



features.

- **Description:** The OS-150-TB two-way speaker is made for installations requiring pattern control. It features a horn loaded compression driver that controls high frequency dispersion for longer throws or systems using live microphones.
- **Driver:**
 - 8" woofer (polymer-coated paper composite cone with cloth surround). HF compression driver with titanium diaphragm, 1" voice coil and ferrite magnet.
 - 150W power rating with frequency response of 65Hz-20kHz ±6dB and average sensitivity of 91.0dB measured 1W/1M.
- **Transformer:**
 - The back of the speaker features an 8ohm/transformer selector switch.
 - The screwdriver-adjustable switch allows for direct 8ohm or distributed 25V, 70V or 100V tap positions. See pg. 4 for tap selections.
- **Enclosure & Grille:**
 - Weather- and UV-resistant talc-impregnated polypropylene enclosure with powder coated aluminum mesh grille. Black.
 - Weather-resistant terminal cover
- **Mounting Aids:**
 - Each speaker features a factory-installed, U-bracket that allows 90 degree rotation (horizontal or vertical, depending on how it's mounted). The bracket is weather-resistant, plated, powder coated steel. Black.
 - The enclosure features a 1/4-20 threaded insert mounting bolt pattern that matches load-rated commercial speaker mounting brackets made elsewhere (see Optional Accessories).
- **Connections:**
 - Connections are made to two screw terminals protected by a weather-resistant terminal cover and rubber grommet, which can be removed if larger wire is used.
 - Includes knockout for 1/2 inch conduit connections.
- **A&E Specifications:**
 - The speaker for indoor or protected outdoor use shall be Lowell #OS-150-TB, which shall have a horn loaded compression driver, 150W power rating, screwdriver adjustable switch for direct 8ohm or distributed 25V, 70V or 100V application. It shall have a frequency response of 65Hz–20kHz ±6dB and sensitivity of 91.0 dB measured 1W/1M. Housing shall be molded plastic with mesh aluminum grille, black finish. The assembly shall include an adjustable U-bracket for vertical or horizontal installation. Each assembly shall weigh 18 lbs. [8.165 kg] and measure 16.3 in.H x 9 in.W x 10 in.D [414 x 229 x 254mm] with included U-bracket. Housing shall include 1/4"–20 threaded inserts to accept optional brackets (Adaptive Technologies MM-016-BT or Omnimount 25.0W), which may increase overall depth.
- **Optional Accessories:** The 1/4–20 threaded insert mounting bolt pattern on the rear of the speaker matches load-rated commercial speaker mounting brackets made by others, such as Adaptive Technologies Group or Omnimount. Verify the mounting bolt pattern alignment and the weight load rating with the bracket manufacturer before using another bracket to mount this speaker.

OS Speaker Series Summary

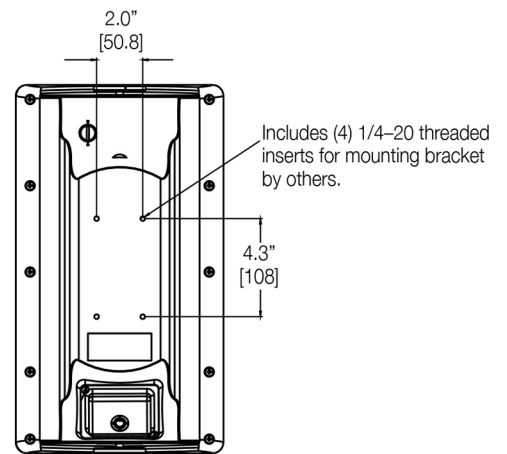
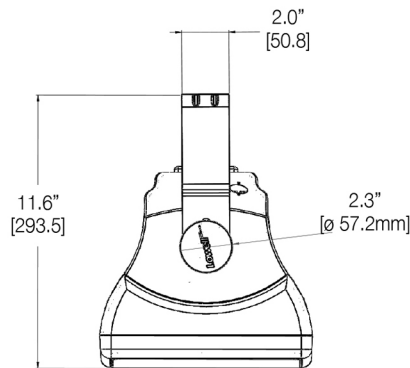
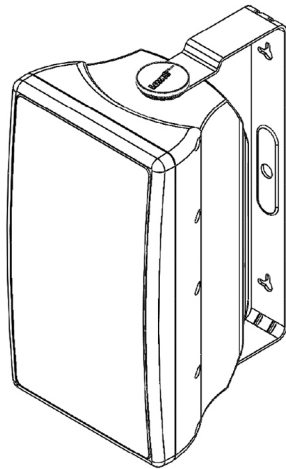
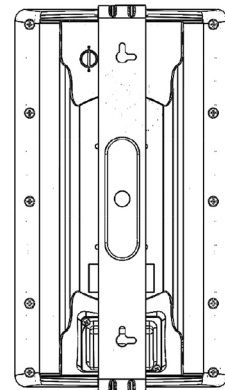
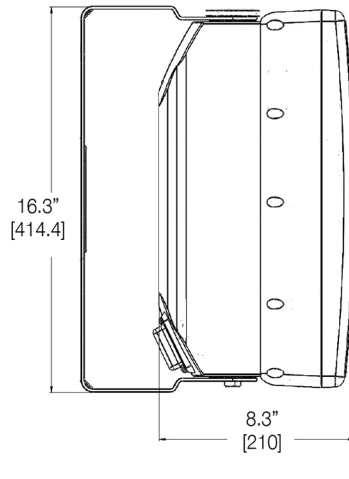
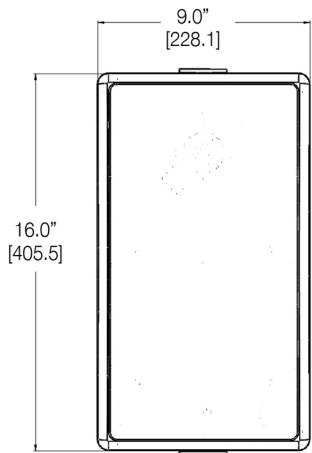
Optional:

Model No.	Description	8 ohms	Maximum 70V Tap	Ideal for	Dimensions* (H x W x D)	Color	Omni-Directional Bracket (order separately)
OS-150-TB	150W two-way speaker—8" woofer	✓	60W	Pattern control (longer throws or live mic)	16" x 9" x 8"	Black	-----
OS-150-TW	150W two-way speaker—8" woofer	✓	60W	Pattern control (longer throws or live mic)	16" x 9" x 8"	White	-----
OS-100-TB	100W two-way speaker—6.5" woofer	✓	60W	Wide dispersion, near-field, hi-quality music	11" x 9" x 7"	Black	OS-BRKT-B (black)
OS-100-TW	100W two-way speaker—6.5" woofer	✓	60W	Wide dispersion, near-field, hi-quality music	11" x 9" x 7"	White	OS-BRKT-W (white)
OS-50-TB	50W two-way speaker—5.25" woofer	✓	15W	Wide dispersion, voice & music	9" x 7" x 5"	Black	OS-BRKT-B (black)
OS-50-TW	50W two-way speaker—5.25" woofer	✓	15W	Wide dispersion, voice & music	9" x 7" x 5"	White	OS-BRKT-W (white)

*Approximate dimensions without U-bracket (see technical specifications).



technical drawings



technical specifications

Performance

Power Handling	150 watts RMS measured per EIA Standard RS-426B at 8 ohms
Sensitivity	91.0dB SPL (avg) measured 1 Watt at 1 Meter 112.8dB SPL (max) calculated 150 Watts at 1 Meter
Frequency Response	65Hz–20kHz (±6dB)
Impedance	8 ohms (nominal), 8.6ohms @ 274Hz (minimum)
Conical Dispersion	80 degrees conical @ 2000Hz octave (-6dB). <i>This measurement is used for comparison with other speakers.</i>
Speaker Spacing	To determine speaker spacing, see the technical paper “ <i>Distributed System Speaker Spacing for the Integrator</i> ” available for free download at LowellMfg.com. An online spacing calculator is also available.

Driver

Woofers	8" polymer coated paper composite cone with cloth surround
HF Compression Driver	Titanium diaphragm with 1 inch voice coil and ferrite magnet

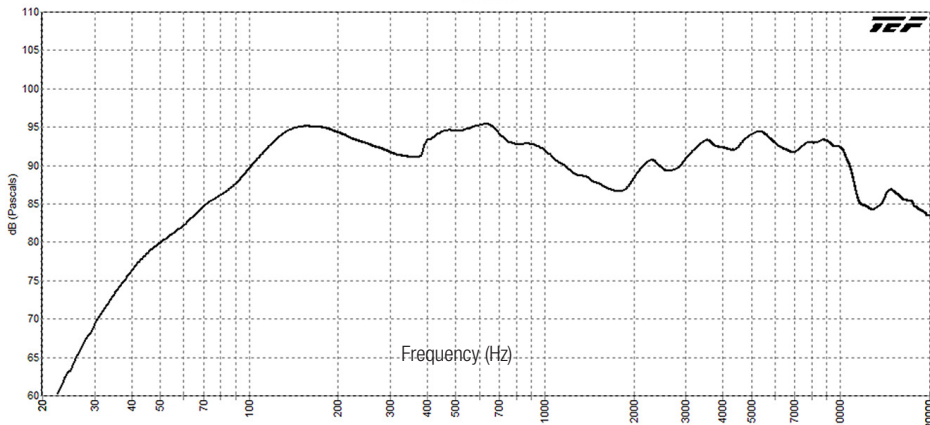
Transformer:

Taps	See page 4
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Mechanical

Cabinet Housing	Molded polypropylene, black
Cabinet Grille	Fine mesh aluminum, black
U-Bracket	Powder coated steel, black
Input Terminals	Screw terminals
Dimensions (without bracket)	16"H x 9"W x 8.3"D [414 x 229 x 211mm]
Dimensions (with U-bracket)	16.3"H x 9"W x 10"D [414 x 229 x 254mm]
Weight (each)	Net Weight: 18 lbs. (8.165kg)
Carton Qty	1 per carton

SPL vs. Frequency (1W/1M)



Test Methodologies

Lowell speaker systems are thoroughly tested to provide specifiers and contractors with accurate data. Test equipment includes the GoldLine TEF-20 analyzer.

- **Power Handling:** specification is based on E.I.A. Standard RS-426B.
- **Frequency Response:** describes the usable response range defined by a ± 6dB window, which is useful in predictive engineering calculations.
- **Sensitivity:** is a computer calculation of the log average sound pressure level (SPL) over the entire engineering bandwidth as given in the Frequency Response (± 6dB).
- **Maximum SPL:** is calculated based on the Power Handling and the measured log average Sensitivity where Maximum SPL = (Sensitivity @ 1W1M) + 10 log (Power Handling).
- **Dispersion Angle:** is defined as the angle of coverage that is no more than 6dB down from the on-axis value averaged over the 2kHz octave band. Since speech intelligibility is dependent upon the 2kHz octave, this specification is useful in designing voice reinforcement and music systems that provide even coverage and intelligibility. The polar plots illustrate how the system performs when hung in free space (360°) or half-space (180°) in the case of a recessed speaker.



installation

Installation with U-bracket (included).

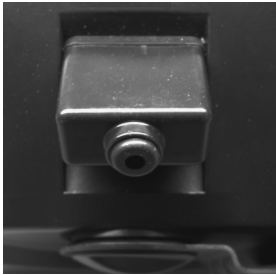
The U-bracket has mounting slots to accommodate vertical or horizontal mounting.



connections

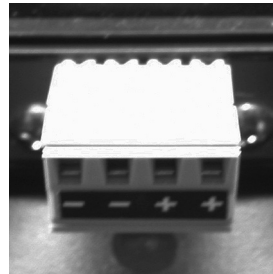
Weather-resistant terminal cover.

Incoming wire enters through the weather-resistant terminal cover and is protected by a rubber grommet. Maximum recommended wire size is 14AWG stranded. *Note: The grommet can be removed if larger wire sizes are used.*



Labor-saving Phoenix connector.

Wiring connects to the 4-conductor removable Phoenix-type connector. Parallel dual terminals (+ / -) are provided to terminate incoming and outgoing wiring.



tap selector switch

8ohm & transformer selector switch.

When the selector switch is in the 8 ohm position, the transformer is disconnected internally and the speaker power rating is 150W. When the switch is in position A-E, the speaker power is determined by the driving voltage as shown in the table on the rear of the speaker and the chart below.



Tap	25V line	70V line	100V line
A	7.5W	60W	Do Not Use
B	3.8W	30W	60W
C	1.9W	15W	30W
D	0.94W	7.5W	15W
E	0.48	3.8	7.5

