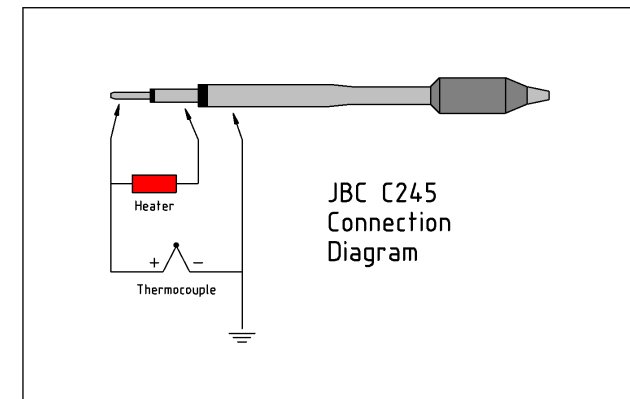
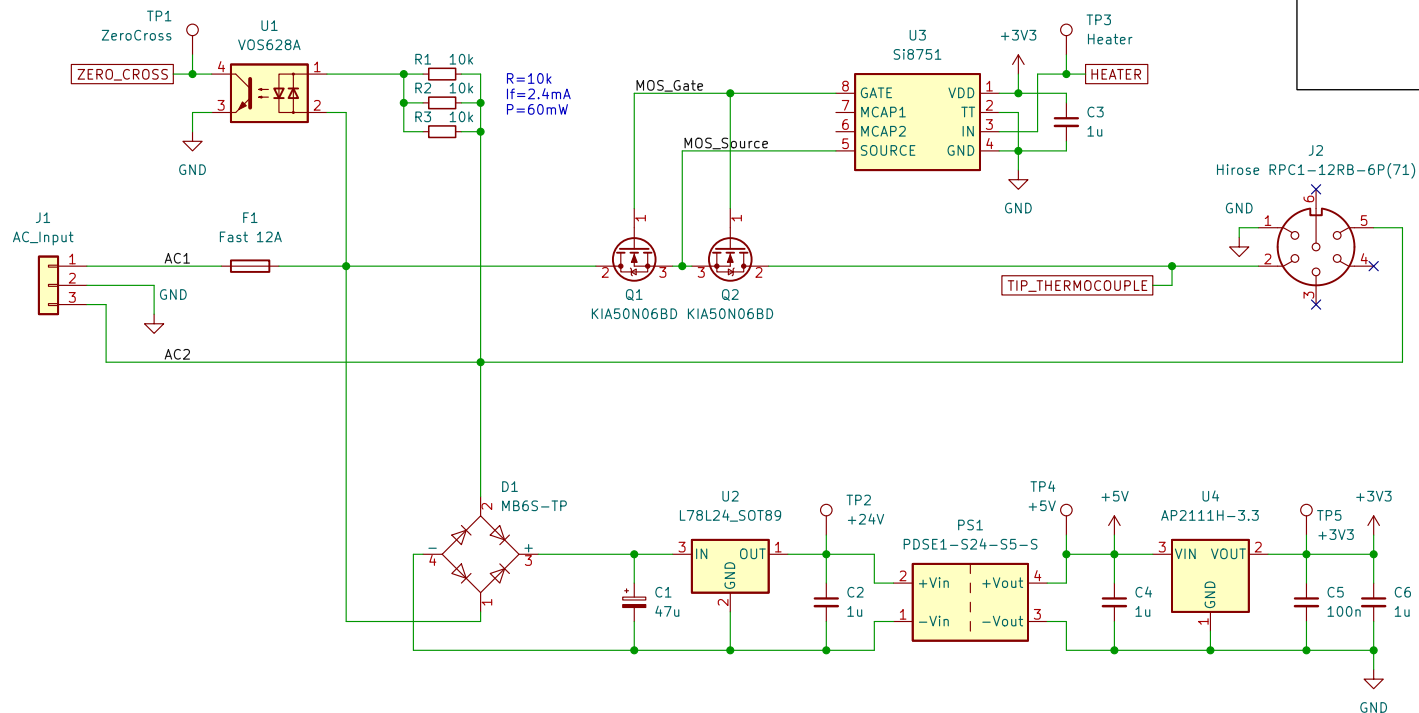


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Sheet: /	
File: OpenSolder.kicad_sch	
Title: OpenSolder Station Schematic	
Size: A4	Date: 2022-05-09
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/***** Design notes *****/

- ZERO_CROSS MCU pin must have pullup enabled
- Zero Cross is triggered a few hundred uS before "true 0", this is compensated for in firmware
- Any reasonable sized N-MOS can be used (<10A, <40V)
- 3V3 must be isolated from AC Input
- DCDC-converter has a small input voltage range, therefore a linear preregulator is used
- 3V3 circuit can probably be heavily simplified, i.e wide-input 24V to 3.3V DCDC and no pre/post reg.
- Linear post regulator is used to give more ADC performance, but might be unnecessary.

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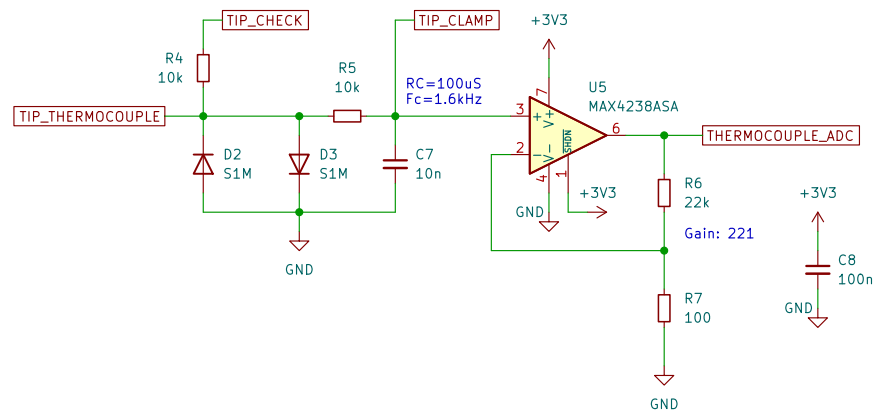
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Sheet: /AC/
File: AC.kicad_sch

Title: OpenSolder Station Schematic

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If TIP_CHECK is set high (3V3), the low impedance tip ($< 3\Omega$) will have a low voltage drop.
If tip is removed, V_f of the input clamp diodes will drive the opamp into saturation.

TIP_CLAMP is pulled low when tip is active, to prevent noise and transients driving MAX4238 into overload situations.

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Sheet: /Analog/
File: Analog.kicad_sch

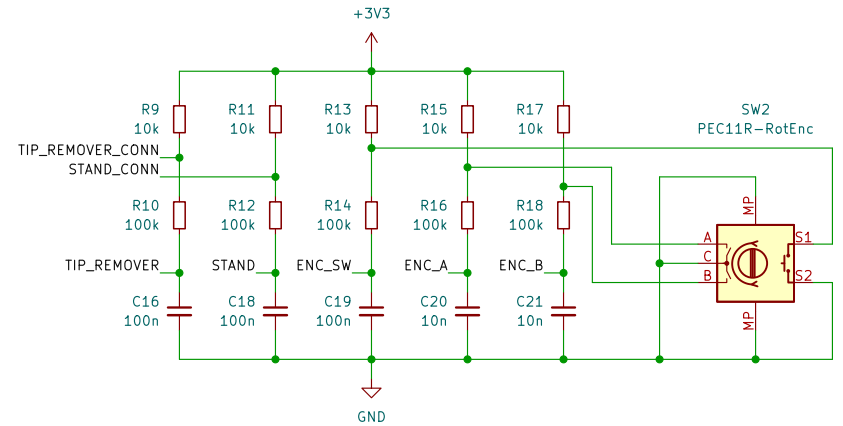
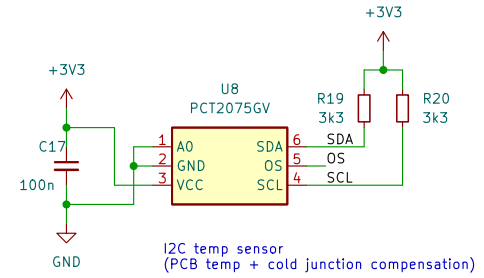
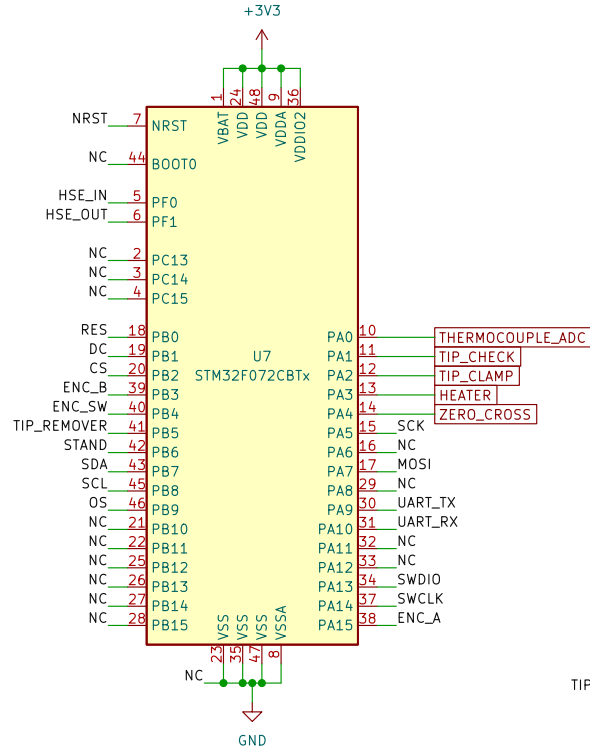
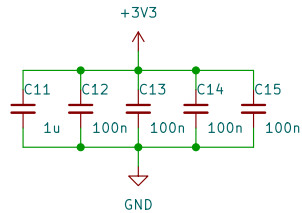
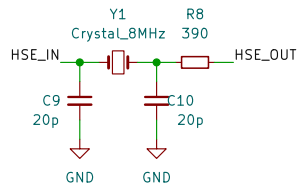
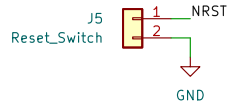
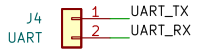
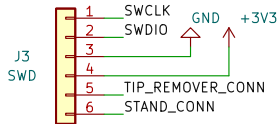
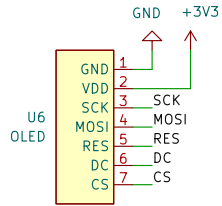
Title: OpenSolder Station Schematic

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