**HABEX2 – Preflight Checklist**

Stage 0:

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| --- | --- |
| 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:

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| --- | --- |
| 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:

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| --- | --- |
| 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:

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| --- | --- |
| 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:

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| --- | --- |
| 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:

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| --- | --- |
| 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! |  |