



# **Installation Manual**

**F/C Kit** – for S55, and S90 Subwoofers

## Installation of F/C Kit

The S55 & S90 can also be installed above the ceiling, or under the floor, or in an adjacent room, assuming you have suitable attic or crawl space access.

The S55 & S90 should be supported or suspended in a manner that does not subject it to twisting or torsional forces that would stress the enclosure. No wooden or metal enclosure should be forced against an irregular surface. If the studs are appreciably curved or warped in an installation, the installer must insert shims between the S55 & S90 front panel and the stud surfaces to avoid such stresses, as would be the case for any in-wall loudspeaker.

All the following photos are illustrative of how the speakers would be installed in an attic space, venting into the room below. (Installing it in the floor is similar, although you might want to replace the HVAC grille with a grate specifically designed for floor registers.) Note that while the photos are of the Wisdom Audio S90, the process is the same for the S55.

### 1) Check your hardware kit to ensure it is complete

The parts required for in-ceiling mounting include:

- Ceiling flange assembly
- S55/S90 flange assembly
- Two band clamps
- HVAC grille (which optionally can be replaced with one that matches the other grilles used in the home)
- The “Bass Snorkel” (an airtight, rigid, expanding tube that bridges the gap between the S55/S90 and the ceiling/floor/wall)
- #8 dry-wall screws



### Important Tip for Best Performance:

Try keeping the Extension Tube as straight and as short as possible for the best performance. The more turns and or longer length will reduce the performance and tuning of the S55/S90 Subwoofer. In addition, make sure your fabric or grille that covers the opening of the Mounting Plate for the Wall has an openness of 60%+ or the subwoofer will chuff and under perform.

## **Important Note on the Proceeding Pages:**

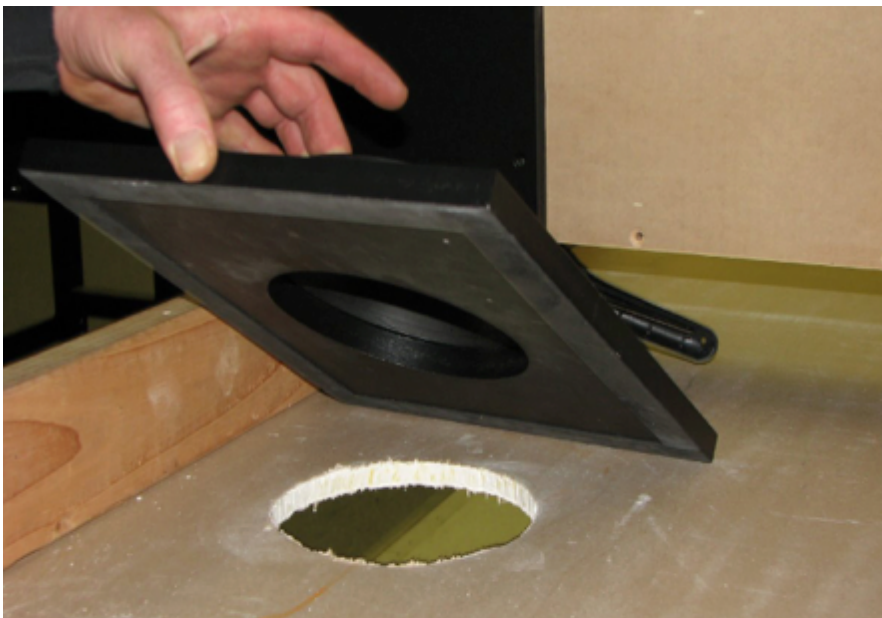
The extension tube/snorkel picture(s) used in the next pages is of the older metal tube. We have since upgraded the tube/snorkel with a new more robust heavy plastic tube/snorkel that reduces chuff and improves performance.

### **Installation of F/C Kit (Continued)**

- 2) Place the ceiling flange assembly in the intended mounting location, and use it as a template for marking the vent into the room. Cut the drywall with a keyhole saw or similar tool.



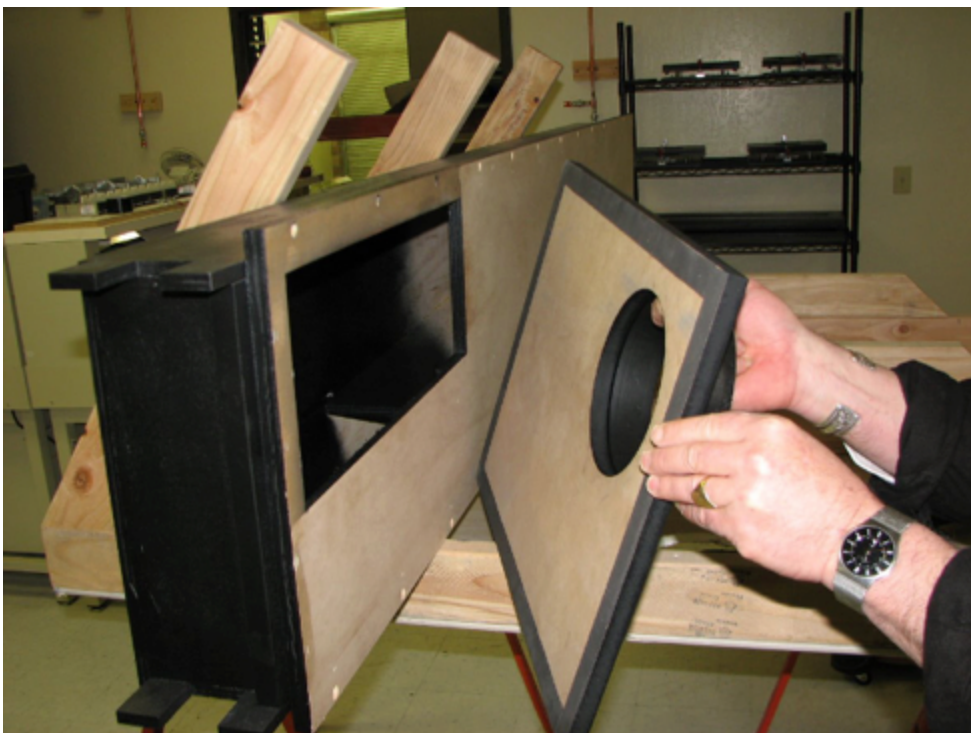
- 3) Screw the ceiling flange in its location.



## Installation of F/C Kit (Continued)

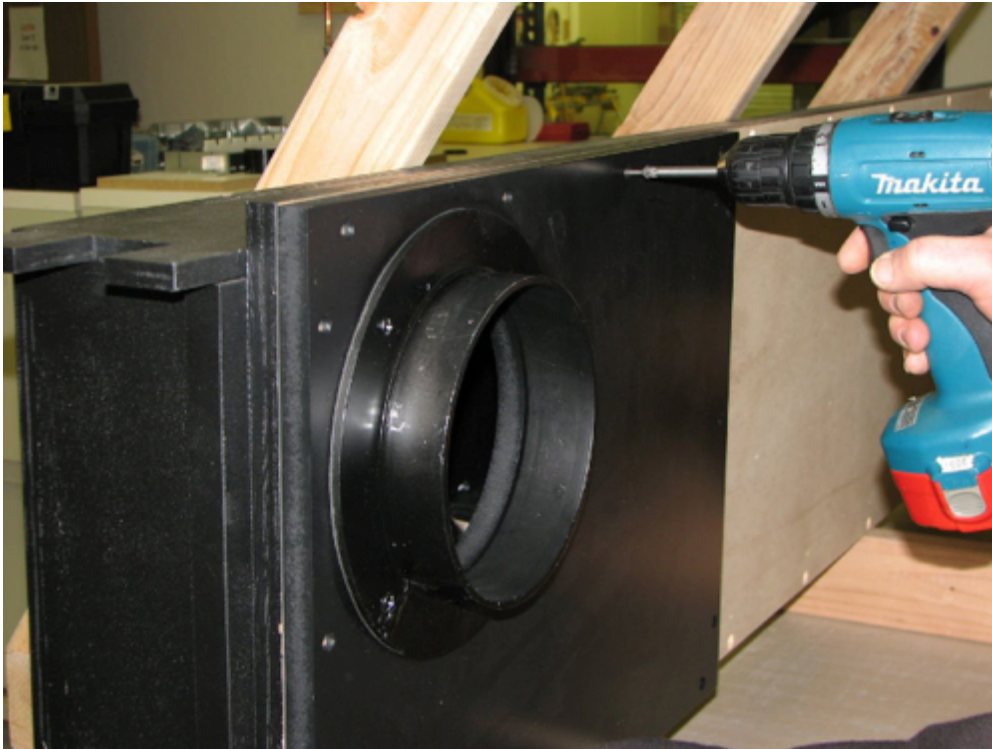


- 4) Align the S55/S90 flange plate on the S55/S90, flush with the corner of the enclosure, and screw into place.





Take care to ensure that there are no air leaks around the edges of the flange assembly. You want all the low frequency energy transferred through the “snorkel” into the room.



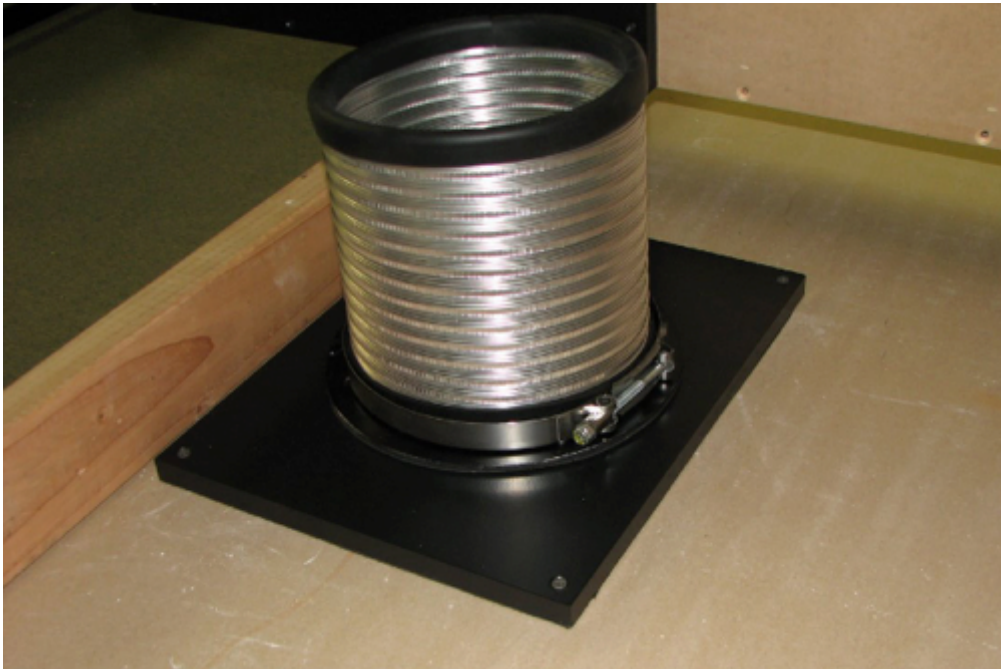
5) Place the expanding aluminum “snorkel” on the ceiling flange and cinch it in place using one of the band clamps.



The snorkel expands over a fairly wide range. It should be lengthened until it is slightly taller than is needed for the joists in your installation. If your attic has joists that are smaller than 2" x 8", you may need to trim the aluminum to a more suitable length using a utility knife.

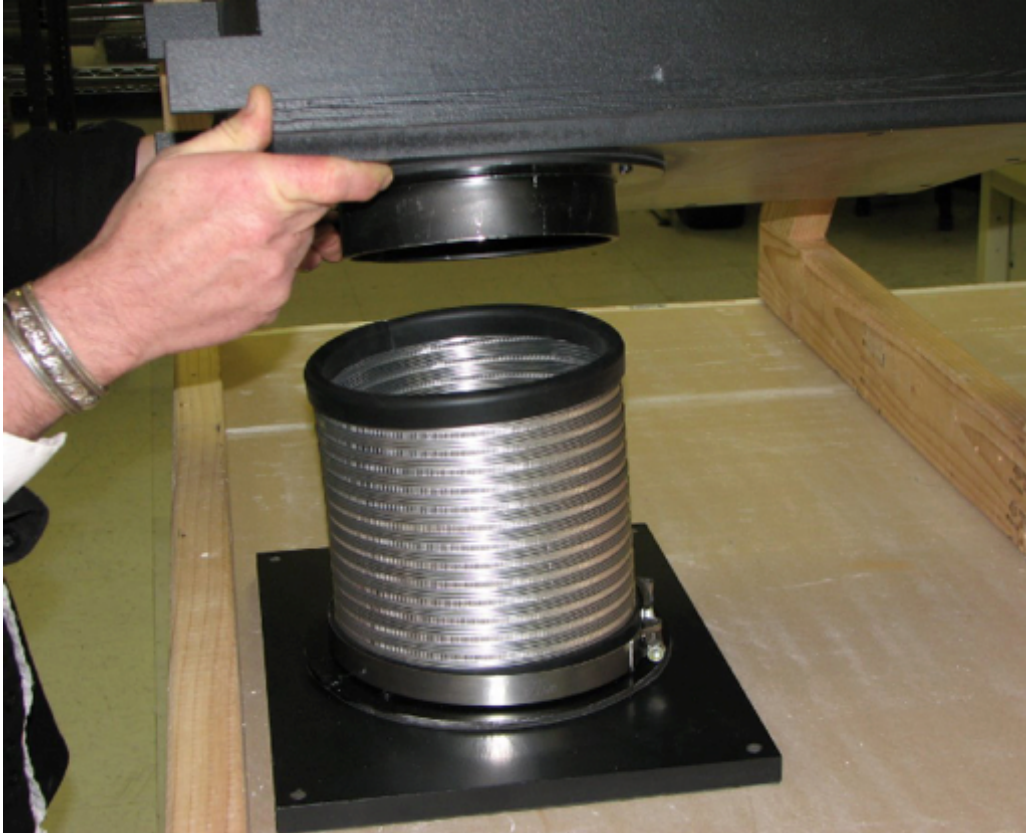
**CAUTION!**

Be certain that the snorkel can be compressed somewhat before proceeding to the next step. Once it is fully compressed, any further pressure placed on it will be transferred directly to the ceiling.

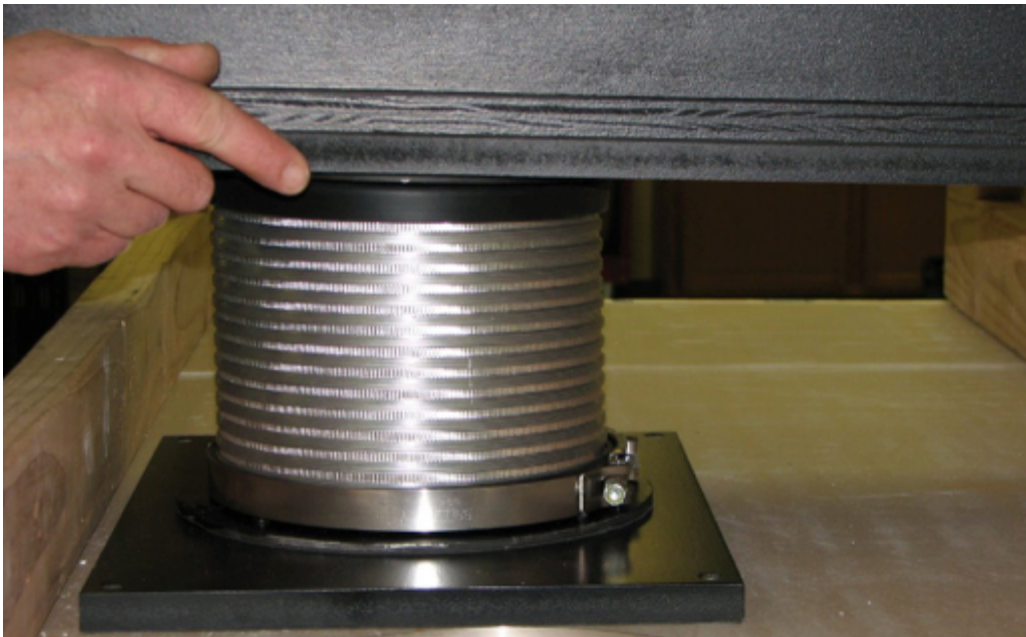


## Installation of F/C Kit (Continued)

- 6) Move the S55/S90 into place above the snorkel, and gently place its flange into the snorkel.

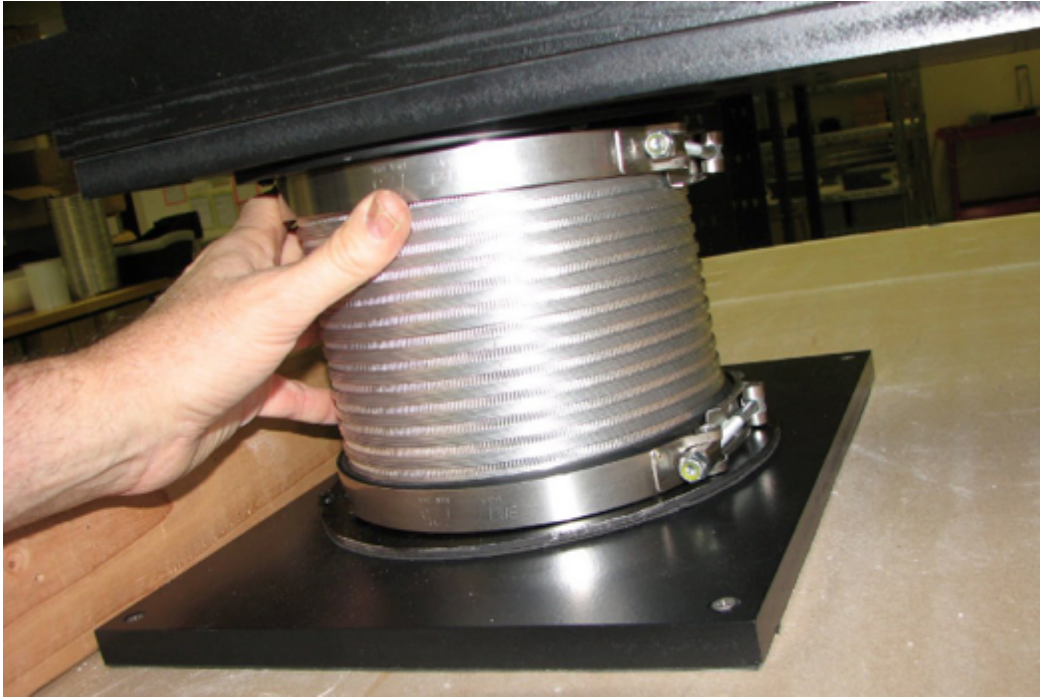


Test fit the S55/S90 assembly to the snorkel and ceiling flange. The snorkel should extend to the back edge of both flanges.





7) Install the second band clamp on the S55/S90 flange.





## Installation of F/C Kit (Continued)

Screw *only* through the wooden flange that extends around the edge of the face of the S55/S90. Fasteners should not be driven into the S55/S90 elsewhere, as there are locations in which doing so could cause permanent damage and/or compromise its performance.

- 8) **Finally, attach the HVAC grille by screwing it in place. The screws used on this grille will extend into the ceiling flange's wooden plate, making an extremely secure cover.**



## Tips and Ideas

It is impossible to cover every possible installation application of this versatile product. But here are a couple ideas to get you thinking.

### **Black out the HVAC and snorkel**

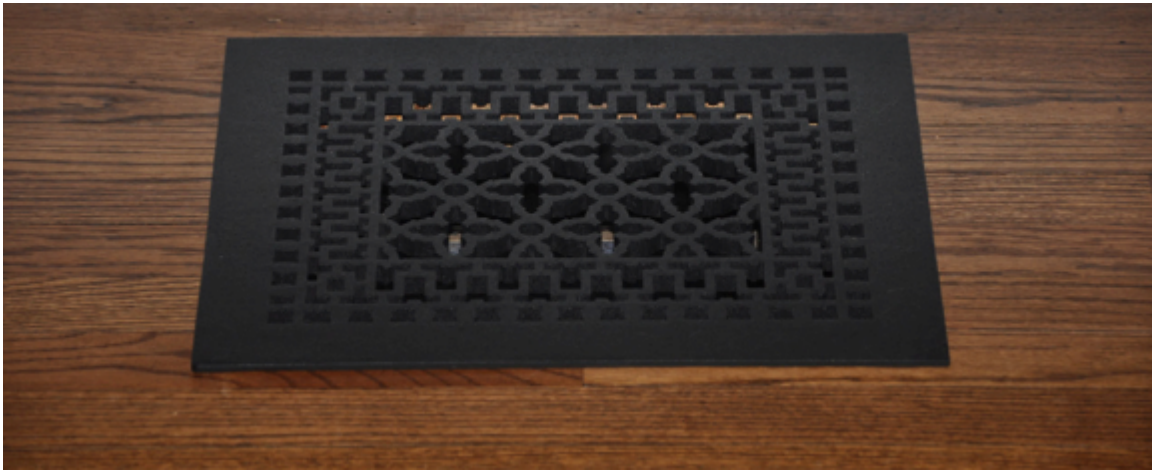
- Cut a cardboard mask just slightly smaller than your HVAC grille (either the one supplied, or your customer's preferred grille design). Use it to paint the area around the vent black.
- In the process, paint the inside of the aluminum duct black as well. Several light coats will work better than trying to do everything in one heavy coat.
- Install the HVAC grille over the blackened area.
- You may want to pad the inside edges of the grille with foam weather stripping to minimize any possibility of a rattle developing over time.



## Tips and Ideas *(Continued)*

### **Installing under the floor**

The same basic process can be used to install an S55/S90 in a basement or crawl space, venting the low frequencies up through the floor. In this case, you should replace the standard HVAC grille with a heavier grate that is designed to withstand traffic. As example is shown below.



One important characteristic of any replacement HVAC grille or grate you may elect to use for aesthetic reasons: many such grille have adjustable louvres to direct the flow of air. These should be either removed or frozen in place with liberal amounts of glue in order to avoid rattles. A lot of air will be flowing through these grilles, in both directions. Anything that can rattle, will rattle.

The grate shown above was purchased from  
<http://www.signaturehardware.com/hardware/registers.html>

It is made of cast iron, has ample open area to avoid turbulence and noise, and has no air flow control louvres to rattle.



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