



**Red Lamps**

ClassicAutoLEDs.com

info@bmcautos.com

## **1966-1973 BMW 2002 (Roundie) w/Red Indicator LED Board Set Installation Instructions**

Part # 1-087 Amber

This kit should install within 30 minutes using a minimum of tools. The only tool, which may be necessary, is an 8mm wrench to loosen the nylon spacer that may be holding your lens secure. The arrays in the kit will need to be secured to your existing light fixture. You may use epoxy, RTV Silicone or Hot Glue (preferred method because it sets immediately).

It is important when doing any electrical work to your car to first disconnect the negative (-) side battery terminal to prevent accidental short circuits.

We recommend that the tail light functions be verified to operate correctly before installing the LEDs. If possible, measure the voltage levels for the running and brake lights at the tail lights. They should be within a few 10ths of a volt compared to the battery voltage. If not, you may have wiring issues that should be addressed.

First, open your kit and verify that you have two Ziploc bags, one marked D-side and the other P-side. Each bag will contain:

- 1ea. Brake Light array
- 1ea. Running Light array (this will have a hole in its circuit board).
- 1ea. Turn Signal array
- 1ea. Large rubber 'O' ring
- 3ea. Pieces nylon tubing
- 1ea. Interface with 3 sets of wires and plugs.

It is recommended that you convert one fixture at a time in order that you have a ready example of which wires are which.

**Step 1:** Remove the plastic cover on the rear of the light fixture (not all cars will have these).

**Step 2:** Loosen and remove both of the white nylon knurled knobs which hold the light fixture to the lens and remove the fixture.

**Step 3:** Remove the incandescent bulbs from the Running, Brake and Turn Signal lights. Do NOT remove the Reverse or Backup bulb, as this will be used.

**Step 4:** Remove the electrical spade connectors from the back of the light fixture and attach each one to the Interface plug. This plug is marked as Brake, Park, Turn and Ground. Set aside.

**Step 5:** If your car has long white nylon spacers securing the lens to the car body (many cars are missing these), you need to loosen and remove the spacer on the inside or centerline side of the fixture. Turn this spacer over so that the 'Hex' end is now facing the rear of the car and reattach it to the all-thread on the lens and hand tighten. This is reversed so that the spacer will pass through the circuit board for the Brake Light array.



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Step 6: Take the three pieces of nylon tubing and fit them over the old center bulb contacts. This is so these sharp contacts will not cut or abrade the wiring from the LED arrays.

Step 7: Take the large rubber 'O' ring and fit it inside the Turn Signal reflector on the fixture. This is so the proper array-to-lens distance is set.

Step 8: Fit the turn signal array into the center reflector. Pass the array's plug through the old bulb hole to the back of the fixture. Be sure that the Brake Light array is toward the centerline of the car and that the hole in the array lined up with the hole in the fixture.

Step 9: Fit the Turn Signal array into the center reflector of the fixture. Note this reflector has a 'key' and the LED array has a notch cut into it to accommodate this key.

Step 10: Using your chosen method (Epoxy, RTV Silicone or Hot Glue), secure the array to the reflector by using a small dab in each 'corner'. Only a small dab is required. Note that the array should be centered and lay flat inside the reflector. Again, Hot Glue is the preferred method because it sets quickly. Inexpensive Hot Glue guns can be purchased at any Hobby or Home Supply store usually for less than \$20.

Step 11: Plug the connectors coming from the arrays into the plugs on the Interface, matching them up i.e. Brake Light array to Brake light plug, Running Light array to Park plug, etc. Connect the Reverse Lamp spade connector from the cars wiring harness and connect the Ground wire to the Interface as marked.

Repeat these steps for the opposite light fixture.

Step 12: Reconnect the battery and test the function of all the arrays as well as the Reverse light to be sure all connections were made properly. Remember, you will need to turn on the ignition switch with the key to be able to turn on all the lights. Once satisfied, remove the negative (-) side battery terminal once again.

Step 13: Replace the fixture by securing it with the white nylon knurled knobs finger tight. The Interface will not allow the use of the rear cover. If you find you want to reuse this, you will need to cut the wires from the Interface Plug and replace the plug with insulated spade connectors, which you will crimp on and then attach directly to the wiring harness from the car.

Step 14: Reconnect the negative (-) side battery terminal and you're done!

This kit is designed to work without an electronic flasher unit. But we cannot guarantee this because so many of the cars have had their electrical systems altered through the years. If you find that the flashers flash too quickly, you may have to install an electronic flasher unit; these cost less than \$20. The majority of cars (those with stock electrical systems) will not need them, but we cannot predict how each individual car may behave.