



BMW E46 M3 convertible AVIN Avant-2 Front Facing Camera Installation Guide



The e46 convertible is a work of automotive art even as the design has aged since its release. It is a real advantage to be able to integrate current technology into the car with a minimum of trouble, and an OEM look.

Assumptions:

The example used for this DIY is a 2004 BMW M3 convertible with an [Avin Avant-2](#) double DIN stereo deck installed. In addition, since this is a convertible there may be some differences if you use this guide to install into a coupe or other but similar model.

Goal:

Install the front facing camera as easily as possible, and also with minimal possible disruption to the OEM look of the car. I don't want some camera that stands out or looks terrible and obvious.

Disclaimer:

This process worked for me beautifully but that doesn't mean it will automatically do so for you. Work slowly and carefully, don't force anything and don't rush. For roughly an hour of total of time, you can save a significant amount on install costs and have pride in upgrading your car. When in doubt, stop, step back and ask for help if something isn't working.

Lastly... do yourself a favor as you get in and out of your car multiple times: DO NOT put tools in your pocket. It's tempting, but one wrong move and you can punch a screwdriver through your seat. DON'T DO IT.

As you do follow this guide, this is just my attempt to get this work done. I have no doubt there are better/faster/easier ways of doing this effort. Feel free to provide feedback on the forums.

Tools:

Must have:

[Front facing DVR camera](#)

[AvinUSA Avant-2 stereo deck](#)

Small flat screwdriver

Small Philips (+) screwdriver

Shop towels

Old plastic credit/club/debit card or piece of thin hard plastic

Nice to have:

[Plastic panel removal tools](#)

[Trim clip](#) x 5 (you *will* break these) BMW #51458266814

Magnetic screw bowl

Lots of light and space

Forum information – [E46 Fanatics Mobile Electronics Forum](#)

[Music](#) (I recommend BB King, nothing like the blues while doing car work)

Patience

Contacts:

[AVINUSA.com](#)

[E46 Fanatics Forum](#)

[E46 Fanatics Mobile Electronics Forum](#)

Installation preparation work

*Assumptions: Ignore the OEM deck shown at times in this stage, as this is about trim removal. The assumption is that the Avant-2 deck is already installed in your car, but this work can be done at the same time.

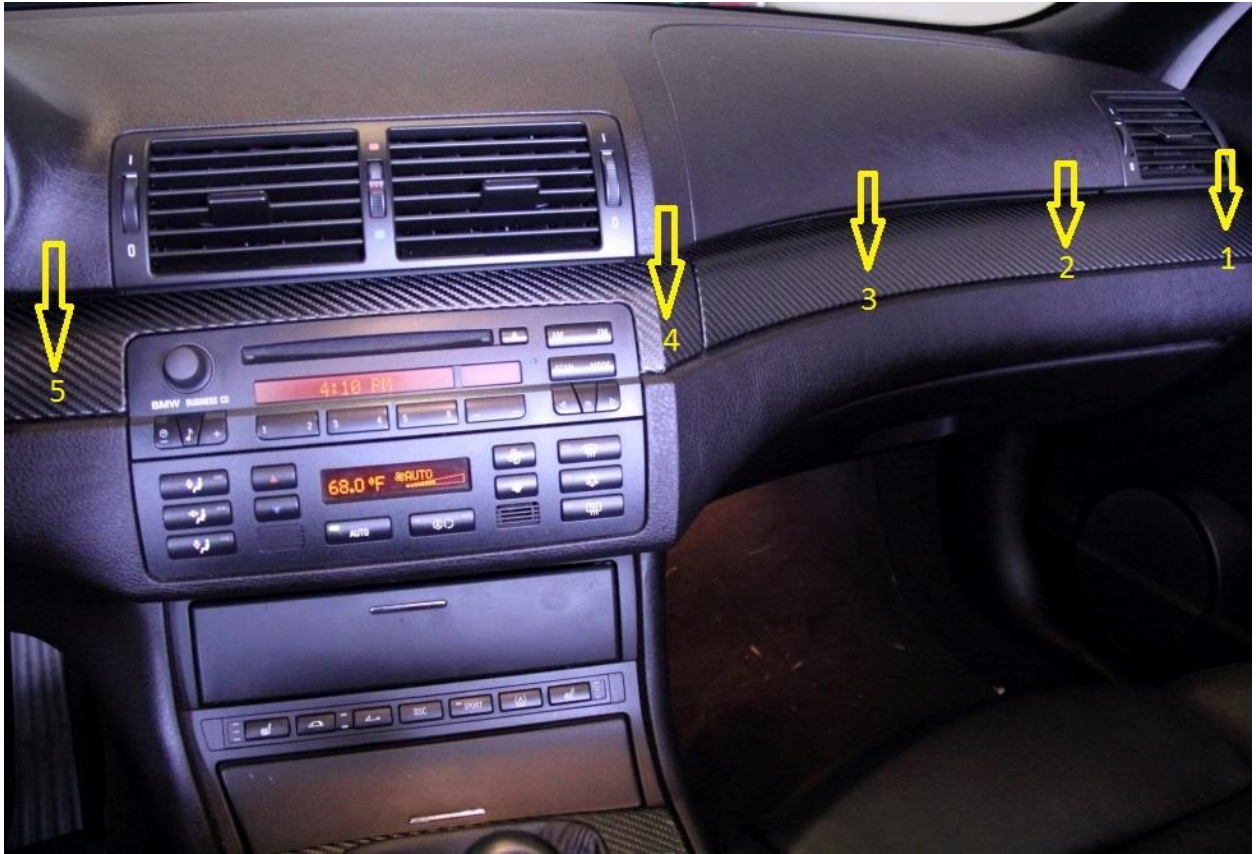
1. Dash trim will need to be removed first, and are held in with a series of 5 attached aluminum pins pushed back into the dash.

Go slowly and carefully as you do this work. The dash itself is soft padded material and *will* dent and tear if you are not careful.

The trim tools are the best option to slowly fulcrum out the pins in the dash and not damage anything along the way. Don't be hasty and make a thousand dollar mistake.



2. Use a flat bladed screwdriver covered with a shop rag, or **better**, the plastic trim tool to carefully pry up the trim, starting at point 1 slowly prying right to left to point 5.



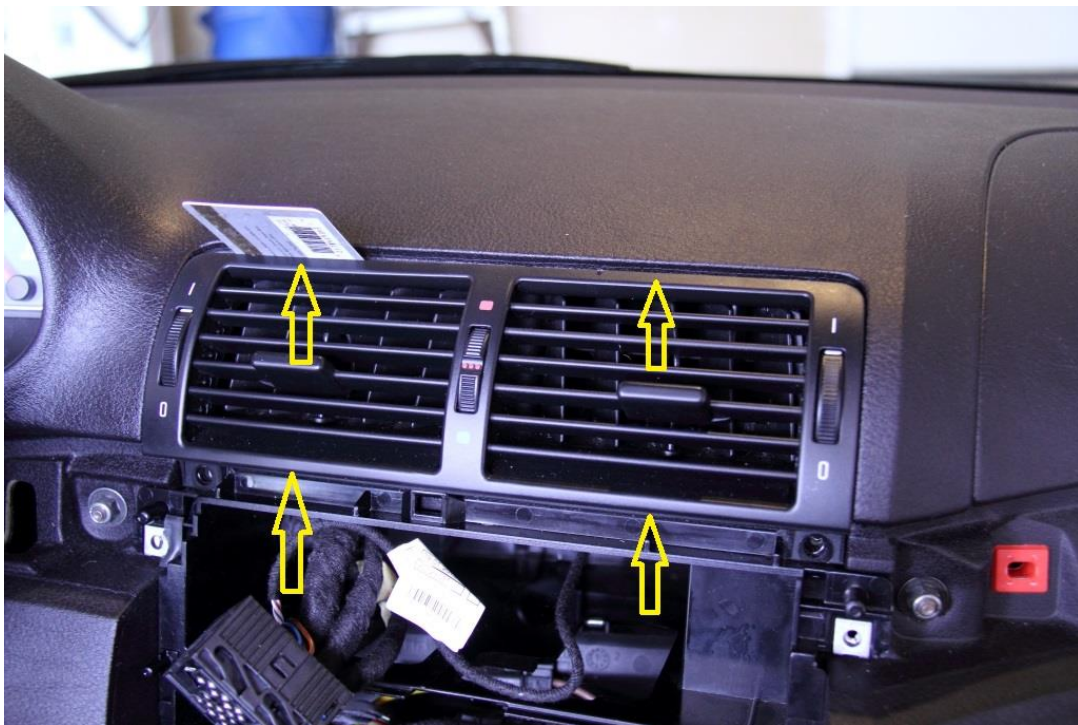
3. It is not uncommon for the orange trim clips to break or even come out attached still to the aluminum pin on the trim. These will break or will be broken, but are easy to replace.



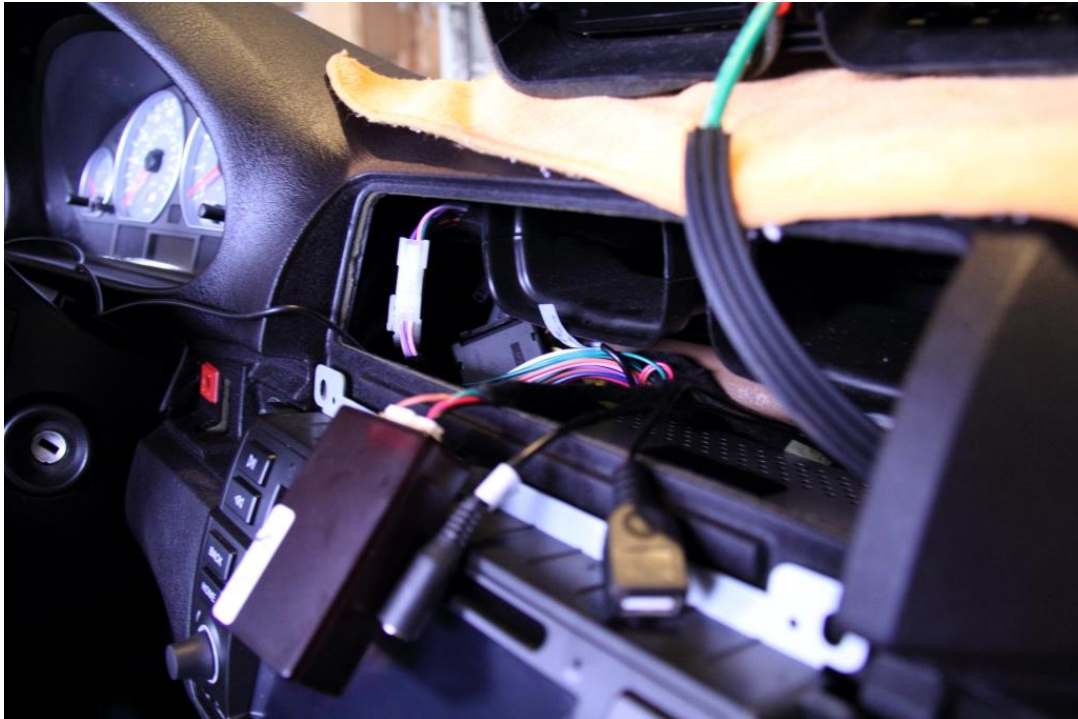
4. Use a pair of needle nose pliers to grip and then remove the trim clips. Turn the clip to a vertical orientation to remove and pull out. Insert the new clip vertically and then turn horizontal to lock into place. The blade of the pliers works well to turn back into place.



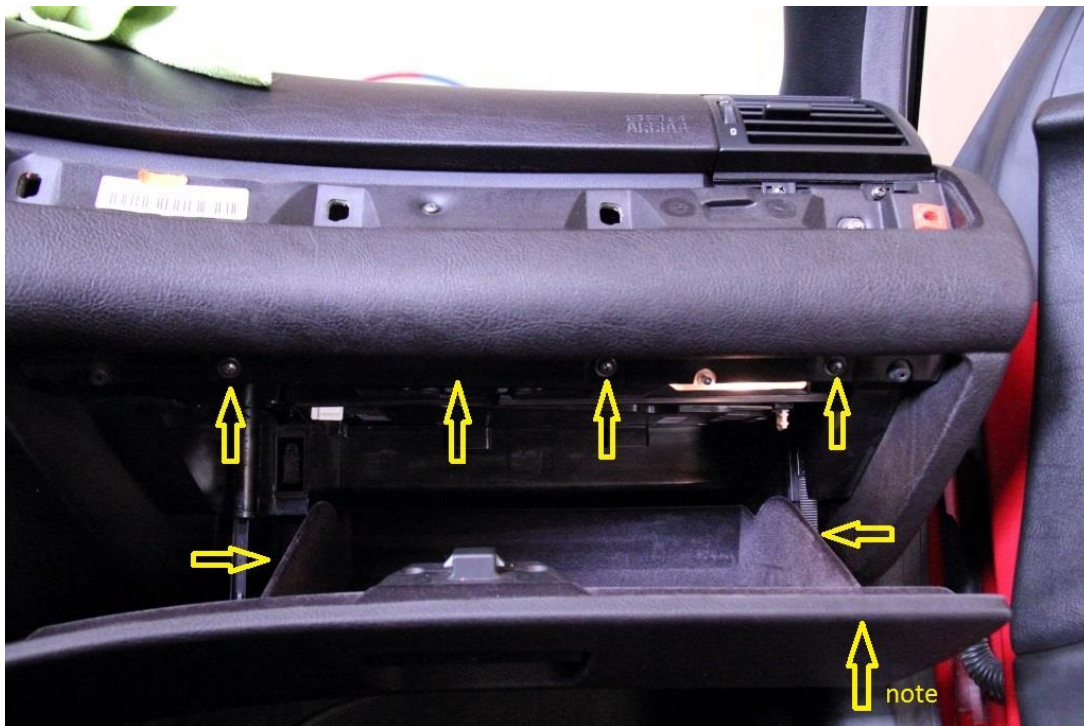
5. Remove the two screws under the vent then the center vent assembly by freeing the four pressure clips on the vents themselves. Do this by using the plastic trim tool, or an old credit card to slide between the dash and the vent. When all four are loose, the vent will pull straight out of the dash. I did not remove the vent control wire as I saw no need, and put the vent on the dash with a shop towel to prevent scratches.



6. Locate an available USB port and move the canbus module, input port and GPS module out of the way.



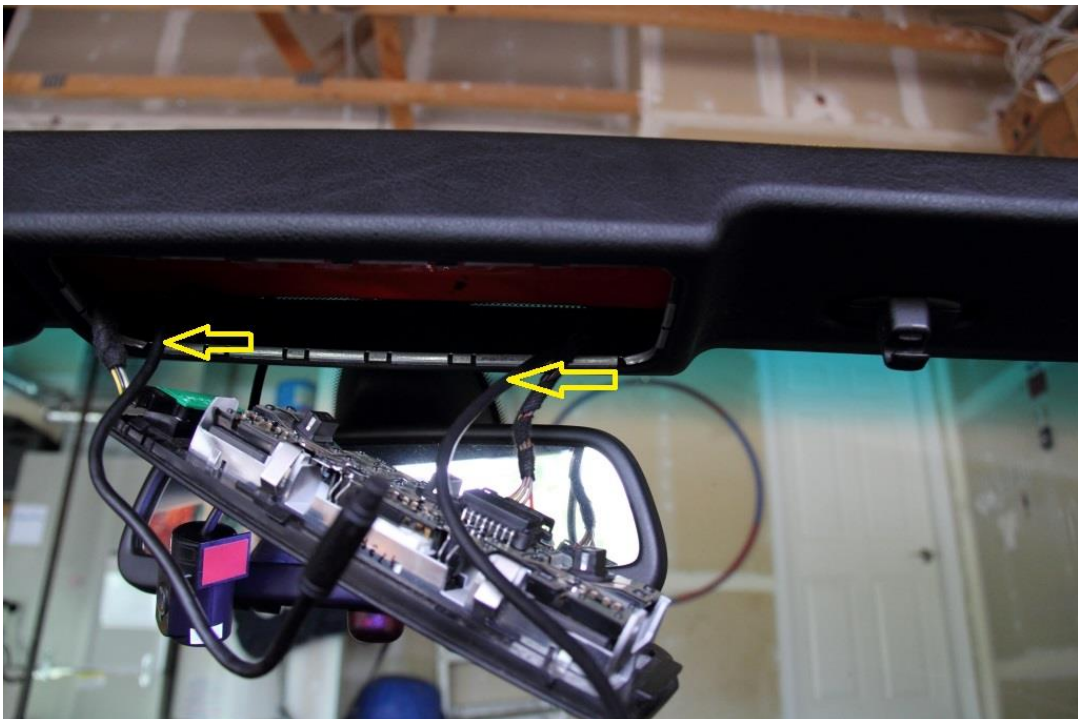
7. Remove the (note) screw first with the glove box closed, as it is on a little tab right above the trim. Open and empty the glove box, then remove the six additional screws.



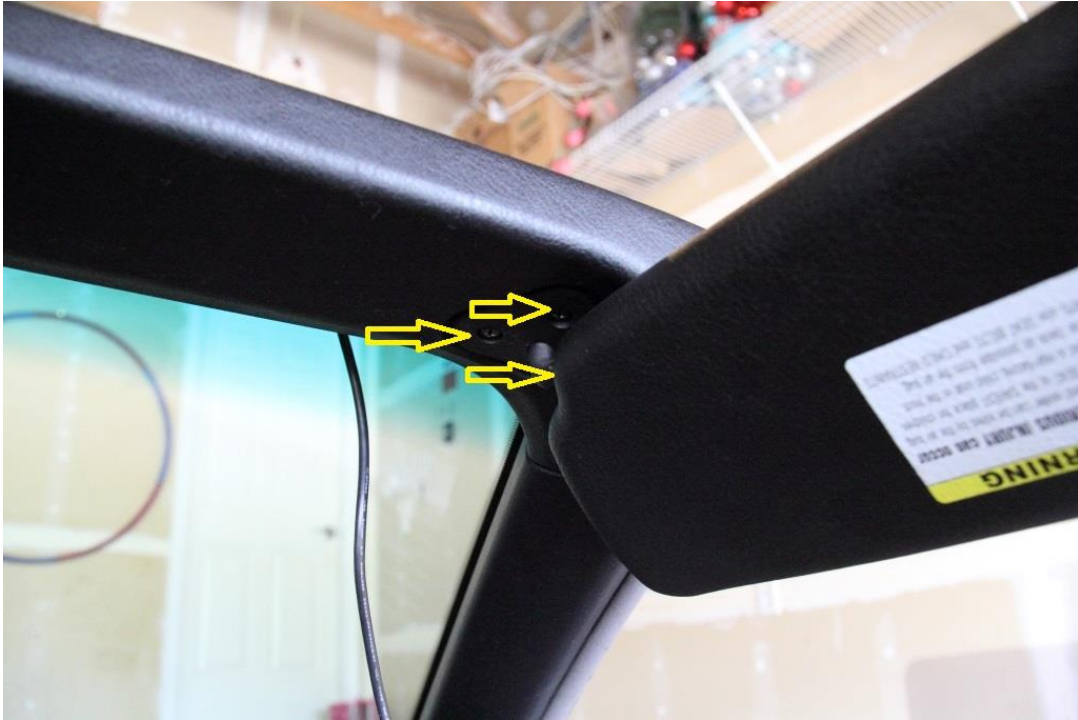
8. Using a covered flat screw driver or **better**, the trim removal tool, remove the dome light cluster by carefully prying it loose. Four clips hold the dome light in place.



9. Pull the camera and USB extension cables between the windshield and the trim and down through the dome light hole.



10. Carefully fit the extension cable into the gap between the windshield and trim until you reach the right hand A pillar. Remove the three screws indicated to remove the sun visor. I removed the visor to allow more movement in the upper trim cover.



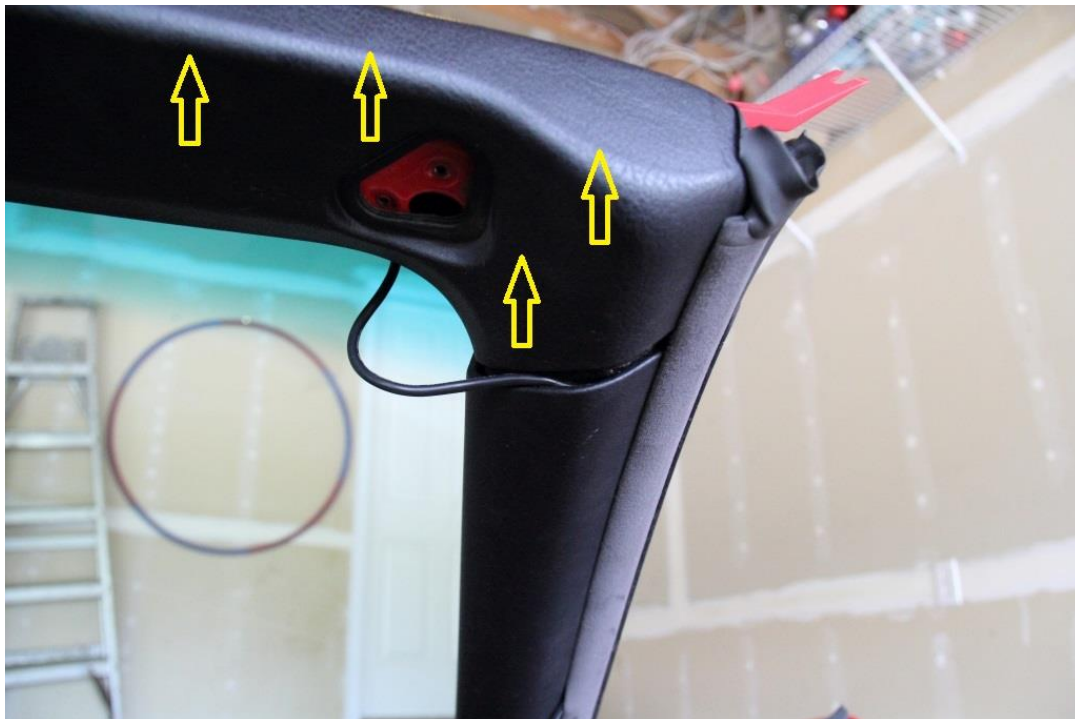
11. Pry back the small covers and remove the two screws and set the visor clip aside.



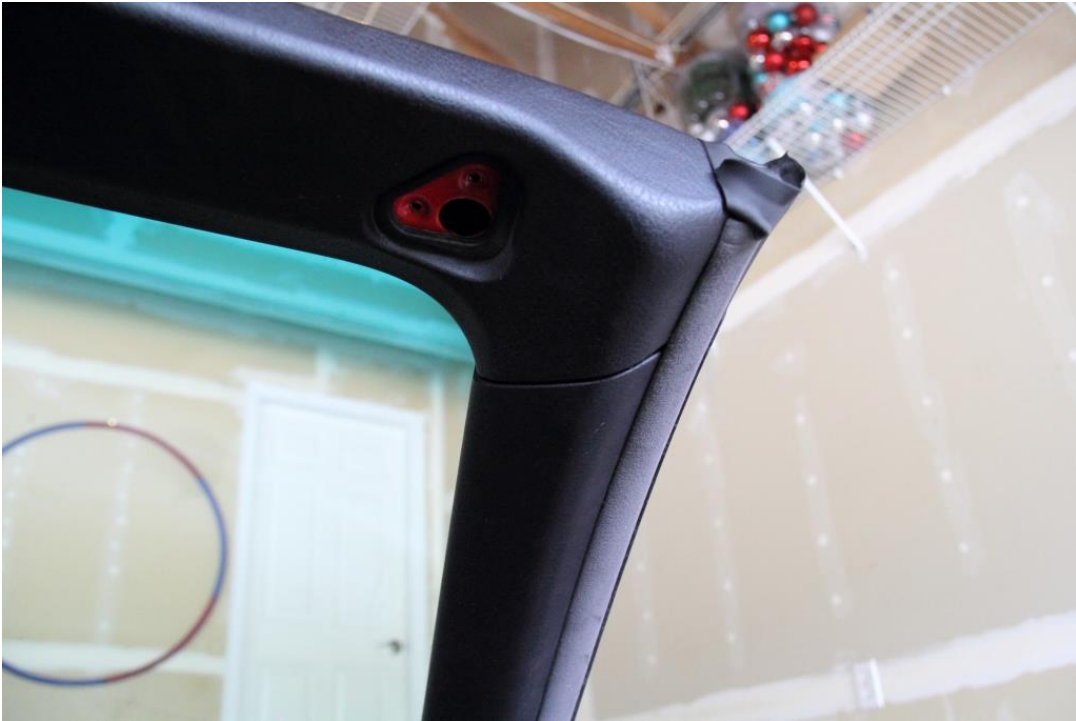
12. Use a cloth covered screwdriver or trim tool to carefully pry back the felt trim and route the USB cable under and down the trim. Make sure to leave enough slack to make it around the A pillar.



13. Carefully pull the trim piece up to create space in the A pillar cover. Route the cable from under the upper piece, through the gap and under the A pillar cover. BE CAREFUL and work slowly as to not pinch the cable. Don't break anything and use the trim tool to help route the cable.



14. When done fit the trim pieces back into place, and ensure everything fits properly especially with a convertible and the roofline seals.



15. Continue to route the USB cable down under the felt trim to the glove box.



16. Route USB cable through the back tray behind the glove box and up into the center dash.



17. Connect USB cable to available USB port.



18. Attach camera to your preferred side of the mirror using the adhesive pad. I selected passenger side to reduce driver side visibility. Positioned properly, it can't be seen from driver or passenger. The camera will rotate so you can adjust camera angle once it is running.



19. Time to plug in everything and test.

1. Connect the camera to the USB extension cable.
2. Connect the USB extension cable to the USB port on the Avant-2
3. Insert the key and turn on the ignition to power on the deck. **Note:** If you have not updated your Avant-2 deck please contact AvinUSA for the latest build including the Tachograph application for the DVR camera. Update your deck as needed.
4. Launch the Tachograph app to launch the front DVR camera.

If the application launches but says no camera or device available, double check all of your connections and cable routing. You can also test the camera plugged into a laptop.

If the app launches but crashes, does not display video or reports invalid device please contact AvinUSA for a ROM update for the camera itself.

Assuming everything works, front camera is displayed on the deck and recording is successful, put everything back together.

20. Reverse order of to reinstall everything, including glove box, central vent, dash trim, dome light and sun visor. As you reinstall the dome light and other points, make sure your USB cable run is clean and wont pinch or get in the way. When you are done, the install should be almost invisible.

21. Double check all functionality again: Front DVR camera, dome light, glove box and light and Avant2. If everything works and everything is replaced, you are done!

Clean up and put your tools away.



Congratulations! All in all this isn't a horribly hard project but just a LOT of pretty detailed and careful work pulling the dash apart.

That said taking the work slowly and patiently, it isn't that hard and you saved yourself a healthy amount of money from having a third party or vendor do the install.

Congratulations again and enjoy the new back up camera in your car!

Written by Stefan Yotz 7/2014

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There is no warrantee or guarantee to this guide and is provided in all good faith and best effort.

Huge thanks to:

[Tommy – AVINUSA.com](#)

[E46 Fanatics Forum](#)

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