

M5 Mirrors DIY

Using non-LCI M5 mirrors on LCI models

Background Info

- There are 3 types of mirrors in the market:
 - Pre 09/05: multiple connectors
 - 09/05-03/07: single connector
 - LCI (Post 03/07): single connector
- Unfortunately none of the mirrors are compatible with each other. This means, you are forced to buy the mirror according to the type of your car. Unfortunately M5 mirrors are expensive parts and the ones on ebay are typically for PRE 09/05 or PRE 03/07 but none for LCI owners.
- This DIY allows you to get a cheap M5 mirror from anyway and migrate the parts from your LCI mirrors to the M5 mirror and retrofit this on your car – and YES it works!!!

Background Info

- **CAR:**
 - BMW E60 LCI
 - Autofold: NO
 - Electrochrom mirrors: NO
 - Memory: YES
 - Autodip: YES
 - Paddle lights: NO

- **Mirrors:**
 - 09/05-03/07
 - Autofold: YES
 - Electrochrom mirros: YES
 - Memory: YES
 - Autodip: YES
 - Paddle lights: YES

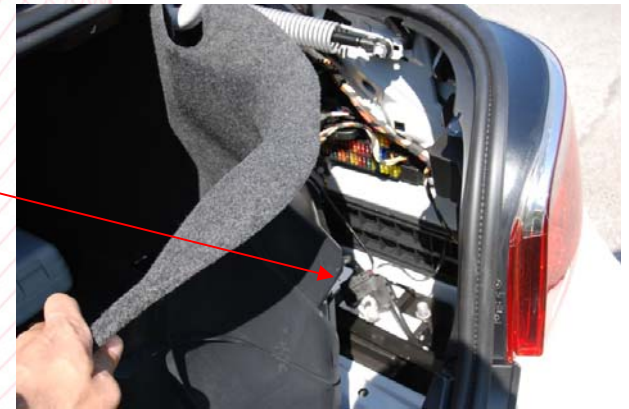
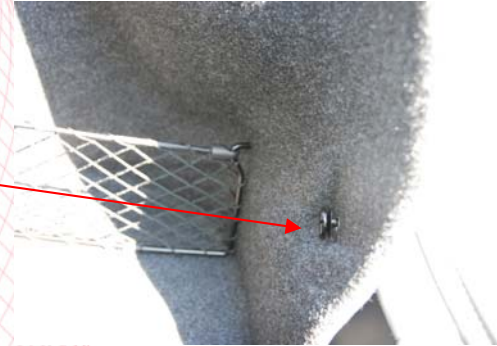
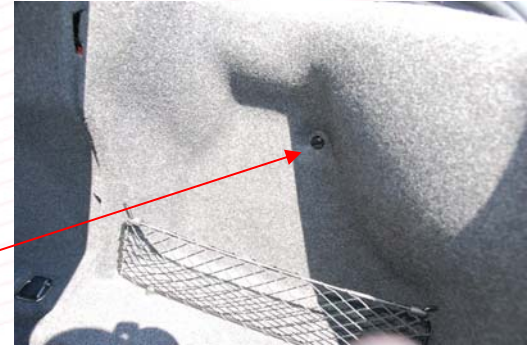
Retrofit Summary

- Time required for the retrofit:
 - 3 hours
- Tools required: As you can see nothing special. Just highlighting the exotic parts:
 - Torx 10, 15 and 20
 - Wire connector



Step 1 – Disconnect Battery

- Go to your boot – open it.
- Lift lid to access the bottom of the boot where your spare tire is.
- Unscrew the 2 screws on the right side of the boot.
- You now have access to the battery. On the negative (black) pole, there is a bolt. I unscrewed the bolt with the pliers and pulled the connector out of the battery.
- ENSURE the connector is not lying around. There is a lot of metal of the car in that area. Rest the connector on something plastic (such as a plastic bag)



Step 2 – Open Door trim

- Remove the AIRBAG cover on the door - can be done with a screw driver. Remove the screw underneath the cover. It is a torx screw:



Step 2 – Open Door trim

- Remove light cover at the bottom. Just use screw driver



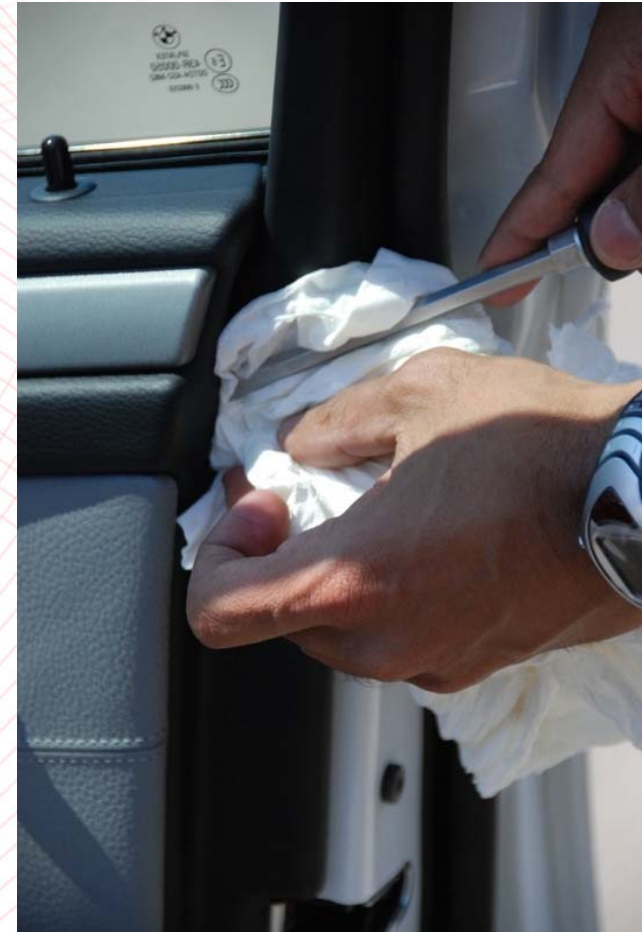
Step 2 – Open Door trim

- Remove cover of a TORX screw near the hinge of the door. Remove screw.



Step 2 – Open Door trim

- The trim is clipped on to the door. BMW recommends starting at the bottom. My suggestion is this location. Use a screw driver, put a lot of soft tissue papers around it (not to scratch anything) and open the trim.



Step 2 – Open Door trim

- Use your fingers and start opening the trim across the windows first.
- Open half of the trim on the side the door is hinged.
- Green line shows how much of the trim is unclipped from the door.
- Once you have the trim open, you can see the cable that goes from the mirror. Disconnect the cable. The cable is roughly here.



Step 3 – Remove speaker

- Pull speaker cover to the side



- Remove the speaker trim from the door by pulling it out



Step 4 – Remove Mirror

- There are 3 screws behind where the speaker was. Unscrew the 3 with a torx screw driver:



Step 5 – Open LCI Mirror

- Tilt the mirror by pressing the inside part of the mirror:



- Pull mirror on the outside part. The mirror clicks out of the housing then:



Step 5 – Open LCI Mirror

- Remove the 4 torx screws



Step 5 – Open LCI Mirror

- Unscrew motor of the mirror – torx screw.
- The mirror is now held together by 4 clips. Unclip then and pull the housing



Step 5 – Open LCI Mirror

- On the back side, there is the ECU. Remove the ECU from the mirror (clipped on). In my case, the ECU has 5 cables.
 - Red/brown/green is the connector of the LCI mirror.
 - Black/Black going from ECU to mirror (heating)



- Cut the 5 wires about 10cm away from the ECU.



Step 6 – Open M5 Mirror

- Tilt the mirror by pressing the inside part of the mirror.
- Pull mirror on the outside part. The mirror clicks out of the housing then:



Step 6 – Open M5 Mirror

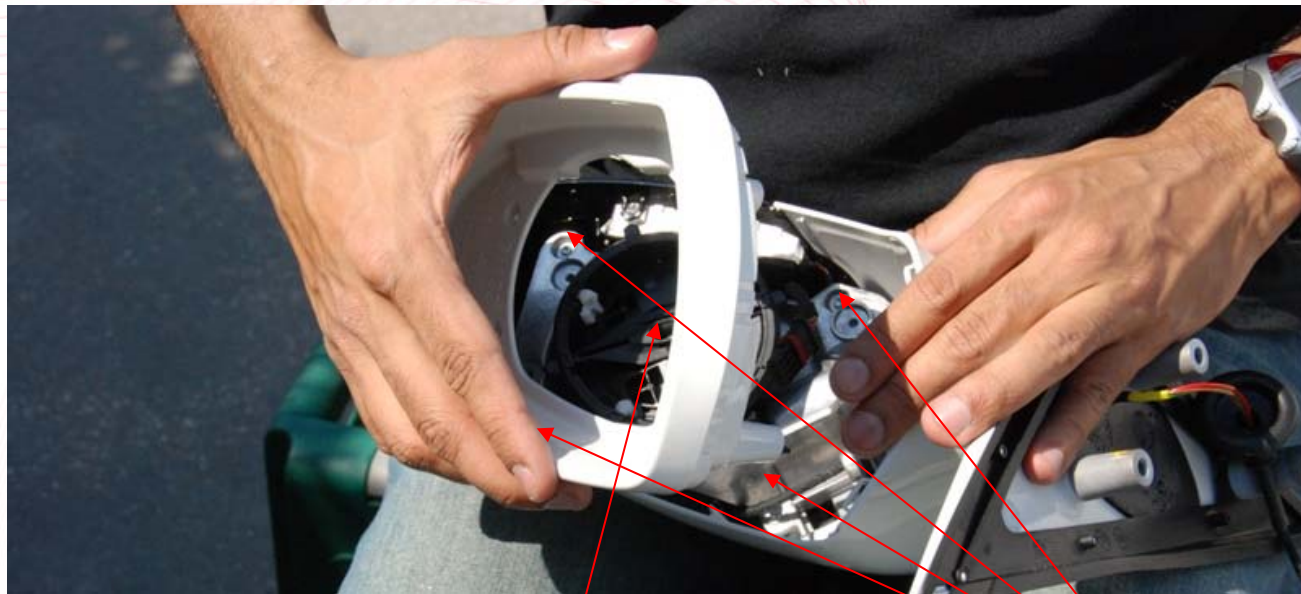
- Disconnect the mirror from the housing



- Remove 4 torx screws

Step 6 – Open M5 Mirror

- Remove first part of the housing



- Unscrew mirror motor (torx screw in the middle of motor)
- Unscrew 4 torx screws holding back part of the housing.

Step 6 – Open M5 Mirror

- Under some foam on the mounting plate of the mirror, there are two torx screws. Unscrew those 2:



- The whole mirror should now fall apart and you have access to the ECU with 11 cables.

Step 6 – Open M5 Mirror

- Cut the wires of the M5 ECU. There should 11 in total:
 - RED/GREEN/BROWN: the mirror connector
 - VIOLET/BLACK: For the EC mirror
 - RED BROWN: heated mirrors
 - BROWN/GRAY: paddle lights
 - YELLOW/WHITE: autofold



Step 6 – Open M5 Mirror

- Tape the wires (not from the ECU but ones going to the ECU) that are not supported by your LCI mirrors. In my case:
 - Wires from the EC Mirrors: VIOLET/BLACK
 - Wires from the motor for Autofold: YELLOW/WHITE
 - Wires from the paddle lights: BROWN/GRAY



Step 7 – Migrating the ECUs

- Put the LCI ECU into the m5 mirror



- Fiddle the LCI mirror connector through the mounting plate of the M5 mirror to the LCI ECU. Connect the cables using a cable connector.
- Connect cables of your LCI ECU to the wires of the m5 mirror. In my case, only heated mirrors (RED/BROWN). If I had the other options, I would be connecting the other cables to the corresponding position to where they were initially connected on the M5-mirror ECU.

Step 7 – Putting mirror back together

- Make sure the rubber is facing the right direction before putting the mirror back together:



...final parts

- Part 8: mount the mirror back to the door
- Part 9: put the speaker back on the door
- Part 10: clip back the trim on to the door
- Part 11: connect the battery
- Part 12: Enjoy your mirror!!!!



Disclaimer

- I hold no responsibility on any damages done to your car!
- I hold no responsibility for any guarantee of any functionality that I have described in this DIY.
- I hold no responsibility for any assumptions regarding functionality of the M5 mirrors with options that I don't have on my car.
- This DIY should be treated as a FYI.