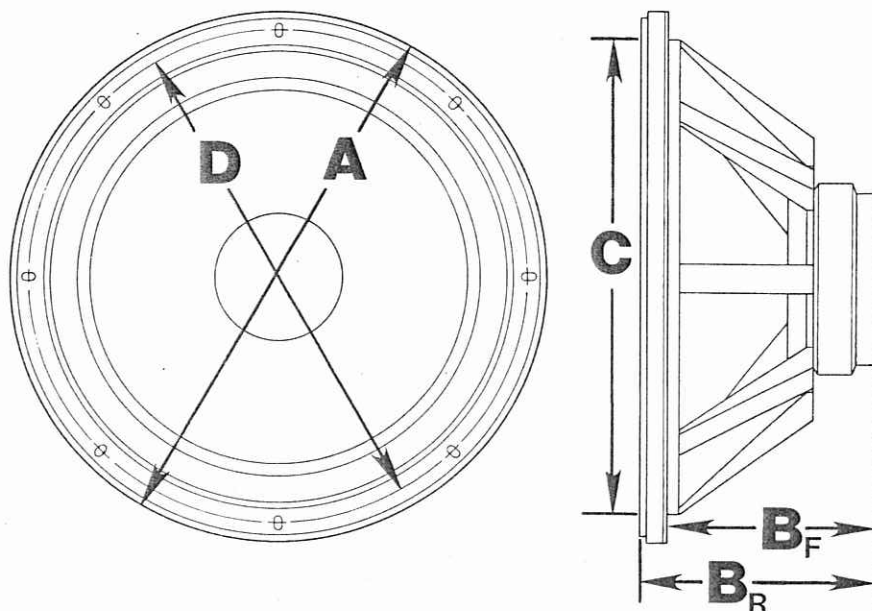


Figure 2. Impedance



#### LOUDSPEAKER MOUNTING DIMENSIONS

- |  |   |
|--|---|
| (A) Loudspeaker Diameter: 18" (45.72 cm)                                 | (C) Baffle Opening Diameter: 15 $\frac{3}{8}$ " (38.89 cm)  |
| (B <sub>F</sub> ) Depth When Front Mounted: 7 $\frac{1}{2}$ " (19.05 cm) | (D) Bolt Circle Diameter: 17 $\frac{3}{8}$ " (43.97 cm)   |
| (B <sub>R</sub> ) Depth When Rear Mounted: 8 $\frac{1}{2}$ " (21.59 cm)  | (E) Bolt Hole Slots: $\frac{1}{4}$ " (0.64 cm) x $\frac{3}{8}$ " (0.95 cm); 8 slots spaced 45° apart. |

#### ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The low frequency loudspeaker shall meet the following criteria. AES power rating, up to 300 watts of band-limited pink noise (20-200 Hz). Frequency response, uniform from 20-2000 Hz when mounted in a suitable enclosure. Pressure Sensitivity, 91.0 dB SPL when measured at 4" on axis from front edge of Altec Model 8182 enclosure (containing one Model 3182 speaker) with one watt of band limited pink

noise from 100-1000 Hz (Ref.: 0.0002 dyne/cm<sup>2</sup>). Minimum impedance, 8 ohms. Nominal free-air LF cone resonance, 18.0 Hz. The voice coil shall be 3" in diameter, driven by a ferrite magnet having a flux density of 10,000 gauss. Dimensions, 18" diameter x 8 $\frac{1}{2}$ " deep. Weight, 22.5 pounds.

The low frequency loudspeaker shall be the ALTEC LANSING Model 3182.



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