



# ICM8

**25V / 70V / 100V / 8 Ohms In-ceiling Speaker  
Full Range, High Ceiling or Sub**

## **INSTALLATION GUIDE**



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# PRODUCT FEATURES

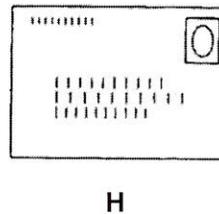
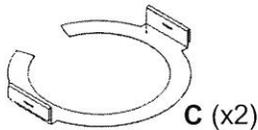
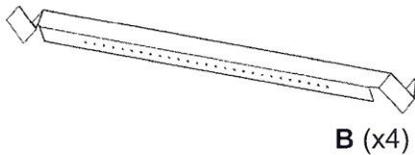
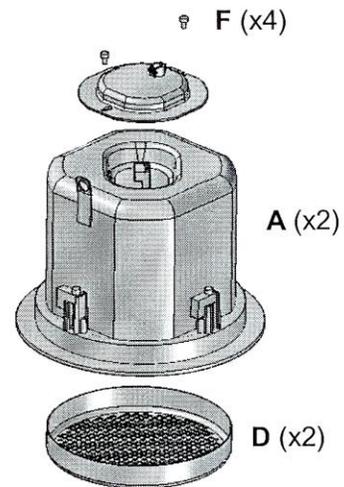
## ICM8 SPEAKER PRODUCT FEATURES

Thank you for purchasing your new OWI ICM8 High Output Ceiling Speakers. The ICM8 ceiling speaker is a high output device, intended to meet the needs of the professional sound contractor. Operational in 25V, 70V, 100V and 8 Ohms formats, these products will deliver high quality sound over a wide coverage area.

Your ICM8 speaker comes complete with all the necessary mounting hardware, and can be flush-mounted into any ceiling type, or alternatively it can be suspended in an open ceiling situation. In addition, a paint cover cap is included which can be used to cover the speaker when painting the bezel and grill to match any ceiling color.

### PACKING LIST

Figure	Quantity	Part
A	2	Speaker system
B	4	Tile rails
C	2	Split-ring supports
D	2	Grill
E	1	Owner's manual
F	4	Screws
G	2	Terminal connector
H	1	Warranty registration card
I	1	Cutout template



# PRODUCT FEATURE IDENTIFICATION

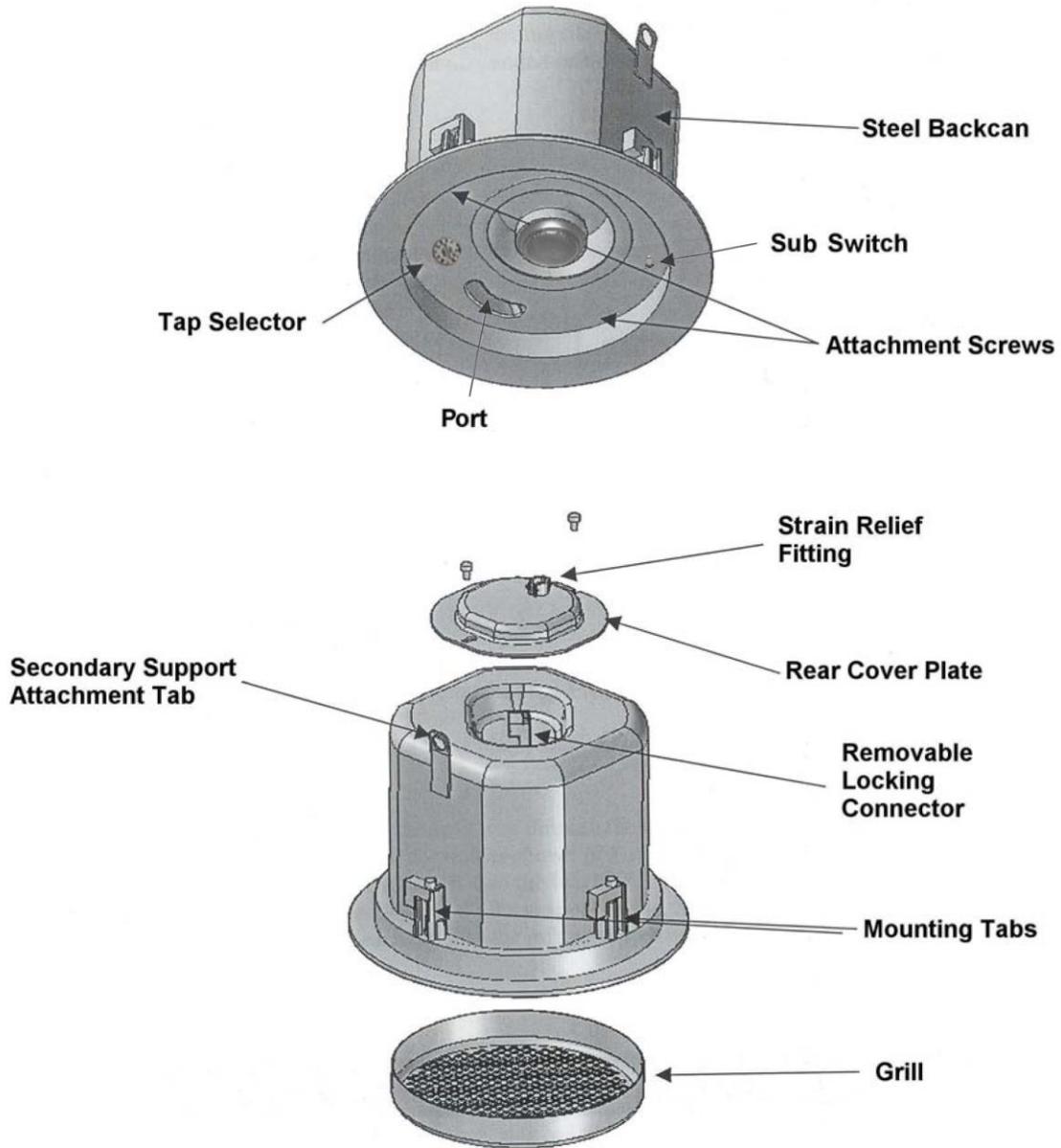


Figure 2 - Feature Identification

## INSTALLATION AND WIRING

The OWI ICM8 speaker installation system has been designed so that the entire installation can be done from beneath the ceiling. In some cases, with a suspended grid ceiling, it may be easier to access from both the top and bottom of the ceiling tile during the installation process. Typical installation hardware needed for either suspended ceilings or sheetrock ceilings is included.

### Step 1 – Cut the Hole

Cut out the hole using a circular cutter set to the appropriate cutout size or by tracing the cardboard cutout template included with your speakers.

If the wiring had been pre-installed, pull the wiring through the cutout hole.

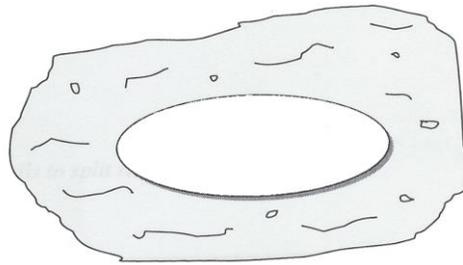


Figure 3 - Cut Ceiling hole

### Step 2 – Install Split Ring and/or Tile Rail

All OWI ICM8 speakers come packaged with two types of backing hardware:

- 1 Split Ring (a c-shaped backing plate) *and*
- 2 Tile Rails

**Suspended Ceilings** - Insert the split ring through the hole cut in the ceiling tile. Place the split ring around the hole with the tabs located as shown in Figure 4. Insert the tile rails through the hole cut in the ceiling tile. Snap the two rails into the two tabs in the split ring and align the rails so that the ends extend **OVER** the T-channel grid on the side of the tile. Secure the rails onto the split ring tabs by inserting a screw through each tab into the rail, as shown in Figure 4.

*This can all be accomplished from below the ceiling tile if necessary.*

### **SAFETY TIP: IMPORTANT TO USE ALL BRACKETS**

ALL included support brackets -split ring and tile rails- **MUST** be used when installing into suspended ceiling tiles. A support safety line must always be installed (see Step 6)

## INSTALLATION AND WIRING

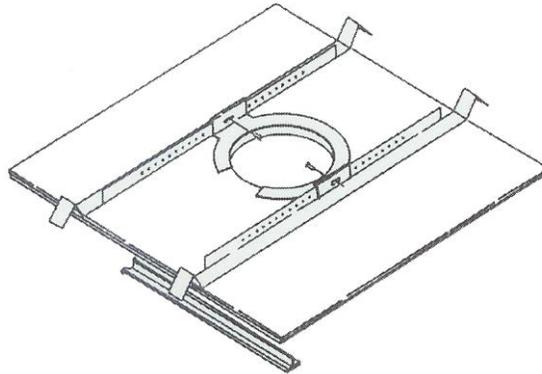


Figure 4 - Secure rails to split ring

**Tile Rails:** The tile rails are designed to fit either standard 24-inch wide tiles or 600mm wide tiles. The tile rail pieces do NOT physically attach to the T-grid struts. Instead, the inverted-V shape at the ends of the rails sit OVER the T-grid strut. Normally, the rails are supported by the edge of the ceiling tile. In the unlikely event that the tile comes out or falls apart, the ends of the support rails are designed to catch onto the T-grid, providing secure support to hold the loudspeaker assembly in place.

### **Vibration Reduction:**

These loudspeakers can generate substantial vibration, which can cause buzzing of the ceiling materials or structure. Depending on the character of the ceiling tile and structure, the installer might need to place neoprene or other dampening material under the tile rails or the edges of the tiles to eliminate rattles.

### **Cutout Placement:**

The tile rails are pre-punched with attachment holes along their length. Placement is not limited to the center of the tile as is the case with many other tile rail support systems.

**Non-Suspended Ceiling Types** -The split ring can be used by itself to reinforce the ceiling material and to spread out the pressure from the speaker hold-down tabs. Insert the split ring through the hole cut in the ceiling and place it on the back side of the hole before inserting the speaker.

## INSTALLATION AND WIRING

### Step 3 – Expose the input-terminal on the rear of the speaker

Remove the rear cover plate, complete with wire strain relief, by loosening the two screws holding it in place, and sliding the plate off. Once the cover is removed, open the strain relief fitting by loosening the horizontal screws.

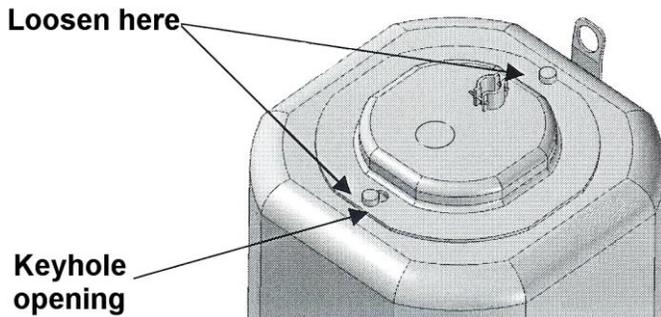


Figure 5 - Removing the strain-relief fitting

Run the speaker wires through the strain relief opening. After passing about 4 to 6 inches of wire through the fitting, tighten the screws on the strain relief to secure the fitting and back plate to the speaker wire. DO NOT over tighten or you may damage the wire jacket, a snug fit is all that is required.

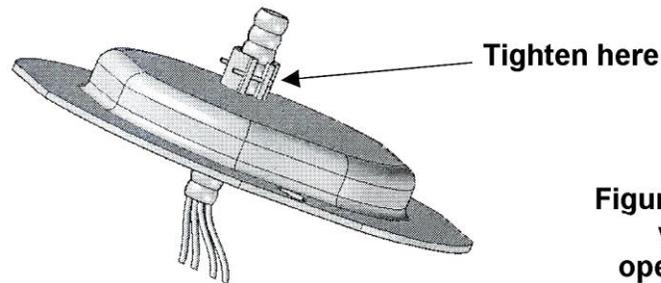


Figure 6 - Running wires through opening in strain relief fitting

Tightening onto flexible or hard conduit - The supplied fitting accommodates up to 3/8 inch (9.5mm) flexible conduit. Insert the conduit into the strain relief fitting. Using the two horizontal screws that clamp the fitting together, clamp the conduit securely between them. Be sure to leave at least 4 to 6 inches of cable beneath the strain relief fitting.

## INSTALLATION AND WIRING

**Using an Alternate Fitting** – the existing strain relief fitting accommodates many common fitting requirements. Sometimes, alternate fittings are required, such as for larger diameter conduit or to meet specific code requirements.

In these cases, the existing fitting can be easily replaced with a number of available off-the-shelf fittings. Simply remove the existing fitting by unscrewing the two hold-down screws, exposing a 7/8 inch (22mm) knockout hole. Then, install the alternate fitting.

### **CAUTION:**

**ALWAYS USE THE PROPER FITTING IN ACCORDANCE WITH YOUR AREA'S BUILDING CODES AND REGULATIONS**

### **Step 4 – Attach Wiring to the Removable Locking Connector**

Connect the end of the wiring to the removable locking connector that is included with the speaker by stripping the insulation back about 5mm, inserting the bare end of the wire into the connector and screwing down the holddown screw until tight. Tighten any unused screws to avoid vibration.

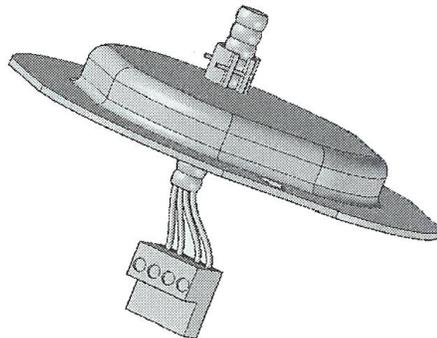


Figure 7 - Attaching wires to connector

# INSTALLATION AND WIRING

## Guide to the Pins for Connection

The removable locking input connector contains 4 terminals. These are numbered on the connector. The label located on the terminal cover plate lists the pin functions.

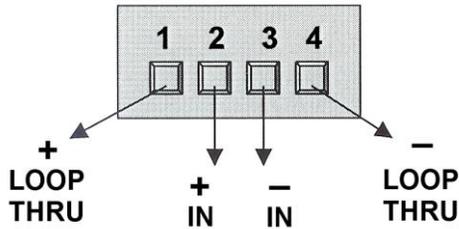


Figure 8 -Connector pins

Pins 2 & 3 are the "+" and "-" inputs to the speaker. Pins 2 & 3 are connected to pins 1 & 4 respectively (i.e. Pin 1 connects to Pin 2 and Pin 3 connects to Pin 4) inside the speaker. Pins 1 & 4 are intended as loop-through connections to other loudspeakers. There are two possible layouts for wiring a group of speakers. Choose whichever hookup pattern accommodates your installation best.

### Parallel Wiring:

Connect the wire pair of the subsequent speaker to pins 2 & 3 (in parallel with the input wiring). In this hook-up scheme, no wires get connected to pins 1 & 4.

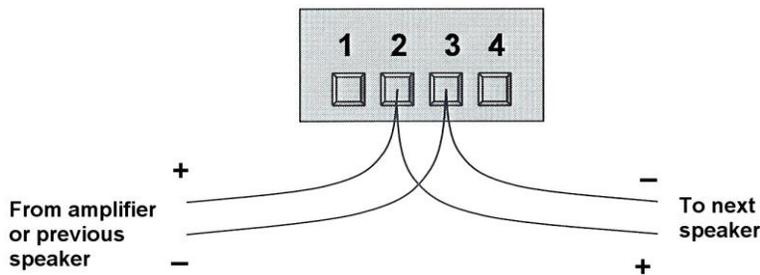


Figure 9 - Parallel Wiring

### PARALLEL WIRING

Whenever the connector is pulled out of the speaker for troubleshooting, subsequent speakers will stay connected. It can be useful during troubleshooting to be able to disconnect a single speaker at a time.

## INSTALLATION AND WIRING

### Daisy-chain Wiring (Using Loop-Through Terminals - Pins 1 & 4):

To daisy-chain the wiring, connect the wire pair of the follow-on speaker to pins 1 and 4.

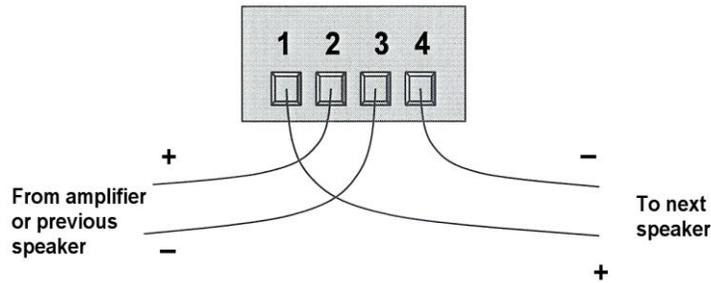


Figure 10 – Daisy-chain wiring

### **DAISY CHAIN WIRING**

By connecting the wire pair of the subsequent speaker to pins 1 & 4, then all subsequent speakers will be disconnected when this speaker's connector is disconnected during troubleshooting. This can be a useful way to isolate problems to a section of the distributed line while leaving the wires attached to the connector.

### Step 5 – Plug connector into connector socket

With all wiring to the connector completed, plug the connector into the socket in the speaker's terminal cup. Remember to tighten any loose screws to eliminate any vibration. Slip the input terminal cover back onto the rear of the speaker and tighten the two screws that keep it in place.

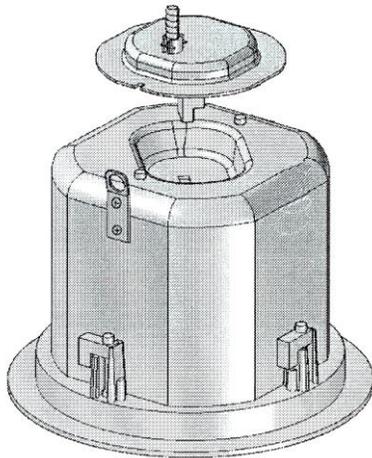


Figure 11 - Plug connector into connector socket

## INSTALLATION AND WIRING

### Step 6 – Connect a Secondary Support Line

A tab is provided on the back of each speaker. This tab allows for connection to an independent and secure anchor point. Some construction codes require using this secondary support point, so please consult the building code in your region.

#### **IMPORTANT:**

**OWI ICM8 ceiling speakers can generate substantial vibration. It is HIGHLY RECOMMENDED to use the tab as a secondary support point in case the ceiling tile or structure breaks.**

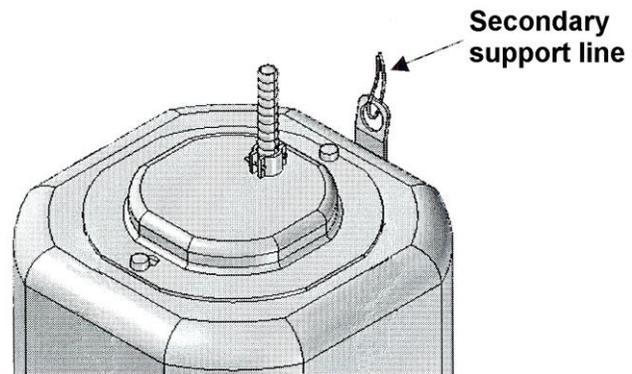


Figure 12 - Attach secondary support line

### Step 7 – Mount the Speaker Into the Ceiling

Push the speaker into the ceiling through the hole until the front baffle rim is flush with the ceiling.

Tighten the mounting tabs by turning the cantilever screws as follows:

**IMPORTANT** - For each cantilever screw, first turn 1/2 turn **COUNTER CLOCKWISE** to release the mounting tab from its guide.

Then tighten the mounting tabs by turning the screw **CLOCKWISE** until tight. The first 1/4 clockwise turn rotates the attachment tabs outward. The remaining turns tighten the tabs down onto the back of the ceiling surface. **DO NOT OVERTIGHTEN.**

## INSTALLATION AND WIRING

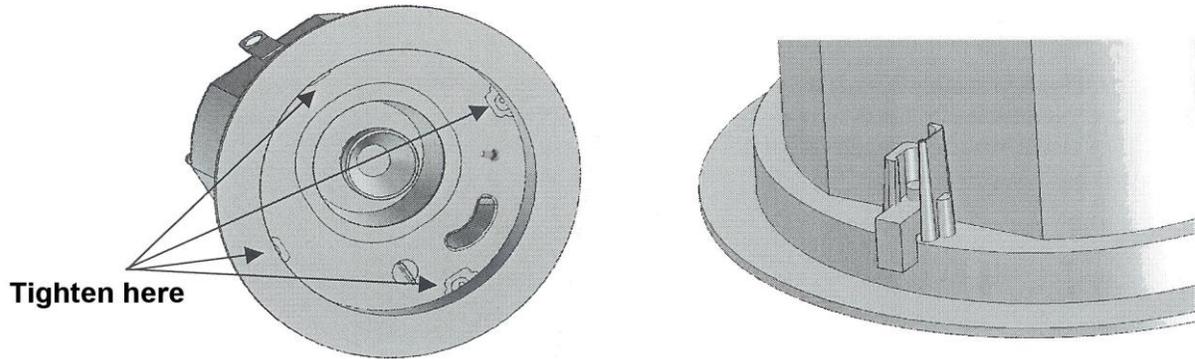


Figure 13 - Tightening the mounting tabs

### Step 8 – Adjust Tap Selector

The tap selector switch is located on the front baffle. Adjust the speaker to the appropriate tap setting before inserting the grill. In some installations it is advisable to leave all the grills OFF until final adjustment of the taps have been made for the entire system.

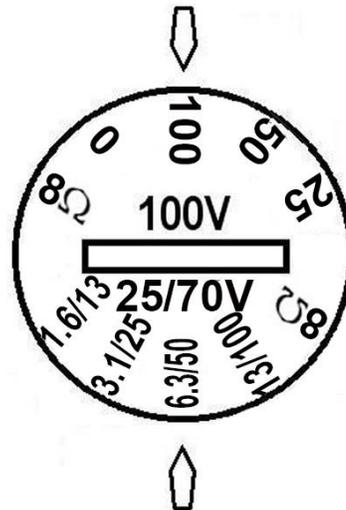


Figure 14 - Adjust tap selector

### Step 9 – Sub Switch

The sub switch is located on the front baffle. There are three selections, Full Range, High Ceiling or sub depending on the listener's preference. In some installations it is advisable to leave all the grills OFF until final adjustment of the taps have been made for the entire system.

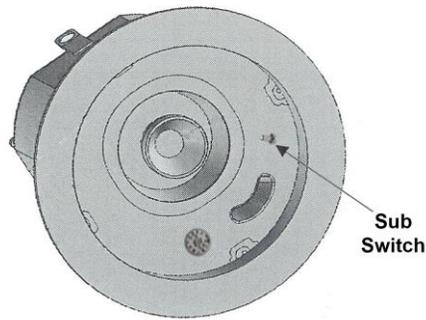
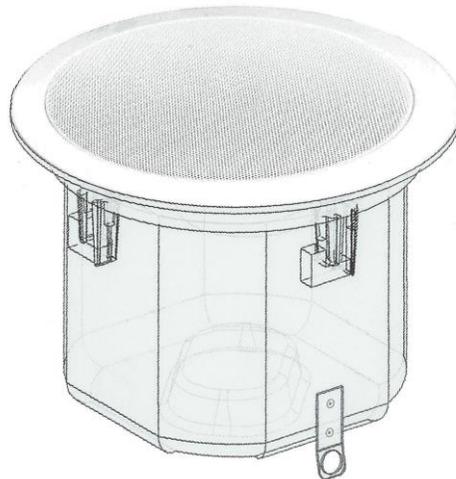


Figure 15 - Sub Switch

### Step 10 – Insert the Grill

Press the grill into place until the front of the grill is flush with the rim. Make sure grill is securely seated to prevent it from vibrating loose and falling. The grill presents a tight fit in order to make sure that it won't fall out, even with high vibrations that can be produced by these speakers.

Removing the Grill - If you need to remove the grill, it is easiest to do so by inserting two pointed objects (such as bent paperclips or push pins) into two nearby holes in the grill, then apply slow even pressure to pull down on the grill until that section of the grill comes out approximately 6 mm (1/4 inch). Work your way around the grill, loosening a section at a time until the grill comes out.



## **PAINTING THE SPEAKER**

The ICM8 speaker's textured white finish does not need further finishing. Where the interior design requires it, these speakers are easy to paint. The speaker backcan and front face are all metal, and the white powdered coat paint can easily be painted over with almost any type of latex or oil based paint. The rim can be painted before installation or after it has been mounted to the ceiling.

### **Painting Process**

Make sure the speaker is clean and free from any dirt or grease. Do not use abrasives such as sandpaper or steel wool, or harsh solvents such as gasoline, kerosene, acetone, MEK, paint thinner, harsh detergents or other chemicals. Use of these cleaners may result in permanent damage to the enclosure.

Apply two or more thin coats of either latex or oil-based paint. Latex paint will adhere better if an oilbased primer is used first. Application can be made by rolling, brushing or spraying.

**Painting the Grill** - Painting the grill requires removal of the internal grill cloth, then spray painting. If the grill is rolled or brush painted, the mesh may become clogged with paint and poor sound quality may result. After the paint has dried, replace the internal grill cloth.

**Painting the Speaker Along with the Ceiling** - If you wish to paint the speaker along with the ceiling after installation, insert a plastic or cardboard paint shield into the front of the speaker to mask the drivers and internal baffle. Paint the speaker and then remove the shield once the paint is dry.

## TROUBLESHOOTING

Problem	Possible Causes	Action
<b>No output</b>	Amplifier	<p>Make sure the amplifier channel is being fed an input signal (preferably via a “signal input” indicator on the amp).</p> <p>Check that the amplifier channel’s volume is turned up.</p> <p>Connect the speaker and cable, which had no output to another amplifier channel, making sure an input signal is fed to the new amp channel. If you then get output, the problem was the amplifier channel. If not, then the problem may be in the cable or speaker.</p>
	Speaker cable(s)	Replace the cable(s) connecting the loudspeaker system and amplifier.
<b>Questionable or intermittent output such as crackling</b>	Faulty connection	Check all cabling for proper connector contact. A bad connection can result in intermittent contact or dramatically increased resistance, which in turn can cause reduced output or noises unrelated to the signal.
	Improper power tap setting	Check the power tap setting under the speaker grill to ensure the setting is appropriate for the installation and amplifier chosen.
<b>Constant noise, such as buzzing, hissing, or humming</b>	A faulty electronic device in the signal chain	Since loudspeakers cannot generate these sounds by themselves, you may have a faulty electronic device, or a faulty ground in the signal chain.
<b>Poor low-frequency output</b>	Out-of-polarity hookup between multiple speakers	When two speakers are hooked up out of polarity, the low frequencies cancel each other out. Make sure that the " +" and" - " from the amplifier output are not crossed on one or more of the speakers.

If none of the above suggestions solve your problem, please contact your OWI Service Center at **1-800-638-1694**



## **WARRANTY**

### OWI Limited Warranty

OWI loudspeakers are warranted for five (5) years from the date of sale to the original purchaser.

#### Who is protected?

Your OWI warranty protects the original owner and all subsequent owners. The original bill of sale must be presented whenever warranty service is required.

#### What is covered?

OWI loudspeakers are warranted to be free from defects in material or workmanship provided that the product has not been subjected to abuse or accident or altered in any way.

Any part of the product covered by this warranty that, with normal installation and use, becomes defective will be repaired or replaced by OWI, at our option, provided the product is shipped insured and prepaid to OWI at the address below. The product will be returned to you freight prepaid.

This warranty does not extend to any of our products that have been subjected to misuse, improper storage, neglect, accident, improper installation, or have been modified or repaired in any manner that OWI believes may affect the reliability of the product, or where the serial number or date code has been removed or defaced.

**THE FOREGOING LIMITED WARRANTY IS OWI'S SOLE AND EXCLUSIVE WARRANTY AND THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY. OWI MAKES NO OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED AND EXCLUDED.**

OWI's liability arising out of the manufacture, sale or supplying of products or their use or disposition, whether based upon warranty, contract, tort or otherwise, shall be limited to the price of the product. In no event shall OWI be liable for special, incidental or consequential damages (including, but not limited to, loss of profits, loss of data, or loss of use damages) arising out of the manufacture, sale or supplying of products, even if OWI has been advised of the possibility of such damages or losses.

Products that are out of warranty will also be repaired by the OWI Service Department. The parts and labor involved in these repairs are warranted for 90 days when repaired by OWI. All shipping charges in addition to parts and labor will be at the owner's expense.

#### Contact Us

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