



# Owner's Manual

Sage Series ICS3FR

In Ceiling, Minimal Appearance, Full Range,  
Point Source Loudspeaker with Spiral PMD

Gypsum and Solid Surface Installation

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## DOCUMENT CONVENTIONS

This document contains general safety, installation, and operation instructions for the Wisdom Audio Sage Series ICS3FR. It is important to read this document before attempting to use this product. Pay particular attention to:

**WARNING:** Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in injury or death.

**CAUTION:** Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in damage to or destruction of part of or the entire product.

**Note:** Calls attention to information that aids in the installation or operation of the product.

## Introduction

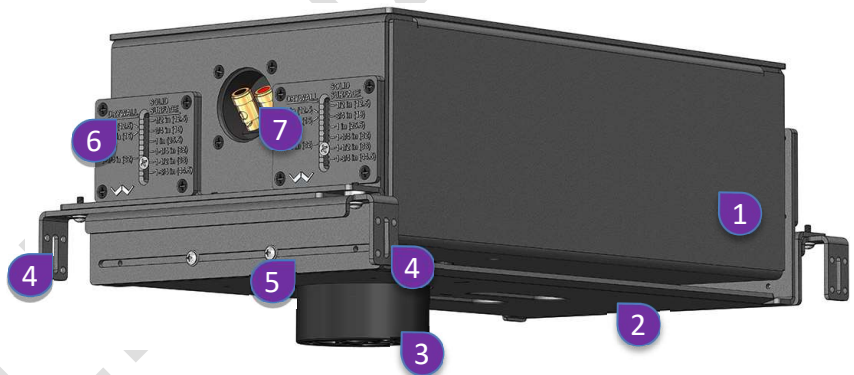
Congratulations on purchasing the Wisdom Audio ICS3FR full range minimal appearance speaker. The ICS3FR delivers the most balanced and highest resolution sound in its class of minimally visible speakers. Its internal crossover allows it to be driven from a single amplifier channel, eliminating the need for bi-amplification.

This manual focuses on the ICS3FR installation and all accessories. A matching Minimal Appearance Subwoofer is available for those seeking higher output and extended low frequency response. For more information, visit [WisdomAudio.com](http://WisdomAudio.com).

## System Overview

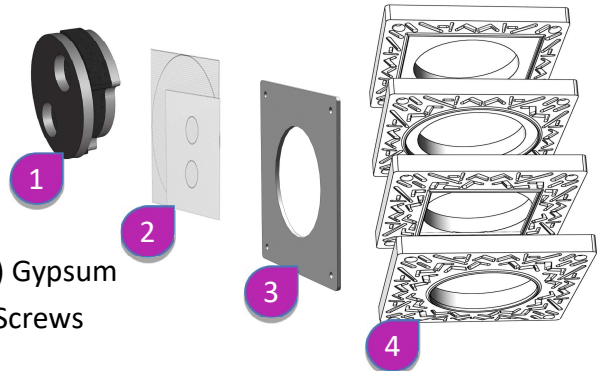
The ICS3FR is shipped, as shown below, fully assembled and ready for installation. Accessories required for installation are included in the packaging except for the spiral planar magnetic driver (SPMD) and the grille. These items are shipped separately and usually at a later date when the final installation is performed.

1. ICS3FR Enclosure
2. Mounting Plate
3. Output Port
4. Sliding Brackets (X4)
5. Center Bracket (X2)
6. Mounting Depth Indexers (X4)
7. Input Terminals (High tension spring posts)



## What is Included with the ICS3FR

1. Paint Shield Plug
2. Paint Shield Mask Assortment
3. Mud Plate 1/8" Spacer for 5/8" (15-16mm) Gypsum
4. Mud Plates 3" & 4", Round and Square w/Screws



NOTE: Due to the unique requirements of each installation, if the supplied hardware is not suitable, it is left to the installer to provide the necessary hardware to attach the Sliding Brackets to the framing. The minimum recommended screw size is: #8 x 1" (4mm x 25mm) with flat washers. The sliding brackets will accept up to #10 (5mm) hardware.

## Planning and Ordering

The ICS3FR is supplied in two separate shipments, one for Preconstruction and the other for Finishing. The preconstruction order comes with all the necessary components to accommodate both Gypsum and Solid Surface installation options. However, should the surfaces be extra thick, a shim kit may be required.

The tweeter and grilles are shipped separately to prevent loss, since these components are often installed much later than the ICS3FR enclosures. A summary of the installation options is listed below along with a configuration chart to aid you with your ordering and installation process. When ordering your speakers, select the option that best suits your installation.

- 1. Gypsum:** The ICS3FR is shipped with the components needed for installation in both 1/2" and 5/8" (13 and 16mm) thick gypsum/drywall/sheetrock/plasterboard surfaces. These surfaces require taping and finishing with a drywall/plaster compound much like any other wall surfaces. When surfaces are thicker than 5/8" (16mm), a shim kit must be ordered to accommodate the thicker surface. See table below for ordering information.
- 2. Solid Surface:** The ICS3FR is ready for installation in solid surfaces, (wood, stone, tile, etc.), from 1/2" to 2" (12.5mm – 51mm) thick. In these installations, a 3.25" or 4" round or square hole is cut into the surface into which the grille is inserted. The grille is adjusted to fit flush with the surrounding surface using our patented magnetic recoil grille attachment. No additional preconstruction components are required. However, a Solid Surface Installation Routing Tool is available for those cutting the solid surfaces with a hand router. See table below for ordering information.

## Sage Series Minimal Appearance System Ordering and Planning

| 1.<br>Planning<br>Stage   | 2.<br>Preconstruction / Prewire<br>Stage  | 3.<br>Finishing Stage        |  |
|---|---|------------------------------|--|
| Surface   | Size & Shape  | Tweeter                      | Grille   |
| <b>Gypsum</b><br>1/2" (12.5mm)<br>5/8" (16mm)<br><br>3/4" to 1-3/4"<br>(19mm to 44.5mm) | <ul style="list-style-type: none"> <li>3" Round Mud Plate (Supplied w/ICS3FR)</li> <li>3" Square Mud Plate (Supplied w/ICS3FR)</li> <li>4" Round Mud Plate (Supplied w/ICS3FR)</li> <li>4" Square Mud Plate (Supplied w/ICS3FR)</li> </ul><br><ul style="list-style-type: none"> <li>Mud Plate Spacer Shim Kit</li> </ul> | ICS3-SPMD                    | <ul style="list-style-type: none"> <li>3" round</li> <li>3" square</li> <li>4" round</li> <li>4" square</li> </ul>   |
| <b>Solid Surface</b><br>Depth from<br>1/2" to 2"<br>(12.5mm – 51mm)                     | Solid Surface Installation Tool Kit (optional)  | ICS3-SPMD<br>[same as above] | <ul style="list-style-type: none"> <li>3" round Solid Surface</li> <li>3" square Solid Surface</li> <li>4" round Solid Surface</li> <li>4" square Solid Surface</li> </ul> |

### **Additional Information:**

1. **Gypsum:** Order the specific grille size and shape for your installation, 3" or 4", and round or square. Ensure that you specify Gypsum, as the Solid Surface grilles are different.
2. **Solid Surface:** When ordering grilles for Solid Surface installations, ensure that you specify Solid Surface grilles as the Gypsum grilles are different. A Solid Surface Installation Tool Kit (routing tools and template) is also available.

### **Important Information (BEFORE YOU BEGIN!)**

Before you begin the installation, familiarize yourself with the installation procedure by reading through all the information. Take time to preassemble any necessary parts before installation so that you have a clear understanding of how they fit together and how they integrate with the other construction materials that will be used. There are a few critical steps that require care to create a professional outcome.

Familiarize yourself with the jobsite, including joist layout and size, surface materials and finishing, lighting and HVAC plan, etc. Plan to meet with the customer, general contractor, subcontractors, interior decorators, and anyone else who may have information needed for successful completion. Ensure you have their contact information for future communications. The next page contains a place to keep notes and/or can be used as a template for planning.

Coordination will need to be made with others who may be supplying materials for the layout of the finished surface, as well as those that will be performing the finishing work. Missteps in this communication can lead to a less-than-professional installation.

The installation of the ICS3FR requires access to the construction framing and is usually performed during the framing phase of construction. However, retrofit installation is also possible where access to a crawl space is available.

This installation guide only covers the ICS3FR enclosure installation. The Wisdom Audio website contains additional information for Solid Surface and Gypsum installations. It is understood that every installation is unique, and it would be impossible to cover all of them in this manual. Therefore, this manual will describe a typical installation with 16" OC joists as an example. It is left to the installer to extrapolate the necessary information for their custom installations. Should you have any questions after reading through the material, please contact a Wisdom Audio sales representative.

## Notes

A breakdown of important items to consider is provided below with an area to keep notes.

Identify the following and make a list or spreadsheet if you have several speakers.

a. Speaker Location: \_\_\_\_\_

b. Dimensions and Type of Construction Framing: \_\_\_\_\_

c. Total Surface Thickness (in which the output will be mounted): \_\_\_\_\_

d. Type of Surface Finish: \_\_\_\_\_

e. Size and Shape of the Finished Grille: \_\_\_\_\_

**NOTE: The hole cutout dimensions for the grilles are provided in the “ICS3FR Solid Surface Grille Cutouts” document on the Wisdom Audio website and in the [Appendix](#) at the end this document.**

f. Additional Hardware That May Be Needed for This Location: \_\_\_\_\_

g. Contact Information:

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h. Other Notes:

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## Getting Started (Preparations)

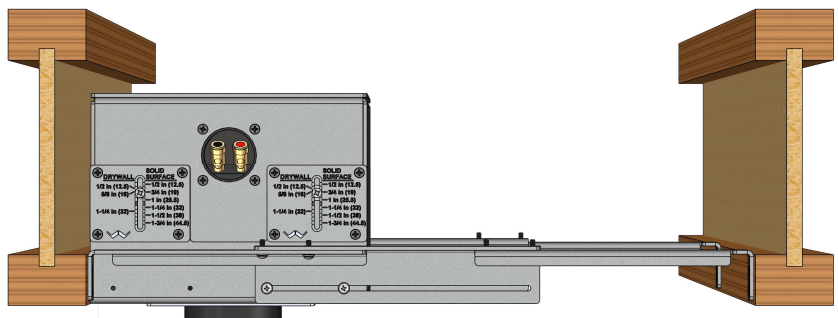
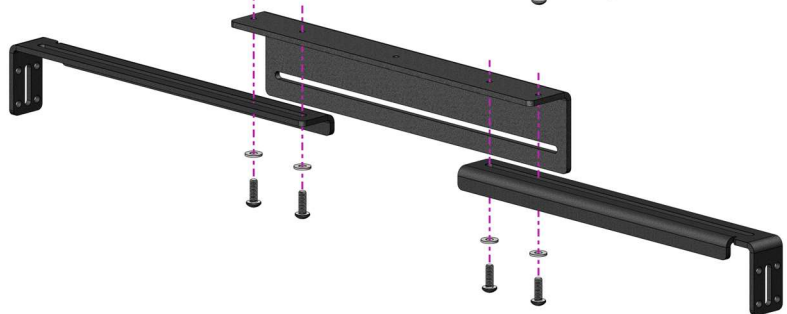
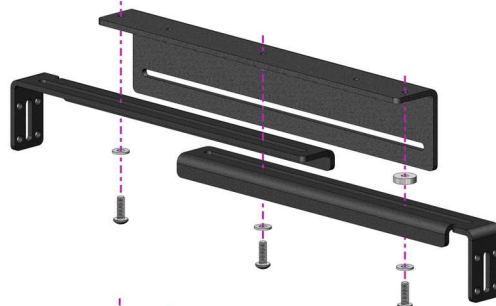
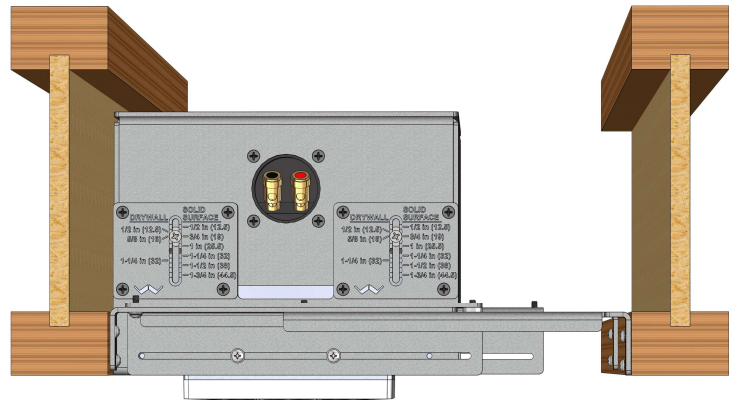
The ICS3FR fits within standard ceiling joists that are spaced between 12" and 24" (305mm and 610mm) "On Center" (OC). It also requires a minimum height of 7.5" (172mm) to fit the enclosure.

The ICS3FR comes configured with the brackets arranged for 12" to 16" (300-400mm) installations. The brackets may also work for 19.2" spacing if one chooses to use blocking on one side.

- For installations that have 19.2" to 24" (480-600mm) stud spacing, the brackets can be reconfigured as shown.

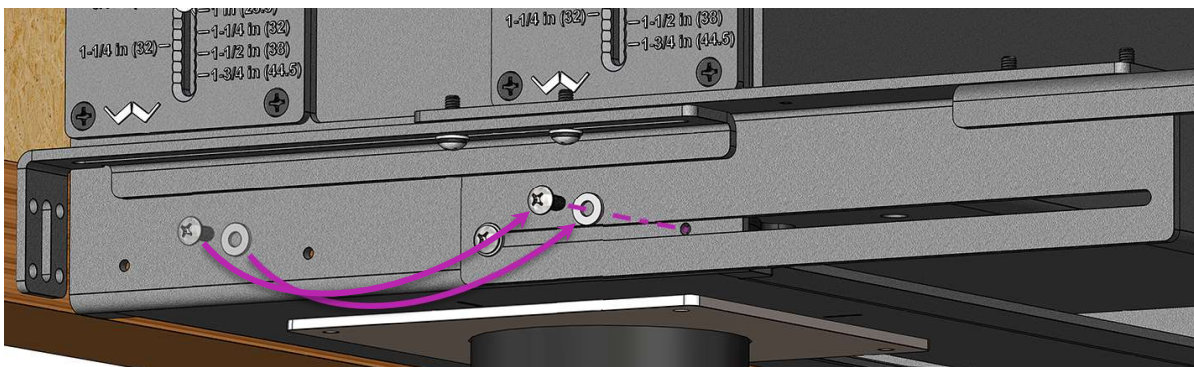
Leave the screws slightly loose so the brackets can slide when the speaker is attached to the joists. The screws are tightened after alignment of the speaker.

If the speaker is installed within 24" (600mm) OC joists and will be positioned close to a joist, it will be necessary to reposition the "Middle Bracket" on the enclosure to one side or the other as needed.

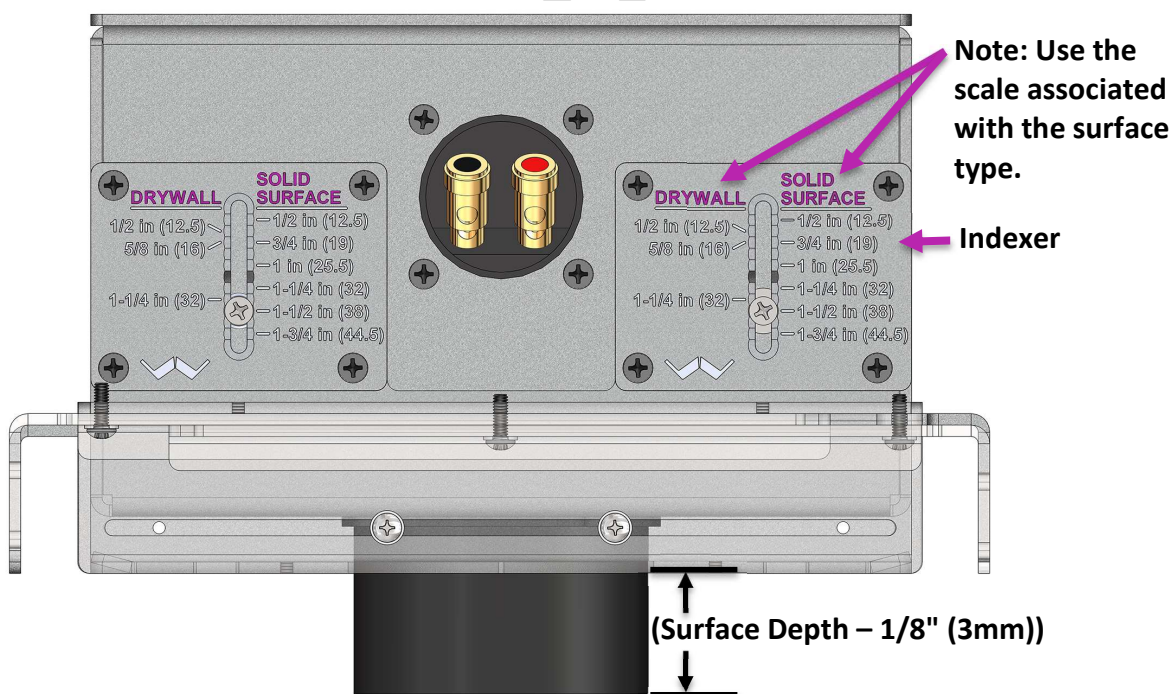




- To reposition the Middle Bracket, simply remove one of the screws from the center portion of the Mounting Plate and move it to the other end of the Mounting Plate. This allows the Enclosure output to be mounted within 4.5 inches of the joist.



- Set the ICS3FR to the proper surface depth. It is important to get this correct. **NOTE: There is no way to change the output offset after the speaker is installed unless there is access to the back of the speaker.** Without access, it will require removal of the speaker if the depth is set incorrectly. The good news is that it is easy to get it correct.



- To set the correct depth, simply use the "Indexers" on the 4 corners of the speakers. Set each of these to the surface depth which the speaker will pass through. Do not set to a depth greater than the depth of the surface.

**NOTE: There are two scales. Ensure you use the correct one for your application. For Gypsum, use the scale on the left. For Solid Surfaces, use the scale on the right.**



The final step is for Gypsum installations only. If you are installing the speaker in a Solid Surface, skip past this to the next section, [ICS3FR Enclosure Installation](#).

- Install the Mud Plate associated with the grille you will use. Four 8-32 flathead machine screws are provided for attaching the Mud Plate.
- If installing in 5/8" gypsum, add the 1/8" Mud Plate Spacer (Shim).



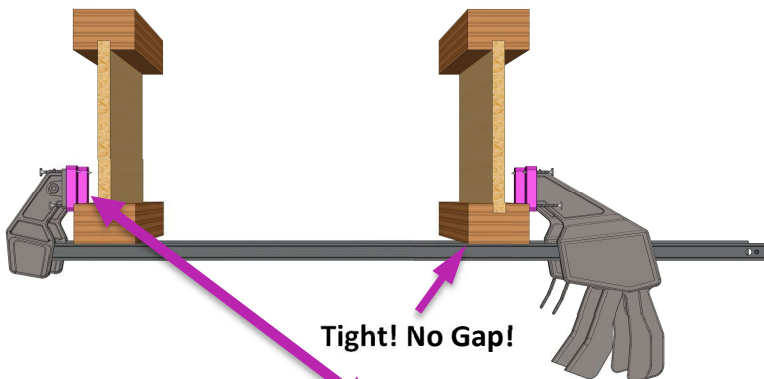
Use Spacer only with  
5/8" (16mm) Gypsum

## ICS3FR Enclosure Installation (Gypsum and Solid Surface)

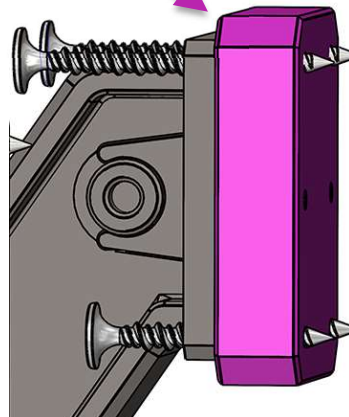
1. Identify the placement location of the ICS3FR. Mark the centerline across the joists.

2. Using these center-line marks, place supports across the joists, 4" (100mm) ahead and 6" (150mm) behind these marks. Bar clamps work well for this application.

**NOTE: Ensure the supports are tight against the bottom of the joists. To reduce the pressure and distortion of the joists when using bar clamps, the clamps should be modified, (such as with screws), to bite the wood surface. This will ensure the clamps don't slip.**



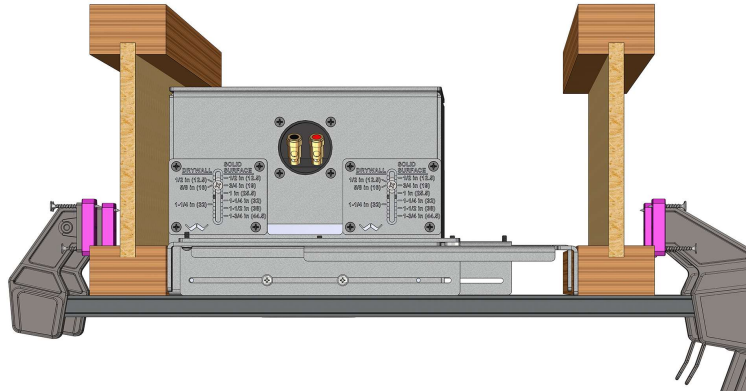
Tight! No Gap!



Note the addition of screws to provide grip.

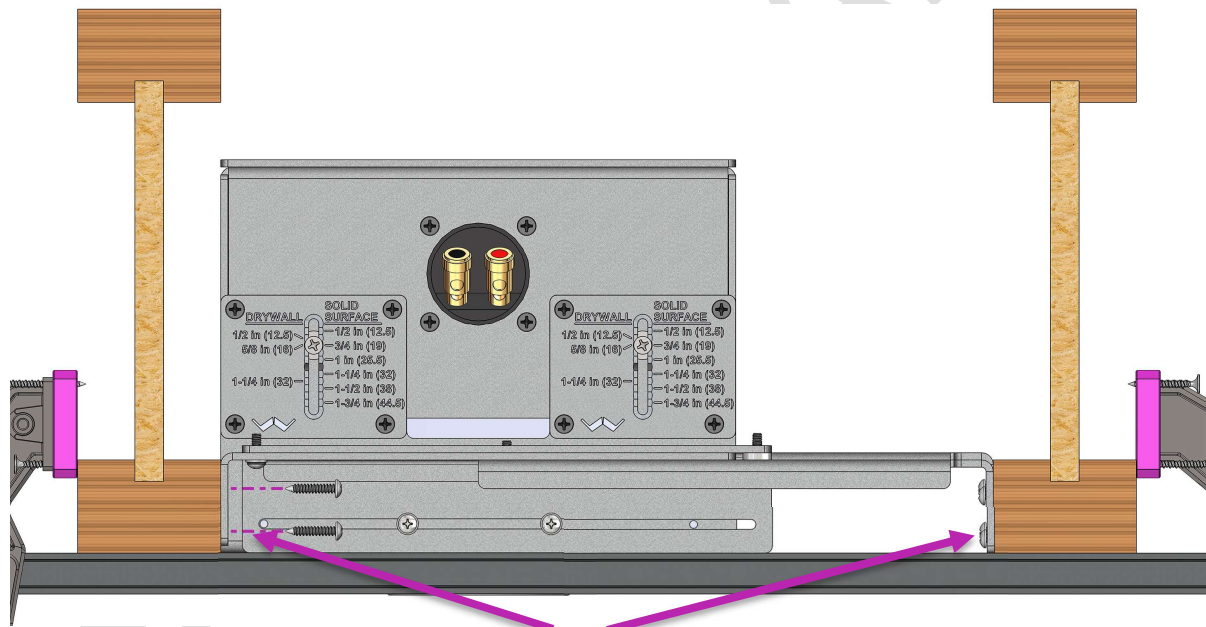
- Place the ICS3FR on top of the supports and align the output with the centerline marks you made earlier.

NOTE: The Mounting Plate of the enclosure assembly must rest on top of the supports and be flush with the bottom of the joists.



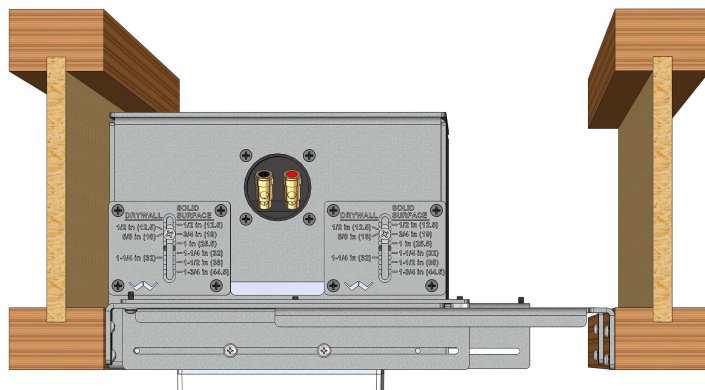
- Screw the Sliding Brackets to the joists using at least 2 screws per bracket.

NOTE: The minimum recommended screw size is: #8 x 1" (4mm x 25mm).



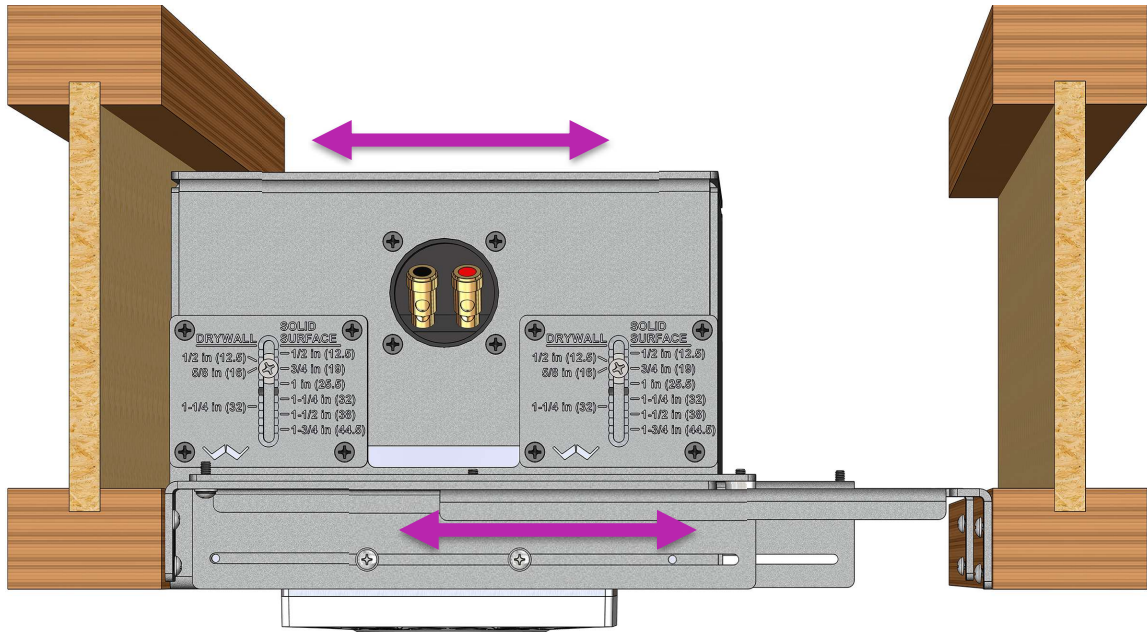
Use 2 screws per bracket-end minimum

- Remove the supports from beneath the speaker.



## 6. Adjust the Lateral Speaker Position

Note: ICS3FR speaker can be moved along the Middle Brackets, and the Middle Brackets can be moved along the Sliding Brackets. This allow for 2 freedoms of movement.



## 7. Tighten all Bracket screws.

## 8. Install the Paint Shield with the correct mask.

Select the mask the fits your installation type. If your installation is either Solid Surface, or Gypsum with a 3" round output, you do not need to add a mask. Simply use the foam plug. All other grille types require the addition of a metal mask.

## Making the Connections

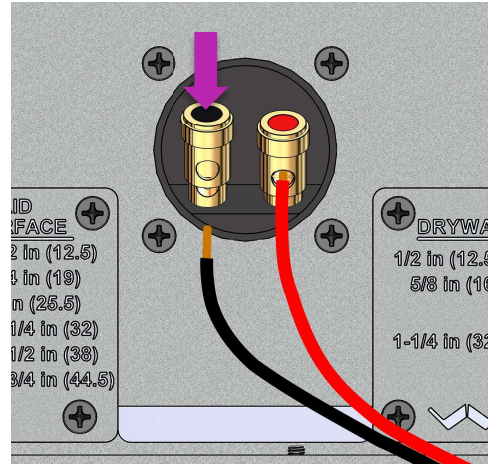
NOTE: If access to the input terminals is limited, it may be necessary to connect the wires prior to positioning and securing the speaker enclosure.

1. Connect the speaker wires to the binding posts on the side of the cabinet by pressing the top of each terminal, inserting the bare conductor, and releasing the connector. Observe the polarity of the connections and double check that it is correct. The red colored input terminal is positive (+).

Though every speaker is individually tested for proper operation prior to leaving the factory, if you will not have access to the speaker for servicing, it is recommended that it be tested before closing off the installation.

**NOTE: Ensure all hardware is tightened, since these items may not be accessible after the drywall is finished.**

Press Terminal and Insert Wire

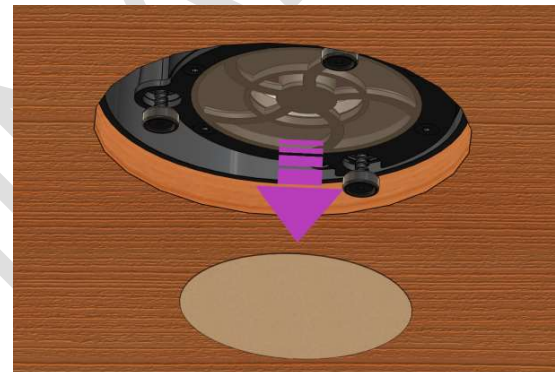
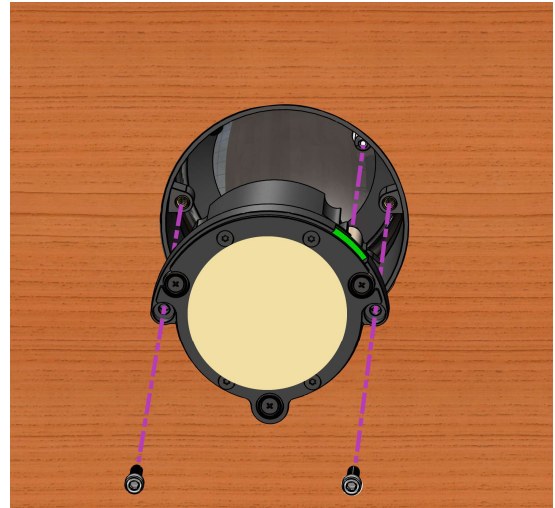




## Finalizing Installation

Remove the paint shield from the speaker and install the tweeter. Two screws are provided for attaching the tweeter to the output port. Ensure the connector is properly aligned as you install the tweeter.

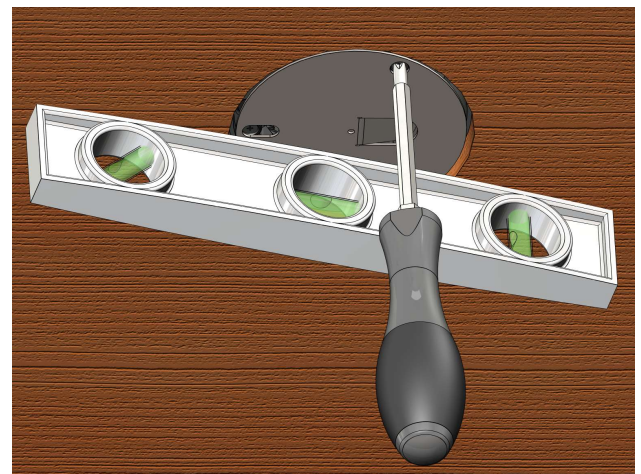
Tighten the two screws and remove the protective tape from the front of the tweeter.



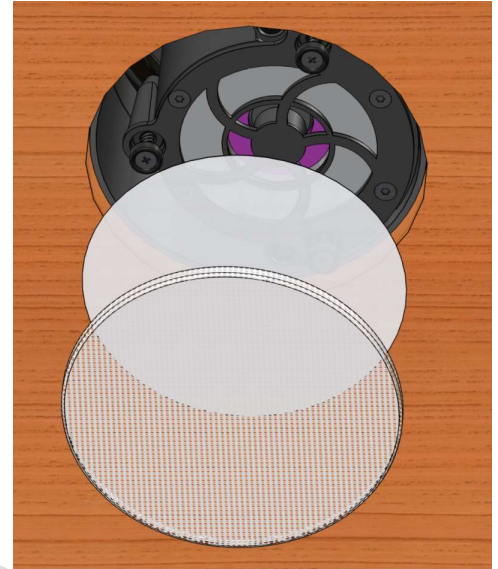
## Grille Installation and Alignment

Once the surface has been finished and tweeter installed, the ICS3FR is ready to have the grille plane set using the Patented Magnetic Recoil Fastener. To make this task easy, the grilles are shipped with an alignment gauge that is the same thickness as the grilles.

1. Place the alignment gauge on the magnets, aligning the holes with the 3 screws. There is only one orientation where all three are visible since the spacing between the screws varies.
2. Place a straight edge across of the opening of the output port and adjust the height of the 3 screws until the paint shield is flush with the face of the finished surface.



3. Remove the alignment gauge and place the grille inside the solid surface cut out, placing the scrim fabric behind the grille.
4. **Connect your electronics.**
5. **Set up the recommended filters as described in the Crossover section of the manual.**
6. **Enjoy!**



**Attach Grille and Scrim**

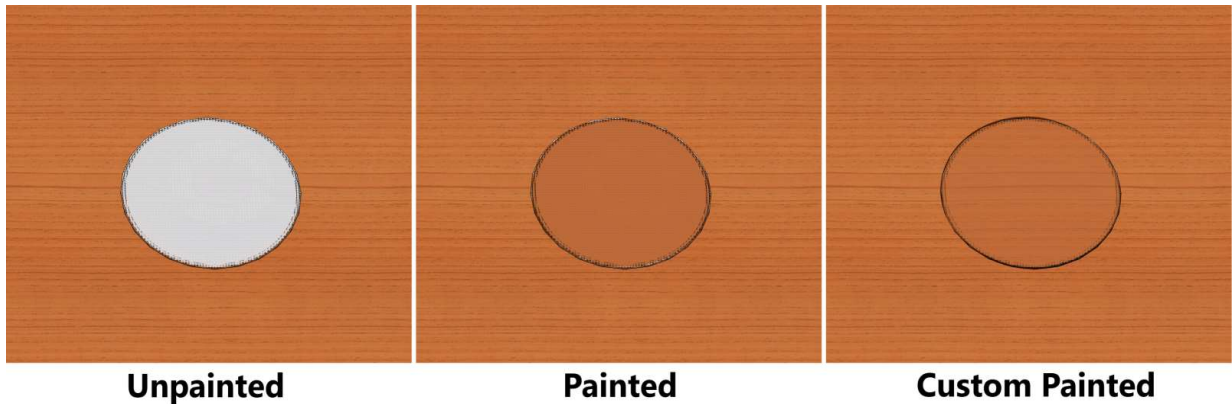
## Grille Painting (Optional)

For custom-colored paints, we recommend using a paint supplier like [My Perfect Color](#), that can provide custom-colored aerosol paints. These are more expensive than latex but are more durable and can provide solutions that are easier to work with. Otherwise, we recommend using water or oil-based paint. If you choose to have a painting professional perform the task with specialized equipment, here is the process we recommend.

1. Thin the paint with a proper thinning agent to a ratio of 1:1, paint-to-thinner, and strain it through a standard mesh strainer to remove any lumps. **IMPORTANT:** Due to its increased durability, oil-based paint should be considered for any installation where the grilles may be exposed to moisture.
2. Use a small touch-up gun or cap-spray gun with a #3 tip for painting.
  - a. Set the nozzle with a medium to wide fan
  - b. Set the pressure regulator to 60psi
  - c. Lightly spray the front of the grille from an angle in three quick strokes from approximately 10 inches away
  - d. Let the paint set for a minute, then rotate the grille 90° and lightly spray the grille again in three quick strokes. Repeat this step until the grille has been lightly painted from 4 directions.
  - e. Repeat the last couple steps as needed until the grille is adequately coated.
3. While the paint is still wet, inspect the grille and make sure that excess paint has not collected underneath the grille frame, and that none of the grille perforations are filled with paint. If any are, use compressed air to blow the paint out of the perforations.

**NOTE: If you find any grille perforations that are plugged with paint after the paint has dried, use a straight pin or sewing needle to carefully remove the paint.**

4. Once the paint has thoroughly dried, attach the grille to the speaker.



## Crossover and Amplifier Recommendations

The ICS3FR is designed as a Full Range speaker, meaning that it can be used without a subwoofer. However, should you wish to use it with a subwoofer, we recommend using an 80Hz 4<sup>th</sup> order Linkwitz–Riley high-pass crossover. The ICS3FR is optimized to work with our Sub1 subwoofer, which shares the same aesthetic and installation options. These together will achieve maximum performance when used with our Wisdom Audio DSP amplifiers.

## Care and Maintenance

To remove dust from the front of your ICS3FR, use a feather duster or a lint-free soft cloth.

To remove stubborn dirt and fingerprints from the grille, we recommend isopropyl alcohol and a soft cloth, except where the grille has been painted with latex paint. Lightly dampen the cloth with alcohol first and then clean the grille of the ICS3FR with the cloth. Do not use excessive amounts of alcohol –there is no need for the cloth to be wet.

Never attempt to clean the drivers themselves.

### Caution!

**Do not touch the surface of the planar magnetic drivers, under any circumstances.** The thin film has been carefully pre-tensioned at the factory; any subsequent contact can only damage it.



## **North American Warranty**

### **Standard Warranty**

When purchased from and installed by an authorized Wisdom Audio dealer, Wisdom Audio loudspeakers are warranted to be free from defects in material and workmanship under normal use for a period of 10 years from the original date of purchase.

Furthermore, the transducers (“drivers”) in your Wisdom Audio speakers are warranted to be free from defects in material and workmanship under normal use for a period of 10 years from the original date of purchase.

### **Harsh Conditions Use**

Wisdom Audio loudspeakers are designed for installation and operation in environmentally controlled conditions, such as are found in normal residential environments. When used in harsh conditions such as outdoors or in marine applications, the warranty is three years from the original date of purchase.

During the warranty period, any Wisdom Audio products exhibiting defects in materials and/or workmanship will be repaired or replaced, at our option, without charge for either parts or labor, at our factory. The warranty will not apply to any Wisdom Audio products that have been misused, abused, altered, or installed and calibrated by anyone other than an authorized Wisdom Audio dealer.

Any Wisdom Audio product not performing satisfactorily may be returned to the factory for evaluation. Return authorization must first be obtained by either calling or writing the factory prior to shipping the component. The factory will pay for return shipping charges only if the component is found to be defective as mentioned above. There are other stipulations that may apply to shipping charges.

There is no other express warranty on Wisdom Audio products. Neither this warranty nor any other warranty, express or implied, including any implied warranties of merchantability or fitness, shall extend beyond the warranty period. No responsibility is assumed for any incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts and other states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. This warranty is applicable in the United States and Canada only. Outside of the U.S. and Canada, please contact your local, authorized Wisdom Audio distributor for warranty and service information.

## Obtaining Service

We take great pride in our dealers. Experience, dedication, and integrity make these professionals ideally suited to assist with our customers' service needs.

If your Wisdom Audio loudspeaker must be serviced, please contact your dealer. Your dealer will then decide whether the problem can be remedied locally, or whether to contact Wisdom Audio for further service information or parts, or to obtain a Return Authorization. The Wisdom Audio Service Department works closely with your dealer to solve your service needs expediently.

**IMPORTANT:** Return authorization must be obtained from Wisdom Audio's Service Department BEFORE a unit is shipped for service.

It is extremely important that information about a problem be explicit and complete. A specific, comprehensive description of the problem helps your dealer and the Wisdom Audio Service Department locate and repair the difficulty as quickly as possible.

A copy of the original bill of sale will serve to verify warranty status. Please include it with the unit when it is brought in for warranty service.

**CAUTION:** All returned units must be packaged in their original packaging, and the proper return authorization numbers must be marked on the outer carton for identification. Shipping the unit in improper packaging may void the warranty, as Wisdom Audio cannot be responsible for the resulting shipping damage.

Your dealer can order a new set of shipping materials for you if you need to ship your loudspeaker and no longer have the original materials. There will be a charge for this service. We strongly recommend saving all packing materials in case you need to ship your unit someday.

If the packaging to protect the unit is, in our opinion or that of our dealer, inadequate to protect the unit, we reserve the right to repackage it for return shipment at the owner's expense. Neither Wisdom Audio nor your dealer can be responsible for shipping damage due to improper (that is, non-original) packaging.

## Specifications

All specifications are subject to change at any time to improve the product.

- **Frequency response:** 50Hz – 20kHz +/- 3dB
- **Impedance:** 6 ohms
- **Sensitivity:** 82dB SPL (2.83V @ 1m)
- **Recommended Amplifier Power:** 100 Watts
- **Maximum Amplifier Power:** 200 Watts
- **Dimensions (min) HxWxD:**\* 7.9" x 10.5" x 19.25" (20.1cm x 26.7cm x 48.9cm)
- **Recommended High Pass Crossover (if used with a subwoofer):**  
80Hz, 12-24dB Linkwitz–Riley

\*Designed to fit within 2"x 8" (50mm x 200mm) or larger ceiling/floor joists with 12"– 24" (305mm – 610mm) OC spacing.

| <u>Speaker Component</u>                                | <u>Weight lbs / (kg)</u> | <u>Shipping Weight lbs / (kg)</u> |
|---|--------------------------|-----------------------------------|
| ICS3FR Speaker enclosure assembly                       | 16 / (7.3)               | N/A                               |
| ICS3FR w/included accessories (Mud Plate, Screws, etc.) | 17 / (7.7)               | 21 / (9.5)                        |

For more information, see your Wisdom Audio dealer or contact:

### **Wisdom Audio**

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Carson City, NV 89706

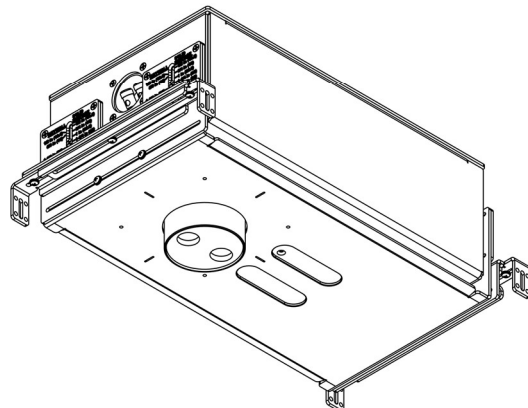
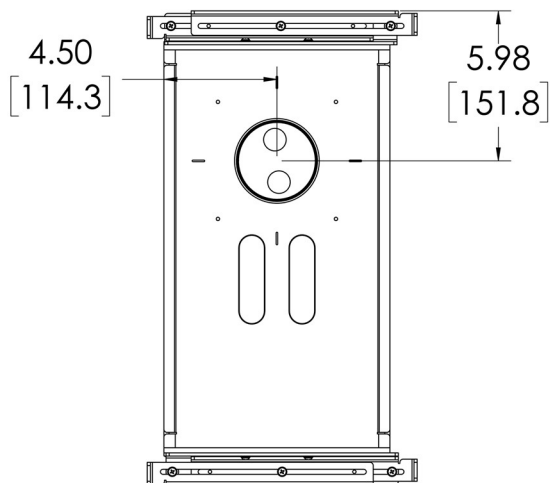
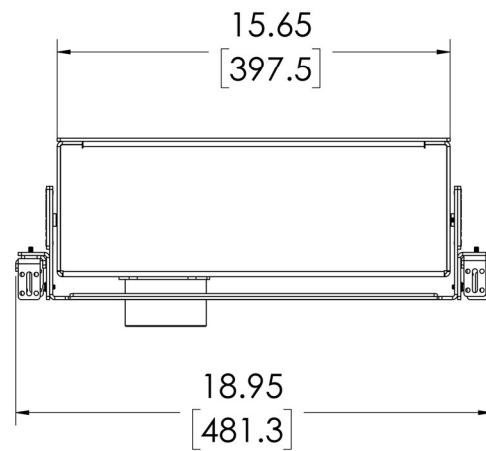
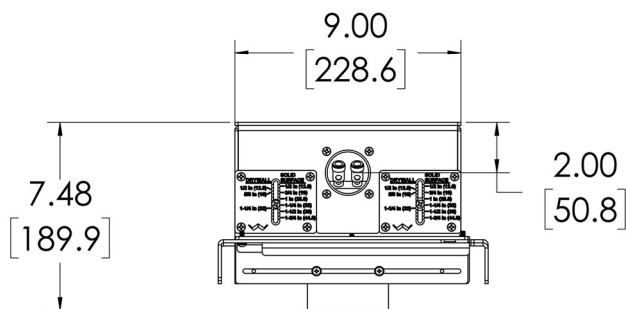
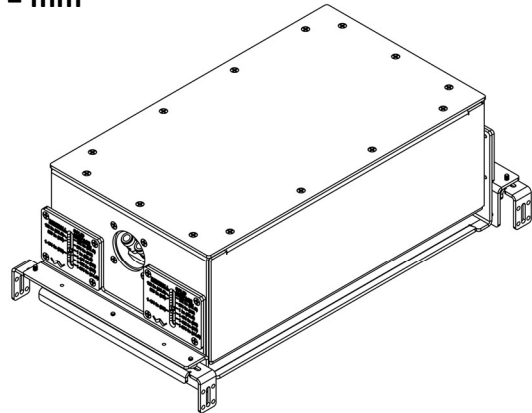
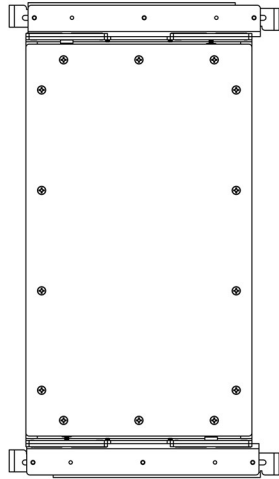
wisdomaudio.com

information@wisdomaudio.com

(775) 887-8850

## Dimensions

X.XX = Inches  
X.X = mm





W I S D O M<sup>®</sup>

*WISDOM and the stylized W are registered trademarks of Wisdom Audio.*

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