

Adding a backup camera to your Miata... Rich Velardo July 19, 2018

How easy is it to see out when you back up your Miata when the top is UP? Yeah, not easy is it? How about when you're parked between two big 'ol SUVs, can you see what's coming as you back out? Nope, you sure can't. I often tell people that it's easier to see when backing a school bus than to see when backing a Miata with the top up.

The solution is to add a backup camera to your Miata. This is surprisingly easy to do and will work on any year Miata pre 2016. If you swapped radios in your car "back in the day", then you'll be able to handle this project. You'll have to change out the factory stereo system head unit for one with a touchscreen display and install a backup camera. To do this sellers like [Crutchfield](#) will provide everything that you'll need to do the job. From one source you can buy the head unit, camera and all of the installation parts that will be required.

What you'll need:

1) **Head unit.** This will have to be a "Double-DIN" unit. DIN is short for "Deutsches Institut für Normung" which is German for "German institute for standardization". Anyway, the double DIN is twice as tall as a single DIN head unit. Single is roughly 7" x 2" and the double DIN is (amazingly enough) twice the height at approximately 7" x 4". You'll find that just about every touch screen head unit also supports bluetooth, many also have a navigation system installed as well and are all set up for Sirius, Apple Car Play, Android Auto and other radio subscription services.

2) **Backup camera.**



Pretty much any one will do, but for a few more bucks get one that's high resolution, is good in the dark and looks like it'll be easy to mount. There'll be plenty of wire to run for this, but wireless cameras are also available. I used a Clarion CC520 that cost \$95.

3) **Steering wheel control adaptor.**



This is a slick little box of tricks that lets your steering wheel controls for the factory radio, work with your brand new double din head unit. This steering wheel control interface is an Axxess ASWC-1 that cost \$60.

4) **Radio surround panel** to fit your new head unit.



Supplied as part of the whole head unit package from Crutchfield & other suppliers. This is the Metra single/double DIN surround & mounting hardware was included at no extra charge.

5) **Wiring harness adaptors.**



This will allow you to simply plug your new head unit into the existing Mazda wiring harness. You won't have to do any splicing or soldering in the car. This is always a good thing. This is the Metra wiring harness adaptor that was also included at no extra charge with the head unit.

The process: this is pretty straight forward:

First, you'll need to join the wires from the head unit harness adaptor to the Mazda harness adaptor. Do this "on the bench" & be sure that you triple check every single connection. Yes this is tedious but when you slip the head unit into the dash & simply plug it in, you'll be glad that you did this.

Second, pull out the factory radio & find a home for the steering wheel /radio control conversion unit.

Third, mount the camera & get it wired. You'll probably have only one cable to the head unit, one wire to the backup light and one wire to ground. When you shift to reverse & the backup light goes on, the camera turns on. My head unit has the option for a front camera as well.

Fourth, run that cable from the backup camera to the front, I just ran it under the carpet from the trunk & then under the sill plates.....easy.

Fifth, get the radio ready to install & do a test fit to see how much trouble the wires are going to be to get them all crammed in behind the head unit. If it all looks like it'll work, hook everything together for a test before final installation. With luck there won't be any smoke escaping from the wires either.

Sixth, once you've found that missed connection and everything finally is working you can do the final installation. Then get it all set up & adjusted to your liking and go show off your great work!



The camera is just above the "C" in the license plate. I'm finding that it's in the way when loading the trunk so it's going to be moved to beneath the License plate.



The new head unit & surround mounted in the dash...looks factory. The mic for the Bluetooth is behind the steering wheel.

Backup camera view, different cameras & head units give better or worse picture quality and different line patterns as well.

