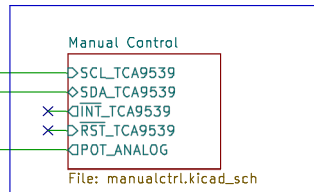
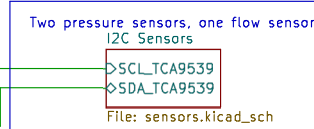
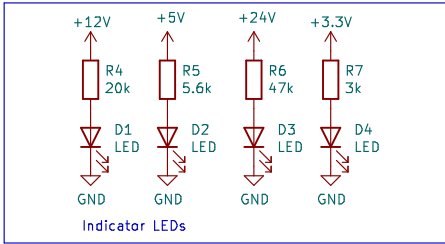
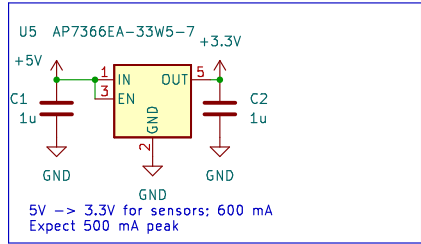
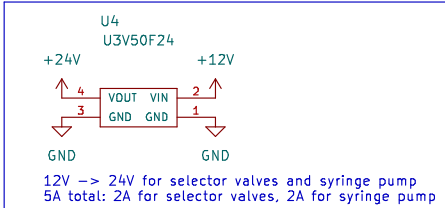
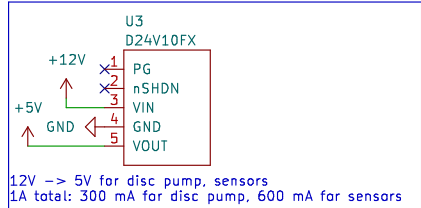


I2C Pullup Resistors
<https://www.ti.com/lit/an/siva689/siva689.pdf>
4 devices in normal mode ->
1.2 nF bus capacitance worst case
1000 ns rise time
Use 1k resistors

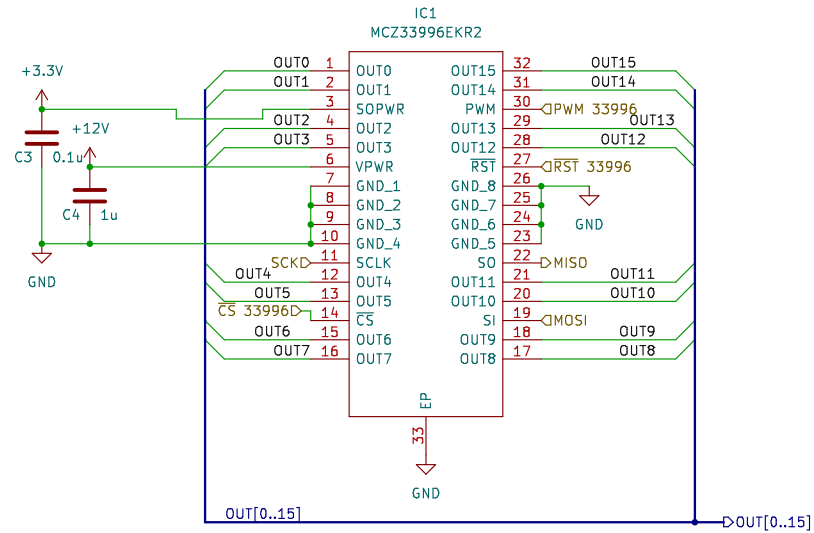
Addresses:
0x74: GPIO expander
0x08: Flow sensor
0x28: Pressure Sensor 1
0x62: Pressure Sensor 2



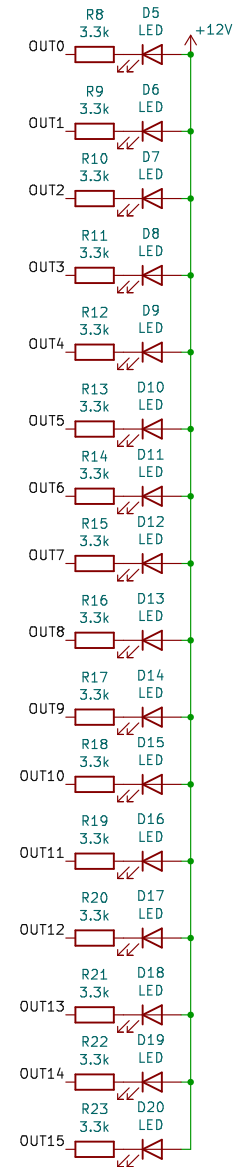
I2C GPIO expander for reading switches and potentiometer to set pump power

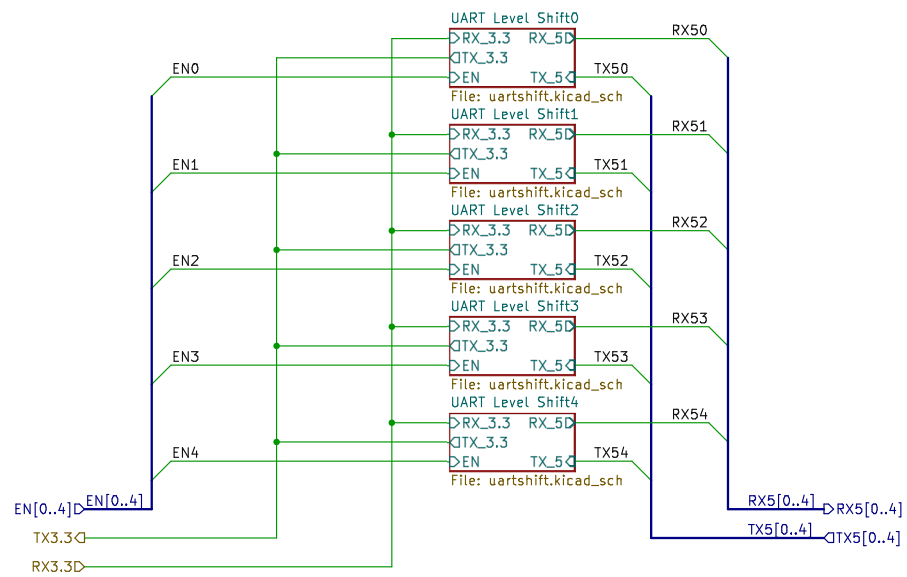


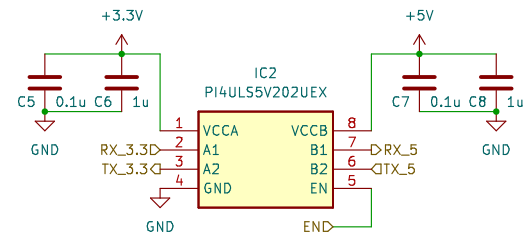
SPI N-channel driver

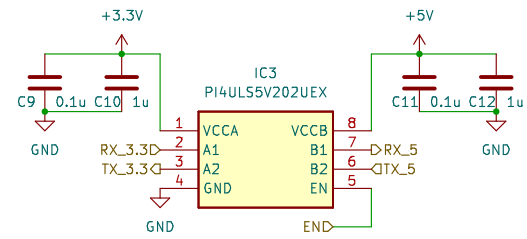


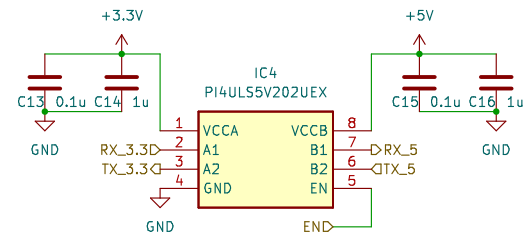
Indicator LEDs 1 for each valve (16 total)

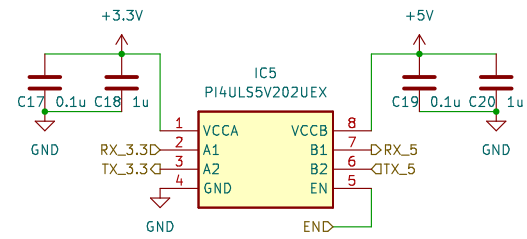


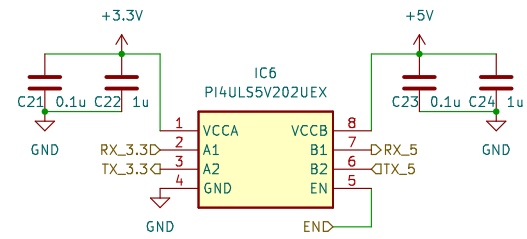


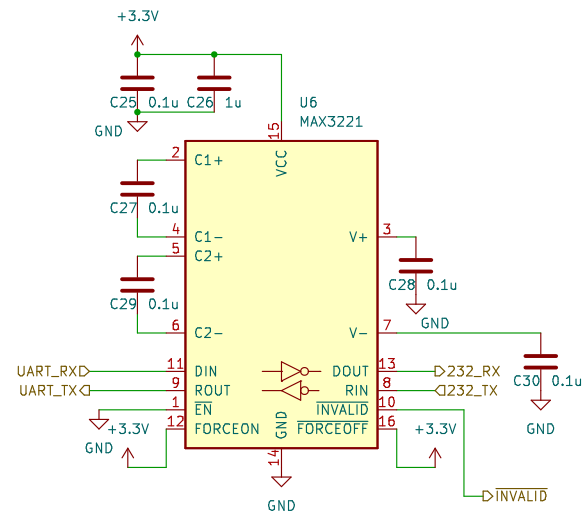






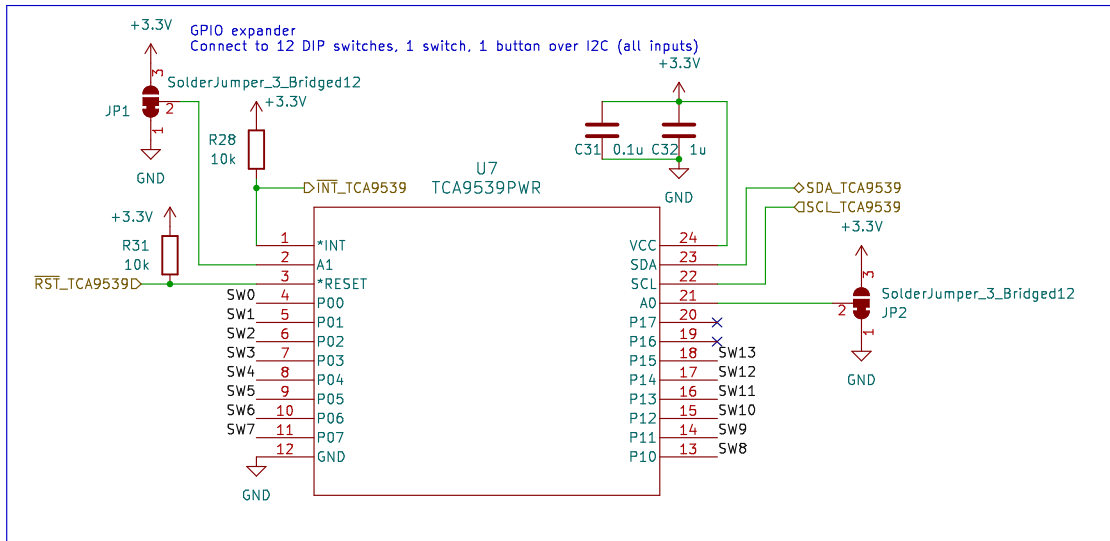
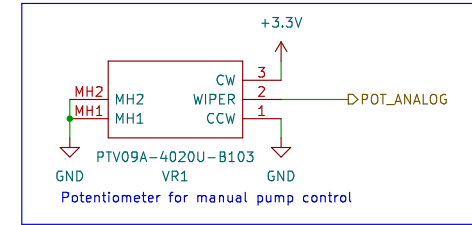
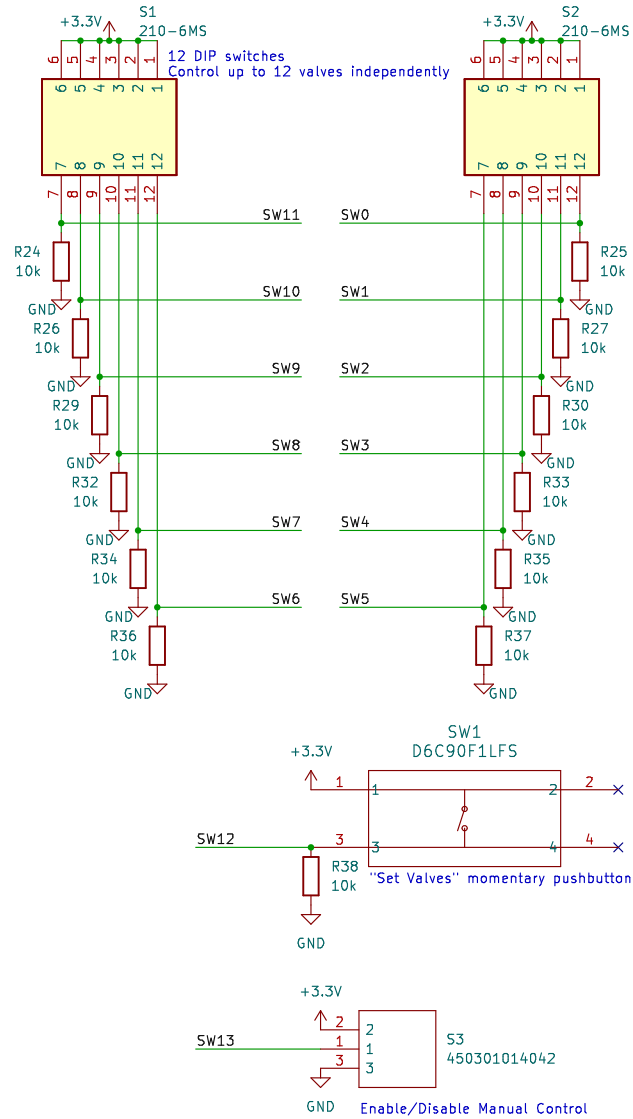




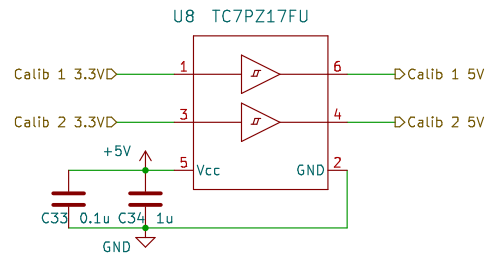


Convert from 3.3V UART to RS232

14 input devices – 12 DIP switches, 1 switch, 1 button



Level shift the calibration signal from 3.3V to 5V



Level shift the bubble detection signal from 5V to 3.3V

