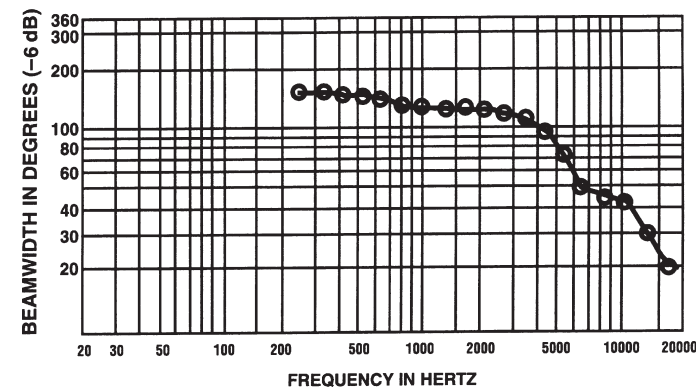
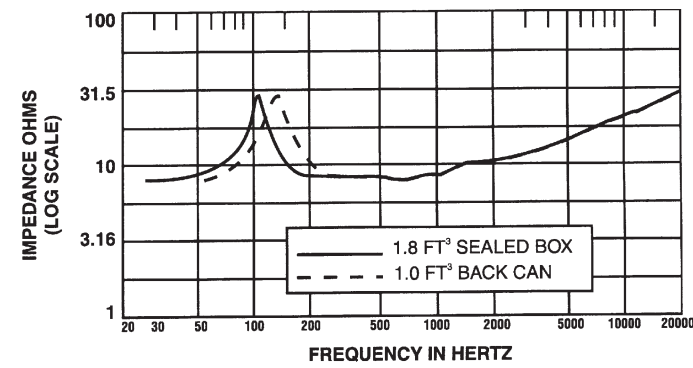


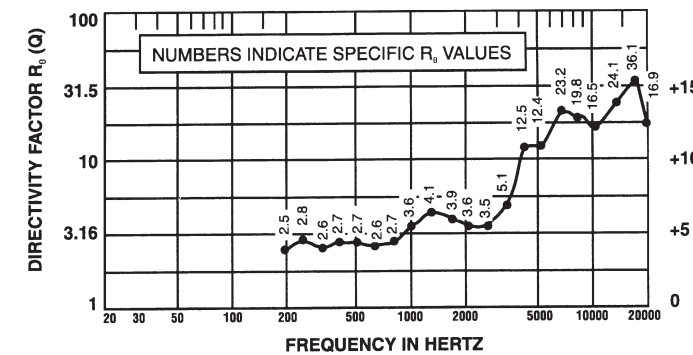
Axial Frequency Response
(1 watt / 1 meter)



Beamwidth vs Frequency



Input Impedance vs. Frequency



Directivity and Q

General Product Description

The Electro-Voice® 205 is a high quality 4-inch, full-range loudspeaker for distributed sound systems.

An acoustically transparent dome encloses a small, centrally mounted free-edge cone which is used to improve high-frequency dispersion.

The 205 is suitable for use in applications requiring highly intelligible speech or smooth musical reproduction.

To ensure long-term reliability in installations, the 205-8A is designed to handle 10 watts continuous power (40 watts peak) of shaped white noise for eight hours per EIA Standard RS-426A 1980.

The 205-4T includes a 4 watt transformer, allowing connection to 25/70.7/100- volt line, with taps of 0.5 to 4 watts.

The 205-8T includes an 8 watt transformer, allowing connection to 70.7/100- volt line, with taps of 1 to 8 watts.

Architects' and Engineers' Specifications

The loudspeaker shall be a ceiling loudspeaker with a nominal diameter of 128 mm (5.1 in.), an overall depth of 56 mm (2.2 in.) for the 205 and 94 mm (3.7 in.) for the 205-4T, and shall weigh no more than 0.9 kg (2.0 lb) for the 205, 1.3 kg (2.8 lb) for the 205-8T. The voice coil shall have a nominal diameter of 25.4 mm (1.0 in.) and length of 7.6 mm (0.3 in.) and shall operate in a gap of not less than 1.0 T (10,000 Gauss).

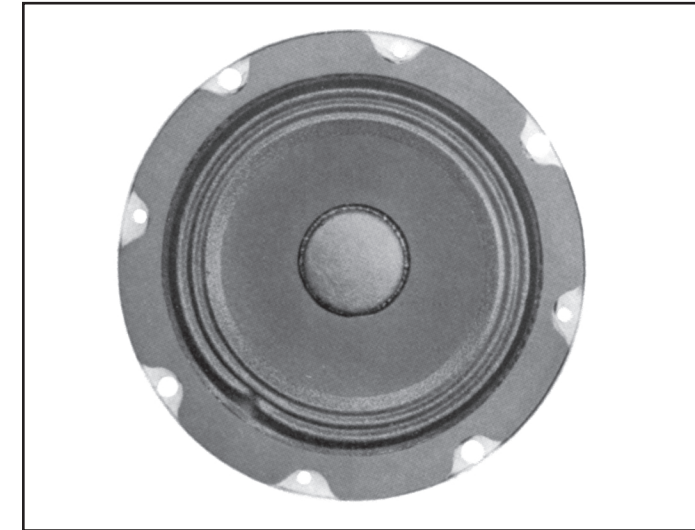
The loudspeaker shall exhibit a sensitivity (SPL, 1 watt at 1 meter (3.28 ft) averaged (200 - 4,000 Hz) of no less than 91 dB on axis maintaining an essentially flat frequency response with 3 dB-down points at 65 Hz and 16,000 Hz in a two-cubic-foot sealed box in a free field. The half-space

205 Series

4-Inch Full-Range Ceiling Loudspeakers



COMMERCIAL



reference efficiency shall be 0.8%. The nominal impedance shall be 8 ohms and the dc resistance shall be 6.5 ohms. The loudspeaker shall be capable of handling a continuous 10-watt (8.6 volts true RMS) shaped white-noise signal (as per EIA Standard RS-426A 1980) with a 6-dB crest factor for eight hours.

The loudspeaker shall be the model 205-8A. When fitted with a transformer that allows connection to 25/70.7/ 100-volt systems of 0.5 to 4 watts, the loudspeaker shall be referred to as the model 205-4T. When fitted with a transformer that allows connection to 70.7/100-volt systems of 1 to 8 watts, the loudspeaker shall be referred to as the model 205-8T.

Specifications:

Frequency Response: 90 - 18,000 Hz, ± 5 dB (see last page)

Power-Handling Capacity: 10 watts
(per EIA RS-426-A 1980 (85 - 15,000 Hz bandlimited pink noise, 6-dB crest factor):

Impedance:

Nominal: 8 ohms

Minimum: 6.7 ohms (230 Hz)

Sound Pressure Level: 91 dB
(at 1 Meter, 1 Watt Input, 200 - 4,000 Hz Average)

Maximum SPL: 101 dB for 10W @ 1M

Voice-Coil Diameter: 25.4 mm (1.0 in.)

Magnet Weight: 0.32 kg (0.72 lb)

Magnet Material: Barium Ferrite

Flux Density: 1.0 Tesla

Speaker Frame: 22-gauge stamped steel

Frame Color: Black

Dimensions:

205-8A / 205-4T / 205-8T

Diameter: 206 mm (8.1 in.)

Height:

205-8A 56 mm (2.2 in.)

205-4T / 205-8T: 94 mm (3.7 in.)

Net Weight:

205-8A: 0.9 kg (2.0 lb)

205-4T / 205-8T: 1.3 kg (2.8 lb)

Transformer Input:

205-4T 25 or 70.7 volt line (100 volt operation)

205-8T 70.7 volt line (100 volt operation)

USA 12000 Portland Ave South, Burnsville, MN 55337, Phone: 952-884-4051, FAX: 952-884-0043
Canada 705 Progress Avenue, Unit 46, Scarborough, Ontario, Canada, M1H2X1, Phone: 416-431-4975, 800-881-1685, FAX: 416-431-4588
Switzerland Kellenstrasse 11, CH-2563 IPSACH, Switzerland, Phone: 41/32-331-6833, FAX: 41/32-331-1221
Germany Hirschberger Ring 45, D94315, Straubing, Germany, Phone: 49 9421-706 392, FAX: 49 9421-706 287
France Parc de Courcerin, Allé Lech Walesa, Lognes, 77185 Marne La Vallée, France, Phone: 33/1-6480-0090, FAX: 33/1-6480-4538
Australia Unit 23, Block C, Slough Business Park, Slough Avenue, Silverwater, N.S.W. 2128, Australia, Phone: 61/2-9648-3455, FAX: 61/2-9648-5585
Hong Kong Unit E & F, 21/F, Luk Hop Industrial Bldg., 8 Luk Hop St., San PO Kong, Kowloon, Hong Kong, Phone: 852-2351-3628, FAX: 852-2351-3329
Japan 2-5-60 Izumi, Suginami-ku, Tokyo, Japan 168, Phone: 81-3-3325-7900, FAX: 81-3-3325-7789
Singapore 3015A Ubi Rd 1, 05-10, Kampong Ubi Industrial Estate, Singapore 408705, Phone: 65-746-8760, FAX: 65-746-1206
Mexico Av. Parque Chapultepec #66-201, Col. El Parque Edo. Mex. 53390, Phone: (52) 5358-5434, FAX: (52) 5358-5588
UK 4, The Willows Centre, Willow Lane, Mitcham, Surrey CR4 4NX, UK, Phone: 44 181 640 9600, FAX: 44 181 646 7084
Africa, Mid-East 12000 Portland Ave South, Burnsville, MN 55337, Phone: 952-887-7424, FAX: 952-887-9212
Latin America 12000 Portland Ave South, Burnsville, MN 55337, Phone: 952-887-7491, FAX: 952-887-9212

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For warranty repair or service information, contact the Service
Repair department at 800/685-2606

For technical assistance, contact Technical Support at 866/78 AUDIO
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Specifications subject to change without notice.

Electro-Voice®

Recommended Connections

The 205 is a nominal 8-ohm impedance loudspeaker with a 10-watt input capability. The 205-4T utilizes a 4-watt, 25/70.7/100-volt universal line matching transformer with power taps ranging from 0.50 to 4 watts. The 205-8T utilizes an 8-watt, 70.7/100-volt universal line matching transformer with power taps ranging from 1 to 8 watts. The transformer is mounted to the frame and the primary winding is accessible for the user to select any of the power taps indicated in the following table for 205-4T. For use with 100-V lines, connect to the 70.7 V primary winding, and use the table below to determine the wattage ratings of various secondary winding taps. Do not use the tap marked 4 W.

All wattages marked for the various taps refer to the load on the amplifier, with the insertion loss of the transformer being less than 1.0 dB.

| 205-4T | | | |
|--------|--------|--------|--------|
| | 25V | 70V | 100V |
| 4.0W | Brown | Yellow | Green |
| 2.0W | Red | Green | Blue |
| 1.0W | Orange | Blue | Violet |
| .05W | Yellow | Violet | N/A |
| Common | Black | Black | Black |
| 8 Ohms | White | White | White |
| Common | Black | Black | Black |

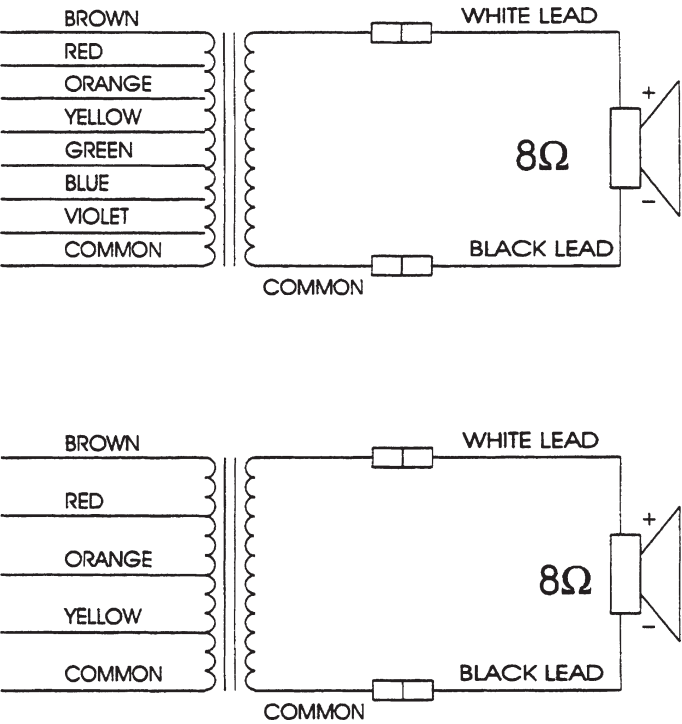
| 205-8T | | |
|--------|--------|--------|
| | 70V | 100V |
| 8.0W | Brown | Red |
| 4.0W | Red | Orange |
| 2.0W | Orange | Yellow |
| 1.0W | Yellow | N/A |
| Common | Black | Black |
| 8 Ohms | White | White |
| Common | Grey | Grey |

Recommended Enclosures and Baffles

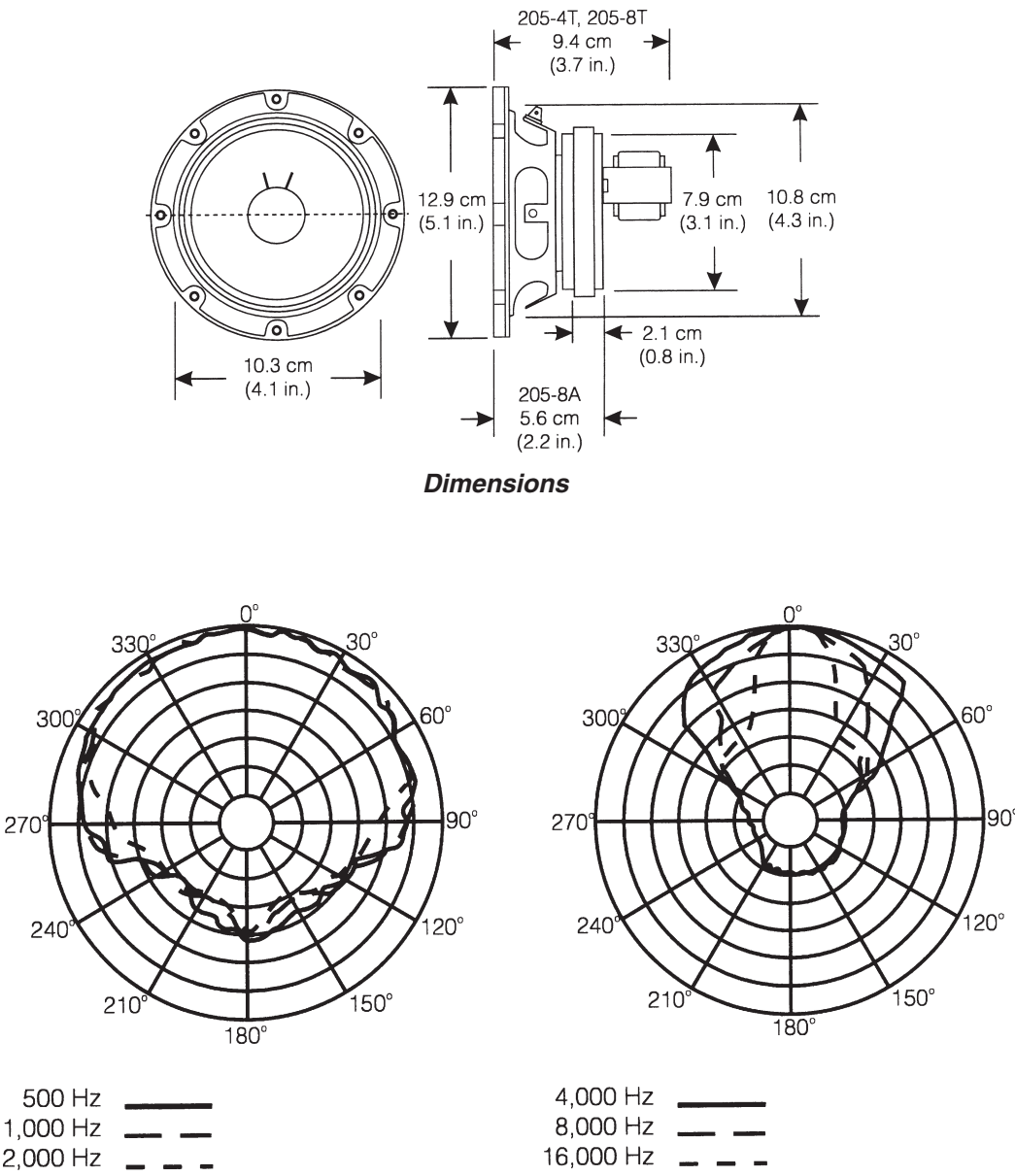
The 205-8A, 205-4T, and 205-8T are designed to fit on standard 4-inch ceiling speaker baffles. Additionally, these loudspeakers will accommodate the use of any standard back enclosure with a diameter of 5.5 inches or greater and a depth of at least 4.5 inches. Larger back volumes will increase the low-frequency output. The frequency response of a 205 in a typical 1.0-cubic-foot and 1.8-cubic-foot back enclosure are shown on the last page.

Mounting

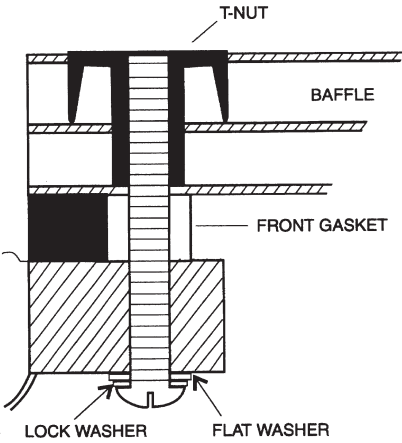
The 205 may be front- or rear-mounted against either surface of its mounting flange and requires a 110 mm (4.35 in.) diameter cutout and a 120 mm (4.72 in.) bolt circle. Normal fasteners up to 5 mm (0.20 in.) will fit through the eight holes in the frame. The 205 is designed for mounting on standard ceiling speaker baffles.



Wiring Diagram



Polar Response in 1.8 ft³ Sealed box 4 volt RMS of 1/3 octave Band Limited Noise in Anechoic Environment, 20 feet on Axis.



Mounting Diagram