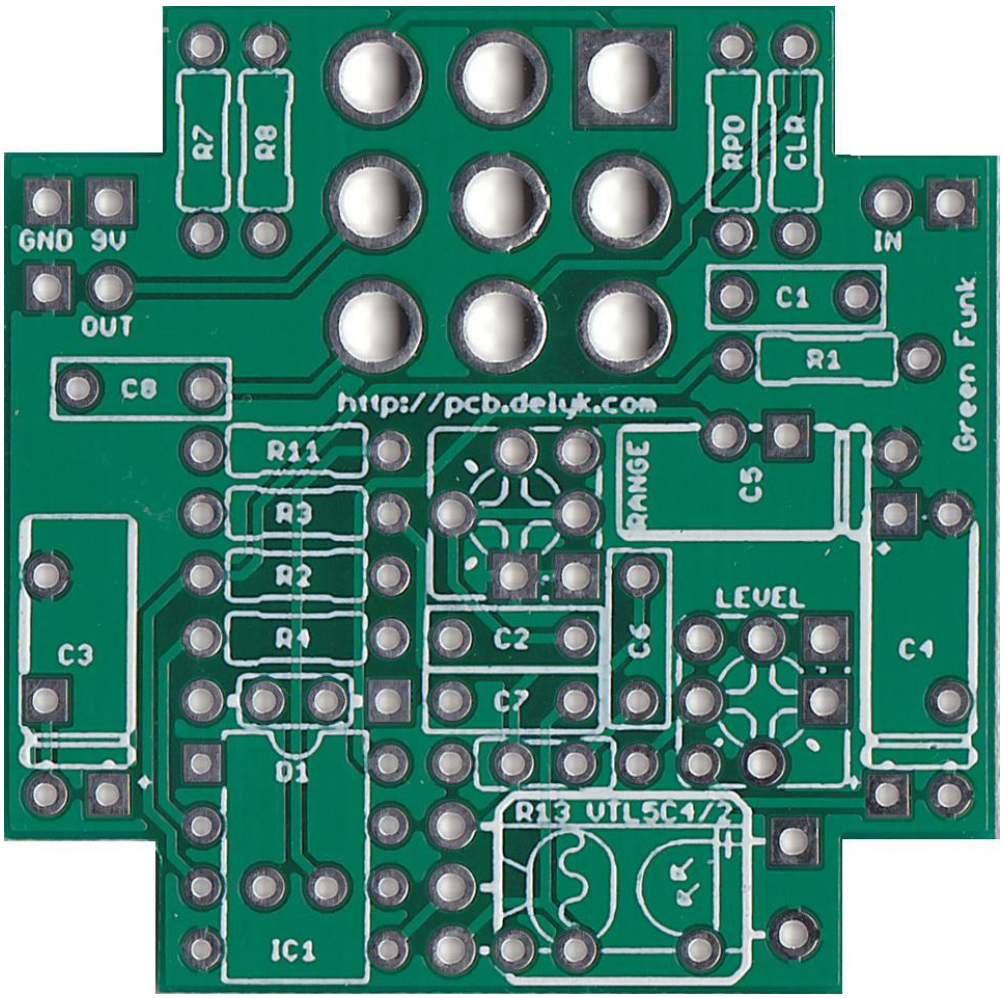


Green Funk

Build Document

Introduction

This is a 1590LB version of the DOD440 Envelope Filter. It uses the very hard to find VTL5C4/2 optocoupler.

Bill of Materials

Resistors

P/N	Value
R1	10k
R2	100k
R3	100k
R4	10k
R5	2M2
R6	2k2
R7	22k
R8	22k
R9	220k
R10	220k
R11	220k
R12	430k
R13	100k
R14	22k
RPD	1M5
CLR	6k8

Diodes

I obtained all of my diodes from Tayda.

P/N	Value	Notes
D1	1N4148	
D2	1N4148	

Capacitors

I obtained all of my capacitors from Tayda.

P/N	Value	Type	Notes
C1	10n	Film Box	
C2	100n	Film Box	
C3	4u7	Aluminum Electrolytic	At least 16V. Easily 50V.
C4	1u	Aluminum Electrolytic	At least 16V. Easily 50V.
C5	10u	Aluminum Electrolytic	At least 16V. Easily 50V.
C6	22n	Film Box	
C7	22n	Film Box	
C8	47n	Film Box	

Integrated Circuits

I obtained all of my integrated circuits from Tayda.

P/N	Value	Notes
IC1	TL022	

Potentiometers

I obtained all of these from Tayda.

P/N	Value	Notes
LEVEL	100k	I recommend this.
RANGE	100k	I recommend this.

Miscellaneous

Qty	Value	Notes
1	VTL5C4/2	While you **can** attempt to roll your own dual optocoupler here, most reports suggest that anything other than the expensive and hard-to-find VTL5C4/2 don't work nearly as well.

Build Notes

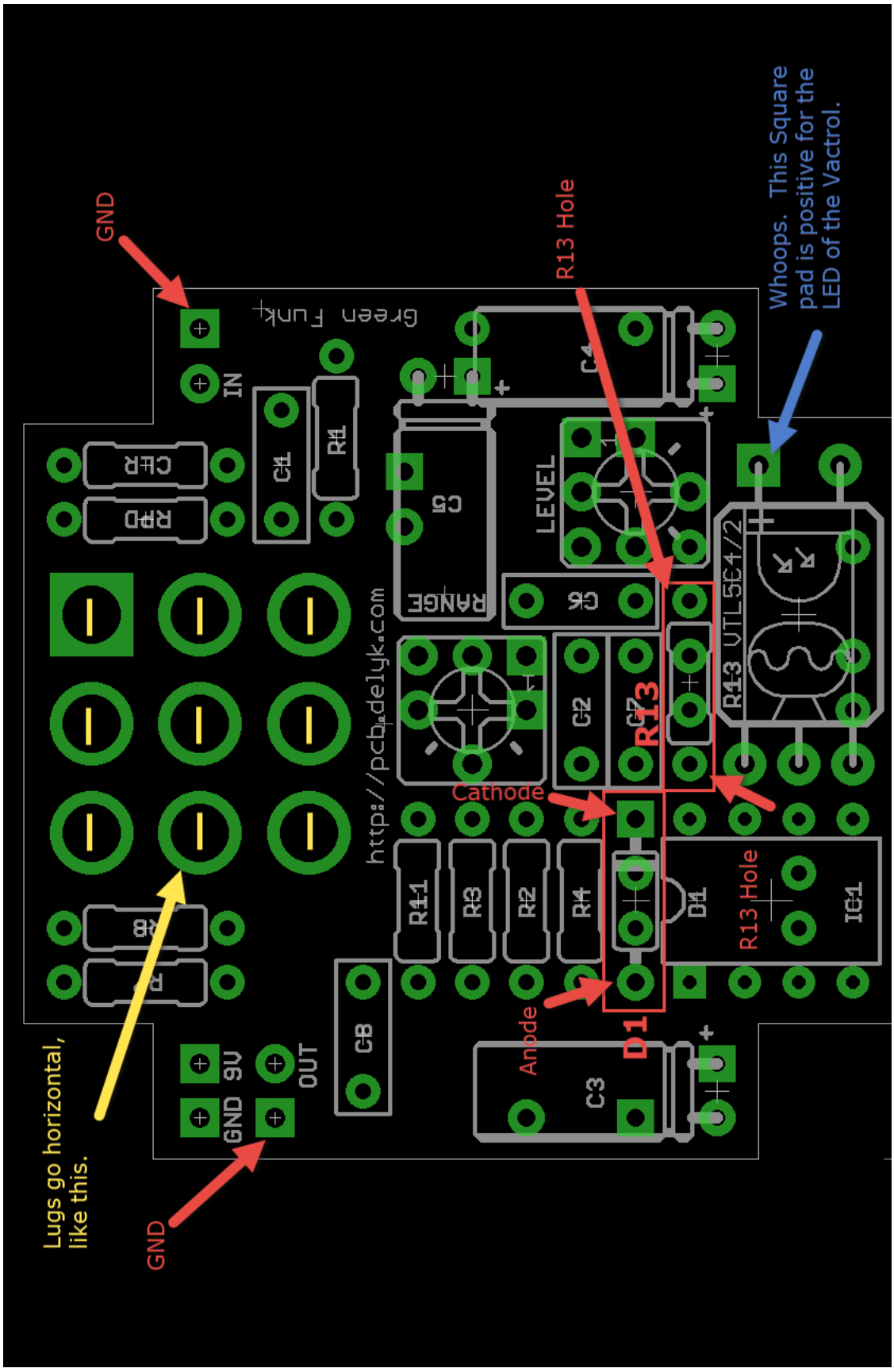
Suggested Soldering Order

1. D2, R5, R123, R9, R10, R6, R14
2. D1, R13
3. The rest of the resistors.
4. All capacitors except for aluminum electrolytics.
5. Trimpots
6. IC1 (If you are putting this in a 1590LB, do not socket)
7. Bypass LED (on bottom of board with D2, R5, etc)
8. Aluminum Electrolytics
9. Vactrol (the Square Pad here in the anode (positive) of the LED of the Vactrol)

BE SURE THAT THE FOOTSWITCH IS ON THE SAME SIDE OF THE BOARD AS D2, R5, ETC!

What do the square pads mean?

- If it's a diode, including an LED, it's the negative (cathode).
    - Most diodes have a band on the cathode.
    - If you look closely, on most LEDs, the cathode also has a flat side on the plastic. It should also be the short leg.
- If it's a polarized capacitor, it's the positive. Most of the time, this is the long leg.
- If it's next to a JI/JO/IN/OUT round pad, then the square pad is GND.



Schematic