

ADVANCED CLASS INSPECTION CHECKLIST Technical and Safety-2015

TEAM NUMBER: _____

TEAM NAME: _____

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

Aircraft Identification	PASS	FAIL	Rule
Team Number on top and bottom of wing: 3" numbers	_____	_____	5.1.5
Team number on both sides of aircraft: 3" numbers	_____	_____	5.1.5
University name or initials (wing or fuse)	_____	_____	5.1.5
Complete University name and address (inside fuse or out)	_____	_____	5.1.6
Safety Equipment			
Team has enough safety glasses for all students on the flight line	_____	_____	3.6.11
Engine Displacement			
Total engine displacement is .46 cubic inches or less	_____	_____	5.1.7
Stored Energy Restriction			
No internal or external forms of stored potential energy allowed	_____	_____	5.1.8
Aircraft Drawing Inspection			
Compare actual measurements to measurements of submitted drawings	_____	_____	7.1.2.3
Note and report differences in span, length, height (1/4" tolerance),	_____		
Aircraft Weight and Balance Per Documentation			
Team must demonstrate a flyable balanced aircraft at center of gravity per submitted drawings (empty weight)	_____	_____	7.1.2.5
Payload: Static and Expellable			
Static Cargo Bay and Static Cargo			
Support assembly must adequately secure static cargo plates to airframe	_____	_____	5.1.4.1.1
Support assembly retains static cargo plates as a homogenous mass	_____	_____	5.1.4.1.2
Static cargo bay(s) must be fully enclosed inside aircraft	_____	_____	5.1.4.1
(Multiple cargo bays allowed)	_____	_____	5.1.4.1
Static cargo may not contribute to the structural integrity of airframe	_____	_____	5.1.4.1.1
Expellable Cargo Bay and Expellable Cargo			
Expellable Cargo Bay does not occupy the same space as the Static Cargo bay	_____	_____	5.1.4.2
Expellable Cargo release mechanism is reliable and functional	_____	_____	Safety
Expellable Cargo is sand enclosed by a sewn fabric material	_____	_____	5.1.4.2.1
Expellable Cargo must weigh between 3 and 3.25 lbs.	_____	_____	5.1.4.2.1
Fabric material must be labeled with team number: 2 inch numbers	_____	_____	5.1.4.2.1
All Expellable Cargo packages inspected and weight checked	_____	_____	5.1.4.2.1
Lead Prohibited: No lead used in payload or aircraft	_____	_____	5.1.4.1.2

Data Acquisition System and First Person View System	PASS	FAIL	Rule
DAS provides real time altitude reading in feet on ground station and registers a change when the model is lifted into the air	_____	_____	5.1.13&14
DAS records exact altitude when Expellable Cargo is released	_____	_____	5.1.13
DAS has an arming/reset switch. If manual, it must be located at least 12" from prop. Wireless remote arming/reset switch is allowed	_____	_____	5.1.14
DAS and FPV system does not use 2.4 GHz	_____	_____	5.1.14
Functional test of FPV/Telemetry system	_____	_____	5.1.16
Expellable cargo not able to be released by primary pilot	_____	_____	5.1.16

Wings, Tails and Control Surfaces

Wings and tail assemblies free of warps and mounted securely	_____	_____	Safety
Control surfaces, hinges and control horns secure and free from slop	_____	_____	5.1.22
All linkages secure. If a clevis is used, it must have a keeper.	_____	_____	Safety

Radio Equipment (2.4 GHz only)

Radio is a 2.4 GHz system	_____	_____	5.1.18
All servos installed properly and securely	_____	_____	Safety
Power switch installed properly	_____	_____	Safety
1000 mAh minimum radio battery, properly secured (regulator allowed)	_____	_____	5.1.19
Receiver mounted securely and vibration protected	_____	_____	Safety
All servos properly sized for aircraft	_____	_____	5.1.23
All flight control, throttle and ground steering servos operate correctly and without clashing or overloading	_____	_____	Safety
Throttle operation correct: idle to full	_____	_____	
Throttle kill set (switch or trim kill)	_____	_____	
Radio fail safe functional: Throttle must go to idle if TX signal lost	_____	_____	Safety

Landing Gear and Wheels

Gear mounted securely	_____	_____	Safety
Wheel collars secure	_____	_____	Safety

Engine(s) and Gear Boxes (if applicable)

Properly mounted and secure	_____	_____	Safety
Prop and prop nut tight	_____	_____	Safety
Spinner or safety nut/no metal prop	_____	_____	5.1.20&21

Inspection Sticker(s)

All airframe parts stickered after technical inspection (wings, fuselage, tail if removable, expellable cargo, spare airframe parts, if any)	_____	_____	
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First Inspector _____

Second Inspector _____

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.