REGULAR CLASS INSPECTION CHECKLIST
Technical and Safety-2018

TEAM NUMBER: _____

TEAM NAME: _____

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

With the exception of a standard tape measure and official test blocks and gauges, team must provide any materials and/or tools required to demonstrate compliance with Technical Inspection requirements.

	PASS	FAIL	Rule
Flight battery, prop AND red arming plug removed	_____	_____	Safety

General Aircraft Requirements

Aircraft Identification			2.1
University Name and address on inside or outside of aircraft	_____	_____	2.1.1
3" minimum size team number on top and bottom of the wing	_____	_____	2.1/2.1.2
3" minimum size team number on sides of aircraft (tail or fuselage)	_____	_____	2.1/2.1.2
University name or initials clearly displayed on the wings or fuselage.	_____	_____	2.1.3/.4
Empty CG Design Requirement and Empty CG Markings			2.3
Aircraft empty CG is located in a safe flyable position	_____	_____	2.3.1
All aircraft have the fuselage clearly marked on both sides with a classic CG symbol (at least .5" in dia.) centered on the Empty CG location	_____	_____	2.3.2
Empty CG position on aircraft matches submitted drawing	_____	_____	2.3.3/6.1.3
Aircraft Conformance to 2D drawings			
Aircraft length, wingspan and height measured and compared to 2D drawing.	_____		6.1
Tolerance+/- .25". Any other measurement on the drawing may be inspected. Deviation from drawing requires Eng. Change Request (ECR)	_____	_____	6.1.1
Aircraft uses a 2.4 GHz radio control system	_____	_____	2.6
Spinner or model aircraft type safety nut installed	_____	_____	2.7
No metal prop	_____	_____	2.8
No lead used in any portion of the aircraft or payload	_____	_____	2.9
Payload does not contribute to the structural integrity of the airframe	_____	_____	2.10.
Aircraft Ballast, if used			2.11
Ballast not installed in closed payload bay or passenger cabin	_____	_____	2.11.1/.4
Ballast stations must be indicated on 2D drawing (if ballast is used)	_____	_____	2.11.2
Ballast must be properly secured to avoid shifting or falling off the aircraft	_____	_____	2.11.3

	PASS	FAIL	Rule
Aircraft is powered only by the Engines/Motors installed in aircraft			
No other forms of stored potential or kinetic energy may power the aircraft in flight	_____	_____	2.12
Control surfaces, hinges and control horns secure and free from slop	_____	_____	2.13
All servos properly sized for aircraft	_____	_____	2.14
All linkages secure. If a clevis is used, it must have a keeper	_____	_____	2.15
Red arming plugs for electric aircraft			2.16
Aircraft must have a discrete and removable red arming plug	_____	_____	2.16
Arming plug must be located on top of aircraft	_____	_____	2.16.2
Arming plug must be clearly visible			2.16.3
Arming plug is located between 40 and 60% of the aircraft length from prop	_____	_____	2.16.1
(Teams may not disconnect wiring harness to arm and disarm their system)			2.16.5
Red arming plug receptacle on aircraft may not have more that one exposed male lead	_____	_____	2.16.4
Safety equipment			
Team must present at least two pairs of safety glasses at inspection	_____	_____	1.17.5

Regular Class Requirements

Wingspan			
Regular class wingspan is limited to no more than 144"	_____	_____	7.1
Restricted Material and Equipment for Regular Class			
Confirm no fiber reinforced composite material in aircraft structure	_____	_____	7.2.1
(Exceptions are commercially available FRP prop, landing gear, motor mount and minor hardware)			7.2.1
Wing is not retained with rubber bands	_____	_____	7.2.2
No gyroscopic assist or autopilot installed	_____	_____	7.2.3
Flight Battery			
Battery must be a clearly marked commercially available **six cell** Lithium polymer pack of **3000 mAh** minimum capacity and **rated at least 25C**	_____	_____	7.3.3
Battery and battery plug easily accessible	_____	_____	Safety
Battery properly restrained against all flight loads	_____	_____	Safety
Payload Bay and Luggage Requirements			
Payload Bay fully enclosed and fully encloses all luggage	_____	_____	7.4.2.2
Payload Bay only contains Luggage (no ballast)	_____	_____	7.4.2.1

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	PASS	FAIL	Rule
Payload Bay and Luggage Requirements, continued.			
Aircraft has a single Payload Bay: multiple bays not allowed	_____	_____	7.4.2.4
Luggage consists of payload plates	_____	_____	7.4.3
Luggage support assembly must securely bolt together all payload plates and create a single mass of payload	_____	_____	7.4.3.7
Luggage support assembly must also securely bolt the mass of payload plates to the aircraft structure	_____	_____	7.4.3.7
Tape, Velcro, rubber bands and friction systems alone not be used to retain luggage	_____	_____	7.4.3.8
Passenger and Passenger Cabin requirements			
All passengers are **unmodified** official tennis balls: no holes or glue allowed	_____	_____	7.4.4
Passenger Cabin must position all passengers tangent to the same side of a single geometric plane. Multi story passenger cabins not allowed	_____	_____	7.4.5.1
All passengers secured to the single layer passenger cabin so they will not shift or come loose during flight.	_____	_____	7.4.5.2
All passenger seat positions are contiguous: all tennis balls are .25" or less from at least one adjacent passenger.	_____	_____	7.4.5.3
All passengers are clearly visible and easily touch counted.	_____	_____	7.4.5.5
Check number of passenger positions in passenger cabin and compare to the teams submitted plan: Aircraft passenger capacity and seating arrangement must match plan. Team must submit an ECR if seating does not match plan	_____	_____	4.4.3.4
Power Limiter			
Aircraft has unmodified 2015 V2 or newer version 1000 watt SAE Power Limiter installed	_____	_____	7.3.4/.1
Power Limiter is fully visible and easy to inspect.	_____	_____	7.3.4.2
Power limiter is properly installed and mounted securely	_____	_____	Safety
Power circuit contains RX, battery, ESC and limiter only: no other electronics allowed	_____	_____	7.3.4.3
Wings and tail assemblies free of warps and mounted securely	_____	_____	6.4
Landing Gear and Wheels			
Landing gear mounted securely	_____	_____	6.4
Wheel collars secure	_____	_____	6.4
Motor and Electronic Speed Control (and gear box if applicable)			
Aircraft powered by a single electric motor	_____	_____	7.3.1
Motor (and 1/1 gear box if installed) properly mounted and secure	_____	_____	6.4
Prop rotates at same RPM as motor (no gear reduction)	_____	_____	7.3.2

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	PASS	FAIL	Rule
Radio Equipment			
All servos installed properly and securely	_____	_____	6.4
Radio power switch mounted properly if RX battery used	_____	_____	Safety
1000 mAh min. optional radio battery, properly secured. Must be LiFe or Lipo, Regulator allowed.	_____	_____	7.3.5.1/2/3
Radio power switch must be used if optional RX battery is used. Radio power switch must be clearly visible and properly mounted at least 12" from prop	_____	_____	7.3.5.4
Receiver mounted securely	_____	_____	6.4
Throttle and Radio Function			
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	_____	_____	6.4
Check for correct throttle response	_____	_____	6.4
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	_____	_____	2.6
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.