

Door Projector LED Logo Lights

This DIY guide is for how to install projector LED Logo Lights in a 2015 Subaru BRZ Limited

Note: This guide is for if you have the courtesy lights in the corner of the door. I believe the Premium trim of the car does not have these lights and would require a different, more difficult, wiring job. If you do NOT have the lights in the door already, check out this video to see how to install:

<https://www.youtube.com/watch?v=C0ITXk85Ezs>

The finished product:

I installed bat symbol logo projectors; you can install any logo you wish

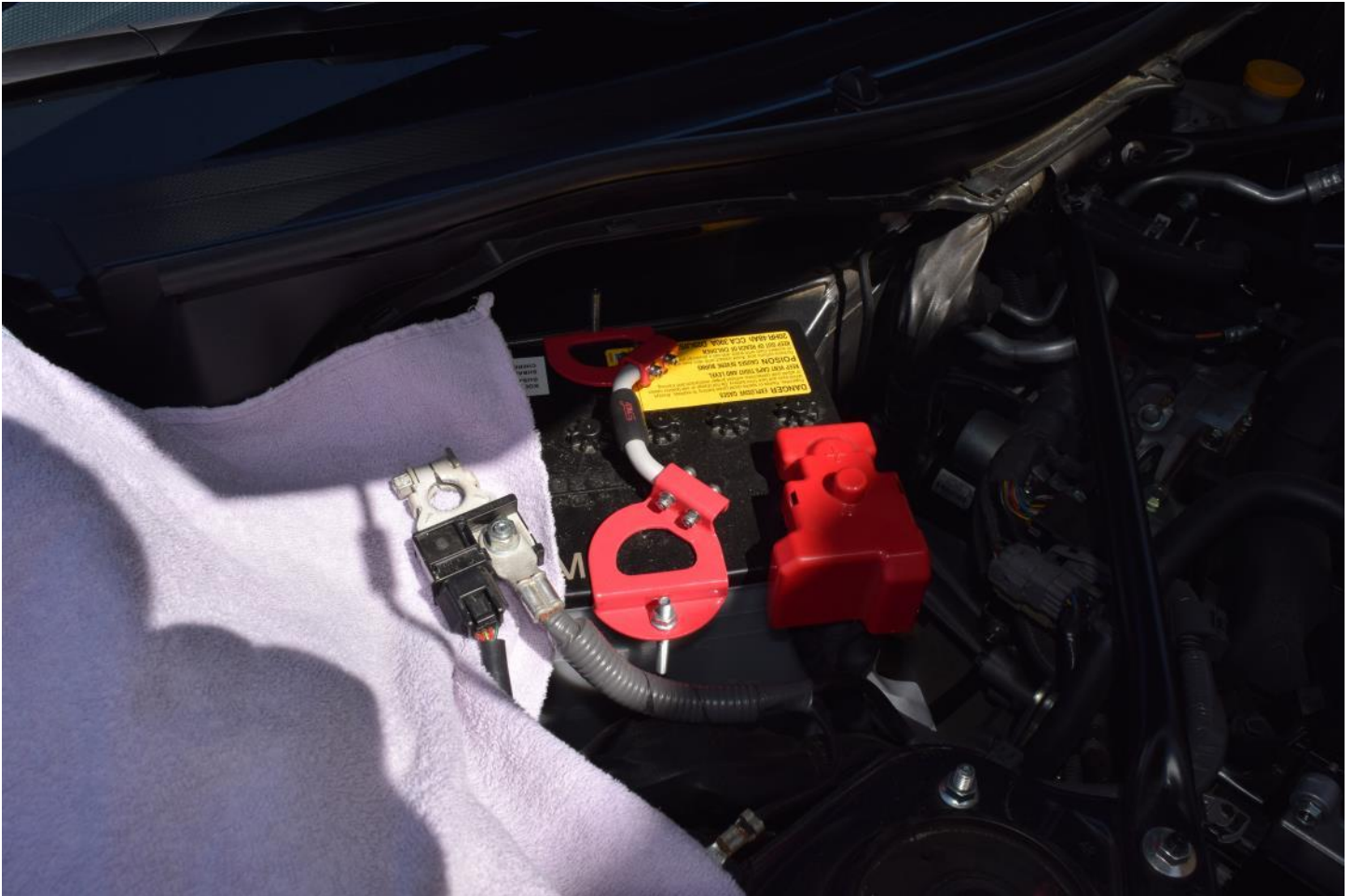


Equipment you will need:

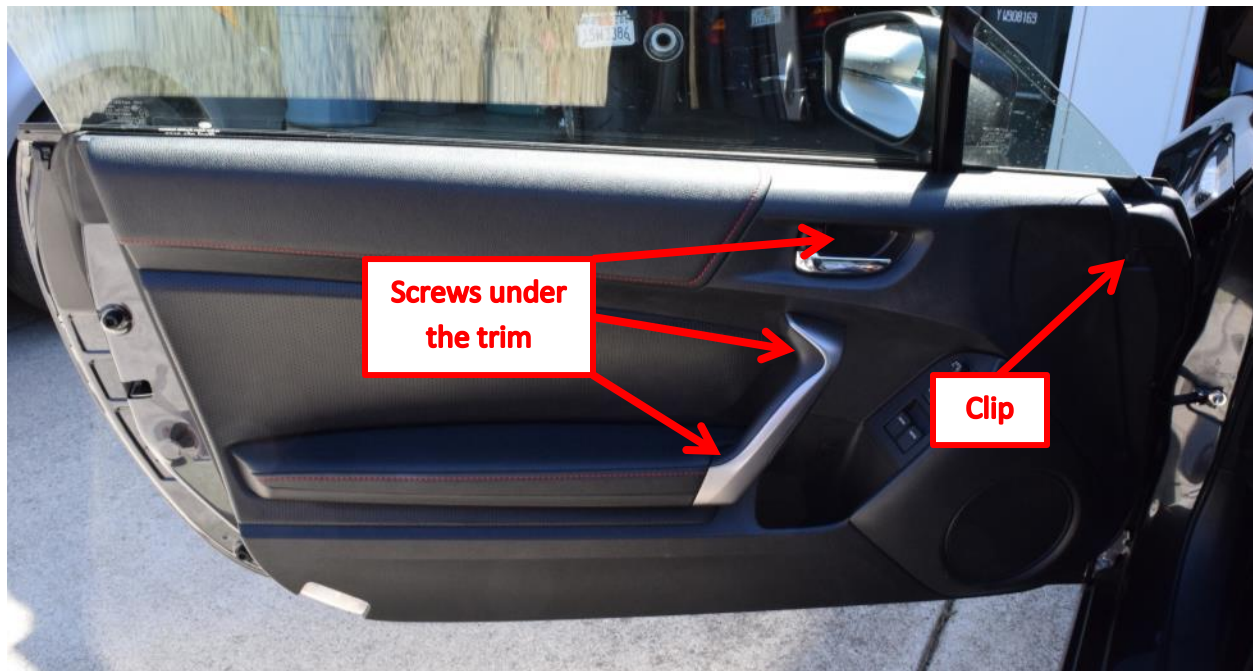
- LED Logo projector
 - There are several out there with several logo options, I bought a decent set off ebay for \$18 bucks. I have seen sets go for as much as \$70.
- 10mm socket or wrench (to disconnect battery)
- Trim tool
- Philips screwdriver
- Flathead screwdriver
- Soldering Iron
- Solder
- Wire Strippers
- Hot glue gun (optional)
 - I supplement my soldering with hot glue to make sure everything is good
- Razer Blade
- Drill
- Hole saw (typically comes with the projector)
- 2-pin connectors (optional)
 - I used a molex connector but any is fine. This is not necessary but will make it easier if you ever need to disconnect, replace, or change them in the future.
- Spare wire (optional)
 - Only needed if you are using connectors in your wiring
- Electrical Tape

The Steps:

Before doing anything, I disconnected the battery. We will be working with live wires on the car, so it is best to do this as a safety precaution. To do this, loosen the 10mm nut on the negative lead then pull the negative lead off the battery terminal. I typically lay a towel over the battery at this point and place the negative lead on top of it to make sure it doesn't contact anything conductive while I am working. Reconnect it once you are done to see your finished work!



Next, we will remove the door cover. It is held in by 3 screws, and a clip as well as several pop clips.



Start by removing the silver trim on the handle. Use your trim tool to do this. Start at the bottom of the handle then work your way up. Be careful and take your time to avoid marring any of the trim.





Now remove the two screws you exposed using a Philips screwdriver



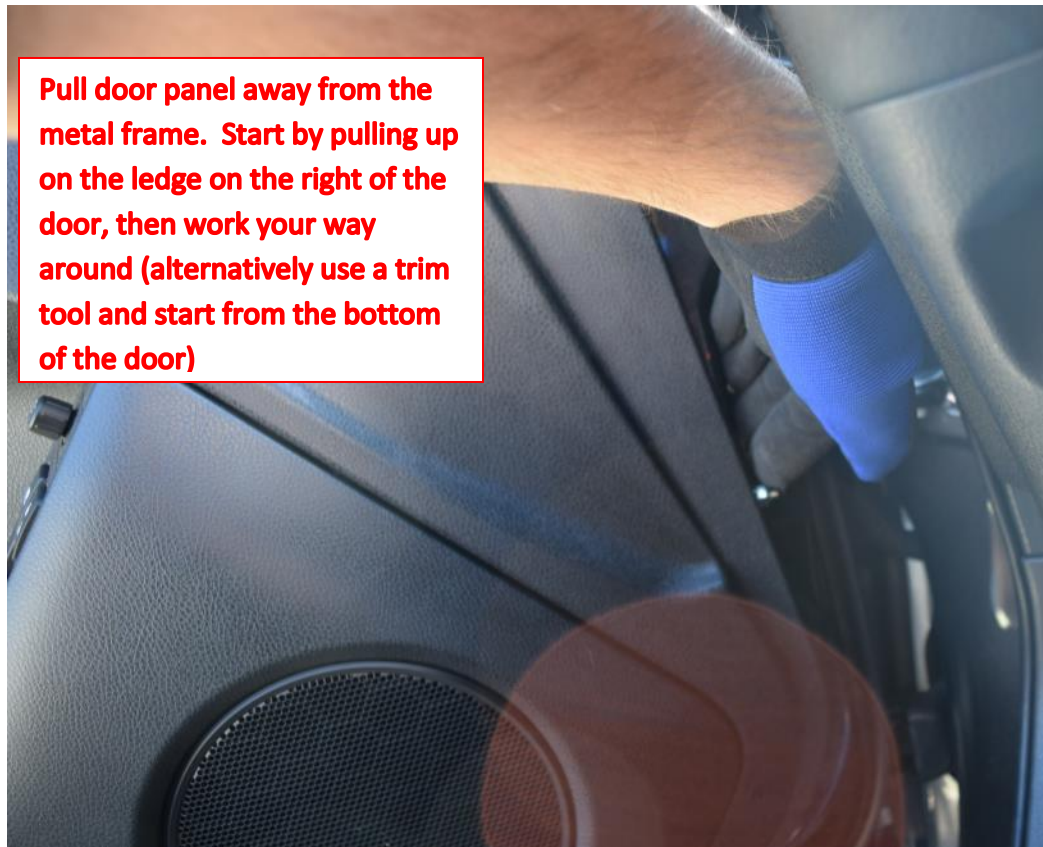
Next, remove the screw located under a cover in the door latch. Pry up the cover using a flat head screwdriver or your trim tool, then remove the Philips head screw



Remove the clip in the top right corner of the panel. I used a trim tool to do this, but a flathead screwdriver works as well. Gently pop up the center portion, then pop of the clip



That is all of the fasteners on the outside of the panel. Next we will pull off the panel. There is two ways to start this so you can do whichever is easier for you. The first is to use your trim tool and pry up starting at the bottom of the panel. Once you have part of it up, get your hand behind the panel and begin working your way around. Until the bottom, left, and right side are all unclipped. Alternatively, it may be easier to start on the right side of the panel and use your hands to pull up the clips. There is a small ledge to get your hand under there, then you can work your way around. Whichever method you chose, I recommend wearing some gloves to do this (or maybe I just have baby hands 😊). Once you have pulled up the sides, there is one more clip in the middle of the door. Pull straight back on the handle to pull off this clip. Finally lift straight up on the door and pull it away (be careful here, it is still attached by several plugs on the back).

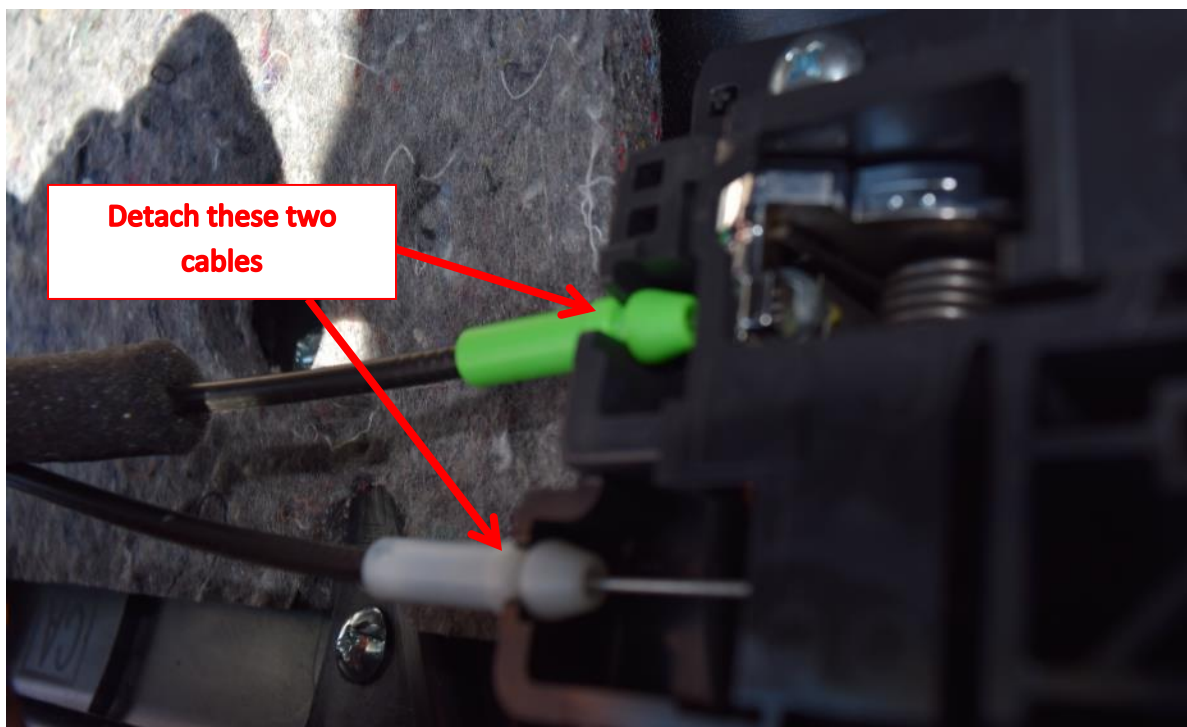






There are several things to release to completely remove the door. There are two cables (for the lock and door handle) and three plugs (for the courtesy light, window control, and mirror control).

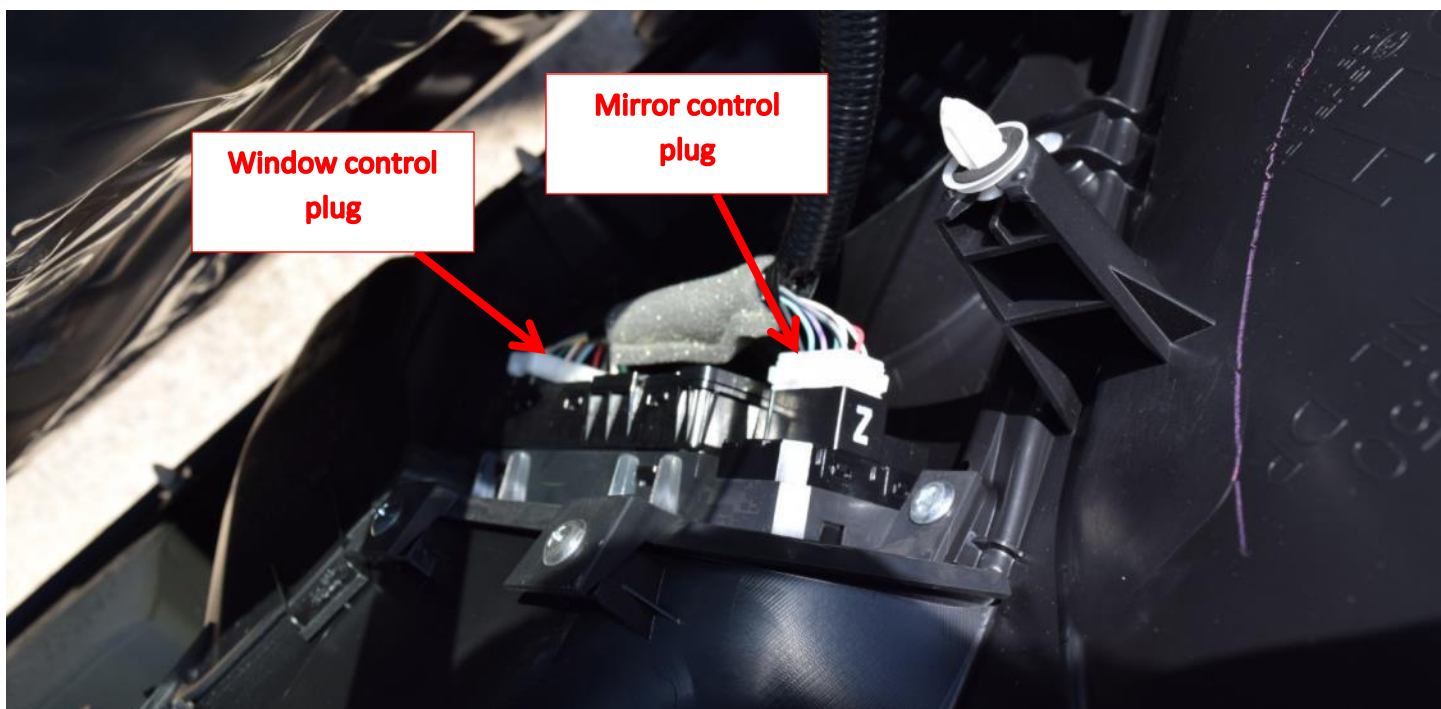
Start with the two cables. Pop them out of their slots and slide them out



Detach the grey connector for the courtesy light located near the bottom of the door panel.



Finally detach the two white connectors for the window and mirror controls. These are a little harder to get out. I used a flathead screwdriver to help detach these. If you are having trouble getting an angle on the clip you can remove the whole control switch (it is held in by black clips) to help.



Once you finish releasing the plugs, the door should be completely disconnected. Yay! Put it in a safe place for a little bit where it won't get marred (it scratches pretty easily).

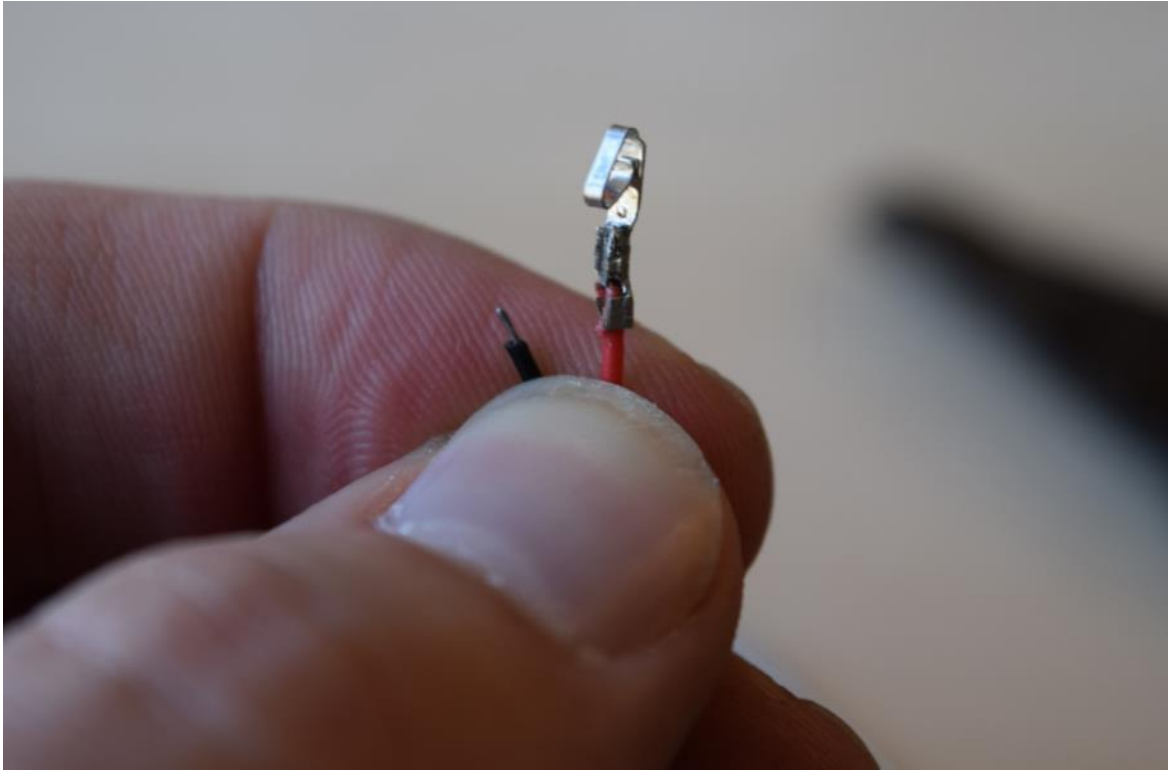


At this point, we will work on the wiring. Luckily, in the Limited trim of the BRZ, the courtesy light is a 12V connection and is already wired to the door switch, so the wiring is pretty minimal.

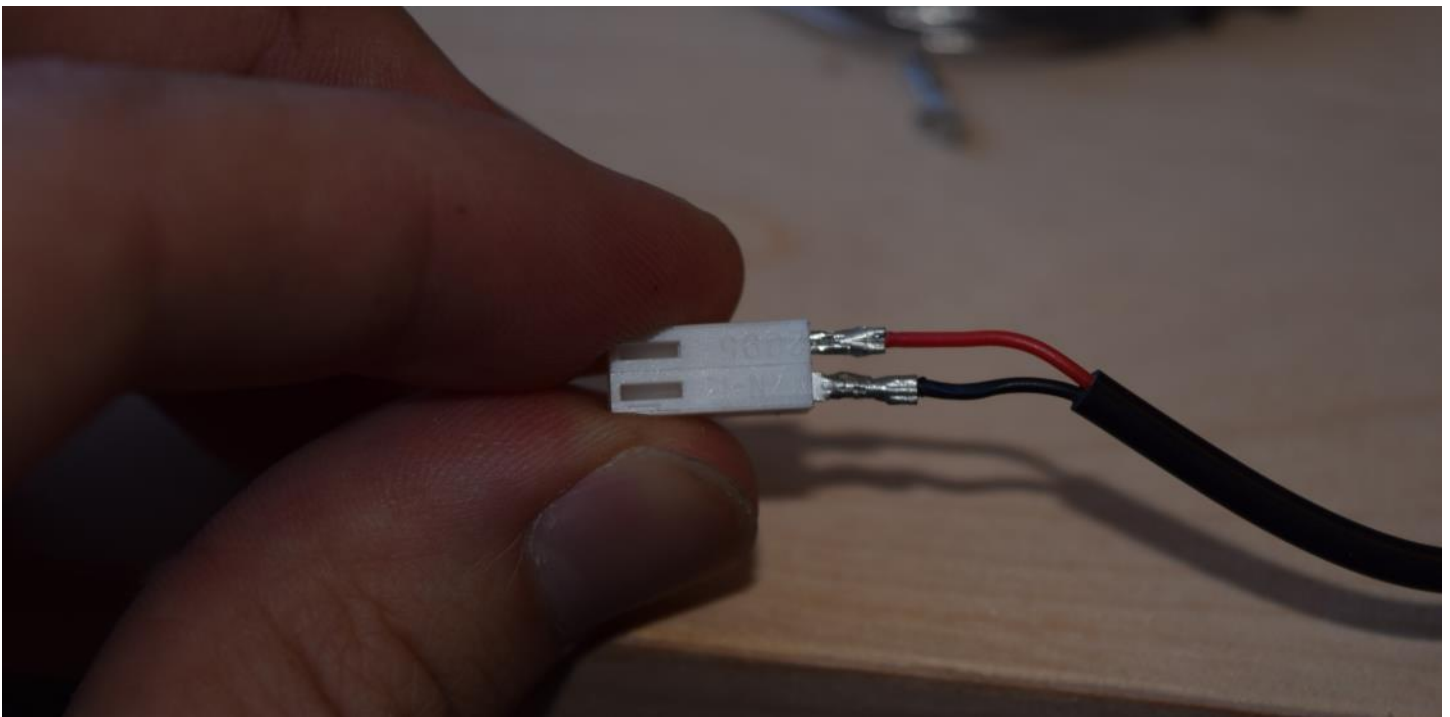
I connectorized the leads on my projectors using a 2 pin molex connector. I did this so that it could easily be replaced/changed/removed if I ever needed or wanted to. If you do not want to do this, or don't care about dealing with unsoldering the connection at a later point, then you can skip the next few steps and just wire the leads from your projector directly to the courtesy light.



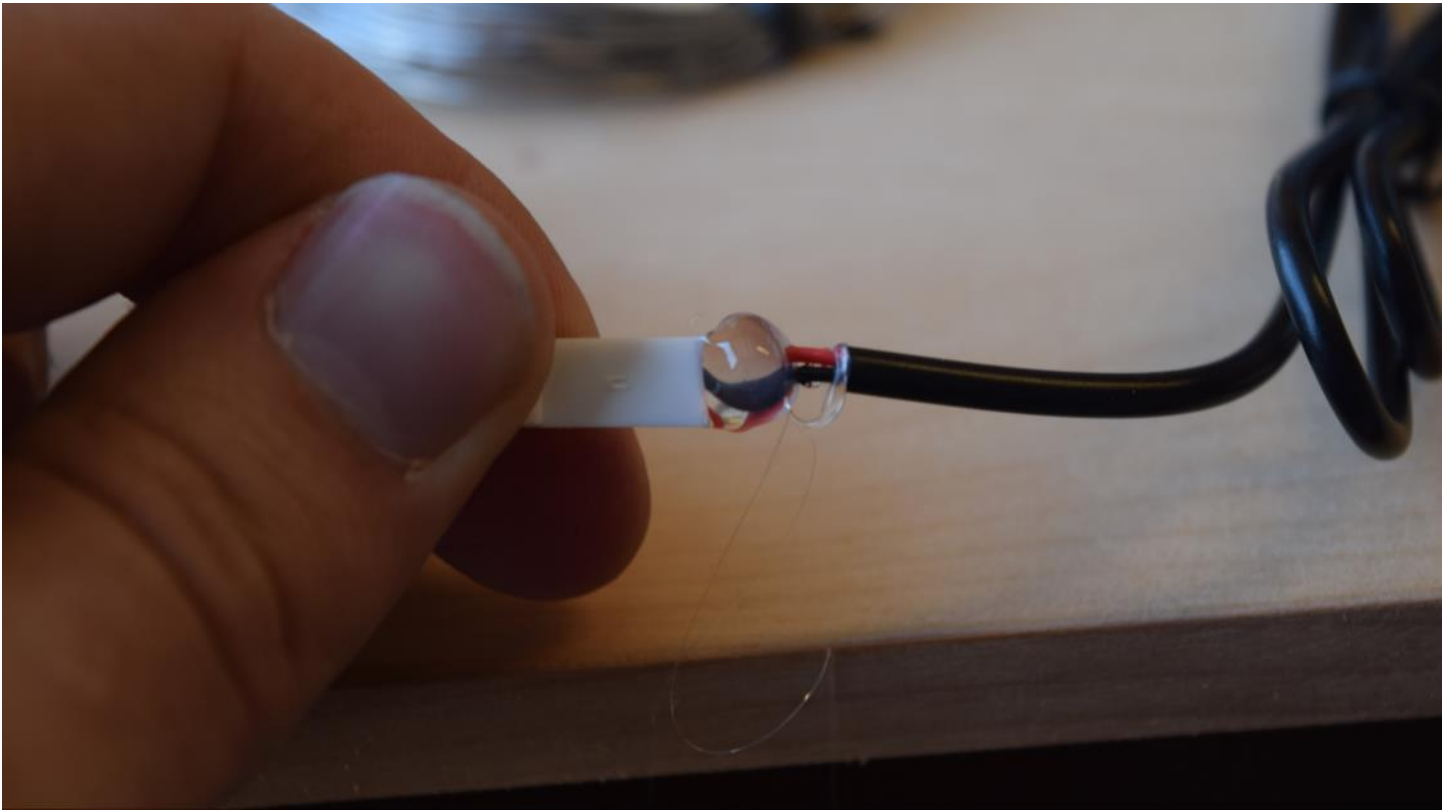
Solder the molex metal leads onto the positive and negative wires of the projector and crimp down the ends.



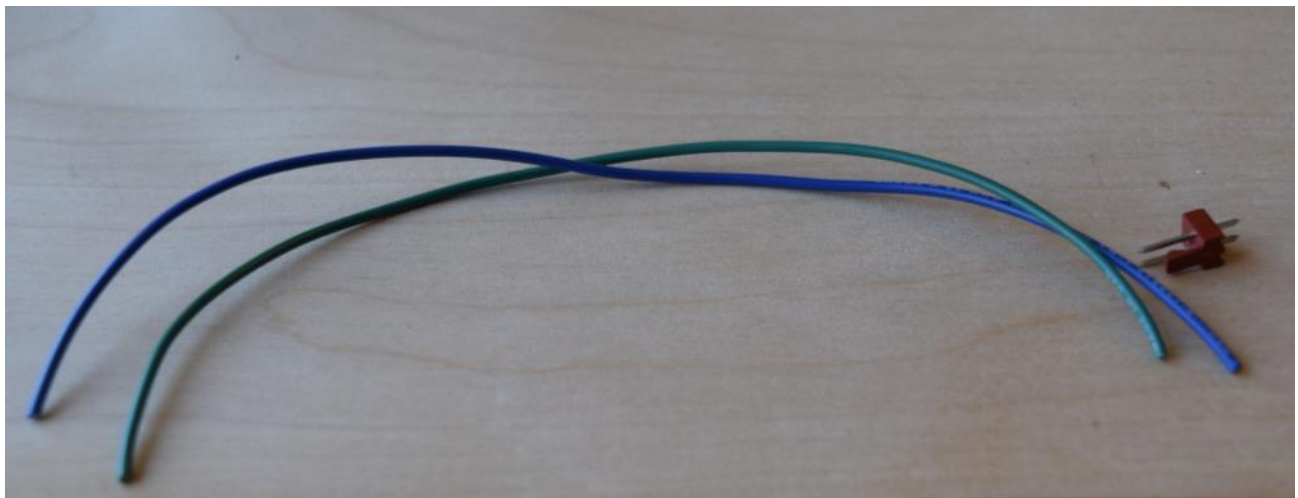
Once the metal connectors are attached, snap them into a female 2-pin molex connector.



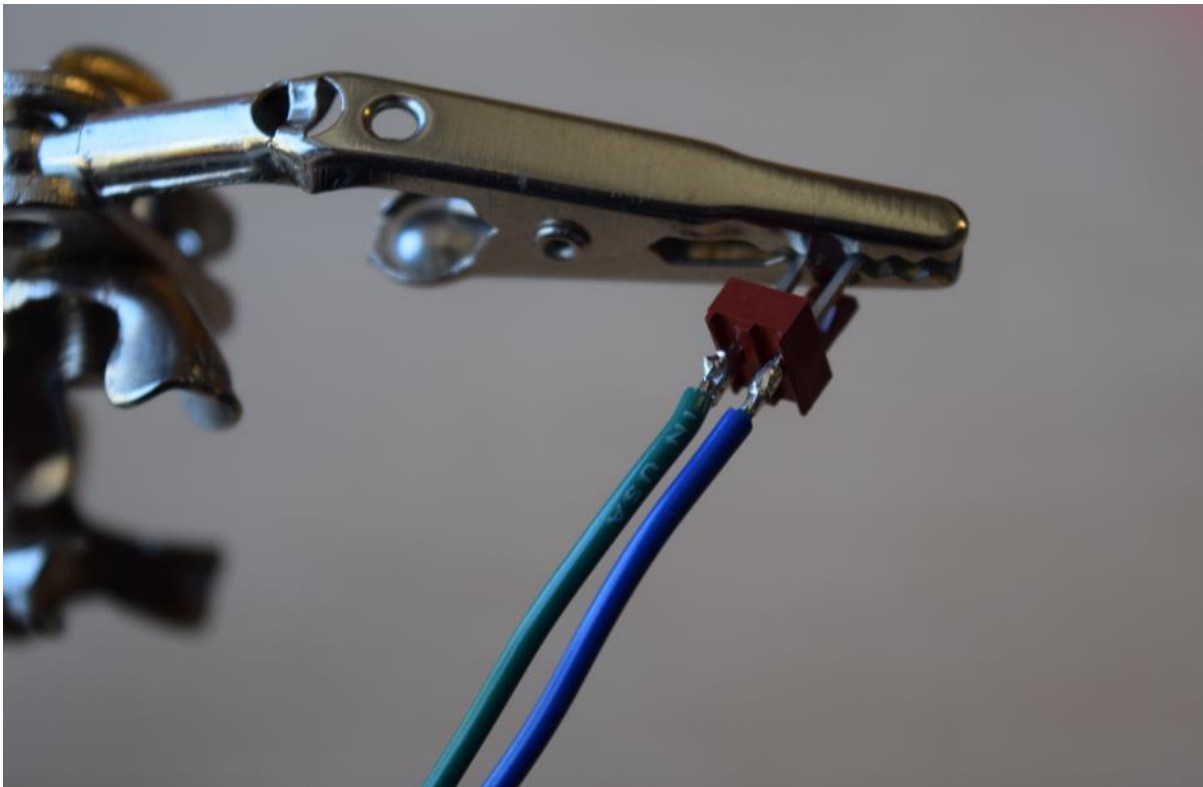
Personally, I like to add a little insurance that nothing moves. A little trick that I learned as an engineer, just add some hot glue to ensure everything stays in place. This is optional, but I like to be sure.



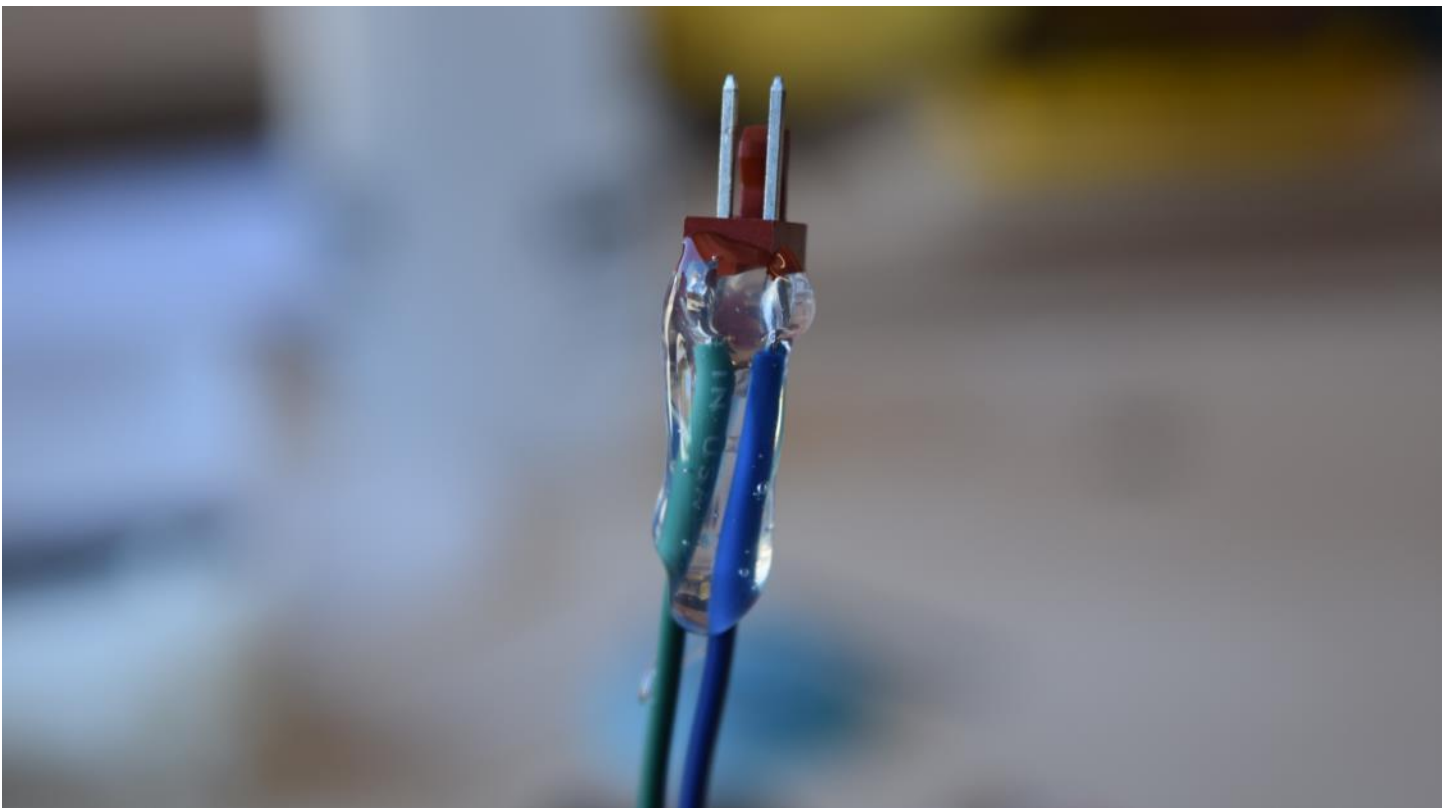
Next we will make the other half of the connector that will be attached to the car. We will attach two pieces of wire to the male 2-pin molex connector.



Strip both ends of each wire. Solder one end of each wire to the male 2-pin molex connector.



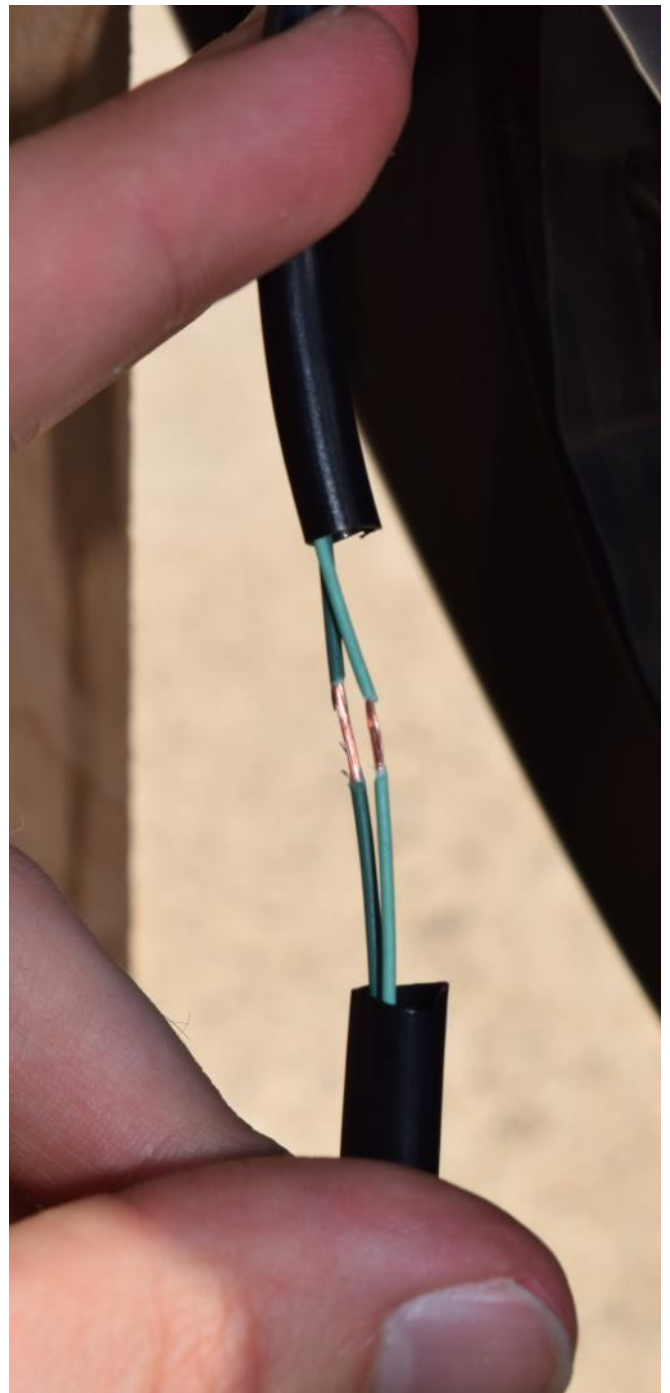
Use a little bit more hot glue for some assurance if you like.



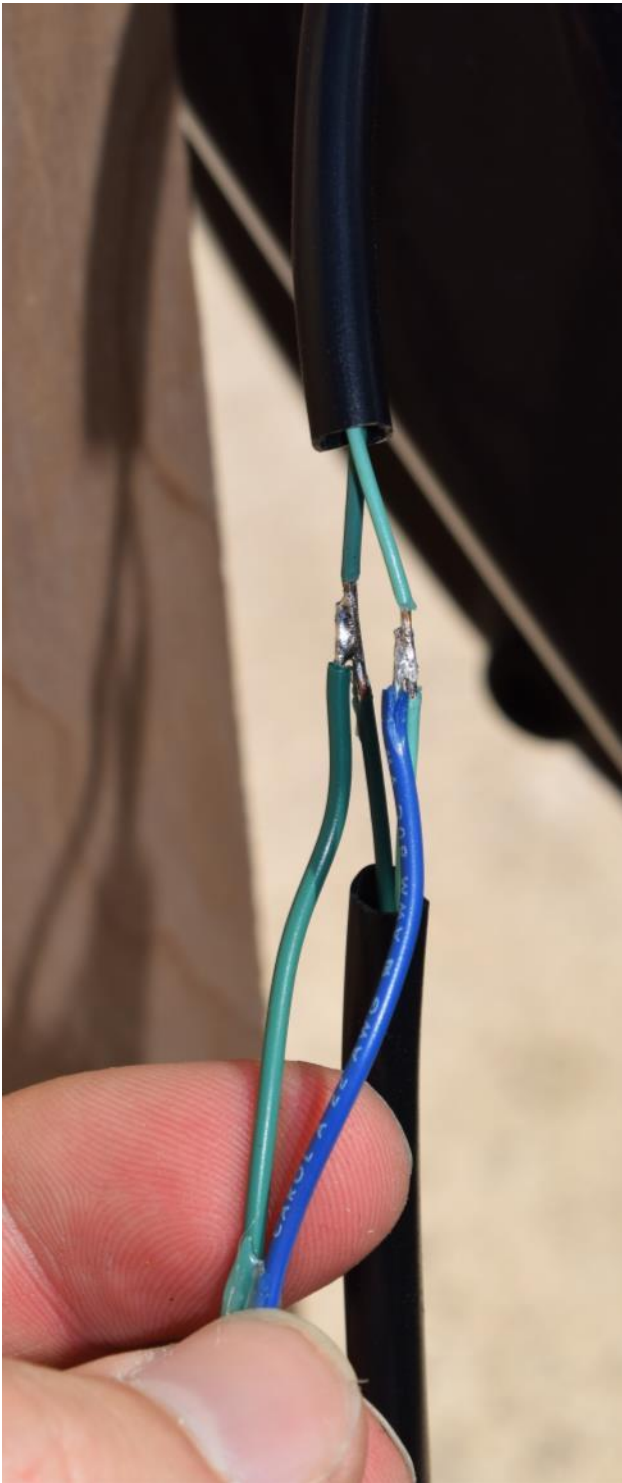
Next we will wire the connection to the car. Locate the connector in the bottom left corner that you removed from the courtesy light.



Cut back the black sheath covering the two wires using scissors or a razor blade. Take care not to cut the wires inside of the sheath. Next strip away part of the wire casing. Again, be very careful not to cut any of the actual copper wiring inside.



Now, solder the opposite ends of the wires you made (with the male molex connector) to the exposed portion of the two wires on the car. Once again add a little hot glue over the solder exposed portion of the wire.



Next, use some electrical tape and tape up the work. Tape off each of the wires individually, then wrap electrical tape around all the wiring to seal it all off. I threw on a zip tie afterwards as well to add a little support, but that is optional.

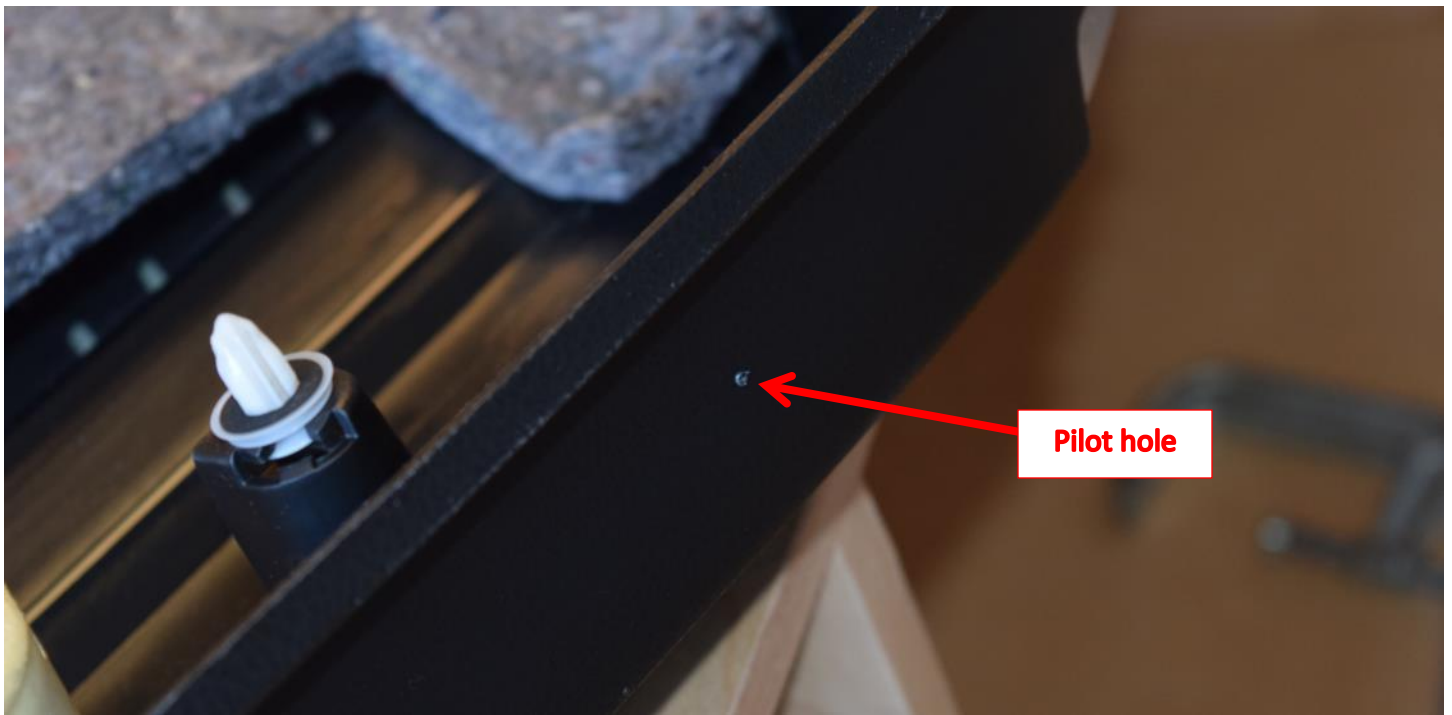


Ok, now that all of the wiring is taken care of, let's cut the hole in the door panel where the projector will go. You can position this pretty much anywhere along the length of the panel that you would like. I positioned mine to line up with the weld mark near the courtesy light. Measure out where you want to place yours and mark it off with a sharpie.



Drill a small pilot hole on the mark you measured out. This will help to center your hole saw in the next step.





Center your hole saw to align with the hole. Cut your hole using the hole saw.





Clean up the hole using a razor blade or similar. I used an X-acto knife here, but anything works.



If you chose to align your hole with the weld mark like I did, you will also need to cut off the weld mark to make the surface flat. I just used a razor blade to do this as well.



Next, we will install the projector itself. Yours may look a little different, but most have some sort of nut and potentially a set screw. You will need to take this off in order to install the projector through the hole. You will put it back on once the projector is through the hole.



Thread the projector wires through the hole until the projector is flush with the bottom of the door panel. Put the nut with the set screw back on.



Position the projector so that the logo will display the way that you want it to (you may need to provide power to it in order to see how it will project. You can either connect it to the car to check it, or just power it off a 9V battery to check the logo orientation, whatever is easier). Once it is in the orientation you want, tighten down the nut on the logo and tighten the set screw.





Now it is time to put everything back together. Connect the projector wires to the stock wiring on the car. If you used connectors like I did, just connect the connectors you made. If you did not use connectors, you will need to solder the projector wires directly onto the stock wiring.



Connect the two connectors that you made. If you did not use connectors, you will need to solder the projector wires directly to the stock

Last, you will reconnect everything and put the door panel back on the frame. Remember, there are 3 connectors for wiring (one each for the window controls, mirror controls, and courtesy light) and 2 cables (one each for the door latch and lock). To put on the panel, just reverse the process you used to take it off. Drop in the panel from the top, and then push around the panel once it is lined up to re-clip it in place. Replace the plastic clip in the top right corner and the 3 screws. Replace the door handle trim. And recover the screw by the door latch.

Repeat the process for the passenger side door. The only difference will be there is one less plug on the door panel as there are no mirror controls on the passenger side.

The finished product should look like this (or similar depending on the logo you used).



Enjoy your new lights!