

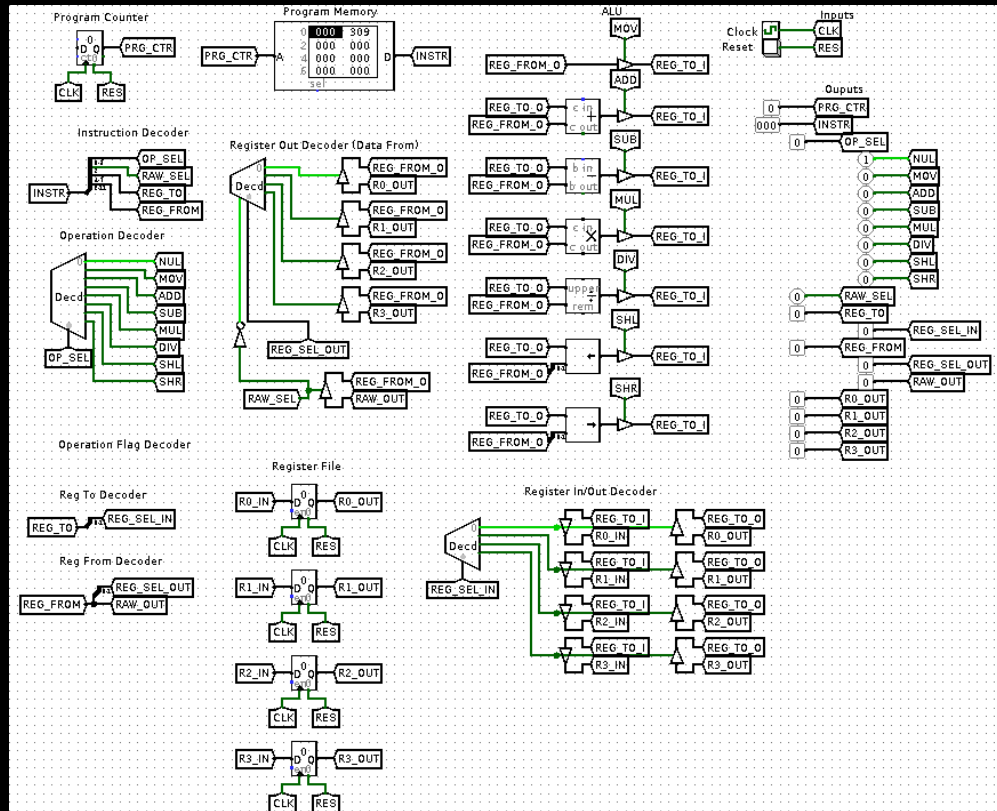
1,2,3 : 4-bits Is All You Need!

Building a Computer Without
Newegg - Mike Moss & Erik Talvi

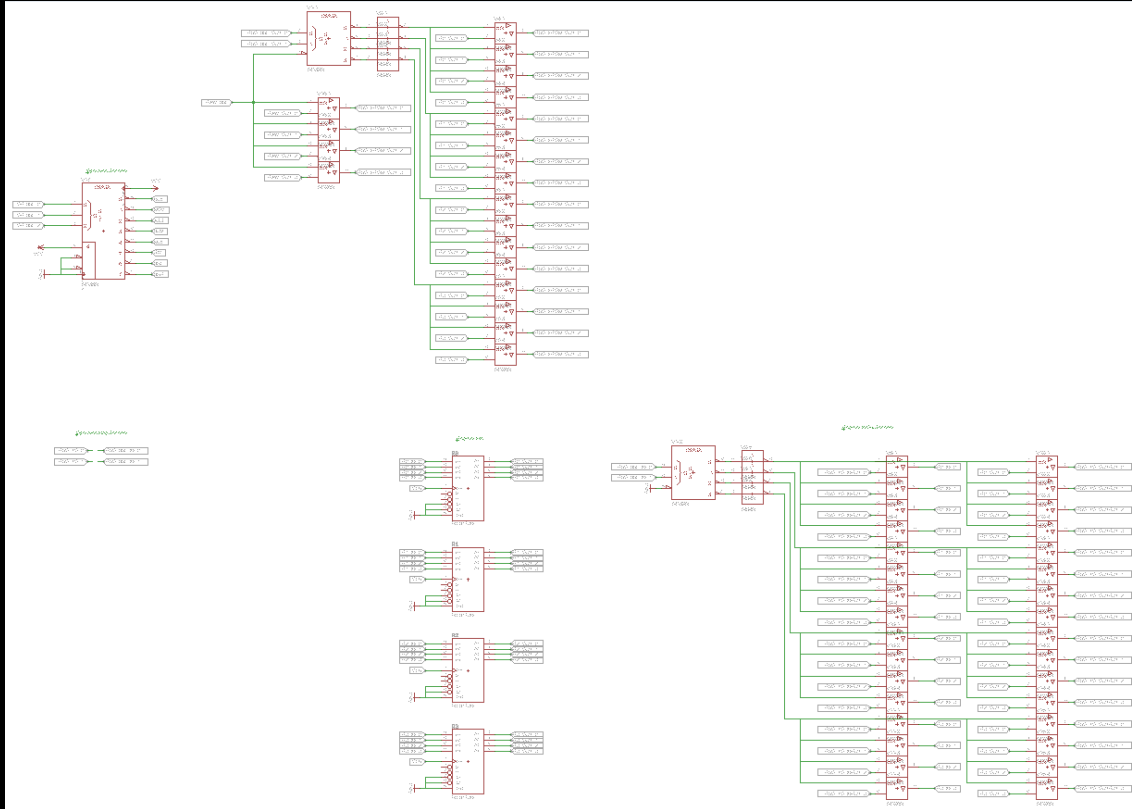
Inception

- Mike - Lawlor challenge
- Erik - Never had milled or soldered circuits

Logisim



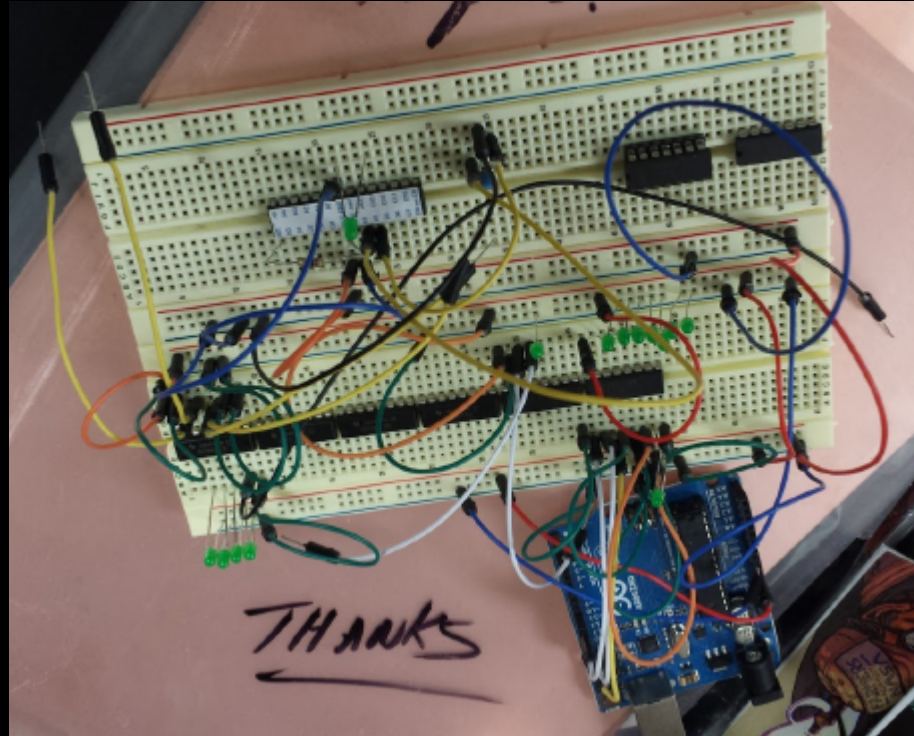
Conversion



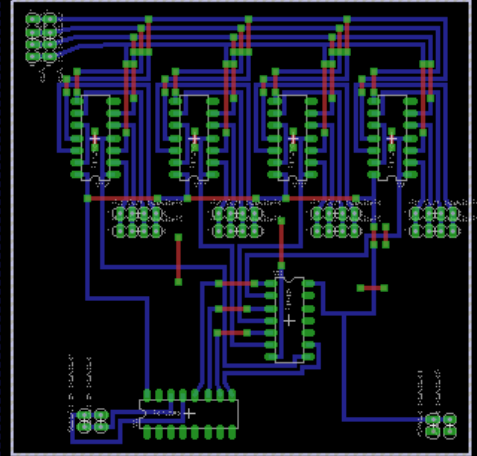
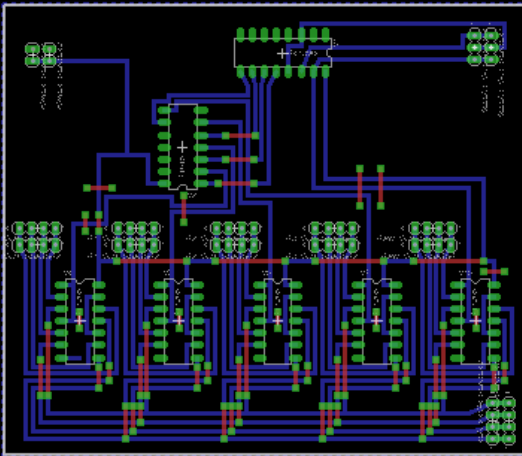
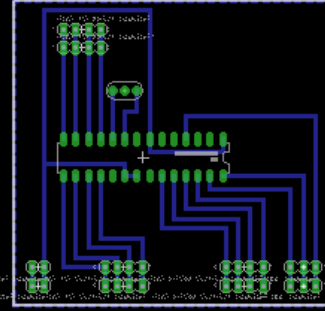
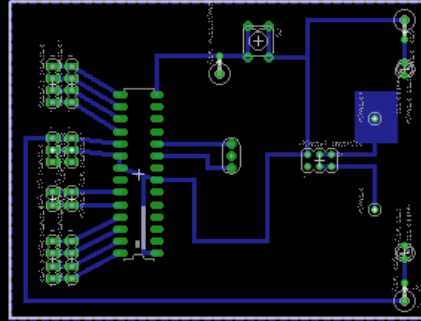
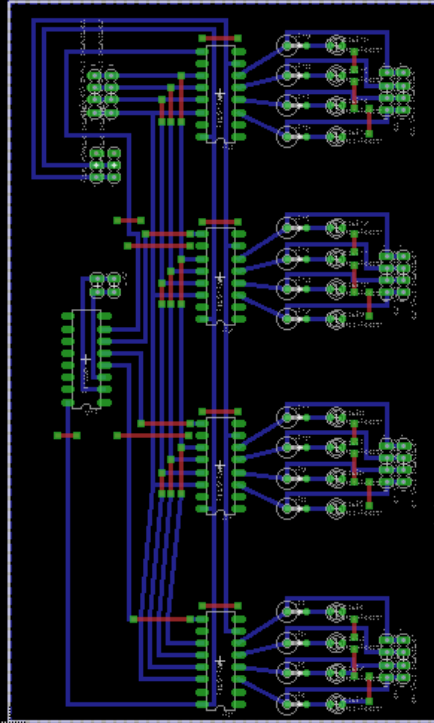
Part List

Name	Part	Pins	Per Chip/Qty	Need	Total
Tristate Buffer	74126	14	4	64	16
Inverter	7404	14	6	9	2
3-bit Decoder	74238	16	1	1	1
2-bit Decoder (NL)	74139	16	2	2	1
4-bit Register	74173	16	1	4	4
14-pin Socket	-	-	10	18	2
16-pin Socket	-	-	10	6	1

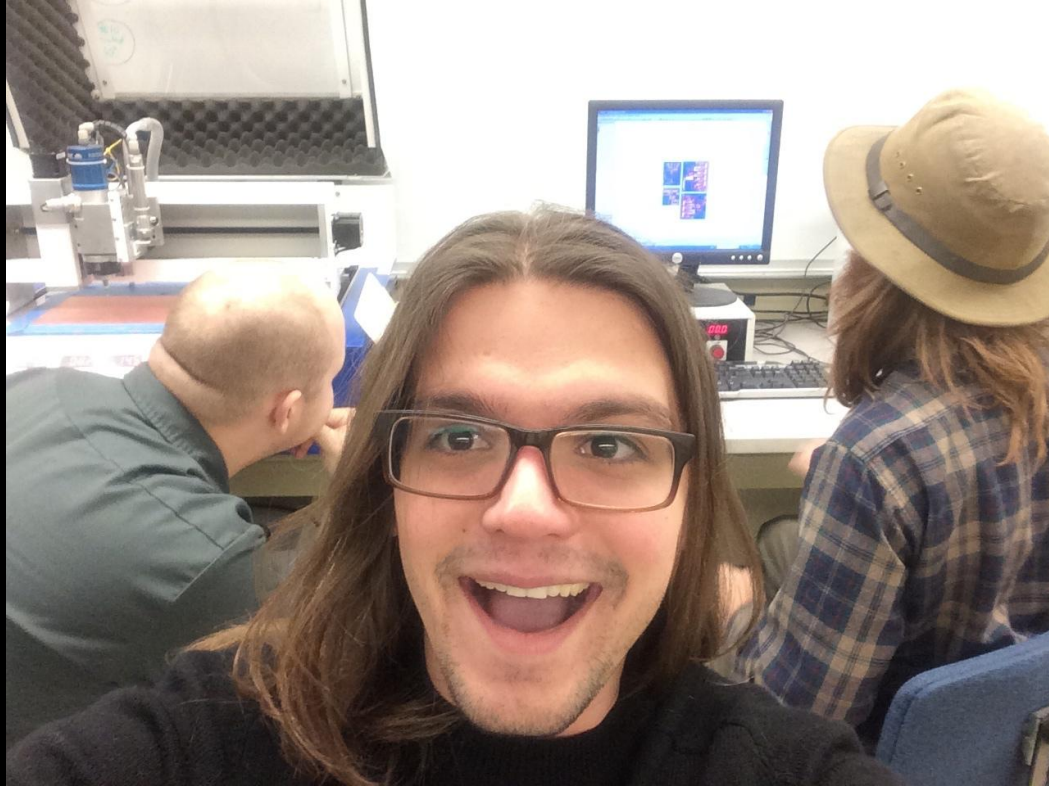
Bread Board Testing



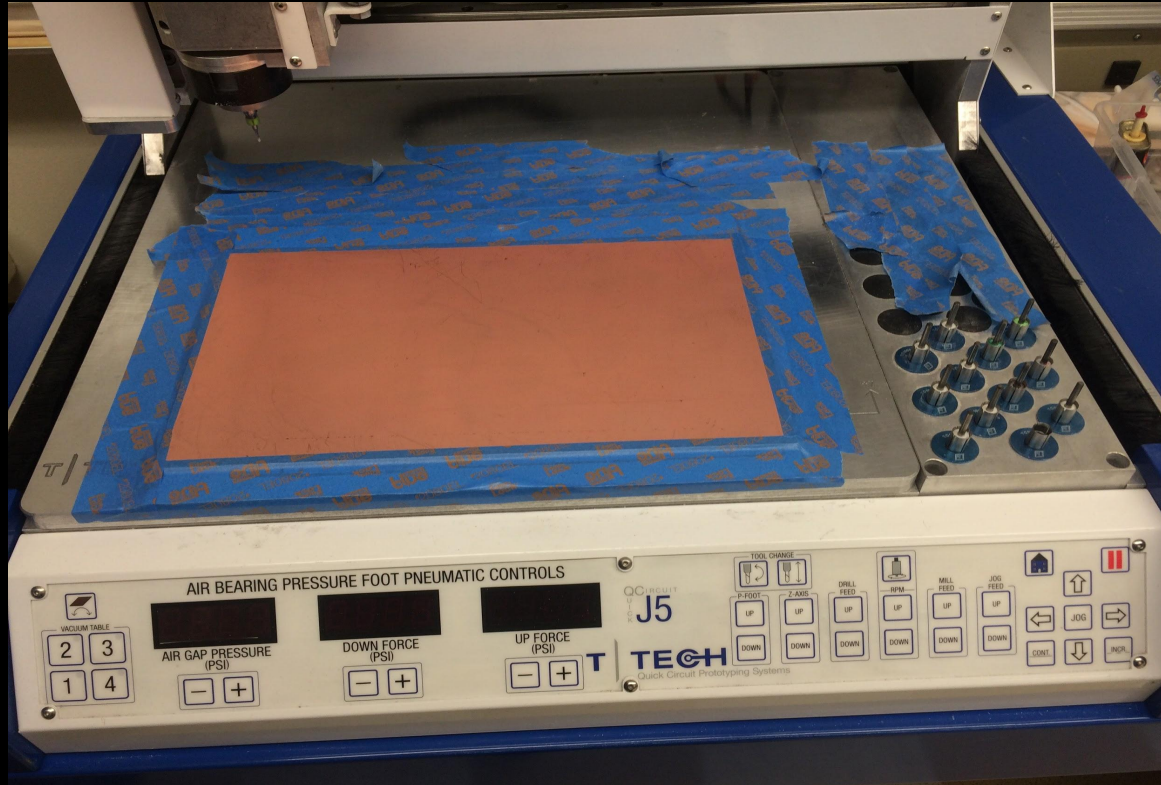
PCB Layout



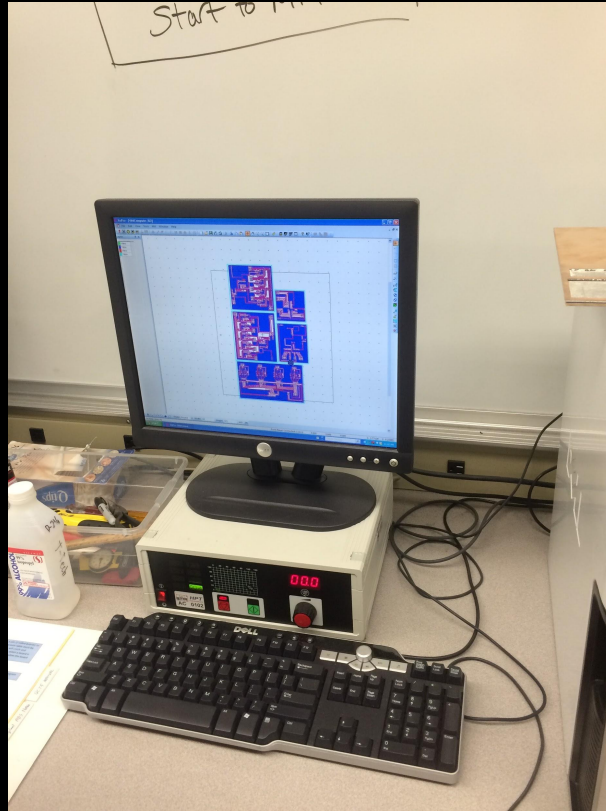
Circuit Board Milling



Circuit Board Milling - Set Up



Circuit Board Milling - Software

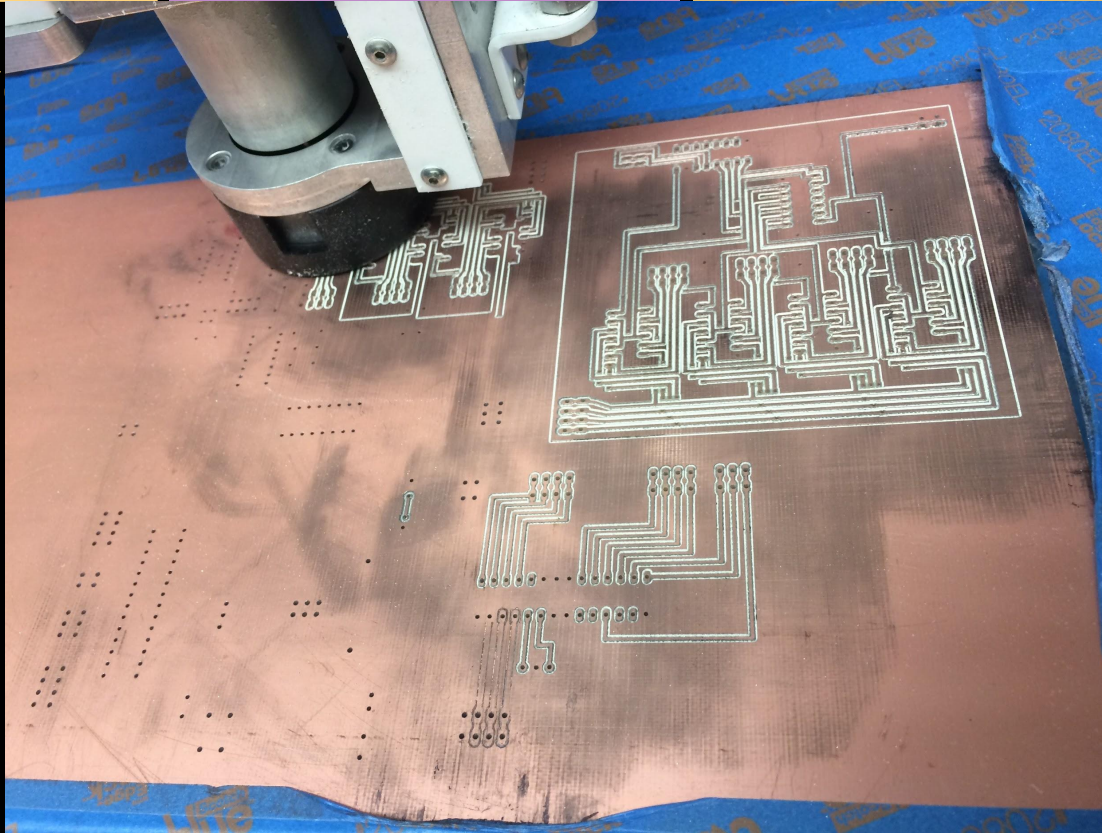


Circuit Board Milling - Drilling

Need to Consider Video Format. Can use youtube video or alt-tab to video.

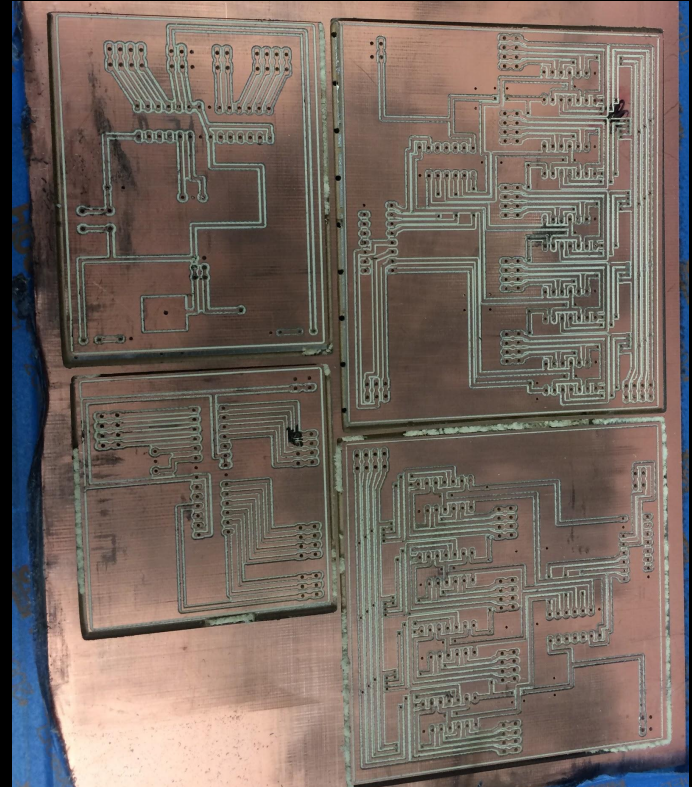
Circuit Board Milling - Milling

Hav

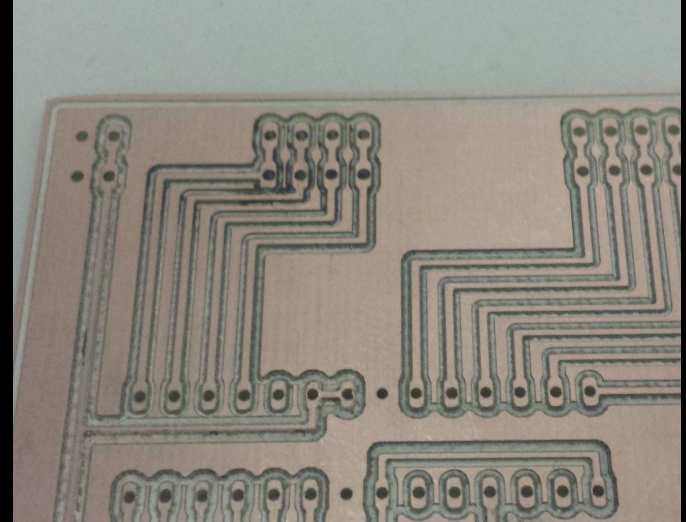
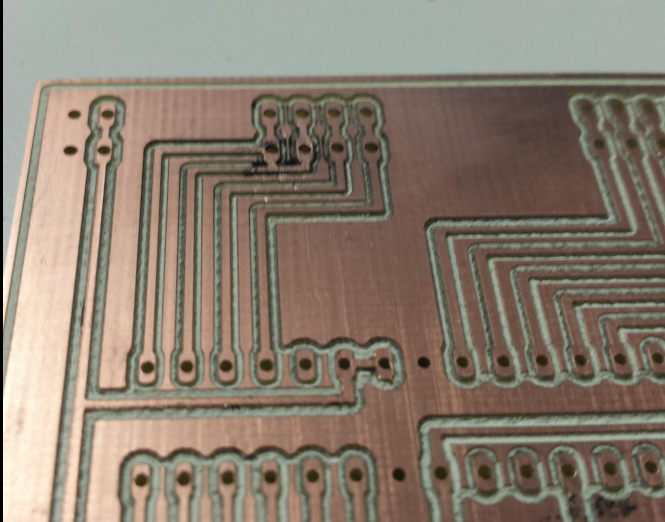


Circuit Board Milling - Cutting Out

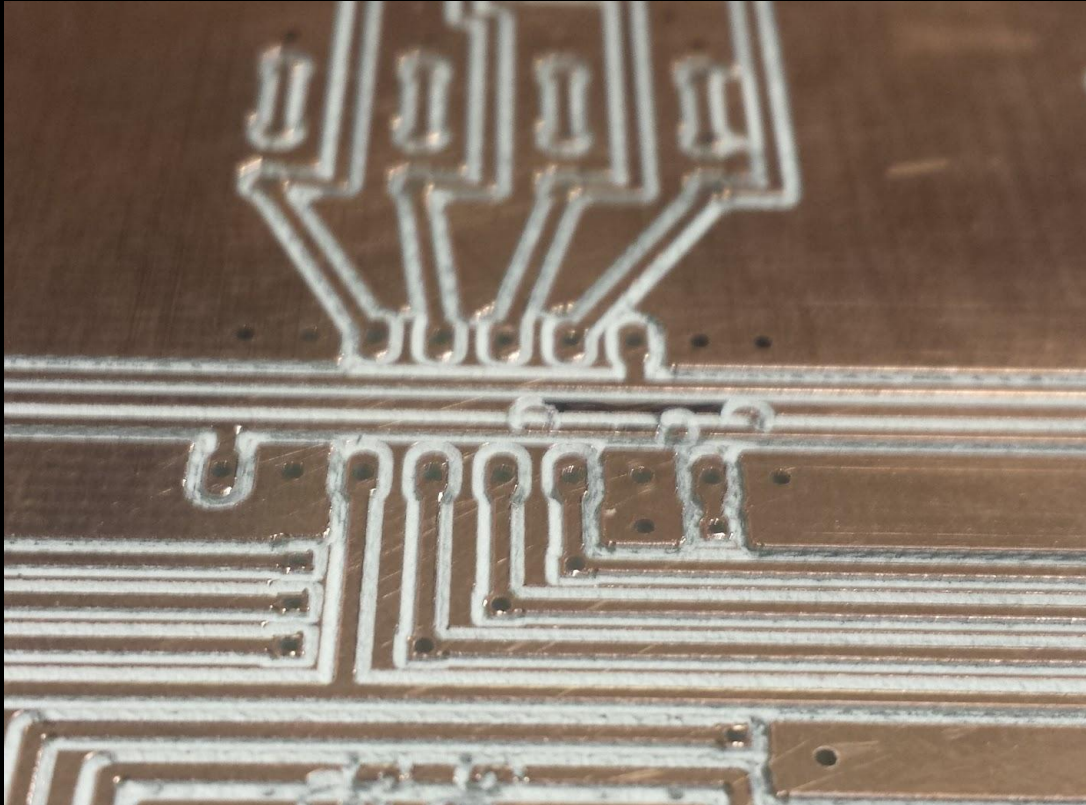
Have a video to upload



Circuit Board Milling - Cleanup



Circuit Board Milling - Errors



Soldering



Placeholder for a posed soldering picture

& Computer

TA - DA

show off our computer: working or failure