

## 290E Driver-Loudspeaker

290E



Cut away view showing 15045A Transformer mounted in the 290E Driver-Loudspeaker

The Altec 290E Driver-Loudspeaker is a high quality permanent magnet type having exceptionally high power handling capacity and efficiency. It is designed primarily for outdoor use with any of the Altec multicellular horns. The 290E finds wide application for public address speech reinforcement in large outdoor systems such as ball parks, race tracks, stadiums, etc., and is ideally adaptable for voice warning systems. As many as four of these 290E speakers may be mounted on a single horn to achieve continuous sound pressure levels as high as 82.5 dB one-half mile distant from the horn.

The moving element of the driver consists of a sturdy, weather-resistant phenolic diaphragm and aluminum ribbon voice coil using a high-temperature-resistant, Class H installation coil form. The entire voice coil/diaphragm assembly can be replaced in the field by untrained personnel without any special tools. The weatherproof cover on the rear of the speaker is drilled and tapped to house the 15045A matching transformer for 70.7V line operation (see above).

A 4-foot cable, stripped and tinned at one end, enters the rear of the cover through a waterproof sealing gland, further ensuring complete weather protection.

Experience has proven that the use of the 290E in large systems rather than a number of speakers having less capacity not only results in higher quality and intelligibility but affords a reduction in overall system cost and upkeep.

**ALTEC**

SOUND PRODUCTS DIVISION

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# ALTEC 290E

## SPECIFICATIONS

Power Rating:	100 watts (above 300 Hz)
Frequency Response:	300-8000 Hz
Pressure Sensitivity:	114 dB SPL measured at 4' on axis with 1 watt input of band-limited pink noise from 500 Hz to 3000 Hz. Equal to EIA rating of 67 dB SPL at 30' from 1 milli-watt (Ref.: 0.0002 dyne/cm <sup>2</sup> ). 134 dB SPL measured at 4' on axis with 100 watts input of band-limited pink noise from 500 Hz to 3000 Hz (Ref.: 0.0002 dyne/cm <sup>2</sup> ).
Impedance:	4 ohms
Voice Coil Diameter:	2.8"
Protection:	Low frequencies should be attenuated by a network providing 6 dB slope per octave below 300 Hz when used at or near maximum power rating. (N500-C or N500-F Altec network or the 15045A transformer is recommended for this purpose.)
Usage:	Weatherproofed construction for outdoor use.
Dimensions:	6-1/2" (16.51 cm) diameter x 7-1/2" (19.05 cm) deep
Finish:	Gray
Weight:	21 pounds (9.53 kg)
Accessories:	30546 - 45° Weatherproof Throat Adaptor 15045A - 100 Watt, 70.7V Transformer

## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The driver-loudspeaker shall include a phenolic diaphragm and an aluminum ribbon voice coil using a high-temperature-resistant, Class H insulation coil form. The voice coil shall be at least 2.8" in diameter and the voice coil gap shall have a flux density of at least 18,800 gauss. The entire diaphragm-voice coil assembly shall be field replaceable without special tools or skills. This shall be interpreted to mean that the speaker shall incorporate self-centering dowels to insure proper indexing.

The driver-loudspeaker shall produce a sound pressure level of at least 114 dB with 1 watt input and 134 dB with 100 watts input, measured at a distance of 4' on axis with band-limited pink noise from 500 to 3000 Hz (Ref.: 0.0002 dyne/cm<sup>2</sup>). Impedance shall be 4 ohms. The unit shall be capable of handling a continuous power level of 100 watts above 300 Hz.

Provision shall be incorporated to permit mounting an Altec 70.7-volt matching transformer on the speaker and the entire assembly shall be enclosed in a weatherproofed housing. Each driver-loudspeaker shall be provided with a 4' cable, stripped and tinned at one end, and shall enter the rear of the cover through a waterproof sealing gland, providing complete protection against the entrance of water, dirt and dust. The speaker shall be useable in conjunction with a 500 Hz dividing network or a 70.7V matching transformer for low-frequency protection. The driver-loudspeaker shall weigh 21 pounds.

The driver-loudspeaker shall be the Altec Model 290E.