
CALUMET SHUTTER TESTER MODIFICATION: AN UPGRADE FOR THE LF SHOOTER

by
JB Harlin

Seems that little comes into my possession that does not, in some way, end up being taken apart and modified in some manner. One of the greatest little gadgets, that unfortunately is no longer available, is the Calumet Shutter Speed Tester. This little box is all you really need to check your view camera shutters. I have had mine for over ten years and have used it many times. I am sure it works fine as designed for most 35mm and medium format cameras, but when it comes to testing large view camera lenses, it just needed something a little more user friendly for me.

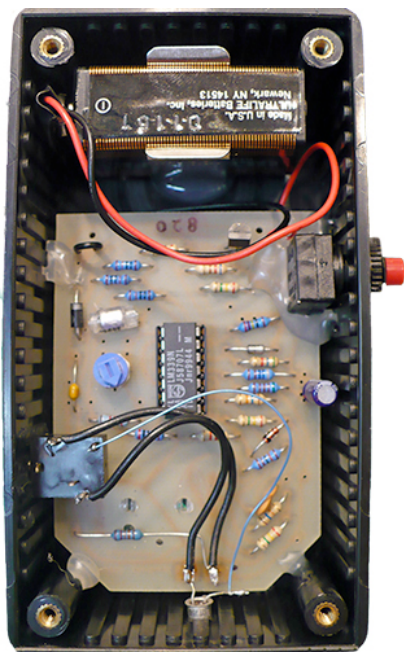


Figure 2
Detail look at the switching jack and associated wiring inside the tester.

I found it very awkward to get the sensor lined up with large lenses or shutters. The area where the sensor is located at the end of the tester box is just too small. So, the first thing I did was take the thing apart and plan a course of action that would make the unit more LF friendly. What I wanted was a large surface upon which to sit a large lens or shutter that was soft padded and didn't require a balancing act. What I envisioned was a box about six inches square.

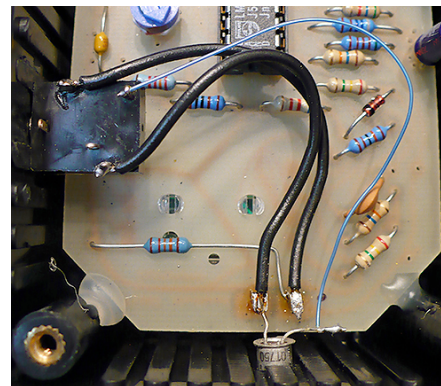


Figure 1
Close view inside of the shutter speed tester with modification. Note the emitter of the internal phototransistor has been lifted from the PCB solder tab.

I had several ideas in mind, from removing the innards from the factory unit and building a new housing, to just building an external box to hold the sensor. First I

determined that the phototransistor was a L12C1, which was readily available. After a little thought and studying the circuitry, I decided I could build an external box with another phototransistor inside that just plugged into the tester. Using a 1/8" phone jack with internal switching, it would be possible to bypass the internal sensor and trigger the tester remotely.



Figure 3
This is a top view of the aluminum chassis with foam top and photo transistor installed.

I hacked out a circuit board for the phototransistor and mounted the assembly dead center of the aluminum chassis. At the local hobby store I found some craft foam that was ideal to cover the top of the box and after a luxurious coat of paint I glued the foam to the box and cut out the opening for the sensor to look through. I wired the new phototransistor to the three-conductor audio cable and that was all there was to that.

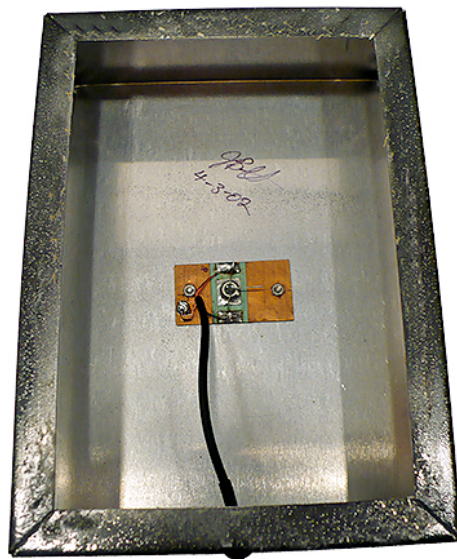


Figure 3
Inside view of the external trigger box with homemade PCB installed.

I dug around in my junk box and actually came up with most everything I needed. An aluminum chassis that measured 5" x 7" x 2" was ideal. I also found a Fairchild L12C1 phototransistor in my collection, along with a stereo cable with a 1/8" plug and matching switching jack. I

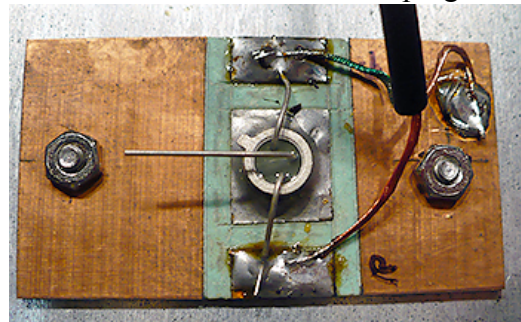


Figure 4
Here is my handmade circuit board with photo transistor and wiring.

I lifted the Emitter lead from the solder clip on the circuit board inside the tester and temporarily connected my external trigger. Sure enough, it worked! All that was left to do inside the unit was to drill a hole and install the 1/8" stereo switching jack. I decided on mounting it to the side of the tester. Next the jack was wired and tested again. Sure enough it worked! When I unplugged the external sensor the internal sensor worked also. Since I did not have a bottom cover for the external chassis, I cut a piece of mat board to the appropriate size and glued it on the bottom and added some stick-on rubber feet.

This arrangement has worked for near ten years, note the date of 04/03/02 on the inside of my external trigger box. One thing that I always do is turn the unit off before plugging or unplugging the remote trigger box.

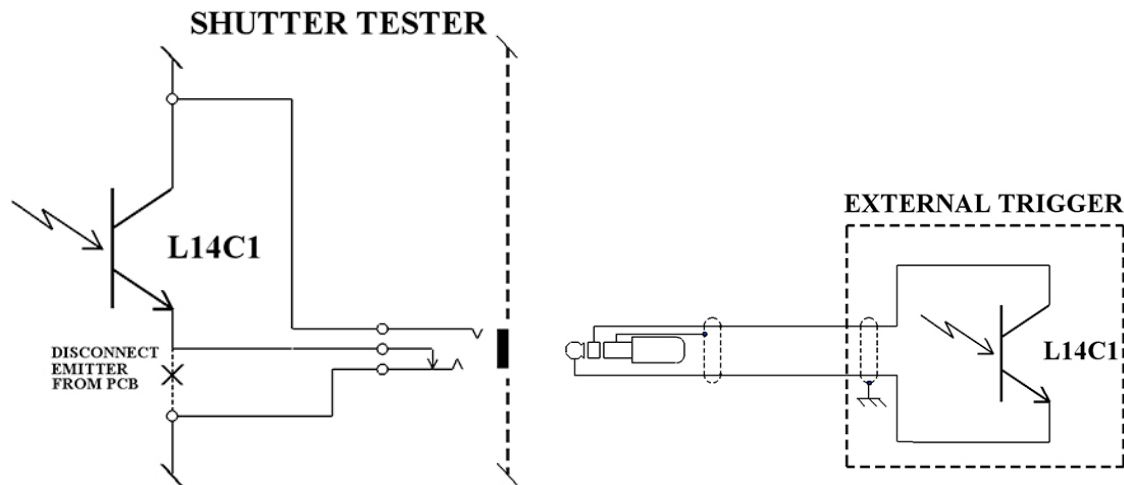


Figure 4

Here is the schematic of the modification wiring. Most everything I needed was scrounged from my junk box of electrical parts. I seem to never throw anything away.

If you are lucky enough to own a Calumet Shutter Speed tester, and if you are adventurous enough to make a few modifications, this just may be what you need to do. It has certainly worked out well for me, and if you are handy with a little electrical and mechanical work, you can do something similar.

Now for the usual disclaimer. . . do not try this if you are not proficient doing a little mechanical work and soldering. But, if you are a tinkerer that likes building and modifying, you may just find this is something you want to look into. Study the photographs and look carefully at the schematic. The external trigger box certainly makes testing large view camera lenses much easier.

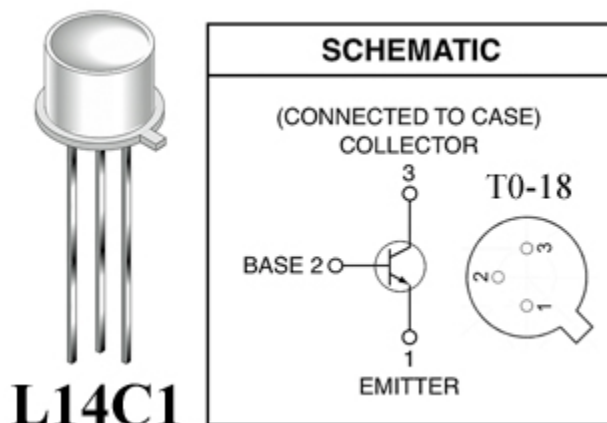


Figure 6

Fairchild L14C1 phototransistor mounted in a wide angle TO-18 package.

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