



Stage One Speaker Upgrade Installation Instructions for BMW 3 Series / M3 Convertible '95-'99 (E36) with Standard Audio (Hi-Fi)



Want an easier install? Watch our videos!

This is a supplement for the installation videos that you will find on our website (www.bavsound.com). Head to "Help > Installation Info."

There are details we go over in the installation videos that cannot possibly be covered as effectively through the written word. This guide is meant to help you in the garage. We still suggest taking your computer/tablet/phone to the car with you and streaming the videos to make sure everything goes off without a hitch. Now, let's get started!

What you'll need to complete the installation:

- **BAVSOUND Tool Kit** (or some variety thereof - the video highlights the tools needed for this particular installation) - <http://www.bavsound.com/product/414/361/BAVSOUND-Interior-Disassembly-Tool-Kit/>
- **Wire strippers** (sharp scissors will also work)
- **Wire crimpers**
- **Heat gun or hair dryer** (to dry your hair - only kidding - to heat up sound deadening for better pliability)
- **Tunes in the garage** (your choice)

Before you Begin

- **Please review and familiarize yourself completely with these instructions before starting work on your vehicle!**
- **Install all your speakers before you audition the Stage One.** Installing one speaker and then listening to the system to “see if it sounds better” is like putting one high performance shock on your car and taking it for a test drive. Feel free to test to make sure the connections were properly made after installing each speaker, but beyond that, keep the process moving along and audition it once all speakers have been installed.
- **Ensure that your bass and treble settings are set to their default middle positions before installing your new speaker upgrade.** Once you’ve installed your Stage One, you can reset the bass and treble settings to taste. Keep in mind that we generally recommend keeping them both very close to center as large adjustments introduce distortion into the audio signal and will lower performance of your system.
- **Perform the installation one door at a time.** Since there are many small parts that you’ll remove when completing the project, limiting the work you’re doing to one door will prevent you from confusing which parts go with what door.
- **Where reinstallation / installation details are omitted, remember that they’re essentially the reverse of the removal process outlined below.**
- **Variations occasionally occur,** so if anything seems out of line with what is contained in the pages that follow, don’t hesitate to contact us.

Ready? Let’s get started!

Part 1: Front Speakers

Front Door Panel Removal

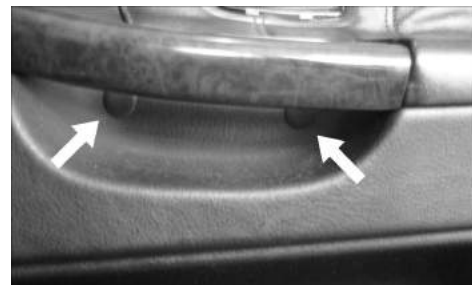
IMPORTANT: Begin on the DRIVER's side door.

1. If your vehicle is equipped with side airbags ("airbag" plug found on the door panel), carefully pop the airbag plug out using your panel tool.



2. This will reveal a Torx T20 bolt. Remove it.

3. Now, look behind the door grip-handle and you will see two plastic inserts. Remove these using your panel removal tool. There will be two more Torx T20 bolts here. Remove these.



4. Locate the chrome or plastic door handle and notice the plastic shroud surrounding it. Remove this by sliding the piece forward towards the front of the vehicle.



5. You'll now want to start prying around the outside edges of the door panel using a specific panel removal tool. **We recommend starting on the underside of the panel towards the front of the car.** The panel is lined around its outer perimeter with a series of plastic clips.



Z3 shown for reference only

6. Continue around the perimeter using your hands and pull the door panel towards you. Make sure that you get the panel tool behind the pockets and that you pry outward from there.

IMPORTANT: DO NOT pull on the two door pockets as you may damage them.



Z3 shown for reference only

7. Once the panel is free, unplug the two speakers and window control switch on driver's door. Now place the door panel aside, being careful not to scratch or drop it.

8. Repeat steps 1-7 with the passenger door.

IMPORTANT: The front passenger door is slightly different than the driver's. The only difference is that you need to remove one extra screw located behind the black plastic cover on the door handle, shown at right.



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Tweeter Installation (Smaller speaker)

1. First, let's remove both the tweeter and the midrange. To do this, unscrew the plastic ring (twist counter-clockwise) on the backside of the door panel that secures the front portion of the speaker assembly to the panel.



2. Using a small pick included in your toolkit, pry out the four tabs along the outer perimeter of the tweeter housing, then remove the tweeter.



IMPORTANT: The plastic surrounding the outer edge mentioned above is notoriously brittle. Try your best not to handle the speaker assembly by this outer edge. Now may also be the time to repair the ring(s) if any cracking has previously occurred.

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3. With the factory tweeter removed, we'll just drop the new tweeter into the factory housing.

NOTE: The new tweeter is "keyed" to the factory housing. Align the tweeter with the key as shown, but do not push downward without the assistance of the white PVC.



5. Now, remove the PVC insertion tool and confirm operation of the tweeter by plugging it in and briefly turning on your radio. For reference, the colors on the wires in the factory plugs are as follows:

Driver Tweeter:
Positive: Yellow/Black Stripe
Negative: Yellow/Brown Stripe

Passenger Tweeter:
Positive: Blue/Black Stripe
Negative: Blue/Brown Stripe

7. Place a dab or two of the included adhesive to secure the tweeter in place, then reinstall the tweeter housing into the door panel.

Midrange Installation

IMPORTANT: The plastic surrounding the outer edge mentioned above is notoriously brittle. Try your best not to handle the speaker assembly by this outer edge. Now may also be the time to repair the ring(s) if any cracking has previously occurred.

(Harman Kardon midrange housing shown for reference)

1. Notice the two pairs of tabs attached to the plastic plate with the speaker plug attached to it toward the rear of the assembly. You'll need to pry them inward and upward to free the speaker housed inside of the assembly.



2. There are two more opposing tabs located closer to the front of the assembly. Pry these tabs outward, and the speaker will be free at this point.

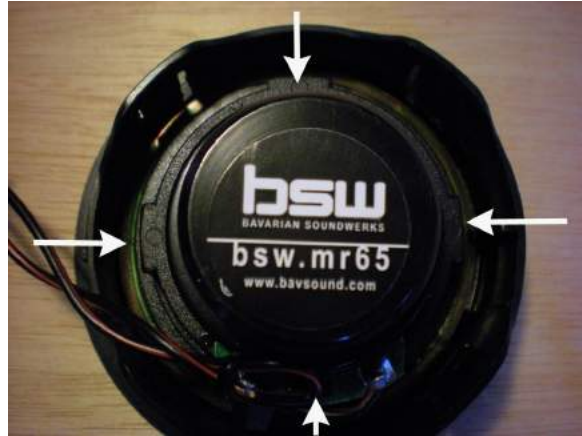


3. After removing the factory midrange, push the tabs that secured the speaker on the front of the assembly back into place, and drop the new midrange directly into the assembly with the speaker facing outward (through the grille).



7. Place a dab of the included adhesive at the 4 points shown at right. If you are not using the bracket described in steps 1-3,

BE SURE to align the dabs of glue with the “legs” of the speaker frame and be **CAREFUL** to avoid getting glue on the speaker cone.



8. Place the front portion the assembly back through the door panel, and screw the ring back into place, securing the assembly.

9. Plug the midrange and all other plugs back into the factory connectors, and reinstall the door panel. **Repeat with opposite door.**

Front Kick Panel Speaker Installation/Removal

Driver's Side

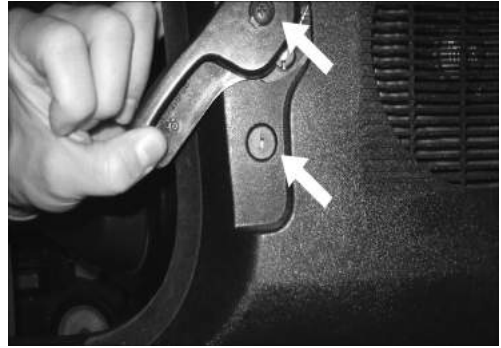
1. First remove the lower dash panel by removing the two Phillips screws located just below the gauge cluster. They are located behind plastic inserts. These have fallen out of most of your cars by now, so more likely than not, you will just see a couple of screws in these areas.



2. There are also two more exposed Phillips head screws on the underside of this panel. Remove those, and firmly but gently pull the panel outward towards you. Disconnect the OBD connector, and move on.



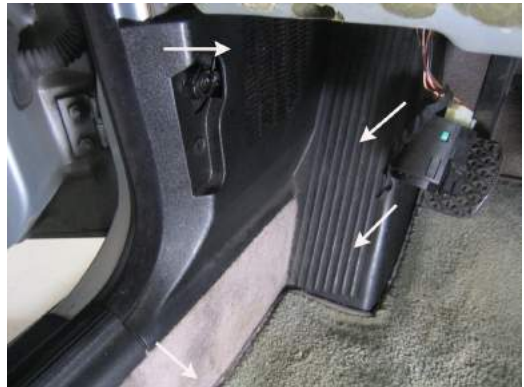
3. Now locate the hood release. It is secured by a Phillips head screw directly in the center of the pivot area. It is located behind a plastic insert. Remove this with your pick tool. Now remove the Phillips screw.



4. Pull the handle towards you. This will reveal another plastic flat head screw. Turn it ¼ turn in either direction.

WARNING: CLOSE YOUR HOOD!

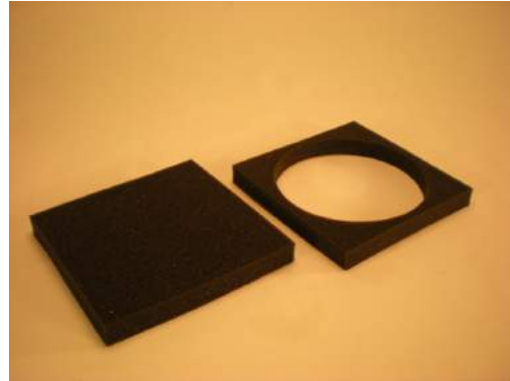
5. Now the kick panel should be freed up. Pull outward towards the inside of the car and towards you at the same. Be very deliberate with your force -- slow and firm is best. Don't yank or force the panel, as the plastic BMW uses is notorious for being very brittle.



6. Remove the speaker by unscrewing the four 8mm bolts and disconnect the wires.



7. We now want to apply the included foam gasket. Simply pop out the middle of the square, and remove the adhesive backing from the outer perimeter of the square.



8. Apply it to the front of the new Bavsound midbass as shown.



9. Wire your new speakers just like factory: the larger terminal is positive, and the smaller terminal is negative. Just match these to the factory spade connectors which are also configured in the same way.



TIP: If your factory wires have been damaged or cut in any way, just remember that the wire with the BROWN stripe is negative.

10. Install the new speaker.

11. Make sure the speaker works by briefly turning on your radio before reinstalling all panels.

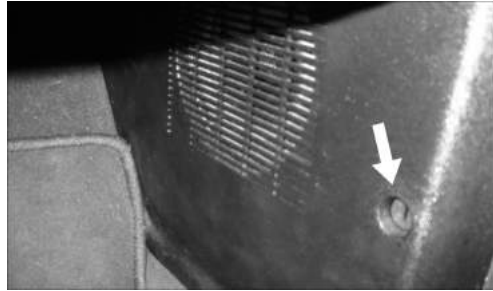
12. Reinstall all the original panels.



(Gasket not shown)

Passenger Side:

1. Notice the single indentation towards the front (closest to you) of the kick panel. Inside here is a plastic flat head screw that will need to be turned $\frac{1}{4}$ turn in either direction to release it.



2. Remove the under dash panel by removing the two Phillips head screws that secure it in place, and pulling towards you.

3. You can now pop the kick panel outward towards the inside of the vehicle.

4. Repeat steps 6-12 from the driver's side.

Part 2: Rear Speakers

1. We'll start by removing the panel that covers the rear speakers. This is removed by simply sliding the panel forward towards the front of the car.

TIP: You may need to pull the gasket out of the way to do so (second photo at right).



2. Remove the entire rear speaker housing by removing the four Philips head screws that attach it to the chassis. Take the housing to your workspace, and let's get the party started!



3. Pry the factory tweeter out of its housing in a manner similar to the front tweeters.

4. Center the new Bavsound tweeter over the factory hole, and attach the new tweeter using a few dabs of the included adhesive. **Let cure for at least 30 minutes before reinstalling.**

5. Connect the new tweeter by stripping back 1/4" of insulation from the BMW wires, and inserting the exposed copper into the open end of the butt connector attached to the new Bavsound tweeters. Using a pair of wire crimpers, crimp down and secure the connection.

IMPORTANT: Connect according to the chart below. There are several possible variations of wire colors in these vehicles. Use the one that matches your vehicle.

Original Tweeters	BAVSOUND Tweeters
Positive: Green, Yellow, Blue	Positive: Black with White Stripe
Negative: Grey, Brown	Negative: Black

6. Pry out the factory midrange driver. Using your metal panel removal tool, carefully pry out the midrange from the front side of the speaker.

7. Once removed, apply the included gasket tape around the outer perimeter of the speaker cutout, and then, using a drill, attach the new speaker using the supplied 4 screws.



(Older model speakers shown for reference only)

8. Wire the new midbass according to the chart below.

Original Midbasses	BAVSOUND Midbasses
Positive: Yellow/Grey Stripe -OR- Blue/Violet Stripe	Positive: Larger Terminal
Negative: Yellow/Black Stripe -OR- Blue/Grey Stripe	Negative: Smaller Terminal

7. Reinstall your panels, and repeat with opposite side.

HALLELUJAH!

You've now completed your BAVSOUND Stage One Speaker Upgrade!

Head up front, put on your favorite album, and go for a drive.

Enjoy your new BAVSOUND system!

Love your new Stage One? Let us know!

Tweet us [@bavsound](https://twitter.com/bavsound) with hashtag #StageOne
or #bavsound and tell us what you think!

Troubleshooting

If you're experiencing an issue with your new speakers, please carefully read through this guide, as it covers almost any issue that you are likely to encounter. (If the guide doesn't resolve these issues for you, please feel free to contact us - www.bavsound.com).

ISSUE #1: No Sound from Speaker

One of three things is most likely happening, and they are listed in order of most common occurrence along with how to correct them:

Possible Cause 1: The wiring on the plug-n-play connector is misaligned.

Step 1. Check for alignment of wires from their factory plug through the BAVSOUND connector. Do they line up (see below)?

Step 2a. If the connections line up, go ahead and plug the factory speaker back in to confirm operation. If the factory speaker works, and the wires in the plug are aligned, the speaker is defective. We need to get you a new speaker!

Step 2b. If the connections don't line up, you'll need to move them so polarity is correct and the positions are correct. On our wires, the Red Stripe is positive, while the solid black is negative, while on the BMW side of the plug that following holds true:

- Black Stripes, Red Stripes, White Stripes, Purple Stripes are Positive.
- Solid wires are negative, as are wires with Brown Stripes or Grey Stripes.

Possible Cause 2: The speaker connections are being shorted out.

Check to make sure that no speaker terminal is touching metal. This can cause the speaker to not function, as it is effectively grounded (shorted) out (most common in midbass speakers).

If you find that this was the case, place electrical tape over the terminals to prevent future mishaps. If the entire system has no sound after the installation of

new speakers, we almost know for sure that there is a speaker whose terminals are grounded out. Let's check by disconnecting each speaker until the music comes back on and we've isolated the problem speaker.

Possible Cause 3: The amplifier may be broken.

If there was a speaker or location in your system which didn't play before installing the Stage One, this is probably the issue.

If this was the case, and you were trying to fix the problem by purchasing new speakers, we may need to look at the factory amplifier, as it is most likely the culprit.

Is the entire side (left front, right rear, right front, left rear) not working, or is it a particular speaker that was not working? Most likely it was a single speaker.

If an entire side is not working, make sure, especially on the tweeters that you just installed, that neither the positive or negative terminals are touching metal. This can contribute to an entire side (channel) not working properly.

ISSUE #2: Distorted Sound coming from new Speaker

1. **Where are the bass/treble settings on the radio/EQ?** Flatten out the settings to ensure no pre-amp distortion is the cause of the problem. If you're using the radio to test the speakers, go ahead and use a CD or directly connected iPod instead.
2. **Are speaker terminals touching ground (metal)?** Where is the distortion coming from? A single speaker, an entire side (channel), or the entire system? Its best at this point to go back and disconnect each speaker until the distortion goes away. The most likely culprits are the front tweeters.
3. **Was the factory speaker distorted as well?** If a single speaker was distorting, the most likely culprit is the amplifier. We may need to explore replacing/repairing your factory amplifier.

ISSUE #3: Lack of Bass Response

A common occurrence when a mid bass speaker is wired “out of phase”. This means that the positive (+) and negative (-) are backwards on the plug and play connections.

Here we’ll want to check alignment of the connectors as they come together between the speaker and the factory plugs. The lack of bass response generally is due to one speaker being out of phase and the other speaker(s) being in phase.

The easy fix is checking these connections to make sure that positives go to positive and negatives go to negatives. Basically, double check your wiring on each speaker. If one speaker is out of phase, the bass response of the entire vehicle can be compromised.

ISSUE #4: Too Much Treble, Harshness, or Brightness

Where are the bass/treble settings on the radio/EQ? Go ahead and flatten out the settings to ensure no pre-amp distortion is the cause of the problem. If you’re using the radio to test the speakers, try using a CD or directly connected iPhone or iPod instead.

ISSUE #5: Missing Product(s)

If you feel that a product or accessory is missing, let’s check a few things before we send out replacements. It’ll save everyone a lot of time!

1. **Please check to make sure that nothing has gone unnoticed in the packaging.** If you’re calling from your office and don’t have access to the package, please bring the package to the office the next day so that we can go over with you exactly what was supposed to be in the packages that we shipped out to you. Sometimes our shipping department uses filler boxes in packages to ensure that your products aren’t damaged in shipping, and often times those boxes are mistaken for missing products.
2. **If indeed a product is missing, firstly please accept our apologies.** We try our best to ensure that all orders are filled as they should be, but we’re only human. Please contact us (www.bavsound.com) and we’ll get it resolved for you shortly!

