



## Stage One Speaker Upgrade Installation Instructions for BMW 3 Series / M3 Coupe '00-'06 (E46)



**Want an easier install? Watch our videos first!**

This is a supplement for the installation videos that you will find on our website ([www.bavsound.com](http://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/>
- Optional: **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.
- **Installation is 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 Doors

## Front Door Panel Removal:

**1.** Start by rolling down the windows on all of the doors. This will decrease the chance of scratching the glass or tint on the window.

**2.** Starting with the passenger door, locate the door handle/armrest that runs the length of the door. You will see three indentions along the underside of this panel (See photos below).



There will be one towards the front of the door near the top of the handle, one at the bottom of the handle, and one more towards the rear. These three bolts are Torx T20.



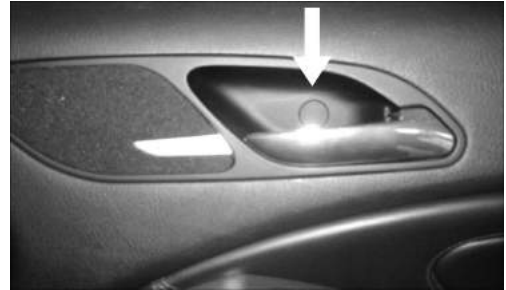
**3.** Remove them by turning them counter clockwise, and placing them in a safe place where you won't lose them.

**4.** Locate the airbag plug towards the rear center of the door panel. Remove this using your panel popper. Pry from the top and bottom very carefully. This will reveal another Torx T20.

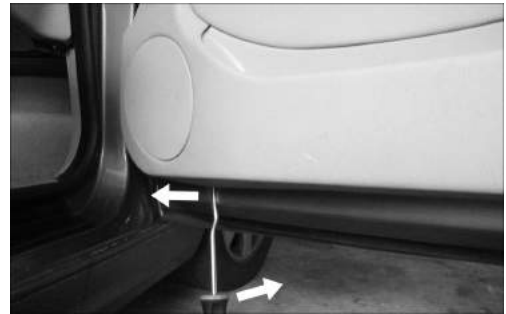


**5.** You will also need to pop out the side mirror control switch in the driver's door. Remove it using a small flat head screwdriver, lifting upward from the rear of the switch, and unplug. This may also be done when the door panel is off by using your finger to push it out from the inside.

**6.** Now, look behind the chrome door handle, and you will see a small plastic black circle (above right photo). Remove this with the straight pick, and you will see another Torx T20. Remove this.



**7.** Carefully insert your panel removal tool on the front side bottom edge as shown. Pry steadily outward until you hear the clip(s) release themselves.



**8.** Now, using your hands, as this will decrease the chances of anything becoming scratched; continue pulling outward around the outer edges of the door. Leave the top part intact, as we will remove this section lastly.



**9.** Carefully pull outward and upward from the rear of the door along the top edge to fully release the panel.



**10.** Be careful of the lock mechanism because the door can be released now, but you aren't quite finished. You have to unhook the door handle itself. Simply lift the white clip away from the door panel, and pull it out of the mechanism



**11.** Unplug the speaker wires from each speaker and the panel can now be removed.

### **Front Midbass (165mm / 6.25" Driver) Removal and Installation:**

**1.** First, notice that the larger speaker in the lower panel is attached using three Phillips head screws. (See below) These can also be Torx T20 or T27 bolts. Remove these, and place them with the other Torx bolts which you have already put aside in a safe place. (You have, haven't you? ;)



**2.** Reattach the new midbass driver to the door panel using the original factory hardware. If your factory speaker had a foam baffle around it, remove it and reuse it on the new Bavsound midbass driver.



(We'll handle the wiring when we reinstall the panel).

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## Tweeter/Midrange Assembly Removal/Installation:

1. You'll first want to remove the entire tweeter/midrange assembly by removing the three Torx T20 screws that attach it to the door panel. Once removed, again place the screws somewhere safe so as not to lose them.



2. You'll simply reattach the new midrange/tweeter housing into place using the factory hardware that was removed from the factory speaker housing.

**IMPORTANT!** The Stage One speaker upgrade uses the 4 pin connector. The 2 pin connector found on the assembly can be ignored.



Now let's take the door panel back over to the vehicle and make our final wiring connections with the midbass drivers!

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## Wiring and Door Panel Reinstallation

**1.** In order to make the wiring connections on the new midbass drivers, we're going to use the existing factory plugs. We're just going to slide the terminals on the end of the wiring attached to your new speaker into the factory plugs that you removed from the factory speakers.



**2.** Connect the midbass drivers as follows:

Driver Door:

Factory Connector		BAVSOUND Speaker Leads
Blue w/White Stripe (+)	Connects to	Red
Blue w/Brown Stripe (-)		Black

Passenger Door:

Factory Connector		BAVSOUND Speaker Leads
Blue w/Red Stripe (+)	Connects to	Red
Blue w/Brown Stripe (-)		Black

- 3.** Reconnect the tweeters and midranges to the original connectors.
- 4.** Reinstall the door panel (reverse of removal) and repeat with the other side.

## Part 2: Rear Deck & Side Panels

### Rear Deck Speaker Removal:

NOTE: There are two types of rear speaker housings in the E46 Coupe. If your car differs from below in that the speaker grille does not have the tie downs as part of their housings, you'll simply pop the grille upward using either your fingers or a panel removal tool.

**1.** First, remove the plastic covering from around the outer two baby seat attachment bolts by prying upward.



**2.** This will reveal a 13mm bolt. Remove this using your socket wrench



**3.** Carefully pry upward on the rear of the speaker grilles. Once released, with your fingers follow the outside edges and continue pulling upward.





4. This will reveal the rear speaker and the (3) 8mm bolts that secure it in place Remove these three bolts using an 8mm socket wrench. Remove the speaker carefully, being sure to unplug the speaker wire.



5. Simply slide the terminals attached to the new speaker into the existing factory plugs in the same way as the front speakers.

Driver's Side:

Factory Connector		BAVSOUND Speaker Leads
Yellow (+)	Connects to	Red
Brown (-)		Black

Passenger's Side:

Factory Connector		BAVSOUND Speaker Leads
Yellow (+)	Connects to	Red
Brown (-)		Black

6. Reinstall your BAVSOUND rear deck speakers will mount the same way as the factory speakers. Simply bolt the new speakers in using the factory hardware.

**IMPORTANT!** It may be necessary to remove the rubber rings from around the magnets in order for the midbass to drop into the rear deck housing. Simply pull with your fingers to remove the "rings."

## Rear Side Panel Speaker Removal / Reinstallation:

**1.** First, you will need to remove the lower portion of the back seat. Lift upward on either side off the front edge, dislodging the front latches, and then pull towards the front of the vehicle. The seat may be a little tight during removal, but keep working it carefully until you can remove it from the vehicle entirely.



**2.** Now, look on the underside of the armrests on the side panels and you will see two holes. There are Torx T20 bolts in here. Remove these and place them in a safe place. These have also been seen as 8mm bolts.



**3.** You will now remove the sill trim along the front edge of the side panel using either your hands or panel removal tool.

But don't remove too much! Just enough to release the panel you are removing.



(As opposed to removing the entire side panel, we instruct on just doing enough to accomplish the mission at hand!)



**4.** Carefully pry the panel out just enough to expose the rear of the midrange assembly. You will see that the midrange is attached to the side panel. Using your fingers, turn the assembly counter clockwise and release the midrange assembly from the panel. Unplug it, and proceed.



**5.** Remove the factory midrange/tweeter from the side panel by unscrewing the back ring from the speaker assembly and freeing up the speaker to be removed from the rear side of the panel.

**6.** Now we'll need to pry out the factory speaker. Start at the two small indentions as shown below and work your way around the speaker.



**7.** It should pop free fairly easily, leaving just the ring shown below.



**8.** Drop the new midrange into the ring and place a few dabs of the included adhesive around the speaker securing it to the ring. Let the adhesive cure for at least an hour before reinstalling.

**NOTE:** Some Stage One kits may include a metal clip which may be used instead of adhesive.



**9.** Reattach the new speaker to the panel in the same manner in which you removed it.

**10.** Plug the speaker back into its factory plug and reinstall the side panel as you removed it.

# KABOOM!

**You've now completed your BAVSOUND Stage One Speaker Upgrade!**  
Head up front, put on your favorite album, and go for a drive.

And most importantly, enjoy your new BAVSOUND system!

# 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](http://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](http://www.bavsound.com)) and we’ll get it resolved for you shortly!