

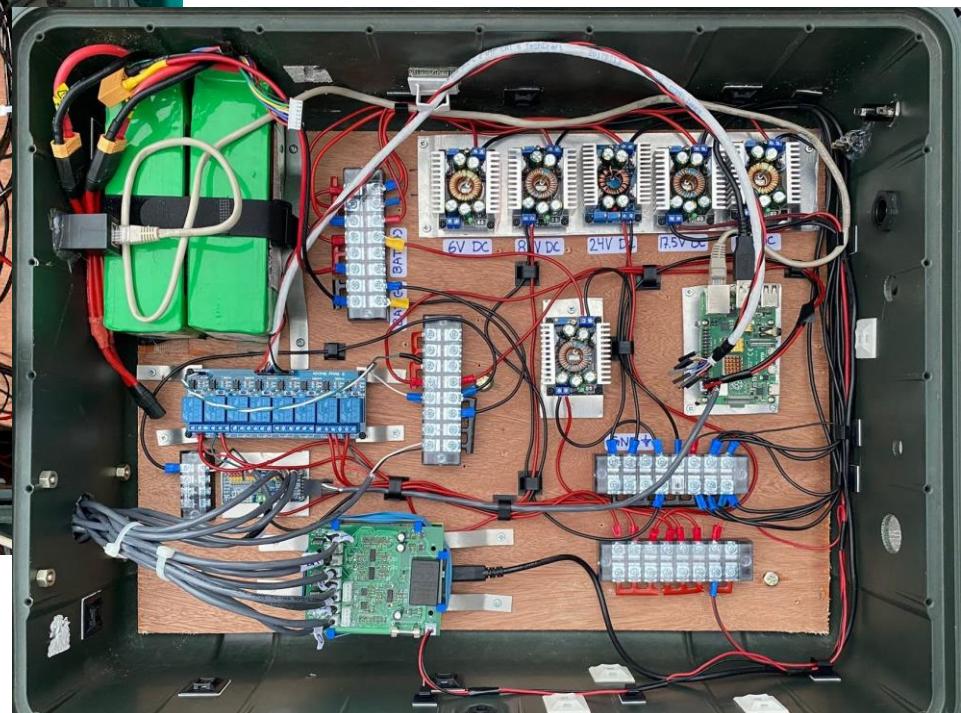
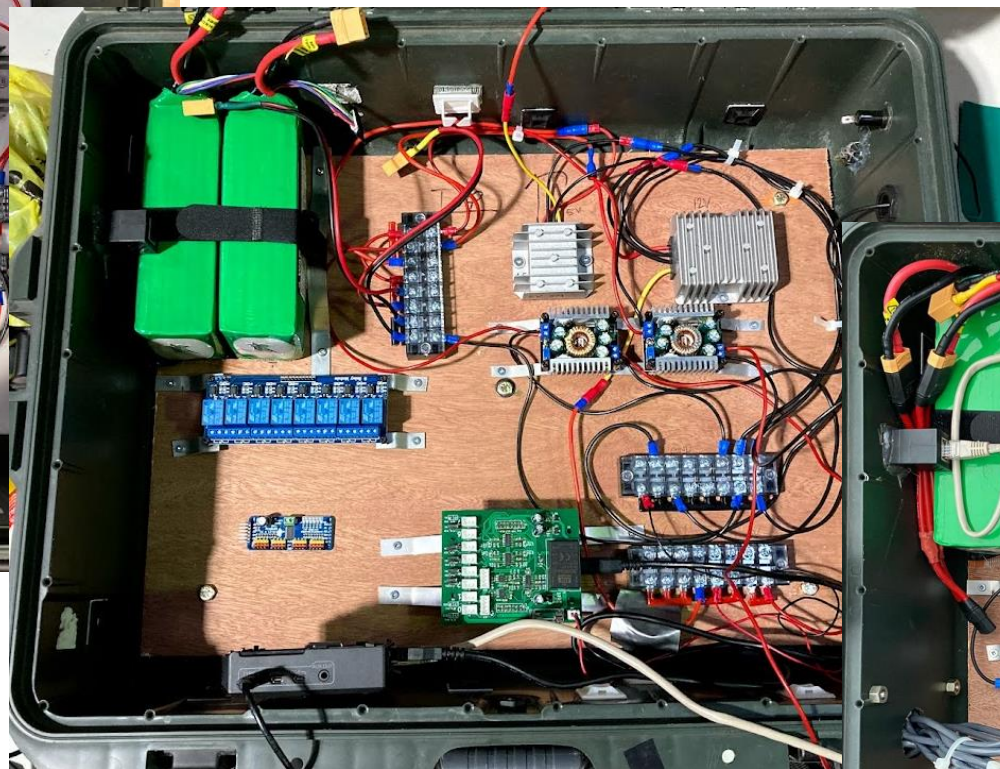
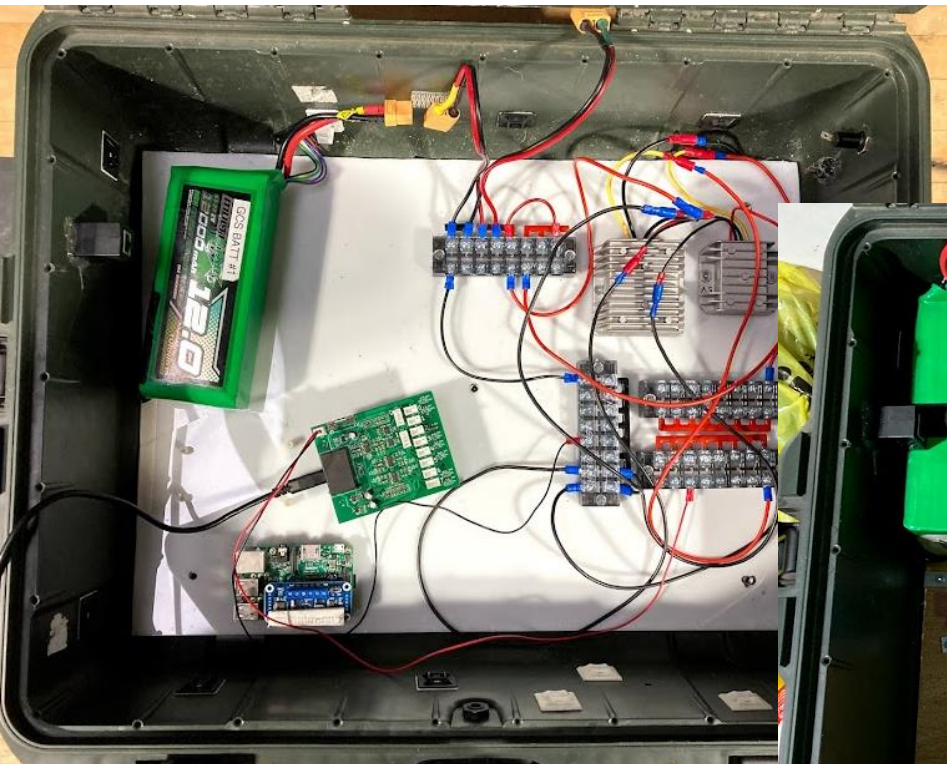
Avionics Ground System

Hamza Dugmag

University of Toronto Aerospace Team (Rocketry)



Progress



Strain Gauge Board for Pressurization Test



User Interface

Process

System Diagram

Recalibrate Sensors

Carina

ABORT

States Summary

S0: Test each sensor.

S1: Test each actuator.

PROCEED

S0: System Check: Sensors

Abort: Next: S1

S0: Test each sensor.

Label	Action	Proceed Check	Abort Check	Actuation Time
sens1	0.954106			
sens2	3.16599			

Sensor Recalibration

This window is prepopulated with the calibration points of the selected sensor. The left column represents raw voltage values from the sensor, while the right column represents the unit values (e.g. kg, psi) that they are mapped to. These five points are linearly regressed to create a line of best fit which serves as the sensor's calibration.

Voltages	Unit Values	
1	1	X
2	2	X
3	0	X
4	0	X
5	0	X

Add Calibration Point

Cancel OK

Pressurant Tank

7500 psi

1800 psi

PR_F_1

SV_F_2

SV_F_1

RV_F_1

PT_F_1

act2

Oxidizer Tank

TC_F_1

TC_F_2

TC_F_3

TC_F_4

TC_F_5

TC_F_6

Injector Plate

Combustion Chamber

Nozzle

PT_F_2

TT_F_1

PT_F_3

RV_G_1

V_G_1

SV_G_1

MV_G_2

RV_G_2

PT_G_2

act1

MV_G_1

PR_G_1

PG_G_1

K_OX_2

K_OX_3

Nitrogen Storage

K_N_1

sens2 3.166 psi

sens1 0.954 psi

2021-09-01 12:01:20,408 INFO [default] sens1: User has requested recalibration.

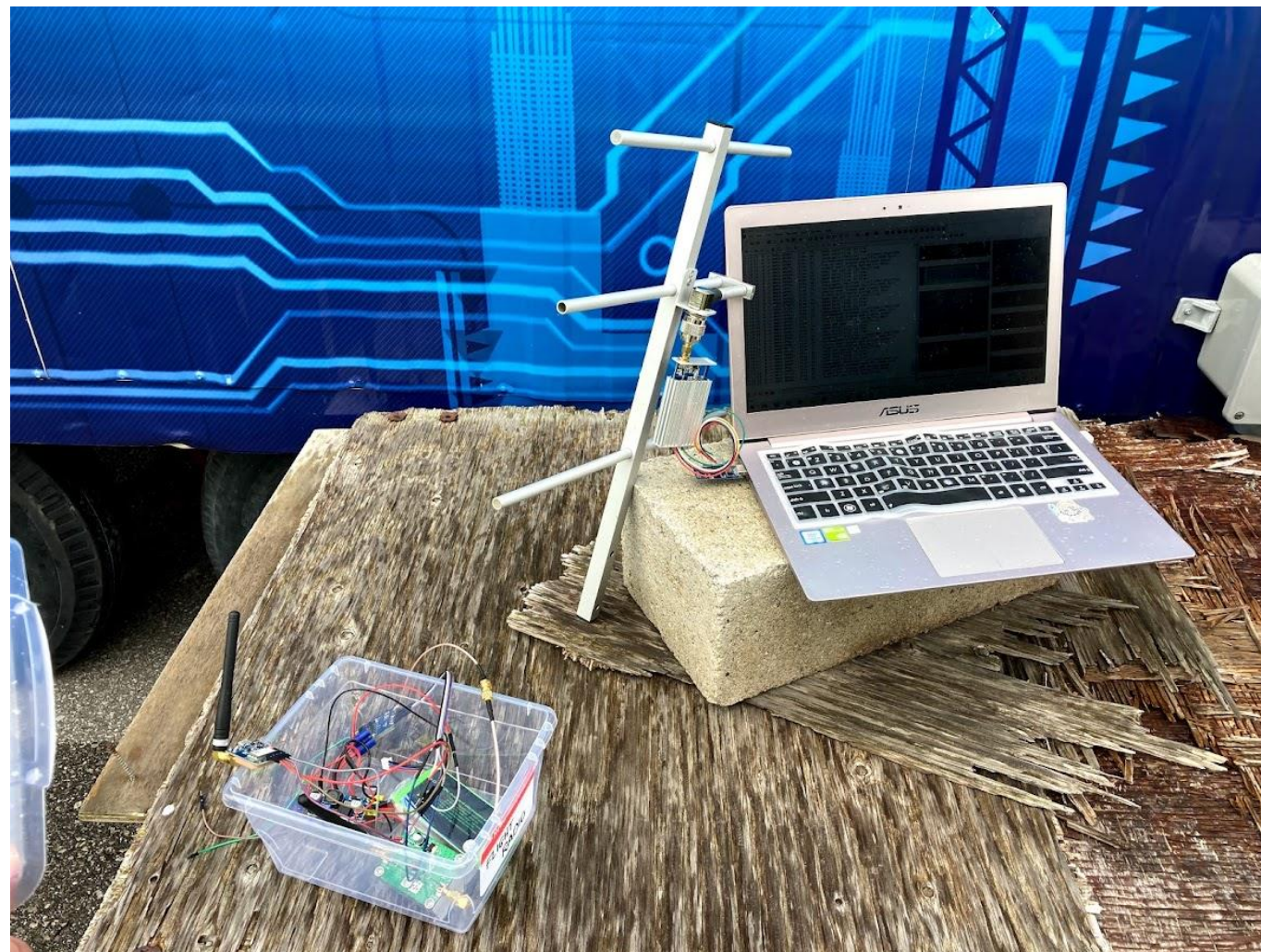
2021-09-01 12:01:29,110 INFO [default] sens1: User has accepted modified recalibration.

2021-09-01 12:01:29,110 INFO [default] sens1: User has requested recalibration.

Load Cell Calibration



Ground and Flight Radios



CCTV System



Operator Station for Hot Fire Test

