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 **Amp, Sub and Dynamat Install (Long post/heavy-pic warning)**

This is a long read, but I wanted to detail my rationale for the equipment I chose and why I chose it. I also wanted to create a thread that might be helpful to those looking to install a sub and amp in their S550.

The Shaker 9-speaker system sounds pretty good for a stock system and most folks are probably pretty happy with it. But, it's missing real low-end. Without a true sub, there's just no thump. Personally, I think Ford missed the boat with the upgraded Shaker system by not including a sub. I decided to remedy the situation and add one myself.

Ford double-missed the boat by not even providing the wiring (power and signal) for a sub on S550s that did not come with a sub from the factory. I knew I was going to have to run a power wire up to the battery and find a signal to feed the amp. With the rear speakers right there in the trunk and the wiring harness nice and exposed it was a no-brainer to use a line output converter (LOC) to provide a preamp-level signal for the amp.

I wanted the installation to be as clean and hidden as possible. Didn't want to just bolt the amp to the sub box and have all that wiring exposed. Single-channel amps are small these days and as I don't have a spare tire, there would be plenty of room in the spare tire well for the amp. I did want to keep my inflator kit and room for jumper cables, so the amp had to be small but still full-featured.

I have the tools and experience to build a sub box and have built probably two dozen or so for myself and to sell over the past 20 years. But this time was different.

For the sub box itself, I didn't want a big box taking up the entire trunk (been there, done that) and blocking access to the spare tire well. Nor did I want the headache of securing said box so it didn't slide around. I wanted something that would fit in the dead space behind the tail lights on either side of the trunk.

I started doing some research and quickly found I had two choices; a JL Audio Stealthbox or an Audio Designs stealthbox-like enclosure. I've used JL subs in the past and loved them, but I'd never used a Stealthbox. The Audio Designs boxes look good enough, but I wasn't going to use whatever brand of sub they sell with their boxes b/c I've never heard of that brand. I didn't want to run the risk of whatever driver I buy not fitting the cutout of their box, either. So, though it's expensive, I went with the JL Audio SB-F-MUSCPE/12TW3 Stealthbox. Box guaranteed to fit the space in the trunk and a driver guaranteed to work with the enclosure. Peace of mind isn't cheap but it's a good feeling.

I knew I'd have to pull the panels in the trunk to run the wiring properly, so I figured it would be a great time to Dynamat the trunk. Not only does a lower noise floor make any stereo sound better, but I was hoping it would also tame the road noise the low-profile tires generate.

Here's a list of equipment I installed. Needless to say, I used a ton of zip ties, zip tie bases and various tools as well.

5 sheets of Dynamat Xtreme Bulk pack (9-sheet kit...didn't want to run out)
<http://www.dynamat.com/dynamat-xtreme-bulk-pak/>

PAC SNI-35 Variable Line Output Converter <https://www.amazon.com/PAC-SNI-35-Va...tput+converter>

JL Audio SB-F-MUSCPE/12TW3 Stealthbox <http://www.jludio.com/car-audio-ste...ng-coupe-15-up>

JL Audio XD600/av2 monoblock sub amp <http://www.jludio.com/xd600-1v2-car...plifiers-98604>

JL Audio XD-PCS4-1B installation kit <http://www.jludio.com/xd-pcs4-1b-ca...ion-kits-90355>

DB Link AGUFH1 AGU Fuse Holder (b/c the fuse holder that came with JL kit was too tall for where I wanted to install it)

<https://www.amazon.com/gp/product/B0...?ie=UTF8&psc=1>

DB Link 80—amp AGU fuse <https://www.amazon.com/gp/product/B0...?ie=UTF8&psc=1>

And a pair of old RCA cables I had lying around.

Onto the install. Removed all the trunk panels; very easy but there is a hidden plastic plug right next to the rear seatbelt mounts on either side. That was the only tricky part.

Most people connect their ground wire to the bolt in-between the rear seats but I found a more convenient location; the spare tire hold down bracket. It has two 8mm threaded holes. The one on the right is used to hold down the inflator kit but the one on the left was unused. A wire wheel in the cordless drill makes quick work of the paint. After it was nice and shiny I wiped it down with Acetone.



Mockup of the ground wire attached.



Cut out some of the Styrofoam on the inflator hold down block to fit over the ground wire.



It still fits fine. I also cut the "wings" off the top edge of the Styrofoam block. Stock, it's sort of shaped like a "Y".



I prepped the metal surfaces for the Dynamat by wiping everything down with Acetone. This ensures the Dynamat sticks and stays stuck.





No pics of the Dynamat install in-progress; you can Youtube that. Basically, you cut strips to fit the various locations and make cuts in the material to go around corners and odd shapes. It's not as easy as it looks. Very time-consuming and messy (you will go through lots of disposable nitrile gloves).

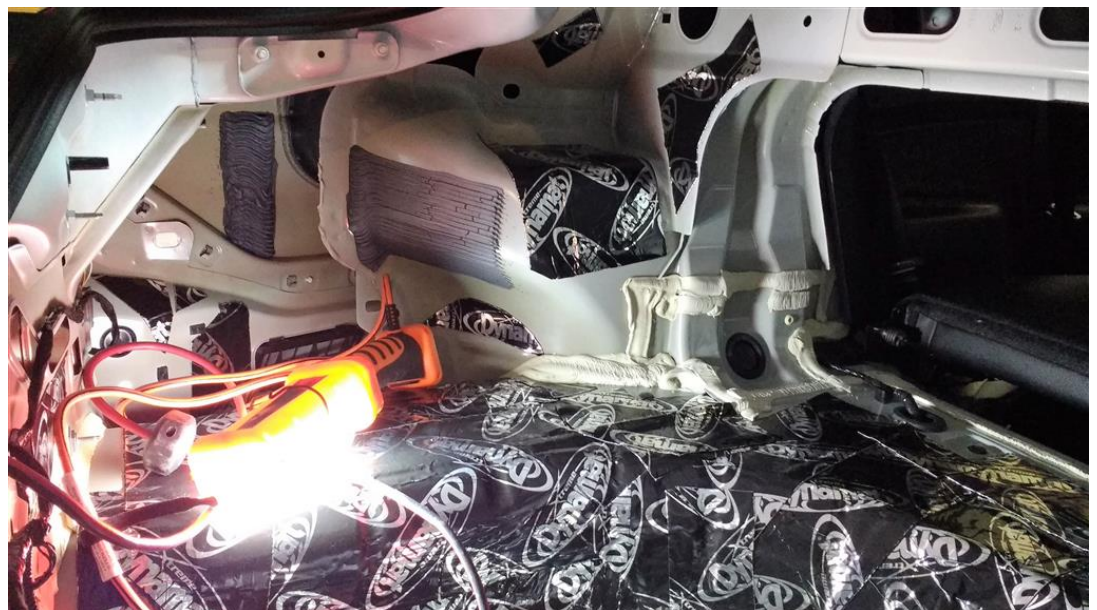
Essentially, I covered everything in the trunk except any grommets or all that bulky seam sealer.



Ground wire installed in this pic.



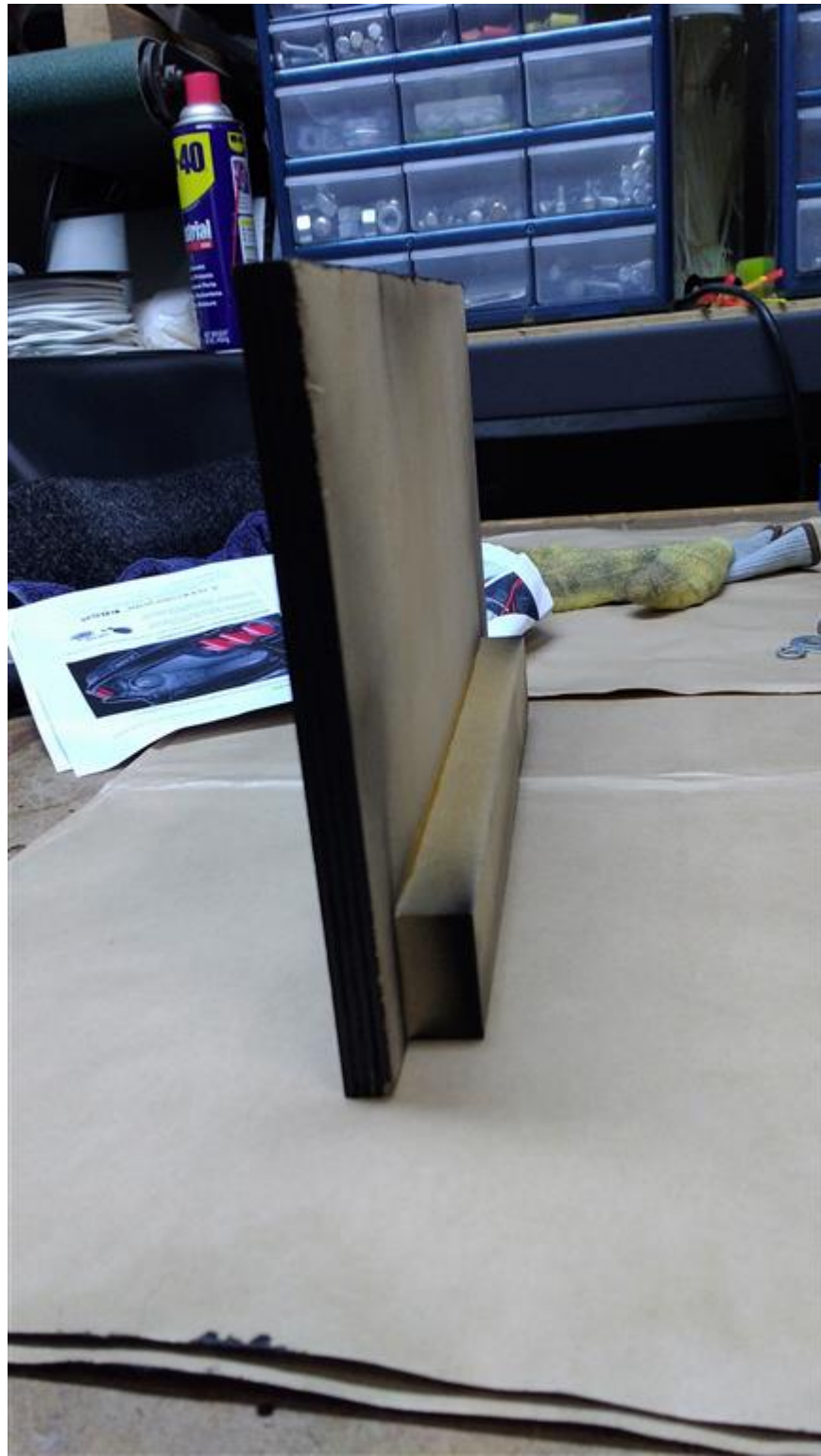
Smaller pieces of Dynamat installed where I thought they would help.





I never attach an amp directly to a metal surface; I always use a board. Cut a piece of $\frac{1}{2}$ " plywood to the size I needed, glued a strip of $\frac{3}{4}$ " MDF to the back in order to make the board sit level in the spare tire well and spray painted it flat black.







Amp mounted to the board. I used the industrial-strength Velcro in the picture to secure the board to the spare tire well.



Now for the signal and power wiring. Used wiretaps to connect the LOC to the rear speakers.



Connected the RCA cables to the LOC and - ran them over the right side of the car. Later, when putting the trunk panels back I made sure to route the RCA cables away from the power wire.

Now it was time to run the power wire from the battery to the trunk. Notice in this pic the ground wire is disconnected from the battery. This should be the **FIRST** thing you do when doing any type of electrical work on the car.



As most folks do, I ran the power wire on the passenger side, through the grommet hidden under the fender liner. Remove the front wheel, remove 98 of the 100 little plastic fasteners (not that many but it's a lot!) and you have this.



And there's the grommet.



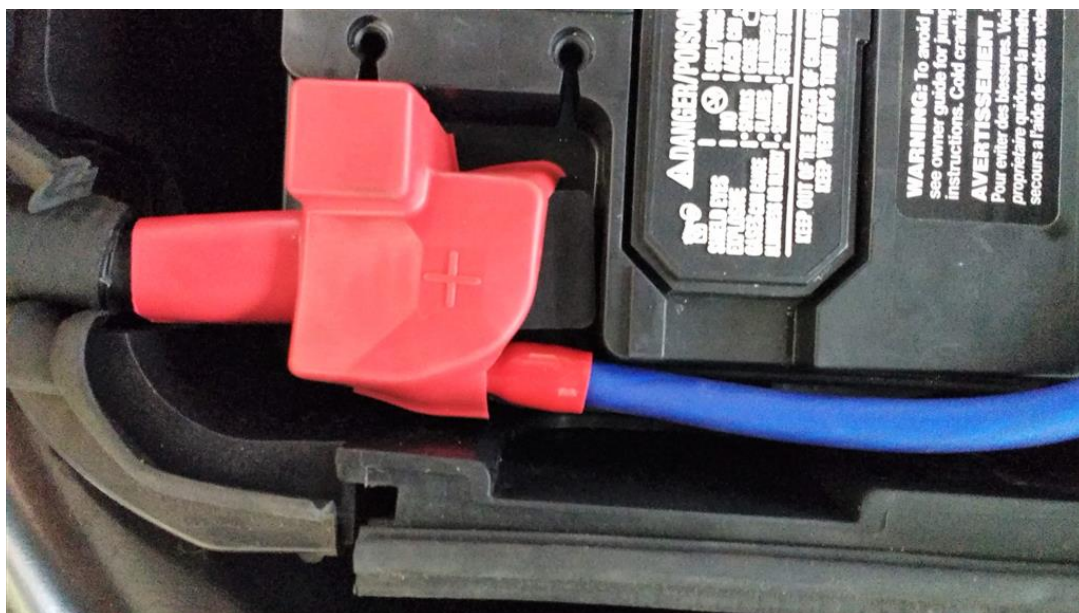
Bottom, center of the pic are the two holes I used to run the power wire from the battery to the grommet and into the car.



I attached the power wire to the positive battery terminal like this. By the way, you have to disassemble the battery terminal to do this. I found out the hard way that there are two little metal wedge-shaped pieces that make the terminal "clamp". And those little piece will fall out, down into the engine bay when you unscrew it all. This is why this part of the install took two hours...finally found all the parts.



Terminal cover still covers everything, just like stock.



Fuse holder wired up.



Used 1/2" wire loom to protect the power wire. Fuse holder fits nicely inside the battery box. You can see how the wire runs from the terminal, down the holder, back up and out of the battery box, underneath the positive cable.



Wire goes down into the fender.



Battery cover covers everything. Can't even see there's a power wire installed.



Wire comes down through the fender and into the grommet. I gooped on some black silicone where the wire goes into the grommet as an extra measure against water leaking in. There were two holes in that bracket which made for a convenient way to secure the wire from moving around. Note the zip tie base for added routing support.



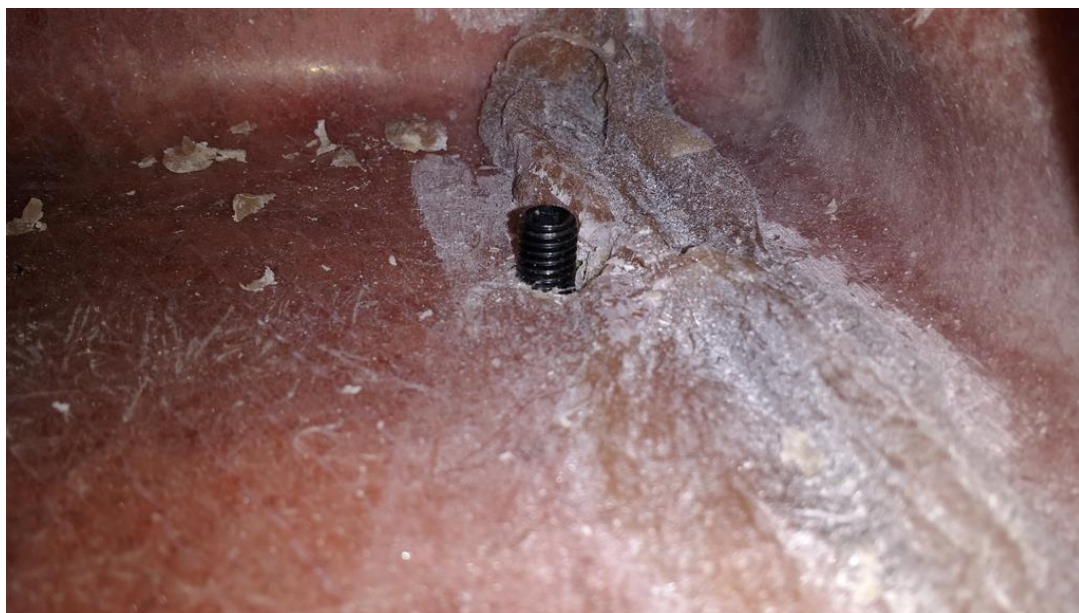
At this point, I was about 10 hours into the install and very tired, so I forgot to take pics of routing the power wire through the car. Basically, I pulled off the passenger kick panel and fuse box cover and the passenger side sill plate and ran the wire to the back of the car.

Time to install the Stealthbox. This took me about 5 hours, total and was the most difficult part of this entire installation. Though JL gives great instructions with plenty of pictures, it was not easy. It is very difficult getting the bolts to line up with the holes on the enclosure, especially the single bolt on the right, upper side of the enclosure. The Stealthbox uses the factory subwoofer mounting points which are present in the body of the vehicle, regardless of the whether or not your car came from the factory with a sub. Here are the

instructions for the Stealthbox.

<http://mediacd.jludio.com/media/mf...pdf?1478208742>

I found the magic trick was removing that rear bolt and threading it in from inside the box. Wish I would've figured that out waaay sooner in the process. As an added "gotcha", JL was a bit sloppy on the QC with this Stealthbox. It might be hard to see in these pics, but there is a bunch of excess fiberglass resin around the mounting holes which prevented the washers and bolts used to secure the box from seating properly. I had to use a Dremel and a grinding bit to grind the resin down. This added an hour to the process. I got mad not only at JL but at myself for not noticing this until I was installing it. I had to remove it from the car to do the grinding.



Got the box installed, replaced the trunk panels, hooked wires to the amp, tidied up the wiring and here's the end result. I left slack in the wires on purpose, so I can move the amp around if I ever decide to get a spare tire.



With the inflator kit and my jumper cables.



All buttoned-up. No exposed wiring at all and I still have a fully-usable trunk.



I am very happy with how it all turned out. I'm still playing around with the gain on the amp but think I've got it where it needs to be. As you know, all songs are recorded differently, so while one song may have the perfect amount of bass, another will be overwhelming and another, not enough. Pretty sure I've found a happy medium setting. I did buy the remote gain control but decided not to install it as running that cable would've meant taking apart the entire interior. As that cable has phone plugs on the ends, and is very thin and flexible, you can't just shove it behind/underneath trim panels like you can with 4-gauge cable. I can live without it.

Though this is 12" sub with 600w behind it, it's not a dual-12" ported box with 600w behind it. It's a 12" in a small, sealed box. Definitely more on the SQ side of things vs. the Funk in Trunk from 300 yards away side of things, if you know what I mean. 😊 And that's exactly what I was going for. Some real thump in the cabin without being obnoxious outside the car, and taking up the whole trunk in the process.

The Dynamat also is a home run. After adding a Borla Touring catback exhaust, the noise in the cabin definitely went up. While not unbearable, I do have a 2-hour round trip commute every day, and do a lot of business on speakerphone while driving, so quieting things down inside was a goal. Worked like a charm. Highly recommend Dynamat Xtreme.

Thanks for reading and I hope this thread is useful to someone looking to install a sub in their S550.



Mods: FORD PERF Power Pack 2/FP Hi-flow air filter/Strut Tower/K-Brace/FP by Borla Touring Cat-Back * STEEDA Prog springs/Pro-action shocks/F-R sways/camber plates/billet rear shock mounts/TPS bushing supports/vert

Last edited by mikes2017gt; 03-19-2017 at 09:00 PM. Reason: Added results

user: offline



quote



Thanks

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