



Owner's Manual

Sage Series SUB1

Minimal Appearance Subwoofer

Preconstruction Mounting

Gypsum and Solid Surface Mounting

Final Installation

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DOCUMENT CONVENTIONS

This document contains general safety, installation, and operation instructions for the Wisdom Audio Sage Series SUB1. 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.

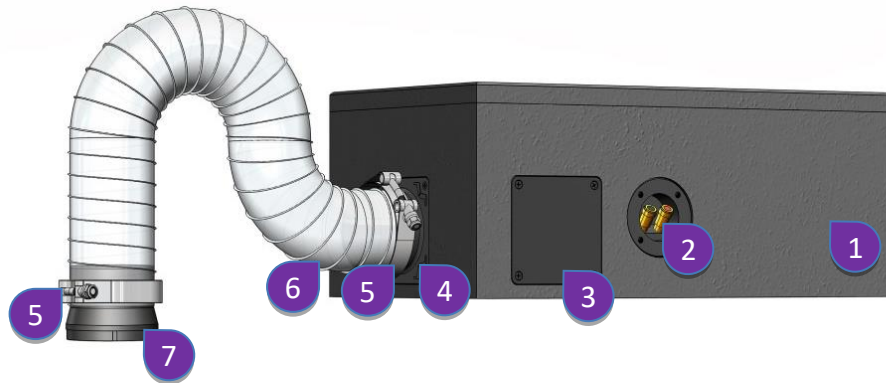
Note: Calls attention to information that aids in the installation or operation of the product.

Introduction

Congratulations on purchasing your Wisdom Audio subwoofer. The SUB1 delivers tremendous bass performance in terms of depth, dynamics, and low distortion resulting in articulate bass that integrates seamlessly with high-resolution main speakers such as Wisdom Audio's Sage ICS3 Minimal Appearance Speakers

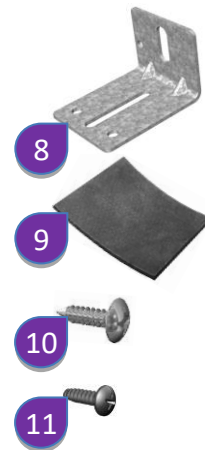
This manual focuses on the SUB1 subwoofer itself and provides an overview of the accessories. More detailed accessory information is available at WisdomAudio.com.

System Overview



What is Included with the Sub1

1. Band-Pass Cabinet (X1)
2. Speaker Input Termination Posts
3. Port Tube Side Output with Cover
4. Port Tube Front Output with Port Tube Coupler
5. Port Tube Band Clamps (X2)
6. Port Tube (X1)
7. Port Tube Platform Adapter (X1)
8. L-brackets (X4)
9. Neoprene Pads – Adhesive backed (X4)
10. Bracket Attachment Screws #10 x 3/4" (X8)
11. Platform Adapter Screws #4 x 1/2" (X4 + 1 extra)



NOTE: Due to the unique requirements of each installation, it is left to the installer to provide the necessary hardware to attach the subwoofer brackets to the framing. The minimum recommended screw size is: #10 x 1" (5mm x 25mm) with flat washers.

NOTE: Port Tube length is not to be altered as it will severely impact the operation of the subwoofer.

Available Output Options (Not Included)

The SUB1 bandpass subwoofer is available with numerous output options to meet your unique installation needs. A summary of these 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. Your subwoofer will be shipped with the necessary components to assemble your option.

NOTE: Each option has its own installation manual. Please visit the [Wisdom Audio](http://www.wisdomaudio.com) website for more information.

- Solid Surface Kit:** This kit allows installation through solid surfaces, (wood, stone, tile, etc.), where the edge of the cutout transitions to the grille. A 3.25" or 4" round or square hole is cut into the surface into which the grille is inserted and adjusted to fit flush with the surrounding surface.
- Gypsum Kits (1/2" and 5/8" available):** These kits are specifically made for drywall/sheetrock/plasterboard surfaces and retrofit installations where drywall is used. The kits require taping and finishing with drywall/plaster compound much like any other wall surface.
- Toe Kick Kit:** As the name implies, this kit allows the subwoofer to output through the toe kick of a cabinet or other solid surface (wall/floor) with a 4" x 16" air-register style grille covering the opening.

Sage Series Minimal Appearance System Ordering and Planning

1. Planning Stage	2. Pre-construction / Pre-wire Stage		3. Finishing Stage	
Surface	Platform (Size & Shape)	Speaker	Tweeter	Grille
Gypsum, 1/2" (12.7mm)	<ul style="list-style-type: none"> 1/2" round 3" Platform 1/2" square 3" Platform 1/2" round 4" Platform 1/2" square 4" Platform 	<ul style="list-style-type: none"> ICS3-BackBox SUB1 	ICS3-SPMD	<ul style="list-style-type: none"> 3" round 3" square 4" round 4" square
Gypsum, 5/8" (15.9mm)	<ul style="list-style-type: none"> 5/8" round 3" Platform 5/8" square 3" Platform 5/8" round 4" Platform 5/8" square 4" Platform 	[same as above]	[same as above]	[same as above]
Solid Surface Depth from 3/8" to 1-1/4" (9.5mm - 31.75mm)	<ul style="list-style-type: none"> Solid Surface Mounting Kit Solid Surface Installation Tool Kit 	[same as above]	[same as above]	<ul style="list-style-type: none"> 3" round Solid Surface 3" square Solid Surface 4" round (same as gypsum) 4" square (same as gypsum)
Cabinet toe kick, ceiling, floor, wall, etc.	<ul style="list-style-type: none"> Side entrance 4" x 16" Slot 	Sub1 Only	N/A	<ul style="list-style-type: none"> 4" x 16" Register-style (supplied)

Additional Information:

1. Gypsum kits must be ordered for the specific ceiling thickness 1/2" or 5/8" (13mm or 16mm). Gypsum kits must also be ordered for the specific grille size and shape, 3" or 4" (76mm or 102mm), and round or square.
2. The Solid Surface Mounting Kit is available for passing through materials such as wood, stone, or tile, from *1/4" to 1-3/8" (6.5mm to 35mm) total thickness. A Solid Surface Installation Tool Kit (routing tools and template) is also available.
***Note: The minimum surface thickness when using 3" grilles is 3/8" (9.5mm).**

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 the 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. A video presenting some of the installation steps can be found [here](#). 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.

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 SUB1 is intended to be a pre-construction process as it requires access to the construction framing. However, retrofitting the subwoofer is also possible where access to a crawl space is available.

This installation guide only covers the Sub1 enclosure installation. The Wisdom Audio website contains additional information for the various "output" options, (Solid Surface, Gypsum, and Toe Kick). 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 “*Sub1 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: _____

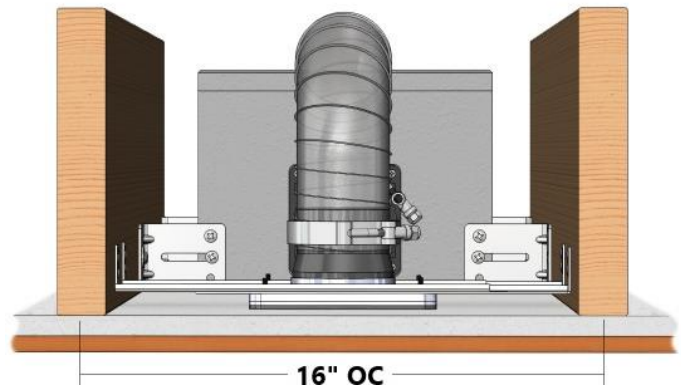
g. Contact Information:

h. Other Notes:

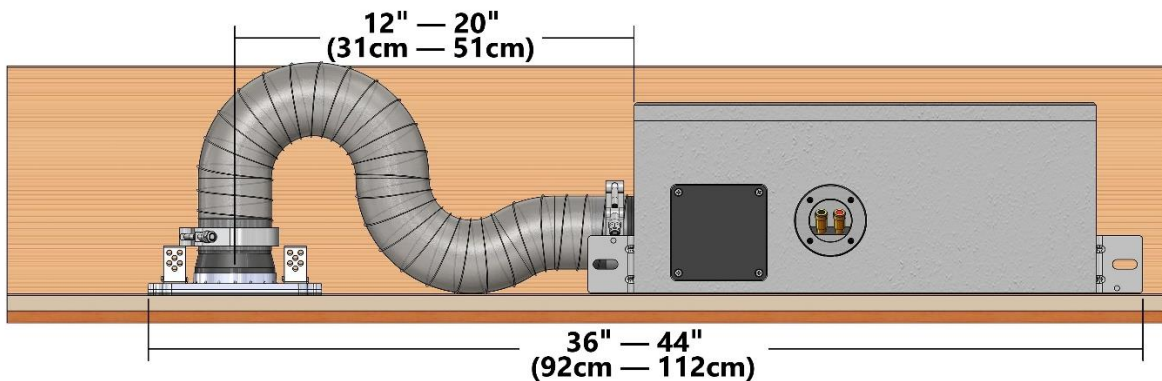
Getting Started

The SUB1 fits within standard ceiling joists that are spaced between 12" and 24" (305mm and 610mm) "On Center" (OC) and requires a minimum of 8" (203mm) of height to fit the enclosure and port tube.

NOTE: The Port Tube length is not to be altered as it will severely impact the operation of the subwoofer.



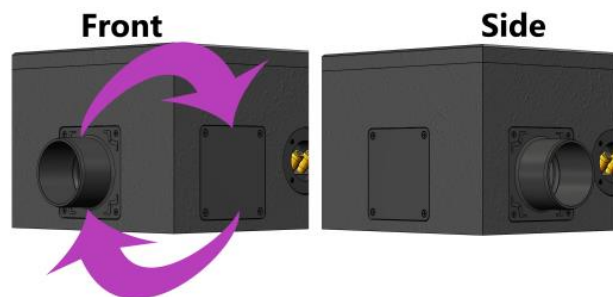
When the SUB1 enclosure is installed in-line with the Solid Surface (SS) mounting kit, as shown below, a minimum of 36" of length is required to fit the system components. The face of the subwoofer enclosure must also be located between 12" and 20" (31cm and 51cm) of the grille's center position. However, it is recommended that you avoid the extremes, 12" and 20" (31cm and 51cm). See image below.



For installations that depart from this guide, the following information will aid in answering questions not covered elsewhere.

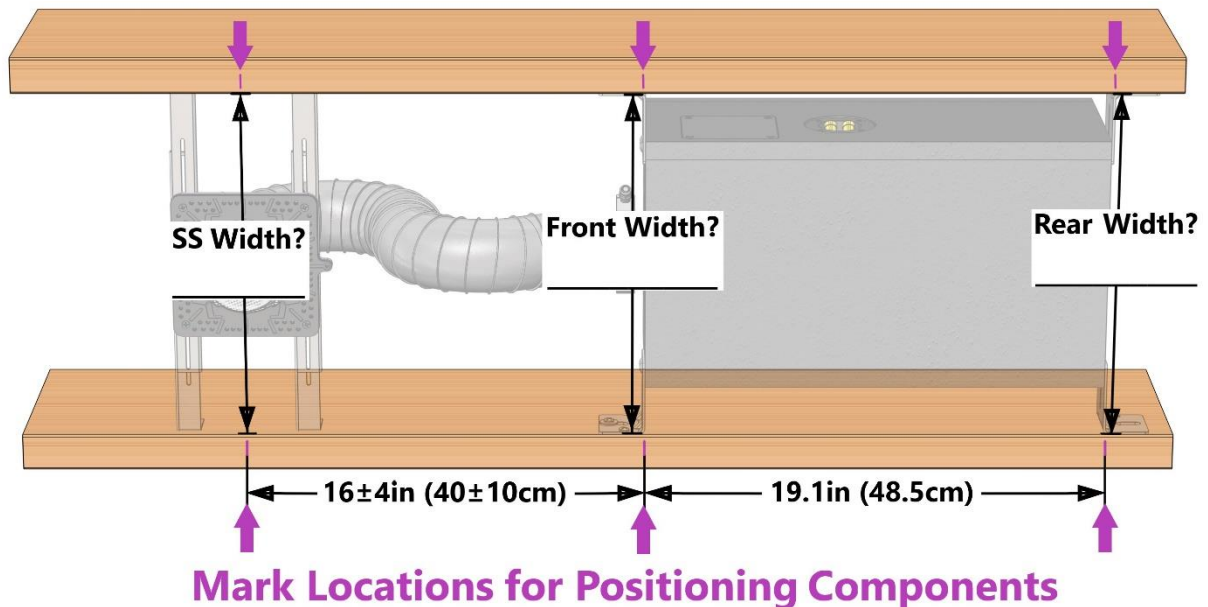
The L-brackets can be attached to any of the 6 sides of the enclosure.

Should it be desirable for your installation, the port tube coupler can be repositioned from the Front of the enclosure to the Side. Each is held in place with 4 Phillips screws.



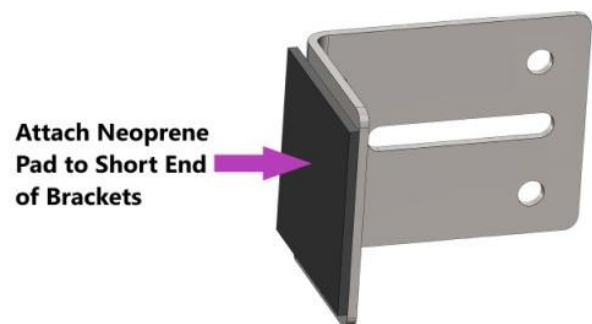
Sub1 Enclosure Installation

1. Identify the location for the placement of the Solid Surface (SS) Mounting Kit and mark the center location on the joists. Measure the distance between the joists and record this below.



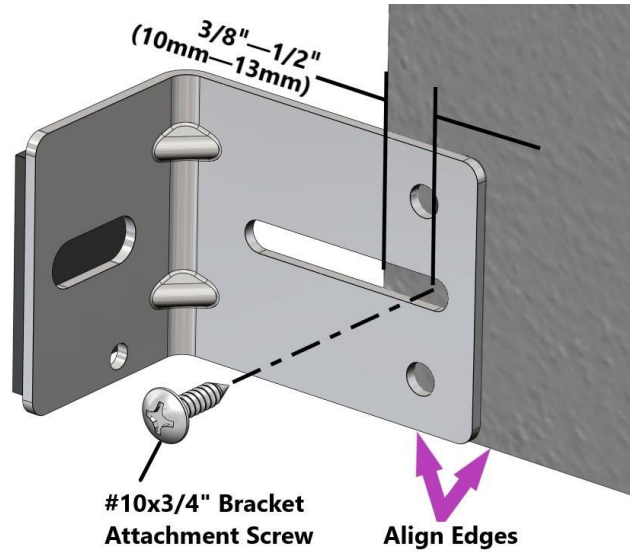
2. From the SS center marks, measure and mark the locations for the front and rear of the enclosure, as shown above, $16\text{in} \pm 4$ ($40\text{cm} \pm 10$) to the front of the enclosure location plus an additional 19.1in (48.5cm) to the rear. Measure and record, in the image above, the distance between the joists at these locations.

3. If desired, attach the Neoprene pads to the short ends of the brackets. Though the vibration from the enclosure is negligible, this can help to isolate and damp the transfer of vibration.



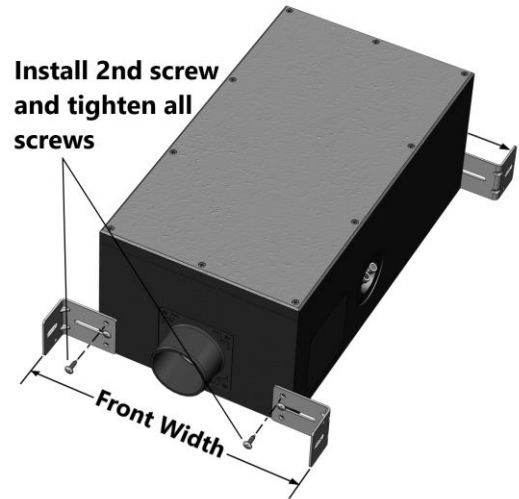
4. Mount the L-brackets to the band-pass cabinet as described in the following steps.
 - a. Place the SUB1 on a flat surface. To protect the subwoofer and the working surface, use the packing material in which your Sub1 was packed.

- b. Place the brackets at the base of the front and rear of the cabinet as shown, allowing the bottom of the bracket to sit flush with the bottom of the SUB1.
- c. Using 4 of the #10 x 3/4" screws, attach each bracket with **1 screw through the long slot. A 2nd screw will be added after adjustment.** The screws should be placed between 3/8" to 1/2" (10mm to 13mm) from the edge of the cabinet. Do not fully tighten them since the bracket will be adjusted in the next step. **Predrilling holes 1/2" (12mm) deep with a 3/32" (2.5mm) drill will ensure the integrity of the attachment.**

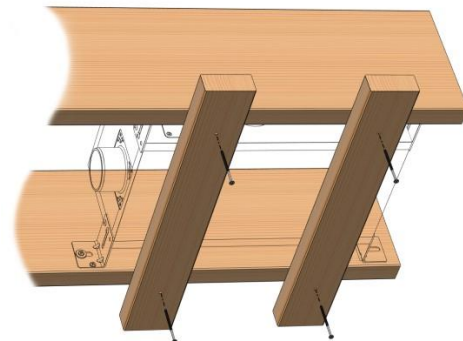


Adjust bracket spacing using joist widths recorded earlier, (Front and Rear). Subtract 1/16" (1.5mm) from the measurements for clearance.

- 5. **Adjust the brackets** using the joist widths recorded earlier in Step 2.
 - a. Subtract 1/16" (1.5mm) from the measurements to allow for clearance when positioning the enclosure between the joists.
Note: Brackets can also be adjusted after placement between the joists if there is workspace clearance.
 - b. **Install 2nd #10 x 3/4" screw** in all brackets and **tighten all screws.**

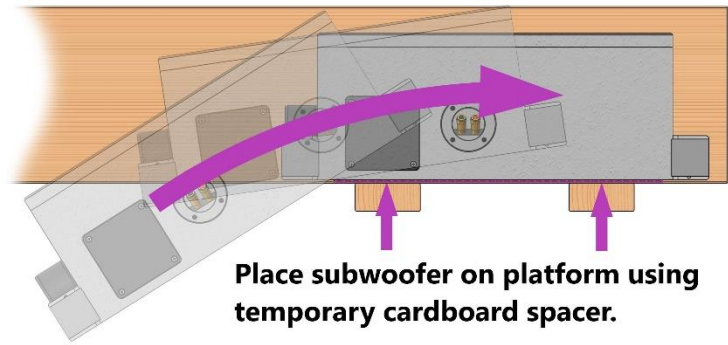


- 6. Using scrap lumber or other material, temporarily install supports across the face of the joists to support the subwoofer. Temporarily add cardboard or other material on top of the supports to separate the enclosure from the surrounding surfaces.



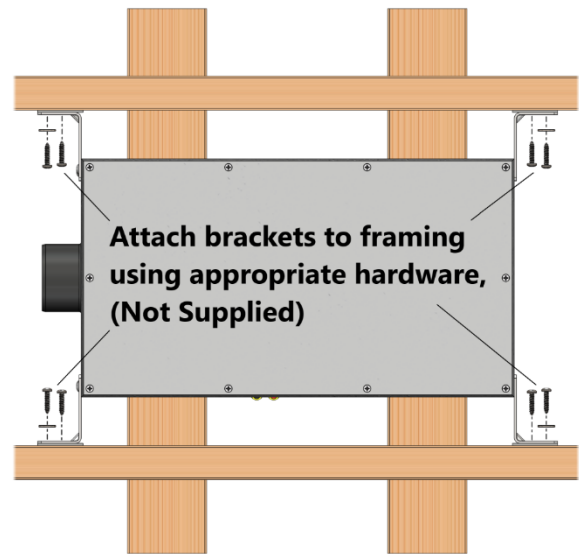
Install Temporary Platform to Support Enclosure

7. Position the band-pass cabinet between the joists and on top of the temporary supports. Use the reference marks from Step 2 to align the position.



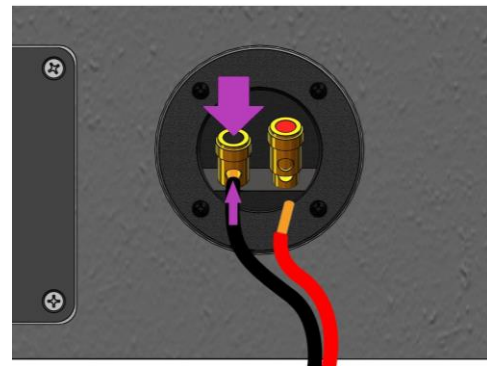
- a. NOTE: If access to the input terminals is limited, it may be necessary to connect the wires prior to positioning and securing the subwoofer enclosure.

8. Screw the enclosure mounting brackets to the joists using appropriate hardware. At a minimum, we recommend #10 X 1" (5mm X 25mm) screws with washers, using two sets per bracket as shown in the image.



9. 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 (+).

Press Terminal and Insert Wire



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

10. Install the chosen output option per each option's installation guide and then complete the port tube installation per the instructions below.

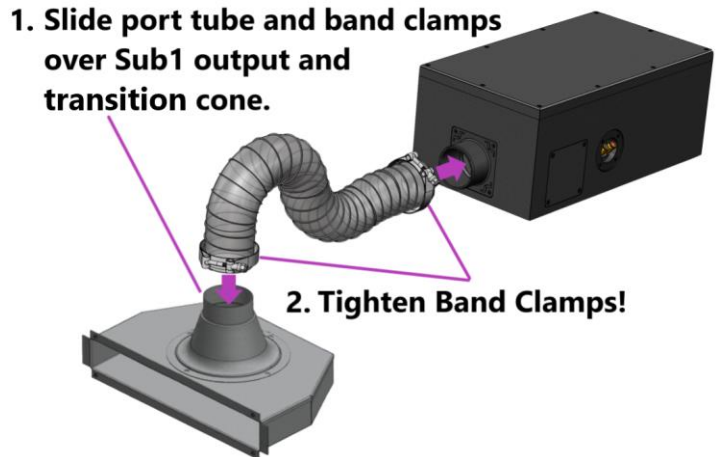
NOTE: Ensure all hardware is tightened, including the SUB1 port tube clamps, since these items may not be accessible after the drywall is finished.

Port Tube Installation

NOTE: The port tube installation is the same for all output options except the toe kick. The toe kick does not require the use of the Platform Adapter shown below.

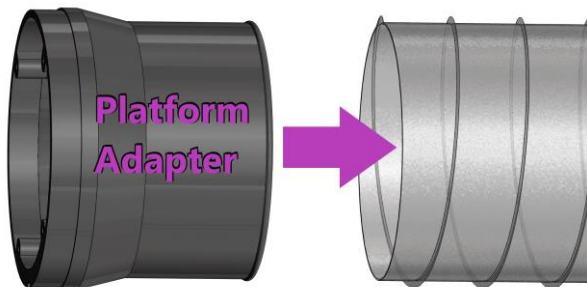
Toe Kick Option

1. Slide the port tube with band clamps over the Sub1 output and the end of the transition cone.
2. Position the band clamps over each end of the port tube and tighten the band clamps.

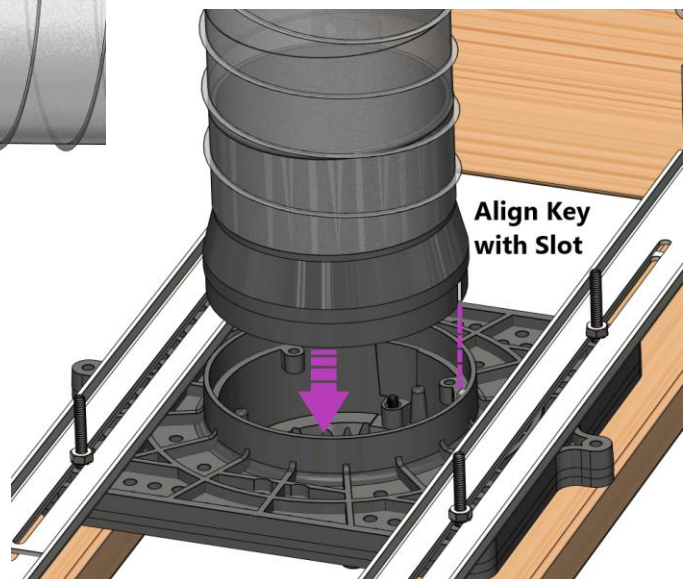


Solid Surface and Gypsum Options

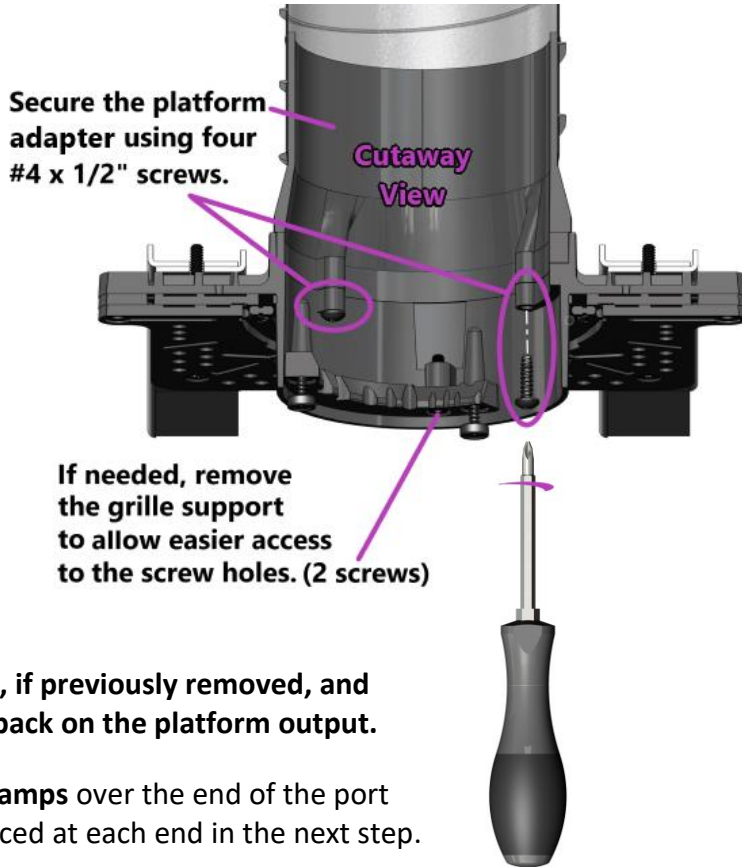
1. Slide the platform adapter into one end of the port tube. Note, the adapter fits tight and will require some effort to slide it into the port tube. If the temperature is cold, warming the port tube will make assembly easier.



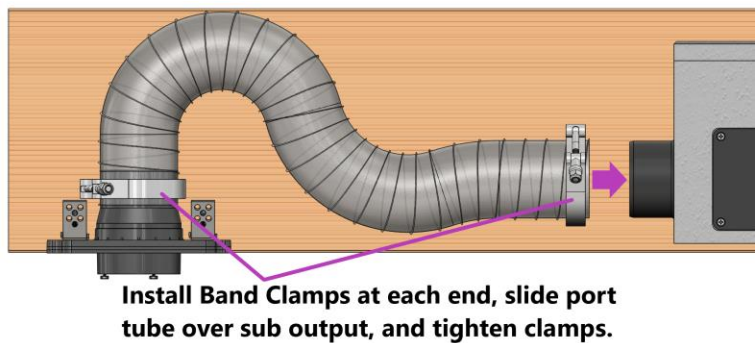
2. Insert the platform adapter into the top of the mounting platform, aligning the slot in the adapter with the key in the platform.



3. Remove the paint shield and save for reinstallation later. Install the four **#4 x 1/2"** screws that were supplied with the Sub1 using a **#1 Phillips screwdriver**. If you don't feel you have clear access to the screw heads, you can temporarily remove the grille support which is held in place with two socket head Allen screws. (A **7/64"** hex wrench is required.)



4. Reinstall grille support, if previously removed, and place the paint shield back on the platform output.
5. Slide two steel **Band Clamps** over the end of the port tube. These will be placed at each end in the next step.
6. Slide the port tube over the subwoofer output, position the band clamps at each end, and tighten them securely.



NOTE: Remove all temporary supports and ensure all hardware is tightened, including the band clamps, since these items may not be accessible after the drywall is finished. The remainder of the installation will take place when the ceiling surface is installed.

Crossover and Amplifier Recommendations

The SUB1 subwoofer is optimized for use with the ICS3 speakers, with a bass-management crossover of 120Hz 4th order Linkwitz–Riley, and with a high-pass filter of 30hz 4th order Linkwitz-Riley. The SUB1 in-ceiling Minimal Appearance subwoofer is designed to work seamlessly with the ICS3 when used with a Wisdom Audio DSP amplifier capable of implementing the correct crossover filters.

We recommend using a high-performance Wisdom Audio DSP amplifier or comparable with between 100-300 watts per channel.

Care and Maintenance

To remove dust from the front of your Sub1, 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 Sub1 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.

WARNING: 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
- **Impedance:** 8 ohms
- **Sensitivity:** 85dB SPL (2.83V @ 1m)
- **Recommended Amplifier Power:** 100 Watts
- **Maximum Amplifier Power:** 300 Watts
- **Dimensions HxWxD:*** 7.9" x 10.5" x 19.25" (20.1cm x 26.7cm x 48.9cm)
- **Port Tube Length:** 3" x 24" (7.6cm x 61.0cm)
- **Recommended High Pass Crossover:** 30Hz 24dB Linkwitz–Riley
- **Recommended Low Pass Crossover:** 120Hz 24dB Linkwitz–Riley

*Designed to fit within minimum 2"x 8" (50mm x 200mm) ceiling/floor joists between 12"– 24" (305mm – 610mm) OC.

<u>Subwoofer Component</u>	<u>Weight lbs / (kg)</u>	<u>Shipping Weight lbs / (kg)</u>
SUB1 Speaker enclosure assembly	23 / (10.5)	N/A
SUB1 w/included accessories (Port, Clamps, etc.)	25.4 / (11.5)	30 / (13.6)
SUB1 1/2" Gyp 3" & 4" Round/Square Grille	7.5 / (3.4)	10 / (4.5)
SUB1 5/8" Gyp 3" & 4" Round/Square Grille	9.1 / (4.1)	11.6 / (5.3)
Toe Kick Assembled SUB1	7.2 / (3.3)	8.6 / (3.9)

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

Wisdom Audio

1572 College Parkway, Suite 164

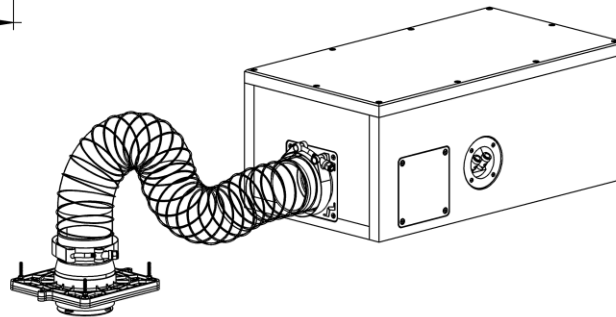
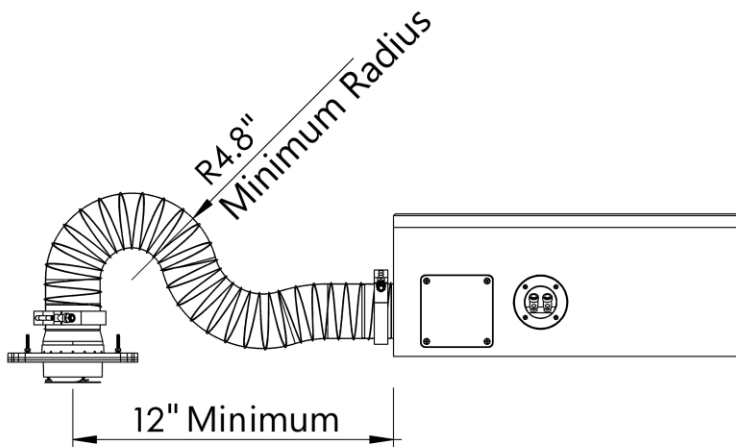
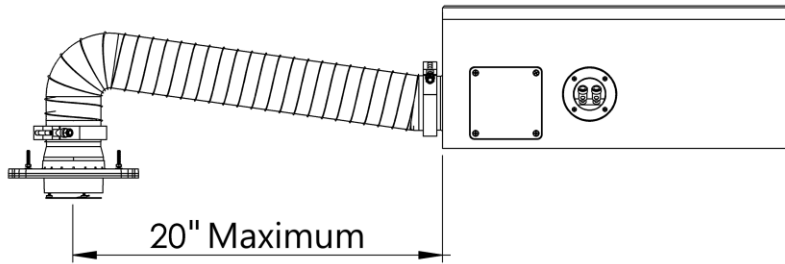
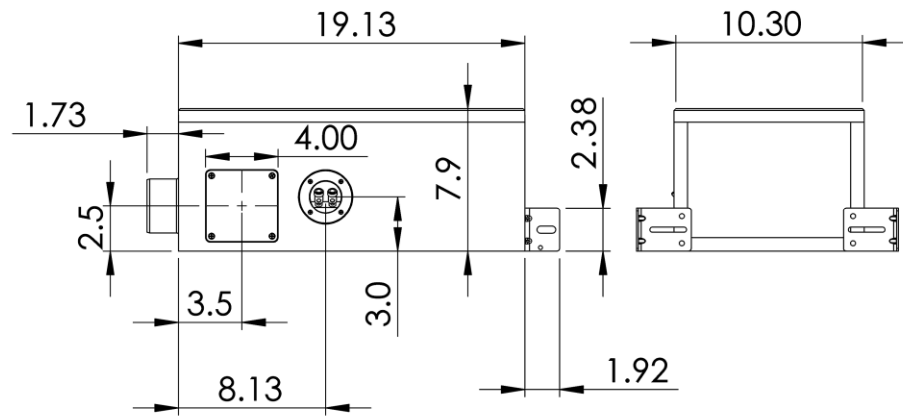
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Sub1 Dimensions



All Dimensions in Inches



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