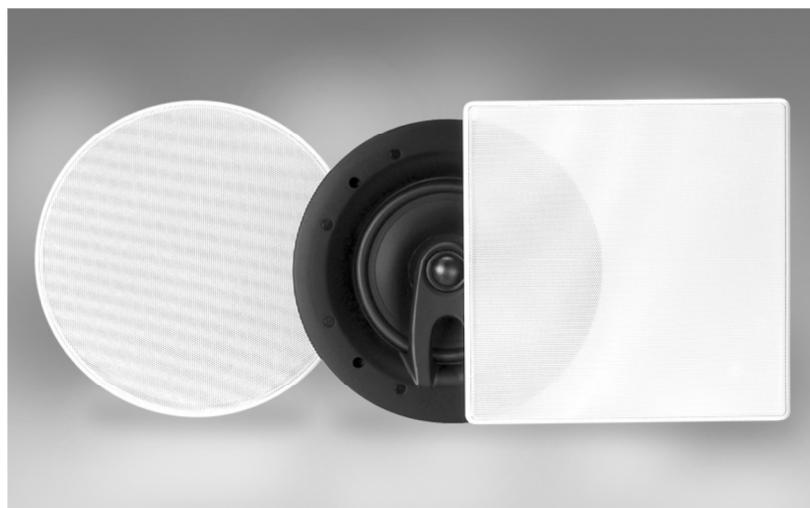


TIS Frameless Speaker

6.5 Inch Ceiling Speaker.

Model: SPK-XC6-FLO

User Manual Rev 1.1



Specifications

Woofers		6-1/2" Polypropylene or Kevlar (rubber surround)
Tweeter:		1" Ferrofluid cooled silk dome
Power handling	Normal Watt RMS Watt	100Watts Max 35 Peak 70 Watts
Frequency		45-20,000Hz
Sensitivity		89dB@1W/1M
Impedance		8Ohms
Mounting	Ceiling mount	by 4 hooks for false ceiling mount
Connection terminal	Speaker Terminal	4X Pushing Terminal 0,25...2mm ²
Cutout size		209mm / 8-1/4"
Weight	Without packaging	1.7 K.G
Dimensions	Diameter x height	235x92mm / 4" x 9-3/4"
Housing	Cover Main	Finish round grill or square grill ABS white
Temperature range	Operation Storage Transport	-10...60°C -20...50°C -25...60°C
Air humidity		<85% non-condensing

*Congratulations on the purchase of your **TIS Speaker** Ceiling Speakers.*

These speakers were manufactured with high quality components and engineered to deliver top quality sound performance.

- Contemporary low profile grill design
- Long-throw polypropylene cone woofers with rubber surround
- Coaxially mounted 1" silk dome tweeter
- 12 dB/octave optimized crossover

Please read these instructions completely before you begin your installation.

1) Parts Inventory

Your speaker kit should include the following:

- 1 of TIS Speaker Frameless Series Ceiling Speakers with Grills
- 1 Paint masking template

2) Installation Tools

The TIS Speaker speakers can be installed with the following simple tools:

- Pencil ● #2 Phillips screwdriver
- Masking tape ● Wire cutters & wire stripper/crimp tool
- Drill & drill bits ● Stud finder**
- Utility knife or wallboard saw*

* Recommended for use if installing in plaster walls.

** Optional tools to make the installation easier.

3) Speaker Location

To achieve the best performance from your TIS Speaker 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 Contractor Series 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.

Once you have established that your chosen location is between two joists or trusses, and that there are no obstructions in the ceiling, tape your speaker template to the ceiling and lightly trace around the inside edge with a pencil and drill a 1" hole in the center of the template outline. Next, use a piece of stiff wire (a coat hanger works well), bend it 8" from the end at a 90 degree angle. Insert the bent part of the coat hanger into the 1" hole and rotate the wire in a complete circle to check for obstructions. If the wire hits a stud on either side, reposition your template to the left or right and mark the outline again. Keep the pilot hole within the template outline.

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, 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.

9) Troubleshooting

Should your speakers not work properly, check the following:

No sound from speakers:

- Most stereo receivers have an A/B speaker selector switch. Make certain that this switch is in the proper position.
- Mute feature is activated.

One speaker is playing while the other is not:

- Check the balance control on the receiver. Make sure it is centered.
- Loose connection at either the receiver or the speaker. Double check connections.
- Bad speaker cable. Replace suspect speaker cable.

Receiver cuts on and off:

- This could be caused by a short circuit between the positive and negative leads.

Check the connections at the back of the receiver, and then at the speaker; make sure that no strands of wire from one connector are touching the other connector.

10) Caring For Your Ceiling Speakers

The two most common ways that ceiling speakers are permanently damaged:

- 1) Not enough power at higher volumes.
- 2) Too much power at higher volumes.

Contrary to conventional wisdom, far more speakers are damaged as a result of under-powering, than by overpowering. When a receiver runs out of power, it still tries to reproduce the musical signal by "clipping" the waveform. At high volume levels this clipping introduces gross amounts of distortion to the speaker, eventually destroying it. If the sound from your ceiling speakers starts to sound distorted, turn down the volume.

Having plenty of reserve power will help your speakers reproduce dynamic contrasts and quick transients of music much more effectively, but you do have to exercise good judgment; too much power will also permanently damage a speaker. Again, if you hear distortion, turn the volume down.

Warranty Information

TIS products are constructed by industry experts, and are thoroughly tested before shipment.

TIS Speaker products are warranted for the period of one year. This warranty is limited to manufacturer defects, either in materials or workmanship. TIS Speaker is not responsible for any consequential or inconsequential damage to any other unit or component or the cost for installation or extraction of any component of the audio system. In the rare case of a product failure, please contact your place of purchase or contact us:

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