


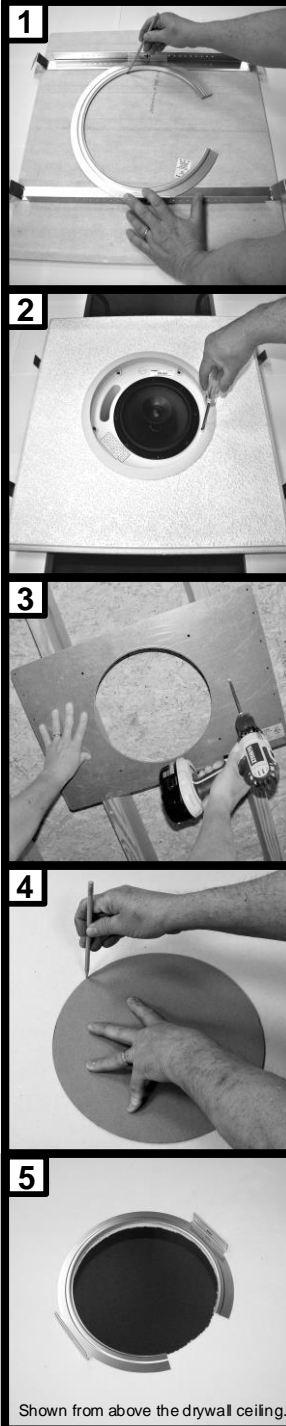




ES-82T SPECIFICATIONS	ES-82CDT SPECIFICATIONS	ES-8TSUB SPECIFICATIONS
<p>Driver Type: 8" Coaxial (with tweeter HF) 8Ω Power Rating: 120 watts (EIA 426B) Frequency Response: 64Hz – 20kHz ± 6dB Sensitivity: 90.0dB SPL (8Ω, 1W@1M) Dispersion: 105° conical (-6dB @ 2kHz Octave)</p> <p><u>Transformer Taps:</u> 100V (120W, 60W, 30W, 15W) 70V (120W, 60W, 30W, 15W, 7.5W) 25V (15W, 7.5W, 3.75W, 1.88W, 0.94W)</p> 	<p>Driver Type: 8" Coaxial (compression driver HF) 8Ω Power Rating: 150 watts (EIA 426B) Frequency Response: 67Hz – 20kHz ± 6dB Sensitivity: 91.5dB SPL (8Ω, 1W@1M) Dispersion: 70° conical (-6dB @ 2kHz Octave)</p> <p><u>Transformer Taps:</u> 100V (120W, 60W, 30W, 15W) 70V (120W, 60W, 30W, 15W, 7.5W) 25V (15W, 7.5W, 3.75W, 1.88W, 0.94W)</p> 	<p>Driver Type: 8" Subwoofer 8Ω Power Rating: 120 watts (EIA 426B) Frequency Response: 57Hz – 138Hz ± 6dB Sensitivity: 90.2 dB SPL (8Ω, 1W@1M) Dispersion: Omni-directional</p> <p><u>Transformer Taps:</u> 100V (120W, 60W, 30W, 15W) 70V (120W, 60W, 30W, 15W, 7.5W) 25V (15W, 7.5W, 3.75W, 1.88W, 0.94W)</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-82T speaker model and accessories are shown in all pictures, but the pictures and instructions are also applicable to the ES-82CDT and ES-8TSUB 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 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.** As shipped from the factory, the mounting ears can span a ceiling thickness of 0" to 2.375". The ears can be removed, rotated 180 degrees, and placed back on the tightening screws and they will then be capable of attaching to a ceiling thickness of up to 3.375". 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-8-RIB rough-in bridge (sold separately) is available for this purpose and may be used for the ES-82T, ES-82CDT, or ES-8TSUB. 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.

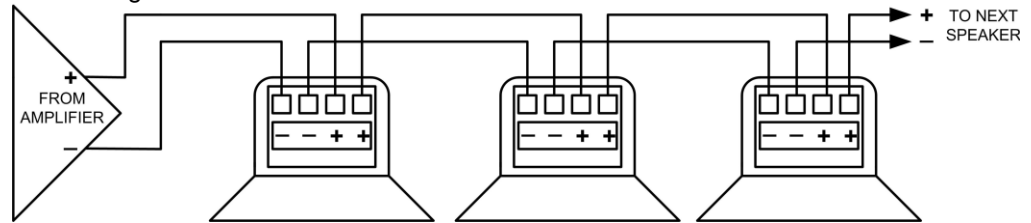
Existing Drywall (Sheetrock) Ceiling

4 When installing the ES-82T, ES-82CDT, or ES-8TSUB 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 (11.75" diameter) 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. Install so the dog ears rest on the ring.



6 Using a Phillips screwdriver, open the screws on the wiring cover on the rear of the speaker, slide and remove the cover, and remove the plug-in Phoenix-type connector. Feed the field wiring through the clamp fitting in the rear plate. Two (2) parallel “-” terminals and two (2) parallel “+” terminals are available for input wiring and parallel 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:



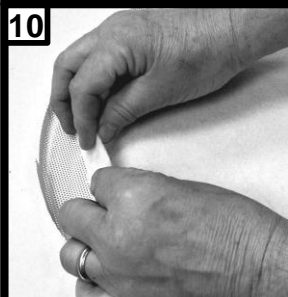
The speakers can be used with the internal matching transformer bypassed by using the 8Ω (or 4Ω in the ES-82T) switch position. Note that the switch position on the ES-82T is marked 4Ω because of a UL requirement regarding minimum impedance measurements. For all practical purposes, all impedance calculations for all ES Series speakers can be made using a nominal 8Ω impedance. One (1) cable should run from the output of an 8Ω maximum 120 watt amplifier to only one (1) ES-82T speaker, or to only one (1) ES-8TSUB speaker, or one (1) cable should run from the output of an 8Ω maximum 150 watt amplifier to only one (1) ES-82CDT 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. After terminating the field wiring on the connector, plug the connector back in on the rear of the speaker, close the wiring cover, and tighten the metal clamp fitting.



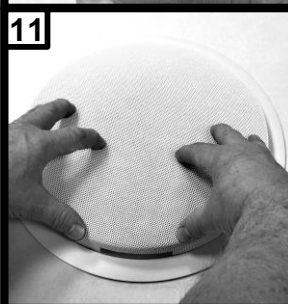
For a tile ceiling installation, the speaker is typically mounted to the tile and C-ring/rail assembly before the wiring is terminated (as was already described in step **2**). Once the wiring termination has been completed, place the speaker/tile/C-ring assembly on the ceiling grid.



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.** As shipped from the factory, the mounting ears can span a ceiling thickness of 0" to 2.375". The ears can be removed, rotated 180 degrees, and placed back on the tightening screws and they will then be capable of attaching to a ceiling thickness of up to 3.375".



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 the 8Ω or 4Ω switch position when using a 25V, 70V, or 100V output from an 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.

