

PROJECT STRIX
Drawn By H. Franks

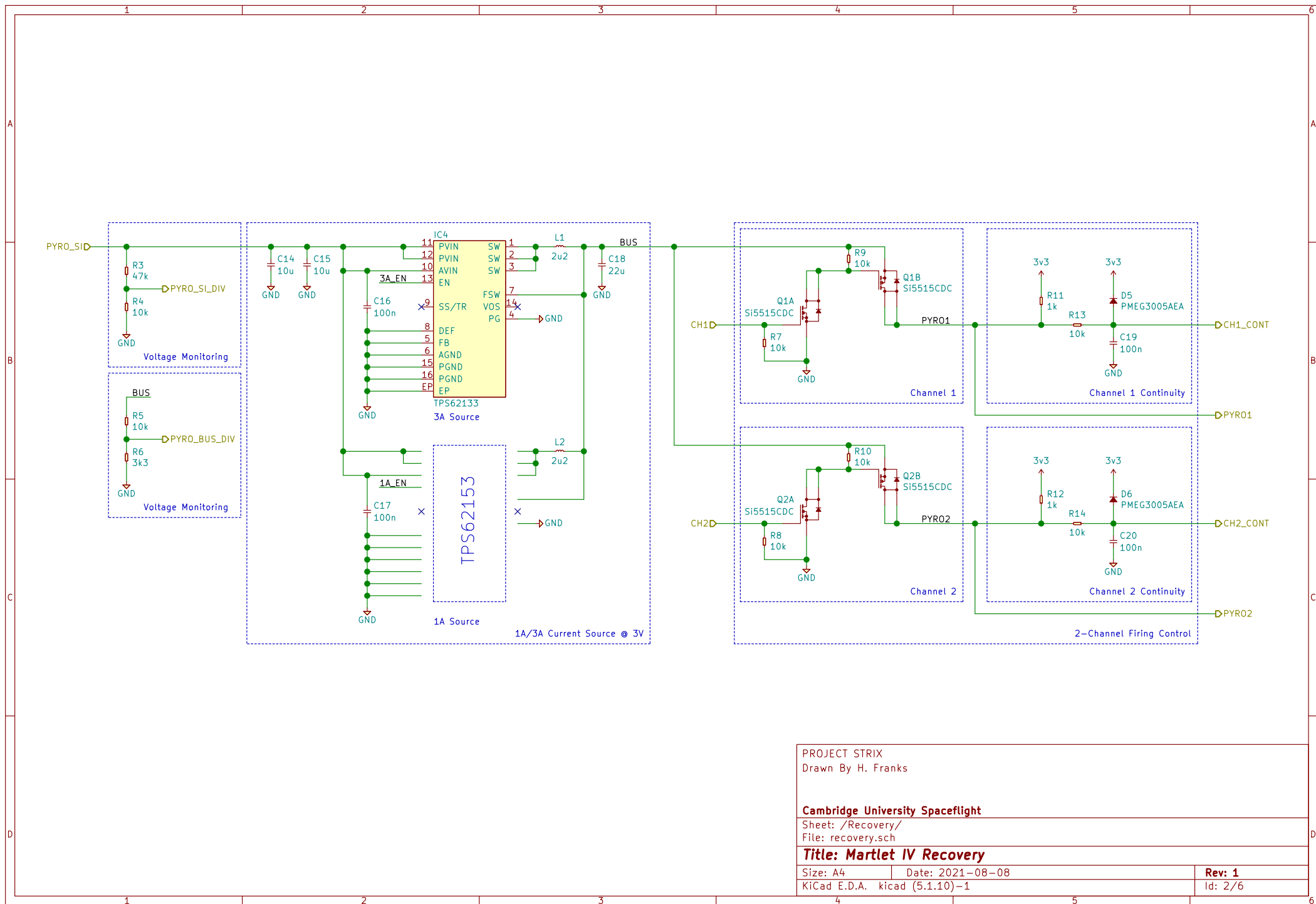
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Sheet: /
File: flight-computer.sch

Title: Martlet IV Flight Computer

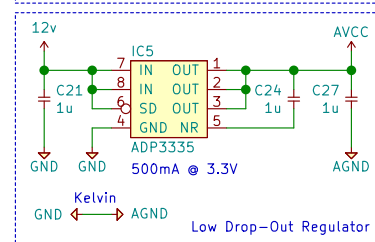
Size: A4
Date: 2021-08-08
KiCad E.D.A. kicad (5.1.10)-1

Rev: 4
Id: 1/6



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Sheet: /Recovery/		
File: recovery.sch		
Title: Martlet IV Recovery		
Size: A4	Date: 2021-08-08	Rev: 1
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The diagram illustrates a two-channel differential amplifier circuit. It consists of two identical op-amp stages, each using an AD8656 IC (labeled IC6A and IC7A for the top stage, and IC6B and IC7B for the bottom stage). The op-amps are configured as voltage followers (buffer amplifiers). The non-inverting inputs (pins 1 and 5) are connected to the signal inputs P1 and P2 through resistors R17 and R18 (1k69). The inverting inputs (pins 2 and 6) are connected to the output of the other op-amp in the same stage (pins 3 and 7) through resistors R19 and R20 (6k04). The outputs (pins 4 and 8) are connected to the signal outputs P1 and P2 through resistors R21 and R22 (562R). The circuit is powered by a 12V supply (P1+ and P2+) and ground (AGND). Various passive components are used for decoupling and signal conditioning, including resistors R15, R16 (150), R23, R24 (17k8), and capacitors C25, C26 (8n2), C22, C23 (82n), C28, C29 (82n), and C30, C31 (8n2).



- NOTES:**
- 150R current shunt required for 0.6v to 3v @ 4mA to 20mA
 - Pressure sensors are highest rate so should be connected to ADC123_x
 - All analog circuitry should be connected between AVCC and AGND. AGND should be a separate ground plane connected to GND by a single trace wide enough to sink all of AGND

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Sheet: /Sensors/
File: sensors.sch

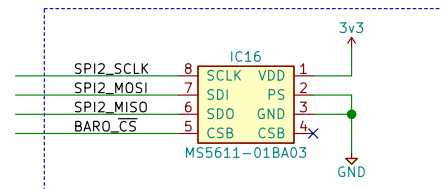
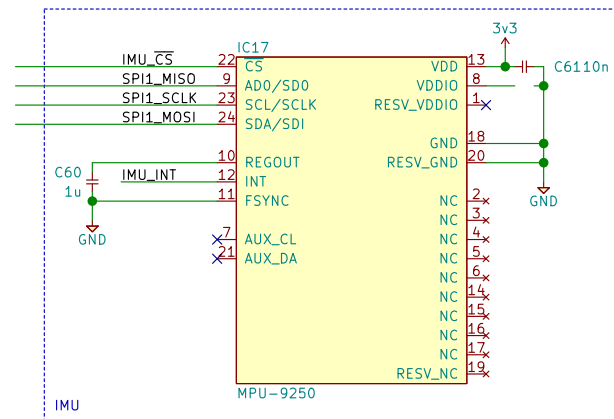
Title: Martlet IV Sensors

Size: A3	Date: 2021-08-08
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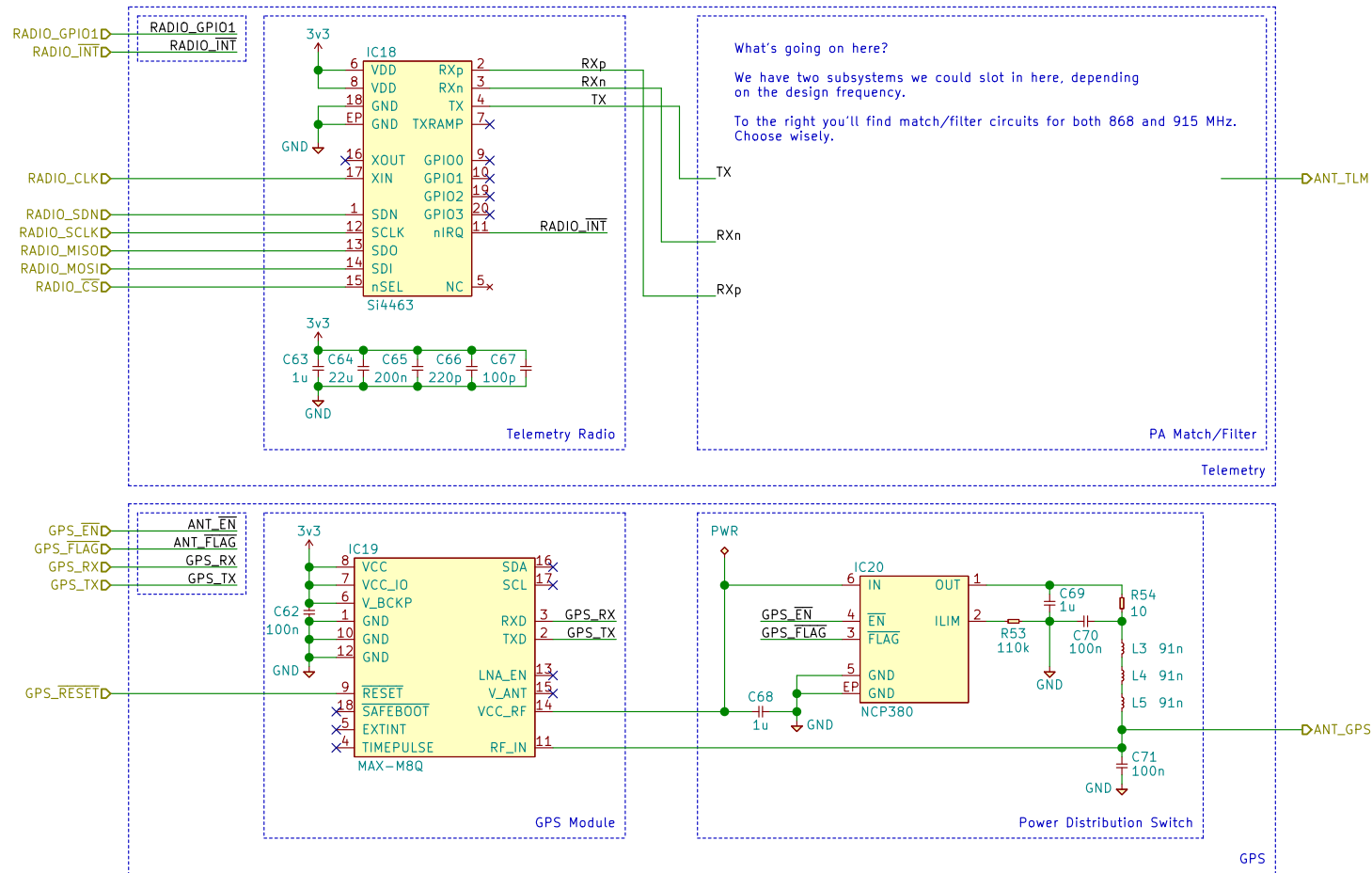
Rev: 1
Id: 3/6

IMU_SCLKD
IMU_MOSID
IMU_MISOD
MPU_CS
MPU_INTD
ADIS_CS

BARO_SCLKD
BARO_MOSID
BARO_MISOD
BARO_CS



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Sheet: /Altimeter/		
File: altimeter.sch		
Title: Martlet IV Altimeter		
Size: A4	Date: 2021-08-08	Rev: 2
KiCad E.D.A. kicad (5.1.10)-1		Id: 4/6



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Sheet: /Radio/
File: radio.sch

Title: Martlet IV Radio

Size: A4 Date: 2021-08-08

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Rev: 2

Id: 5/6

