A Solid State EM84

A half-baked project.

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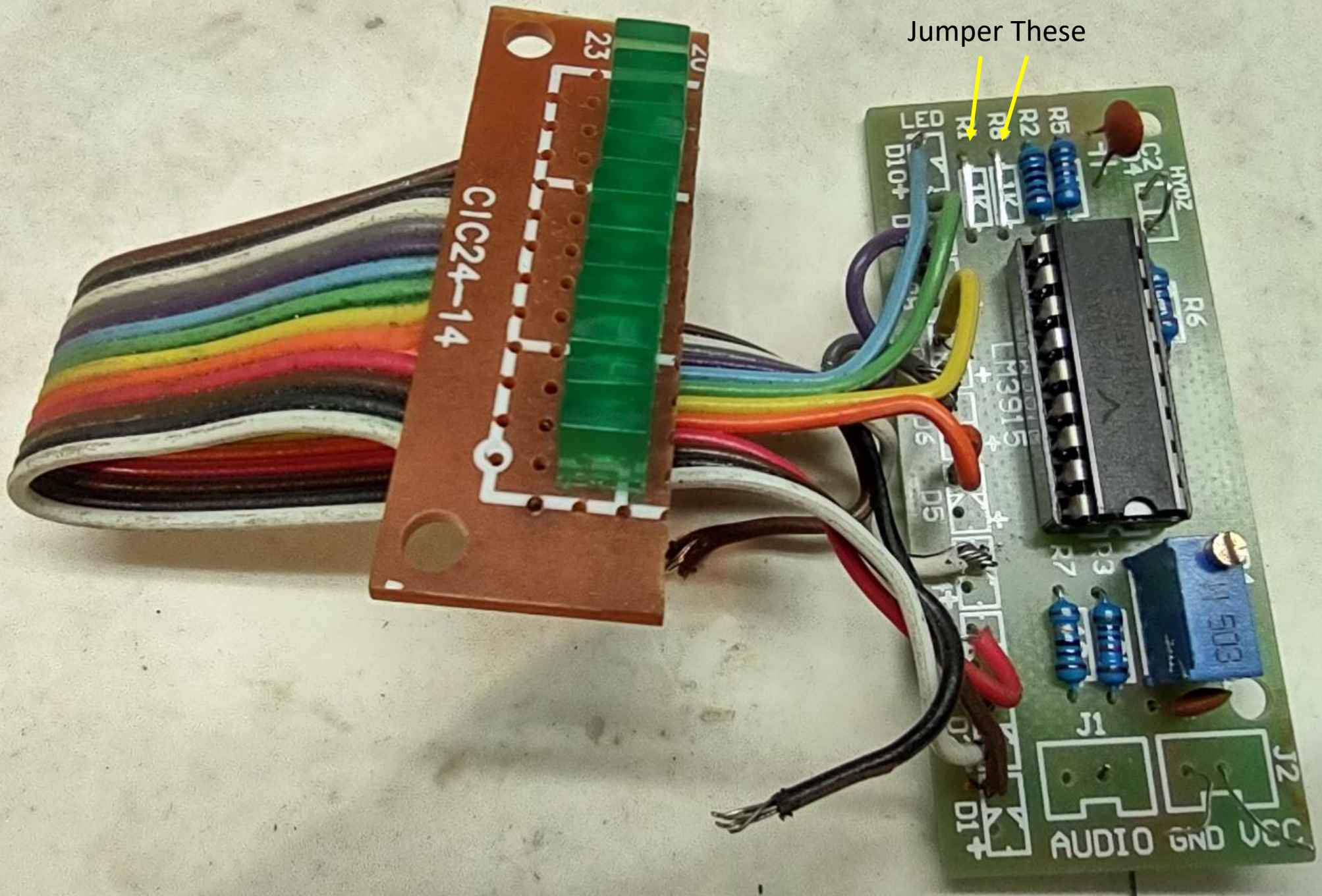
Low-Hanging Fruit

- I bought some LED VU Meter kits from Universal Solder. https://universal-solder.ca/audio-level-meter-lm3915-diy-kit/ I have also seen them on Amazon.
- I bought them when they were on sale. I bought them solely for the LM3915 chip. I usually pay $3 for the LM3915, but this whole kit cost me less than $2!
- Now that I had the kit, I wondered what a EM84 substitute would look like.

- The LEDs are in the “wrong order” on the VU meter board to emulate a EM84. So, I mounted the LEDs on a perforated board (with 0.1” hole spacing; the LEDs had to be flied down a tiny bit) and connected it to the VU meter board with ribbon cable. (Ribbon cable: bad idea. Individual wires would be much easier)
- I added an extra LED at either end, turns out to be unnecessary unless you really want the LEDs to match the EM84 bar.
- Note that you need 10 LEDs, and a kit only has 8 green LEDs.
- Easy to prototype, discrete LEDs are easier to handle than SMT LED chips!
- Not a convincing substitute for an EM84! Needs a diffuser and bluer LEDs.
- The VU meter responds to positive voltages, the EM84 uses negative voltages, so a simple inverter will be required. (J-FET, or an op-amp as used in the SS6E5 circuit)


Jumper These
CIC24-14
23
LED
D10+
R1
R8
R2
R5
C2
HY02
R6
LM3915
D5
R7
R3
J1
J2
AUDIO
GND

See video at http://rabjohn.ca/data/documents/SolidState_EM84.mp4