OSD AUDIO

ICE-620ST

In Ceiling Element

Owner's Manual In-Ceiling Speakers

Tools needed for installation

- Pencil
- Drill
- Tape Measure
- Wire cutter
- Philips-head screwdriver
- Sandpaper
- Utility knife
- Safety eyewear
- Gloves

Quick installation guide

- Where is the best place to install the speakers
- Where do the speakers sound the best?
- Try to separate the speakers 6 - 10 feet apart.
- When placing the speakers in the ceiling, try to install them so that the fixed 15º angle woofer is pointed towards the main listening area. **(For LCR model only)**
- If you intend to paint the grilles, try to do so before installation.

Speaker wire

To determine the length and the gauge of speaker wire, you will need to measure the distance between your receiver/amplifier to the speakers.

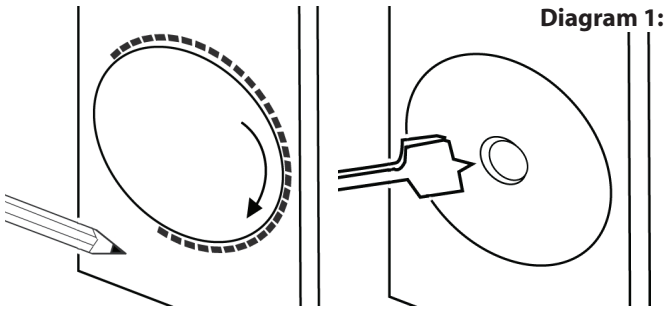
- Always buy more than you think you would need.
- Equal wire lengths should always be used to maintain an equal balance in sound volume.
- Sound quality is lost when using thin wire gauge over a long distance.

18AWG minimum - for distances up to ..... 10 ft
16AWG - from ..... 10 to 50 ft
14AWG - from ..... 50 to 100ft

STEP 1: Cutout Tracing

Trace along the inclusive template. Cut along the traced line using a drywall saw or rotary drill. A simple, inexpensive drywall saw (about $10 at your local hardware store) is the best choice for beginners. ***Caution: This is the most important part of the entire installation***. If you are not certain whether any obstructions exist behind the desired mounting area, you should start by cutting a small hole in the center of your penciled mounting hole with a drywall saw. Use a piece of sandpaper to sand down the cut out edge for a smoother contour. **(See Diagram 1)**

Diagram 1:

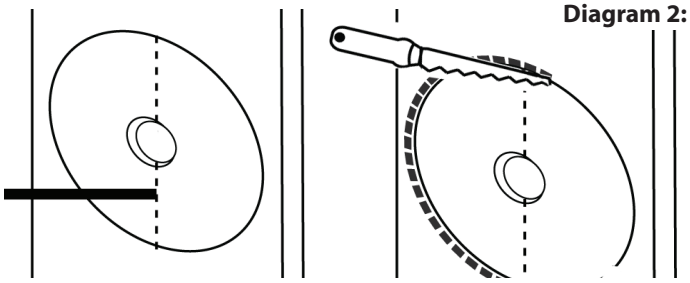


STEP 2: Cut Out

Run the cable into the cut out location while leaving an extra two feet to make the connection to the speaker easier. Strip back approximately ½ inch of the speaker cable insulation and twist the copper wires tightly for easy insertion.

On the back of the speaker, press down on the gold-plated compression terminal to reveal the "eye" and insert the speaker cable through the eye for secure connection. Release the compression terminal to lock each cable securely. **(See Diagram 2)**

Diagram 2:



STEP 3: Tweeter Adjustment

Your in-ceiling speakers come from the factory with the tweeter facing straight out from the baffle. This will result in the overall smoothest response. However, you can adjust the tweeter to focus the sound at your listening location. In order to do this, gently press on the grill (See Diagram 3). ***Caution: Do not touch the tweeter dome while adjusting for your hearing preference. (*See Diagram 3) -**Pivoting Tweeter Model Only

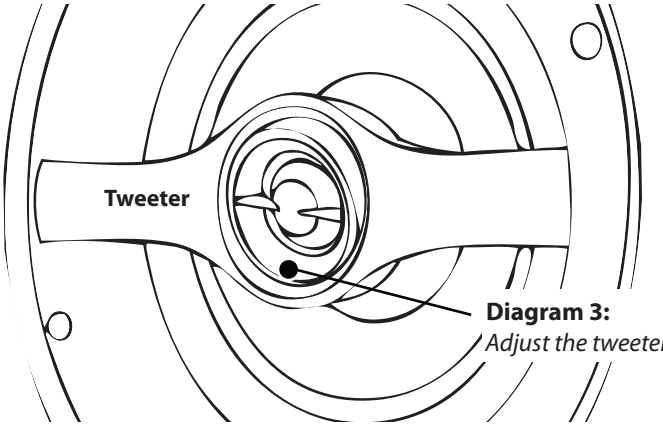
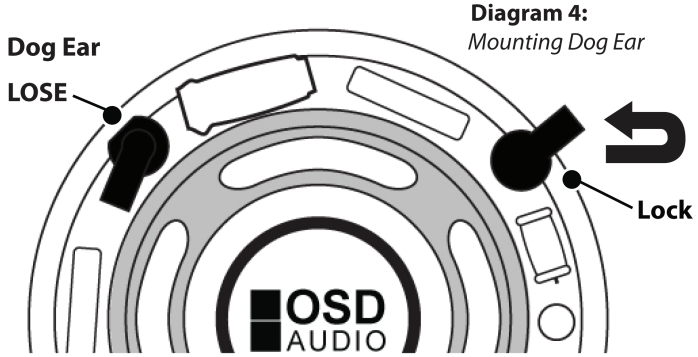


Diagram 3:
Adjust the tweeter here

STEP 4: Mounting Dog Ear

Tighten the dog-ear brackets by simply turning the screws on the speaker's front baffle. Use a Phillips head screwdriver to turn the screws slowly clockwise. The quick-turn mounting system and frame will "sandwich" or clamp around the wall to hold the speaker securely in place. **(See Diagram 4)**

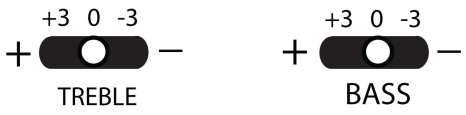
Diagram 4:
Mounting Dog Ear



STEP 5 (Not applicable to certain models)

TIP: Adjust the bass and the treble setting on your speakers by shifting the knob either to the left or right. Speakers positioned closer to a corner often produce more bass and will usually benefit with the tweeter switch in the +3dB position. Speakers located within a few feet of a listener's ear will often sound better with the tweeter switch set to -3dB. Furthermore, rolled in insulation materials, such as a foam bedding would work as a dampening material and offer better acoustics. **(See Diagram 5)**

Diagram 5 Adjustment Switches

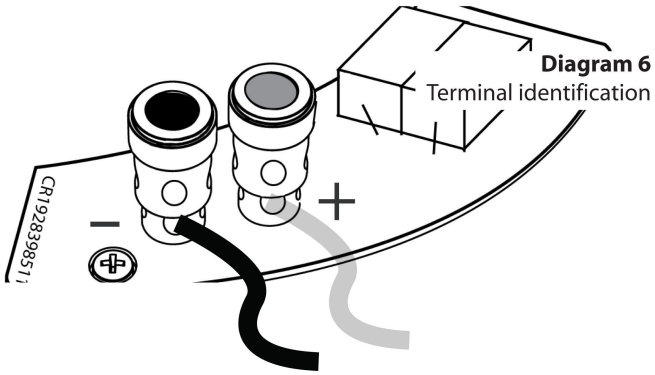


Treble Adjustment Switch Bass Adjustment Switch

TIP: Blown-in insulation can sometimes work its way into the moving components of the speaker, negatively impacting performance. It is best to replace about a one square foot section directly behind the speaker with rolled-in (bat) insulation. **(See Diagram 6)**

Note: The wire for both speakers should be about the same length. If one speaker is placed closer to the amplifier than the other. Hide the excess wire behind the wall

Diagram 6
Terminal identification

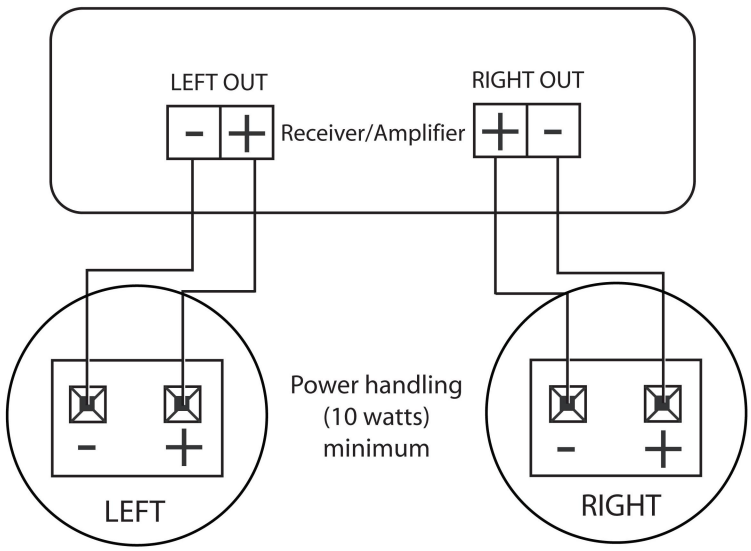


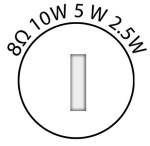
Amplifier/Receiver Considerations.

Not all receivers/amplifiers can safely operate 2 pair of speakers at the same time. It is important that the amplifier or the receiver's output wattage is comparable to the speaker's power handling. Please refer to your owner's manual for reference.

When connecting any speakers to the amplifier or receiver, always make sure the power is off. Locate the connection terminals on the back of your receiver or amplifier. Always make sure to connect audio out from the back of your receiver or amplifier to the speakers. **(See Diagram 7)**

Diagram 7 Amplifier & Receiver interface





70 Volts consideration (Applicable to only 70V tap speakers)

The 70V transformer offers you the ability to daisy chain multiple number of speakers in series. In doing som you would simply connect1 pair of output to each speaker and daisy chain to subsequential speaker/s. If you don't intedn to daisy chain the speakers, set the default setting to 8 ohms

Warranty & Repair

All OSD AUDIO speaker products have (10) year Limited Warranty against defects in materials and workmanship. Proof of purchase must accompany all claims. During the warranty period OSD AUDIO will replace any defective part and correct any defect in workmanship without charge for either parts or labor

OSD AUDIO may replace returned speakers with a product of equal value and performance. In such cases, some modifications to the mounting may be necessary and are not OSD AUDIO's responsibility.

For this warranty to apply, the unit must be installed and used according to its written instructions. If necessary, repairs must be performed by OSD AUDIO. The unit must be returned to OSD AUDIO at the owner's expense and with prior written permission. Accidental damage and shipping damage are not considered defects, nor is damaged resulting from abuse or from servicing performed by an agency or person not specifically authorized in writing by OSD Audio

OSD AUDIO sells products only through authorized dealers and distributors to ensure that customers obtain proper support and service. Any OSD AUDIO product purchased from an unauthorized dealer or other source, including retailers, mail over dealers and online sellers will not be honored or serviced under existing OSD AUDIO warranty policy. Any sale of product by an unauthorized source or other manner not authorized by OSD AUDIO shall void the warranty on the applicable product.

Damage to or destruction of components due to application of excessive power voids the warranty on those parts. In these cases, repairs will be made on the basis of the retail value of the parts and labor. To return for repairs, you must email customer service at RMA@OSDAUDIO.com for a Returned Merchandise Authorization (RMA) number# then the unit must be shipped to OSD AUDIO at the owner's expense, along with a note explaining the nature of service required. Be sure to pack the speaker(s) in a corrugated container with at least 3 inches of resilient material to protect the unit from damage in transit.

This Warranty Does Not Cover:
Damage caused by abuse, accident, misuse, negligence, or improper operation (installation) • Any products that have been altered or modified • Any product whose identifying number of decal, serial #, etc. has been altered, defaced or removed • Normal wear and maintenance.

Specifications

In-Ceiling Model

	MK-850	ICE-850	ICE-870	MK-840
Speaker Type:	8″ MK Spitfire Series Ceiling Speakers	8″ Kevlar Ceiling Home Theater Speakers	8″ Kevlar LCR Ceiling Home Theater Speaker	8″ MK Spitfire Series Ceiling Speakers
Tweeter:	1″ Pivoting Aluminum Tweeter	1″ Pivoting Aluminum Tweeter	1″ Pivoting Aluminum Tweeter	1″ Pivoting Titanium Tweeter
Woofer:	8″ Kevlar Cones	8″ Kevlar Cones	8″ Kevlar Cone	8″ Polypropylene
Impedance:	8 Ω	8 Ω	8 Ω	8 Ω
Sensitivity:	92dB 1W/1m	92dB	92dB 1w/1m	92dB 1W/1m
Contour Switches:	2-Position Front-Mounted ±3dB Bass & Treble Switches	2-Position Front-Mounted ±3dB Bass & Treble Switches	2-Position Front-Mounted ±3dB Bass & Treble Switches	2-Position Front-Mounted ±3dB Bass & Treble Switches
Frequency Response:	25Hz - 22kHz	26Hz - 22kHz	26Hz - 22kHz	32Hz - 22kHz
Power Handling:	200 Watts	175 Watts	175 Watts	175 Watts
Dimensions: (H x W x D)	10 ¾″ x 4 ⅞″	11 ⅛″ x 4 ¼″	11 ⅛″ x 5 ⅞″	10 ¾″ x 4 ⅞″
Wall Cut Out: (H x W)	9 ⅞″	9 ⅞″	9 ⅞″	9 ⅞″
Unit of Measure:	Pair	Pair	Pair	Pair

ICE-840	ICE-810	ICE-900ST	ICE-800ST	ICE-800
8″ High Definition Pro Series Ceiling Speakers	8″ Custom Series Ceiling Speakers	8″ Ceiling Speaker With Back Can	8″ Ceiling Speaker With Back Can	8″ Contractor Series Ceiling Speakers
1″ Pivoting Silk Dome	1″ Pivoting Silk Dome	1″ Coaxial Silk Dome	1″ PEI Dome	1/2 PEI Dome
8″ Polypropylene	8″ Polypropylene	8″ Polypropylene	8″ Polypropylene	8″ Polypropylene
8 Ω	8 Ω	8 Ω or 70v	8 Ω or 70v	8 Ω
91dB	89dB	89dB	89dB	89dB
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
36Hz - 22kHz	38Hz - 22kHz	40Hz - 18kHz	45Hz - 22kHz	45Hz - 22kHz
175 Watts	140 Watts	120 Watts	120 Watts	120 Watts
10 ¾″ x 3 ⅜″	10 ¾″ x 3 ⅝″	11″ x 7″	11″ x 7″	10 ¾″ x 3 ⅝″
9 5⁄16″	9 ⅝″	9 5⁄16″	9 5⁄16″	9 ⅝″
Pair	Pair	Each	Each	Pair

MK-650	ICE-650	ICE-670	ICE-660	MK-640
6 ½″ MK Spitfire Series Ceiling Speakers	6 ½″ Kevlar Ceiling Home Theater Speakers	6 ½″ Kevlar LCR Ceiling Home Theater Speaker	6 ½″ High Definition Pro LCR Ceiling Speaker	6 ½″ MK Spitfire Series Ceiling Speakers
1″ Pivoting Aluminum Tweeter	1″ Pivoting Aluminum Tweeter	1″ Pivoting Aluminum Tweeter	1″ Pivoting Silk Dome	1″ Pivoting Titanium Tweeter
6 ½″ Kevlar Cones	6 ½″ Kevlar Cones	6 ½″ Kevlar Cone	6 ½″ Polypropylen	6 ½″ Polypropylene
8 Ω	8 Ω	8 Ω	8 Ω	8 Ω
92dB 1W/1m	92dB 1w/1m	92dB 1w/1m	92dB 1w/1m	92dB 1W/1m
2-Position Front-Mounted	2-Position Front-Mounted	N/A	N/A	2-Position Front-Mounted
±3dB Bass & Treble Switches	±3dB Bass & Treble Switches	N/A	N/A	±3dB Bass & Treble Switches
28Hz - 22kHz	30Hz - 22kHz	30Hz - 22kHz	50Hz - 22kHz	32Hz - 22kHz
175 Watts	150 watts	150 watts	150 watts	150 Watts
9 ⅛″ x 3 ⅞″	9 ¼″ x 3 ⅝″	9 ¼″ x 4 9⁄16″	10 ½″ x 5″	9 ⅛″ x 3 ⅞″
8 ⅛″	8 ⅛″	8 ¼″	8 ⅛″	8 ⅛″
Pair	Pair	Each	Each	Pair

Specifications

In-Ceiling Model	ICE-645	ICE-640	ICE-630	ICE-700ST
Speaker Type:	6 ½" High Definition Pro Series Ceiling Speakers	6 ½" High Definition Pro Series Ceiling Speakers	6 ½" Custom LCR Series Ceiling Speaker	6 ½" Ceiling Speaker With Back Can
Tweeter:	1" Pivoting Silk High Tenacity Teteron Dome	1" Pivoting Silk Dome	1" Pivoting Silk Dome	3/4" Coaxial silk Dome
Woofer:	6 ½" Polypropylene	6 ½" Polypropylene	6 ½" Polypropylene	6 ½" Polypropylene
Impedance:	8 Ω	8 Ω	8 Ω	8 Ω or 70v
Sensitivity:	92dB	91dB	91dB	88dB
Contour Switches:	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A
Frequency Response:	36Hz - 22kHz	38Hz - 22kHz	52Hz - 22kHz	55Hz - 18kHz
Power Handling:	175 Watts	150 watts	125 Watts	120 Watts
Dimensions: (H x W x D)	9 ½" x 3 ⅜"	9 ½" x 3 ⅜"	10 ½" x 5"	9 ½" x 5 ½"
Wall Cut Out: (H x W)	7 ⅝"	7 ⅝"	8 ⅛"	7 ⅞"
Unit of Measure:	Pair	Pair	Pair	Each

ICE-620ST	ICE-620	ICE-610	MK-550	MK-540
6 ½" Ceiling Speaker With Back Can	6 ½" Custom Series Ceiling Speakers	6 ½" Contractor Series Ceiling Speakers	5 ¼" MK Spitfire Series Ceiling Speakers	5 ¼" MK Spitfire Series Ceiling Speakers
1/2" PEI Dome	1" Pivoting Silk Dome	1/2 PEI Dome	1" Pivoting Aluminum Tweeter	1" Pivoting Titanium Tweeter
6 ½" Polypropylene	6 ½" Polypropylene	6 ½" Polypropylene	5 ¼" Kevlar Cones	5 ¼" Polypropylene
8 Ω or 70v	8 Ω	8 Ω	8 Ω	8 Ω
89dB	89dB	88dB	92dB 1W/1m	92dB 1W/1m
N/A	N/A	N/A	2-Position Front-Mounted	2-Position Front-Mounted
N/A	N/A	N/A	±3dB Bass & Treble Switches	±3dB Bass & Treble Switches
60Hz - 22kHz	58Hz - 22kHz	60Hz - 22kHz	50Hz - 22kHz	55Hz - 22kHz
100 Watts	125 Watts	100 Watts	150 Watts	125 Watts
9 ½" x 5 ½"	9 ½" x 2 ⅞"	9 ½" x 2 ⅜"	6 ½" x 3 ⅝"	6 ½" x 3 ⅝"
7 ⅞"	7 ¾"	7 ¾"	6 ½"	6 ½"
Each	Pair	Pair	Pair	Pair

ICE-540	ICE-530	ICE-520	ICE-1080HD
5 ¼" High Definition Pro Series Ceiling Speakers	5 ¼" Custom Series Ceiling Speakers	5 ¼" Contractor Series Ceiling Speakers	3-way 10" Ceiling Speaker
¾" Silk Dome	¾" Pivoting Silk Dome	1/2 PEI Dome	1 ½" Silk Dome Tweeter With 2 ½" Mylar Cone
5 ¼" Polypropylene	5 ¼" Polypropylene	5 ¼" Polypropylene	10" Polypropylene
8 Ω	8 Ω	8 Ω	8 Ω
90dB	88dB	88dB	90dB
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
58Hz - 22kHz	65Hz - 22kHz	75Hz - 22kHz	36Hz - 20kHz
80 Watts	100 Watts	90 Watts	150 Watts
7 ¾" x 2 ¾"	8" x 2 ¾"	8" x 2 ¾"	13 ½" x 5 ⅝"
6 ⁹⁄₁₆"	6 ⅝"	6 ⅝"	9 ⁵⁄₁₆"
Pair	Pair	Pair	Each