

## Stage 1 Audio Upgrade (BMW Speakers) Installation Instructions for BMW 3 Series, M3 Coupe '00-'06 (E46)

If your Stage 1 packaging does not contain the exact speakers that you see to the right, please do not proceed with the installation until you have spoken with a BSW representative.

Your Stage 1 contains:  
(4) 3 prong Midbass Drivers  
(2) Front Midrange/Tweeter plates  
(2) Rear Midrange Drivers

You should have a total of ten (10) speakers in your Stage 1.



### Tools Required:

(All the below are readily available at your local auto parts store)

- Phillips Head Screwdriver
- Panel Removal Tool
- Torx T20 screwdriver
- Small, Straight Pick Tool
- 8mm Socket Wrench
- 13mm Socket Wrench
- Hot Glue Gun w/Glue Sticks (Rear Midranges)
- Brain
- Hair Dryer or Heat Gun (Optional Sound deadening installation)

### Before you Begin

- **Please review and familiarize yourself completely with these instructions before starting work on your vehicle!**
- **Insure 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 1, 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. Take a quick listen to confirm that the speakers are

functional, **but wait until all of the speakers are installed for a complete audition.** Installing the speakers into one door and comparing them to the rest of the factory speakers will not yield the desired results of the upgrade.

## The Process

As each customer's installation is unique, it is important to remember that installation is essentially the reverse of the removal process outlined below, though you will need a certain level of personal ingenuity and certain tools outlined above. 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.

**Note that there is also a supplemental video installation guide available on our website covering the front door speaker installation process.** [www.bavsound.com](http://www.bavsound.com) – Head over to the E46 Coupe product listing on the website and click on the blue "Videos" tab above the main image.

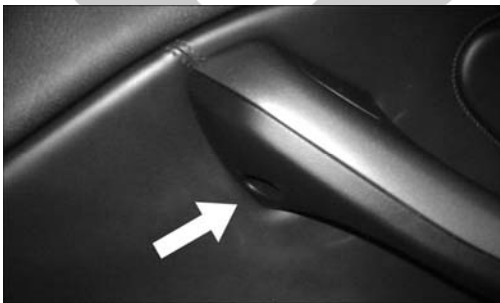
**If you experience any issues with your installation, please consult the troubleshooting guide located at the rear of this installation packet.**

We're going to proceed as follows:

1. **Front Door Speakers**
2. **Rear Deck Speakers**
3. **Rear Side Panel Midranges**

## Front Door Removal:

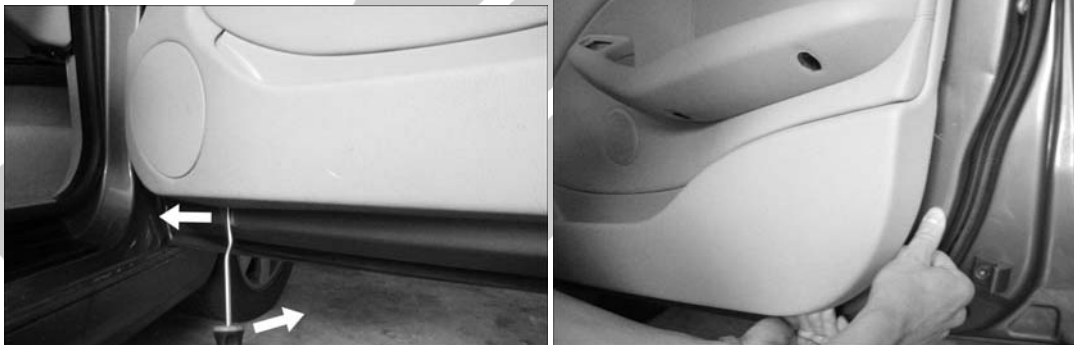
1. Start by rolling down the windows on all of the doors. This will decrease the chance of scratching the glass or tint on the window.
2. Orient yourself with the door. Read these instructions fully before beginning the installation process. This will again ensure proper planning and that the process goes as smoothly as possible.
3. You're now ready to begin. 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. 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.



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 Installation:

With the door panel now removed, carefully place it down on your workspace so that you will not scratch or damage it in any way. We're first going to remove the factory midbass speaker, then proceed on to the midrange/tweeter plate.

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.



Reattach the new BSW 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 BSW midbass driver.

## Tweeter/Midrange Assembly Removal/Installation:

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.

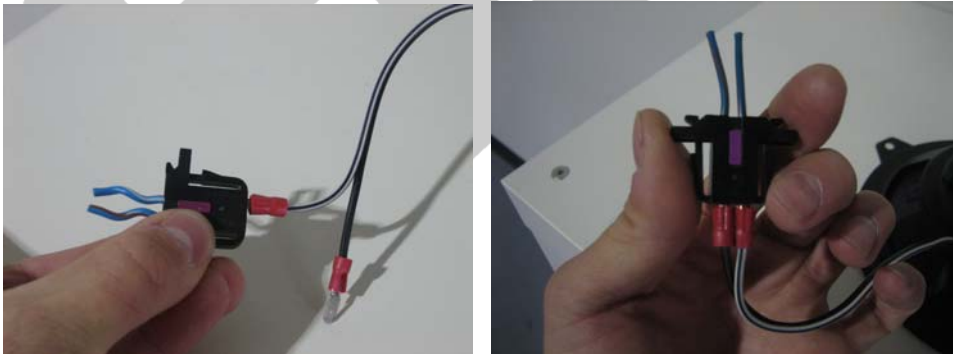


Simply reattach the new midrange/tweeter housing into place using the factory hardware that was removed from the factory speaker housing.

With the new speakers installed, let's take the panel back to the car and plug everything back in. **Pay careful attention to the next section regarding the front midbass connections.**

## Front Midbass Wiring Connections:

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. Here are a few photos to illustrate the process:



### Driver Door

Blue w/White Stripe (+)	Connects to	Red
Blue w/Brown Stripe (-)		Black

### Passenger Door

Blue w/Red Stripe (+)	Connects to	Red
Blue w/Brown Stripe (-)		Black

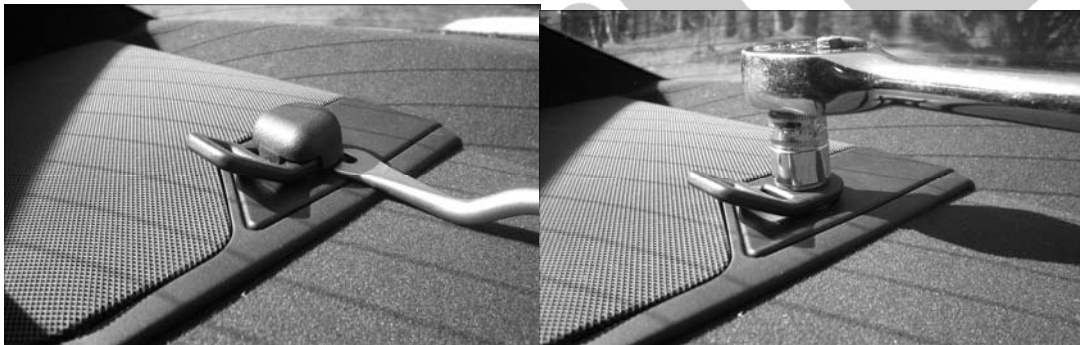
With the midbass speaker properly connected, you can now plug the rest of the connectors exactly as you removed them. It's easiest to connect the door handles first before you attempt to connect the midrange/tweeter plates and window control switch (driver's door).

Pay careful attention when reinstalling the front door panel. Patience exercise here will make your job that much easier. **Be sure and check all clip alignment before you attempt to push the panel back into place.**

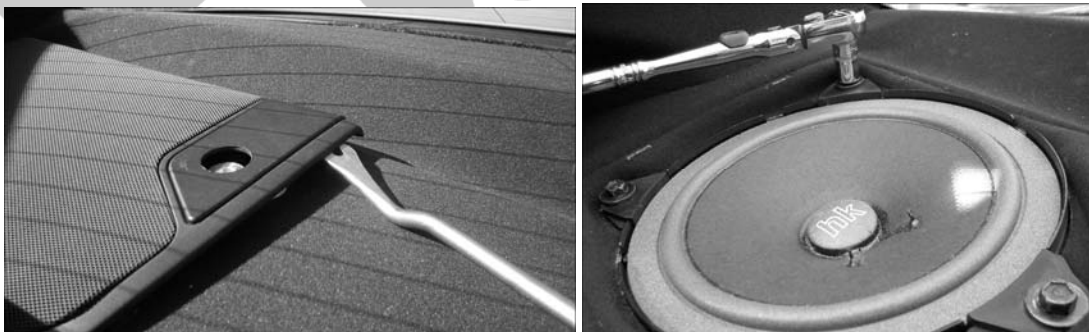
## Rear Deck Speaker Removal:

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



2. Carefully pry upward on the rear of the speaker grilles. With your fingers, follow the outside edges and continue pulling upward.



3. 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.

## Rear Deck Midbass Installation:

The BSW rear deck speakers will mount the same way as the factory speakers.

**-Please note that in some instances, it is necessary to remove the rubber ring surrounding the magnet of the speaker so that the new midbass driver will sit properly in the housing.** You will immediately know if this is the case as your speaker will not just drop right into the opening. This is no way compromises the performance of the speaker. It is purely aesthetic.

Simply bolt the new speakers in using the factory hardware. The wiring will be performed in the same way as the front speakers. Simply slide the terminals attached to the new speaker into the existing factory plugs as outlined below.

### Driver Side

Yellow (+)	Connects to	Red
Brown (-)		Black

### Passenger Side

Blue (+)	Connects to	Red
Brown (-)		Black

## Rear Side Panel Removal:

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. As opposed to removing the entire side panel, we suggest just doing enough to accomplish the mission at hand. 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.

You will see a visual representation of the process on the following pages.



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 tweeter from the panel. Unplug it, and proceed



## Rear Midrange Installation:

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



Once removed, simply drop the new midrange into the ring and place a bead of hot glue around the speaker securing it to the ring. See photo on next page.



With the new speaker attached to the ring, **reattach the new speaker to the panel in the same manner in which you removed it.** Plug the speaker back into its factory plug and reinstall the side panel exactly as you removed it.

### Side Panel Reinstallation

This can be tricky if you try and force or rush the process. Once the midrange is secured to the panel and plugged in (remember to quickly check to make sure the speaker is playing before you put the panel all the way back into place), you'll want to take notice as to how the panel lines up with the lines of the car. **There are several fasteners on the backside of this panel that must line up exactly in order for the panel to properly sit back in its place.**

It only takes a second to perform this process if you've lined everything up correctly, so if you're having trouble, step back and take another look at the alignment of the panel.

## Stage 1 Speaker Upgrade Troubleshooting Guide:

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 issue cannot be resolved, please call us at (404) 963.8857 for further support.

Here are the most common issues we've experienced:

- **No sound from speaker (s)**
- **Distorted sound from speaker (s)**
- **Lack of Bass response**
- **Physically defective speaker (broken or damaged during shipping, no sound)**
- **Missing product**

Let's address each bullet point:

- **No Sound from Speaker:**

One of three things is most likely happening, and they are listed in order of most common occurrence:

1. Wiring on plug-n-play connector is misaligned.

Here we want to check for alignment of wires from their factory plug through the BSW connector.

**Do they line up?** If so, was the factory speaker working prior to replacing the speaker?

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!

**If not, let us guide you to the proper connections.** Remember, 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.

2. 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. This is very common, especially in E46 vehicles front mid bass installations.

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 the most likely culprits, (E46 mid bass drivers) by disconnecting each speaker until the music comes back on and we've isolated the problem speaker.

3. The Factory Speaker did not work either. 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, left 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.

- **Distorted Sound coming from new Speaker**

Again, a few things come to mind:

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. Speaker terminals may be 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 culprit is the E46 front midbass connections.
  3. The factory speaker was 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.
- **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.
  - **A speaker is physically defective, as in defective from shipping or directly from the manufacturer.**

There is only one solution here:

    1. We will be happy to get a replacement speaker out to you. We'll need to bill you for the replacement speaker, and once the defective speaker arrives back to us, we will gladly issue a refund. Once you get the new speaker, please keep us posted on the results, as want to make sure that everything is sounding as it should.
  - **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 notify us immediately of the missing product, and we will the appropriate pieces out to you that same business day, provided FedEx hasn't already come for the day. We want you to get your new equipment installed as quickly as possible, so we'll make sure you have it in an expedited fashion once we've been made aware of the problem.