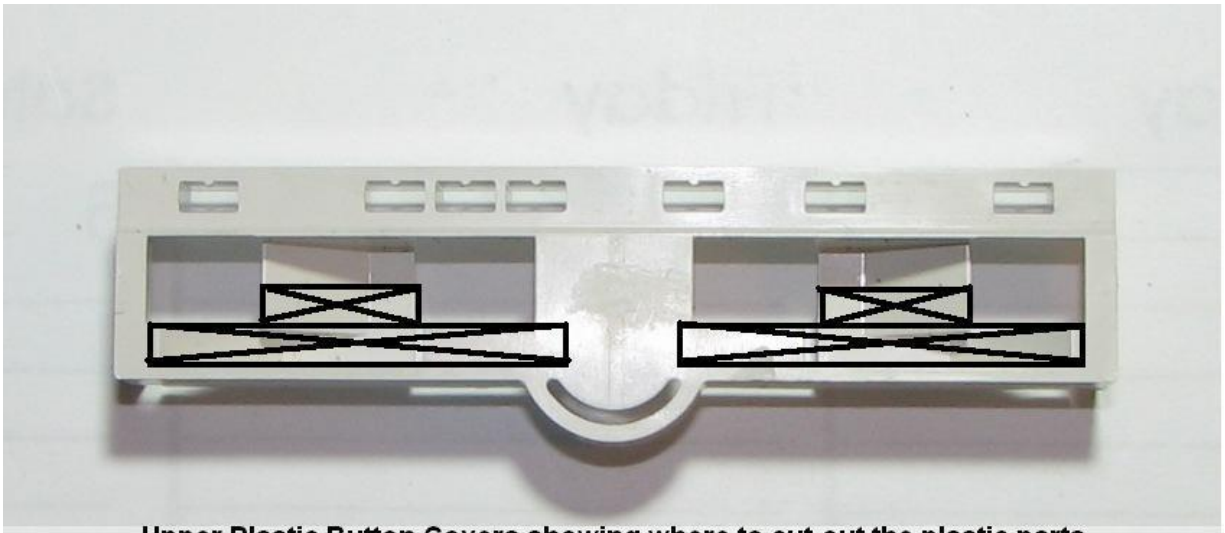
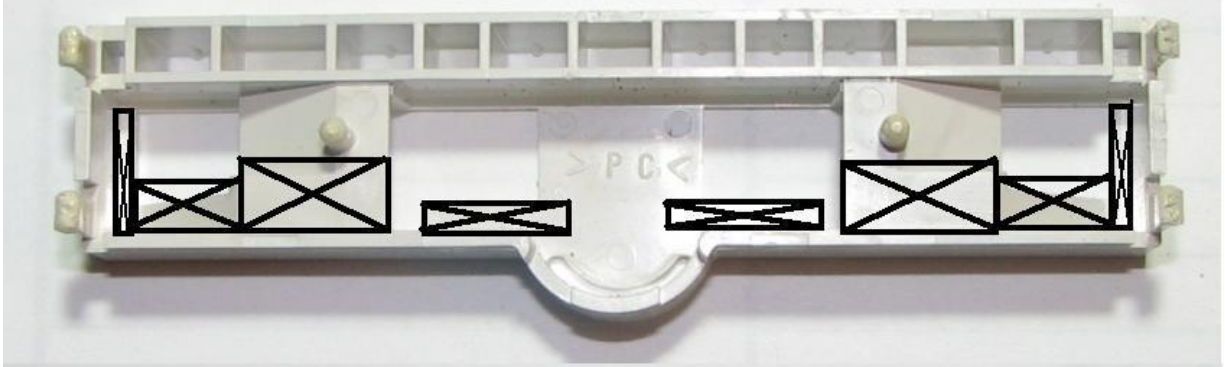
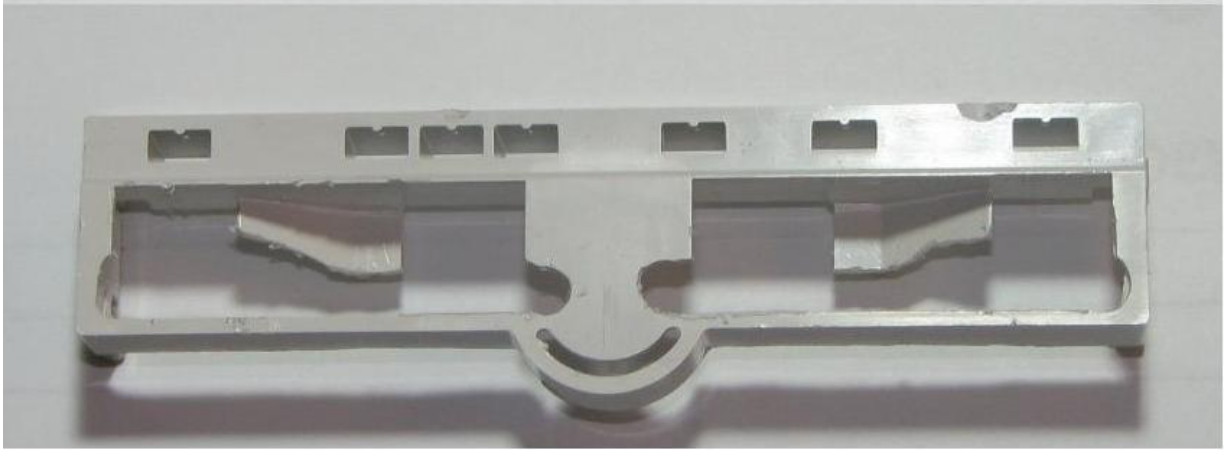
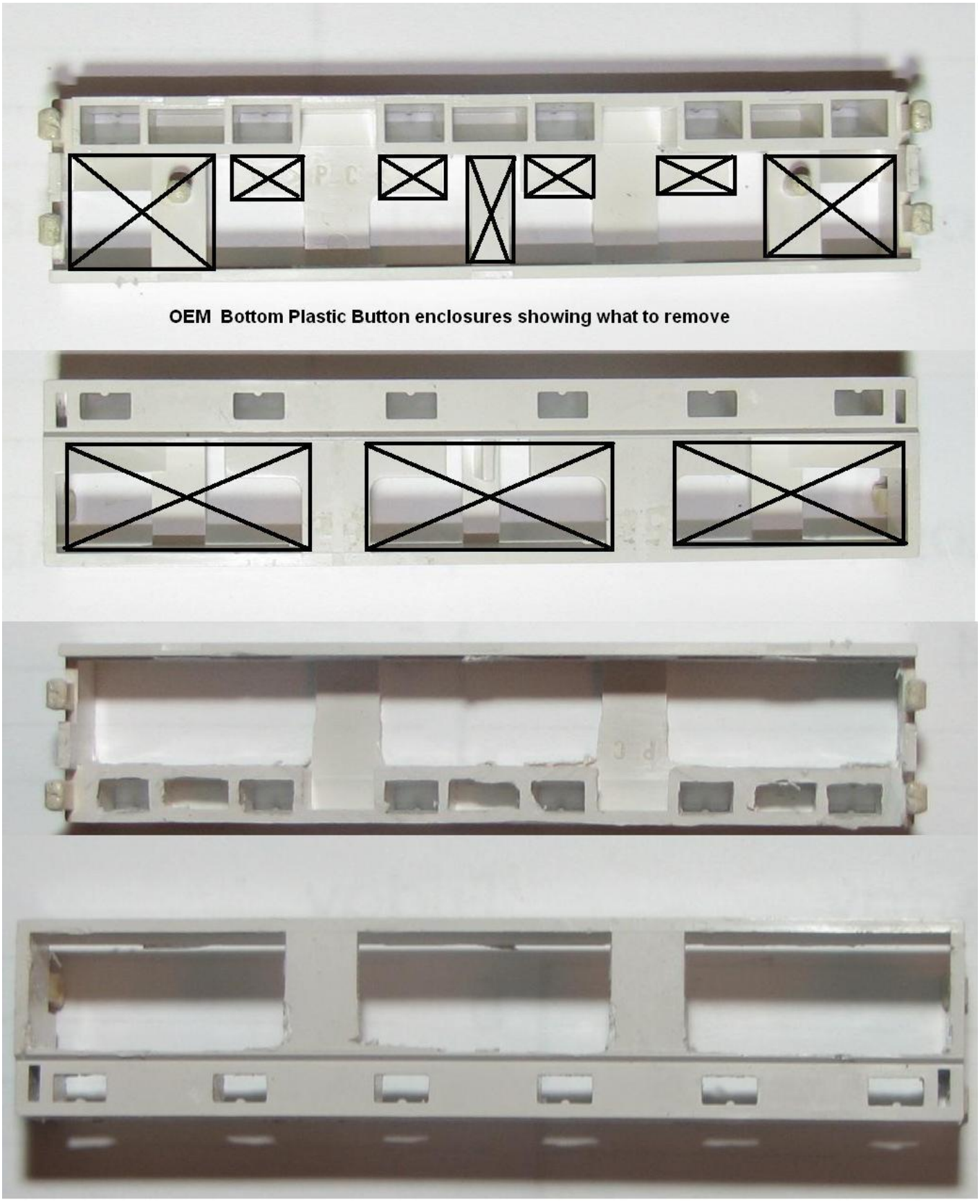


Upper Plastic Button Covers showing where to cut-out the plastic parts

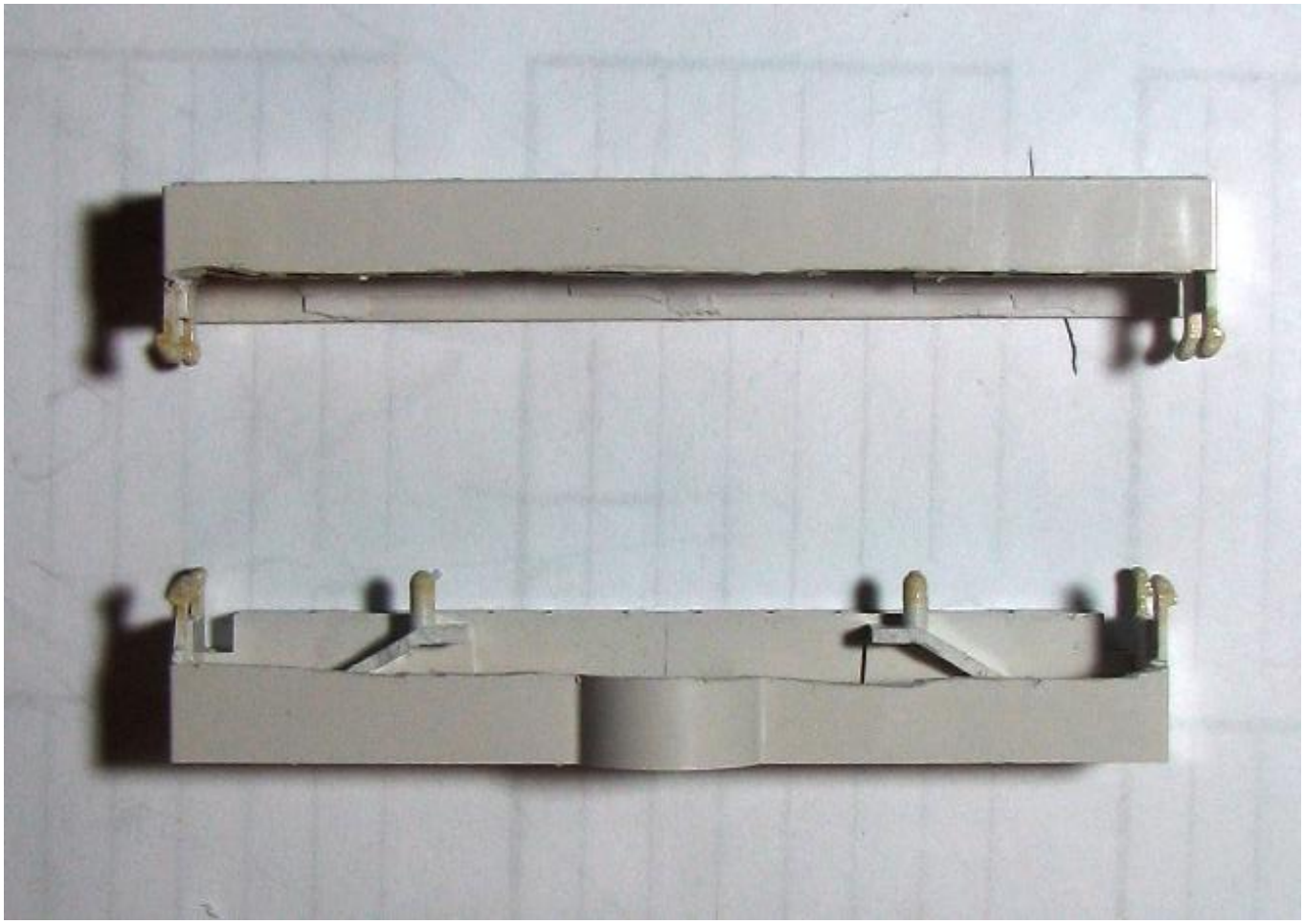




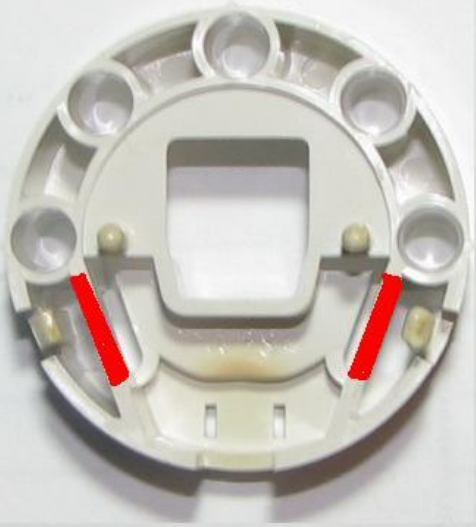


OEM Bottom Plastic Button enclosures showing what to remove

It is Important to cut out a ¼” piece along the entire length of each plastic button cover. This is because the LED boards are slightly wider and need to protrude beyond the plastic. This allows the button cover to drop in “over” the circuit boards. Make sure you slice the correct side on each plastic piece since they are opposite.

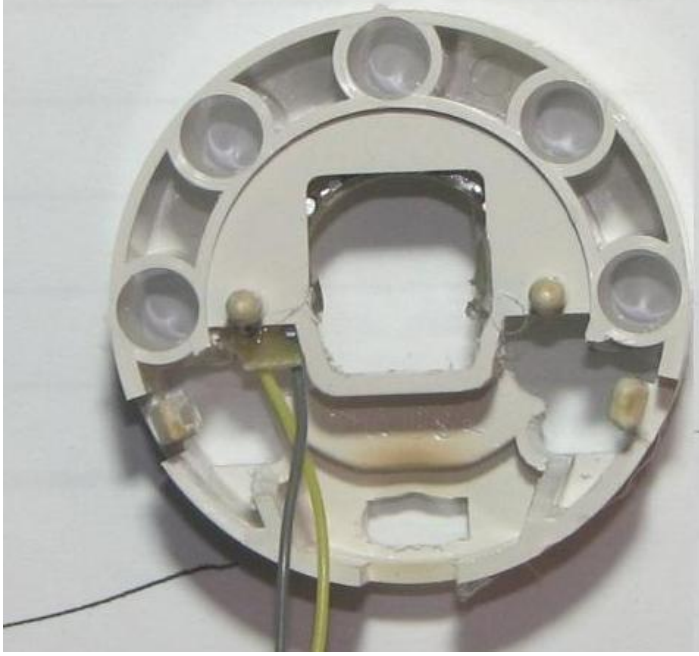


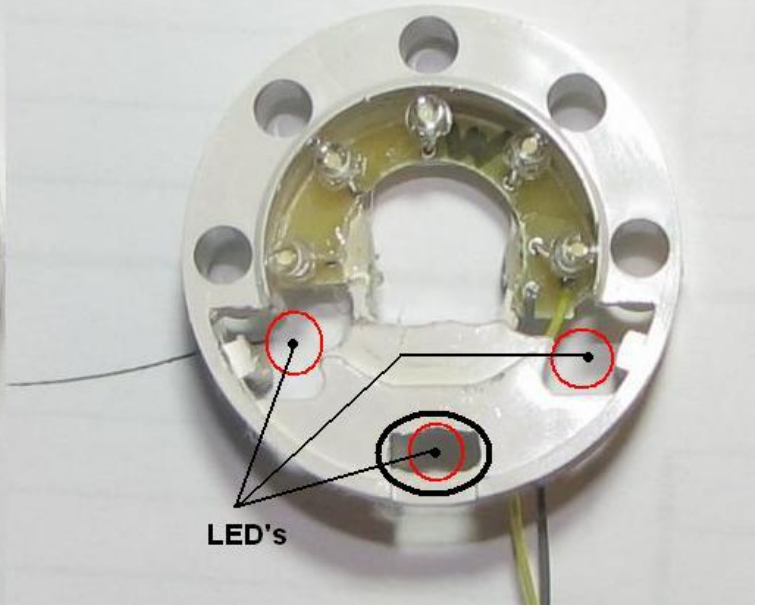
Fan Speed Dial Rear



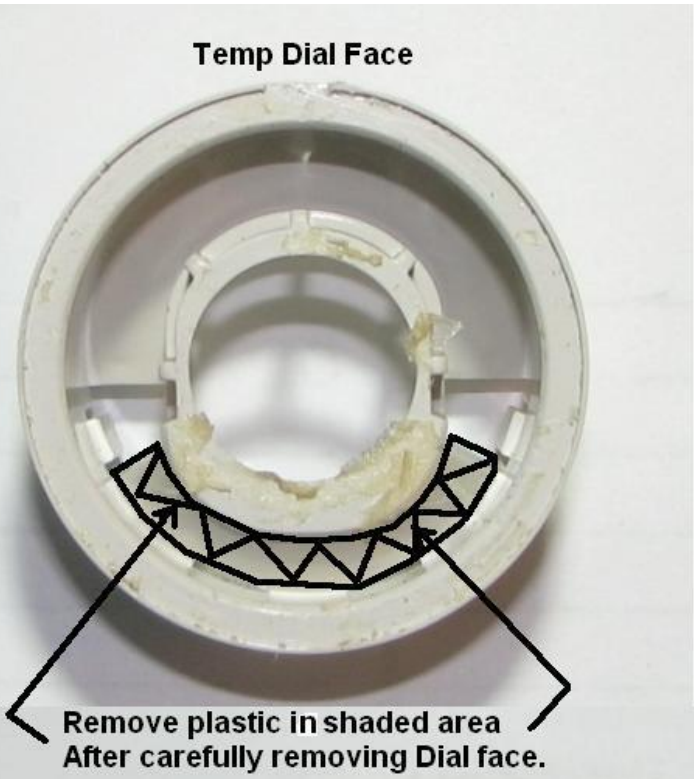
Fan Speed Dial Front

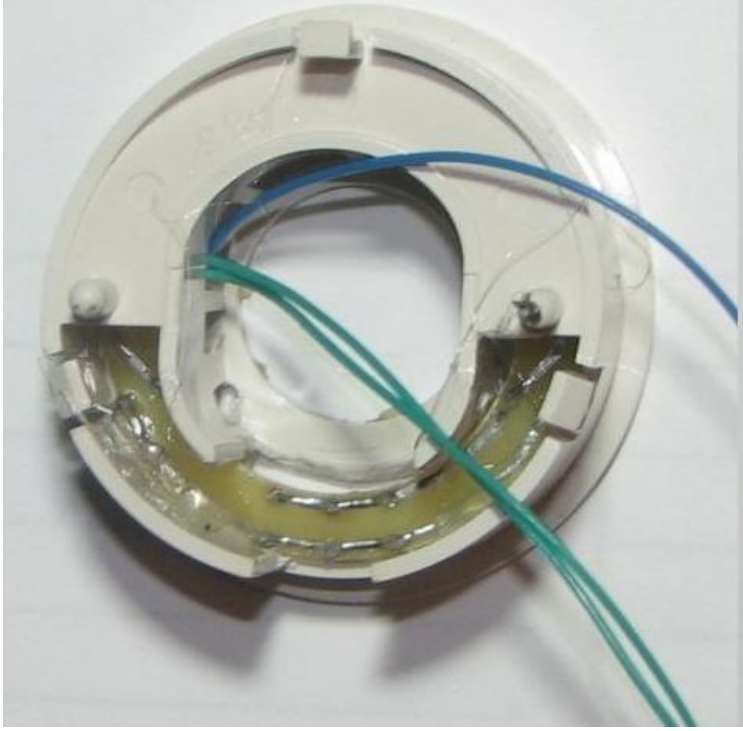
Cut out plastic Brace in "red" and drill
out center bottom area for the 3 LEDs

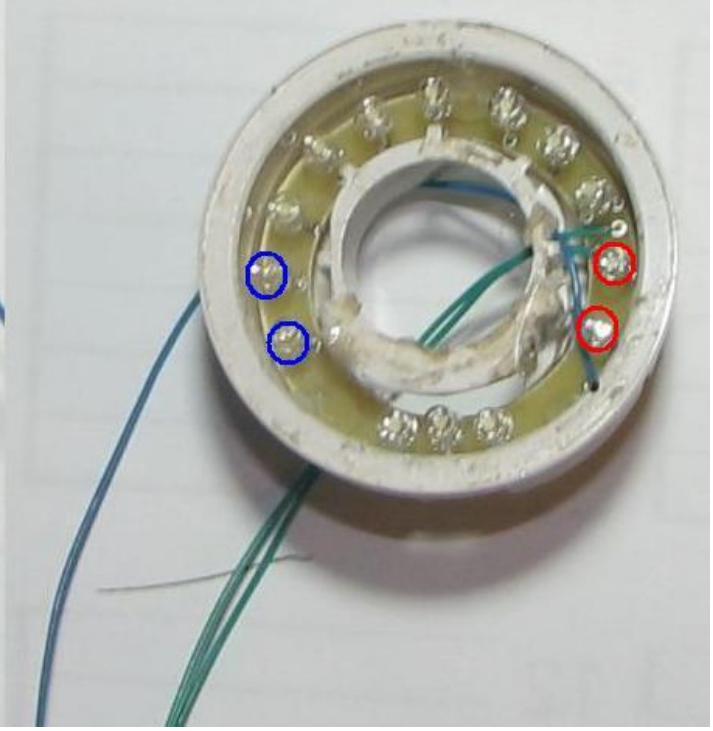


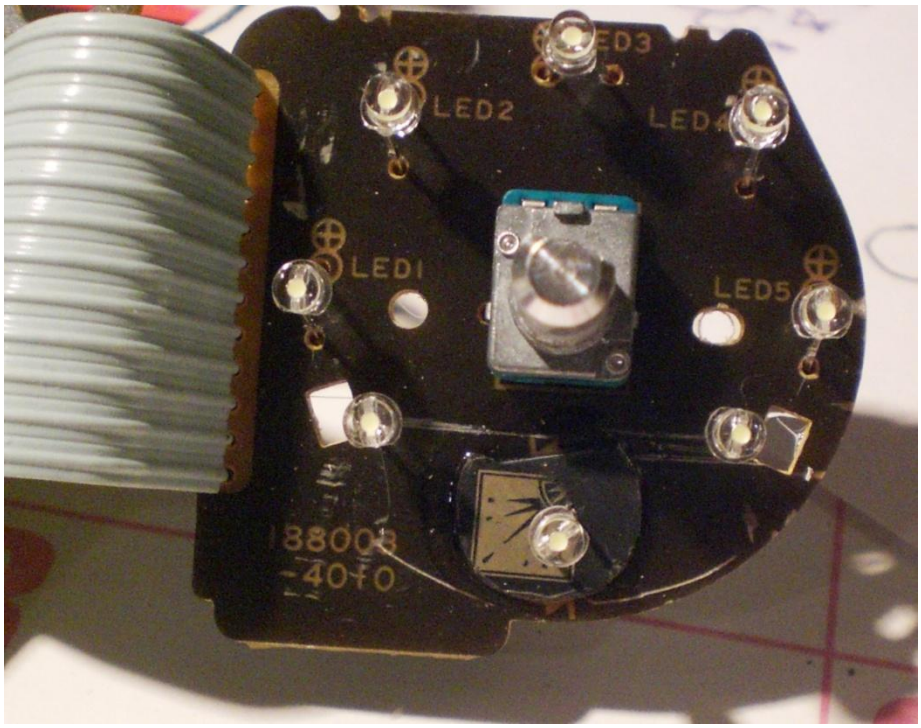



Temp Dial Back

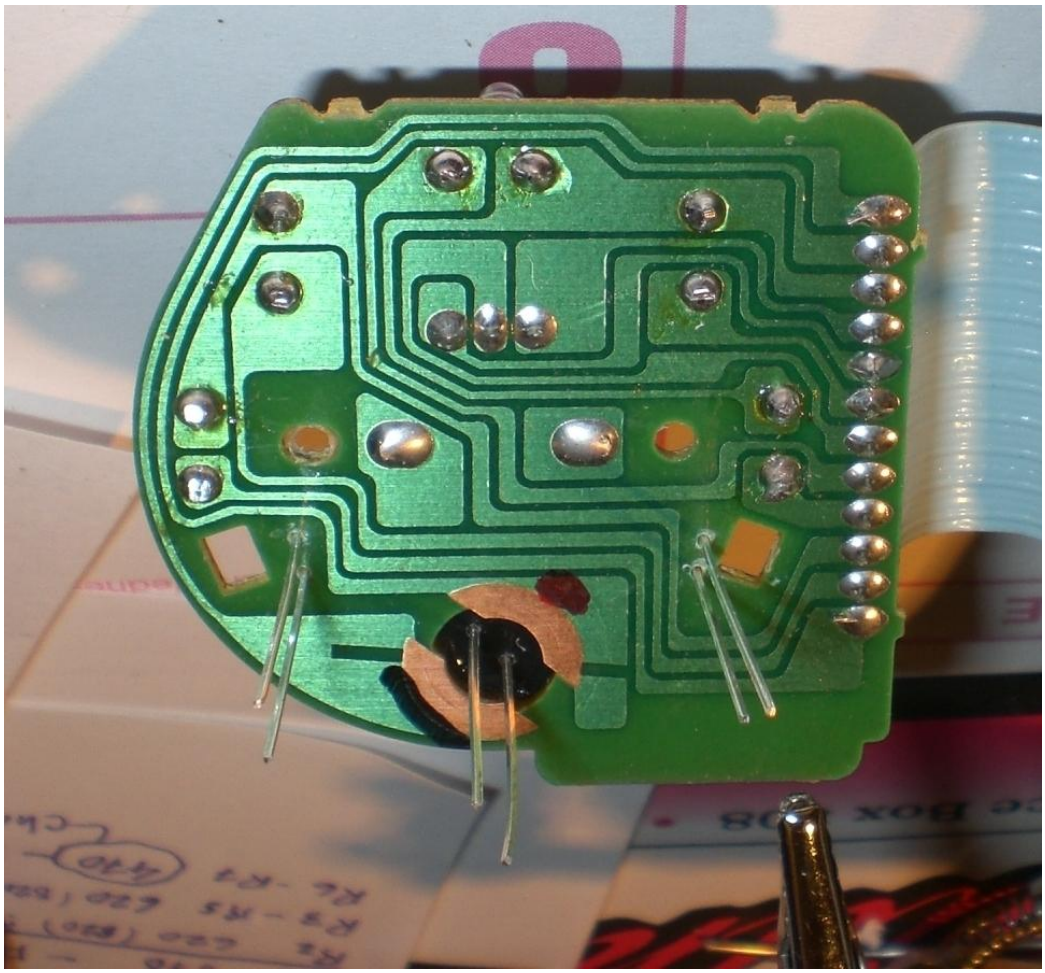

Temp Dial Face
Remove plastic in shaded area
After carefully removing Dial face.

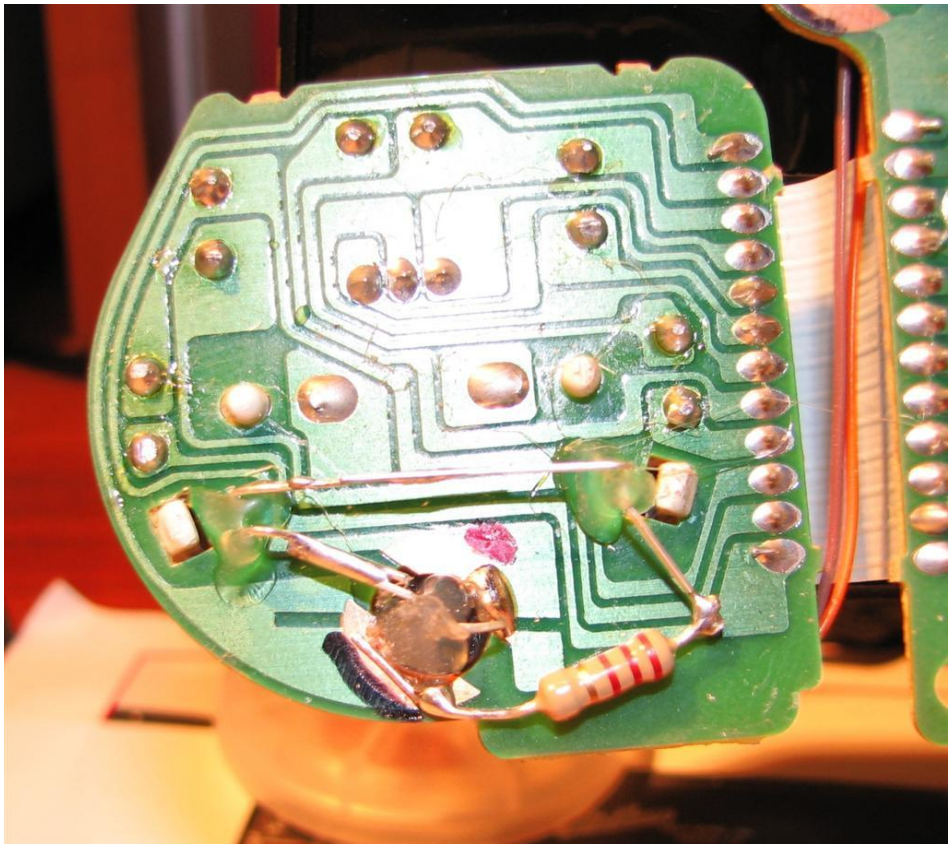




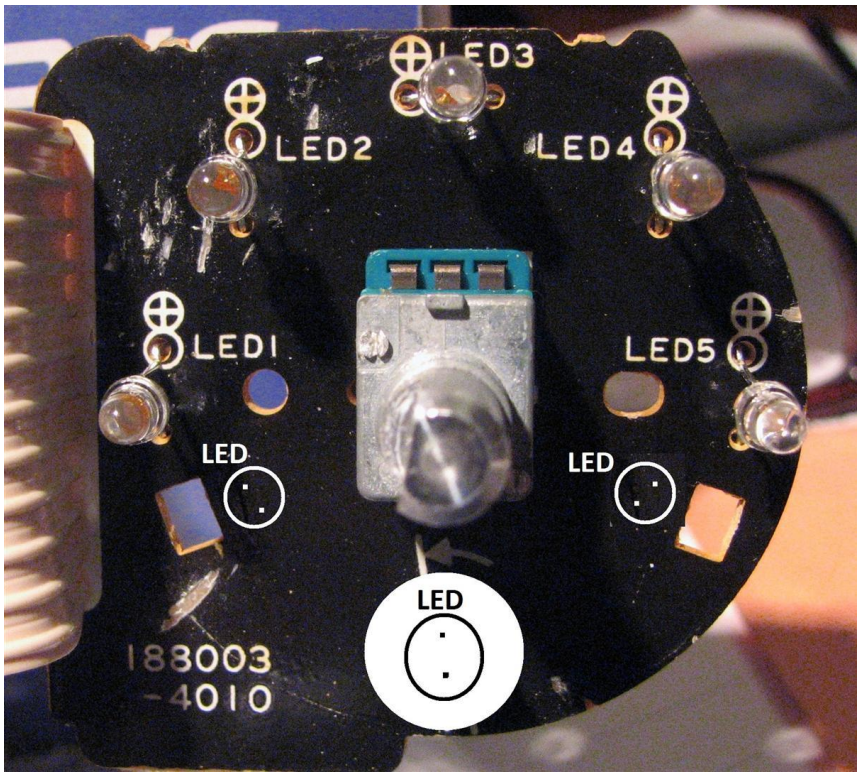


Drill small holes in the circuit board on the Left and Right. Cut a piece of plastic about 3/8” diameter and glue it over the center hole where the OEM light bulb used to go. Drill 2 small holes into it for the center LED. Bend the LED legs and solder all the (+) together and all the (-) together. Run the (+) to the inner circuit board and solder. Attach a resistor to any of the LED (-) leads, then the other end of the resistor to the (-) on the board. See the red and black sharpie marks.

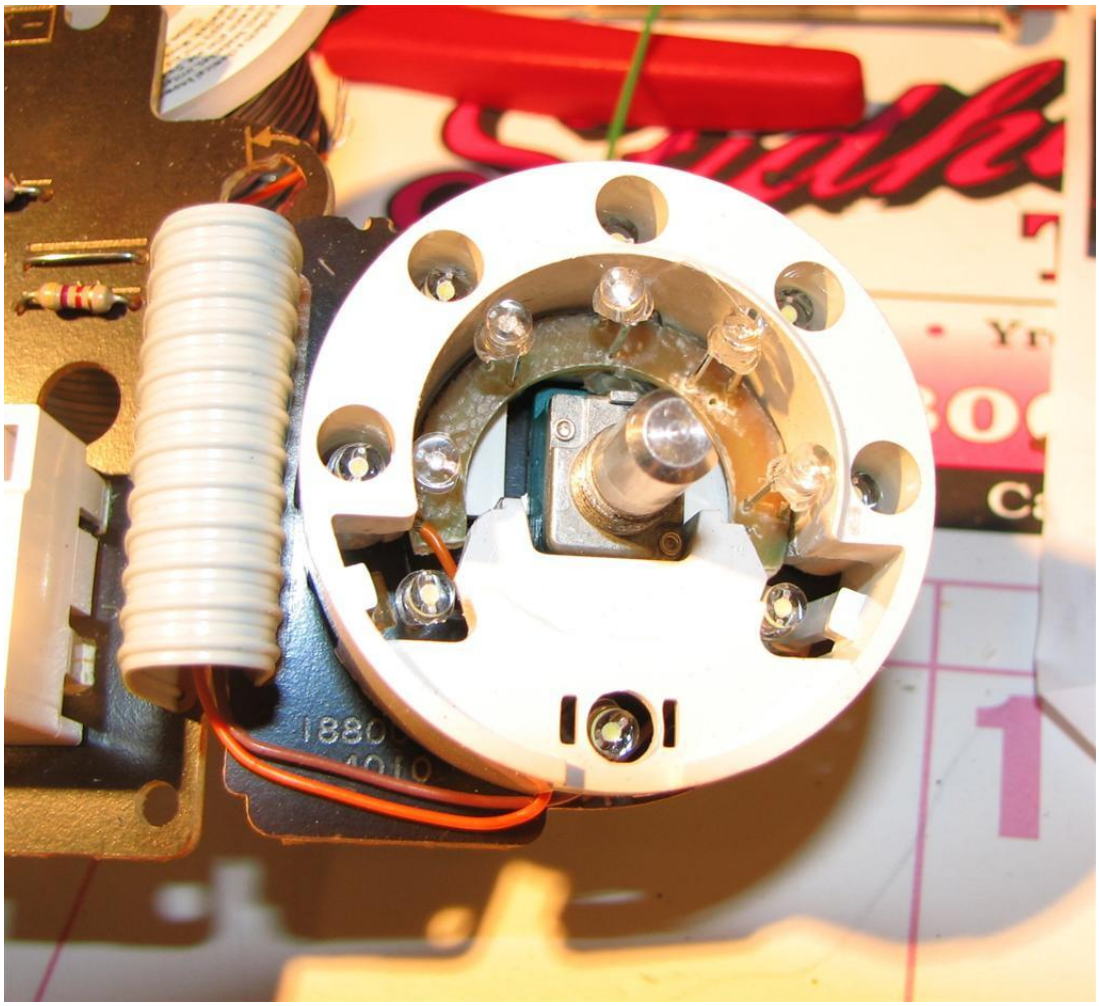




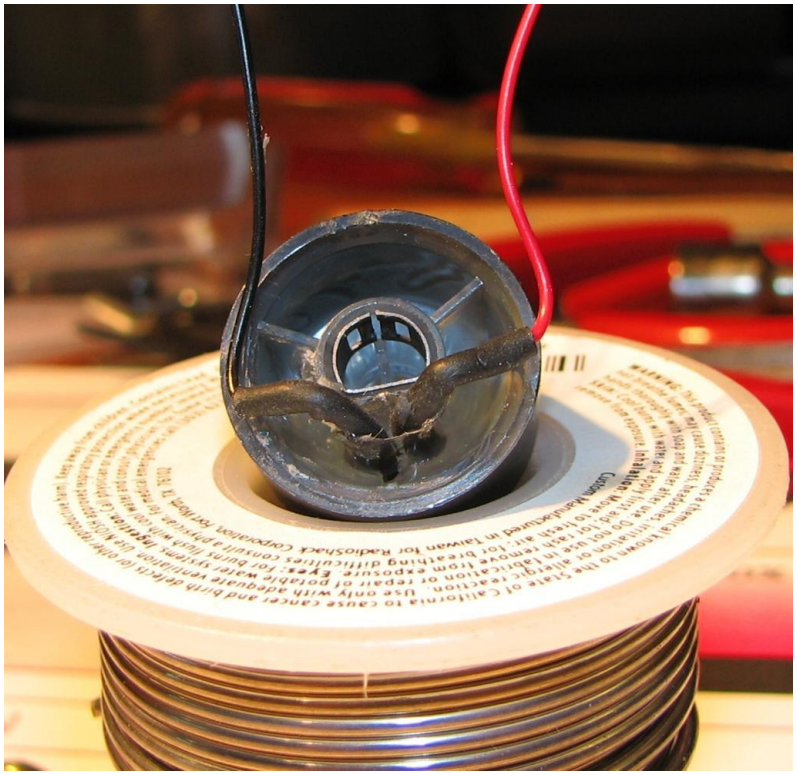
You see how it is wired as “Series”. (+) to (-) to (+) to (-) etc. The 2200 resistor is (-) to ground.



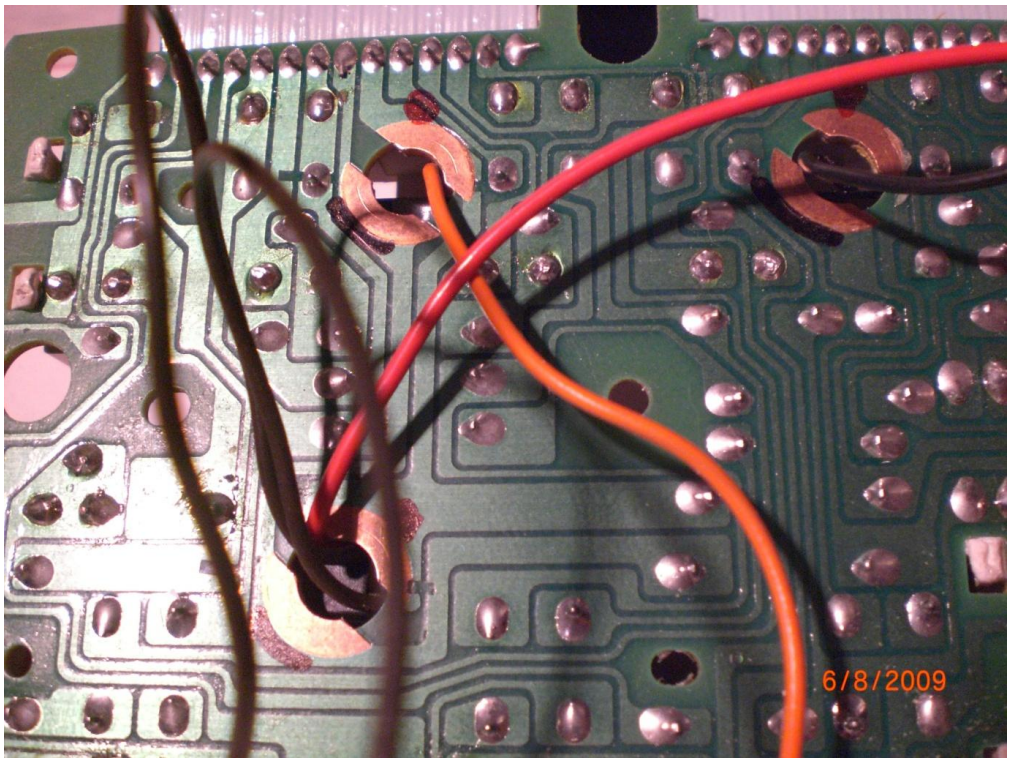
Another look at where to drill and insert the 3 new LEDs. You will need to hot glue a piece of plastic over the center hole where the OEM bulb went so you have something to drill into to hold the new LED in place. Also, where this inserts into the black plastic cover, you will need o dremel a little so the center LED circuit board doesn’t bind.



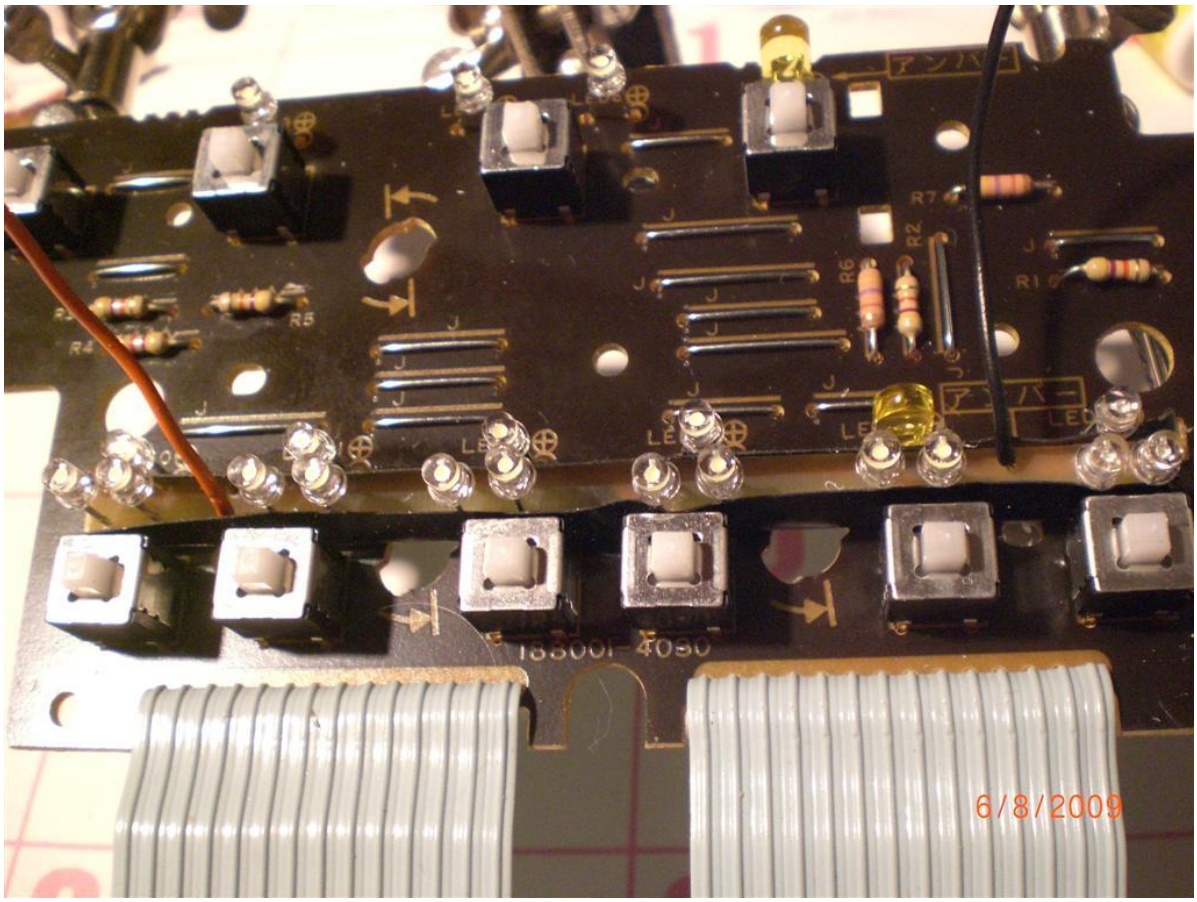

REAR



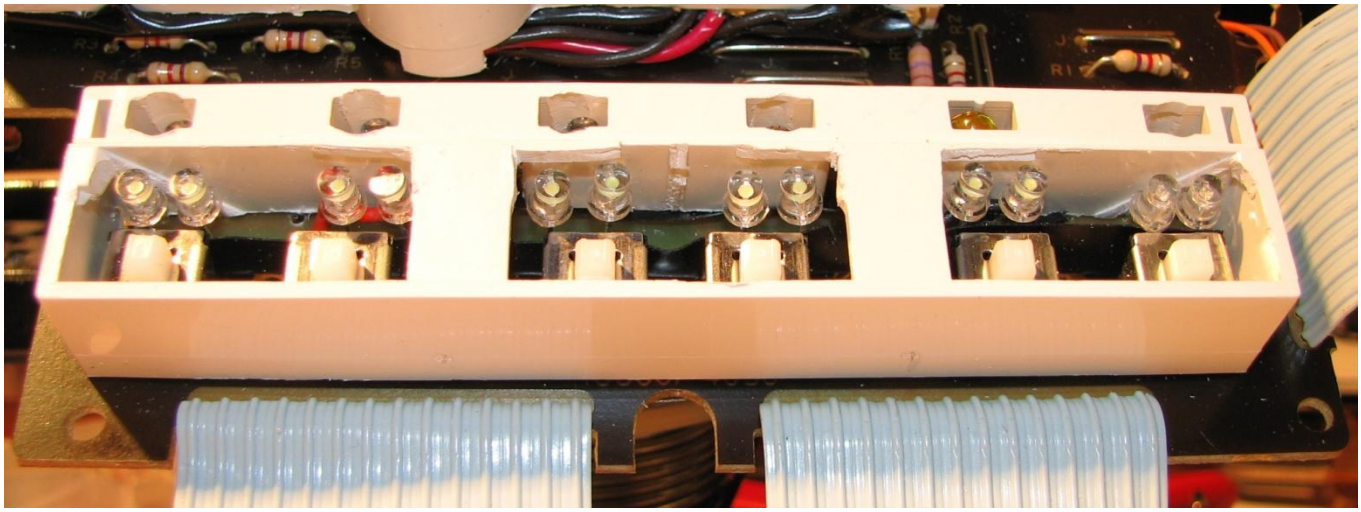
Picture of backside of Temp know with LED hot glued into back. The is a hole there, just needs enlarging to an 1/8”

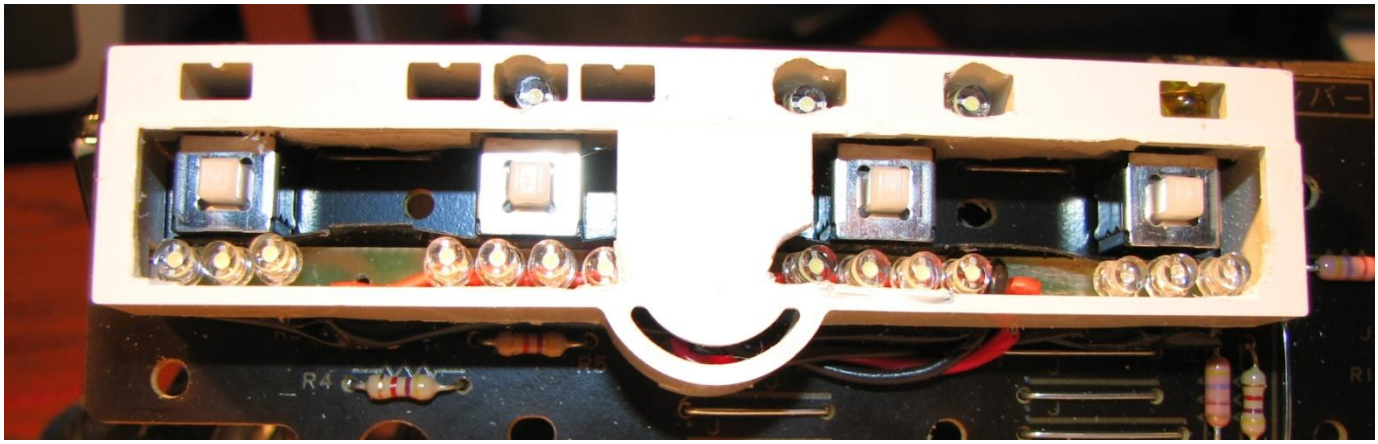


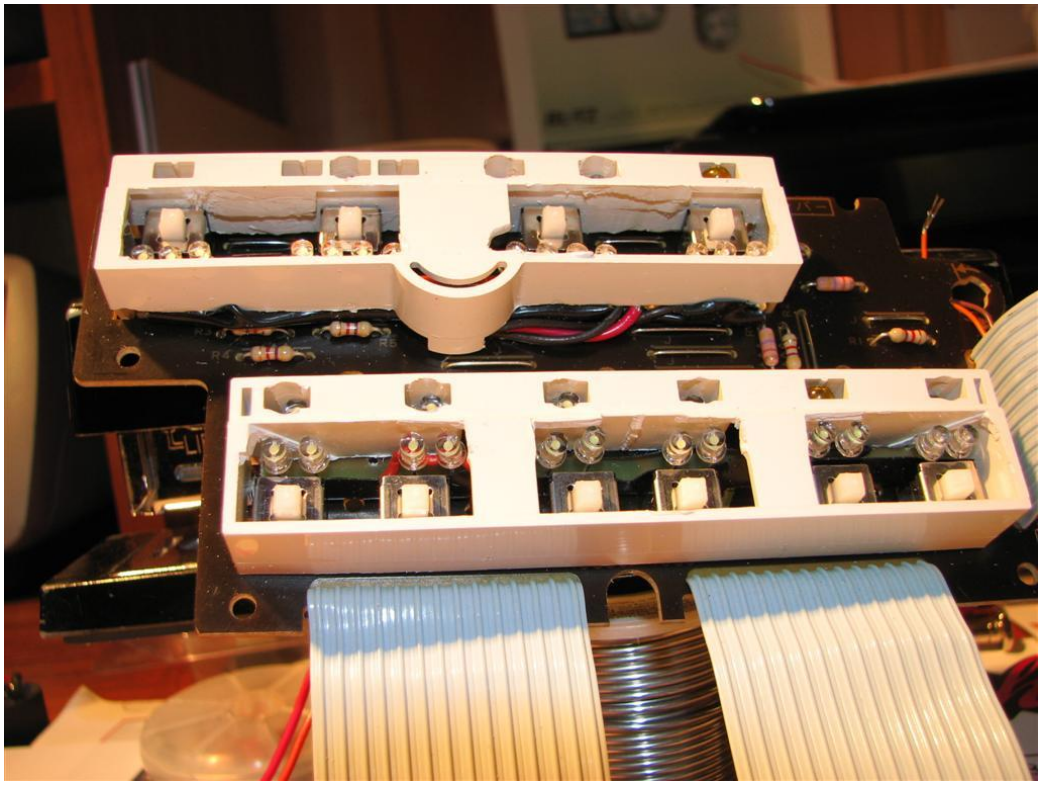
The way the wires are routed from the circuit boards go “through” the OEM bulb openings. What is not pictured is where I drilled two small holes through the center copper layer of each the (+) and (-) sides of one OEM bulb opening. This will be the 12v supply for all the circuit boards. Just drop the tip of the bared 2 wires into the drilled hole and apply a dab of solder. Then these 2 wires (+) (-) will route through the plastic openings of the black cover. Tie all the (+) circuit board wires together. Then all the separate (-) circuit board wires attach individually to the black (-) wire on the resistor” side. I prefer to wire all my LEDs with the resistor on the negative side, not the positive side.

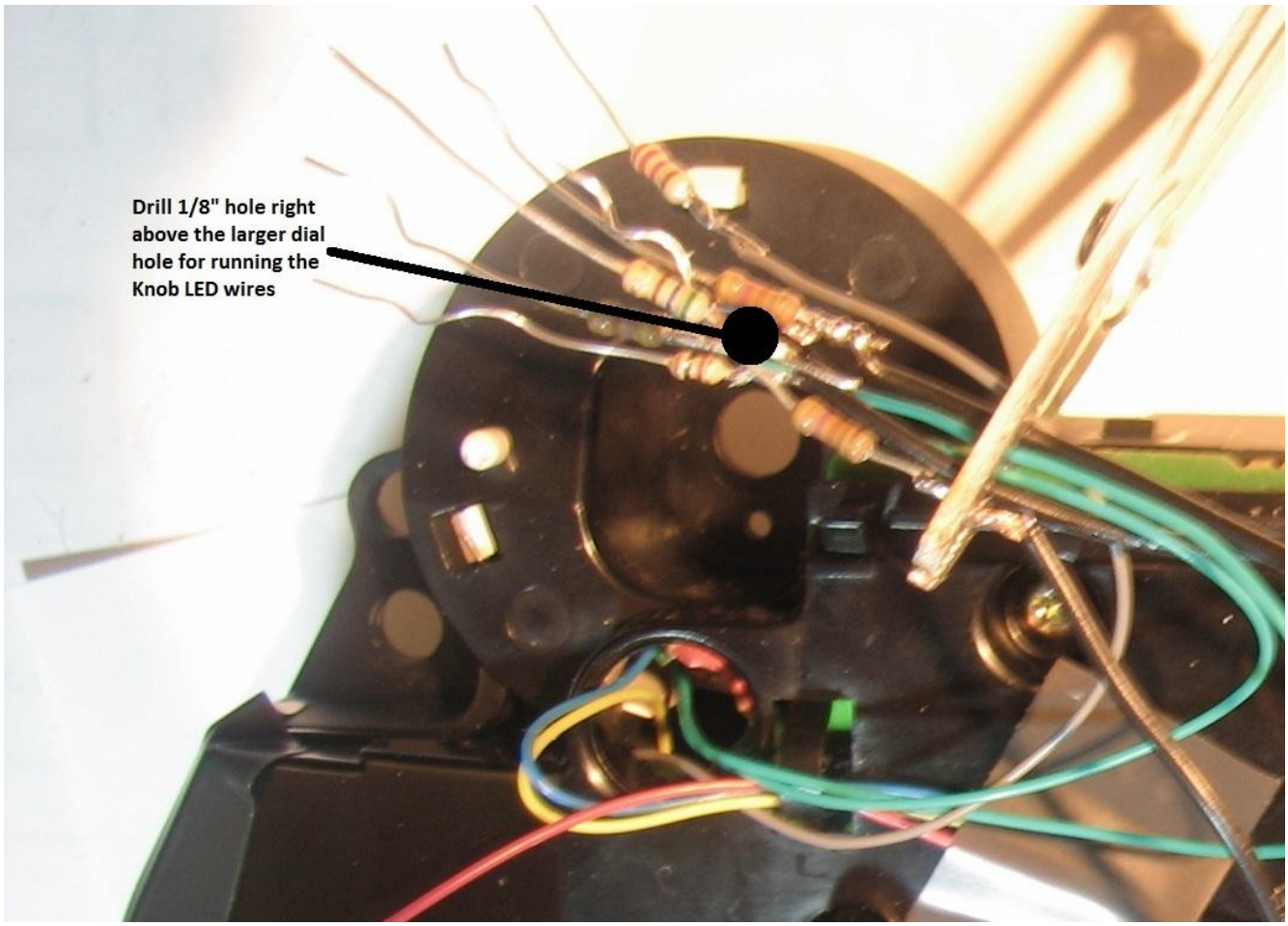


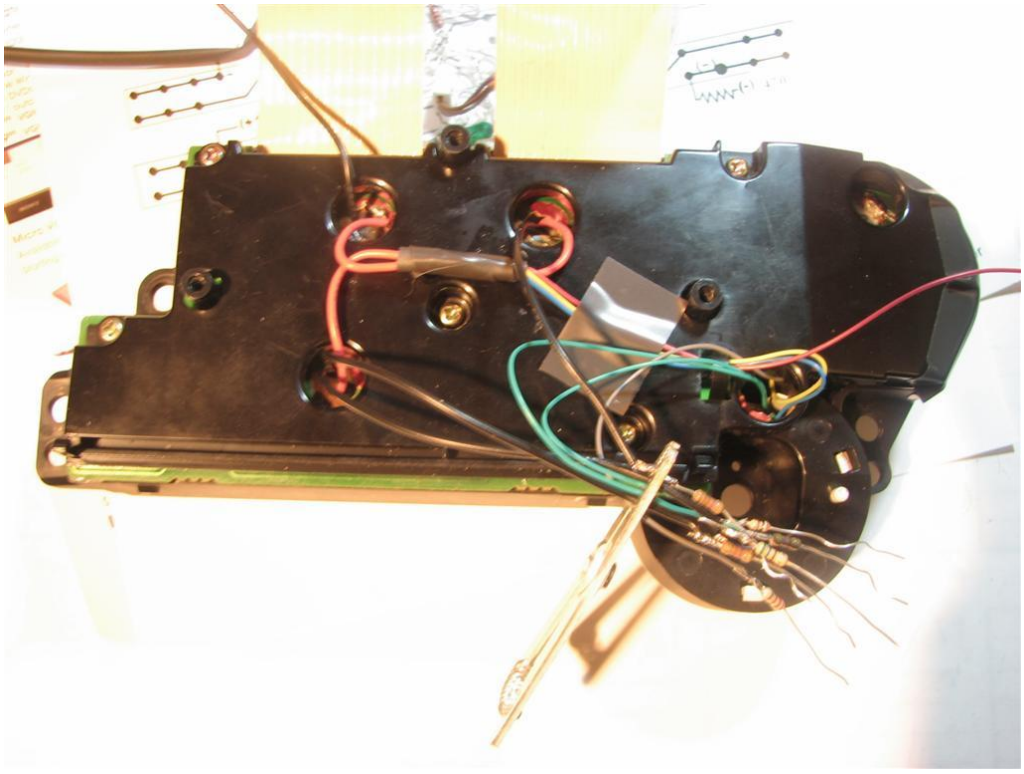
VERY IMPORTANT to lay down a layer of electrical tape so the bottom of the LED's strips do not short the bare wires on the OEM circuit board. Notice the OEM bulb openings at the bottom. That is where you route the wires.

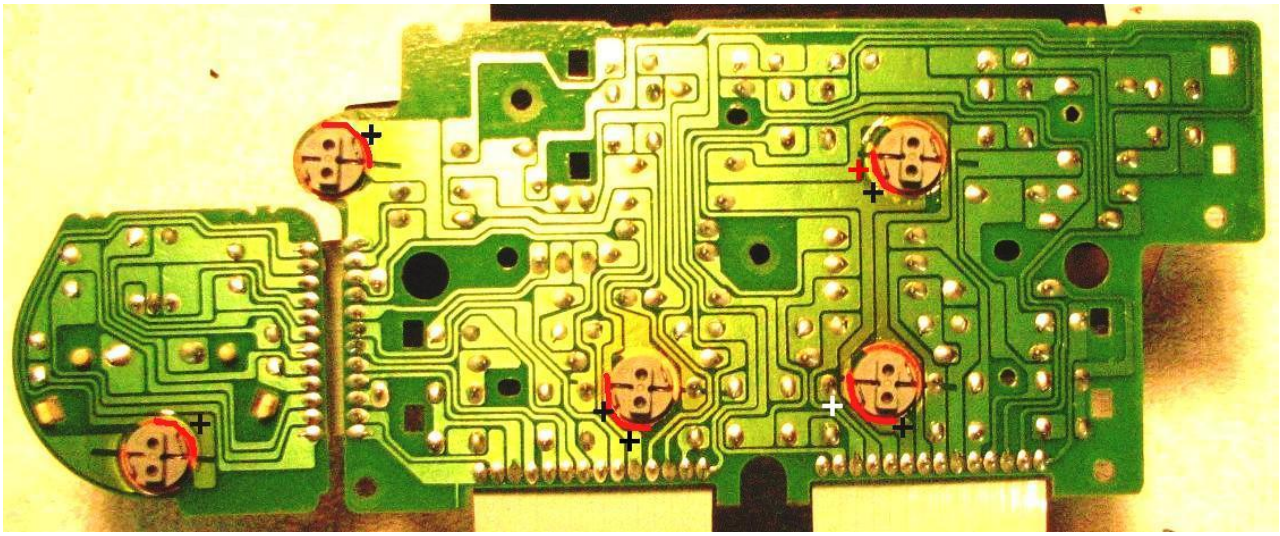




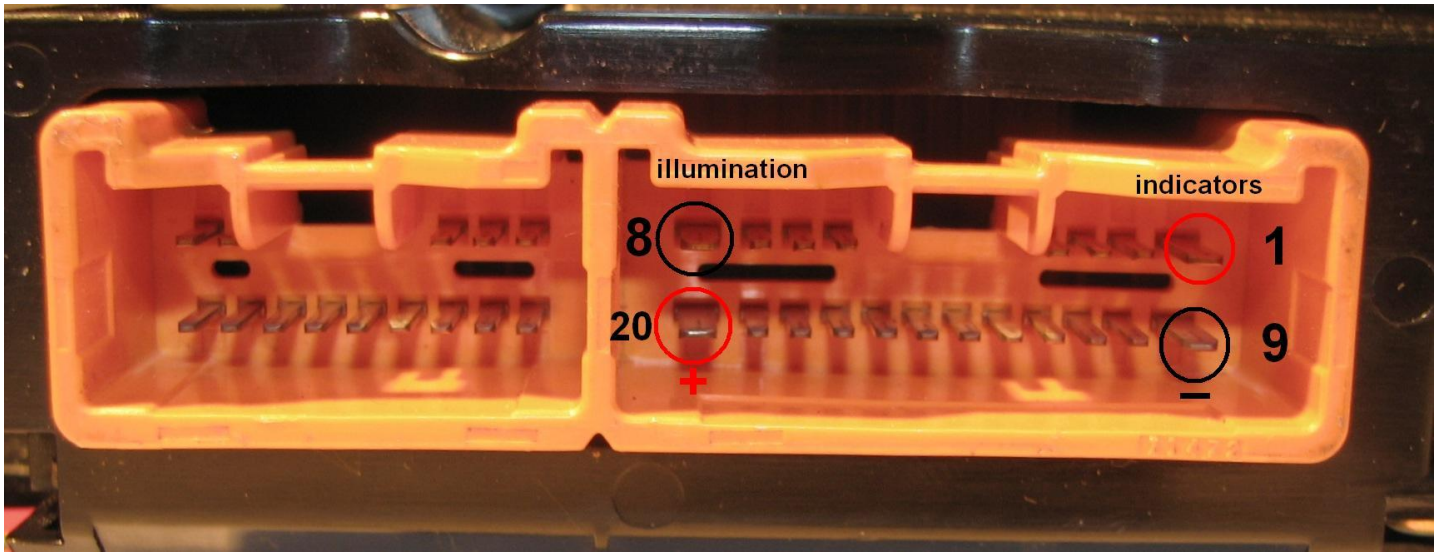



Drill 1/8" hole right above the larger dial hole for running the Knob LED wires



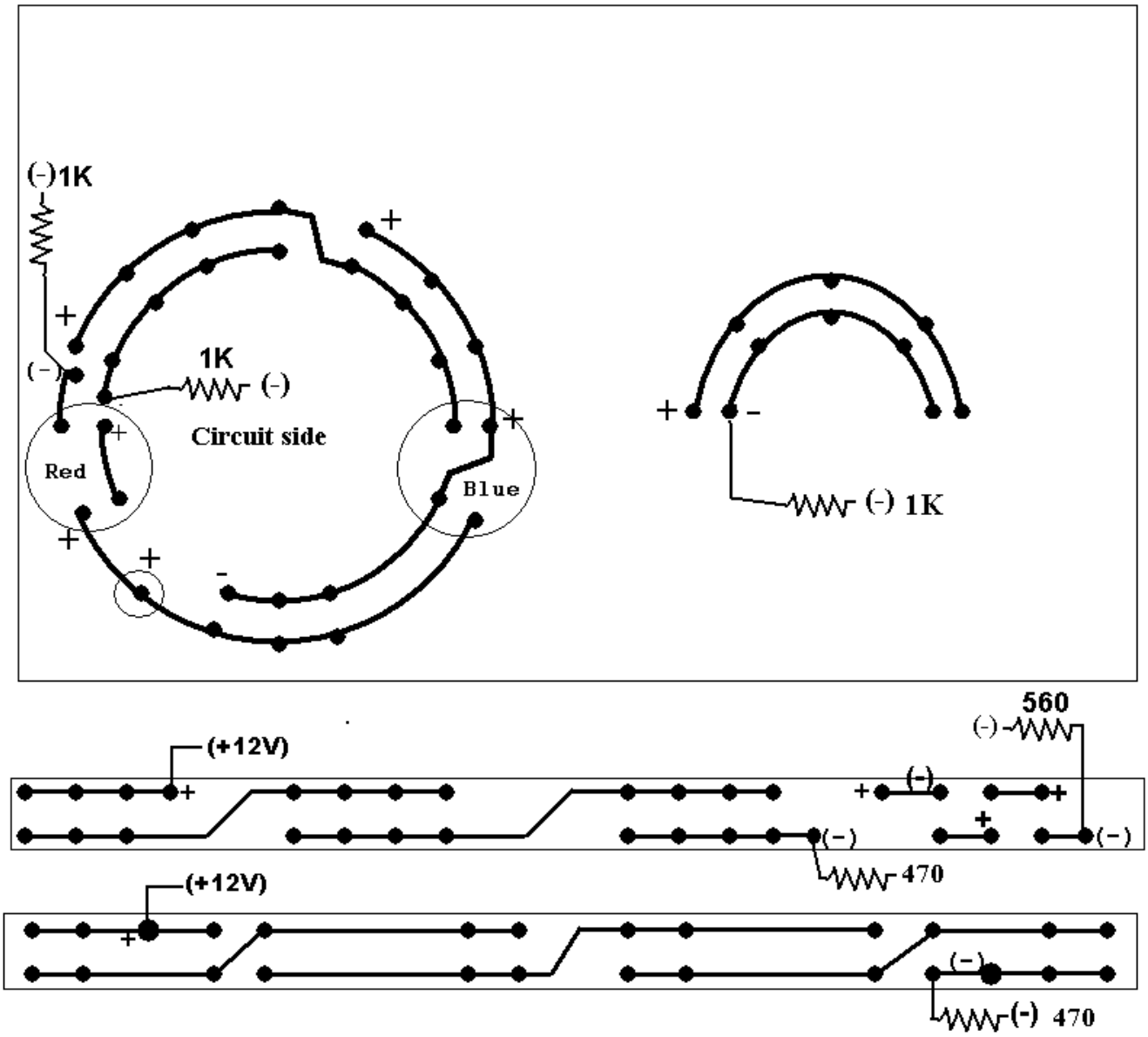


This shows all the (=) and (+) sides to the OEM circuit boards. You can solder to anyone of them. I usually solder one (+) and one (-) by either drilling a small hole into it, or lay the wire down and solder it. Run the wires up through the plastic holes when you attach the black cover back on. Wire all the (+) LED strings to the one (+) wire. On the (-) wire, you need to solder a resistor to the LED side of the LED strips. The other side of the resistor goes to the circuit board ground wire.



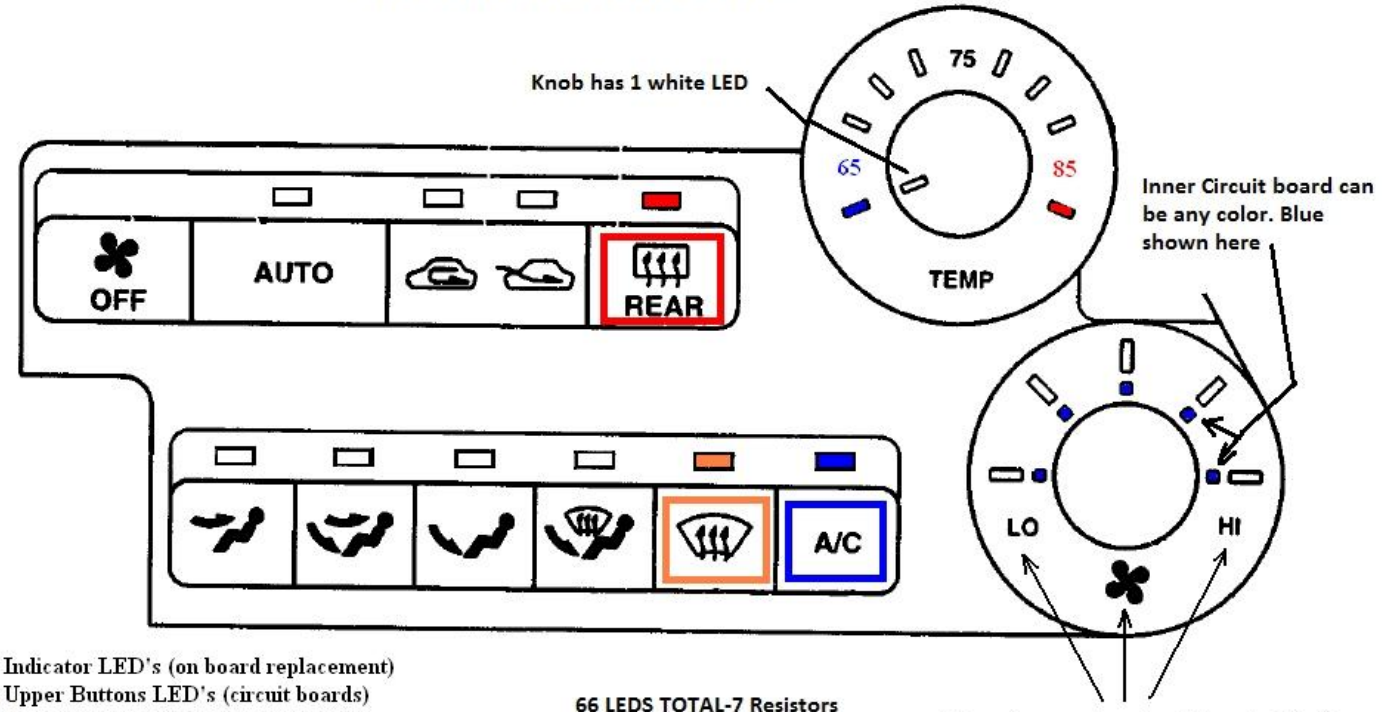
When all done, you can test by applying 12V to the pins above. For the 4 LED circuit boards and all use pins 8 and 20. Pins 1 and 9 are for testing the indicator LEDs above the buttons. They won't actually light the LED unless you "ground" the negative side of the LED on the OEM circuit board.

Another look at where to drill and insert the 3 new LEDs. You will need to hot glue a piece of plastic over the center hole where the OEM bulb went so you have something to drill into to hold the new LED in place. Also, where this inserts into the black plastic cover, you will need o dremel a little so the center LED circuit board doesn't bind.



Recommended resistor values. You might want to change to your preference. The 560 ohm on the above board might be too bright for the 3 Red LEDs. Might even use a 3300 ohm to tone it down. Same with the large round dial. The 1K for the Red I have gone as high as 4700 ohm. Sometimes the lower board 470 is too Dim, and I use a 270 ohm. It is really all trial and error on what best suits you. It is also better to do all of them outside the unit so you can “tune” all of them to be the same intensity. Also the board above with the 560 ohm resistor is too long, it needs to be trimmed down about 1/8” so the board fits within the OEM board sockets.

STANDARD TEMPLATE



15 Indicator LED's (on board replacement)
16 Upper Buttons LED's (circuit boards)
12 Lower Buttons LED's (circuit boards)
14 Temp Dial LED's (circuit boards)
8 Fan Speed LED's (5 on cicuit board 3 separate)
1 Temp knob indicator

66 LEDS TOTAL-7 Resistors
OEM Board-8 Resistors on
Custom LED circuit boards

These 3 are not on circuit boards. Need to be installed and wired separately

Toyota Button Part #'s 55905-