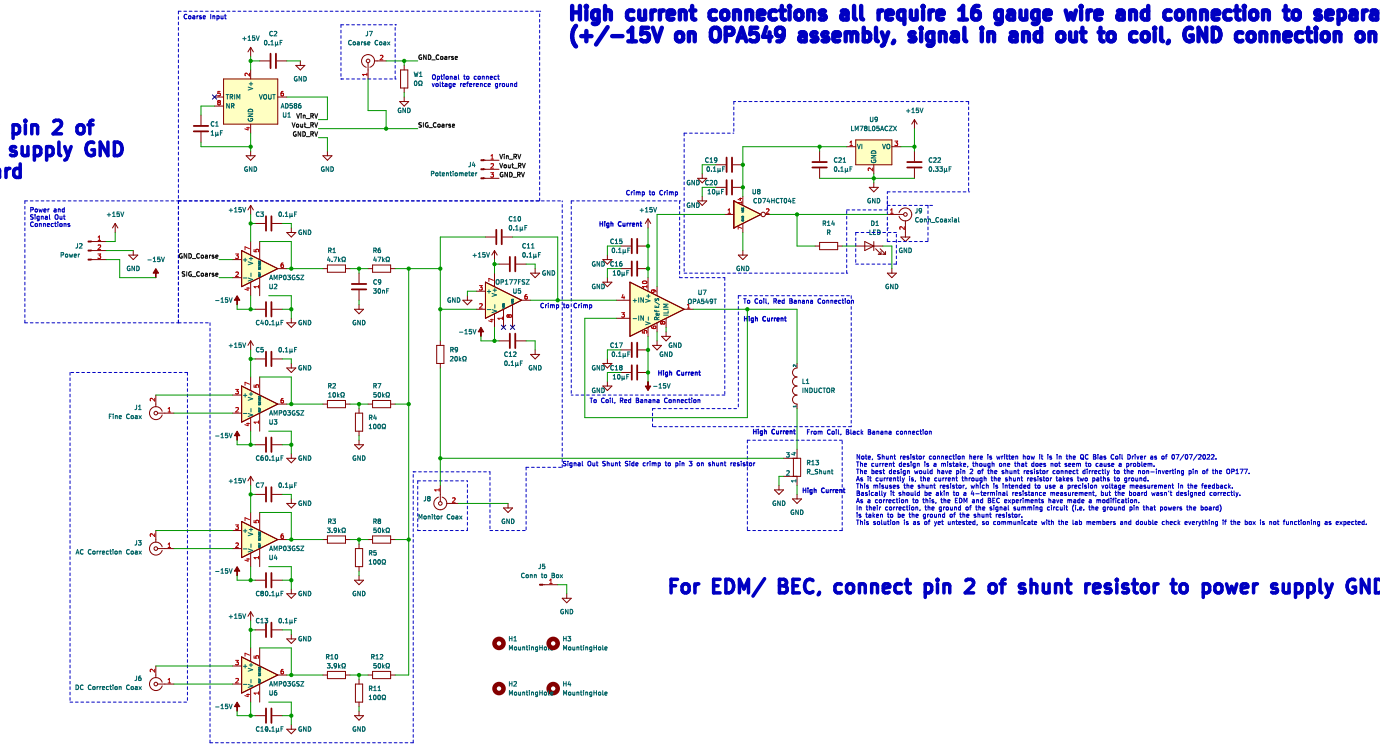
Note:
High current connections all require 16 gauge wire and connection to separate high current power supply (+/−15V on OPA549 assembly, signal in and out to coil, GND connection on shunt resistor pin 1)

For EDM/ BEC, connect pin 2 of shunt resistor to power supply GND on summing circuit board



For EDM/ BEC, connect pin 2 of shunt resistor to power supply GND on summing circuit board

Signal Summing Circuit for the Bias Coil Driver
Takes inputs from Supertime for coarse and fine tuning
Update 04/01/2022
- Adds channel for feed−forward correction to magnetic field
- Adds optional 5V voltage reference/potentiometer input for
- EDM experiment to replace supertime coarse input. This allows for the field to remain on, even when supertime is not running, to prevent magnetic field interference between labs
- Removes 60 Hz correction signal, which proved too noisy to be useful
- Designed to be implemented on a PCB

Update 07/07/2022
- Adds fourth input for DC correction, and changes connection style to kk 254

Notes on values
Low pass filter on Supertime Coarse input, with f_c = 1100 Hz
Voltage divider on Supertime Fine and Ext Correction, Vout = 0.01 * Vin

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Sheet: /
File: Bias Coil Driver Full.kicad_sch
Title: Bias Coil Driver Signal Summing
Size: A2 | Date: 2022-05-18 | Rev: 004
KiCad E.D.A. kicad (6.0.1-0) | Id: 1/1