DESCRIPTION

The ALTEC 409T Loudspeaker is a full-range, low-distortion, coaxial transducer. Its wide dispersion angle and compact shape make it ideal for use in indoor public address speaker systems, distributed sound systems, paging facilities, background music networks, and monitoring installations.

The wide distribution angle of this speaker enables larger areas to be covered with fewer units, affording a considerable savings in cost while sustaining uniformity in response and intelligibility of speech.

The 409T may be flush-mounted in any type of wall, ceiling or baffle. An ALTEC 70-volt transformer is incorporated for use in distributed sound systems.
SPECIFICATIONS

**Type:** Full-range coaxial loudspeaker

**Power Rating:**
- 32 watts program material
- 16 watts, based on continuous operation with pink noise, band-limited from 60-12,000 Hz

**Frequency Response:** 50-14,000 Hz

**Pressure Sensitivity:** 96 dB SPL measured at 4' on axis with 1 watt input of pink noise, band-limited from 500-3000 Hz (Ref.: 0 dB = 0.0002 dyne/cm²). Equal to ETA rating of 40 dB SPL at 30' with 1 milliwatt input.

**Transformer Data—**

<table>
<thead>
<tr>
<th>Load Impedance</th>
<th>8 ohms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary</td>
<td>8 ohms</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audio Watts Primary</th>
<th>4, 2, 1 and 0.5 watts</th>
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</thead>
<tbody>
<tr>
<td>Maximum Insertion Loss</td>
<td>1.0 db</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>±1 db, 100-10,000 Hz</td>
</tr>
<tr>
<td>Terminals:</td>
<td>¼&quot; spade lug type</td>
</tr>
</tbody>
</table>

| Nominal Free-Air Cone Resonance LF Section | 84 Hz |

**Crossover Frequency:** 2500 Hz

**Dispersion Angle:**
- 6 dB Angle—
  - 2000 Hz: 80°
  - 4000 Hz: 69°

**Voice Coil Diameter:**
- LF section—1"
- HF section—⅝"

**Magnet Assembly—**
- LF section—10 ounces
- HF section—0.68 ounce

**Flux Density:**
- LF section—8500 gauss
- HF section—7500 gauss

**Mounting Data—**

| Mounting Hole Diameter: | 7⅛" (18.1 cm) |
| Mounting Bolt Centers: | 4 holes, equally spaced on 7⅛" (19.5 cm) diameter circle |

**Dimensions:**
- 8½" (20.6 cm) diameter
- 4½" (10.6 cm) deep

**Weight:** 3 pounds, 8 ounces (1.6 kg)

*Angle of 6 db loss on a plane perpendicular to the loudspeaker (see Technical Letter No. 257A, Sound Distribution on A Plane Normal to A Loudspeaker Axis.)*

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The loudspeaker shall be the full-range coaxial type with an 8" low-frequency (LF) cone radiator, a 3" high-frequency (HF) cone radiator, and a dividing network. The loudspeaker shall meet the following criteria. Power rating: 16 watts, based on continuous operation with pink noise, band-limited from 60-12,000 Hz. Frequency response, 50-14,000 Hz. Pressure sensitivity, 96 dB SPL when measured at 4' on axis with 1 watt input of pink noise, band-limited from 500-3000 Hz (Ref.: 0 dB = 0.0002 dyne/cm²). Load impedance secondary, 8 ohms. A 70-volt line transformer shall be incorporated for use in distributed systems, and shall have a frequency response of ±1 db from 100-10,000 Hz, with maximum insertion loss of 1.0 db and primary wattage taps of 4, 2, 1 or 0.5 watts. Nominal free-air cone resonance of LF cone, 84 Hz. Crossover frequency, 2500 Hz. Dispersion angle, 120°. Voice coil diameters: 1" LF section, ⅝" HF section. Magnet weight; 10 ounces LF section, 0.68 ounce HF section. Flux density; 8500 gauss LF section, 7500 gauss HF section. The loudspeaker shall be 8½" in diameter by 4½" deep and shall weigh 3 pounds, 8 ounces.

The loudspeaker shall be the ALTEC Model 409T.