

Connect across these jumpers after routing - their purpose is to put the grounds on different nets.

Sheet: /Power Supply/
File: Power Supply.sch

Title: Power supply

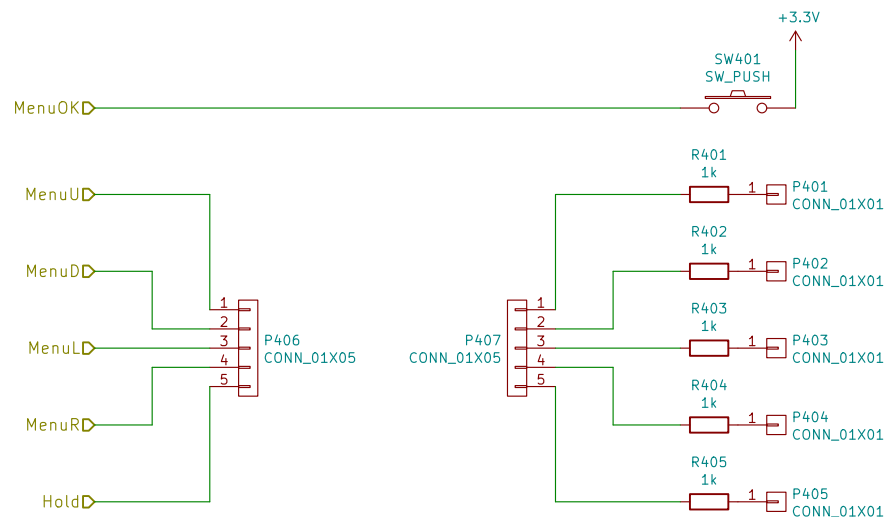
Size: A4 Date: 2016-06-22

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The touch buttons are on their own board that is in contact with the case (or the underside of the case itself).



Capacitance
Resistance / diode / continuity (select with Range)

LCR

Voltage - AC/DC, RMS, DC offset, peaks, frequency, duty cycle

Current, as for voltage

Power, power factor, voltage, current, much as for voltage (probably can't fit all at once; select connection style with Range)

Could probably auto-detect voltage, current, power, but that conflicts with manual ranging. Power always does though, because it has both current and voltage.

Power has four connection styles, although two are the same from the point of view of power: Current and Common on negative / neutral or on positive / live (positive or negative voltage readings, respectively), and Current upstream or downstream of Common for each of the previous two (positive or negative current readings, respectively). Combining both negative shows positive power, but negative components unless known.

Combining one of each shows one component negative, but also shows negative power, unless known. We need to know because negative power is very real - the "load" is actually a source, and would be useful for things like batteries where power flows in both directions.

Range +/-: Increase or decrease through possible ranges - probably don't wrap, but not sure yet. Both returns to auto-ranging.

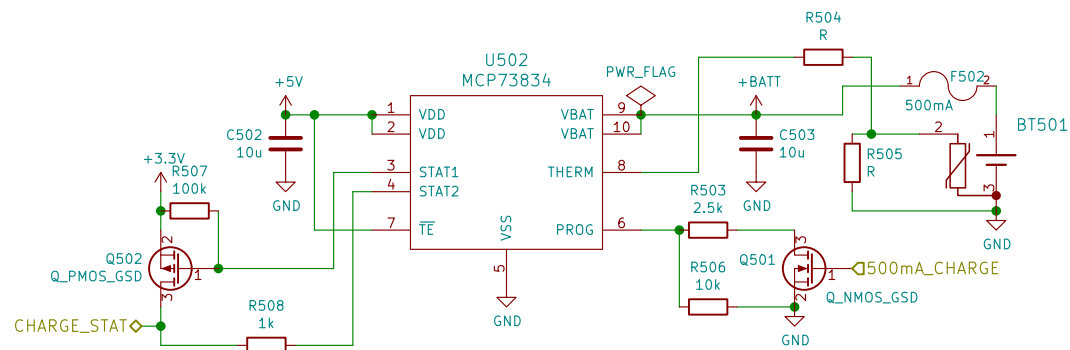
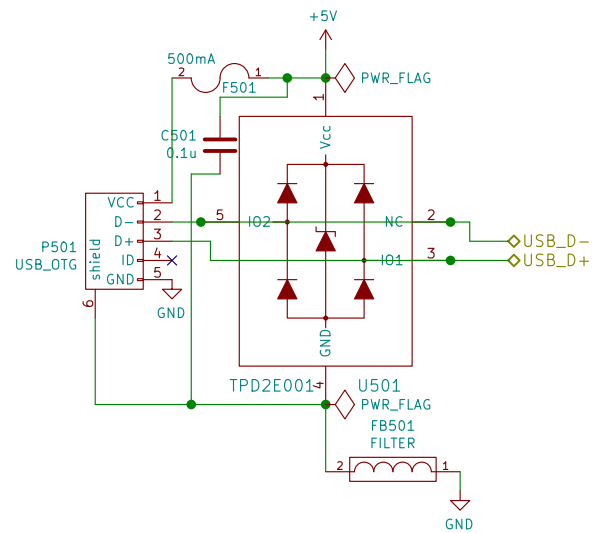
Rel: Relative measurement. For voltage or current, also has long-term max and min - however, they could have problems with a zero reading, for instance when changing measurement terminals.

Sheet: /Controls/
File: Controls.sch

Title: Interface inputs

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Sheet: /USB/
File: USB.sch

Title: USB and charging

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