

Dashcam install in Model 3

Intro:

It has been rumored that Model 3 might have some ability in future to use existing cameras to act as a dashcam. For this reason, I decided to do a dashcam install in the Model 3 that I could easily pull out and with the install, have a minimum impact on modifications to the car. Additionally, I didn't want to cut any wires from the dashcam so it remains as received from factory for re-use or resale.

I'm happy to report I have finished the dashcam install and am happy with it that it meets the above requirements yet is installed well enough to leave it on in the event Tesla doesn't enable a dashcam. The only modification to the car is that would be different if/when I remove the dashcam is an extra hole in the rubber grommet (that two factory wires already utilize) in order to run constant always-on 12V power into the car. The 12V cigarette lighter in the center console is only on when the screen is on so that would not enable dashcam footage during parking. That 12V line coming in might remain even after the dashcam is removed in order to allow future use for other always on 12V accessories.

The dashcam that I decided on is the Blackvue DR750S-2CH. I have experience with 3 prior dashcam models and this is the newest model.

The difficulty of this install is relatively easy as a result and I would rate it a relatively easy DIY for someone handy. Ok here we go.

A. Mounting cameras.

Because the Blackvue can send the real time image from both front and rear cameras to your smartphone, you can utilize this capability to make sure you position your cameras exactly where you want them and ensure yourself that once you stick them on the windows they will be just where to want them. To do this just plug the Blackvue cigarette plug into the cigarette plug receptacle in the console and run the camera cable from front to rear. If you slide the front camera out of the mount, you can read the Wifi SSID and password to link to it's wifi. Also the serial number and a QR code to register it easily. Download the Blackvue app, then link to the Blackvue's wifi and then load the app and you can see the views out each camera as long as the Model 3 screen is on.

You can elect to put them more out of the way or more in the center of the car. I elected to put them right on the centerline of the car so that the views were symmetrical. If the rear camera bothers you by seeing it in the rear view mirror all the time, you can put it in a place where the rear seat rests would block your view of it from the driver's rear view mirror. With the front camera you can mount it below the existing camera housing as I did or you can mount it high and to the right of the existing camera housing on the Model 3. That is also a good option.

To determine position you want the cameras, after enabling your smartphone to see the real time images, here I start with the rear camera and position it with something underneath to hold it. The shelf under the rear window enables you to do that easily. Then using the wifi app using your phone to see what it's seeing behind you move it around and look at it from the driver's position. As I mentioned, I decided to line up the camera so the lens of the camera was in the centerline of the car. That puts most of the housing slightly to the left (drivers side). You can get out of the car and look carefully to make sure the camera lens is centered in the car and it's orientation is directly in line with the centerline of the car. The red heating element is nicely perpendicular to the centerline making this process easy. When you're ready, peel off the double stick tape and affix the camera or just the mount against the window. You can slide the camera out of the mount to enable you to press evenly and also it's less weight. I just put something under to the camera to hold it up for awhile.



Put something under camera to hold it
To determine position and hold it while
double stick sets.





View of camera from inside car and thru rear view mirror. (It might be better a little lower.)

That done, move to the front camera. Here are few pictures where I decided to put it. Camera lens is on centerline of car. I held it while someone outside confirmed it. Here are some pictures of the position. Another choice might be just to right of Model 3 camera housing at top of windshield.



In the case of the front camera, I removed the camera from the mount and pressed all around the mount base to ensure it was secure to the window and let it sit for



awhile before putting the camera back into the mount. There is a button on the Blackvue front camera to unlock it so it is removable and also rotates for best view.

That done, time to tuck the wires out of view.

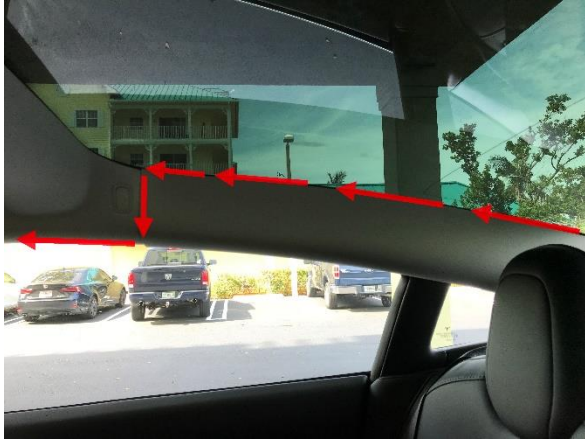
Starting with the rear camera wires, go back and down between the window and the shelf, there is some foam. The wire just slips behind there. Now run the wire along there to the right side of the car and then up the window between the window and the trim. Use the Blackvue tool to pry the trim panels out as you move along. Gently push the wire in with the end of the tool if it's a little tight. Mostly you can just push on the wire as you go along. You'll figure it out. It isn't hard.



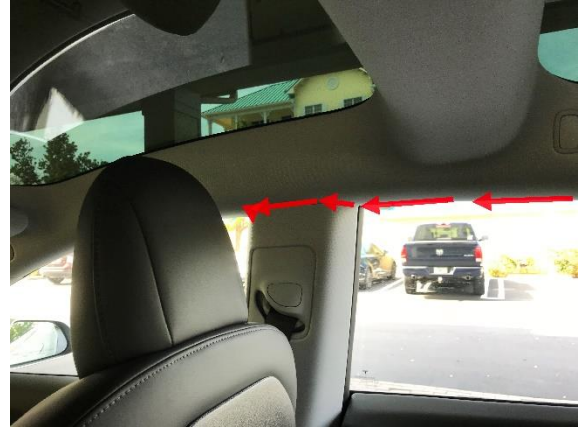
1. Where rear camera begins journey



2. Continue along window and up



3. As you move up the roof window go down at the trim junction



4. This enables you to cross under the roof beam and across "B" pillar



5. After "B" pillar, you're going to use that location for the extra wire. Now go to camera and run the camera wire from where it plugs into the front camera wire back along to the right of the Model 3 camera housing and then push it between the windshield and the trim back to where the rest of the wire remains and tuck the excess wire in where shown.



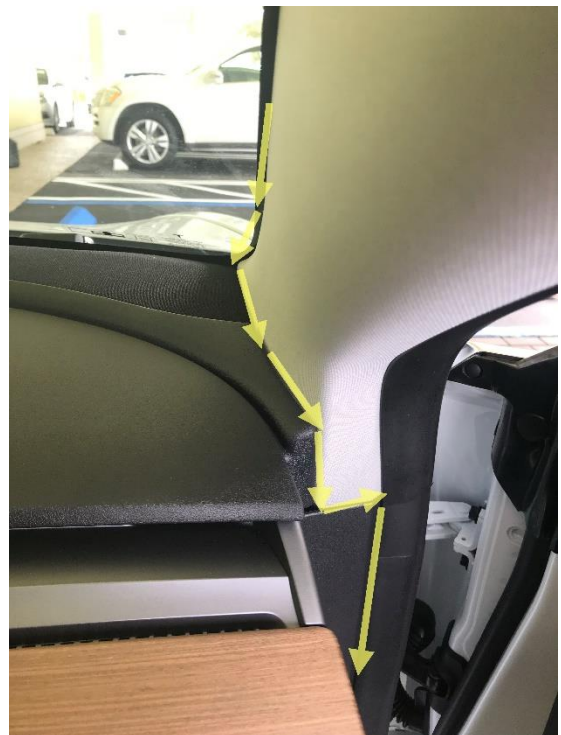
6. Bringing wire from connection at Camera back to where you left off after crossing "B" pillar. This is where to tuck in excess wire. Of course it's easier to do with doors open pulling the rubber out and tucking the wire behind the trim at the edge. This completes routing of the camera wire.

This picture gives you idea of the amount of excess camera wire you have to tuck in. Not too much.

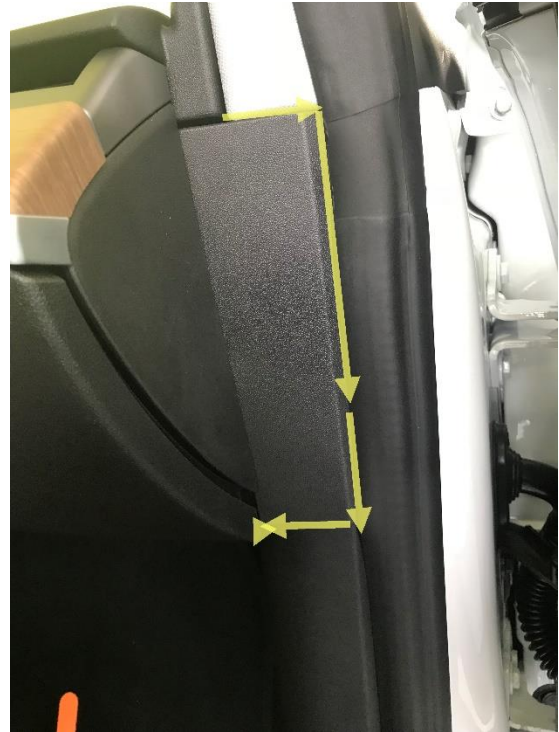


Next is routing the Blackvue power wire.

The power wire plugs into the front camera. Plug in and run that wire back to the same place the camera wire is and along the windshield but don't cross the pillar, just continue tucking the power the right side of the windshield under the trim, forward to the bottom and then tuck it under the trim as shown below.



Actually the top of that dark hard trim has a little clip in it. You can see below Pull it out enough to put wire behind it so it doesn't push out the top of the trim. The actual route is diagonally down and then across between glovebox door and side wall.



Then route between bottom of glovebox and sidewall forward to top of carpet in foot rest area and then to left to left corner. This is close to where the power will come out and connect with the camera power and both will tuck in behind the plastic piece above foot area where it meets carpet.



This is the excess wire from the power cable meeting the red/black wires from the Tesla battery. Those wires run from the battery to that location. How to do that is next.



=====

Running the power from Tesla battery into car:

Open the front trunk (frunk) and note the large panel closest to the windshield.

Grab almost anywhere on the panel and lift straight up. The clips will release with a pop. There are about 8 of them. Just pull it straight up until it's free and put it aside.



Under that panel you will see another vent with 4 which clips similar to what the other panel had if you turn it over you'll see them. You can see the 4 white clips in the picture below. Pull up on that panel with the vent and it will lift out. Careful not to lose the white clips. They will mostly stay captive but can come out.



When you remove the panel, you will see the battery in the center of the car.

This is where you can attach the always on wires. I had some good black and red wire so I used that and crimped on the appropriate size terminal eye to go on the positive and negative terminals of the battery. I used the existing nuts (10mm socket) to attach to the existing posts. (When you remove the positive nut, be sure to hold the battery cable against the battery post to keep power from disconnecting)

I have a 15A fuse on the positive wire. The smaller fuse for the Blackvue is contained in the cigarette plug at the end of the power cable.



Keep the fuse out of the power cable until you're done wiring to be safe. About 5 feet of cable is more than enough for this job. Excess is stored underneath or you can cut off excess later. Next is to locate the grommet between the inside of the car and the trunk space. For that you go into the passenger area and lift back the top corner of the carpet just to the left of the circular area shown below. Underneath you will see two orange wires coming thru the rubber grommet. In the picture shown, I've already run the black and red wires thru the same grommet.



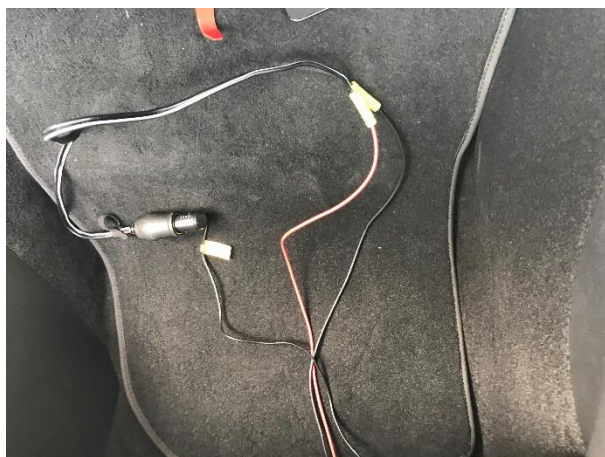
There are a few ways to punch a little hole in the grommet away from existing wires. I used a Dremel tool to bore thru it. I suppose a soldering iron could burn a little hole and make a smell as well. I didn't want to cut it for fear the cut would run. So I used this tool carefully not to touch the other two wires and it did the job easily.



I stuck a thin stainless wire thru the newly created hole from inside the footwell and then went outside the car to look down to see if I could see it coming out. Below is the inside picture and the one taken outside looking down from behind where the vent piece was pulled out. It's easy to find it because of the two orange wires coming out.



Now I took the black and red wires and stripped about ½” and making sure the fuse was removed from the red wire before I started this step! Twist the two wires to hold them together and route the wire down from the battery to the grommet and push it thru the hole. Then go into passenger footwell and pull the wires out thru the grommet. Now you're done with 90% of the job. I spliced a female cigarette receptacle on the two wires (red to center of receptacle) and plugged in the Blackvue. Then went out and plugged in the 15A fuse in the fuse holder near the positive terminal. Blackvue comes on and you've confirmed power. Replace vent piece, and cover panel in frunk and close frunk. Go inside and tuck the remaining wires up behind the black panel just above the carpet in the top left corner of the footwell. In the picture below you can see a little of the red wire in the little hole showing where it's stowed.



Again, picture of the wires before tucking them behind top of passenger footwell area on left side. You can see a little bit of red wire in corner inside due to flash.

Last step is I used a couple of the double stick wire holders provided by Blackvue to attach the front wires to the right side of the Model 3 windshield camera housing to keep them from flopping around and did the same on the rear camera but up to the window, both of which you can see in the pictures.

Feel free to leave comments, questions. If this helped you, let me know. My Tesla referral code link is:

<http://ts.la/norman6716>

if you wish to contribute crypto ☺

ETH: 0x42d5d7EEf6bAD946C9FA0be2d9C9c8Cc645Bd97D

BTC: 1N857zoxwSZNiyuGX4Q8A16Wqhs4F2Rqbm

LTC: LSJ84sFYUh254bS9ojFh1Vd3eLT8pN7qQQ

BCH: qzw9jszhmrc25a9qptwe66v8wec88pphyuf0e6r3cj

Additional pictures:



