

MFJ-862 SWR / WATTMETER (Loose Meter fix, & Panel Lamp LED Replacement)



Photo 1: Loose meter with lampholder unplugged, broken support post

The **MFJ-862 SWR/Wattmeter** is a favourite of mine, especially for the 220 band, where it seems difficult to find something with reasonable accuracy.

I noticed the meter illumination was not working and when I picked up the unit, the meter actually fell backwards into the unit.

Investigation found a broken plastic support post for the meter (bits in lower left in photo 1) as well as a burned out bulb.

It appears that the support post base had cracked at some time and both screws that had originally held the post to the chassis had fallen right out. Note: I'm sure the 2 faults are not related !

Photo 1 also shows the burnt out illumination lamp unplugged from the meter, prior to replacement.

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In order to fasten the meter back in place, I decided to use the simplest way -- a bead of silicone rubber sealant on 2 sides of the housing. However, before doing so, remove the illumination lamp while the meter is loose, much easier!.



Since the bulb wires had been soldered to the tinned terminals in the lamp holder, I removed the terminals and inserted the frosted white Led leads in their place as shown in photo 2. The red dots mark the anode (longer lead) of the Led. Loops formed on the ends of the led leads will be used to reconnect the orange and black wires, the ceramic decoupling capacitor, and an added 1k resistor.

Note: don't have a frosted led? Make one by filing or sanding the outer surface on any regular Led.

Photo 2: Lampholder removed from meter, T1 ¼ Led installed

Photo 3 below, shows the added current limiting resistor (1K) in series with the orange wire and the anode of the led (red dots). The ceramic capacitor is replaced across the led terminals. The black wire connects as shown to the unmarked led terminal. (led cathode)

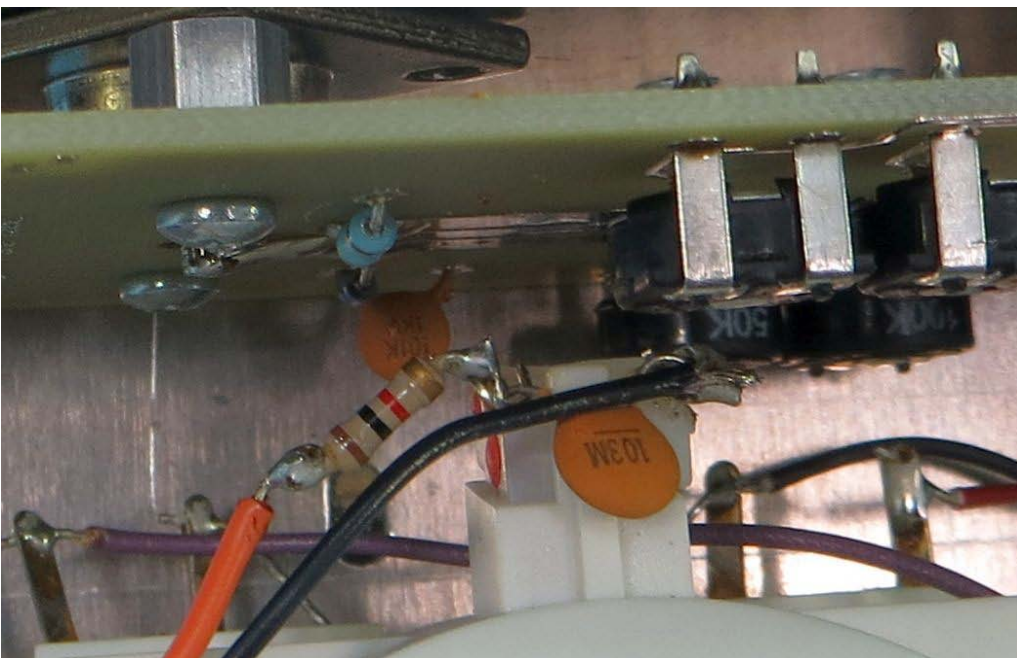


Photo 3: Wiring of Led in holder