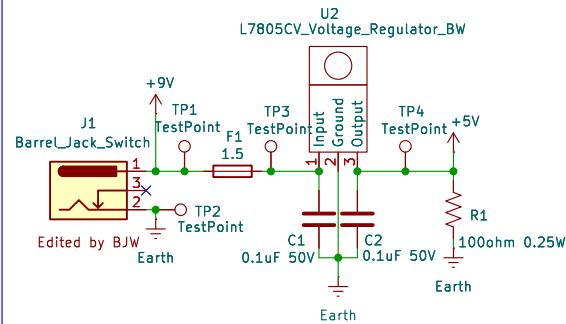


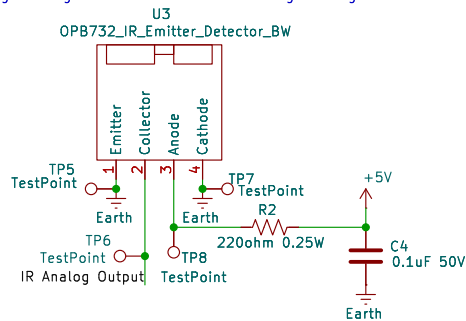
Power

Barrel jack port outputs 9V 3A connected to a fuse in case too much power is outputted. That connects to a voltage regulator that outputs 5V and 1.5A current.



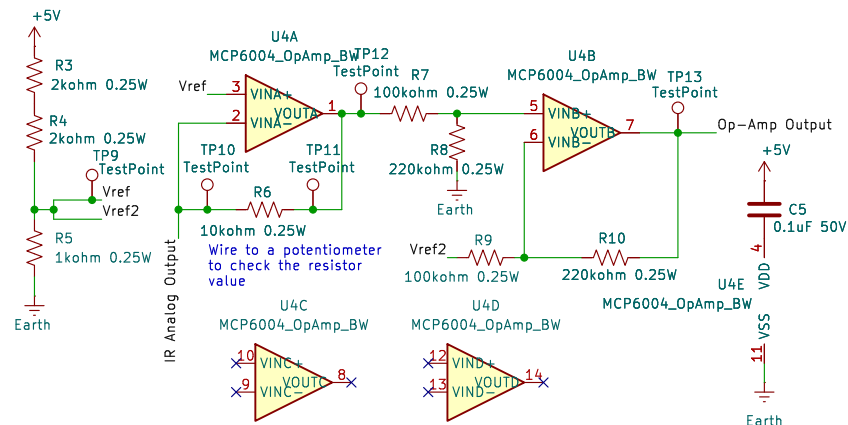
IR Emitter / Detector

IR Emitter/Detector Sends out an analog output at the collector, and the Anode of the LED goes to a resistor and power. The Emitter goes to ground and the Cathode also goes to ground.

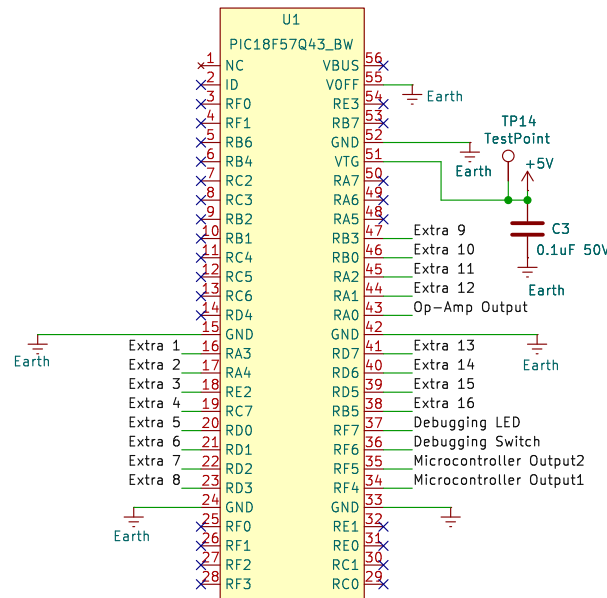


Op-Amp

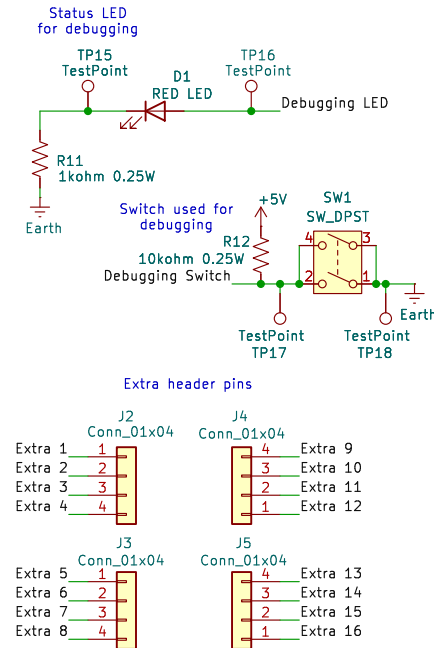
The op-amp takes the analog output from the sensor's Collector, which then gets amplified and outputs to the microcontroller



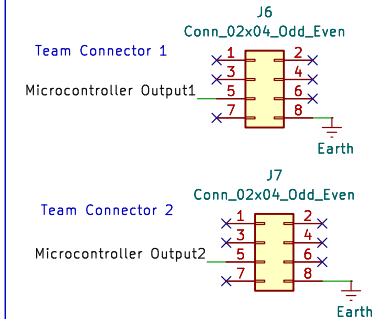
Microcontroller



Debugging



Ribbon Cables



Team 209

Sheet: /

File: Subsystem Schematic Design.kicad_sch

Title: Subsystem Schematic Design

Size: A4

Date: 2025-10-31

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Rev: 2.0

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