

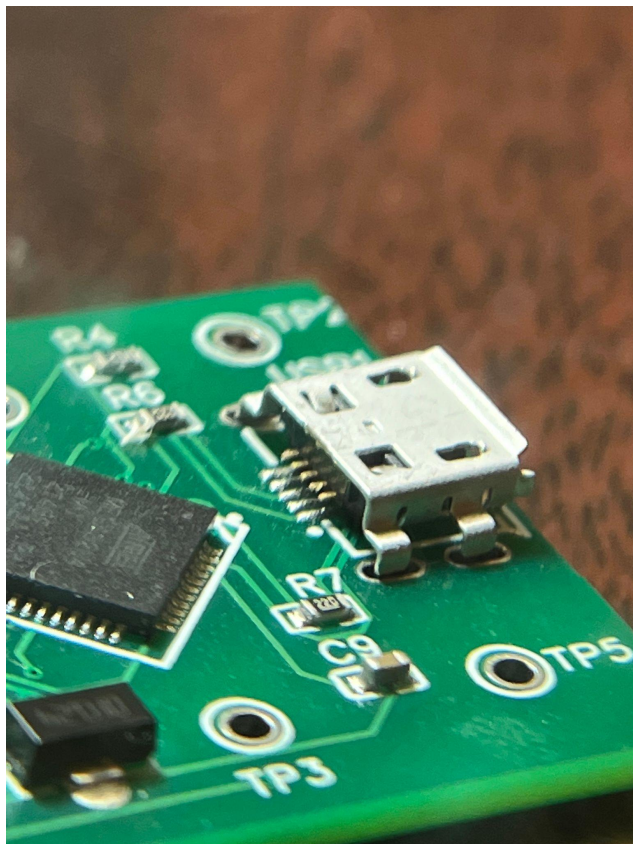
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Weekly Report 3/31

Introduction:

This week I have been working on my final paper as well as writing up hand off documentation. The handoff documentation isn't specifically for my class but it is more so when I am no longer part of this project the documentation will have access to all of my work and parts. The final report I am writing is about 60% done, mainly research and design stuff, but I still am working on the impact section as well as testing. The last part came in and I've been soldering everything to the board, however I did encounter an issue with the micro usb port not laying flat, so I am very unsure about what to do going forward with that.

Work from this past week:

I have been soldering parts onto the PCB but I ran into an issue with the usb port. I think that the footprint that I used for the usb, which came directly from the company, is flawed or was cut out incorrectly in the manufacturing process. It doesn't lay flat so the leads aren't touching the pads(demonstrated below)



I am unsure where to go from here as the microchip is programmed through the USB so if the USB cannot be connected to the board, the microchip can't be programmed. I have been looking into the possibility of just connecting stripped wires to the pads on the board where the usb would lay, however there's risk because of strain and the possibility of ripping the pads off the board. I plan to continue to look into this and find out how I can do it over this weekend because I have an exam tomorrow.

If I can get it to work from the USB over this weekend then I will hopefully be able to burn a bootloader to the microchip and then use the arduino code that I have already written, accommodating for the new motor stall current. However, if I can't then I will just have to try to work out what exactly is wrong with the USB and how to fix it on the design of the board moving forward., presumably just using a different micro usb footprint/part.

Work for the next week:

My professor has made my final paper and my port-mortem presentation due next Thursday which includes a demo. As I do not have a working board right now, I might try to just work with the current prototype just to show for and then still explain what went wrong in the design process which is what the purpose of the presentation is. I was wondering if I could be in lab all next week and learn/ be able to work with the device once it's put back together so that I am able use it and can have an in class demonstration during my presentation or if Dane is available to come to my class during my presentation, it's only 7 minutes sso the demo is about 2-3 minutes max and have a quick demonstration of how it works while also being able to explain this pcb.