

Electric RC Airplane Pre-Flight Checklist

For the Use of SOGGI Flight Instructors

May be issued to Students to enable them to prepare their sailplane for First Flight Inspection.



Item	Description	Complete ?
Visual Inspection - Exterior		
Covering and Surface Inspection	Look for any "hangar damage". Punctures in the covering or exterior surface of the plane can indicate structural damage or damaged linkage or wiring.	
Landing Gear (If applicable)	Inspect the tires, floats, or skis for structural integrity: Pneumatic tires inflated? Foam tires gouged or torn? Rubber tires dry-rotted? Do tires roll freely? Floats sealed and water-tight? Are snow skis cracked or bent?	
Retractable Landing Gear (If applicable)	Are the retracts fully extending and locking? Are they fully retracting and the gear doors (if applicable) closing properly? If pneumatic, is the system canister pressurized and are the lines intact?	
Windshield, engine cowl, scale accessories and trimmings	Are all bolted, screwed, and glued outer trimmings and removable components fastened firmly and are all fasteners present?	
Propeller or EDF Fan Unit	Is the propeller spinner and/or prop nut secured properly? Is the prop scratched, nicked, bent or otherwise appear damaged? Are all of the EDF fan blades present and in good condition?	
Motor	Does the motor turn freely without making any scraping or rattling noises? Does the motor feel firmly affixed when you apply some pulling force to the propeller?	
Motor Primary Isolation	How is the motor prevented from inadvertent starts? Use of Fuse-holder and removable fuse? Disconnect of Primary Battery?	
Control surfaces	Are all of the primary and secondary control surfaces properly attached to the servo linkage? By GENTLY applying a small amount of pressure to the control surfaces but NOT enough to move the servos, do the servos provide some resistance? Note: Cranking a servo back and forth by hand can easily damage the gears!	
Flying Surfaces	Are wings free of twist and is there washout at the tips? Is the angle of incidence within an acceptable range?	

Item	Description	Complete ?
Visual Inspection - Interior		
Foreign Material	<p>Is the fuselage free of any construction or assembly debris? When you turn the model over and rotate from side to side can you hear anything rattling or flopping around inside the fuselage or wings?</p> <p>Note: Some light, consistent rattling can be heard from the servo wiring leads and extensions from within the wings and/or stabilizers - this is normal but should happen very consistently when the model is rotated or moved through the same motions.</p>	
Wire Routing	<p>Are electrical connections routed away from servo linkage and servo horn travel paths? Are wires affixed firmly in place by tie wraps/zip ties, or fasteners?</p> <p>Note: Under normal flying conditions, unsecured wires can easily flop in the path of servo linkage and cause servo binding problems or even become severed, resulting in a loss of control.</p>	
Electrical Connections	<p>Are all receiver, servo, ESC, battery, and add-on components fully plugged-in and connected properly?</p>	
Main Battery	<p>Is the main battery securely fastened in place? Is the main battery fully charged and registering the proper maximum voltage? Is the battery free of damage and look normal?</p> <p>If a Li-Po, does the pack look puffy or feel warm to the touch?</p>	
Receiver battery (if applicable)	<p>Is the receiver battery fastened securely and fully charged?</p>	
Receiver Antenna	<p>Is the antenna fully intact and connected? If you are using an FM radio, is the antenna properly extended from the fuselage, free of tangles and knots and away from the prop or any moving surfaces?</p> <p>If using 2.4GHz, are the antenna(s) located away from other electrical wiring inside the fuselage?</p>	
Control Linkage and Servos	<p>Is all servo linkage properly fastened and secured? Is control linkage free of restriction? Are all linkage fastener set screws in place and secured? Are servo horn locking screws in place and secured? Are all servos securely fastened within their mounts?</p>	

Item	Description	Complete ?
Balance and C of G		
Longitudinal Balance	Does the model want to roll aggressively to one side when held in the center of the nose (by the prop) and by the center of the tail?	
C.G.	<p>Note: Making a small mark on the wings at the model's recommended CG balance points help for this inspection.</p> <p>Does the model balance properly when supported by your finger tips at the C.G. points?</p> <p>MAKE SURE YOU HAVE INSTALLED ALL COMPONENTS NEEDED FOR FLIGHT INCLUDING BATTERIES BEFORE CHECKING C.G.!</p>	
Transmitter Inspection		
Battery	Is the transmitter battery fully charged?	
Model Selection (if applicable)	Have you selected the correct model memory in your transmitter?	
Neck Strap	Have you fastened and adjusted your neck strap?	
Functional Tests		
<p>Motor</p> <p>CAUTION! SECURE YOUR MODEL WITH THE PROPELLER AWAY FROM YOUR HANDS, BODY, AND LOOSE CLOTHING OR ITEMS. HAVE AN ASSISTANT HELP YOU IF AT ALL POSSIBLE! STAY OUT FROM IN FRONT OF OR DIRECTLY BESIDE THE PROPELLER IN THE EVENT IT SHOULD BECOME DETACHED.</p>	<p>Does the motor function through the throttle range? Does it operate smoothly without stuttering or making any scraping noises? Is there excessive vibration? Does it surge at full throttle?</p> <p>Does it turn off and stop properly when you move the throttle gimbal all the way down as it should?</p>	
Ailerons - Critical	Are the ailerons moving as they should (in opposite directions)? When you push the right gimbal right, does the right aileron (looking from the rear) move up and the left move down as they should?	
Elevator - Critical	<p>Do both elevators (if applicable) move in unison as they should? When you push the right gimbal up, does the elevator move downward as it should?</p> <p>When you pull down on the right gimbal does the elevator move upward as it should?</p>	

Item	Description	Complete ?
Rudder - Critical	Does the rudder move left when you move the left gimbal to the left as it should? Does it move right when you move the left gimbal to the right as it should?	
Elevons - Critical (if applicable)	Are the elevons functioning as both elevators and ailerons and moving in the proper direction?	
Ruddervators - Critical (if applicable)	Are the ruddervators functioning as both rudders and elevators and moving in the proper direction?	
Radio System Range Test - Critical	Have an assistant walk your model 60 yards away from you and verify that you still have control of the model on the ground. If your radio transmitter has a range test mode, follow the instructions in the radio manual to perform the range test.	
Dual Rates (if applicable)	Cycle the dual rate switch on each control surface and verify that the high and low rates are functioning properly.	
Secondary Control Surfaces	Verify that your flaps, flaperons, droops, spoilers and brakes are extending and retracting properly.	

Pre-flight Checklist Complete

Please be safe when operating your RC airplane
Have a great flight!