Back to my courses

RC Excavator - How To

69% COMPLETE

What We're Building

Sourcing Parts

Soldering

Soldering H-Bridges & Buck Converter

Soldering Components to PCB

Soldering Wires to N20 Motors

Uploading Code to ESP32

3D Printing

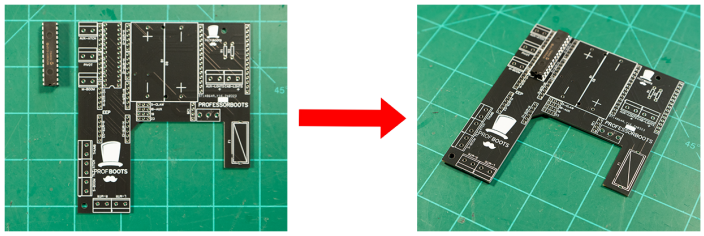
Soldering Components to PCB

Tools Required

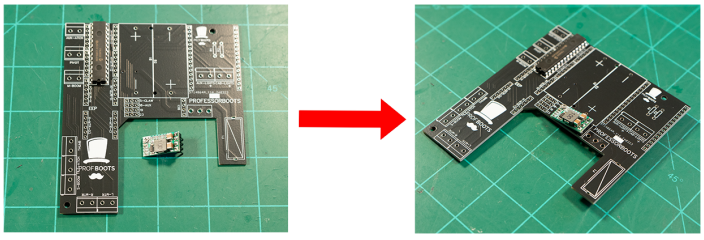
- Soldering Iron
- Small Wire Snippers

STEPS

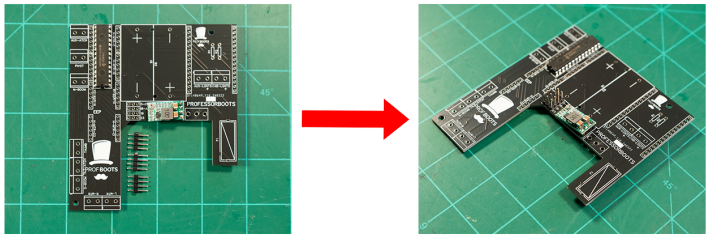
Solder a MCP23017 port expander directly onto the PCB aligning the small circular notches.



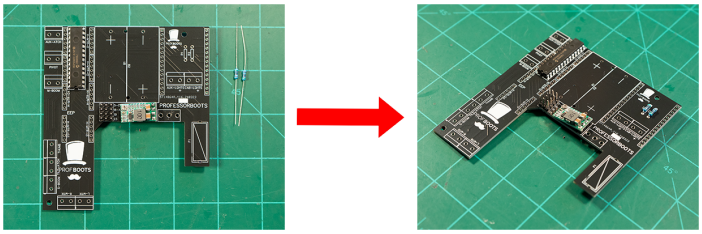
Solder on a completed 5v buck converter.



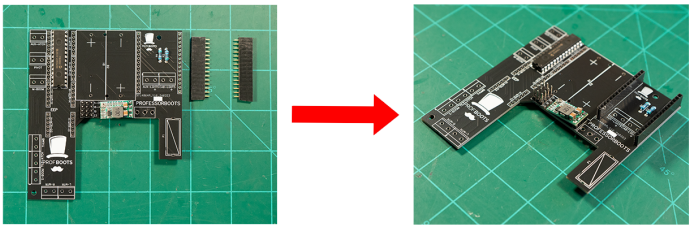
Solder 3 sets of 4pin or 4 sets of 3pin male Headers onto 5-Claw, 18-Aux, 19 and 23.



Solder 2 resistors onto R1 and R2. Resistor size 4k7 is optimal but anything between 2k and 8k will likely work just fine as these simply pull up the two data lines coming off the MCP23017 to 5v.

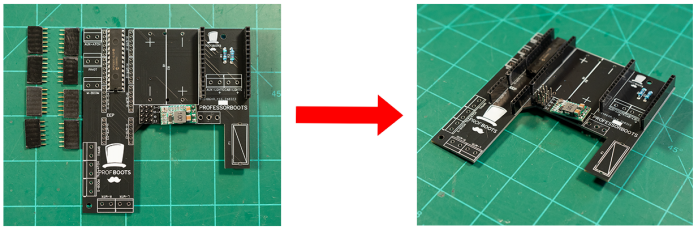


Solder 2 sets of 15pin female headers onto where the ESP32 development board will mount.

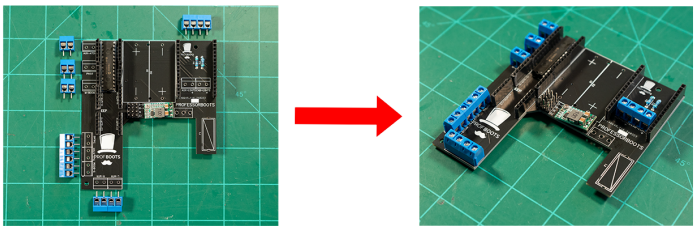


Solder 8 sets of 6pin female headers

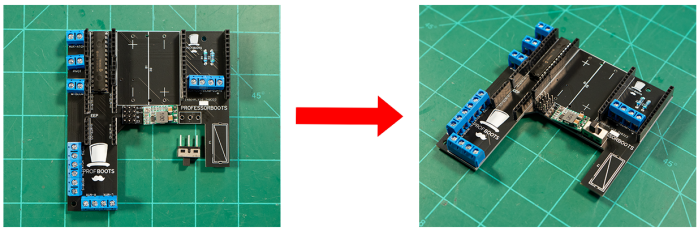
onto where the 4 H-Bridges will mount.



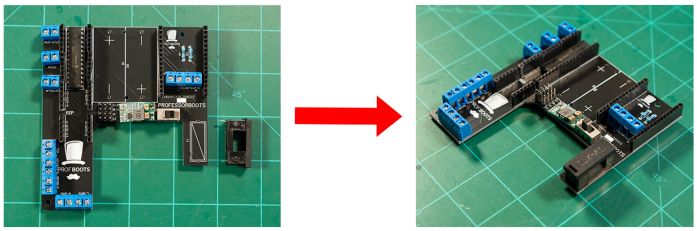
Solder all 10 terminal blocks on, verify each block is facing the correct direction by cross referencing the photos below. Where they are stacked beside each other it helps to lock them together first.



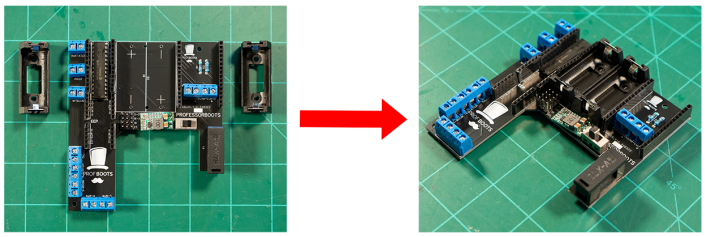
Solder the power switch onto the PCB.



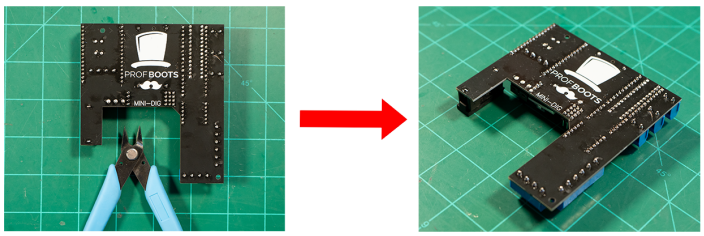
Solder on the fuse holder so the cover swings back towards the ESP32 development board.



Solder 2 CR123A Battery holders on making sure to match the positive(+) symbols of the holders to the positive(+) symbols of the ProfBoots PCB.



With everything soldered flip the board over and trim any pins that stick out excessively.



COMPLETE AND CONTINUE

Country/region

USD $ | United States