



SLC308-8T

Preassembled Ceiling Speaker System

FEATURES - THE ALTEC LANSING DIFFERENCE

- High Efficiency - 97 dB SPL
- High Output - 109 dB Peak SPL (8 watt Tap)
- Preassembled Speaker System for Quick Installation
- Off-White Décor Snap-On One Piece Metal Grille
- 5-Position Switch for Easy Transformer Tap Selection
- ½ in. (13 mm) Conduit Connector
- Metal Tile Bridge Included

GENERAL PRODUCT DESCRIPTION

High labor costs are driving the development of a new generation of preassembled, quick-install ceiling speaker systems. Altec Lansing's SLC308-8T builds on the company's strength as one of the world's leading supplier of premium 8 in. (203 mm) Duplex® ceiling speakers equipped with premium, low-insertion loss transformers.

The SLC308-8T features Altec's best selling CD308-8T component. The CD308 is an 8 in. (203 mm) Duplex® component rated at 16W AES / 64W peak power handling. The 8 watt 70V/100V transformer has a broadband insertion loss of < 0.6 dB from 50 Hz to 15 kHz.

Altec's high efficiency Duplex® design delivers maximum output with minimum amplifier power. At a broadband efficiency rating of 97 dB SPL (1W/1m), the SLC308-8T has rated peak output of 109 dB SPL using the 8 watt transformer tap at a distance of one meter. Less efficient ceiling speaker systems require 30W to 60W transformer taps to generate similar output. The high efficiency design of the SLC308-8T allows the systems integrator to downsize the amplifier channel assigned to each zone of ceiling speakers by a factor of two-thirds or more. Using the SLC308-8T is the most profitable choice a sound contractor can make.

The CD308-8T is installed in a round, metal, dampened 0.25 cubic foot enclosure with metal strain relief strap. Three metal dogleg arms are screwed-down to secure the enclosure to the included metal tile bridge. An off-white one-piece metal décor grille snaps into the assembly. The SLC308-8T has a two-wire

input connection (red & black), making it fool-proof for even the least experienced installers. The ½ in. (13 mm) connector easily mates to either metal or flex conduit.

Installers particularly like Altec's package. The mounting hole in the metal tile bridge serves as a hard template for cutting a perfect hole in the ceiling tile. A metal S-hook allows the installer to hang the enclosure from the ceiling grid of flex-conduit while wiring up the SLC308-8T.

In addition to industry-leading efficiency and output, the SLC308-8T is among the most lightweight packages available to sound contractors. The low-profile design allows the SLC308-8T to fit into tight ceiling spaces. An optional ring (SLC-RING) is required for plaster or sheetrock ceilings.

NOTE: SHIPPED IN PAIRS

SPECIFICATIONS

FREQUENCY RESPONSE ^{1, 2}	
130 Hz - 20 kHz (±5 dB)	
USABLE LOW FREQUENCY LIMIT (-10 dB) ^{1, 2}	
110 Hz	
SENSITIVITY ³	
97 dB SPL	
POWER HANDLING ⁴	
16 W AES (continuous); 64 W peak	
PEAK OUTPUT (1 m) ⁵	
115 dB SPL; 109 dB SPL (8W transformer tap)	
COVERAGE ANGLES ⁶	
90° (horizontal) by 90° (vertical)	
DIRECTIVITY FACTOR, Q ⁶	
11.91	
DIRECTIVITY INDEX, DI ⁶	
10.76 dB	
TRANSDUCER COMPONENTS	
LF: 1 x 8-in. (203 mm), low frequency woofer	
HF: 1 x 3-in. (76 mm), high frequency tweeter	
IMPEDANCE ⁷	
Nominal:	8.0 ohms
Minimum:	7.3 ohms at approximately 7.5 kHz
CROSSOVER FREQUENCY	
Passive LF - HF: 3,000 Hz	
TRANSFORMER	
Premium 8 watt 70V/100V, switch selectable taps of 8W, 4W, 2W, and 1W; rated at < 0.6 dB insertion loss, 50Hz - 15 kHz	
INPUT CONNECTIONS	
Only 2 wires, pre-stripped, for simple, quick installation	
FINISH	
Enclosure - Black Painted Steel with internal damping material	
Grille - Matte White Décor Round Metal Grille	
DIMENSIONS	
Diameter:	Can - 9.31 in. (236 mm); Baffle - 11.75 in. (298 mm)
	Grille - 12.75 in. (324 mm)
Depth:	Can - 7.85 in. (199 mm)
Length/Width:	Tile Bridge - 23.75 in. (603 mm) / 14 in. (356 mm)
NET WEIGHT	
8.5 lbs. (3.86 kg), one speaker system with grille	
SHIPPING WEIGHT	
31.7 lbs. (14.38 kg), (includes 2 speaker systems with grilles and tile bridges)	
CD308-8A - THEILE-SMALL PARAMETERS	
Free Air Resonance, f_s :	92.2 Hz
Equivalent Volume Compliance, V_{AS} :	0.84 ft. ³ (23.7 l)
Total Q, Q_{TS} :	0.87
Electrical Q, Q_{ES} :	1.05
Mechanical Q, Q_{MS} :	5.26
D.C. Resistance, R_E :	8.0 ohms
Peak Linear Displacement, X_{max} :	0.05 in. (1.3 mm)
Reference Efficiency, η_0 :	2.13%

INSTALLATION AND WIRING

Although the SLC308-8T can be mounted into a sheetrock or plaster ceiling, the following installation procedure is intended for suspended tile ceilings. Note: We recommend that you order the mounting ring (SLC-RING), not included, when installing the SLC308-8T into a sheetrock or plaster ceiling.

1. Place ceiling tile, finished side facing up, over the flat, 12 in. (305 mm) to 22 in. (559 mm) diameter opening of a container such as a Rubbermaid® 32 gallon Brute® model 2632.
2. Locate the approximate center of the mounting hole that is to be cut, and mark this spot on the ceiling tile. Note: This center can be located anywhere along the length of the ceiling tile that is at least 8 in. (203 mm) from either end and equidistant from each side edge.
3. Align the center of the 10.75 in. (273 mm) tile bridge hole with the spot marked as the center, and position the metal tile bridge flat against the ceiling tile with the ends of the tile bridge aligned to the side edges of the ceiling tile.
4. Carefully, so as not to damage the ceiling tile, temporarily secure the tile bridge in-place with adjustable torsion clamps such as C-clamps.
5. Guide the blade of a RotoZip® RZ01, or similar rotary cutting tool, against the edge of and completely around the 10.75 in. (273 mm) tile bridge hole, cutting the ceiling tile hole.
6. Remove the torsion clamps and tile bridge from the ceiling tile.
7. Install the ceiling tile in the ceiling's T-grid.
8. Install the tile bridge on top of the ceiling tile, and align the tile bridge hole with the newly cut ceiling tile hole.
9. Pull the wiring and or flex conduit through the tile bridge and ceiling tile holes.
10. Attach one end of the S-hook to the SLC308-8T's metal strain relief strap and rest the other end of the S-hook, through the mounting hole, on the top surface of the tile bridge.
11. Connect the audio transmission (-) wire (usually black) to the black wire of the SLC308-8T, and connect the audio transmission (+) wire to the red wire of the SLC308-8T. Secure a sufficient insulator cover over these connections. Note: Proper rated wire-nuts are recommended to insulate these connection points.

SPECIFICATION NOTES

- ¹ The frequency response of the loudspeaker system is measured at a distance of no less than 3 meters to obtain full range data. The level is then corrected to be equivalent to a 2.83 V 1 m measurement. A near field measurement of the system is performed for frequencies below 500 Hz. This data is then combined with the full range measurement to give an accurate composite frequency response curve.
- ² The limits of the frequency response are referenced to -5 dB of the loudspeaker's rated sensitivity in the SLC's 0.25 ft.³ sealed enclosure.
- ³ The sensitivity of the loudspeaker system is the log based average SPL taken over the intended bandwidth of operation for the system with a 2.83 V swept sine stimulus. The data is measured and level corrected in a manner consistent with note 1.
- ⁴ The power handling capacity of the loudspeaker system is tested using a full range form of AES Standard 2-1984. The test stimulus is band limited (40 Hz - 16 kHz) pink noise with a 6 dB crest factor. The applied RMS voltage is determined using the minimum impedance of the system. The amplifier used to drive the loudspeaker has a minimum operating headroom of 6 dB referenced to the RMS voltage.
- ⁵ The peak output level of the system is calculated based on the sensitivity and the peak power handling capabilities of the system.
- ⁶ The coverage angles for the loudspeaker are taken as the -6 dB points of the directivity response and averaged from 500 Hz to 16 kHz.
- ⁷ The minimum impedance of the loudspeaker is taken over its intended band of operation.

As we are continually striving to improve Altec Lansing products, specifications are subject to change without notice.

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- Authorized EASE data on all Altec Lansing Professional loudspeakers
- PDF specification sheets. Download page 1 of the specification sheet for you submittals.
- One paragraph A&E Specifications in .doc format
- The latest information on Altec Lansing Professional products.
- Performance specifications for the CD308-series speakers, including the one-octave polar response charts.

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12. If flex conduit is used, pack the excess wire into the conduit (including the wire nuts), and secure the flex conduit with the ½ in. (13 mm) connector.
13. Remove the S-hook and gently push the SLC308-8T (and excess conduit or wire) up into the hole and tighten the three mounting screws, causing the dogleg arms to swing out and anchor the enclosure to the metal tile bridge.
14. Snap on the metal grille.

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The loudspeaker system shall be an in-ceiling design, consisting of a Duplex® 8 in. (203 mm) diameter cone woofer and a 3 in. (76 mm) diameter cone tweeter. This loudspeaker component shall have a power rating of 16W AES (64W peak). The loudspeaker system shall have an operating bandwidth of 130 Hz to 20 kHz, with a sensitivity of 97 dB at one watt, when measured at one meter. The loudspeaker system shall include a 5-position switch for adjustable load/output requirements. The switch shall terminate the two 18 gauge input wires directly to the nominal 8 ohm impedance of loudspeaker component, or indirectly to the loudspeaker component through a step-down, multi-tap 8W transformer. This transformer shall have an insertion loss of < 0.6 dB. The loudspeaker component, switch and transformer shall be assembled into a moisture resistant black-painted steel enclosure with internal damping material. The enclosure diameter shall be 9.31 in. (236 mm), the enclosure's baffle diameter shall be 11.75 in. (298 mm), and the enclosure's depth shall be 7.85 in. (199 mm), including the ½ in. (13 mm) flex-conduit connector. The loudspeaker system shall include a 12.75 in. (324 mm) diameter, one-piece, snap-on, off-white-painted steel grille; and a 23.75 in. (603 mm) long, 14 in. (356 mm) wide, 20 gauge galvanized steel tile bridge. The loudspeaker system shall be the Altec Lansing Professional model SLC308-8T.

