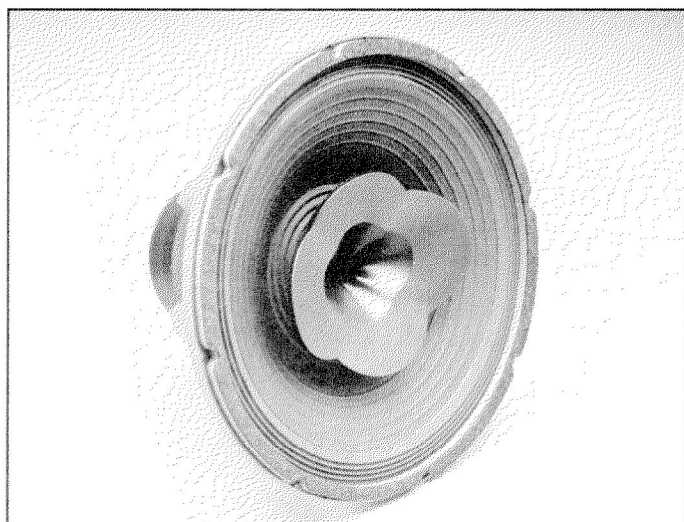




950-8A 15" Duplex® Ceiling Loudspeaker



KEY FEATURES

- ★ **90° by 90° CD Horn, Produces a Square Floor Plan Isobar.**
- ★ **High Output Capability**
- ★ **Auto-Reset Circuit Breakers**

The Altec Lansing **950-8A** Duplex® loudspeaker system is a two-way loudspeaker with a 15-inch low frequency cone and high-temperature voice-coil assembly, coaxially mounted with a rectangular-coverage 90° x 90° horn driven by a 1-inch compression driver. The **950-8A** utilizes a dual section crossover network with 12dB per-octave attenuation and self-resetting protection circuits on each section. Pilot holes are provided for mounting an Altec **15716** or **15732** matching transformer in order to operate the loudspeaker from 70.7V distribution lines. These transformers offer selections of 2,4,8,16 or 32W, delivered to the loudspeaker system.

The Altec **5297-W** steel grille and baffle provide an attractive means to conceal the loudspeaker in ceiling or wall installations. The

PRIMARY SPECIFICATIONS

System Type:	Two-way, full range, Duplex® loudspeaker system employing compression driver and horn.
Pressure sensitivity:	98.0dB dB SPL (1W,500Hz - 3kHz, re: 20μPa, see note 1)
Frequency Response:	60 Hz - 20 kHz (see Figure 1, Note 2)
Power Handling:	200 watts,60 Hz-20 kHz, AES method (see note 3)
Maximum Long Term Output:	119.6 dB SPL (200 watts input, 1m, re:20μPa, see note 4).
Impedance:	7.0Ω ohms minimum. 8.0Ω ohms nominal.

DESCRIPTION

perforated grille is finished in semi-gloss white enamel.

A metal ceiling-type enclosure is available as an accessory with the **950-8A**. The **5197-X** enclosure provides an internal volume of 4 ft³. It is constructed from 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, and corner mounting brackets are provided to mount the enclosure within a ceiling.

These components are designed to work together as a complete system of in-ceiling loudspeakers and accessories. They provide a square coverage pattern, high efficiency, high maximum output, ease of installation, and wide-range reproduction of music and voice.

Components: 15-inch, high-efficiency, low-frequency driver with a coaxially mounted 1-inch compression driver and rectangular coverage 90° x90° horn.

Crossover Network: Two-way at 1800 Hz with a 12dB per octave slope for both low and high frequencies. Self-resetting protection circuits for both woofer and tweeter.

Input Terminals: .205-series spade terminals

Accessories: 15716, 15732 Transformers; 5197-X Enclosure, 5297-W Grille and Baffle assembly.

Replacement Diaphragm

Assembly: R-950-8AHF

LF Cone Kit: R-950-8ALF

Dimensions Diameter: 15.1 in. (38.35cm)

Bolt Circle Diameter: 14.46 in. (37.0cm)

Bolt Holes: Eight .281 in.holes spaced 45° apart.

Baffle Opening: 13.9 in. (35.3cm)

Depth Rear Mounted: 9.2 in. (23.37cm)

Depth Front Mounted: 8.3 in. (21.0cm)

Net Weight: 22.1 lbs (10.0kg),

includes network

Shipping Weight: 29.0 lbs (13.2kg),

includes network

Finish: Dark Grey enamel

Weight: 2 lbs. 3 lbs.
(0.91kg) (1.36kg)

Connection Type: .205-series spade terminals

Additional Taps: Additional 0.5dB and 1.0dB taps to compensate for line losses.

SPECIFICATIONS: 5197-X ENCLOSURE

Construction Material: 18 gauge cold rolled steel

Coating: Undercoated for panel resonance damping.

Glass Wool Lining: 1.5 in. (3.7cm) glass wool blankets

Volume: 4 ft³ (113.2 liters)

Dimensions: 23.0 in. (50.8cm) square, with centered perforated 15.8 in. (40.1cm) square section.

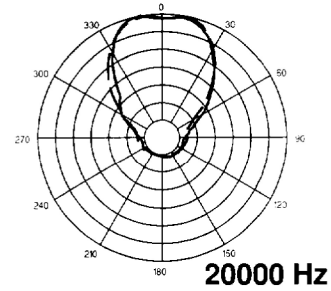
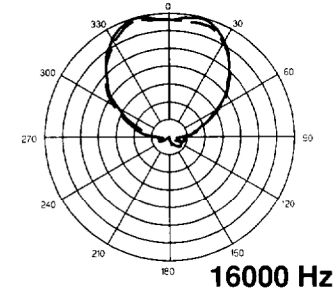
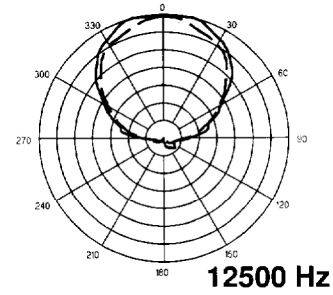
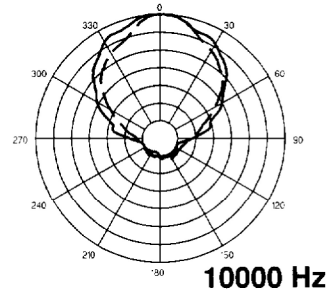
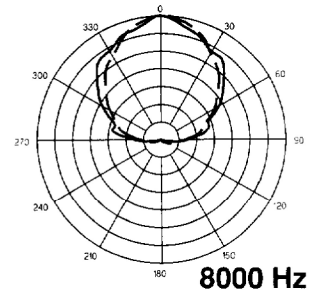
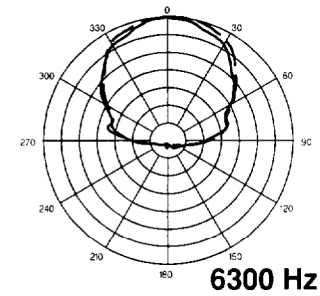
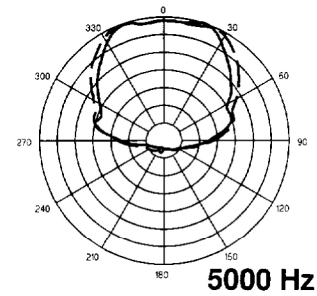
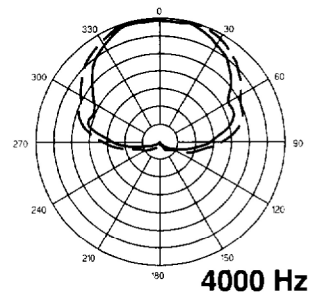
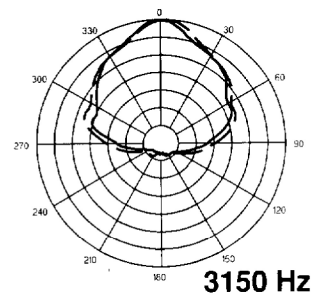
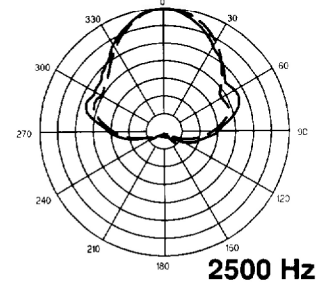
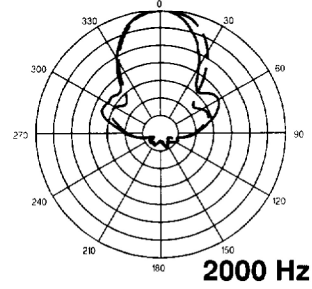
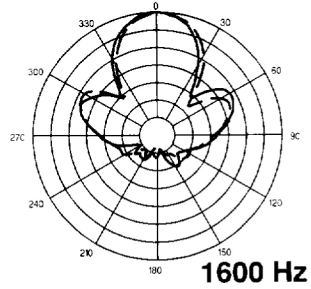
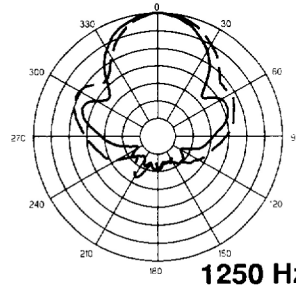
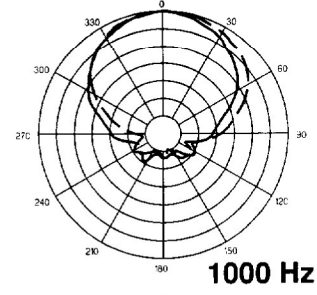
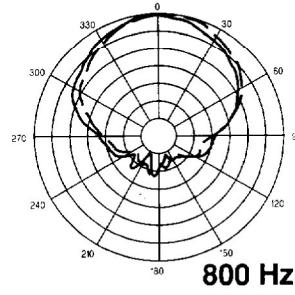
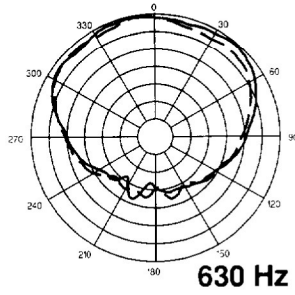
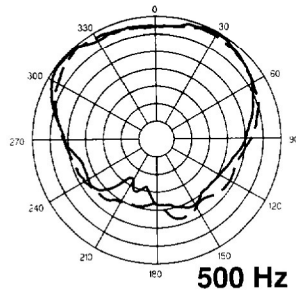
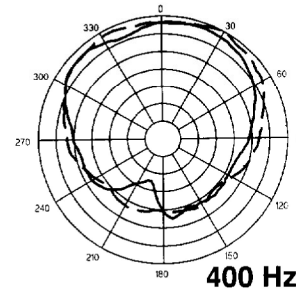
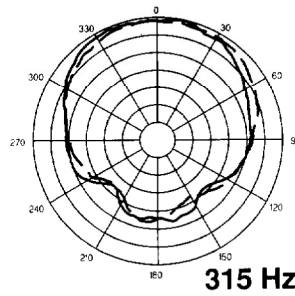
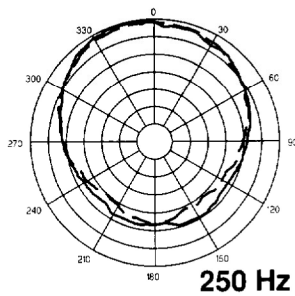
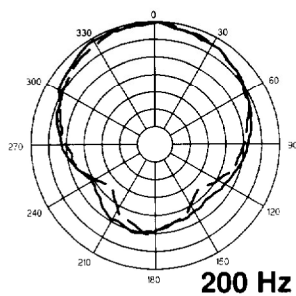
SPECIFICATIONS: TRANSFORMERS

Frequency Response: 50Hz to 15Khz, ±1dB

Insertion Loss: 0.5dB

Secondary Impedance: 8 ohms

	15716	15732
Primary Impedances and Power Drawn:		
	2499Ω	1250Ω
	2 Watts	4 Watts
	1250Ω	625Ω
	4 Watts	8 Watts
	625Ω	312Ω
	8 Watts	16 Watts
	312Ω	156Ω
	16 Watts	32 Watts



HORIZONTAL —
VERTICAL - - -

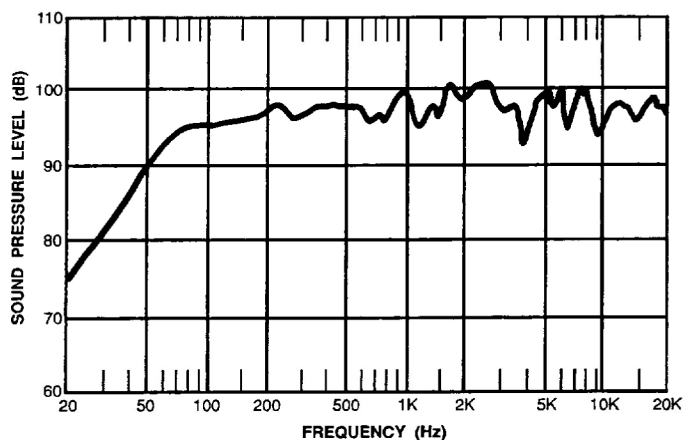


Figure 2. Frequency Response

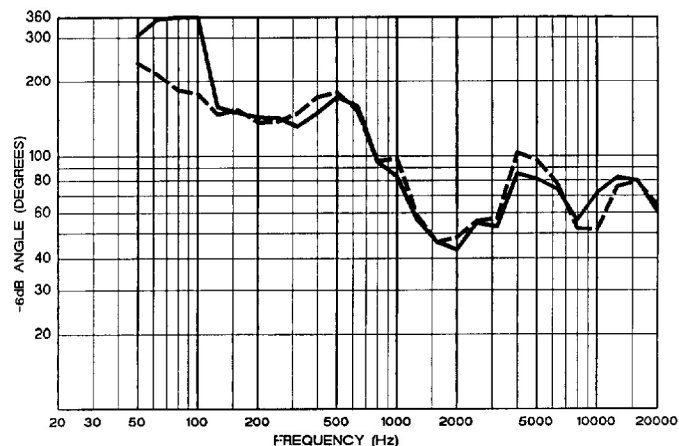


Figure 3. Dispersion Angle

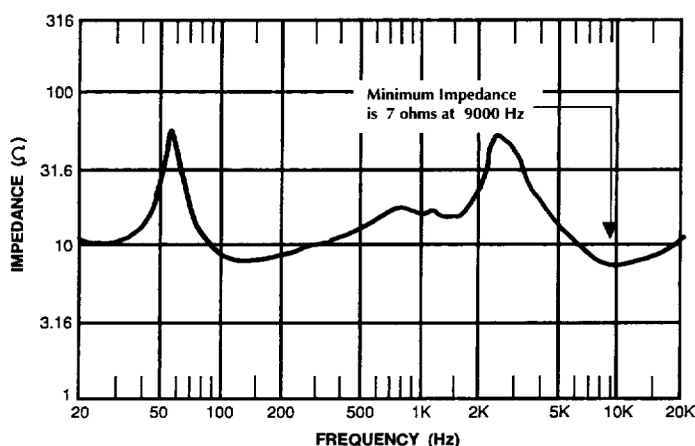


Figure 4. Magnitude of Impedance

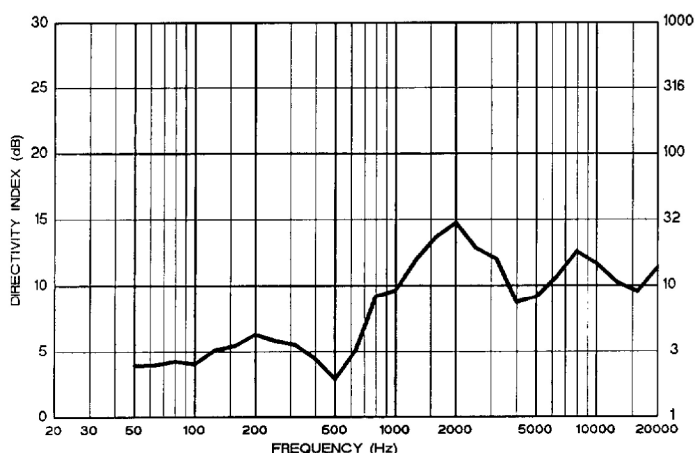


Figure 5. Q and Directivity Index

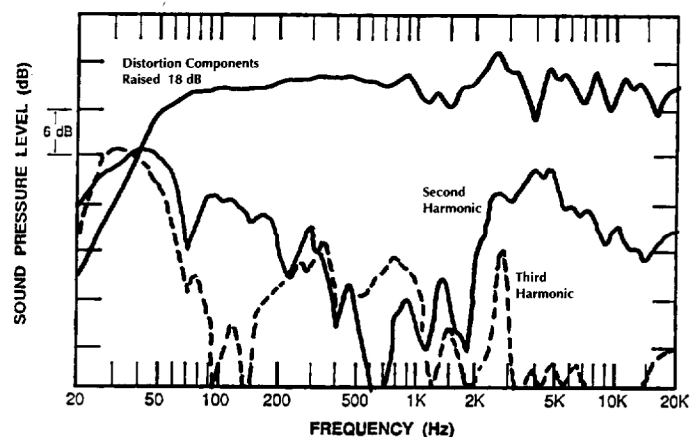


Figure 6. Harmonic Distortion at 0.1 Rated Power

950-8A - THIELE-SMALL PARAMETERS

Free-Air Resonance, f_s :	31.5 Hz
Equivalent Volume Compliance, V_{as} :	14.5 ft. ³ (410 Liters)
Total Q, Q_{ts} :	0.297
Electrical Q, Q_{es} :	0.307
Mechanical Q, Q_{ms} :	9.07
Reference Efficiency:	4.02%
Effective Diaphragm Area, S_d :	132.7 in. ² (.0856m ²)
Linear Displacement, X_{max} :	.13 in. (.33cm)
Peak Volume Displacement, V_d :	17.3 in ³ (.28 Liters)

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NOTES ON MEASUREMENT CONDITIONS

1. Pink noise signal, one Watt calculated using $E^2 \div Z_{\min}$, 3.16m measurement distance referred to one meter.
2. On-axis, one Watt calculated using $E^2 \div Z_{\min}$, 3.16m measurement distance referred to one meter, low frequencies corrected for anechoic chamber error.
3. This system rating patterned after the A.E.S method for individual driver, where the test signal is pink noise with a 6dB crest factor over the bandwidth of the system, with power calculated using the $E^2 \div Z_{\min}$, for 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.
5. Distortion components invalid above 10kHz. The distortion at any given frequency may be found by graphically taking the difference between the fundamental and harmonic, and adding the number of Decibels which the harmonic has been raised on the graph and apply the formula:
percent distortion = $100 \times 10^{-(\text{difference in dB} \div 20)}$

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

CEILING-TYPE ENCLOSURES

The ceiling-type enclosure shall be of square shape for new and existing installations to accommodate a 15-inch duplex® loudspeaker. Construction shall be of heavy gauge, rugged cold rolled steel, heavily undercoated to eliminate panel resonance, and finished with rust-preventing paint. The interior of the enclosure shall be lined with 1-1/2-inch thick glass wool blankets. The enclosure shall have corner mounting brackets to facilitate mounting within the ceiling. The enclosure shall have a volume of 4 cubic feet. The ceiling-type enclosure shall be the **ALTEC LANSING Model 5197-X**.

5297-W GRILLE AND BAFFLE ASSEMBLY

The grille and baffle assembly shall be of square shape and constructed of 18 gauge steel having a visible finish of semi-gloss white baked enamel paint. A loudspeaker mounting subplate and mounting hardware shall be included. Dimensions shall be 20" on each side, with a centered perforated square measuring 15.8" in each side. The grille and baffle assembly shall be the **ALTEC LANSING Model 5297-W**.

TRANSFORMERS

The transformers shall deliver within $\pm 1.0\text{db}$ of full rated power over a frequency range of 50Hz to 15kHz with a maximum insertion loss of not greater than 0.5 dB for the most unfavorable impedance combination. Primary and secondary windings shall be electrically isolated, and shall provide a balanced line to the load. Secondary impedance shall be 8 ohms. Additional taps of 0.5dB and 1dB shall be provided to compensate for line losses. The transformers shall utilize 1/4-inch blade quick-connectors for convenience of installation and wiring. The **Model 15716 Transformer** shall offer selections of 2, 4, 8 and 16 watts, and shall weigh 2 pounds. The **Model 15732 Transformer** shall offer selections of 4, 8, 16 and 32 watts, and shall weigh 3 pounds. The transformer shall be the ALTEC-LANSING Model _____.