






ES-4T SPECIFICATIONS	ES-52T SPECIFICATIONS	ES-62T SPECIFICATIONS
<p>Driver Type: 4" Dual Cone (with whizzer HF) Power Rating: 25 watts (EIA Standard 426B) Frequency Response: 108Hz – 20kHz ± 6dB Sensitivity: 85.7dB SPL (8Ω, 1W@1M) Dispersion: 175° conical (-6dB @ 2kHz Oct.)</p> <p>Transformer Taps: 100V (16W, 8W, 4W, 2W) 70V (16W, 8W, 4W, 2W, 1W) 25V (2W, 1W, .5W, .25W, .13W)</p> 	<p>Driver Type: 5-1/4" Coaxial (with tweeter HF) Power Rating: 30 watts (EIA Standard 426B) Frequency Response: 70Hz – 20kHz ± 6 dB Sensitivity: 88.0dB SPL (8Ω, 1W@1M) Dispersion: 165° conical (-6dB @ 2kHz Oct.)</p> <p>Transformer Taps: 100V (16W, 8W, 4W, 2W) 70V (16W, 8W, 4W, 2W, 1W) 25V (2W, 1W, .5W, .25W, .13W)</p> 	<p>Driver Type: 6-1/2" Coaxial (with tweeter HF) Power Rating: 50 watts (EIA Standard 426B) Frequency Response: 64Hz – 20kHz ± 6dB Sensitivity: 88.6 dB SPL (8Ω, 1W@1M) Dispersion: 120° conical (-6dB @ 2kHz Oct.)</p> <p>Transformer Taps: 100V (32W, 16W, 8W, 4.2W) 70V (32W, 16W, 8W, 4W, 2W) 25V (4.4W, 2.2W, 1.1W, .55W, .28W)</p> 



Mounting Note: The speaker system must be mounted in accordance with local, state, and federal codes and regulations, and industry standard practices. The ES-4T speaker model and accessories are shown in all pictures, but the pictures and instructions are also applicable to the ES-52T and ES-62T speaker models and accessories.

Lay-in Tile Ceiling

1 Remove the 2' X 2' or 2' X 4' ceiling tile. Place the tile face down on a soft surface (to avoid damaging the surface of the ceiling tile). Assemble the C-ring and rails assembly by using 1 screw to attach each rail to the C-ring in the desired location. Place the assembly on the rear of the tile so that it spans the 2' width of the tile. Trace the inside edge of the C-ring as shown. The C-ring/rail assembly can be rotated 180 degrees to complete tracing the circle where the ring has a gap. Use a hole saw to cut out the hole in the ceiling tile.

2 Insert the rear of speaker through the hole in the tile. Tighten the mounting ears with a Phillips screw driver so that the ears rotate away from the speaker body and trap the tile between the speaker and C-ring/rails assembly. **Do not over-tighten the mounting ear screws or the plastic ears can break.** The mounting ears can span a ceiling thickness of 0.1" (2.54mm) to 1.4" (35.56mm).

Most contractors prefer to wire the speaker before placing the tile/speaker assembly on the ceiling tile grid. Skip to **6** for speaker wiring.

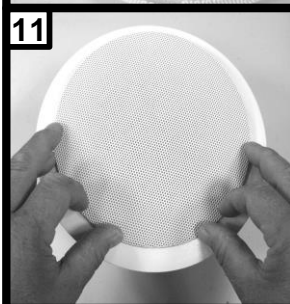
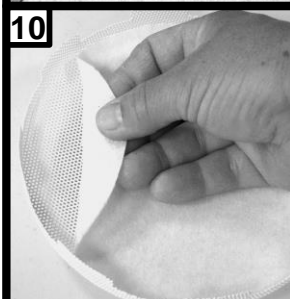
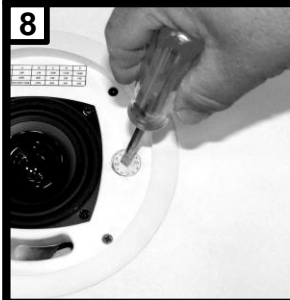
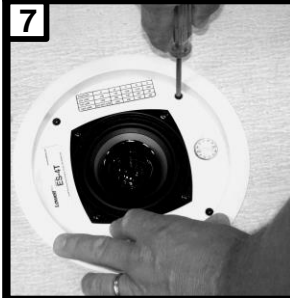
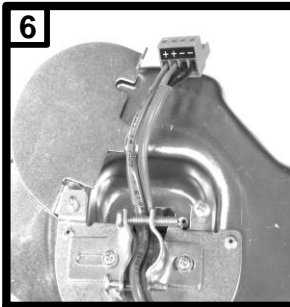
New Drywall (Sheetrock) Ceiling

3 On a new construction project, it is best to install a rough-in bridge before the drywall ceiling is installed. The ES-4-RIB rough-in bridge (sold separately for use with the ES-4T) and the ES-6-RIB rough-in bridge (sold separately for use with the ES-52T or ES-62T) are available for this purpose. Holes are provided on the bridge on twenty-four (24) inch centers and sixteen (16) inch centers for mounting to the bottom of the joists, rafters, trusses, metal rails or other ceiling support structure. Screw types required to mount the bridge vary widely depending on the construction of the ceiling structure so **mounting screws are not included and will be supplied by the installer.** Mount the bridge with the lip facing downward toward the floor. When the ceiling contractor installs the drywall, the lip will be used as a router guide to cut the hole in the ceiling that is required to install the speaker. Skip to **6** for speaker wiring.

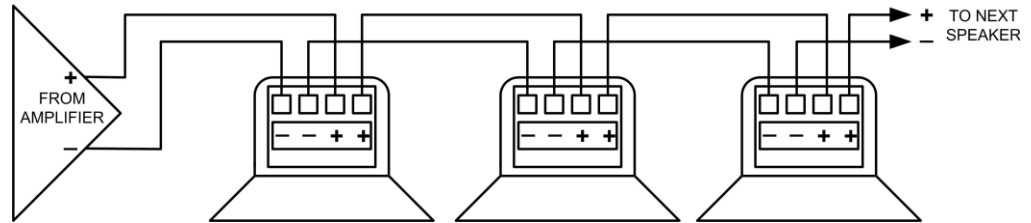
Existing Drywall (Sheetrock) Ceiling

4 When installing the ES-4T, ES-52T, or ES-62T in an existing drywall ceiling, it is important before cutting the hole, to confirm that there are no obstructions above the drywall ceiling that would prevent the speaker from being installed at your chosen location. See the technical paper at https://www.lowellmfg.com/wp-content/uploads/Checking_above_the_ceiling_before_you_cut.pdf. Once the location has been chosen and it has been determined that no obstructions exist, use the cardboard template provided to trace the cut-out circle on the ceiling.

5 Use a saw to cut the hole. For a drywall ceiling, the support rails provided need not be used, but it is recommended that the "C ring" be used to support the cut-out edge of the drywall. The gap in the C-ring allows the ring to be maneuvered into position as shown.



6 Using a Phillips screwdriver, open the screw on the wiring cover on the rear of the speaker, slide open the cover, and remove the plug-in Phoenix-type connector. Two (2) parallel “-” terminals and two (2) parallel “+” terminals are available for input wiring to the speaker and for output wiring to the next speaker in the string. The wiring schematic for a typical 25V, 70V, or 100V speaker system is shown in the diagram below:



The speaker can be used with the internal matching transformer bypassed by using the 8Ω or 4Ω position on the selector switch. To feed this input, one cable should run from the 8Ω output of a maximum 25 watt amplifier to only one ES-4T speaker, or from the 8Ω output of a maximum 30 watt amplifier to only one ES-52T speaker, or from the 4Ω output of a maximum 50 watt amplifier to only one ES-62T speaker. Wiring the speaker system in a series/parallel configuration may be acceptable depending upon the amplifier used, but that wiring method is not covered in this installation manual.

Run the cable through the metal clamp strain relief and make the wiring terminations on the plug-in connector. Plug the connector back in on the rear of the speaker, tighten the metal strain relief clamp, and close the wiring cover.

For a tile ceiling installation, the speaker is typically mounted to the tile and C-ring/rail assembly before the wiring is terminated (as was already described in step **2**). Once the wiring termination has been completed, place the speaker/tile/C-ring assembly on the ceiling grid.

NOTE: Lowell Manufacturing recommends that a suitable safety cable be attached from the ring that is supplied on the rear of the speaker enclosure to the building structure. In some areas of the country, building codes require this type of “safety cable” or “earthquake cable”. Refer to applicable building codes for safety cable requirements.

7 For a drywall ceiling installation, push the rear of the speaker through the hole in the ceiling making sure that the mounting ears line up with the C-ring (and not with the gap in the C-ring). Tighten the mounting ear screws with a Phillips screw driver so the ears rotate away from the speaker body and clamp the speaker to the ceiling and the C-ring.

WARNING: Do not over-tighten the mounting ear screws or the plastic ears can break. The mounting ears can span a ceiling thickness of 0.1" (2.54mm) to 1.4" (35.56mm).

8 Using a flat blade screwdriver, set the transformer tap select switch on the desired position (see the tap chart on the face of the speaker). **Note: Do not use an 8Ω or 4Ω switch position when using the speaker level output from a 25V, 70V, or 100V amplifier.**

Note: If custom paint is not required, skip to step **11**.

9 Use the plastic shipping cover as a paint shield and spray paint the front trim ring.

10 Carefully peel off the white scrim material before painting the grille. Spray paint the grille with a few light coats being very careful not to clog the holes in the grille with paint. After the paint on the grille is dry, replace the scrim using a light coat of all-purpose spray adhesive.

11 Press on the front grille until it is flush with the trim ring and the installation is complete.



UL1480A GENERAL SIGNALING EQUIPMENT
CSA C22.2 NO. 205-12
UL2043 SUITABLE FOR USE IN PLENUM SPACES

