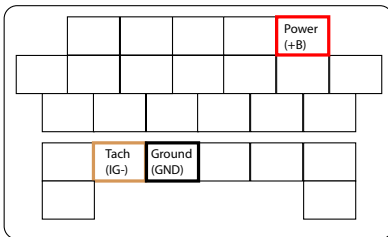




Installing a Revlight in a Miata

The Datatool Revlight was originally designed for motorcycle use. That doesn't matter, it'll work on four-wheeled toys as well. The Revlight can be installed in just about any location in the Miata with a bit of imagination - embedded in the gauge cover, on the windshield header, on the steering column, on the A pillar - it's up to you. We've even wired them in to the diagnostic connector temporarily and stuck them under a windshield wiper! Don't feel you have to follow our instructions to the letter.



Underhood diagnostic connector viewed from above

In order to function, the Revlight needs three things: power, ground and an ignition signal. These are all available in the connectors on the back of the instrument cluster, at the ECU or underhood at the diagnostic connector. The easiest is underhood, and the connections are shown here.



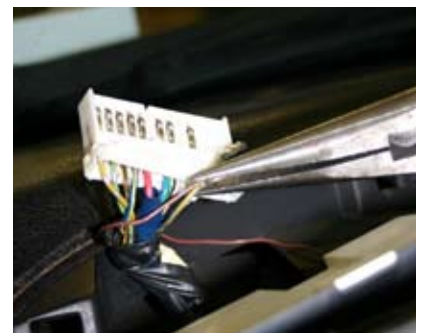
To tap into the back of the instrument cluster, you first have to expose the connections. On a 1990-97, remove the upper part of the cover over the steering column by unscrewing the four screws underneath. Pay attention - one of them is a different thread and one is in a really deep hole. Pop the cover off and set it aside. Now undo the two screws at the bottom of the gauge cover, then pull it towards you. It will let go with a bang and with older cars, it's possible one or two of the connectors will break off. If the plastic is cold, this is more likely. Once it's loose, the cover can be wiggled free and set aside.

On the 1999-05 models, the cover over the instruments can be simply pulled off without touching the steering column cover.

The connectors can be seen on the back of the gauge cluster. Press the tab at the top and pull them free. You can splice into the wires using several methods - crimp connectors, soldering or our favorite, molesting the terminals in the factory connector. Here's how you do that.



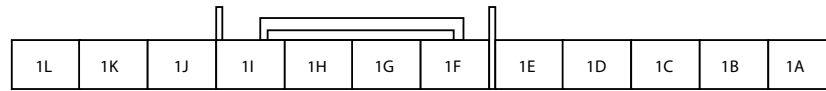
Pull back the tabs on each side of the connector so the flap on the back can be flipped up. The terminal is held in place by a little tab that's accessible on the bottom side. Use a thin poking device to press this tab down by poking through the hole in the middle of the terminal as shown. Once the terminal is out, slide the Revlight wire through the uncrimped loop in the back and use pliers to squash it down, trapping the bare wire inside. Make sure the terminal isn't any wider than it was before, then reinsert it into the connector. A thin ziptie around the newly paired wires will keep everything from moving around.



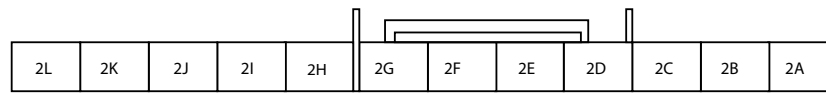
Wire colors. The tach signal is the same color at the ECU.

	Ground	Power	Tach signal
1990-93	Black (2D)	Black/yellow stripe (2K)	Yellow/blue stripe (1H)
1994-97	Black (2D)	Black/yellow stripe (2K)	Black/white stripe (1H)
1999-05	Black (3J)	Black/yellow stripe (1C)	Green/orange stripe (2K)

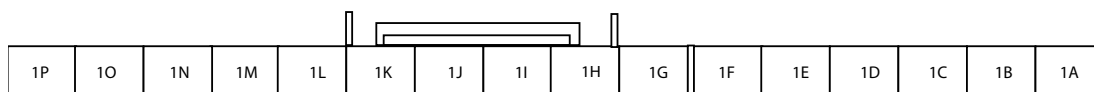
All connectors shown from the wire side.



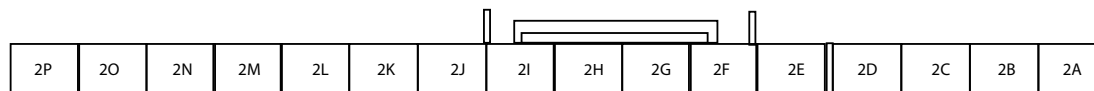
1990-97 connector 1 (white)



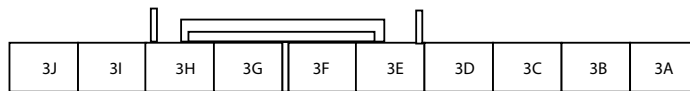
1990-97 connector 2 (black)



1999-05 connector 1



1999-05 connector 2



1999-05 connector 3

Notes.

Programming the Revlight is simple enough, but you may have to read the instructions a couple of times. One thing to note is that the minimum interval between LEDs is 500 rpm. Thus a typical Miata setup would be to use 9 flashes for the green, 12 for the yellow and 14 for the red giving a 7000 rpm “all flash” setting. For Mazdaspeed MX-5s, use 8, 11 and 13.

While programming, if the Revlight does a quick little shake of the red and yellow lights, you’ve done something you shouldn’t. It could be a matter of having the intervals close together or not having an RPM signal while trying to program.

Tape up the extra programming wire when you’re done so it doesn’t ground out and accidentally change something.

The Revlight will automatically dim at night, but it always starts off in full bright mode. After about 15-30 seconds, it will settle down into a dimmer night setup. Be warned, it’s really bright at first!

It is possible to put a switch on the power or ground wire to turn off the Revlight when you don’t want to use it. It will not lose programming.