

Backup camera for e88

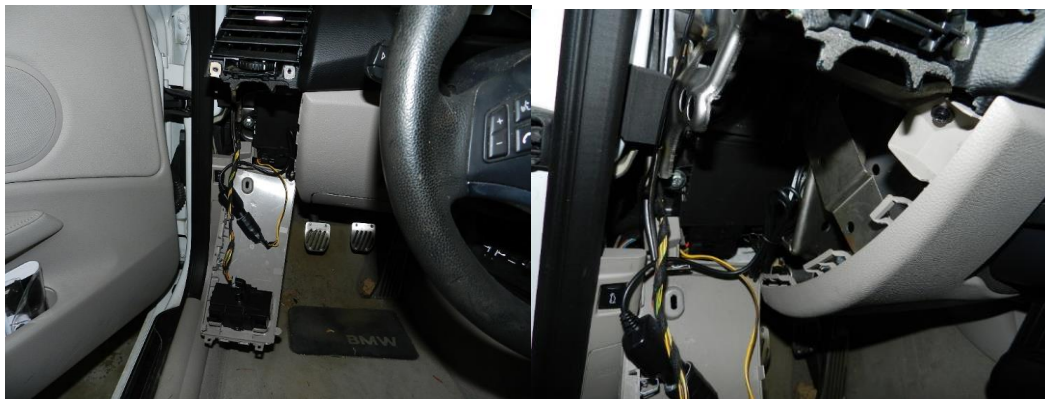
We love our 128i convertibles (my wife and I each have one) but they have huge blind spots because of the size of the back glass. Top down isn't an issue, of course, but when the top is up, it is harder to see out than my SUV. I have had several rental cars with backup cameras and wanted one for my bimmer. Not an inexpensive one with lots of noise in the signal like I have in my SUV but a nice one like the rentals had.

I have a nuvi on my dash. It was initially on the right of the gauges on a mount sold for the BMW portable pro. Later I moved it to the left of the gauges on a mount I made myself (there is a DIY). When I saw that Garmin had a backup camera, I started thinking. But it meant a new nuvi. My first was a 350 which I gave my daughter. Then I bought a 760 which I still have, then a 765 which Garmin bricked with their map update process and then I bought a 885t. I like storing MP3s on them and the new ones don't do that. But I wanted a backup camera.

So I started looking at newer nuvis and found that the only 4.3 inch models – which I need to use my mount – which would work are the 2457 and 2497. I wanted the Bluetooth phone capability so I bought a 2497 – for a little over \$100 (used like new condition). That went on the dash just fine and I was happy to find Garmin has made real progress in the software in the 5 years I was out of the market. I also can see why people are going for bigger ones – there is more information on the screen now!

Then my wife gave me a BC30 for an anniversary present. So I had to put it on.

The BC30 has a different power cord with a receiver for the camera built in. So I had to take my dash apart again to put it in. I have an accessory socket hooked to the circuit recommended by BMW for the portable pro but it is in the area of the steering wheel, in the dash. So I have to pull the gauge cluster, the hood over the gauges, the trim over the vents on the left of the gauges, the panel with the headlight switch and the L shaped piece to the left of that panel that goes under the door weather strip. Here's a couple pictures:





After I got the front end back together, I went to the back. I don't like to drill holes in my bimmer but I don't have a big issue with drilling or otherwise modifying plastic pieces I could replace if I want to go back to original configuration. The license plate frame is a plastic piece that screws to the back of the car. So attaching to that, as recommended, made sense. But there wasn't space above the license plate so I put it below. But how to get the wire in? I found out I could pop the plastic piece you push to open the trunk out by pushing on it in the center. A 11/32 hole (put it in the bend) let me snake the wire from the camera into the trunk lid. Pictures:



There's a little space behind the license plate frame where you can run the wire.

Then I popped the cover off the inside of the trunk lid



This is the tough part. I decided to mount the transmitter on the inside in the center so it would face the receiver with only the seats in the way. It works well. That let me keep everything but the power wire in this area. But the power wire has to move across the trunk lid and through the flexible conduit into the passenger's side of the trunk. Which meant that liner had to get partially removed for access. I found a piece of weed whacker line handy for snaking the power wire through the conduit. I wired the backup lights to a relay. The next to the bottom wire was the backup light, I think it is black with a purple stripe. I probed the connector with a multi meter while my wife had the car idling with the clutch in and the transmission in reverse. I just stripped the insulation and soldered my trigger wire. I got a relay and hoop connectors and flat connectors at advance auto for \$15. I hooked to the battery negative and positive for power to the relay. I dropped the relay (after tapping up the connections, into a cavity under the cover. So you can see the wires at the battery and a little at the camera but otherwise everything is hidden. And it works.

Initially I had it at the bottom but I didn't like the looks:



So today I modified the license plate frame to lower it and move the camera to the top, in the center. The screws that attach the frame to the car go through brass (or brass plated) fittings. Those come out if you tap on them. A new hole higher, tap them back in and the plate is lowered. I decided the camera would look best in the center so I bolted the bracket there (put tape of the bolt so it doesn't scratch your bimmer) and put it back together. I think it looks much better.



And it works great! No noise (the shielded power cord may help). Nuvi shows the back view when I shift to reverse. When I shift to first, nuvi display goes to normal. I programmed the lines (a simple process) so they line up with the sides of the car. I can't get the back red line to the back of the car, it gives me about 2 feet of margin, but that's OK.

It took me at least 5 hours to do this installation. It is not super easy. But it is also not something you can't do if you are persistent. Plastic pry bars are really nice for pulling the pieces out. Torx screw drivers are absolutely necessary. A drill with bits is necessary. A soldering iron is nice but you can probably do everything with crimp connectors.