

Guys, here is my write up about back up camera installation on my PC4. First of all I would like to say that everything I was doing with my car was my personal responsibility. If you are not sure how to do or what to do, please do not attempt to do it, since I really don't want you to damage your car.

Ok, enough said... let's get back to the installation process. It is completely up to you whether you want to proceed with camera installation, wires pulling and termination to the HU or if you want to connect your camera's wires to the HU in order to make sure that everything works and then finish with the rest of your camera installation process. However, most of the people recommend to check the camera first. The most important, that you will allocate enough time for this project and please be patient.

Let's start with the Head Unit first. In order to remove it:

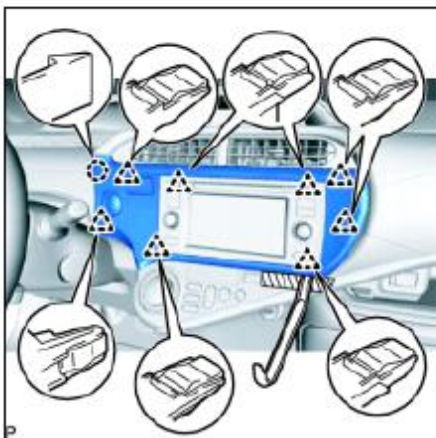
REMOVE CENTER INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY



(a) Apply protective tape to the area shown in the illustration.

Text in Illustration

*1	Protective Tape
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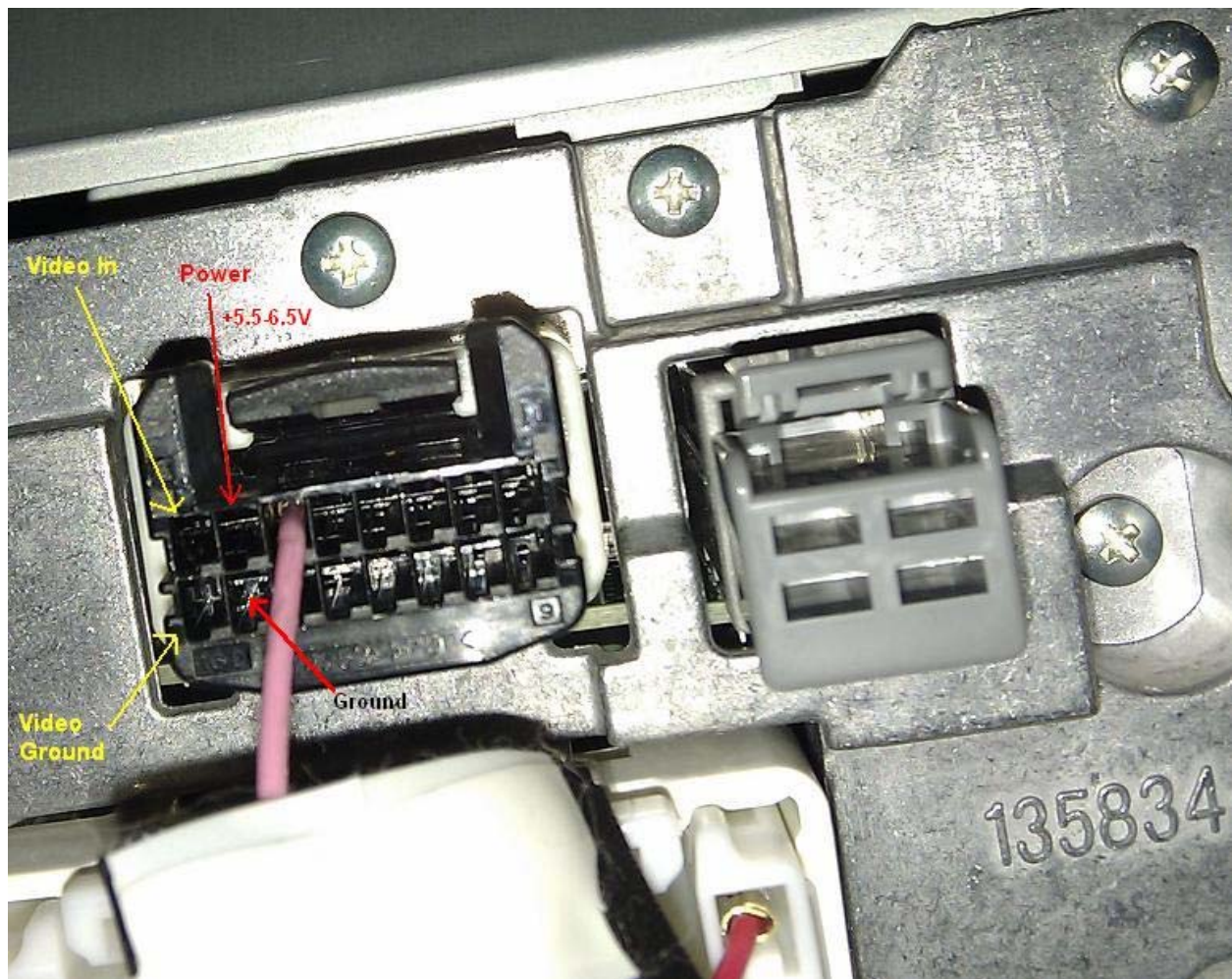


(b) Using a moulding remover, disengage the 8 clips and claw.

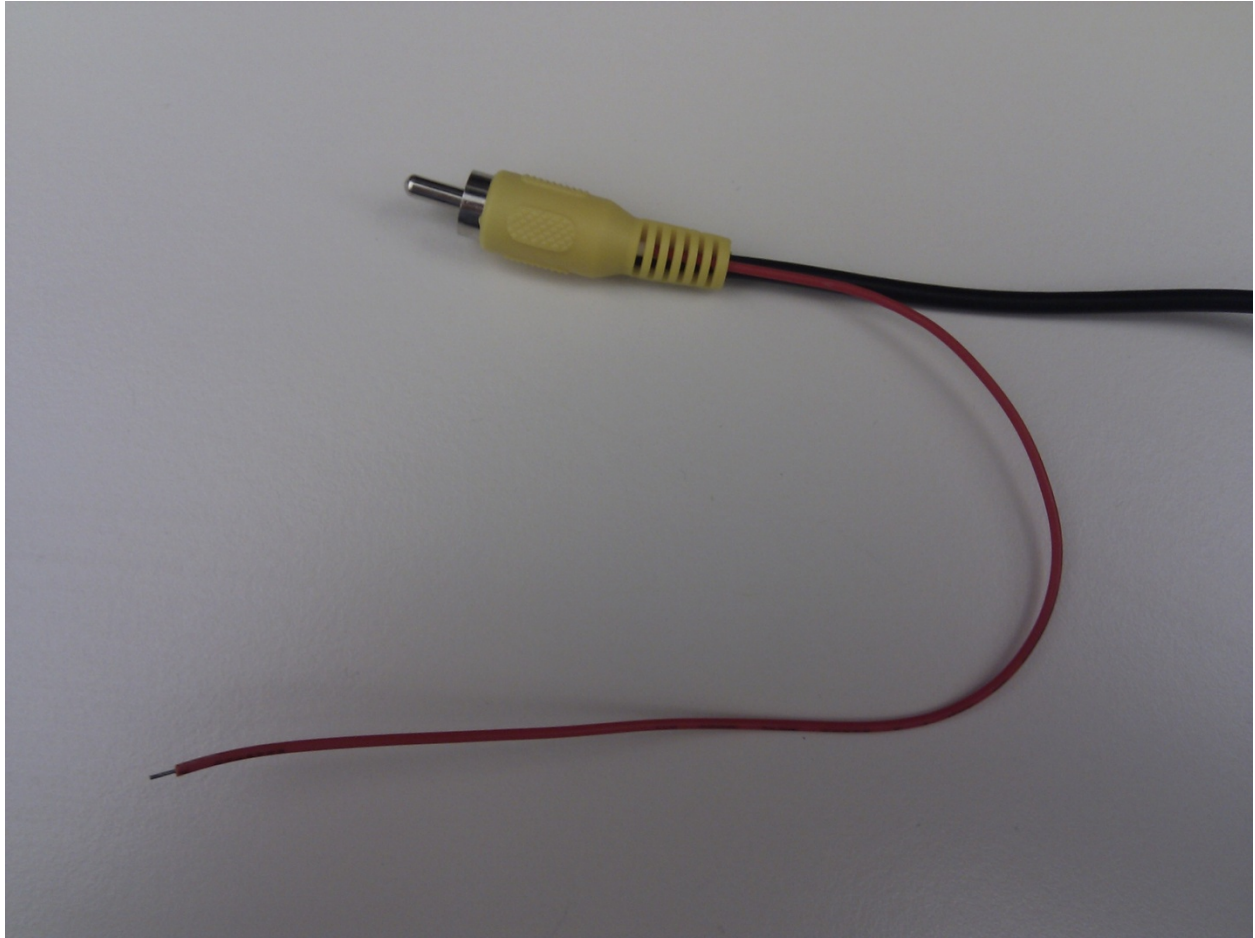
(c) Disconnect the connector and remove the center instrument cluster finish panel sub-assembly.

The HU itself is going to be mounted on 4 screws. Once you will take them out, to pull the HU will not cause any problems. Once the HU is out - put something soft underneath in order to make sure that you will not scratch your AC cluster.

On the back side of the HU you need to find a black connector (G79) with 16 pins in it. This connector originally has only one wire (purple) in it, located in pin #6. This wire is parking brake wire. This is how the connector looks like:



I am sure, if you have an aftermarket camera, the original connector on your wire will be an analog connector, aka RCA connector. Something like I've got:

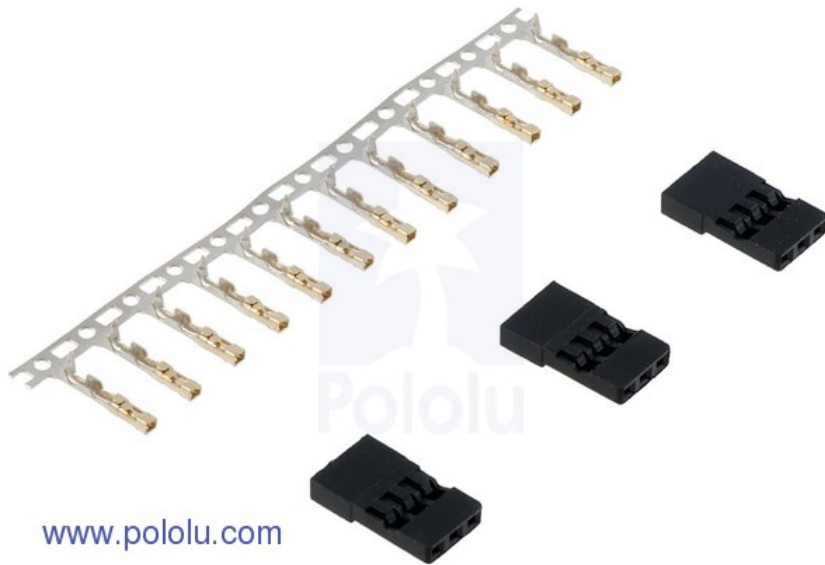


Since the write up is revised based on what we found out during our tries, here is a little bit modified description:

You need to cut this connector off, since our HUs do not have such input. Once you will cut it off, you need to strip the wires, and most probably you will see 2 wires at the beginning; however, there will be 3 wires: red (power to the camera), yellow (video in) and non-insulated wire (camera ground) covered with aluminum shielding (was blue for me).

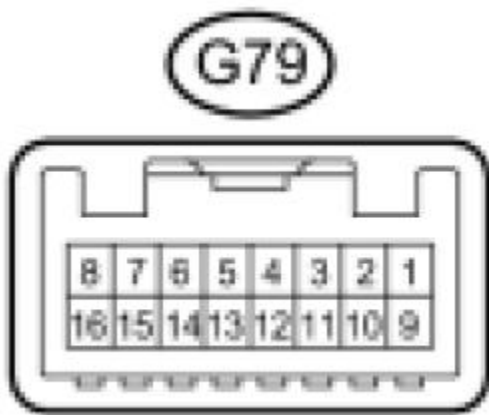
Since our HU just give 5.5-6.5V on the pin #7, this power is not enough for the most aftermarket cameras, cause they are rated for 12V. Taking this into consideration I pulled two sets of wires. One for the camera's video signal and another one for power (schematic is given below).

Once your wires are stripped, you need to put crimp pins on them. After couple of tries I found a perfect match. I have ordered them from here: <http://www.pololu.com/catalog/product/1924>



www.pololu.com

Once your wires are crimped, you need to put them into the right terminals of your connector G79 (the black one)



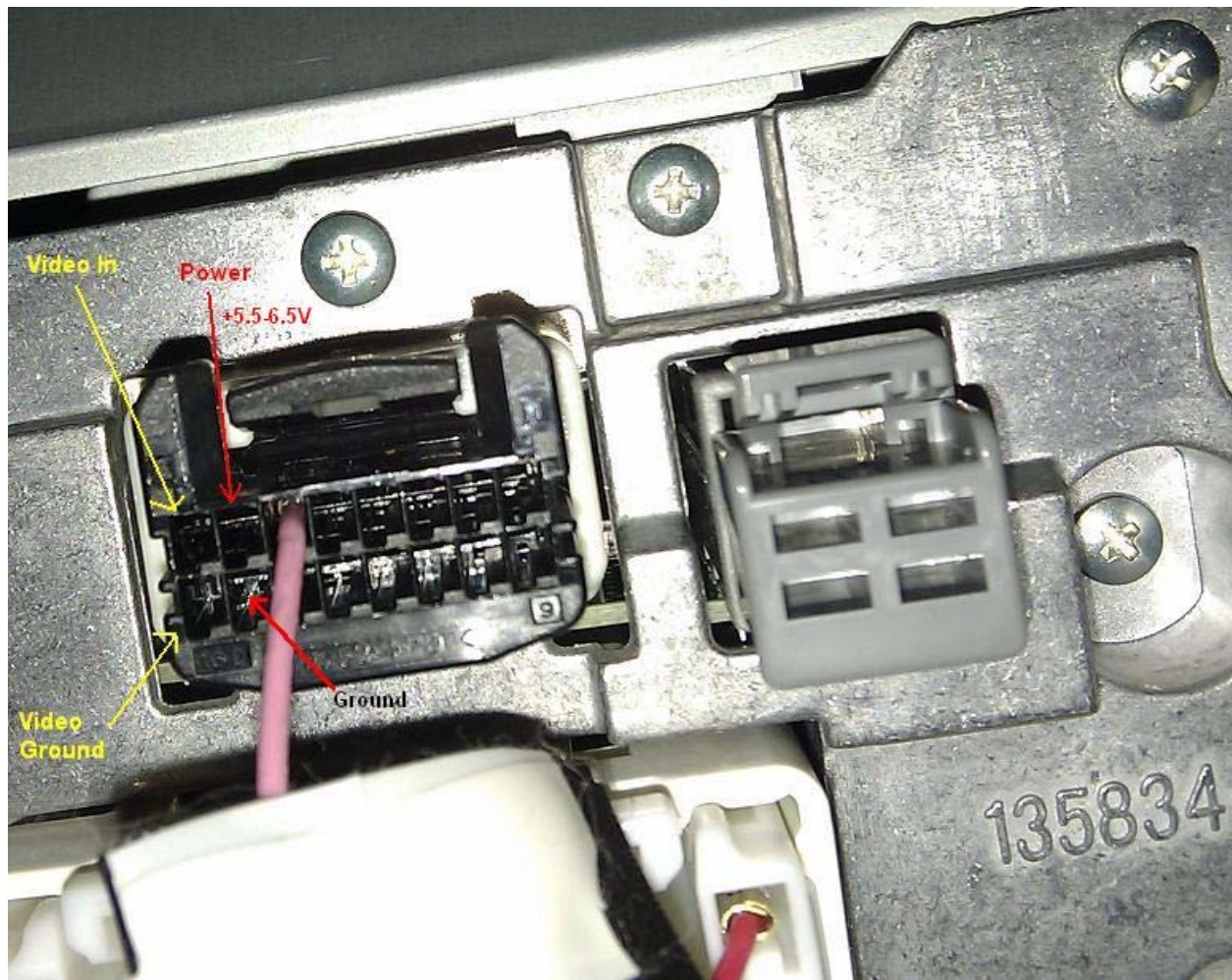
As I mentioned earlier:

Pin #8 (left top corner) is your Video in (+)

Pin #16 is your Video ground

Pin # 7 is your power +5.5-6.5V

Pin#15 is your ground



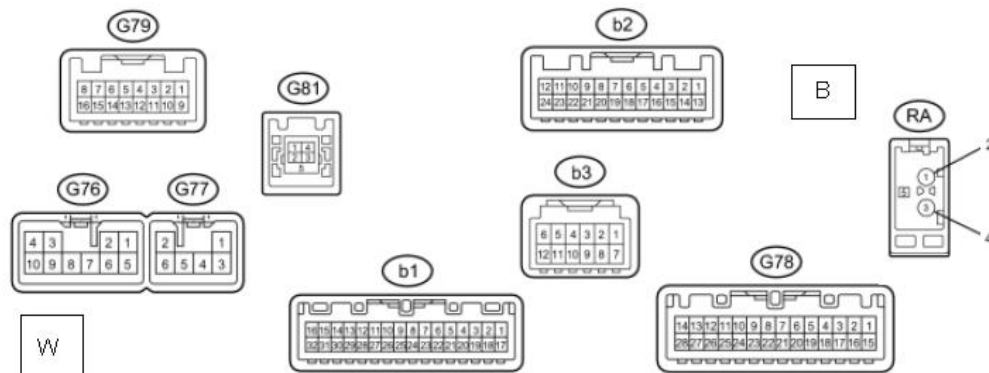
In order to put the crimped pins inside of the connector, you need to lift small clamp with the needle. There is only one way for crimp to seat properly. The dip part of the crimp should look towards the clamp on your connector.

These part should face towards the clamp

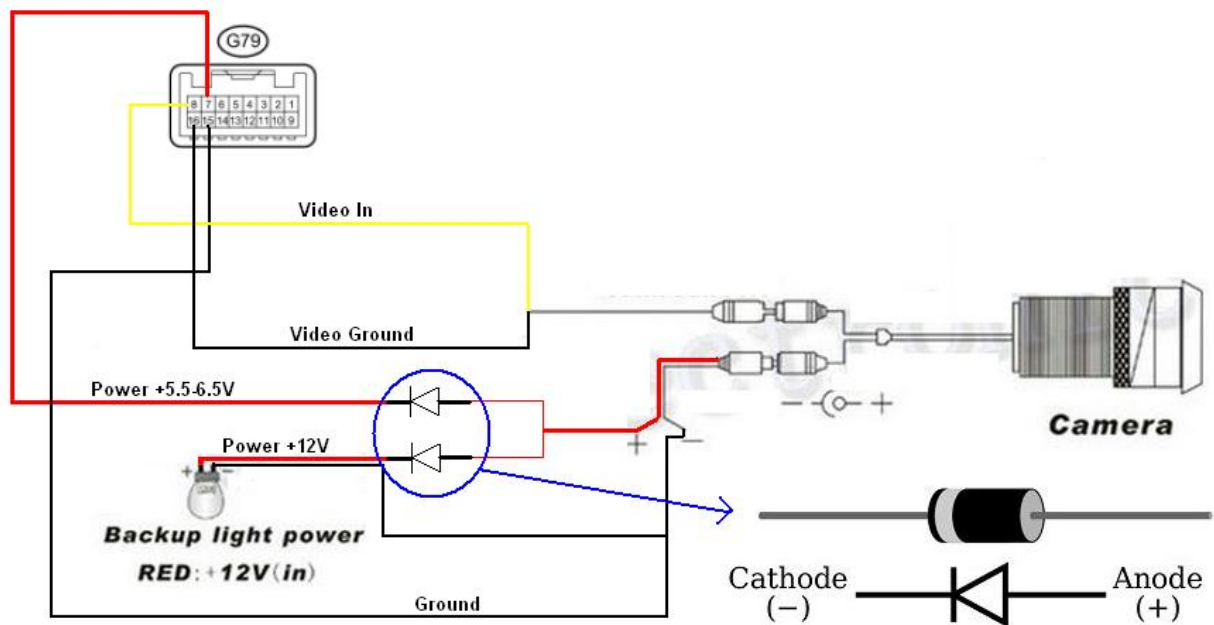


You need to push the pins all the way down the terminal. I used a paper clip for this purpose. Once you'll put all the pins into respective terminals press and close the clamp (it should click).

Here is some schematic of how everything is connected for me:



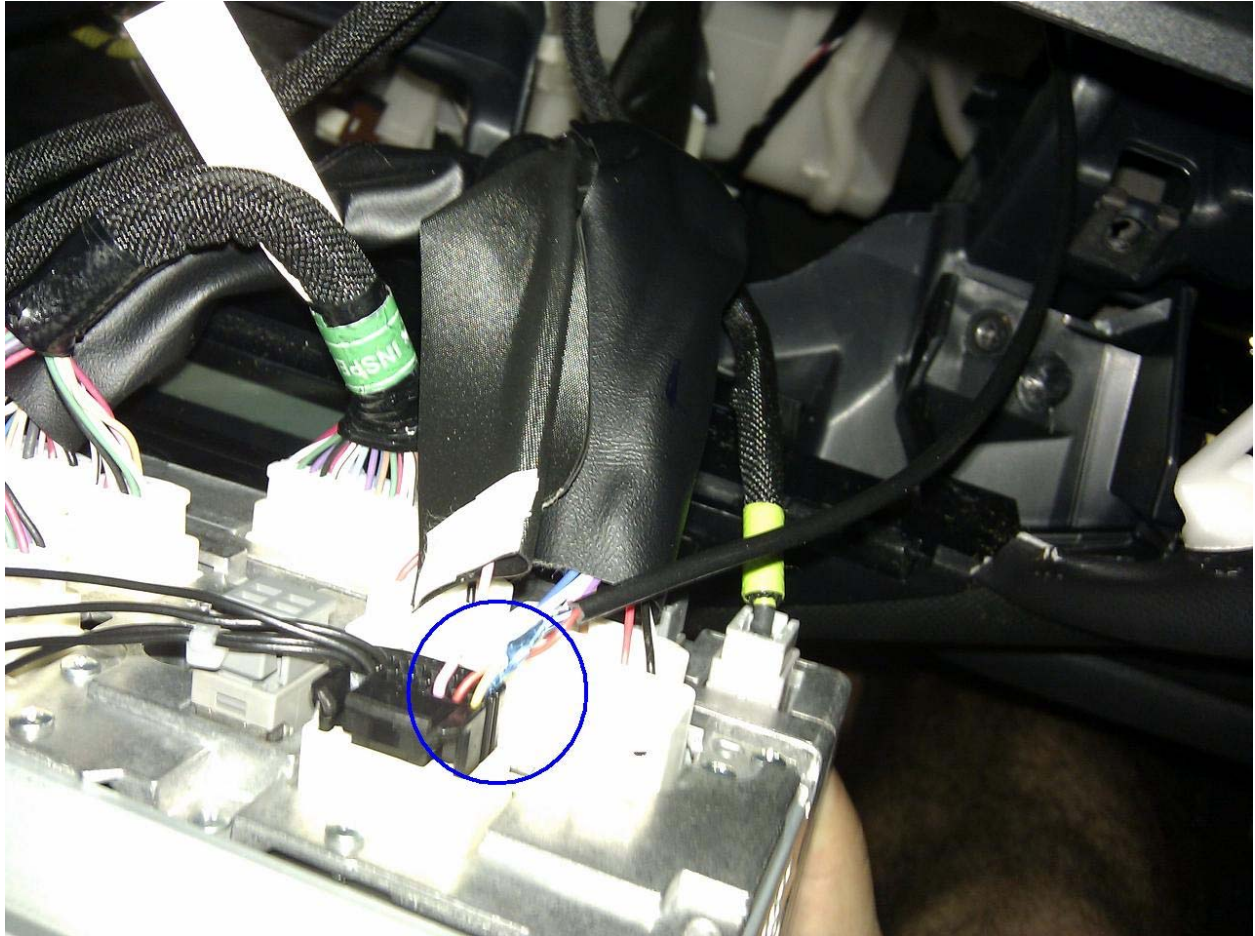
Note: I didn't find any description for the black B and white W connectors indicated here. But that's how the back of HU should look like. At least for my PC4.



I personally soldered both sides of my diodes.

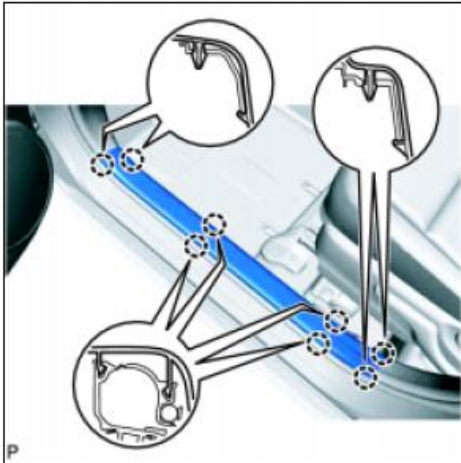
I bought diodes from RadioShack, their store # IN4004. They were less than 3 dollars for the package of two.

So at the end of this step you should see something like this:



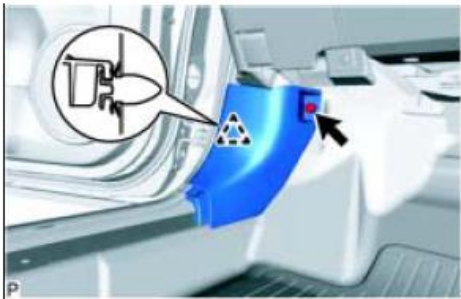
That's pretty much it with the HU. You can put it temporary back, connect the camera to the other side of your wire harness, start the car, put in reverse and you should see your video. If you can see the video, you can permanently put your HU back.

Now about the way I pull my wires down to the trunk. I pulled them underneath the lower panel (below my steering wheel) then I put them underneath the carpet behind my pedals and then along the door sills. To remove the door sills is not a problem, here is the description:



(a) Disengage the 8 claws and remove the front door scuff plate LH.

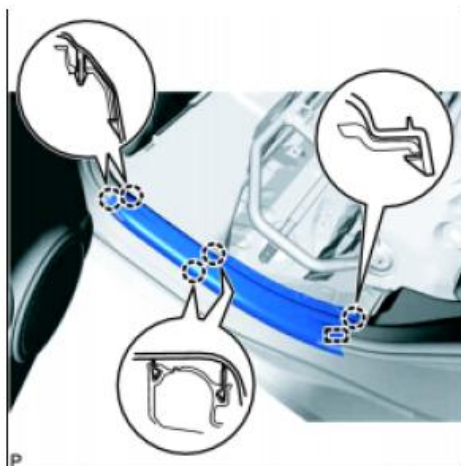
REMOVE COWL SIDE TRIM BOARD LH



(a) Remove the clip.

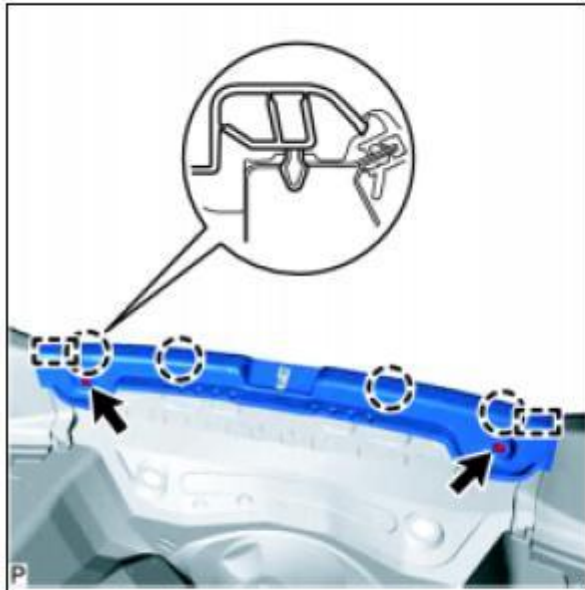
(b) Disengage the clip and remove the cowl side trim board LH.

REMOVE REAR DOOR SCUFF PLATE LH



(a) Disengage the 5 claws and guide and remove the rear door scuff plate LH.

REMOVE REAR DECK TRIM COVER

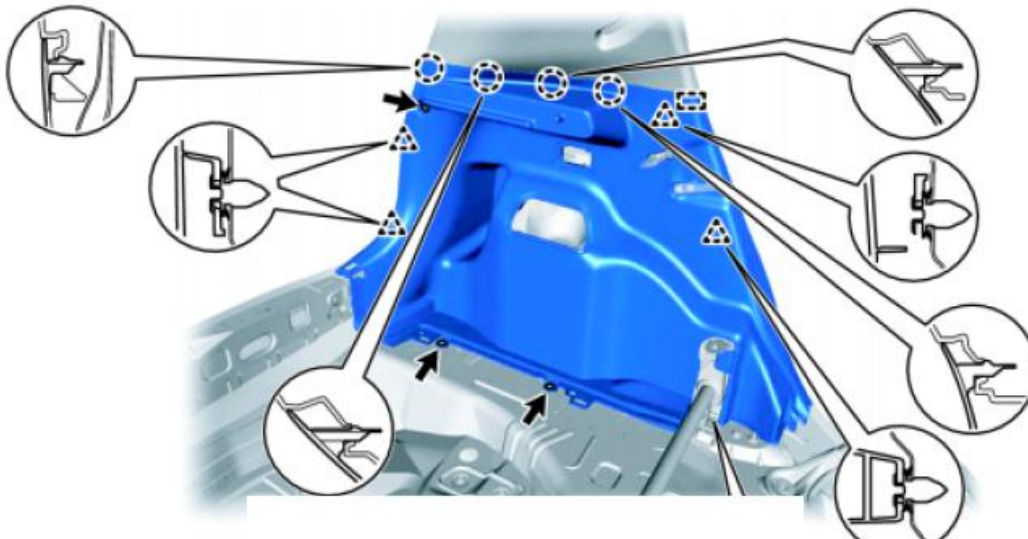


(a) Remove the 2 clips.

(b) Disengage the 4 claws and 2 guides, and remove the rear deck trim cover.

REMOVE DECK TRIM SIDE PANEL ASSEMBLY

(a) Turn the rear seatback hinge in the direction indicated by the arrow shown in the illustration.

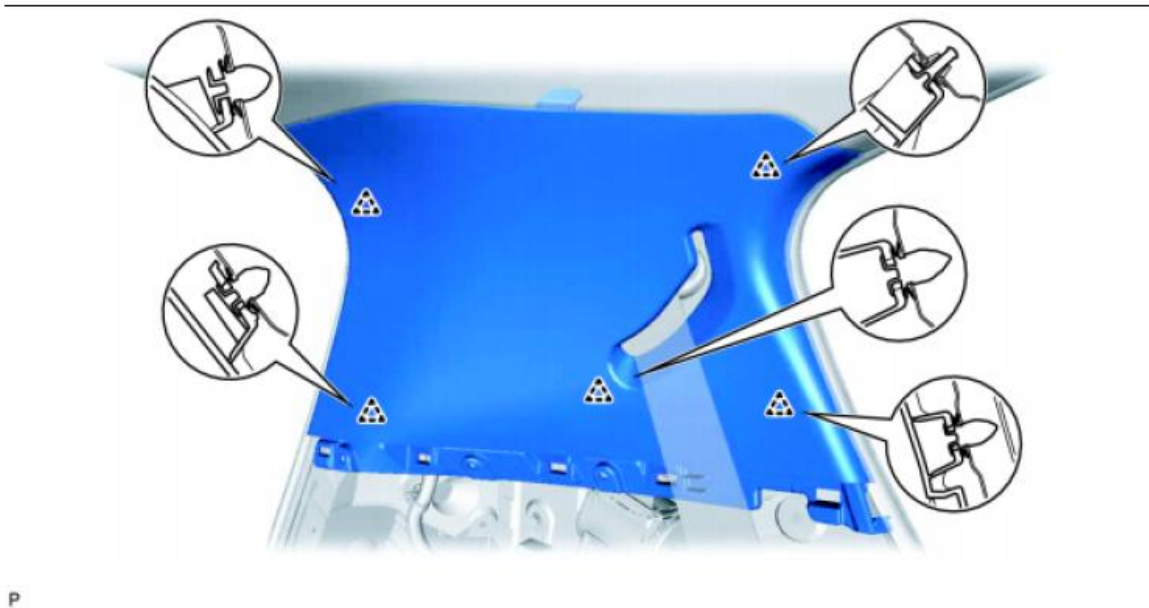


(b) Remove the bolt and 2 screws.

(c) Disengage the 4 claws, 4 clips and guide, and remove the deck trim side panel assembly

REMOVE ROOF SIDE INNER GARNISH

(a) Disengage the 5 clips.



(b) Pass the floor anchor of the rear seat 3 point type outer belt assembly LH through the roof side inner garnish LH and remove the roof side inner garnish LH.

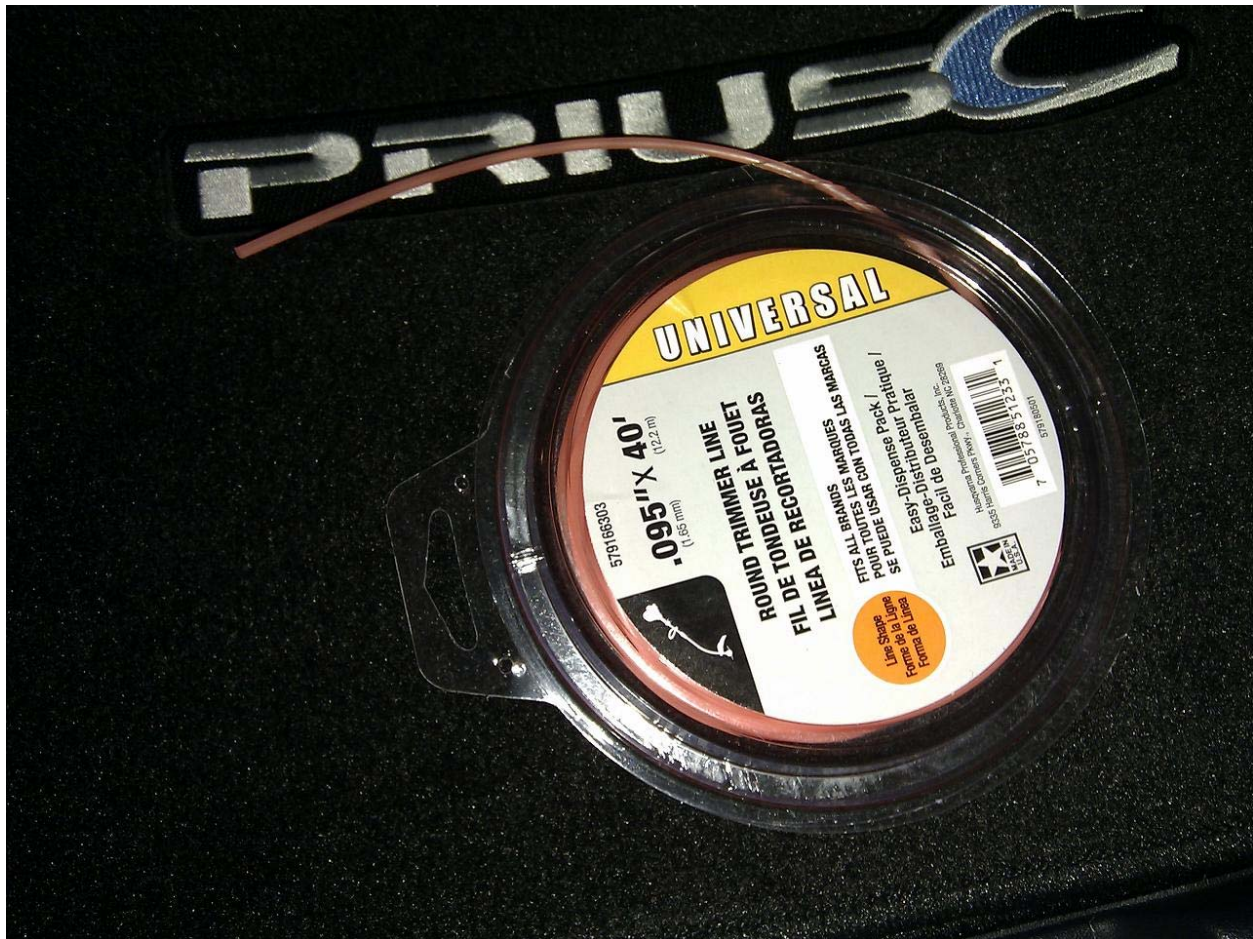
However, I didn't remove roof side inner garnish in my car, I just pulled the wire in between its edge and the trunk sealing rubber.

Then I pulled the wire into my trunk door:

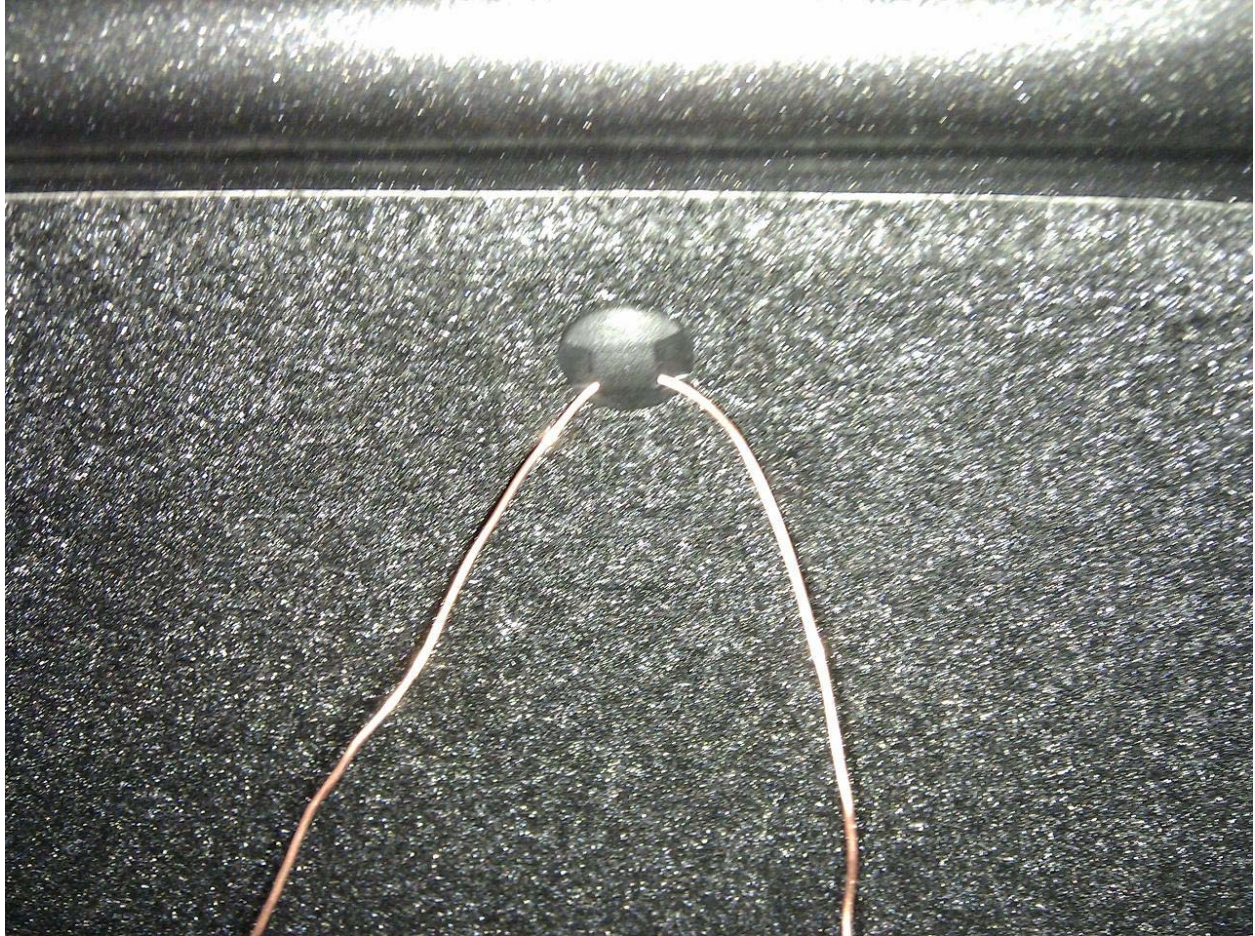




HINT: The easiest way to do it (IMHO) to pull some plastic line (I used round trimmer line for this purpose, see pic below) through the rear door first and then tape (I used electric insulation tape for this purpose) your camera's wire to the plastic wire and pull everything together.



To remove the cover on your trunk door it seems like an easy task but the suckers which holding the cover are not so easy to remove, at least with the screw driver. The easier solution I found is to pull some wire through them, and then pull them with this wire.



Where and how to mount the camera on your trunk door is completely up to you and design of your back up camera. So I will leave it up to each of you; however, mine was the type which you can put instead of the license plate light, even though nothing is perfect and I had to make some modifications in order to make it fit.