

HABEX2 – Preflight Checklist

Stage 0:

1. Weather predictor shows good landing location, run with multiple scenarios, run on different predictors (use different websites too).	
2. 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.	
3. Projected launch window is good and a GO	
4. Fill up gas and plan refueling	
5. Final mass is within error	
6. Launch and Recovery Teams are at their given locations (could change based on weather predictor)	
7. Radio communication is good	

Stage 1:

1. Inspect Balloon for tears or errors	
2. Measure neck lift of balloon, do this in low wind conditions	
3. Check rope for tears or errors	
4. Check rope tie points	
5. Check parachute for tears or errors	
6. Inspect payload tie points and harness	
7. Check temperature of electronics	
8. Check ALL battery voltages	
9. Connect ALL batteries	

Stage 2:

1. Power on Radio Alpha	
2. Check Radio Alpha functionality	
3. Ensure GPS Lock	
4. Check for valid packets	
5. Listen to transmission for any volume anomalies	
6. Assure nothing else is transmitting around the same time	
7. Check laptop/ham, make sure volume is tuned well, No SQL, make sure connections are good.	
8. Check with all Alpha Team ground units, assure their equipment is functional.	

9. Receive at least 8 APRS Packets	
10. Check with the Alpha Team ground units to see if they are receiving a signal	
11. Requirement is that launch site can decode the APRS with TWO separate setups	
12. Check aprs.fi	
13. Check temperature of Radio Alpha Electronics	
14. Check Radio Alpha connections to assure they are connected, fit, and locked/tied in	
15. Check for possible hazards like things getting caught and pulling on connectors	
16. Log APRS packets	
17. Alpha Team equipment is functional, everyone is GO	
18. Radio Alpha is GO	

Stage 3:

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

Stage 4:

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

Stage 5:

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

Stage 6:

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

Stage 6:

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