

# Assembly Instructions

Other documents involved:

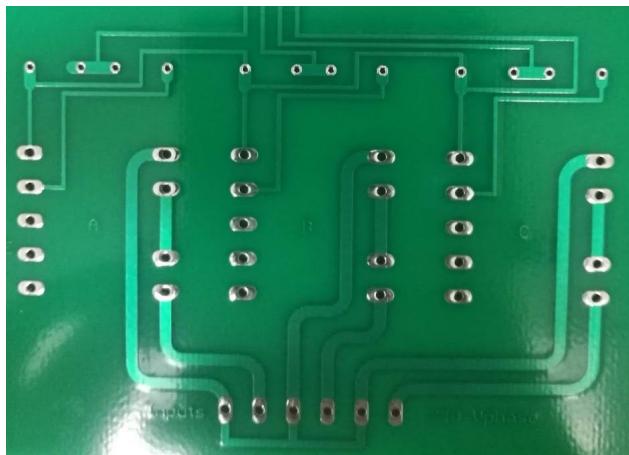
- Assembly Instructions (Google Slides)
- PIC Microprocessor

Note that much of the information in this document comes from the attached OpenPMU documents written and created by David Laverty. The document below acts as a step by step instruction booklet, along with providing more information on attaching wire connections.

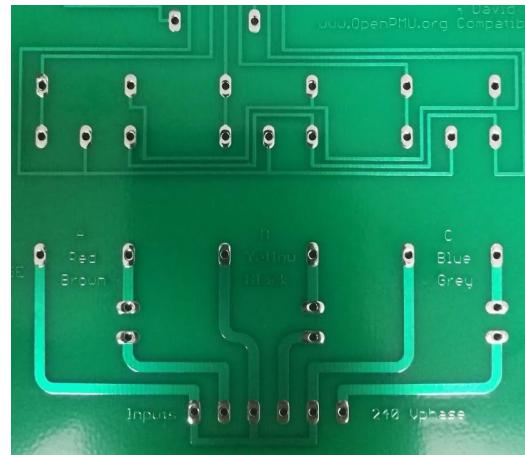
## Initial Notes

- The differences between the two versions of OpenPMU are shown below. V37 (Hall Effect) and V38 (Isolation Transformers). Other than the differences shown below, component placements are the same.

V38 Isolation Transformers



V37 Hall Effect



- There are drill holes in V38 (Isolation Transformers), not in V37 (Hall Effect). Drilling the holes is not necessary, unless you are going to mount it.
- Some of the images below are pictured with a TRACO power unit. This was an incorrect part I originally ordered so ignore it. The correct power unit is on the parts list and in some of the other images.



- For components that come with long leads, I found it easier to put the entire leads through component ports on the circuit board, soldering them, and then snipping the leads off, as shown above.

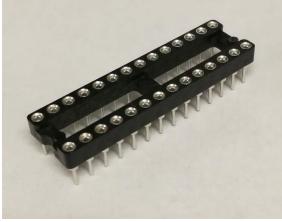
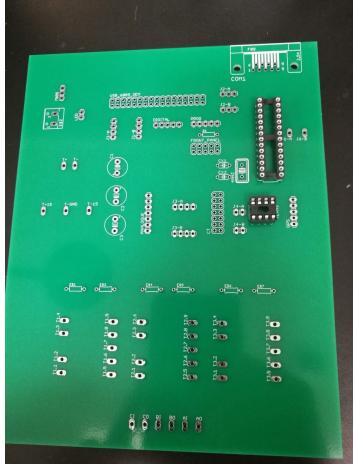
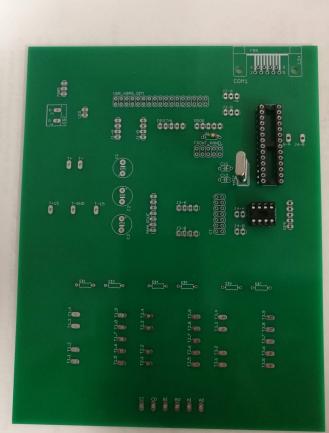
## Soldering Components

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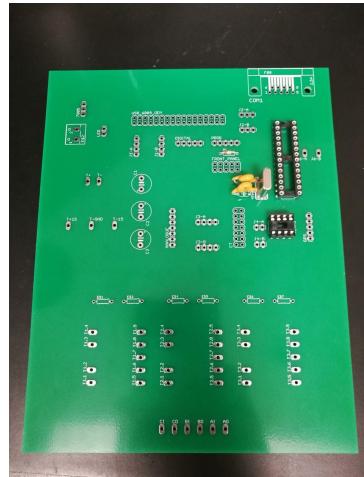
Below is a table with the recommended soldering sequence. The parts are split in terms of size and placement on the board.

The table below gives minimal information about soldering the components on, and is recommended if you have already built one board. If it is your first time building the board, refer to the Google Slides document to get more information on what and where to solder.

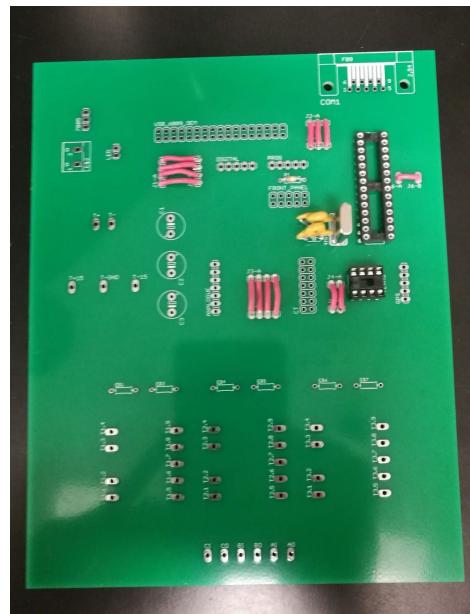
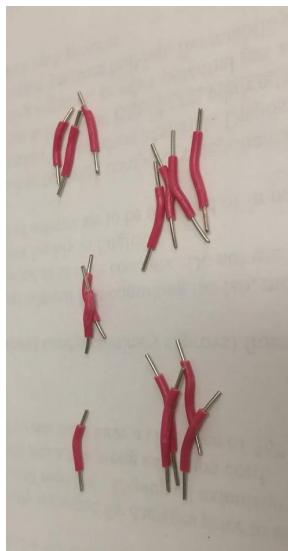
Component Name	Component Visual	Placement
8-pin IC Socket	A photograph of an 8-pin integrated circuit (IC) socket component, showing its physical appearance with eight pins.	A photograph of a green printed circuit board (PCB) with various electronic components and pads for soldering, showing the placement area for the 8-pin IC socket.

28-pin IC Socket		
4 MHz Crystal		
100k Resistor		

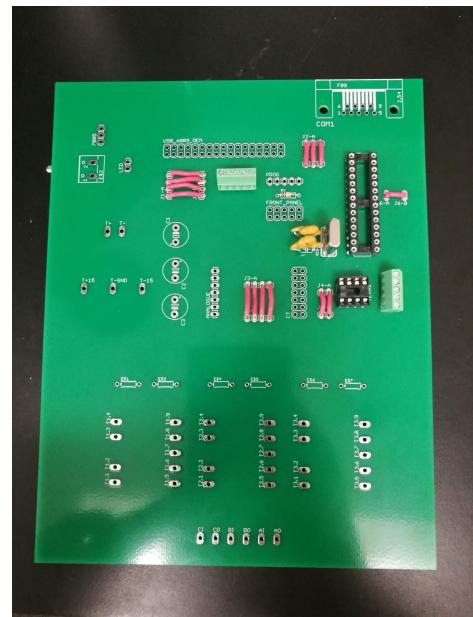
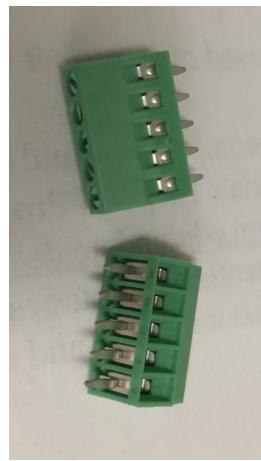
100pF Capacitors  
(2)



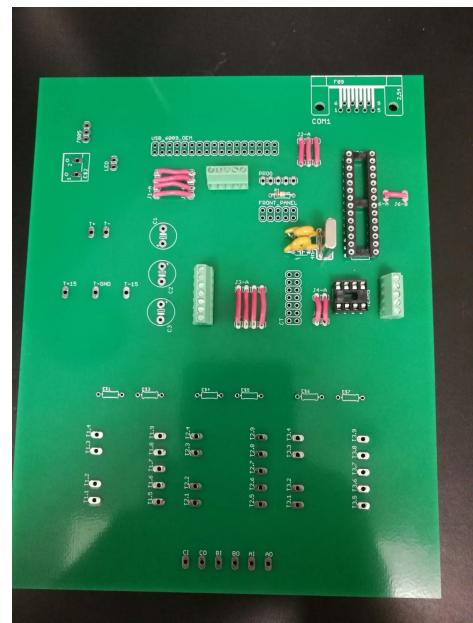
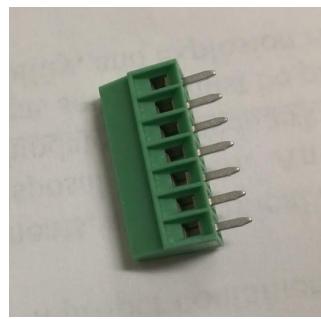
Wires (14)



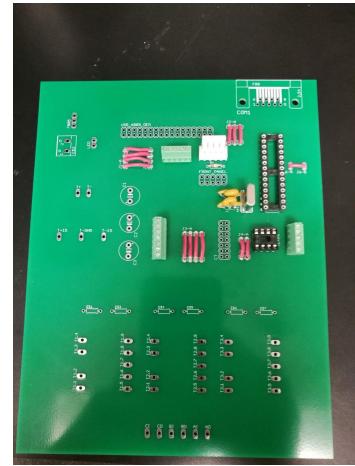
5-way 0.1" screw  
terminal (2)



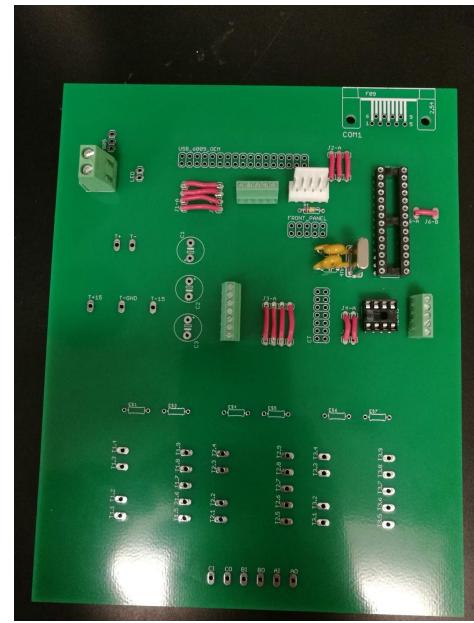
7-way 0.1" screw  
terminal



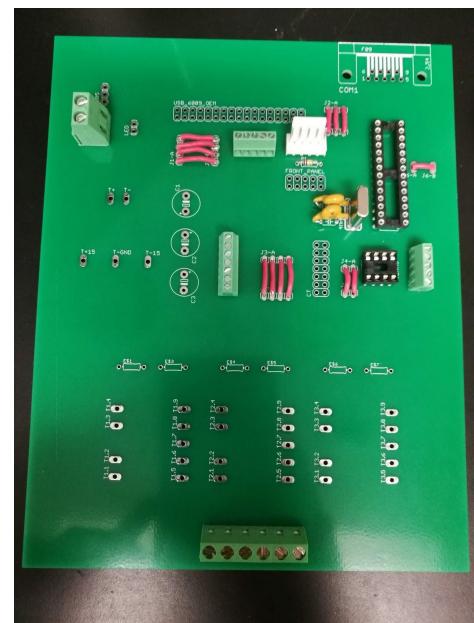
5-pin PCB header



2-way 0.2" screw terminal



7-way 0.2" screw terminal



5V Red Led

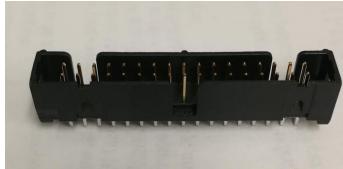
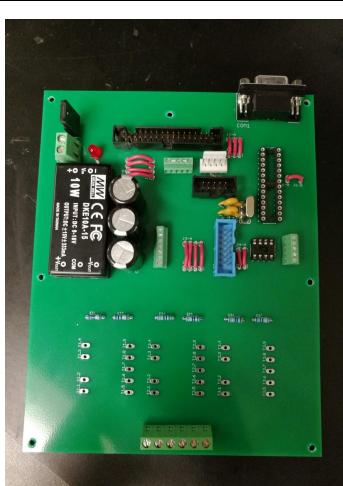
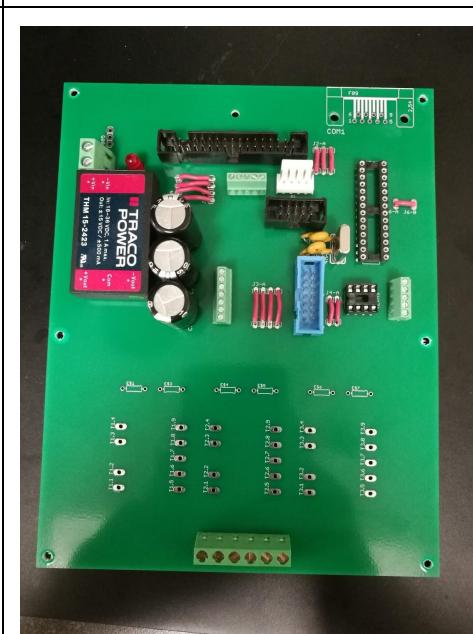


Current Board  
IDC (2x7)

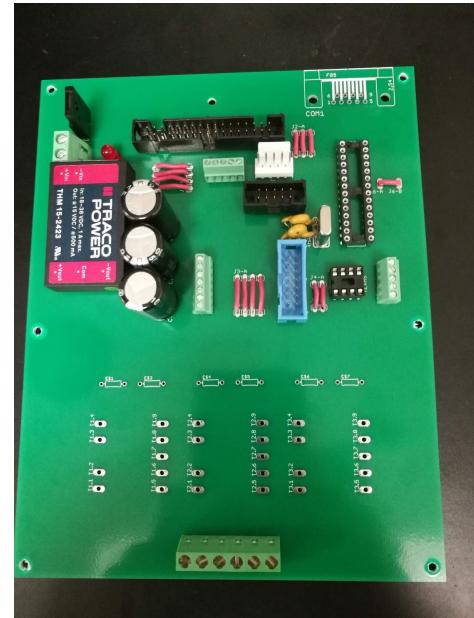


Front Panel IDC  
socket (2x5)

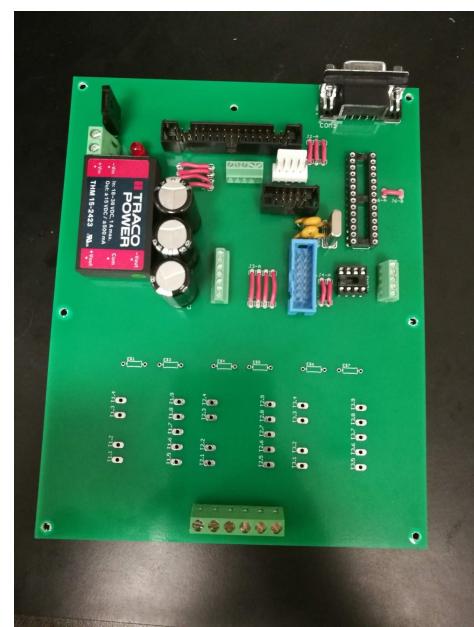


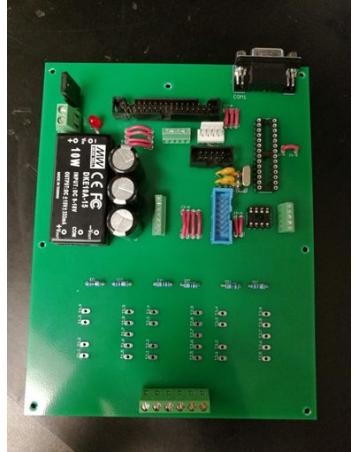
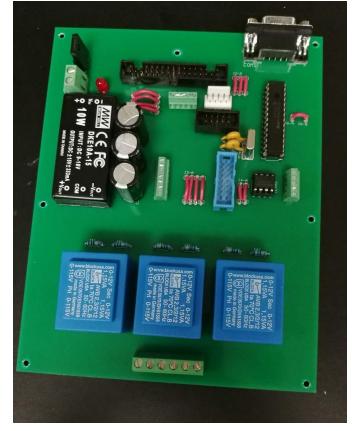
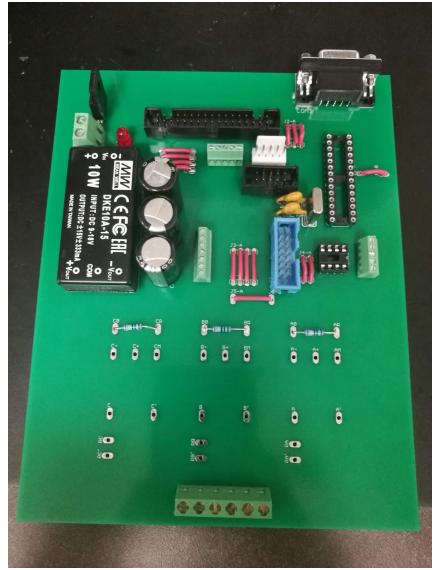
USB IDC Socket (2x17)		
DC-DC Power Supply		
Electrolytic Capacitors (3)		

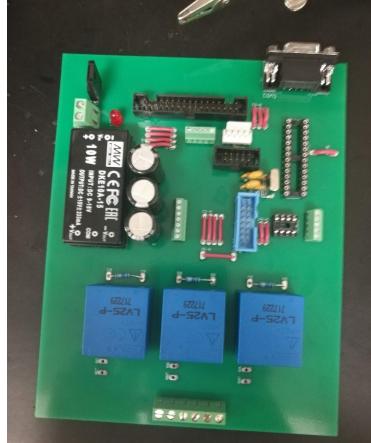
5V Voltage  
Regulator



9-pin D Type  
Socket



240 Ohm Resistors		
V38 Isolation Transformers		
240 Ohm Resistors		

Hall Effect Transformer		
47K Burden Resistors		