How to build a blink type code reader.

For those of us who have trouble with the schematics instructing us on how to build a code reader. Special thanks to deanyel for an easy to follow schematic and the code reading instructions. I just figured I would make it almost impossible not to be able to build one. I needed this to read the codes on a W140 36 pin socket but I also have a W124 and a W201 so I modified the directions to be able to use it on more than one size connector. If you only need one size you can eliminate the banana plugs and jacks.

Parts Needed  $17.00 or less at my Radio Shack

1 - Film Can, Pill Bottle , Small  Pain Reliever bottle or Project Box
1 - Radio Shack # 275-1556  SPST Momentary Switch
1 - Radio Shack # 276-0270 Red LED Assembly
2 - Radio Shack # 274-721 Banana Plugs
2 - Radio Shack # 274-725-B Banana Jacks
1 - Piece of 1x3 stock – wood, metal or plastic
Assorted Shrink Wrap Tubing
3  feet each of 3 different color primary wire  16-18 ga
3- standard paper clips  or some 20 ga solid wire
1/8 , ¼ & 5/16 drill bits
Soldering iron and solder
1. Cut each color wire into two 18” lengths (if making a multiple pin size model)
2. Strip ¼ inch off each end
3. Attach a banana plug (I used two red and one black to the end of each wire)

4. Drill 3 1/8 inch holes in the bottom of the film can
5. Drill 2 appropriate size holes for the led and the switch in the top of the can
6. Thread all three wires through a few 2” lengths of shrink tube
7. Push the 3 wires through the holes and make a knot about 3” from the end of each

8. Solder two 2 ½ inch pieces of any color wire to the switch and tape or shrink wrap

9. Mount your LED and Switch into your cap

10. Your red wire is hot, black is ground and the green wire will be the test lead
Solder the Red wire to the Red leg of the LED and shrink wrap or tape.
Solder your Black wire to one leg of the switch and shrink wrap or tape
Solder the Test Wire (Green) to the black leg of the LED and the other leg of the switch
and shrink wrap or tape.
11. Fold your wires up into the can and snap on your cap.

12. If you only need 1 size pin eliminate the banana plugs and skip to step 15
13. Drill 3 5/16 holes in the flat stock for the banana jacks and mount the jacks

14. Solder your wires to the jacks with the test lead in the center and shrink wrap or tape

15. Solder a paper clip to the end of each wire
16. Trim each paper clip to 1” and shrink wrap to leave 3/8 “ exposed

17. Slide Some shrink wrap over all three wires and shrink to keep them neat

You are Done! If you need other size pin outs just duplicate the bottom half with the size pins you need. My Radio Shack has very few items on hand but I assume there may be banana plug adapters

Just follow deanyel’s code reading instructions below and you easily be able to read the codes. There are several copies of the code explanation books out there to download.
Reading Fault Codes – 38 PIN Connector

Turn ignition key to “on” position, all dash warning lights will be on but the engine not running.

Access 38 pin connector by unscrewing the round cover on top of black box where the battery would normally be (access may vary by model). Or for better access remove the entire rectangular top of the black box - 4 allen bolts.

Plug Wire #1 (ground) into socket #1 and Wire #3 (12v power) into socket #3. Plug the third wire into the socket to be tested (e.g. socket 4, 6, 7, 8, 16, 17, 19, or 30).

Push the switch button down for about 3 seconds, then release. Count the number of flashes that follows. The number of flashes is the fault code number – for example, 6 flashes is fault code 6. 1 flash means no codes.

Repeat again for more codes. Repeat until the first code comes up a second time.

Note the fault code numbers.

To clear a code - After reading a code, hold down button for about 8 seconds, then release, then turn ignition key off. Repeat for each code to be cleared. The ignition must be turned off for at least 15 seconds between each code cleared. Code erasure must take place between 3 and 20 seconds of the reading of the code.

Check appropriate fault code list to determine possible cause of failure. The diagnostic module functions as a data collector - the source of the fault is generally one of the other modules.