

# REGULAR CLASS INSPECTION CHECKLIST

## Technical and Safety-2015

TEAM NUMBER: \_\_\_\_\_

TEAM NAME: \_\_\_\_\_

**Caution: Aircraft is to be presented with prop, flight battery AND red shunt plug removed**

“With the exception of a standard tape measure, Teams shall provide any materials and/or tools required to demonstrate compliance with Technical Inspection requirements.”

	PASS	FAIL	
<b>Flight battery AND red arming plug removed</b>	_____	_____	Safety
<b>Aircraft Identification</b>			
Team number on both sides of aircraft: 4" numbers	_____	_____	4.2.2
Team number on top and bottom of aircraft: 4" numbers	_____	_____	4.2.2
University name or initials (wing or fuse)	_____	_____	4.2.2
Complete university name and address (inside fuse or out)	_____	_____	4.2.3
<b>Safety Equipment</b>			
Team has enough safety glasses for all students on the flight line	_____	_____	3.6.11
<b>Aircraft Dimensions</b>			
Length + width + height = 175 inches or less (tolerance + 1/4 inch) (Aircraft MUST be measured in takeoff position)	_____	_____	4.2 4.2
<b>Aircraft Drawing Inspection</b>			
Compare actual measurements to measurements of submitted drawings	_____	_____	7.1.2.3
Wheel diameters must be on drawing and measured on aircraft for Regular class	_____	_____	7.1.2.3
Note/report differences in span, length, height (1/4" +/- tolerance), _____			
Ballast stations indicated on plans, if ballast used in aircraft	_____	_____	4.4.4
<b>Aircraft Weight and Balance form</b>			
Team must demonstrate a flyable balanced aircraft at the center of gravity per submitted drawings (empty weight, no payload.)	_____	_____	7.1.2.5
<b>Enclosed Payload Bay and Payload</b>			
Enclosed payload bay must fit official payload test block	_____	_____	4.4.2
Payload bay dimensions are 4"x 4"x 10" plus 1/8", minus 0"	_____	_____	4.4.2
Enclosed payload bay must have a continuous top, bottom and four sides	_____	_____	4.4.2
One side must be removable for payload bay access	_____	_____	4.4.2
Support assembly must prevent weight from shifting	_____	_____	4.4.1/3
Only the payload support can penetrate the payload bay (no lightning holes)	_____	_____	4.4.2
Payload support assembly must be removable for the payload bay fit check	_____	_____	4.4.2
Payload consists of plates and plates are retained as one homogenous mass	_____	_____	4.4.1
Payload does not contribute to the structural integrity of the airframe	_____	_____	4.4.3
No fixed ballast installed inside payload bay volume	_____	_____	4.4.4
Payload demo weight used in presentation must weigh at least 10 lbs.	_____	_____	7.2.2

	<b>PASS</b>	<b>FAIL</b>	<b>Rule</b>
<b>Ballast</b>			
Confirm all ballast secured properly in aircraft, if used	_____	_____	4.4.4
<b>Restricted Material</b>			
Confirm no lead used in aircraft, payload, or ballast	_____	_____	4.2.4
Confirm no fiber reinforced composite material in aircraft (Exceptions are commercially available FRP prop, landing gear, motor mount or minor hardware)	_____	_____	4.2.4
No gyroscopic assist or autopilot installed	_____	_____	4.3.5
<b>Flight Battery</b>			
Battery must be a clearly marked commercially available <b>six cell</b> Lithium polymer pack of <b>3000 mAh</b> minimum capacity and <b>rated at least 25C</b>	_____	_____	4.3.3
Battery and battery plug easily accessible	_____	_____	Safety
Battery properly restrained against all flight loads	_____	_____	Safety
<b>Red Arming Plug</b>			
A visible and removable red battery arming plug must be mounted on the top of the fuselage between 40% and 60% of the fuse length	_____	_____	4.3.6
<b>Power Limiter</b>			
Model must have a unmodified 2015 version 1000 watt SAE Power Limiter properly installed, accessible and securely mounted	_____	_____	4.3.4
<b>Wings, Tails and Control Surfaces</b>			
Wing and tail assemblies free of warps and mounted securely	_____	_____	Safety
Control surfaces, hinges and control horns secure and free from slop	_____	_____	4.5.4
All linkages secure. If a clevis is used, it must have a keeper	_____	_____	Safety
<b>Landing Gear and Wheels</b>			
Landing gear mounted securely	_____	_____	Safety
Wheel collars secure	_____	_____	Safety
<b>Motor and Electronic Speed Control (and gear box if applicable)</b>			
Motor (and 1/1 gear box if installed) properly mounted and secure	_____	_____	Safety
Prop rotates at same RPM as motor (no gear reduction)	_____	_____	4.3.2
Spinner or safety nut/no metal prop. No prop saver	_____	_____	4.5.2 & 3
Electronic Speed Control securely mounted	_____	_____	Safety
<b>Radio Equipment</b>			
Radio is a 2.4GHz system	_____	_____	4.5.1
All servos installed properly and securely	_____	_____	Safety
Radio power switch mounted properly if RX battery used	_____	_____	Safety
1000 mAh min. radio battery, properly secured, if used (optional, can use BEC)	_____	_____	Safety
Receiver mounted securely	_____	_____	Safety
All servos properly sized for aircraft	_____	_____	4.5.5

**Throttle and Radio Function**

	<b>PASS</b>	<b>FAIL</b>	<b>Rule</b>
Confirm red arming plug removed	_____	_____	Safety
Flight battery installed and connected	_____	_____	Safety
Turn on TX and aircraft radio system	_____	_____	Safety
Install red arming plug	_____	_____	Safety
All flight control and ground steering servos operate in correct direction and without clashing or overloading	_____	_____	Safety
Check for correct throttle response	_____	_____	Safety
Motor turns in correct direction	_____	_____	Safety
Check that low throttle and/or low throttle trim completely stops motor	_____	_____	Safety
Radio fail safe functional: Motor must go to zero RPM if TX signal lost	_____	_____	Safety
Remove red arming plug, remove flight battery and confirm aircraft is off.	_____	_____	Safety
Turn off TX	_____	_____	Safety

**Inspection Sticker(s)**

All airframe parts and batteries stickered after technical inspection (wings, fuselage, tail, demo payload, spare airframe parts, if any) \_\_\_\_\_

**First Inspection** \_\_\_\_\_

**Second Inspection** \_\_\_\_\_

**Instructions: First inspector notes pass or fail items. If anything does not pass, that item must be corrected by the team and re-inspected by the second inspector.**