



Owner's Manual

Sage Series SUB2

In Ceiling Minimal Appearance Subwoofer

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DOCUMENT CONVENTIONS

This document contains general safety, installation, and operation instructions for the Wisdom Audio Sage Series Minimum Appearance Solid Surface Kit. 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.

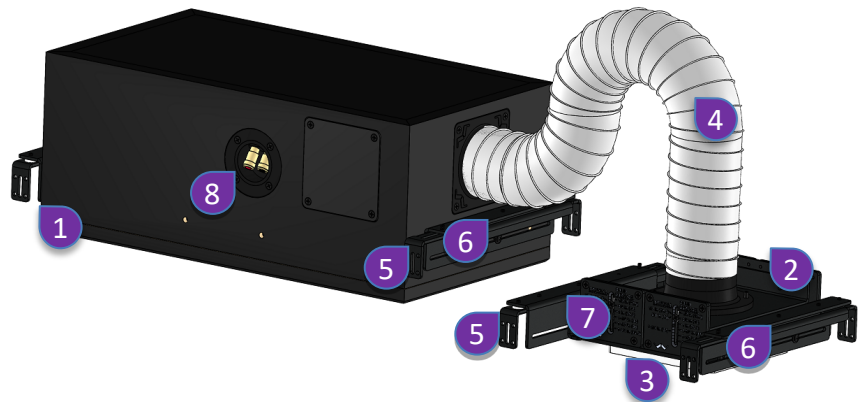
Introduction

This manual focuses on the SUB2 installation and included accessories. A matching Minimal Appearance main speaker is available for use as a 2.1 system. For more information, visit WisdomAudio.com.

System Overview

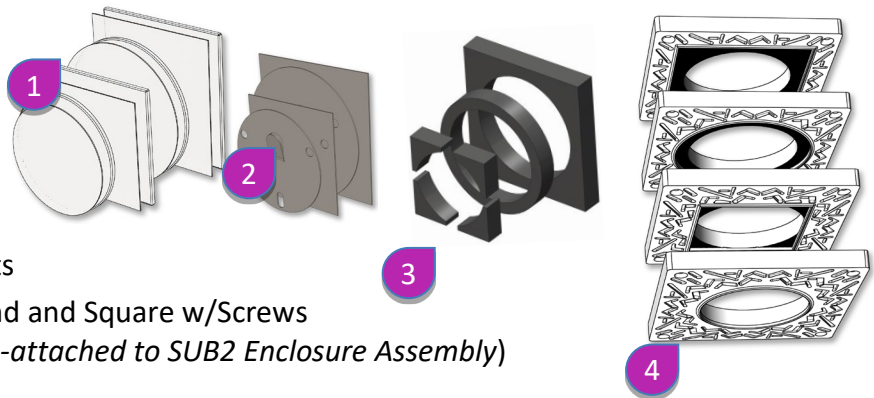
The SUB2 is shipped, as shown below, fully assembled and ready for installation in 5/8" (15-16mm) gypsum with the 3" round mud plate. *Components required for all other configurations are included, including those for "solid surfaces," such as wood.

1. SUB2 Enclosure
2. Grille Mounting Platform
3. Mud Plate and 1/8" Spacer
4. Output Port Tube
5. Sliding Brackets
6. Center Bracket
7. Mounting Depth Indexers (X4)
8. Input Terminals (High tension spring posts)



What's Included

1. Grille Assortment (X8)
2. Paint Shield Mask Assortment (X4)
3. Solid Surface Foam Inserts
4. Mud Plates 3" & 4", Round and Square w/Screws
(The 3" round plate is pre-attached to SUB2 Enclosure Assembly)



NOTE: Due to the unique requirements of each installation, 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). The sliding brackets will accept up to #10 (5mm) hardware.

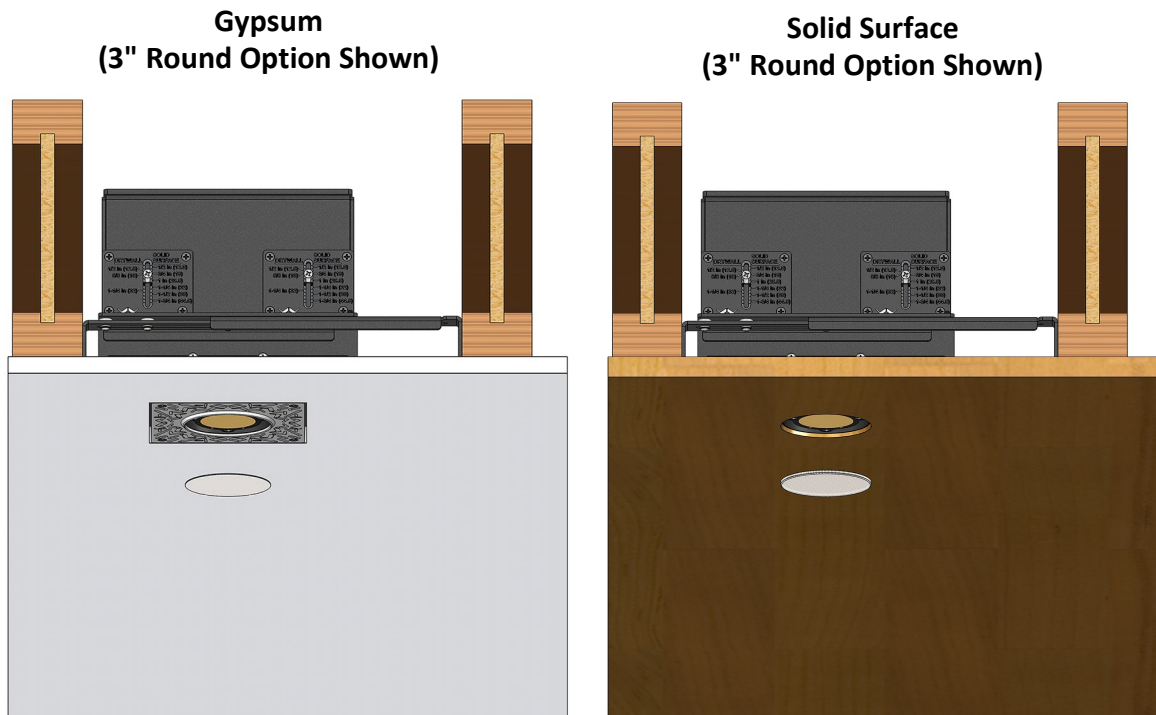
*A Solid Surface Routing Tool is available for order when cutting solid surfaces with hand router. For Gypsum installations thicker than 5/8" (16mm) please contact Wisdom Audio or your Wisdom Dealer.

Planning and Configuration

The SUB2 is shipped with all the necessary components to accommodate both Gypsum and Solid Surface installation options. A summary of the installation components is listed below along with a configuration chart to aid you with the installation process.

- 1. Gypsum:** The SUB2 is shipped with mud plates for installation in both 1/2" and 5/8" (12.5 to 16mm) thick gypsum/drywall/ plasterboard surfaces. The mud plates require taping and finishing using a standard drywall/plaster compound. They are blended into the gypsum surface like other devices but require a meticulous finish since there is no escutcheon to cover the edge. For gypsum surfaces thicker than 5/8" (16mm), contact Wisdom Audio for guidance and parts. See table below.
- 2. Solid Surface:** The SUB2 is ready for installation in solid surfaces, (wood, stone, tile, etc.), from 1/2" to 1-7/8" (12.5mm – 48mm) thick. In these installations, a 3.3" 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 cutting solid surfaces with a hand router. Contact Wisdom Audio or your Wisdom dealer for ordering information.

ICS3FR shown for Clarity – Installation is the same for the SUB2



Sage Series Minimal Appearance System Configurations

Installation Type	Configuration	Finishing
Surface	Size & Shape	Grilles (Supplied)
Gypsum 1/2" (12.5mm) 5/8" (16mm) >5/8" to 1-3/4" (>16mm) to (45mm)	<ul style="list-style-type: none"> • 3" Round Mud Plate (Supplied & pre-installed) • 3" Square Mud Plate (Supplied) • 4" Round Mud Plate (Supplied) • 4" Square Mud Plate (Supplied) • Contact Wisdom Audio if installing in gypsum surfaces greater than 5/8" (16mm) thick. 	<ul style="list-style-type: none"> • 3" round (Thin Flat Grille) • 3" square (Thin Flat Grille) • 4" round (Thin Flat Grille) • 4" square (Thin Flat Grille)
Solid Surface Depth from 1/2" to 1-7/8" (12.5mm - 48mm)	<ul style="list-style-type: none"> • Hole is cut to accommodate grille. • An optional Solid Surface Installation Tool Kit is available for use with hand routers. 	<ul style="list-style-type: none"> • 3" round Solid Surface • 3" square Solid Surface • 4" round Solid Surface • 4" square Solid Surface

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 SUB2 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.

It is understood that every installation is unique, and it would be impossible to cover all of them in this manual. Therefore, this manual describes 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 "SUB2 Solid Surface Grille Cutouts" document on the Wisdom Audio website.

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

g. Contact Information:

h. Other Notes:

i. Location where the grilles are stored:

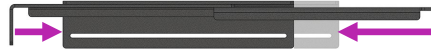
Getting Started (Preparations)

There are 3 steps to preparing the SUB2 for installation. These are shown below and described in detail on the following pages.

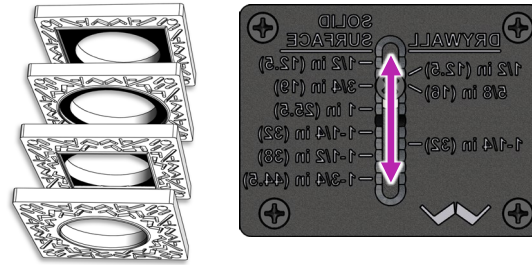
1. Adjusting the Bracket span (width)



2. Adjusting the Middle Brackets (offset)



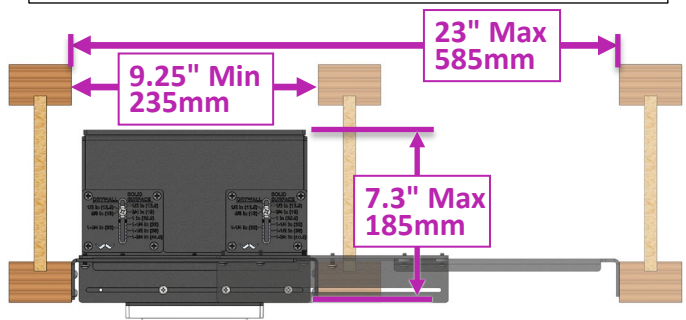
3. Configuring the output (surface type, depth, grille shape, and grille size.)



ICS3FR shown below – SUB2 is the same.

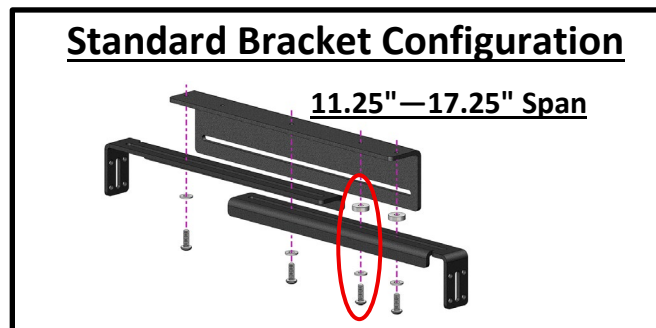
1. Adjusting the Bracket Span

The SUB2 fits within standard ceiling joists that are spaced between 12" and 24" (305mm and 610mm) "On Center" (OC). The minimum width into which The SUB2 will fit is 9.25" (235mm). The minimum length requirement is 19" (483mm). The minimum height requirement is 7.3" (185mm) in the 1/2" (12.5mm) solid surface configuration.



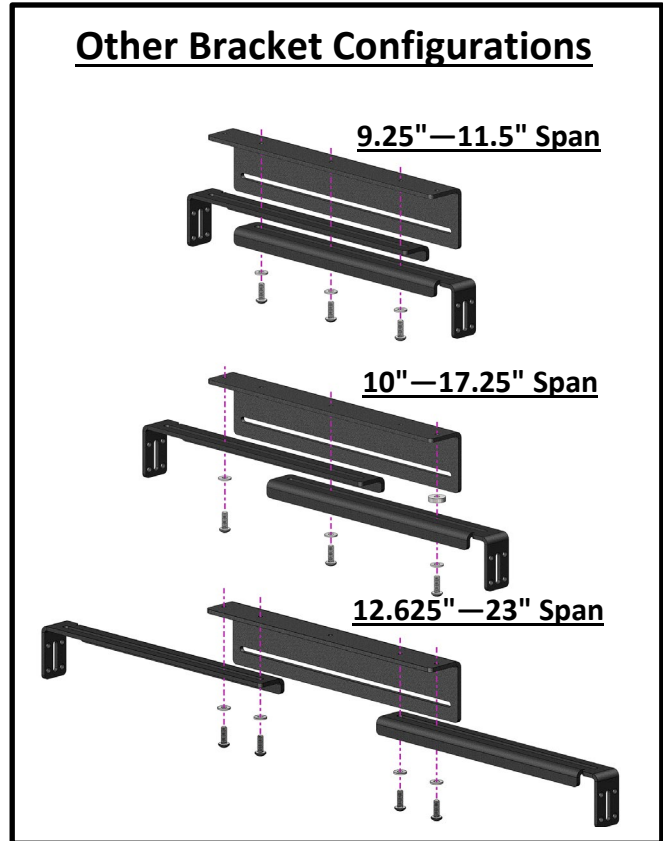
NOTE: Thicker ceiling surfaces require less vertical clearance.

The SUB2 comes configured with the brackets arranged to span 11.25" to 17.25" (286mm – 438mm). This configuration is generally suitable for installations with 16", 400mm, and 450mm OC joists. Removing the circled hardware lowers the minimum span to 10" (254mm) for 12" (300mm) OC installations.



The brackets can be reconfigured for other span requirements, as shown on the right. Use this guide for setting up your speaker's brackets prior to installation. Note: "Span" refers to the distance between the ends of the brackets, not the joist center-to-center spacing.

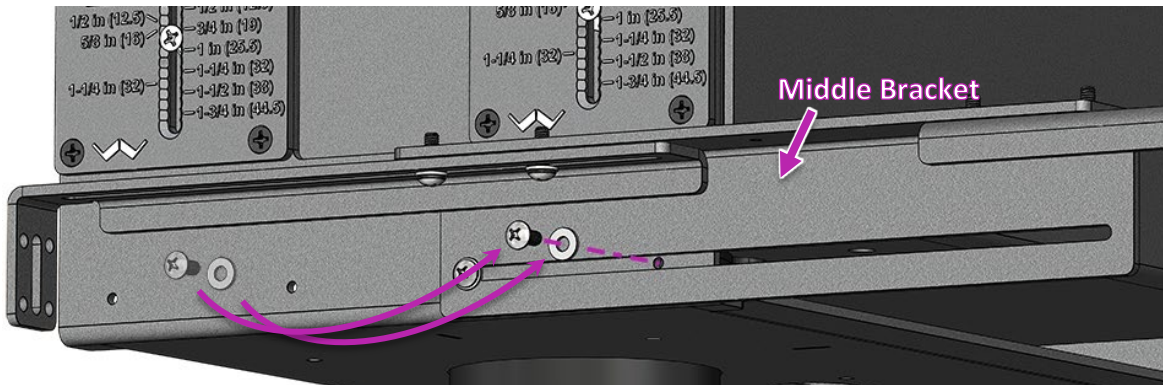
Leave the screws slightly loose so the brackets can slide when the speaker is attached to the joists. The screws are tightened after alignment of the speaker. **NOTE: REMEMBER TO TIGHTEN ALL SCREWS AFTER ALIGNING THE SPEAKER.**



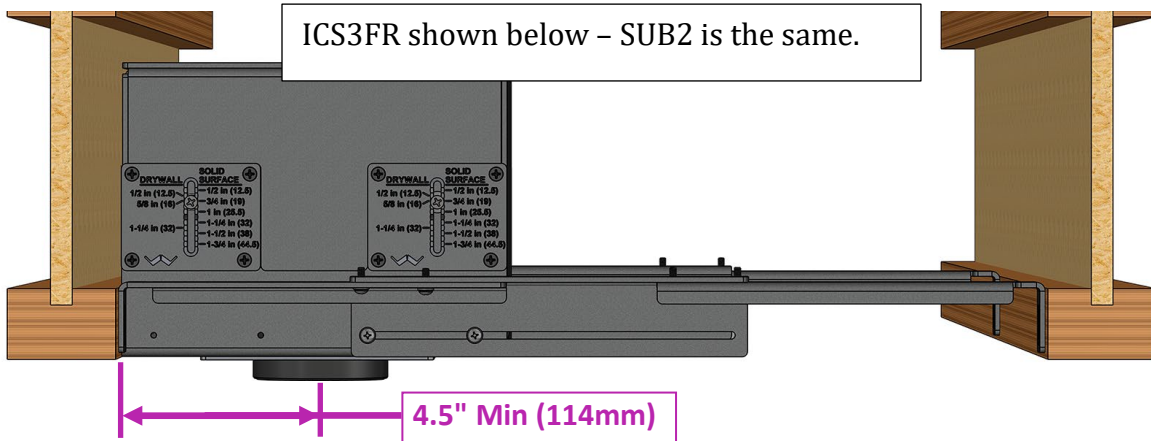
2. Adjusting the Middle Bracket offset

If the speaker will be positioned close to a joist, it may be necessary to reposition the Middle Brackets. For narrow spans, simply loosen the screws and slide the bracket to an appropriate position. For wide spans, it may be necessary to change the Middle Bracket hardware position as shown below.

To reposition the Middle Brackets, remove the necessary screws from the Middle Bracket, reposition the bracket on the Mounting Plate, and reinstall the screws ensuring there are a minimum of 2 screws on each end of the enclosure (4 total). This allows the speaker's output to be mounted as close as 4.55" (116mm) to the edge of the joist.



As shown below, the minimum output offset is 4.5" (114mm), as measured from the side of the joist, not the centerline.



3. Configuring the Output

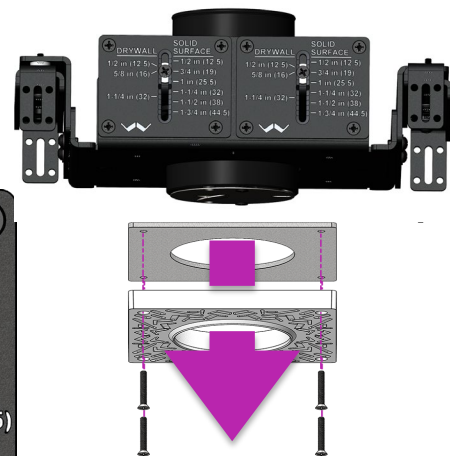
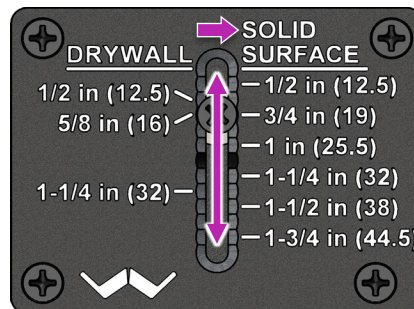
This step is broken into separate sections for **Solid Surface** and **Gypsum**. Skip to the section appropriate for your installation.

Solid Surface Configuration (Skip this section if using Gypsum)

- Remove the Mud Plate and 1/8" Shim that come attached to the SUB2 output. You will not need these parts.
- Using the 4 "Indexers" on the 4 corners of the speaker, set each Indexer to the total surface depth into which the speaker will pass by loosening the 4 screws and adjusting the position of the Mounting Plate. The adjustment is in 1/8" (3.2mm) increments. See the example below.

c.

NOTE: There are two scales. Ensure you use the correct one for your application. For Solid Surfaces, use the scale on the right. Tighten all indexing screws after adjustment.

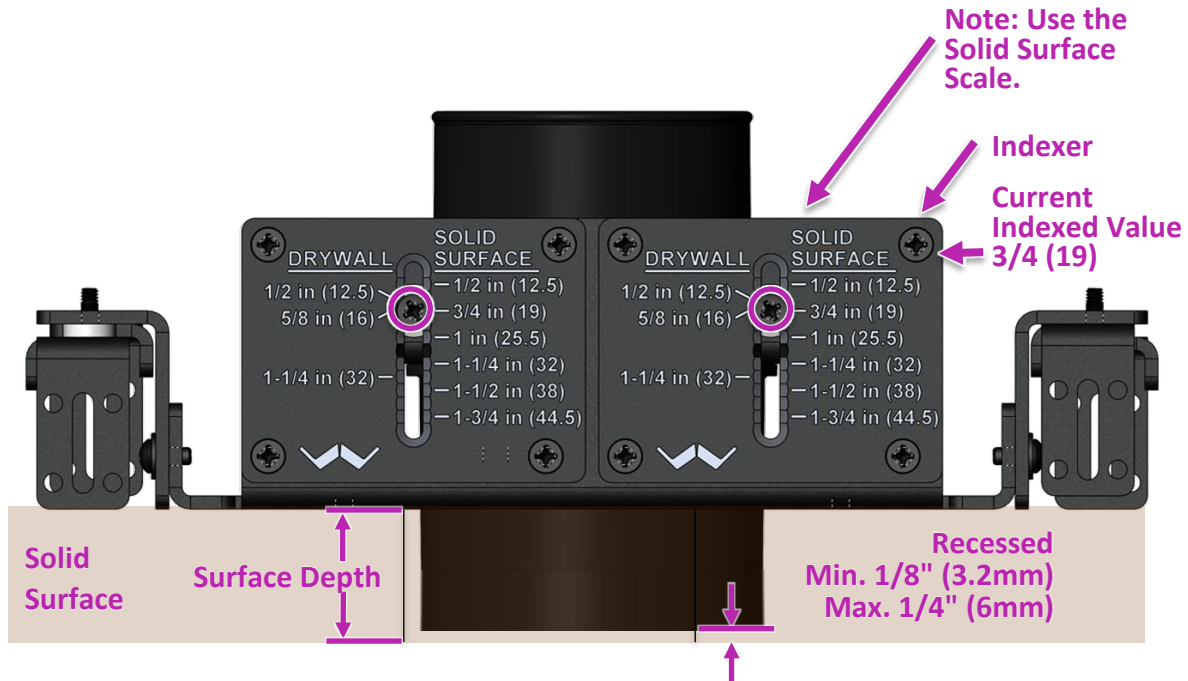


In the Solid Surface example below, the Indexer is set for 1-1/2" (38mm), the total depth

of the surface layer(s).

NOTE: The output of the SUB2 MUST BE positioned between 1/8" to 1/4" (3.2mm to 6mm) behind the surface when finished.

Skip to the **SUB2 Enclosure Installation** section if you are not installing in gypsum.



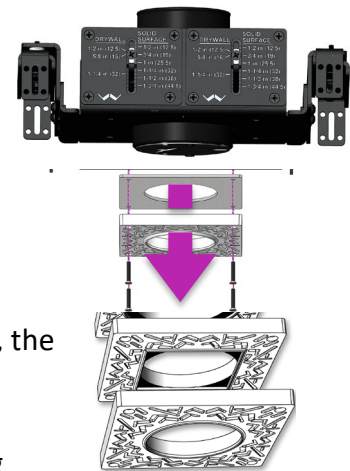
Gypsum Configuration

(Refer to the previous section if installing in **Solid Surface**)

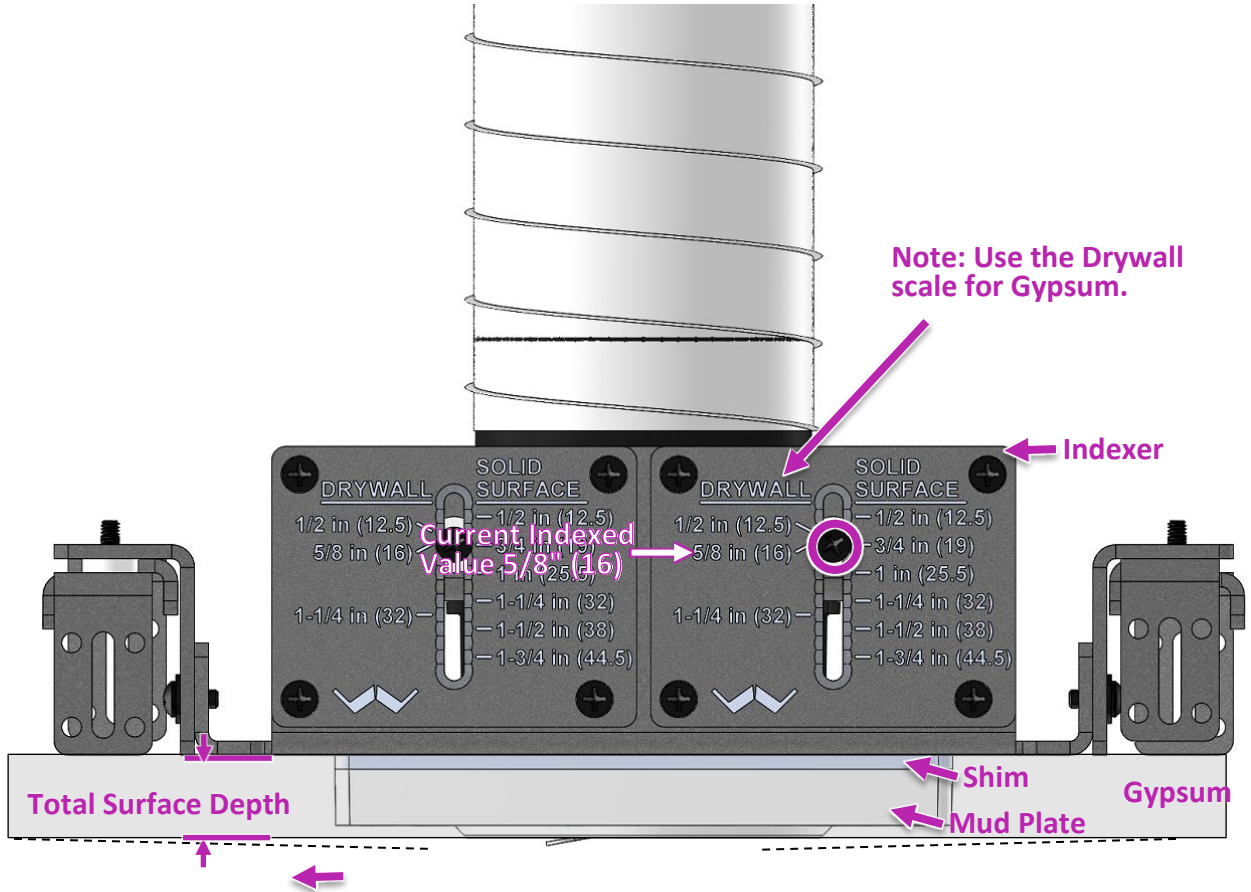
The SUB2 comes preconfigured with the 3" Mud Plate for installation in 5/8" (15-16mm) gypsum. If installing through thicker or thinner gypsum, or if using a different grille size or shape, remove the pre-attached Mud Plate and 1/8" Shim by removing the four 8-32 flathead Phillips machine screws.

Replace the components with those needed for your installation.
NOTE: If installing in a gypsum surface greater than 5/8" (16mm), contact Wisdom Audio for any additional components.

In the Gypsum example below, the indexer is set for 5/8" (16mm), the total depth of the stacked surface layers. The front lip of the Mud Plate extends slightly beyond the surface. Standard joint filling compound is used to blend the speaker output to the surrounding surface, as indicated by the dashed line.



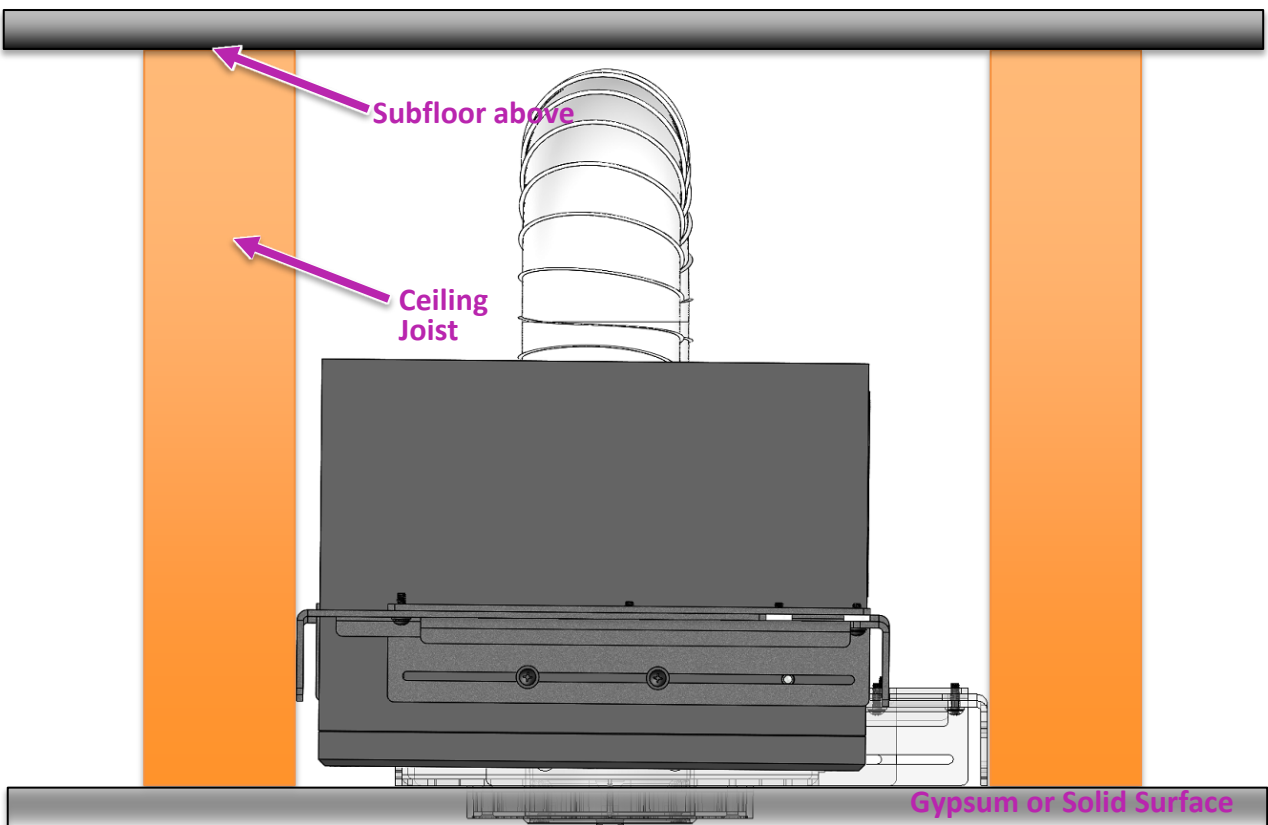
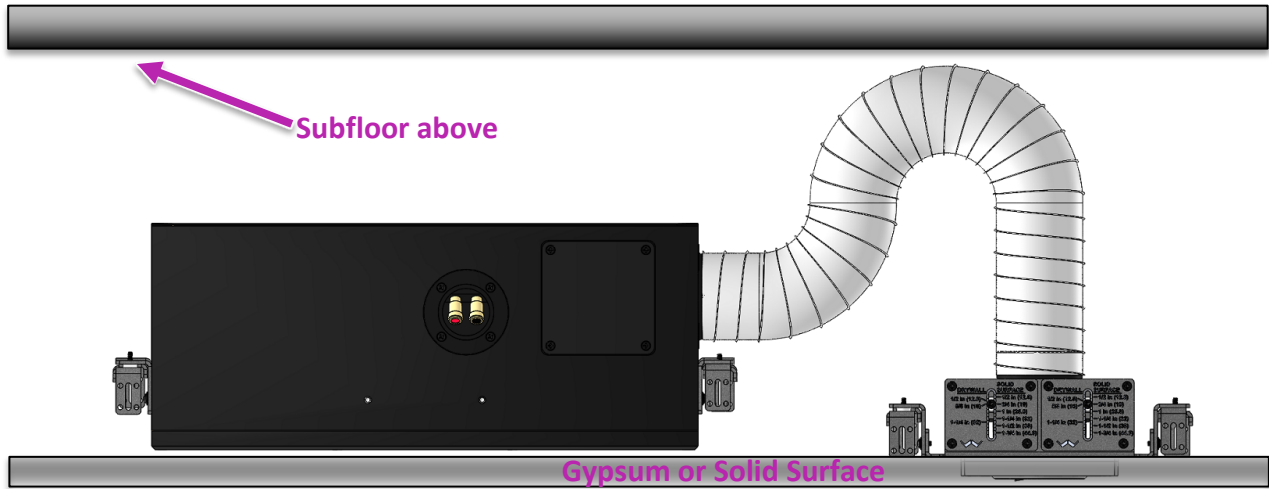
In the example, a 1/8" shim, plus the Mud Plate, are used to create the necessary surface depth. Shims are added or removed so the front lip extends slightly beyond the surface, ensuring that a fine surface finish can be created. Note: Contact Wisdom Audio if additional shims are needed.



NOTE: For both Gypsum and Solid Surface installations, it is necessary to set the mounting plate to the proper surface depth. There are two scales, Drywall and Solid Surface. Ensure that the correct scale is used. It is important to get this correct as there is no way to change the output offset after the speaker is installed unless there is access to the speaker.

SUB2 Installation (Solid Surface and Gypsum)

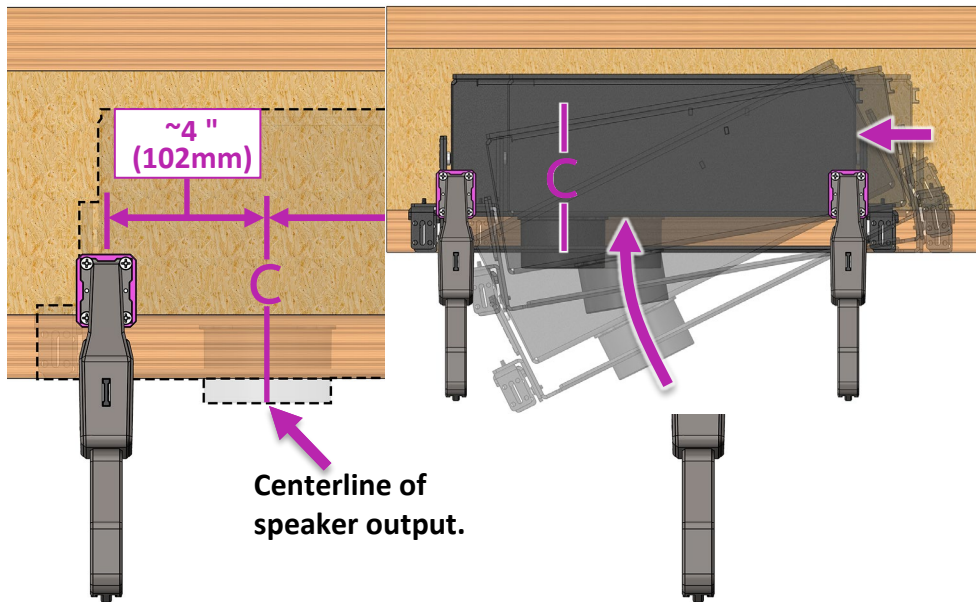
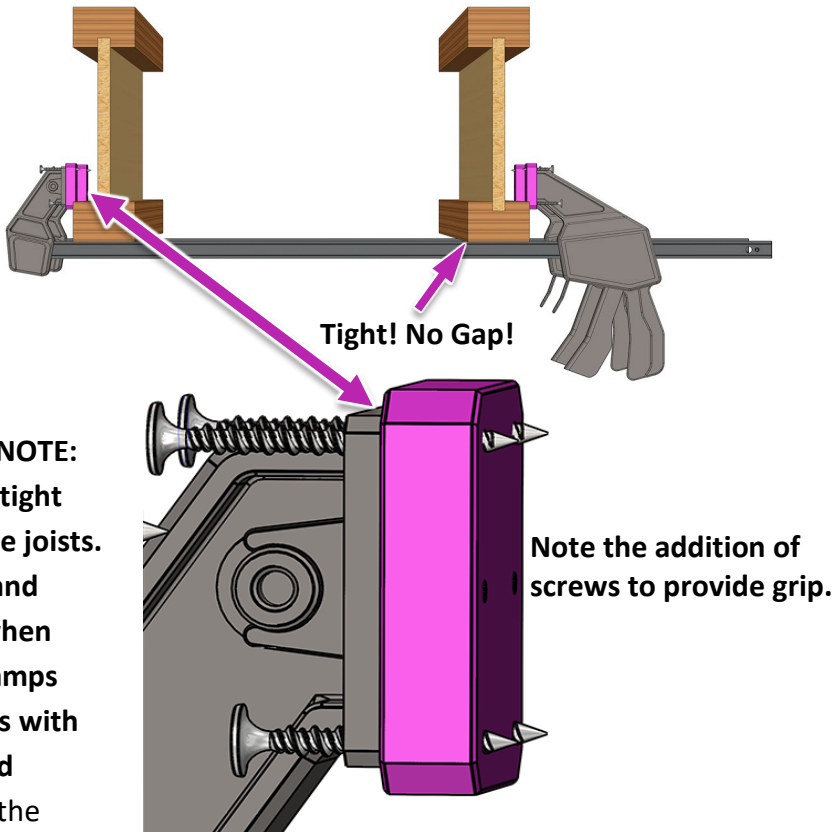
1. Locate the SUB2 Cabinet close to where the grille platform will be installed, so that the Port Tube can be installed without sharp bends



2. Identify the placement location of the SUB2 GRILLE TRIM PLATFORM. Mark the centerline across the joists.

3. Using these center-line marks, place supports across the joists, approximately 4" (100mm) ahead and 11" (280mm) behind these marks.

Bar clamps work well for this application, but temporary wood pieces can also be used. **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 can be modified, (such as with screws), to bite the wood surface.** This will ensure the clamps don't slip.

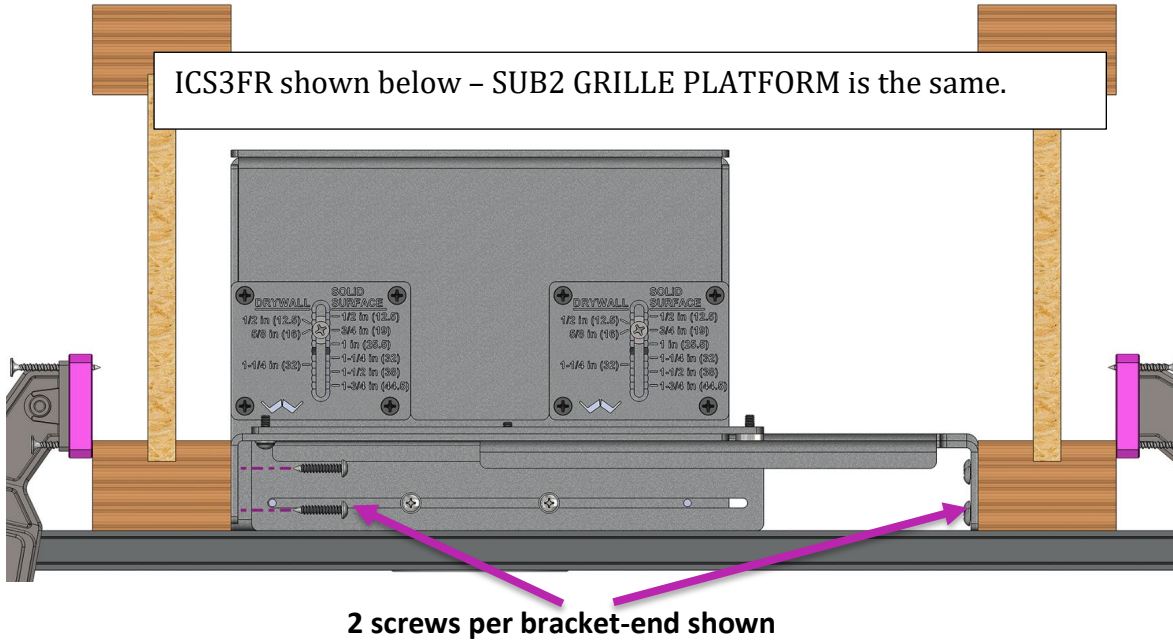


4. Place the SUB2 on top of the supports and align the output with the centerline

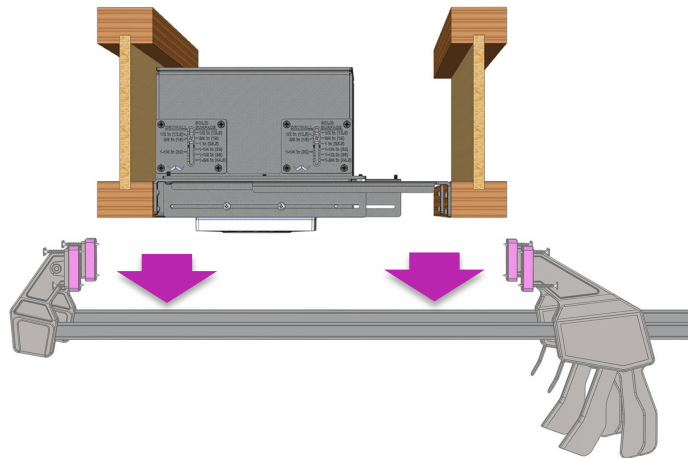
marks you made earlier. NOTE: The Mounting Plate of the enclosure assembly must rest on top of the supports and be flush with the bottom of the joists.

5. Screw the Sliding Brackets to the joists using at least 1 screw per bracket end.

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

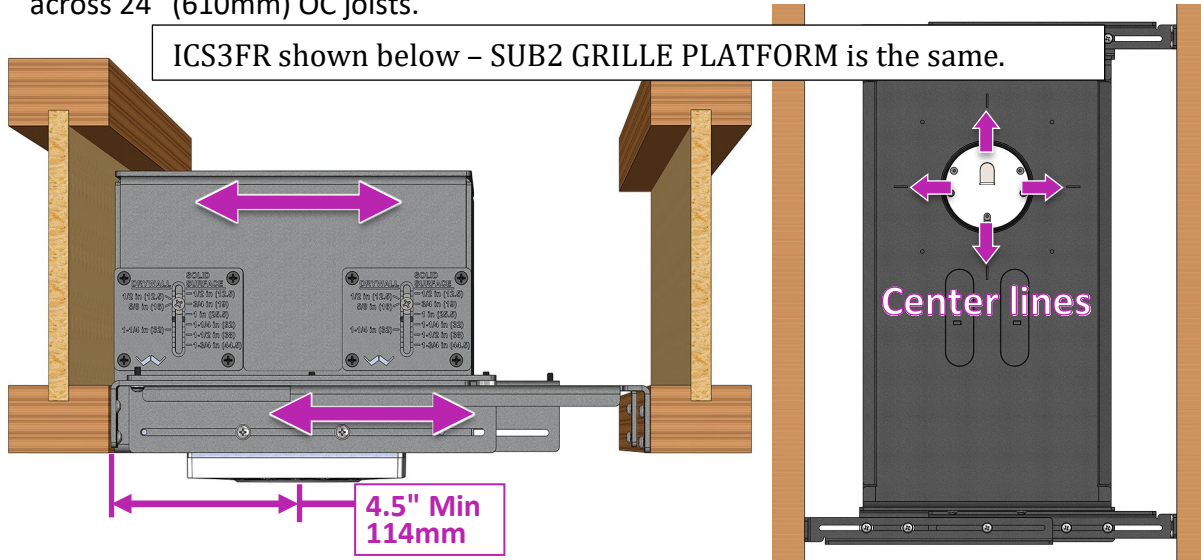


6. Remove the supports from beneath the speaker.



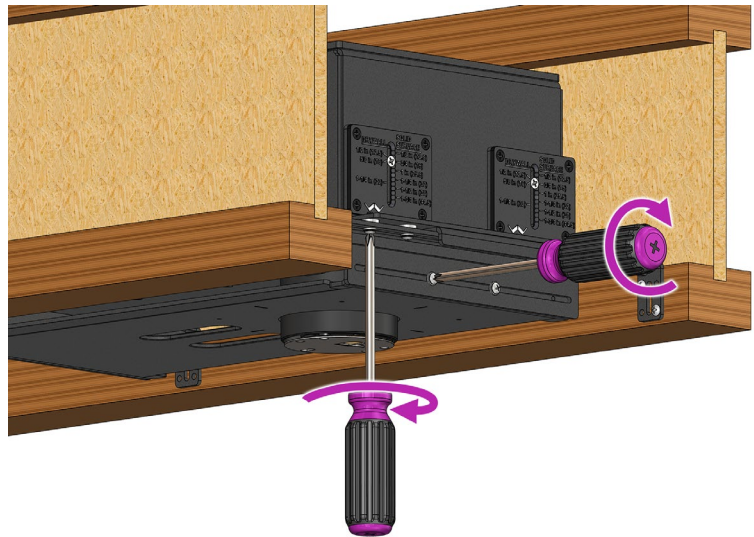
Adjust the Lateral Speaker Position

Note: The SUB2 speaker can be moved along the Middle Brackets, and the Middle Brackets can be moved along the Sliding Brackets. This freedom of movement ensures that the speaker's output can be placed within 4.5" (114mm) of a joist while spanning across 24" (610mm) OC joists.



7. Tighten all Bracket screws.

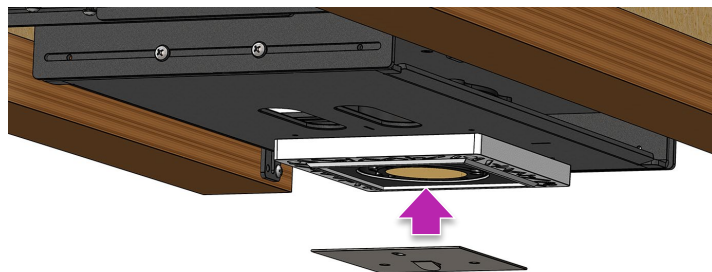
CHECK ALL SCREWS to ensure they are tight!



8. Install the Correct Paint Shield.

For gypsum installations, select the shield that fits your mud plate. The shield protects the surface from joint filler, texture, and paint.

For Solid Surface, the 3" round shield can be used as a placeholder, but the other shields are also suitable.



Making the Connections

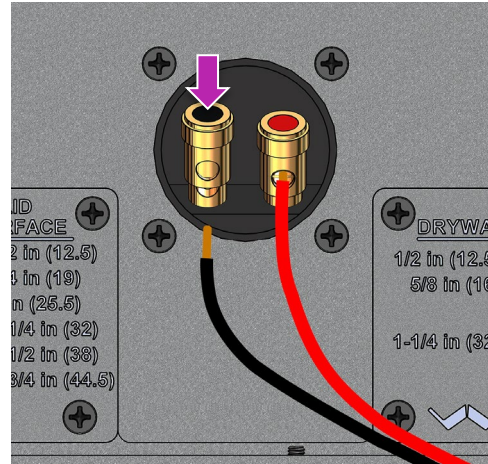
NOTE: If access to the input terminals is limited, it may be necessary to connect the wires prior to positioning and securing the speaker enclosure.

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

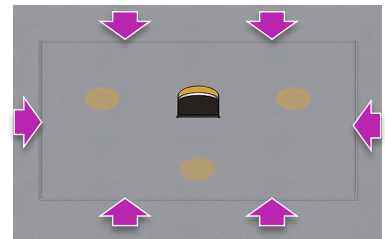
This section contains a brief summary of the gypsum grille installation followed by the finishing steps for solid surfaces.

Gypsum Finalization (Skip this section if using **Solid Surface**)

At this stage, the gypsum surface should already be finished with plaster and paint.

1. If the paint shield has become coated with any finishing material, it may be necessary to break the paint shield loose at its edges. This can be done by pressing on the paint shield around its perimeter to create a small crack.
2. Remove the paint shield from the speaker by pulling outward on the paint shield tab to lift it away from the speaker. It is magnetically held in place.
3. Remove the protective tape from the front of the tweeter and from the front of the paint shield.
4. Remove any excess paint or texture from the paint shield. The paint shield will be used to adjust the grille depth, as it is the same thickness as the grille.
5. Replace paint shield, aligning the Patented Magnetic Recoil screws with holes in paint shield.
6. Adjust the 3 magnetic recoil screws until the grille is flush with the surrounding surface. A flat instrument, such as a level, can help with the alignment.
7. Replace the paint shield with the grille.

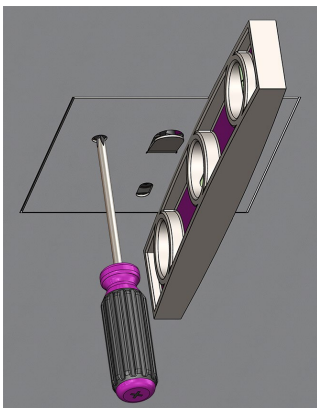
Press around edge to free up paint shield



Remove Shield and Tape



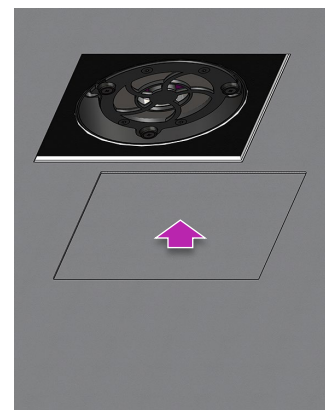
Adjust Grille Height



Remove Paint Shield



Install Grille



Solid Surface Finalization (Skip this section if using Gypsum)

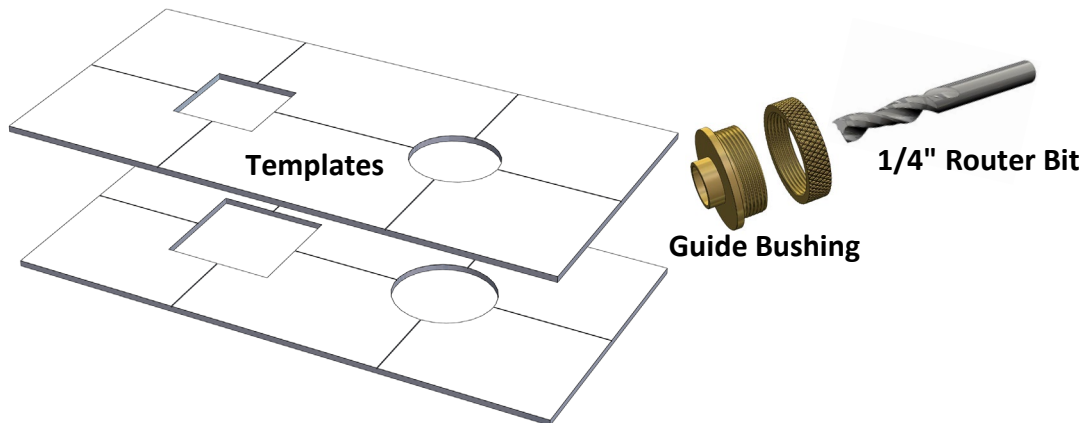
Solid Surface installations require additional steps during the finishing phase of the SUB2 installation. The solid surface will need to be routed or cut to fit the output of the speaker and the grille. This operation will likely be done by the contractor responsible for installing the final ceiling surface. A wood surface is described in this overview. This should provide sufficient information to complete this step with most common materials.

Solid Surface Routing

In some installations, the holes will be cut using a CNC operated cutting table. In others, it will be done using a hand router. The [following describes the hand router method](#) and includes a description of the routing tool and its use. This is followed by grille installation instructions.

NOTE: Care must be taken to ensure the hole is cut in the correct location. Determining the precise location of the hole is not within the scope of this manual and is left to the installation professional.

As mentioned earlier in the manual, a routing tool is available if the holes are routed using a hand router. The routing tool consists of the following components, 3" and 4" acrylic templates, a router guide bushing, and a 1/4" diameter routing bit.

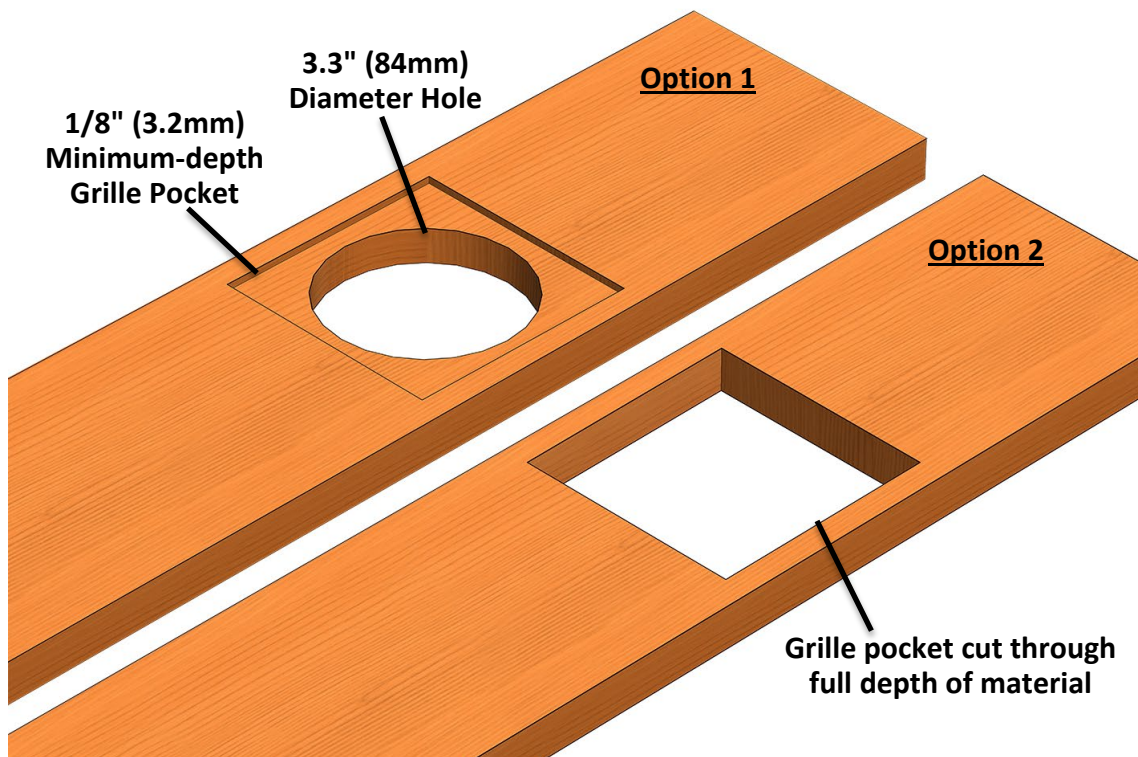
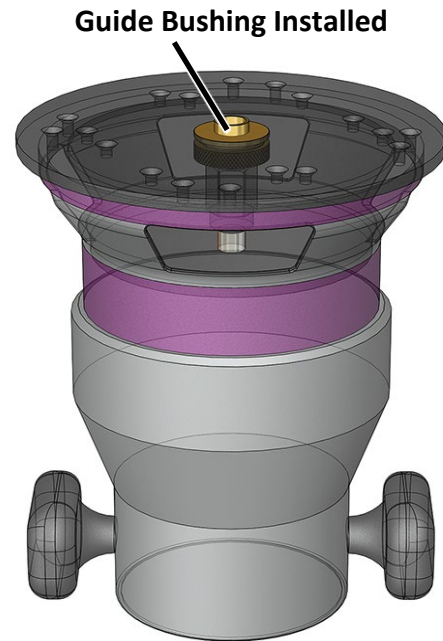


CAUTION: The templates are specifically designed to be used with the router guide bushing. Using the template without this bushing will produce oversized holes.

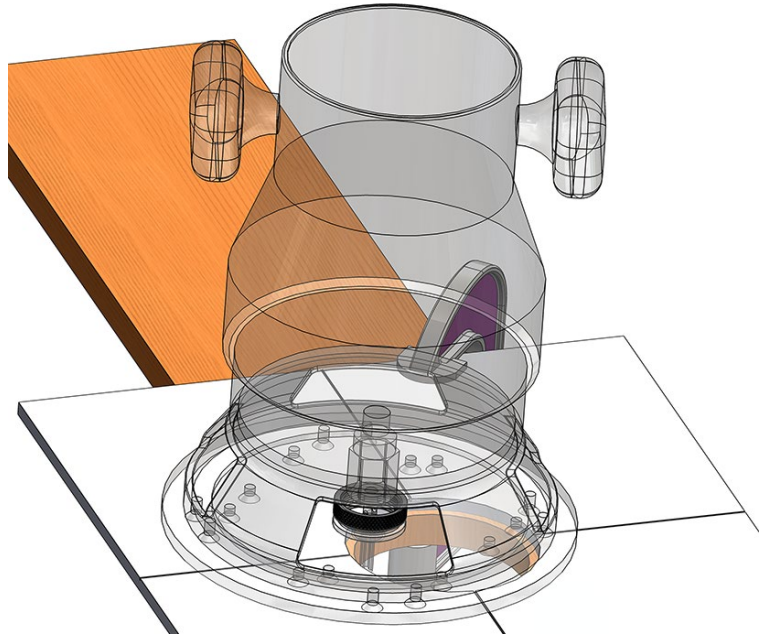
Note: If the router guide bushing does not fit your router, a universal replacement baseplate is available to fit most routers. Contact Wisdom Audio or your Wisdom Audio dealer for more information.

Routing the hole

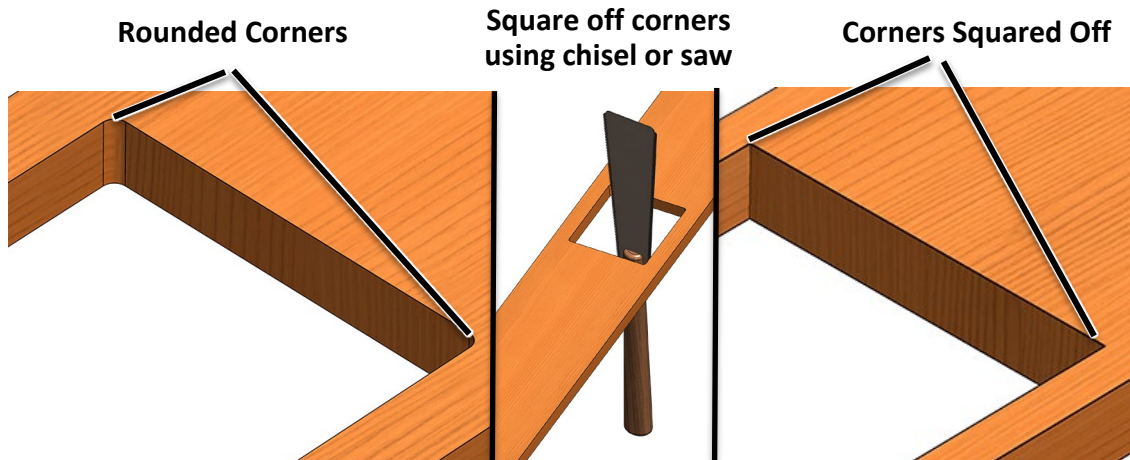
1. Install Guide Bushing in router.
2. Determine how you will route the hole, full or partial pocket. The hole will need to accommodate both the output port of the speaker and the grille, all versions of which are 1/8" (3.2mm) thick. There are two options for cutting the holes, as shown in the images below.
 - a. One option is to cut a full-depth 3.3" diameter hole, to accommodate the output port, along with a partial depth pocket (1/8" minimum) to accommodate the grille.
 - b. The 2nd option is to cut the full depth of the material in the shape of the grille.



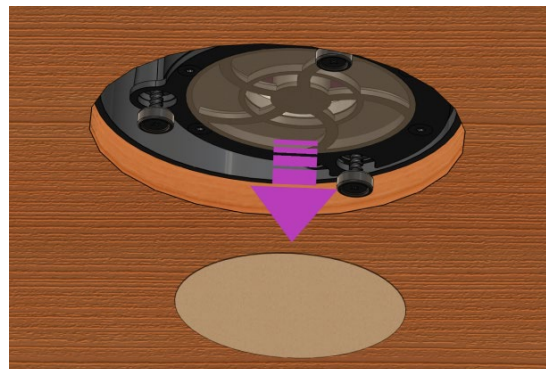
3. With the hole location identified, align and secure the template to the surface to be cut. Since the wood is cut before it is installed in most installations, the template can usually be secured with clamps.
4. Route the hole and grille pocket (as desired).



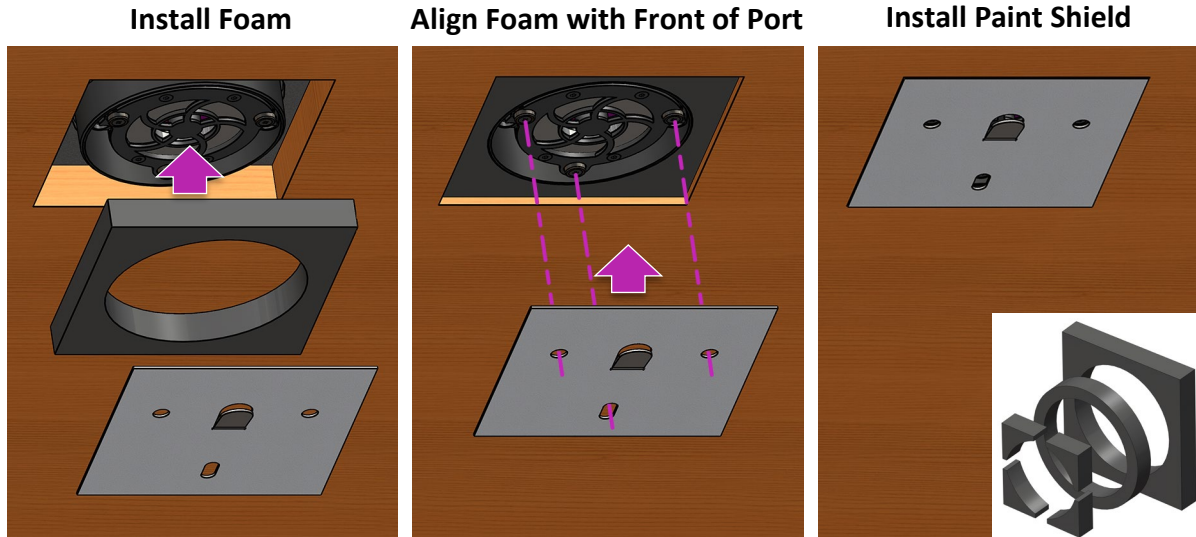
NOTE: If holes are cut for square grilles, a radius will remain at each corner. It will be necessary to square these off with either a saw, chisel, or square-hole drill bit, (hollow chisel mortise bit).



5. Prior to grille installation, remove the masking tape from the front of the tweeter.

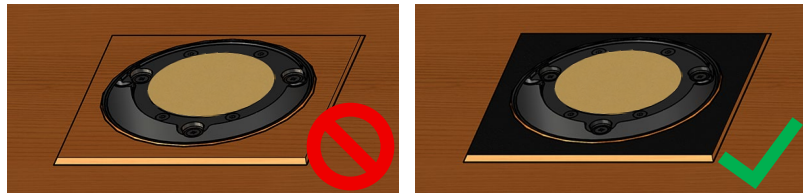


- If a square hole or a 4" round hole were cut through the entire solid surface, install the foam piece(s) for your grille size. This will close off the hole. The foam should be installed so that it is flush with the front of the speaker opening. There are 3 different size foam inserts.



- If a partial depth pocket is cut, then it is recommended that the surface be painted black to create a consistent colored background for the grille.

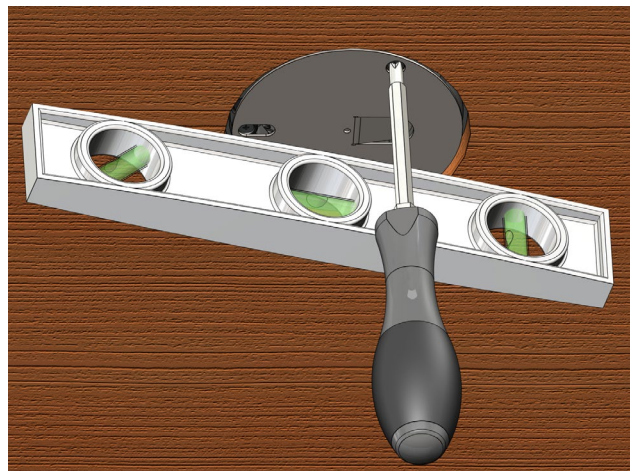
For Partial Depth Pockets, Color the Background Black



Grille Installation and Alignment

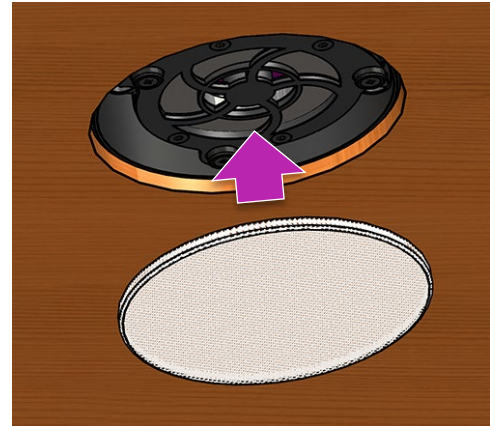
Once the surface has been finished, the SUB2 is ready to have the grille plane set using the Patented Magnetic Recoil Fastener. To make this task easy, the grilles are shipped with an alignment gauge that is the same thickness as the grilles.

- Place the Paint Shield 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.
- 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 Paint Shield (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 profile is available on your amplifier.**
6. **Enjoy!**



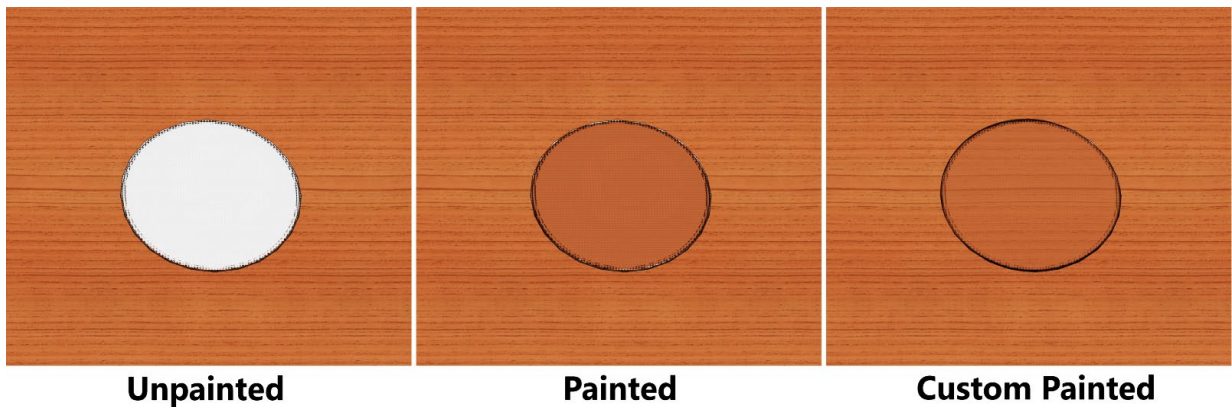
Grille Painting (Optional)

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

We recommend using an 80Hz 4th order Linkwitz–Riley high-pass crossover. The SUB2 is optimized to work with our ICS3FR speaker, 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 SUB2, 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 SUB2 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

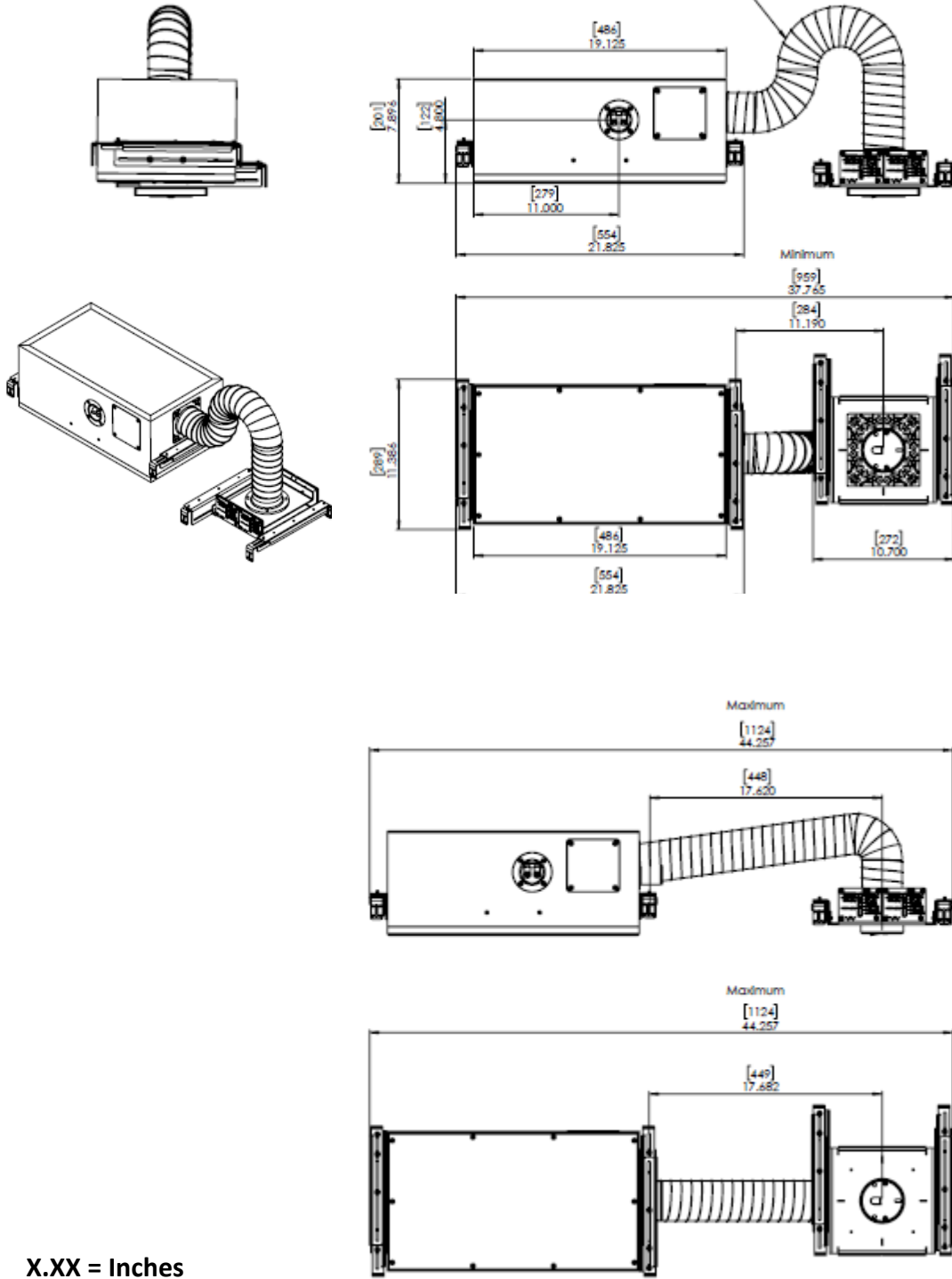
All specifications are subject to change at any time to improve the product.

Frequency Response	37Hz – 140 Hz +/- 3dB
Port Tube Length	3" x 24" (7.62cm x 60.96cm)
Impedance	8 ohms
Sensitivity	85dB / 2.83V / 1m
Minimum Recommended Power	100 Watts
Maximum Recommended Power	300 Watts
Included Gypsum / Plaster Grilles	Round 3.04" [7.7cm] Square 3.07" [7.8cm] Round 3.97" [10cm] Square 3.95" [10cm]
Included Solid Surface Grilles	Round 3.26" [8.3cm] Square 3.275" [8.3cm] Round 3.94" [10cm] Square 3.95" [10cm]
Recommended High Pass Crossover	80Hz 24dB Linkwitz–Riley
Recommended Low Pass Crossover	35Hz 24dB Linkwitz–Riley
Dimensions L x W x D (Woofer Enclosure) (Designed for 2x8 Stud Depth)	7.9" x 10.5" x 19.25" (20.066cm x 26.67cm x 48.895cm)
Minimum Grille Distance from Wall	4.55" [116mm] OC to Long Edge 6.00" [152mm] OC to Short Side
Weight	25.4 lbs (11.5 kg)
Shipping Weight	30 lbs (13.6 kg)
Gypsum/Plaster Finished Thickness	Shipped with mud plates for installation in both 1/2" and 5/8" (12.5 to 16mm)
Solid Surface Finished Thickness	installation in solid surfaces, (wood, stone, tile, etc.), from 1/2" to 1-7/8" (12.5mm – 48mm)

Dimensions

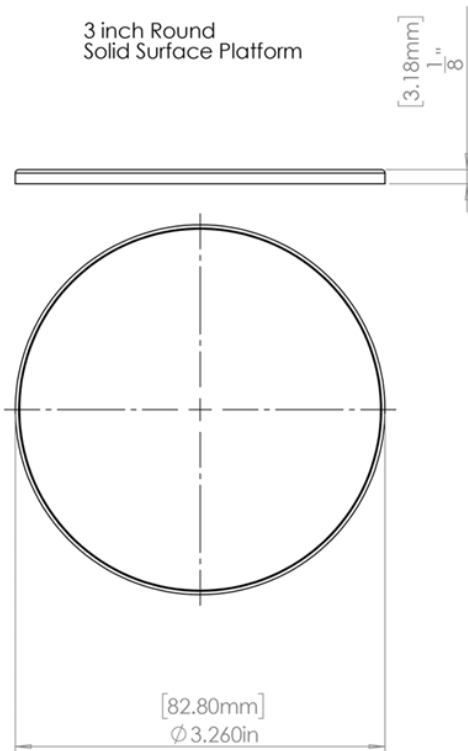
Tube Extension from Woofer Enclosure
 12.182 [309] MINIMUM
 20.163 [512] MAXIMUM

2.645 [67] APPROX TubeBend Height Max at closest to Woofer Enclosure

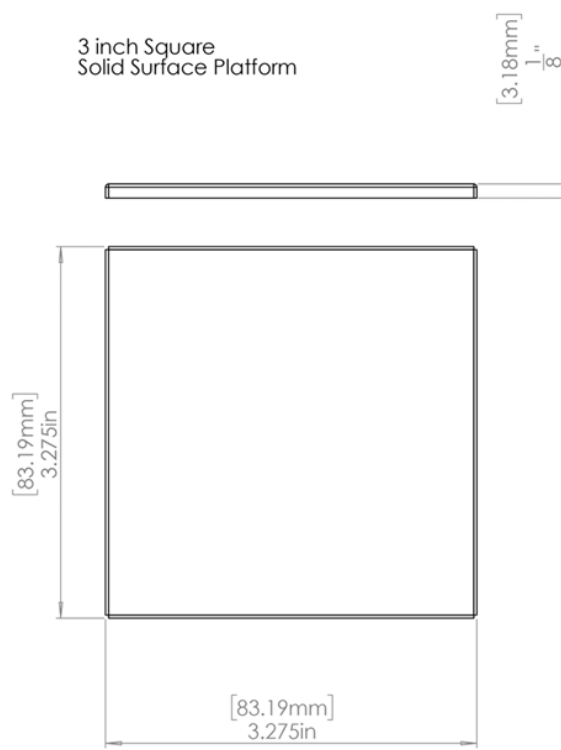


X.XX = Inches
X.X = mm

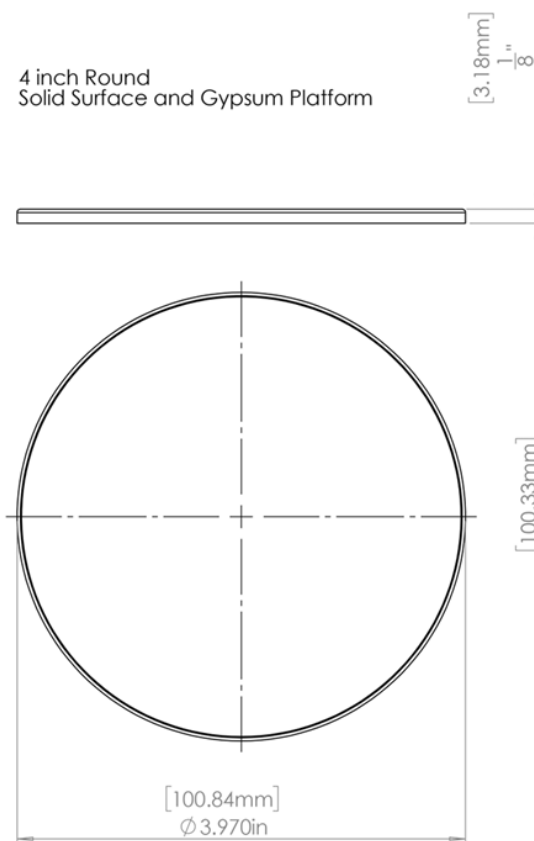
3 inch Round
Solid Surface Platform



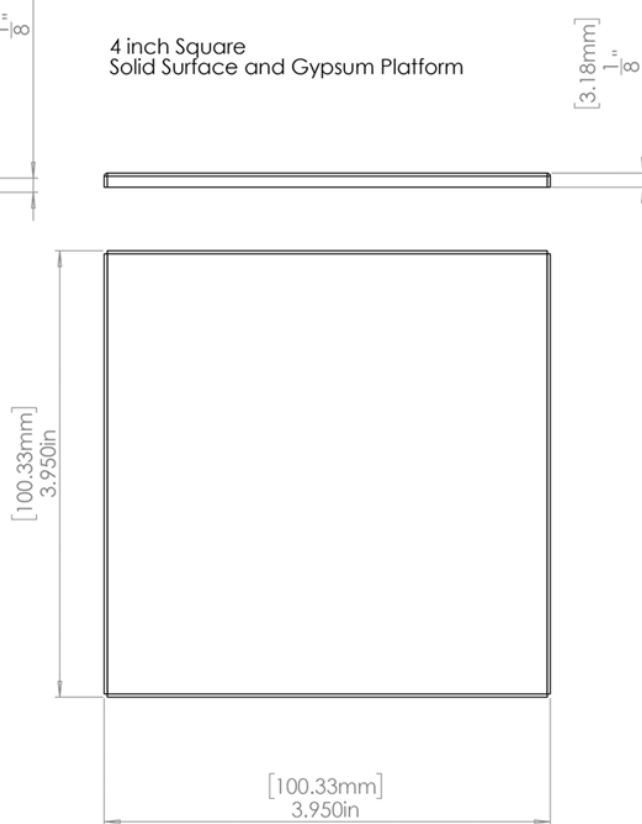
3 inch Square
Solid Surface Platform



4 inch Round
Solid Surface and Gypsum Platform



4 inch Square
Solid Surface and Gypsum Platform



Wisdom Audio
ICS3FR and Sub1 Solid Surface Grille Sizes

ALL TOLERANCES ARE ±0.01 INCHES (0.25MM)



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