

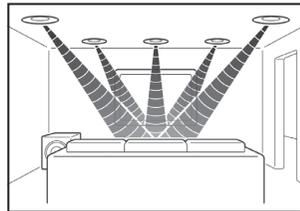


## TIS-SPK-FLO

Woofer	6-1/2" polypropylene
Tweeter	1" ferrofluid cooled silk dome
Power handling	100Watts
Frequency response	45-20,000Hz
Sensitivity	89dB@1W/1M
Impedance	8Ohms
Dimension(DiaxD)	235x92mm
Cutout size(Dia)	209mm
Mounting depth	90mm

Please read these instructions completely before you begin your installation.

- 1) Your speaker kit should include the following:
  - 1 pc of **TIS** Ceiling Speakers with Grills
  - 1 speaker installation / paint masking template
- 2) The Ceiling speakers can be installed with the following simple tools:
  - Pencil
  - Masking tape
  - Drill & drill bits
  - Utility knife or wallboard saw\*
  - #2 Phillips screwdriver
  - Wire cutters & wire stripper/crimp tool
  - Stud finder\*\*
- 3) **Speaker Location**  
To achieve the best performance from your Ceiling speakers, it is important to carefully select the location for installation. Your Ceiling speakers should be installed 5 to 8 feet apart to ensure proper stereo imaging. Mount each speaker the same distance from the intersecting walls to maintain a uniform look. Keep the speakers at least 2 feet away from the corners of the room to avoid overemphasized bass reproduction.
- 4) **Speaker Installation**  
Once you have selected the location for your speakers, you are ready to install them.



**CAUTION:** Be certain that there are no electrical wires, water pipes, or heating ducts in the planned installation area before you start drilling or cutting into the ceiling. If there is an electrical outlet nearby, turn off the circuit breaker to avoid possible injury.

Ceiling speakers are designed to be mounted in the ceiling between the joists or trusses. Once you have selected the location, check to be sure you are between the joists or truss. One method is to tap on the ceiling, you will hear a hollow sound when between two joists or trusses and a sharper, more solid sound when right on top of, or close to a joist or truss.

An easier, more accurate method for finding the location of joists or trusses is to use a stud finder. The Ceiling speakers include a two-part template. Remove the center circle from the template, this is a paint masking template to use if you choose to paint the speaker frames and grill. The outer ring is used to mark the cut-out for the speakers.

If the ceiling is made of drywall, simply cut the marked area with your utility knife or drywall saw. If the ceiling is made of plaster, you should use a saw with a higher tooth count to reduce the chance of breaking the plaster. Test fit the speaker in the hole, the speaker should fit loosely and the speaker frame should cover the edges of the hole. Repeat these steps for the other speaker.

### 5) Speaker Cable

Don't compromise sound quality by using thin, inexpensive speaker wire. We recommend using a high quality oxygen free copper speaker cable. For runs less than 50 feet, we recommend 16 gauge cable, and for longer runs we recommend 14 gauge or larger cable. Most municipalities require the use of CL2 rated speaker cable for installation in walls and ceilings. Leave enough speaker cable so you can stand comfortably on the floor or ladder while connecting the speaker cable to the speakers.

### 6) Speaker Connection

Remove about 8" of the cable jacket to expose the inner conductors. Strip 1/4" of insulation from each conductor and connect to the speaker terminals. When connecting the wires to the speakers, be sure to observe proper polarity. Most CL2 rated speaker cable will have red and black conductors so you will connect the red wire to the red speaker terminal and the black wire to the black speaker terminal.

### 7) Final Installation

To install the speakers into the ceiling, remove the grills using a small paper clip, this will give you access to the mounting screws. Turn the mounting clamps so they are positioned as in the illustration, this will allow the speakers to clear the hole for installation. Insert the speaker into the hole, and tighten the mounting screws. As you turn each screw, the mounting clamps will rotate outward to engage ceiling material.

**CAUTION:** Do not over-tighten the clamps. Too much torque may snap off the lug and the speaker will not seat securely. A snug fit is all that is necessary to assure proper performance.

### 8) Painting Speakers

If you choose to paint the speaker grill and/or frame we have provided a "Paint Masking Template" to cover the woofer/tweeter assembly and help prevent possible damage. Do not try to paint the frame and grill assembly together, the grill should always be painted separately. Do not apply heavy coats of paint that might block the perforations in the grill.

