**HABEX2 – Preflight Checklist**

Stage 0:

|  |  |
| --- | --- |
| 1. Weather predictor shows good landing location, run with multiple scenarios, run on different predictors (use different websites too).
 |  |
| 1. Import flight prediction kml into google earth and check it against the "LAND ZONE" and "AIRSPACE" kml's, as well as visual inspection with at least 2 other people looking it over.
 |  |
| 1. Projected launch window is good and a GO
 |  |
| 1. Fill up gas and plan refueling
 |  |
| 1. Final mass is within error
 |  |
| 1. Launch and Recovery Teams are at their given locations (could change based on weather predictor)
 |  |
| 1. Radio communication is good
 |  |

Stage 1:

|  |  |
| --- | --- |
| 1. Inspect Balloon for tears or errors
 |  |
| 1. Measure neck lift of balloon, do this in low wind conditions
 |  |
| 1. Check rope for tears or errors
 |  |
| 1. Check rope tie points
 |  |
| 1. Check parachute for tears or errors
 |  |
| 1. Inspect payload tie points and harness
 |  |
| 1. Check temperature of electronics
 |  |
| 1. Check ALL battery voltages
 |  |
| 1. Connect ALL batteries
 |  |

Stage 2:

|  |  |
| --- | --- |
| 1. Power on Radio Alpha
 |  |
| 1. Check Radio Alpha functionality
 |  |
| 1. Ensure GPS Lock
 |  |
| 1. Check for valid packets
 |  |
| 1. Listen to transmission for any volume anomalies
 |  |
| 1. Assure nothing else is transmitting around the same time
 |  |
| 1. Check laptop/ham, make sure volume is tuned well, No SQL, make sure connections are good.
 |  |
| 1. Check with all Alpha Team ground units, assure their equipment is functional.
 |  |
| 1. Receive at least 8 APRS Packets
 |  |
| 1. Check with the Alpha Team ground units to see if they are receiving a signal
 |  |
| 1. Requirement is that launch site can decode the APRS with TWO separate setups
 |  |
| 1. Check aprs.fi
 |  |
| 1. Check temperature of Radio Alpha Electronics
 |  |
| 1. Check Radio Alpha connections to assure they are connected, fit, and locked/tied in
 |  |
| 1. Check for possible hazards like things getting caught and pulling on connectors
 |  |
| 1. Log APRS packets
 |  |
| 1. Alpha Team equipment is functional, everyone is GO
 |  |
| 1. Radio Alpha is GO
 |  |

Stage 3:

|  |  |
| --- | --- |
| 1. Power on Radio Bravo
 |  |
| 1. Check Radio Bravo functionality
 |  |
| 1. Receive at least 8 text messages with GPS location
 |  |
| 1. Check temperature of Radio Bravo
 |  |
| 1. Check Radio Bravo connections to assure they are connected, fit, and locked/tied in
 |  |
| 1. Check for possible hazards like things getting caught and pulling on connectors
 |  |
| 1. Receive 2 more text messages with GPS location
 |  |
| 1. Bravo Team equipment is functional, everyone is GO
 |  |
| 1. Radio Bravo is GO
 |  |

Stage 4:

|  |  |
| --- | --- |
| 1. Power on Radio Charlie
 |  |
| 1. Check Radio Charlie functionality
 |  |
| 1. Check all antennas, signal gain, and radios
 |  |
| 1. Check temperature of Radio Charlie
 |  |
| 1. Check Radio Charlie connections to assure they are connected, fit, and locked/tied in
 |  |
| 1. Check for possible hazards like things getting caught and pulling on connectors
 |  |
| 1. Charlie Team equipment is functional, everyone is GO
 |  |
| 1. Radio Charlie is GO
 |  |

Stage 5:

|  |  |
| --- | --- |
| 1. Power on Science Payload
 |  |
| 1. Check Science Payload functionality
 |  |
| 1. Verify SD Card is installed
 |  |
| 1. Pull Data for a test (not required)
 |  |
| 1. Check Science Payload Temperature
 |  |
| 1. Check any connections to the Science Payload, assure they are connected, fit, and locked/tied in
 |  |
| 1. Check for possible hazards like things getting caught and pulling on connectors
 |  |
| 1. Science Payload equipment is functional
 |  |
| 1. Science Payload is GO
 |  |

Stage 6:

|  |  |
| --- | --- |
| 1. Power on Camera
 |  |
| 1. Check Camera functionality
 |  |
| 1. Verify SD Card is installed
 |  |
| 1. Pull Images for a test
 |  |
| 1. Check Camera Temperature
 |  |
| 1. Check any connections to the Camera, assure they are connected, fit, and locked/tied in
 |  |
| 1. Check for possible hazards like things getting caught and pulling on connectors
 |  |
| 1. Camera equipment is functional
 |  |
| 1. Camera is GO
 |  |

Stage 6:

|  |  |
| --- | --- |
| 1. Allow all electronics to run at the same time for at least 15 minutes with NO anomalies
 |  |
| 1. Weigh the payload with parachute
 |  |
| 1. Check for any loose parts, assure nothing can detach, break off, move/bounce around inside or outside
 |  |
| 1. Check tie to parachute rope for tears or errors, assure a tight connection
 |  |
| 1. Winds on ground a calm for launch
 |  |
| 1. Every radio is functional and none of the radios are interfering
 |  |
| 1. Call FAA (either ZLA ARTCC or SoCal TRACON as appropriate) and notify them the time of launch
 |  |
| 1. Begin audio/video recording
 |  |
| 1. Begin audio recording of telemetry radios (APRS radios)
 |  |
| 1. Begin audio recording of communication radios
 |  |
| 1. Check in with everyone, get a GO from all teams
 |  |
| 1. HABEX2 is ready for launch
 |  |
| 1. Launch the damn thing!
 |  |
| 1. Chase the damn thing!
 |  |