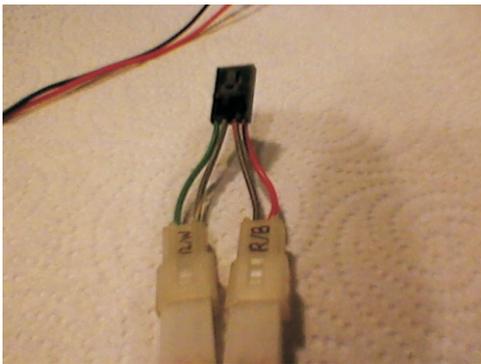
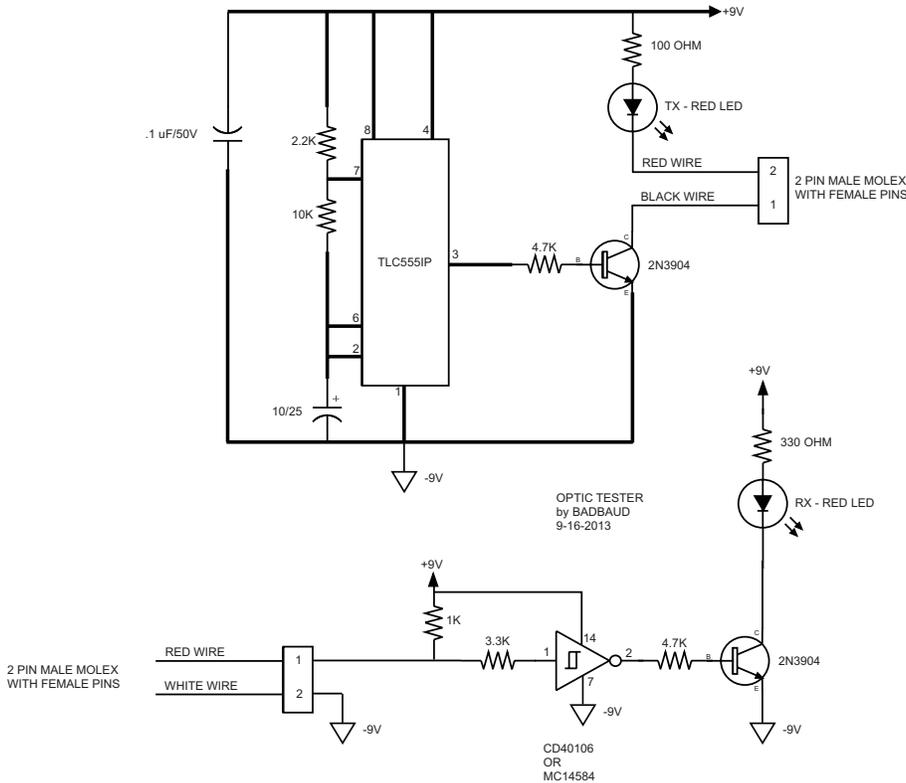
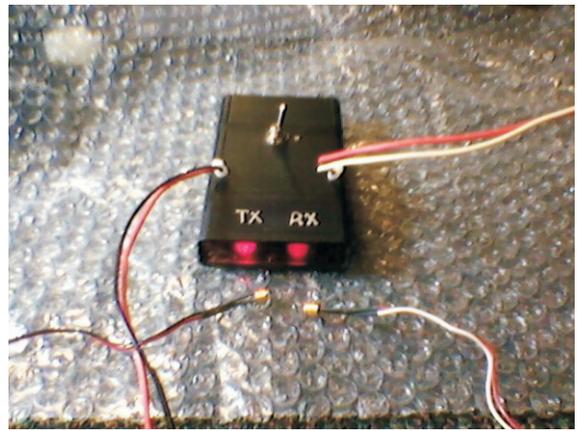


This circuit was devised to test IGT door optics. As can be seen in the photo to the right the emitter LED on the red and black wired connector is aimed at the receiver LED on the red and white connector. The RX LED flashes at the same rate as the TX LED. Moving them away and the TX LED flashes alone. The TX circuit has a LED in series with the output to indicate the external emitter LED is conducting. Connect a good receiver LED and test emitter LED's for proper operation. Or visa versa to test receivers. If the emitter LED is held close to a receiver in a machine you will see the door open revert to a door closed. Hold the receiver LED close to the emitter LED on the door side of the machine and you will see the RX LED on the box light up. So you can test a machines door optics with the box instead of the usual remove and replace routine.



Then I decided to get more creative. I made a test plug that connected to the box that would enable me to test those pesky reflective object sensors in the belly door of slant tops. By plugging in the 4 pin reflective object plug into my test plug which was plugged into the red/black and red/white connectors on the box I was able to confirm if a optic was good or bad by aiming it at a shiny surface.

Next I tried a hopper optic and was able to verify it's emitter and detector were operating properly. Breaking the beam turned off the RX LED.

You could even connect a visible LED to the red/black connector to see if it lights.

Have fun with this one. I am sure there are other optic encounters where you may find this application useful.