University: ____________________________________________

Team Name: ____________________________________________

Inspector (Print Name): __________________________________

Inspector Affiliation: Faculty Advisor □ Non-Student Pilot □

1. Systems
   - Verify that the receiver(s) is powered by a separate NiCad, NiMH, or LiPo battery with an accessible switch EXTERNAL to the aircraft.
   - **NOTE:** If a Battery Elimination Circuit (BEC) exists on the Speed Controller, it **MUST** Be disabled.

   - Pass | Fail
   - Verify the motor/servos/wheels/landing gear are secured w/ safety wire, Loctite, or nylock nuts.
   - Pass | Fail
   - Verify all control rods are of the proper gauge/strength, and are securely attached to control horns.
   - Pass | Fail
   - Verify all control horns are properly secured to the control surfaces. Note: Commercially available control horns **MUST** be installed per manufacturer’s instructions. (NOTE: Control horns cannot be adhered to film services.)
   - Pass | Fail
   - Verify control surfaces and wing-surfaces are of adequate flutter & aero-elastic resistance

2. Aircraft Configuration
   - Maximum linear dimension of assembled aircraft is 8ft or less.
   - Pass | Fail
   - All payloads are carried internally to the aircraft.
   - Pass | Fail
   - The aircraft can carry at least ten (10) syringes.
   - Pass | Fail
   - The aircraft can carry at least one (1) vaccine vial package.
   - Max amount of syringes that can be carried:______
   - Max amount of vaccine vial packages that can be carried:______
   - Pass | Fail
   - Verify all payloads are adequately secured as not to shift or move during flight.
   - Pass | Fail
   - Verify the remote deployment of the vaccine vial package.

3. Propulsion System
   - Verify propeller and hub/pitch mechanism(s) is commercial availability and verify their mounting integrity.
   - Pass | Fail
   - Verify all propulsion is provided by an unmodified commercially available electric motor.
   - Pass | Fail
   - Verify that a fuse or arming plug is connected to all positive propulsion battery terminals.
   - Pass | Fail
   - Verify the fuse or arming plug is located ahead of a pusher propeller or behind a tractor propeller and is externally mounted and accessible without removal or opening of any cover(s).
   - Pass | Fail
   - Verify no bare wires are visible, and all connections are shrink-wrapped or fully-insulated.

4. Propulsion Battery (check all flight packs to be used)
   - Verify all batteries are same type, connectors are fully insulated, and energy stored is less than 100 watt-hrs.
   - Pass | Fail
   - Verify battery packs are constructed from commercially available NiCad, NiMH, or LiPo pack with label visible. If LiPo, there is a fuse connected to the “+” terminal.
   - Pass | Fail
   - Verify battery pack is properly shrink wrapped over its entirety and all contacts are insulated.
   - Pass | Fail
   - For multiple LiPo battery packs, ensure a minimum of 0.25” spacing between packs on all sides.
   - Pass | Fail
   - Verify all packs are properly secured within the fuselage.
5. Tip Test
Configure aircraft for flight with the heaviest flight battery and with heaviest payload

<table>
<thead>
<tr>
<th>Pass</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verify aircraft in this configuration is &lt; 55lbs.</td>
<td></td>
</tr>
<tr>
<td>Verify aircraft has a CG Mark for all possible mission configurations. (and that it is correct &amp; reasonable)</td>
<td></td>
</tr>
<tr>
<td>Have students lift the aircraft configured in the maximum weight condition from the wingtips at the CG. All other parts of the aircraft must not be supported and structural integrity must be maintained without any damage.</td>
<td></td>
</tr>
</tbody>
</table>

6. Range check and failsafe validation

- 2.4GHz
- 72MHz
- 72MHz Channel Assigned: [ ]

With one member holding the aircraft, the operator (pilot) must perform a range check per the instructions of the manufacturer of the radio in use.

<table>
<thead>
<tr>
<th>Pass</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start with fuse or arming plug pulled, cycle throttle; verify no engine/prop movement/propulsion and verify all controls work properly</td>
<td></td>
</tr>
<tr>
<td>Verify the BEC has been eliminated by installing the arming plug, turning the RX switch off, and verifying the transmitter does not command the aircraft.</td>
<td></td>
</tr>
<tr>
<td>Verify the area is clear and install the fuse. Apply 1/4 power, have the pilot check the following responses:</td>
<td></td>
</tr>
</tbody>
</table>

- Right Roll
- Left Roll
- Right Yaw
- Left Yaw
- Nose Up
- Nose Down
- Throttle cutoff
- Throttle back to ¼

Verify Lost-Link works properly by turning off the Transmitter(s):

| Throttle closed | Full up elevator | Full right rudder | Full right aileron | Full flaps down |

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**Flight Certification**

The following items must be completed successfully to begin on-site tech inspection at the contest:

1. Technical Inspection Follow-up

<table>
<thead>
<tr>
<th>Pass</th>
<th>Fail</th>
</tr>
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<tbody>
<tr>
<td>Verify correction of non-compliant Pre-Tech items</td>
<td></td>
</tr>
</tbody>
</table>

2. Successful flight validation

<table>
<thead>
<tr>
<th>Pass</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verify competition aircraft has flown a complete successful flight including a minimum of:</td>
<td></td>
</tr>
</tbody>
</table>

- Ground take-off meeting all requirements outlined in the contest rules.
- Flight pattern containing at least one left and one right 360 degree turn while maintaining altitude
- Landing within a designated area with no damage to aircraft

**Inspector Signature:** __________________________

**Date of inspection:** __________________________