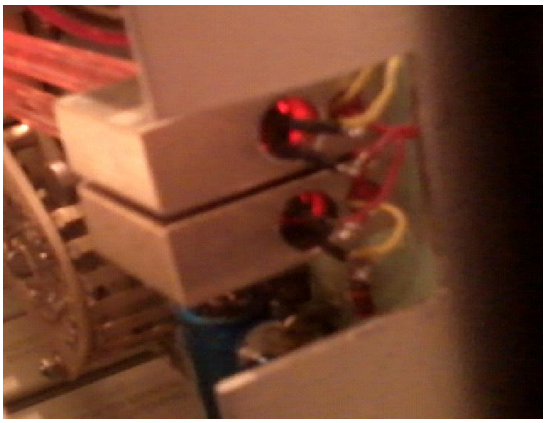
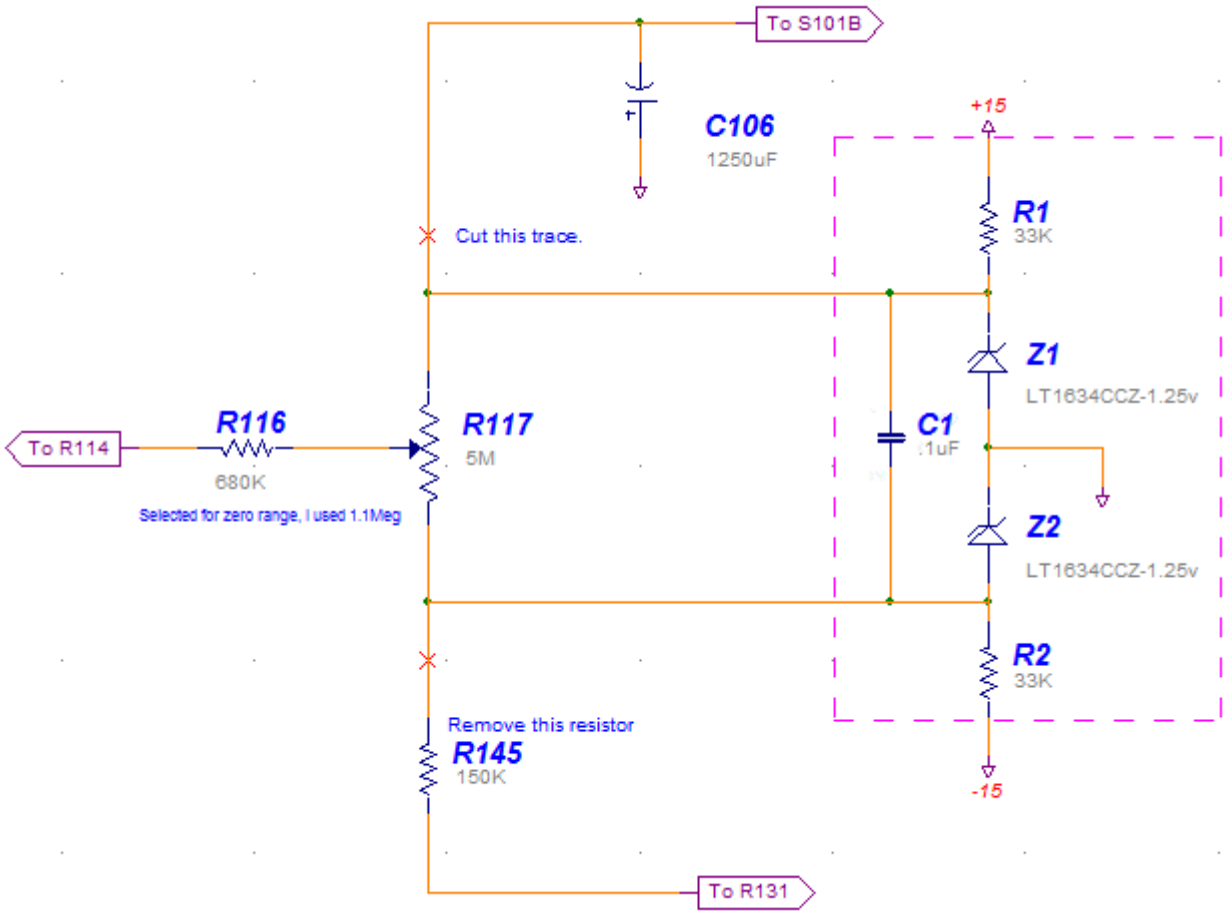
Fkuke 845AB/AR Led Modification

- First you will need the 845AR print, the mods are simple so I will not be providing an updated print.
- I found out that all the 1/4w resistors in my 845AR were high as much as 30 percent. So I changed all the resistors out on the meter PCB with Radio Shack 1/4 watt carbon film resistors. This change made great improvement in the output meter amp stage.
- Clean the rotary switches with minimal DeoxIT® D-Series. May use small camel hair brush.
- Move the wire on T202 pin 9 to pin 7, We will not need high voltage anymore.
- Replace C119 with jumper.
- Remove R154 (39K) change to 4.7K 1/2 to 1 watt. You may experiment here for optimum brightness.
- Reverse the diodes CR106 & CR107 (Moving T202 wire inverted phase).
- Drill though the neon aluminum blocks all the way though with the same diameter drill.
- Also drill two small holes about a 1/4 inch below to accommodate the wires to pass though.
- 
- Build up the Led's with heat shrink - LED's Mouser 630-HLMP-EH08-Y2000 Standard LEDs - Through Hole Red-Orange, 615nm 8 Deg, 27000mcd(max) .
- 
- Press the LED's in the new holes all the way in so there is no play in the light tubes. Wire them from wires passed though the new little holes soldered at the old neon locations.

- Change C111 (.0047uF) to .022uF. And C116 to 47uF. This will slow the response down, less jitter, Optional but I liked the change.
- Now for the zero control changes. Make up the following circuit and install as a floating circuit with heat shrink where necessary. R1 and R2 should be metal film about 50ppm. I used a tubular cap for C1 which provided a platform to mount the zeners on.



- You may have to pad one side of R117 to center the zero range.
- Adjust the 84 Hz multivibrator and meter calibration.
- If you have any questions E-mail me. Try this mod at your own risk. My goal was to keep it simple and maintain the basic circuit design and the original isolation. No PCB required.