

## An Interior Lighting Project

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In last month's installment, we covered adding lights to the red reflectors located in the rear bumper. I've since been asked how to make those new lights flash in-sync with the turn-signals. It's certainly possible, the instructions to do this can be found here: [http://www.miata.net/garage/sidemarkers\\_turn\\_signals.html](http://www.miata.net/garage/sidemarkers_turn_signals.html)

This month, we'll talk about adding some lighting in the footwells. Having some light down there is both convenient and looks good to boot. You've got a couple alternatives for the NA & NB cars. First, you can buy the console lighting kit that Moss sells (\$38.95). It's a bit pricey and they're not offering those kits in tan anymore for those of us with tan interiors. Or, you can assemble and install your own kit that hides the lights underneath the dash. Mazda offers a kit for the NC cars that works this way. (See the accompanying picture)



Figure 1 - lighted footwell in NC (credit: Moss Motors)

In this article, we'll walk through the setup I installed last year on my own car.

First, you'll need a few parts; you may have some of these left over from last month's project:

- Two mini-marker lights for trailers. They can be found in any auto parts store for a few dollars each. I used red, but amber would work as well and be a bit brighter. You could also change the bulb color if you like.
- A package of Butt Connectors. (wire range 16 to 14 gauge.) These are blue plastic tubes about an inch long to which you will need to add short pieces of wire to extend the marker light

wires.

- A box of Quick Connectors. (for use with 18 to 14 gauge wire.) They are blue and box shaped with a fold-over tab. You'll need four.
- One roll of 14 gauge wire. (18 gauge will work.) You'll need about 6-8 feet, so you might look around and get the shortest roll you can find.
- One red 16-18 gauge crimp-on ring connector (90-95 models only)
- One roll of Vinyl Electrical Tape.
- Depending on where you mount the lights and the grounding method used by the lights you bought, you may require a few small nuts with bolts. Read on and you'll understand. :P

Let the fun begin!

1. Warm up the garage. It just makes everything easier...
2. Starting with the passenger side, look under the dash to find a location to mount your light. There's a stud under there on the NBs that's perfect. Work out how/where you're going to mount the light. Out of sight is best, pointing down or sideways won't matter. On my car, the light is mounted on the firewall, facing the back of the car. One bolt/screw is all that's needed, or you could even use double-sided tape if you like.
3. Now repeat the above process on the driver's side so you know where and how you're going to mount that light. Above the pedals, facing the driver's seat worked for me. I'm not being real specific here because the mounting options may vary from year-to-year.
4. Disconnect the negative terminal of the battery!!! (In the trunk, passenger side, neg. terminal is closest to the taillight. it has a 10mm bolt)
5. Read carefully before continuing. Move back to the passenger side and add some wire to that light using the butt connectors and spool of wire. Chances are, the light has one wire (+) and is grounded via the base. In this case, you'll need to attach a grounding wire to that side of the light using a bolt and nut. On the 90-95 cars, you'll be connecting into the car's wiring behind the courtesy light next to the glovebox. On the 96-05 cars, you'll be connecting on the driver's side, above the fuse box. Lengthen your wires accordingly and run them under the dash, behind the console, or

under the carpet as necessary to get them close to where we'll be connecting them. Go ahead and mount the light.

6. Having fun yet? Good! Now repeat the above process for the driver's side light.
7. At this point, you should have both lights mounted. Two wires from each light should be run to either the glovebox area (90-95) or the fuse box area (96-05).
8. Next use a Quick Connect to attach one of the (+) wires to the other (+) wire. The result should be that you have one bare-ended (+) wire with the other light's (+) attached to it. Do the same to the ground wires.
9. Now you're ready to tie into the car's wiring. We'll be using the wires that ultimately are attached to the dome light in the 96-05 cars or the dash-mounted courtesy light in the 90-95 models.
10. In the 96-05 cars: You're about to learn what it means to be a pretzel. Locate the connector for the factory dome light... under the driver's side dash... above the fuse panel. :O) It is usually wrapped in grey foam rubber and has two wires coming out of each end. These wires are red with a white stripe (+) and blue with a red stripe (ground). Use a Quick Connector to attach your (+) and ground wires to the corresponding factory wires.
11. For the 90-95 cars: With the glove box shut, remove the two screws for the hinges at the bottom edge. Now open the glove box and take it off. Reach in behind the interior light and push it forward, it'll be pretty tight. This will expose the wires you need. Pass your wires up from behind and use a Quick Connector to attach your (+) wire to the Red wire connected to the factory light. Crimp the ring connector onto your ground wire. Remove the screw from the back of the factory light. Place the ring connector over the hole and reinstall the screw. Reinstall the factory light into the dash. Reinstall the glove box.
12. Re-connect the battery, tighten down the bolt.
13. Test.
14. Success? Good! Problem? Check all the connections, especially the grounds. Oh, and don't bother trying to ground the lights directly onto the chassis. It doesn't work that way, at least not on my '99.

Now, enjoy some light in the footwells each time you open the doors! By the way, in the interest of full-disclosure, the wiring connection instructions (steps 10 & 11) were borrowed from the instructions used to install the Moss kit.

I hope you enjoyed a little more bonding time with your car. Next month, I'll think of something else to cover, let me know if you have any requests! Zoom, Zoom!

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