

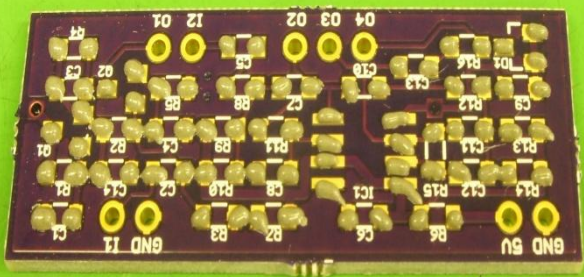
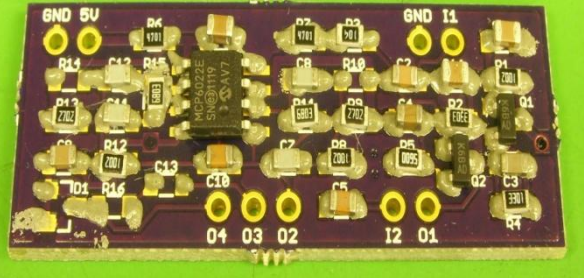
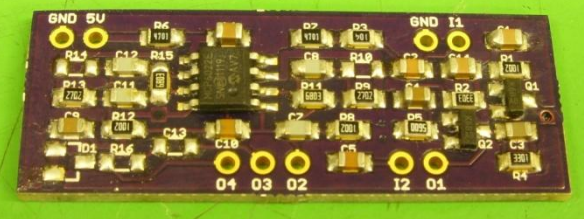
Second SMD soldering experiments

PAN, April 22th, 2016

1. Equipment:

- Metcal DX-250 Dispenser, Feb. 2016
- Compressor with silencer, PAN, March 28th, 2016:
<http://www.ufo-doctor.ch/descriptions/Recent%20other%20Projects/Silencer%20for%20Air%20Compressor.pdf>
- Metcal HCT2-120 Hot Air soldering equipment, Feb. 2016
- SMD Workshop, Pick and Place Manipulator, PAN, Feb.21st, 2016:
<http://www.ufo-doctor.ch/descriptions/Recent%20other%20Projects/SMD%20Workshop%20and%20Manipulator.pdf>
- SMD Component Dispenser, PAN, March 27th, 2016:
<http://www.ufo-doctor.ch/descriptions/Recent%20other%20Projects/SMD%20Dispenser.pdf>

2. PCB (by Miru) processed

	<p>Fig.1: Deposition of solder paste by Metcal DX-250 Dispenser, Syringe of the dispenser positioned at about 45 Deg angle to the PCB, Quite perfect!</p>
	<p>Fig. 2: Pick and place SMD Components No problem!</p>
	<p>Fig. 3: Soldered PCB at 400 Deg Celsius with Hot Air Gun Metcal HCT2-120 Cleaned with Isopropanol and brushed with an antistatic tool. Looks good!</p>

3. Important notes

- The syringe of the solder dispenser should be positioned at about 45 degree to the PCB.
See Metcal Tutorial, a vertical syringe position with the manipulator (PAN) is not satisfactory!
- If the syringe of the solder dispenser has been stored at about 20 Deg C (max 6 months!),
you need to warm up the syringe in your hands for about 20 minutes (viscosity!). After this, you may experiment different pressures (3 Bar), Time of air push (0.8 sec) and select the best vacuum setting (not fully understood, sorry) on an experimental PCB, observing the solder dots during 20 minutes of manual solder paste application ! Good luck!