

QUALITY FOR LESS

FOR IN-CEILING AND IN-WALL APPLICATIONS



309-ST Duplex® 2-way Loudspeaker System

- OFFERS WIDE RANGE REPRODUCTION OF MUSIC OR VOICE
- FOUR DELUXE CEILING-TYPE ENCLOSURES ARE OFFERED
- INCLUDES MATCHING TRANSFORMER

APPLICATIONS

- Arenas
- Auditoriums
- Convention Centers
- Houses of Worship
- Meeting Halls

DESCRIPTION

The 309-ST Series Duplex® loudspeaker system is a two-way loudspeaker with 8-inch low-frequency cones and high-temperature voice-coil assembly coaxially mounted with wide-dispersion cone tweeters. The dual magnet construction allows each speaker to be structurally, magnetically, electrically and mechanically independent of the other. The 309-ST utilizes a dual section crossover network, centered at 1500 Hz and providing 12 dB of attenuation for each element outside its operating range.

The 5281-W baffle is available as an accessory, and provides an attractive means to conceal the loudspeaker in ceiling or wall installations. The perforated grille is finished in semi-gloss white enamel. Other baffles available include the 5281-S (satin aluminum) 5282-W and 5284-W (both are square baffles).

Five sealed, metal ceiling-type enclosures are offered with the 309-ST. Each is made of heavy-gauge, rugged cold rolled steel, under-coated to prevent panel resonance, and finished with rust-inhibiting paint. In addition, the interior is lined with glass wool blankets. The enclosure model numbers are as follows; 5183-X, 5184-X, 5184-E, and 5184-N.

SPECIFICATIONS FOR THE 309-ST DUPLEX® LOUDSPEAKERS

System Type: Two-way, full range, Duplex® loudspeaker system.

Frequency Response: 85 Hz-18 kHz (see Figure 1, note 2).

Pressure Sensitivity: 96 dB SPL (1W, 500 Hz-3 kHz) re: 20 μ Pa (see note 1).

Power Handling: 16 watts, 85 Hz-18 kHz, AES method (see note 3).

Maximum Long Term Output: 107.6 dB SPL (16W/1m) re: 20 μ Pa (see note 4).

Impedance: 6.0 ohms minimum @ 11 kHz
8.0 ohms nominal.

Components: 8" high efficiency driver with a coaxially mounted 2.5" cone tweeter

Crossover Frequency: 2500 Hz

Connection Type: Bunch tinned wires for soldering or crimping.

Transformer: Maximum insertion loss = 1.5 dB
50 Hz-15 kHz, \pm 3 dB
primary taps = .5 watt (25/70V) 1 watt
2 watt
5 watt

Dimensions: 8.13" (20.6 cm) diameter
3.13" (7.9 cm) deep

Net Weight: 3.1 lbs. (1.4 kg)

Shipping Weight: 3.6 lbs. (1.6 kg)

Quantity: 8

Accessories: Grilles; 5281-S, 5281-W, 5282-W, 5284-WM
Enclosures; 5181-XM, 5182-XM, 5183-X, 5184-E, 5184-N, 5184-X, 5189-X

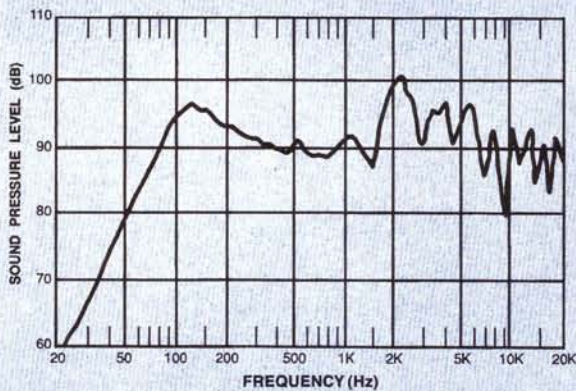


Figure 1.

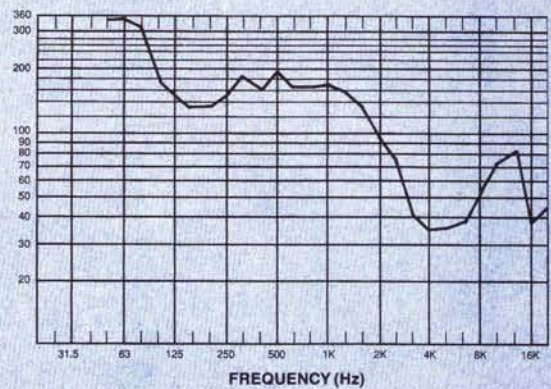


Figure 2.

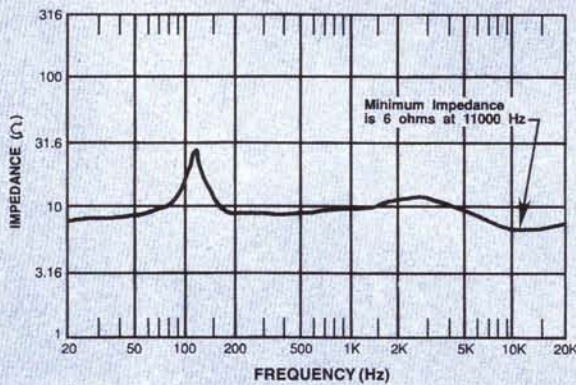


Figure 3.

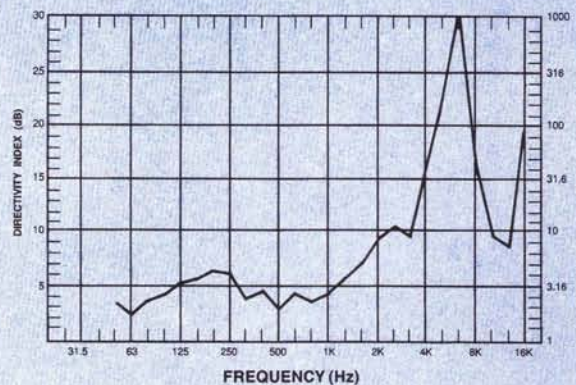


Figure 4.

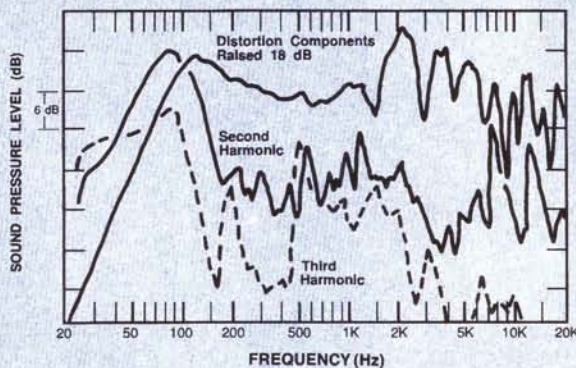


Figure 5.

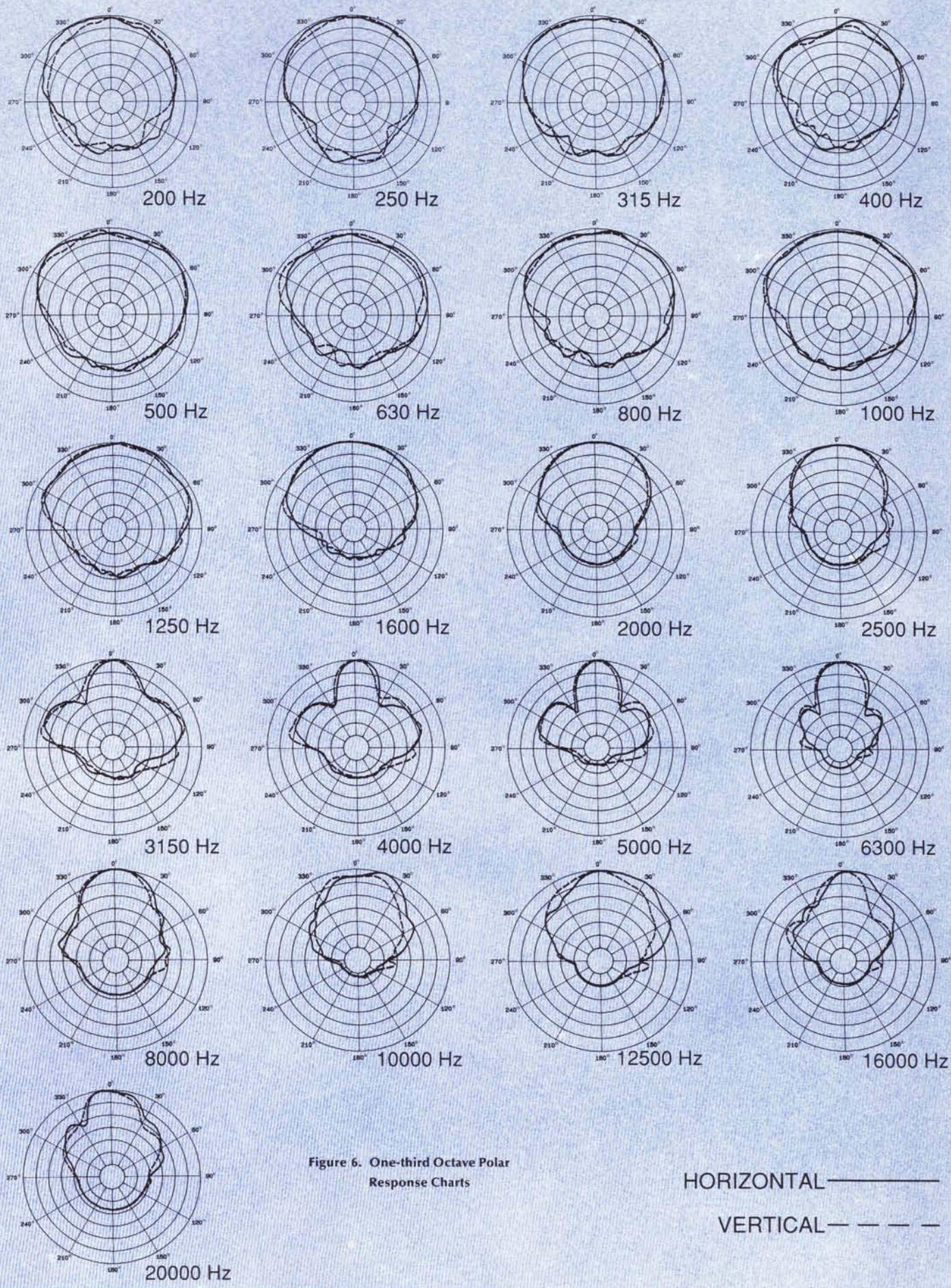


Figure 6. One-third Octave Polar Response Charts

HORIZONTAL ———
 VERTICAL - - - -

NOTES ON MEASUREMENT CONDITIONS

1. Pink noise signal, one Watt calculated using E^2/Z_{min} , 3.16 meter measurement distance referred to one meter.
2. On-axis, one Watt calculated using E^2/Z_{min} , 3.16 meter measurement distance referred to one meter, low frequencies corrected anechoic chamber error.
3. This system rating patterned after the AES method for individual driver, where the test signal is pink noise with a 6 dB crest factor over the bandwidth of the system, with power calculated using E^2/Z_{min} , for the two hours.
4. This measurement made under the same conditions as Pressure Sensitivity, but at rated power, and takes into account any power compression effects due to non-linearities in the system.

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The loudspeaker shall be a full-range Duplex® type with an 8 in. low frequency cone radiator, a high frequency cone radiator, and a dividing network. The Duplex loudspeaker shall meet the following criteria. AES power rating shall be 16 watts of band limited pink noise (85 Hz to 18 kHz, 6 dB crest factor). Frequency response, uniform from 85 Hz to 18 kHz. Pressure sensitivity, 96 dB

SPL at 1 meter (94 dB at 4 feet) on axis with one watt of band limited pink noise from 500 Hz to 3 kHz (ref. 20 μ Pa). Minimum impedance, 6.0 ohms. The loudspeaker shall be 8.13 in. (20.65 cm) in diameter and 3.13 in. (7.9 cm) deep. Weight shall be 3.1 lbs (1.4 kg). The Duplex loudspeaker shall be the Altec Lansing 309-ST.



a MARK IV company

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