Artifact ID:	Artifact Title:
TP-002	Central Flight Test Document
Revision:	Revision Date:
01	Nov 6, 2024

Prepared by:	Checked by:
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Purpose:
Contains testing plans for all flights, communications, and ROS 2 nodes as well as test results.

Revision History			
Revision	Revised by	Checked by	Date
01	Jacob Wilkins	Jonah Lowther	Nov 6, 2024
XX	There are changes almost daily, so no changes will be tracked any further.		

Flight #	Date	Successful tests	Failed tests	Post Flight Notes	Location
1	1/17/2025	None	preflight failed	SD card failed requiring us to take SD card from raspberry pi, aileron servo wasn't attached correctly, and a-tail servo failed randomly.	Elberta, Slant Road

2	1/24/2025	Succesfully got high altitude drone in the air but transmitter lost connection to the drone. However, luckily the untested failsafe worked for loss of connection and the drone correctly came back and circled from where it took off the drone was immediatly landed. A new and better tranmitter is needed.	Provo,Rock Canyon Park
3	2/7/2025	High Altitude drone did not fly due to extreme wind conditions. But the camera effectively detected the fire , Transmiter needed to be on crossfire mode to use newly purchased tranmitter. Once transmitter was on the mode using the new transmitter range from transmitter to drone was accebtable.	Provo,Rock Canyon Park
4	2/18/2025	Low Altitude Drone on VTOL mode fell about 20 feet because the motors cut off due to a failsafe trigered by an error:"Attitude Invalid" seemed like the vehicle estimators were not running	Provo,Rock Canyon Park
5	2/21/2025	High Altitude drone was flown effectively for about a 5 minute flight. The drone succesufuly switched from manual mode to autonomous mode during the flight and succesfully followed the correct waypoint path autonomously. A fire was made and the drone flew by the fire many times to collect fire data. When the drone was being taken down for landing there was traffic on the road and the drone lost battery and got extensive damage with the fuelsulage splitting into two pieces and dammage on the wings, however, electronics were still intact. Unfortuanntly, the drone lossing power wiped the data on the Rasberry Pi and no critical fire data was saved from the thermal camera.	Elberta, Slant Road

6	3/11/2025	None	After setting up a fire and testing the raspberry pi, camera, and comms systems of each drone, we attempted to connect the controller to the high-altitude drone to fly above the fire to capture video data. Unfortunately, the drone kept losing connection. We then attempted to fly the high-altitude drone and that drone, once armed, would switch into autonomus mode and our only functioning control was the disarm switch. We were unsuccessful in our flight, but we were able to successfully reconnect to the drones without issues the following day. No damage was done to either drone.	Provo, Rock Canyon Park
7	3/21/2025	None	We successfully tested the autonomous dropping mechanism	Elberta, Slant Road