

BlitzRCWorks P-40N



SPECIFICATION

Wingspan:1100mm (43.3")

Flying weight:1300/1400g (45/49oz) 3/4 cell Length:1000mm (39.3")

Servos:7 x 9g type (2 aileron, 2 flap, elevator, rudder, bomb system) Motor: Banana Hobby 3536 900Kv brushless outrunner

ESC: Banana Hobby 45amp

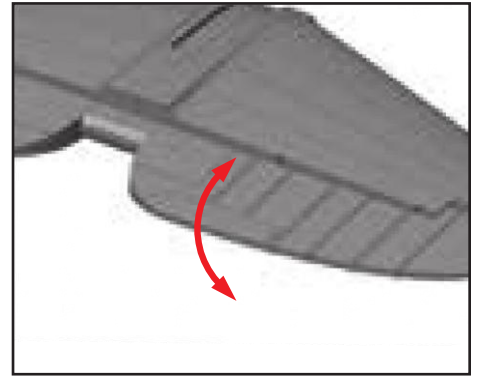
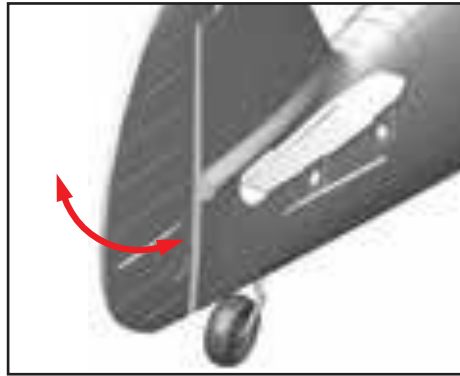
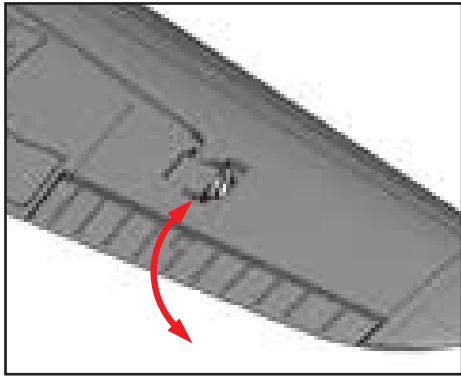
Battery: 2200mah 3S 60-65C or 2200mah 4S 25-30C

Channels: 6-7 required (7 if using included bomb system)

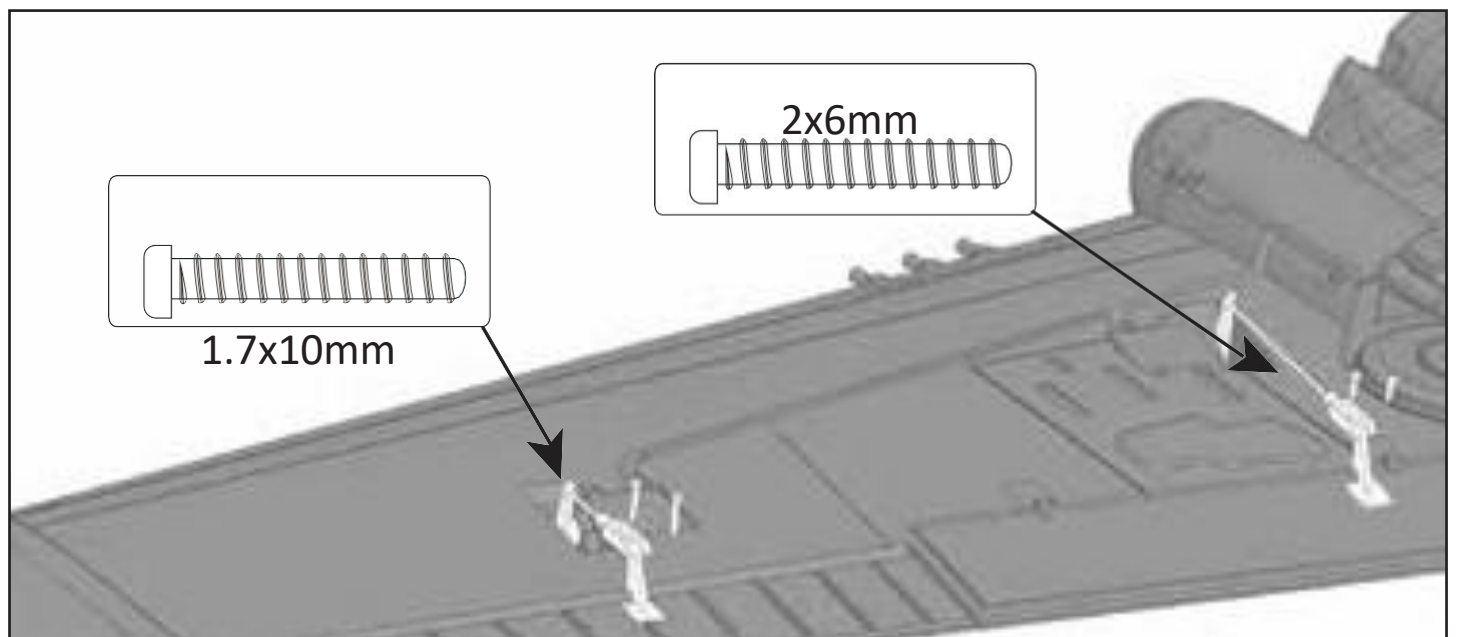
- This is a radio controlled flying model and as such must always be flown with caution and care. This is not a toy.
- The P-40 is designed for intermediate to advanced pilots.
- Always exercise great caution when using the recommended battery to power this product. For full safety notes and operating procedures, please see information provided by your battery supplier.
- Take great care when connecting/disconnecting the battery. See battery supplier for full safety procedures.
- Never power up the model in confined spaces and always keep the prop clear of obstructions.
- This product is not a toy. Children must be accompanied by an adult at all times if operating this product.
- Only fly this model in an open area away from crowds, people, buildings, tree's, power lines and obstructions.
- Always put safety first when operating this model and consider the warnings stated above.
- The supplier/manufacturer accepts no responsibility for damage or injury caused through the use of the product. Not suitable for children under the age of 14. THIS IS NOT A TOY.

ASSEMBLY

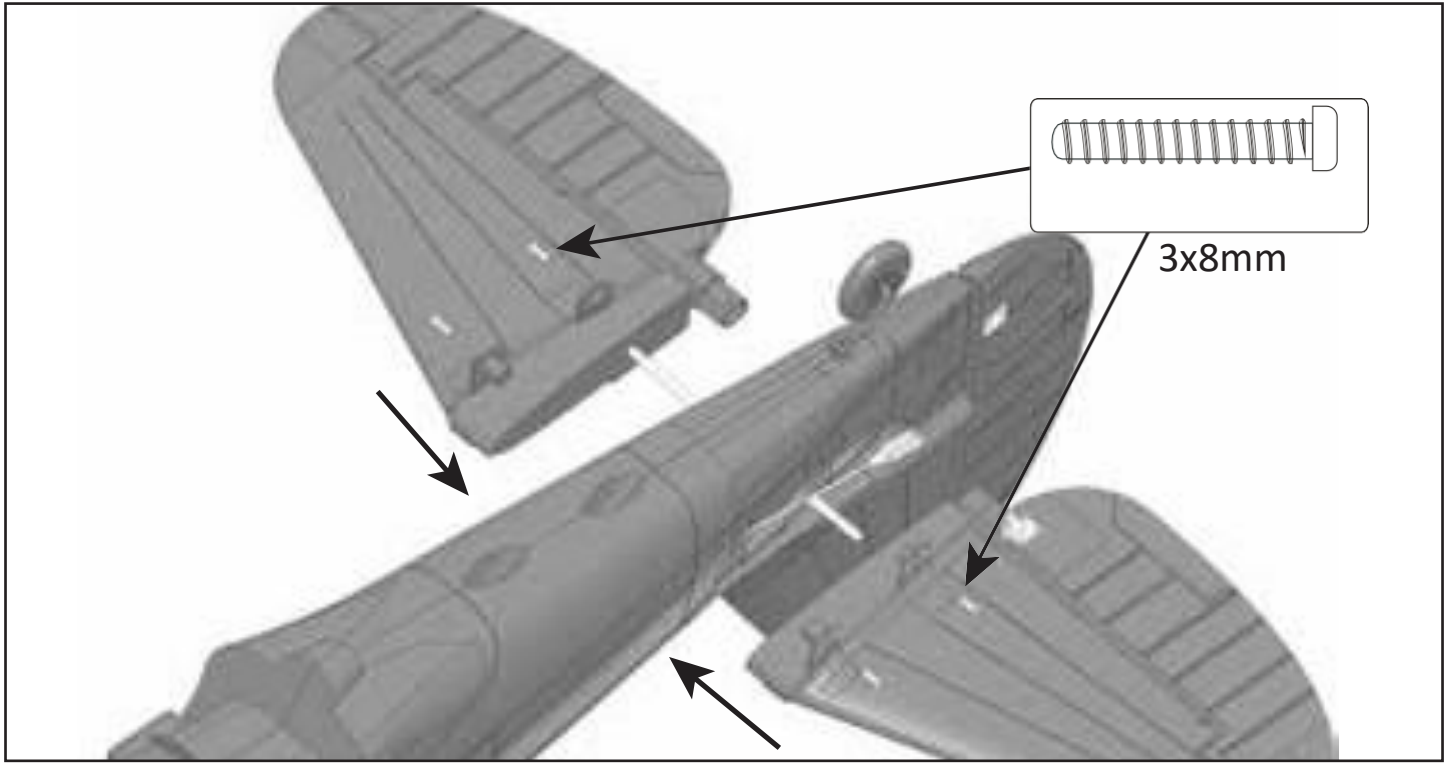
1. Out of the box your P-40N comes with reinforced foam hinges. However before assembly can begin, each hinge line must be flexed back and forth 5-6 times to reduce tension, and load on the servo. Do this for all control surfaces before continuing.



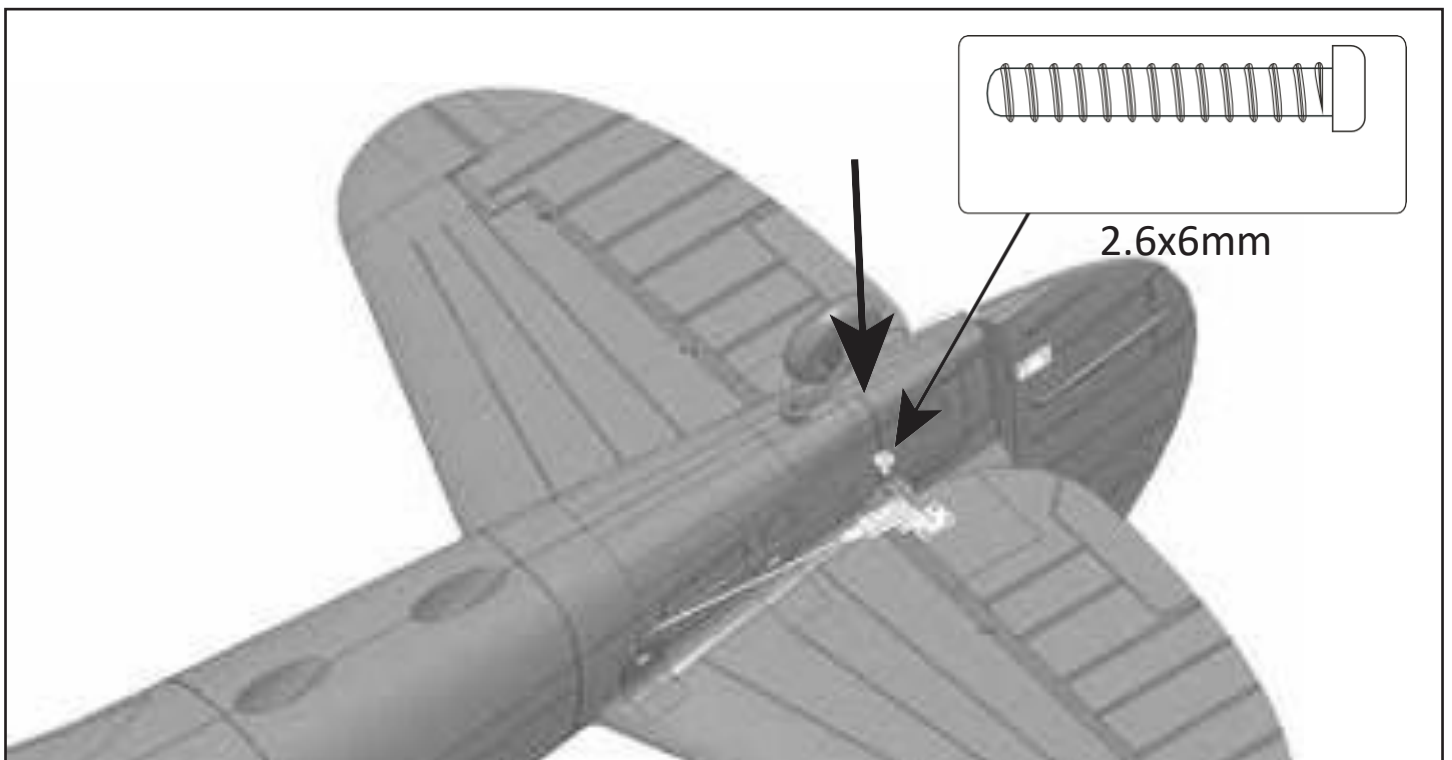
- 2A. Locate both aileron and flap control horns, plates and push rods. Screw each horn in place as shown below using the screws provided. Aileron horn screws pass through the aileron and screw into the receiving horn plate. The flaps screws screw directly into the plastic of the flap.
- 2B. Raise each servos horn until at 90 degrees to the wing and attach the push rods to the outer holes of both servo and control horn. Adjust the plastic clevis on the rods until the ailerons are neutral and the flaps are closed. Further adjustments can be made later during the 'set-up' stage of the manual.



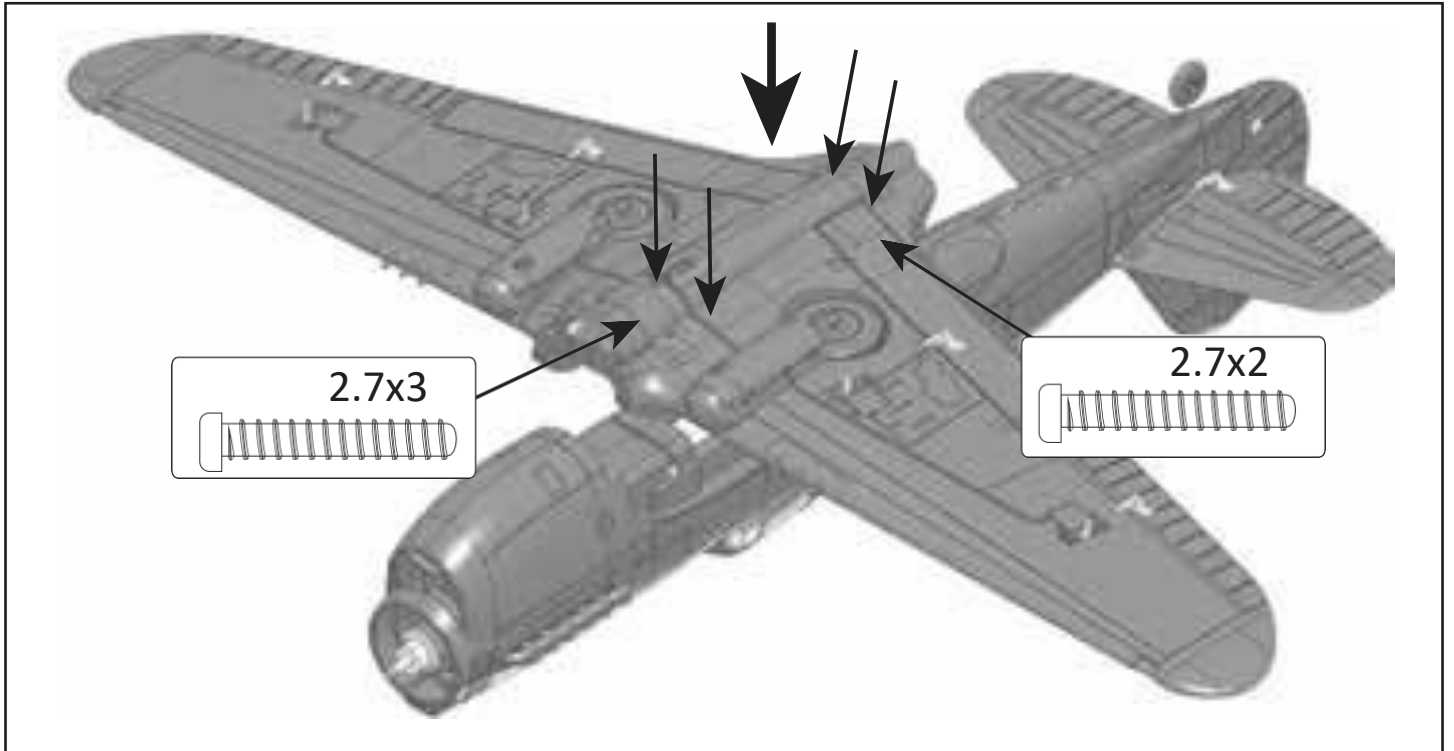
3. Insert that carbon tail spar into one half of the horizontal tail and slide into the opening at the rear of the fuselage ensuring the plastic screw tabs key fully into the fuselage sides. Repeat with the second half and once aligned, screw firmly in place with the 3x8mm screws as shown. A little glue may be applied at this stage for added security if desired.



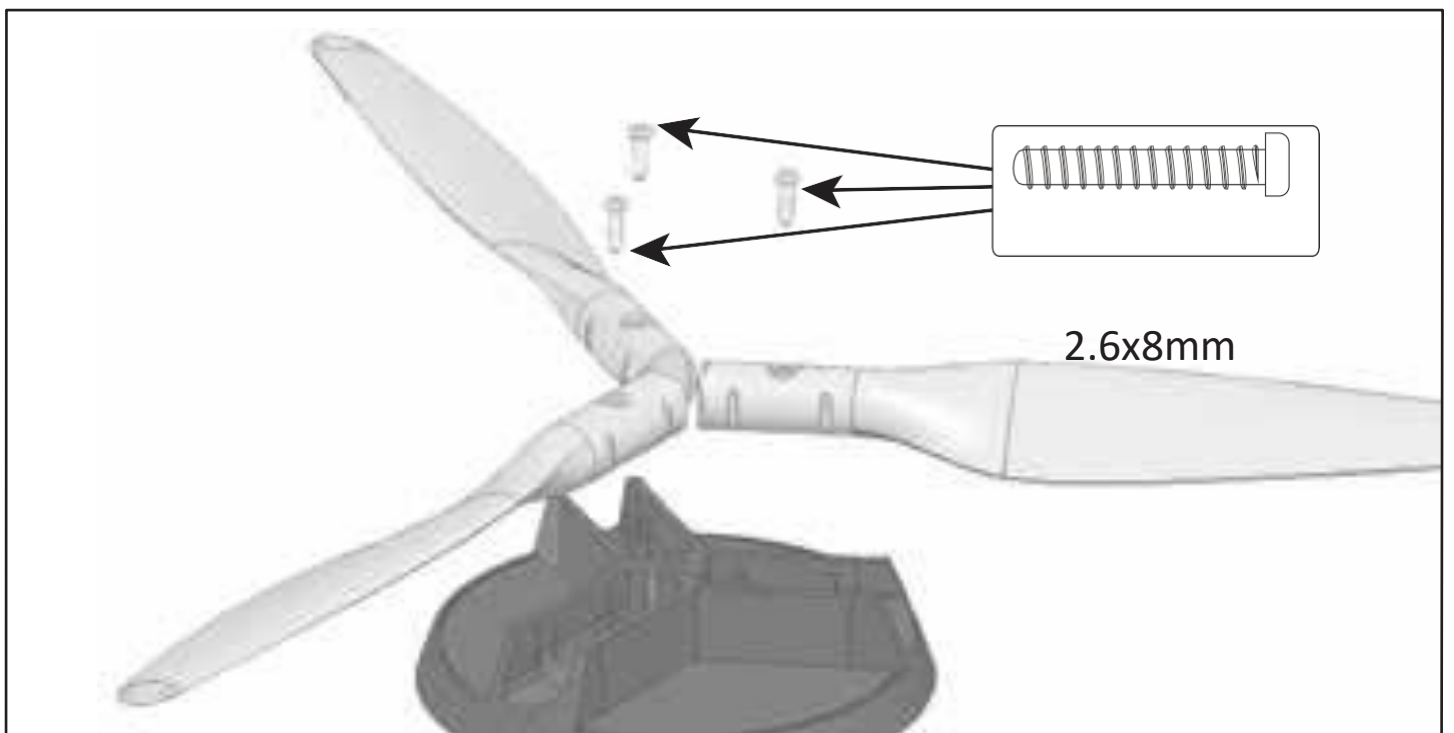
4. Into the hole of the elevator joint, screw the single 2.6x6mm screw as shown to ensure the elevator halves remain connected.



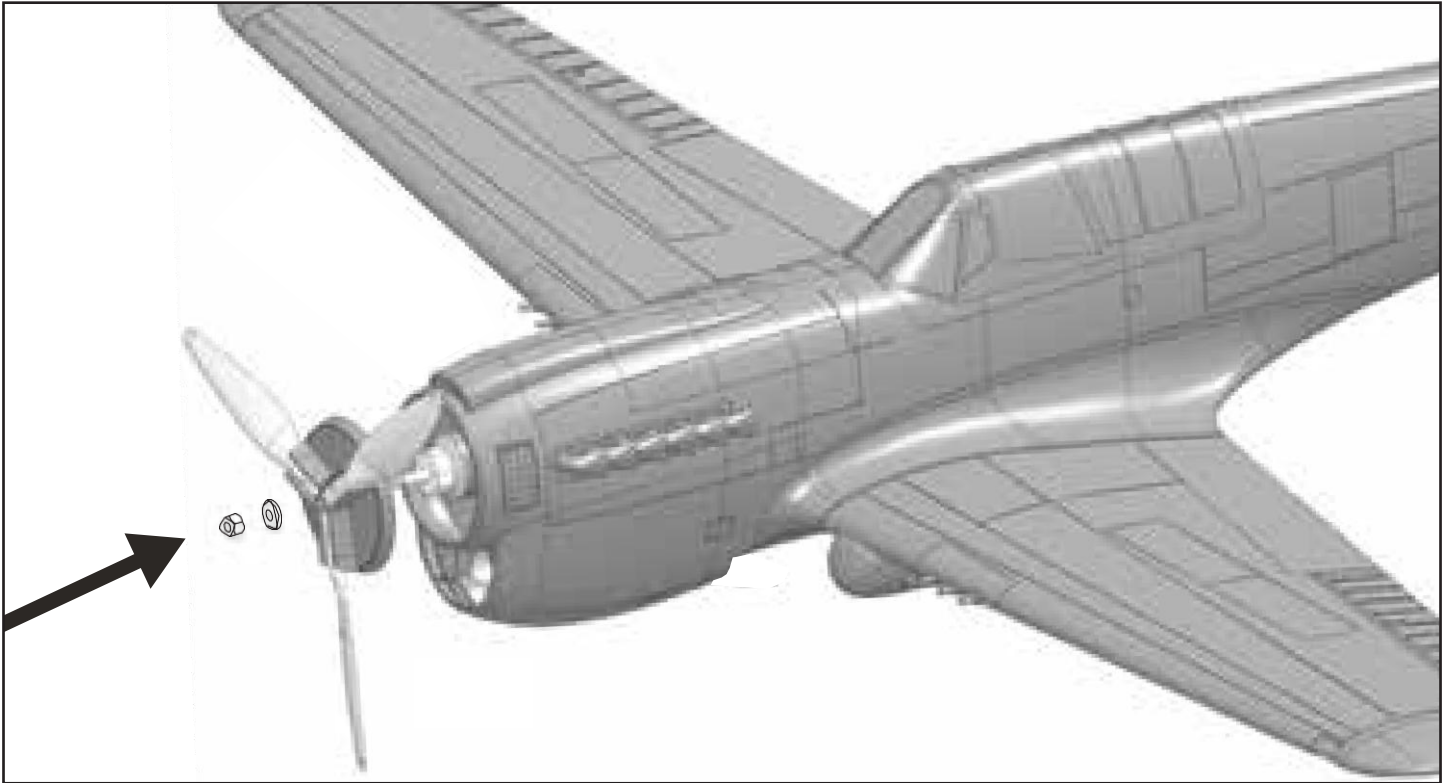
5. Attach the wing to the fuselage and ensure the servo wires from the wing pass through only the 3rd hole from the rear of the plywood tray into the fuselage. This will ensure the wing sits correctly on the fuselage. Once in place, screw the wing firmly down using the screws provided as shown below.



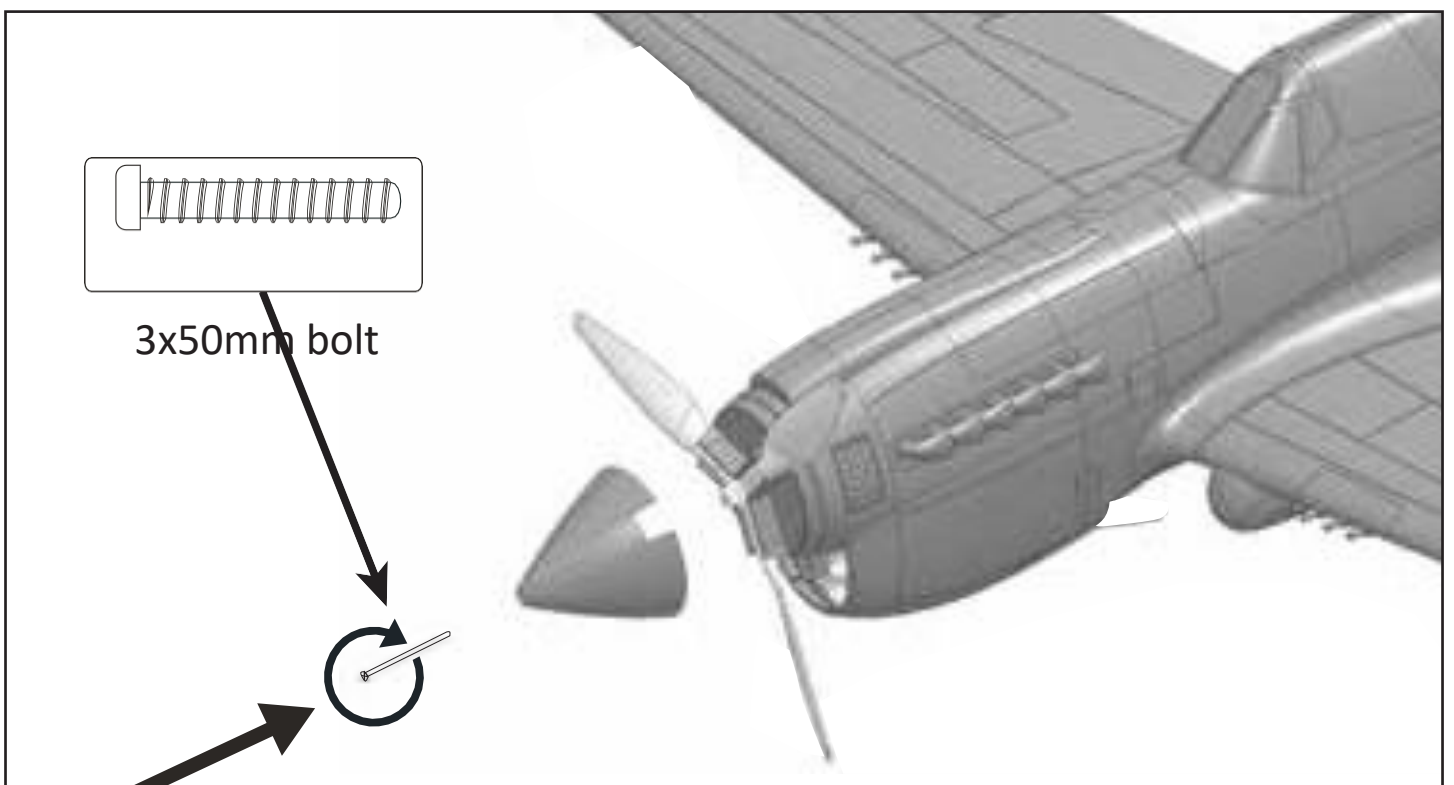
6. Push each of the propeller blades fully into the slots of the spinner back plate. Note that the numbered sides of the blade face outwards. Secure each blade to the back plate using the 2.6x8mm screws as shown. Check that the distance between each blade tip is equally. If not, loosen adjust and tighten again.



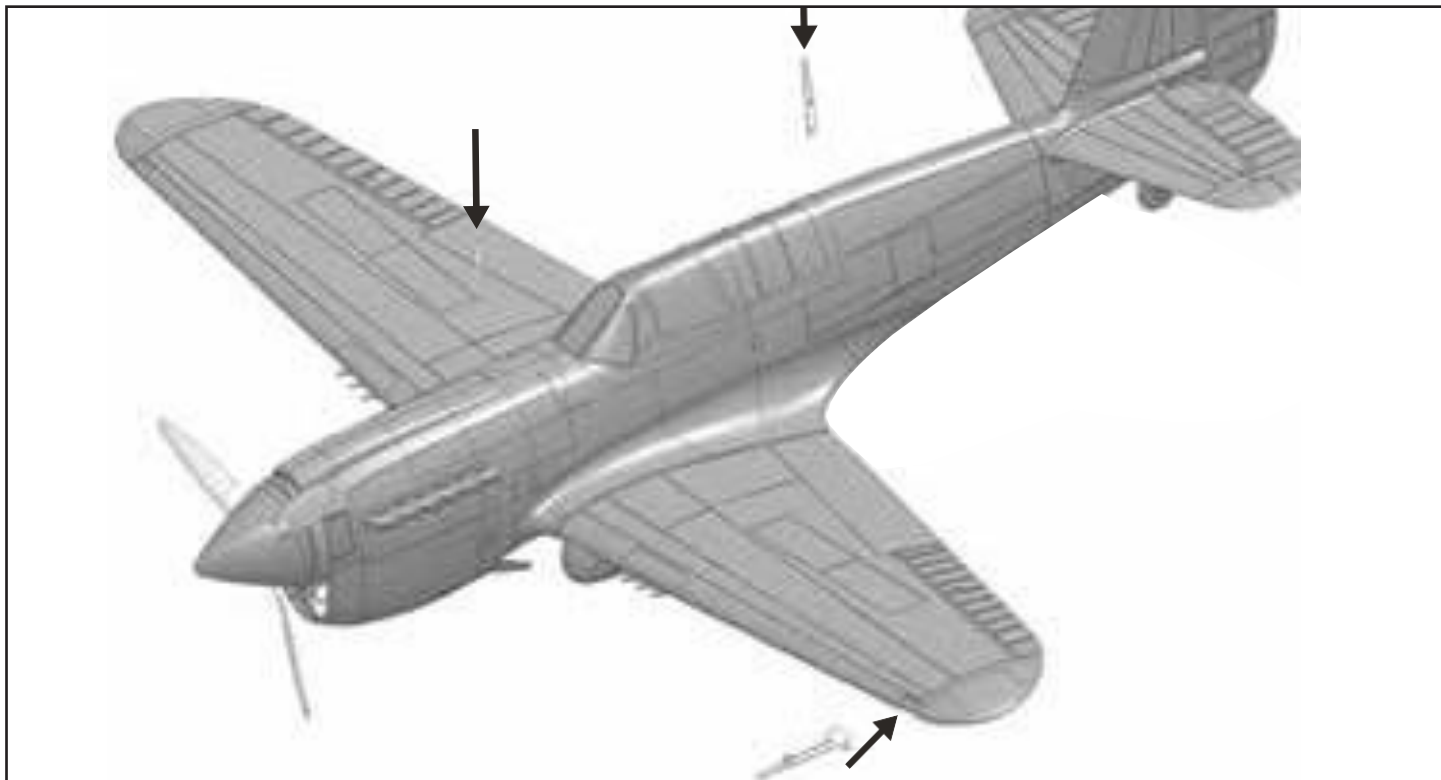
7. Slide the assembled back plate and blades onto the motor shaft ensuring the back plate keys properly onto the base of the shaft. Fit the supplied washer then nut onto the shaft and tighten the nut firmly to the shaft.



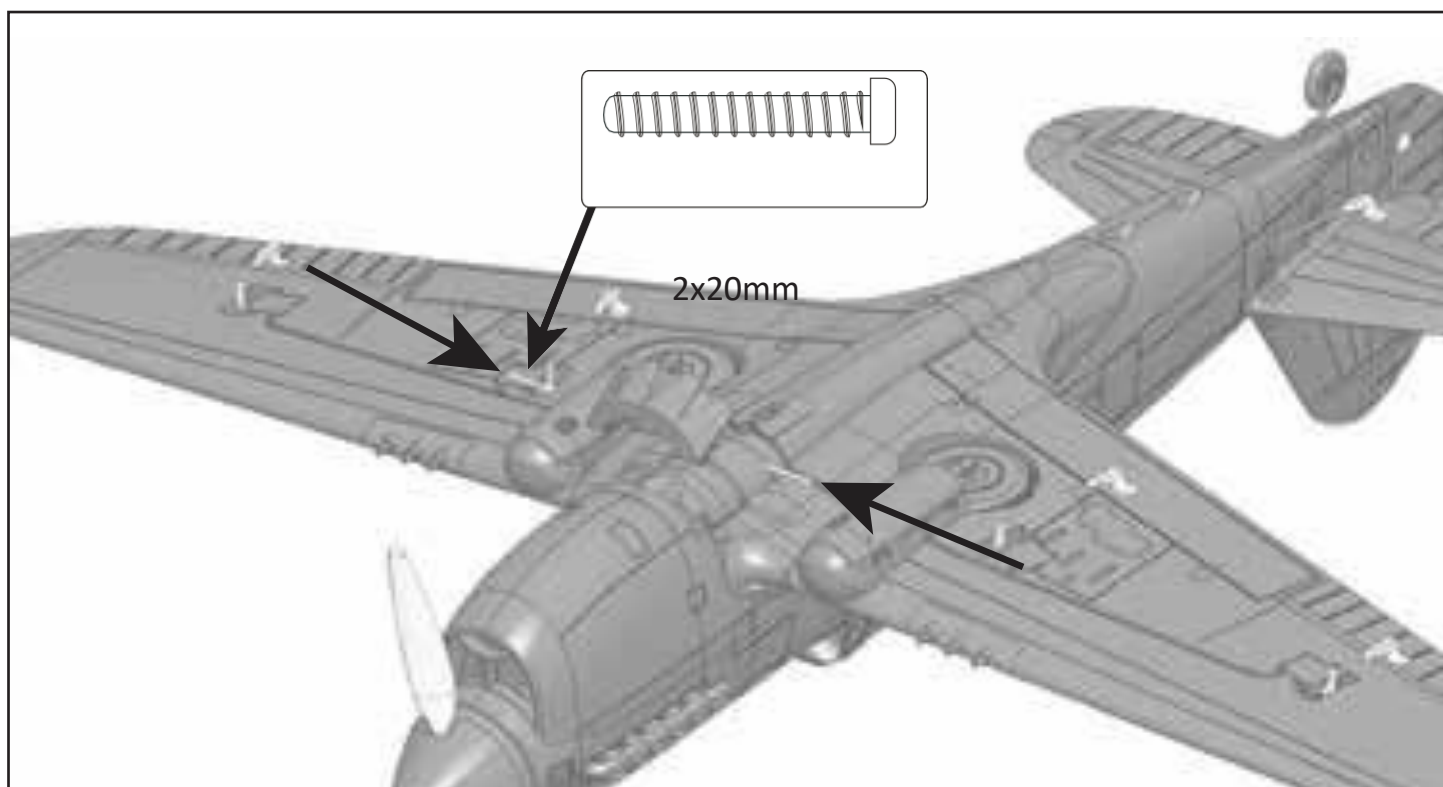
8. Position the spinner in place over the back plate and insert the 3x50mm bolt into the tip and tighten. A small amount of medium thread lock can be used if desired for extra security.



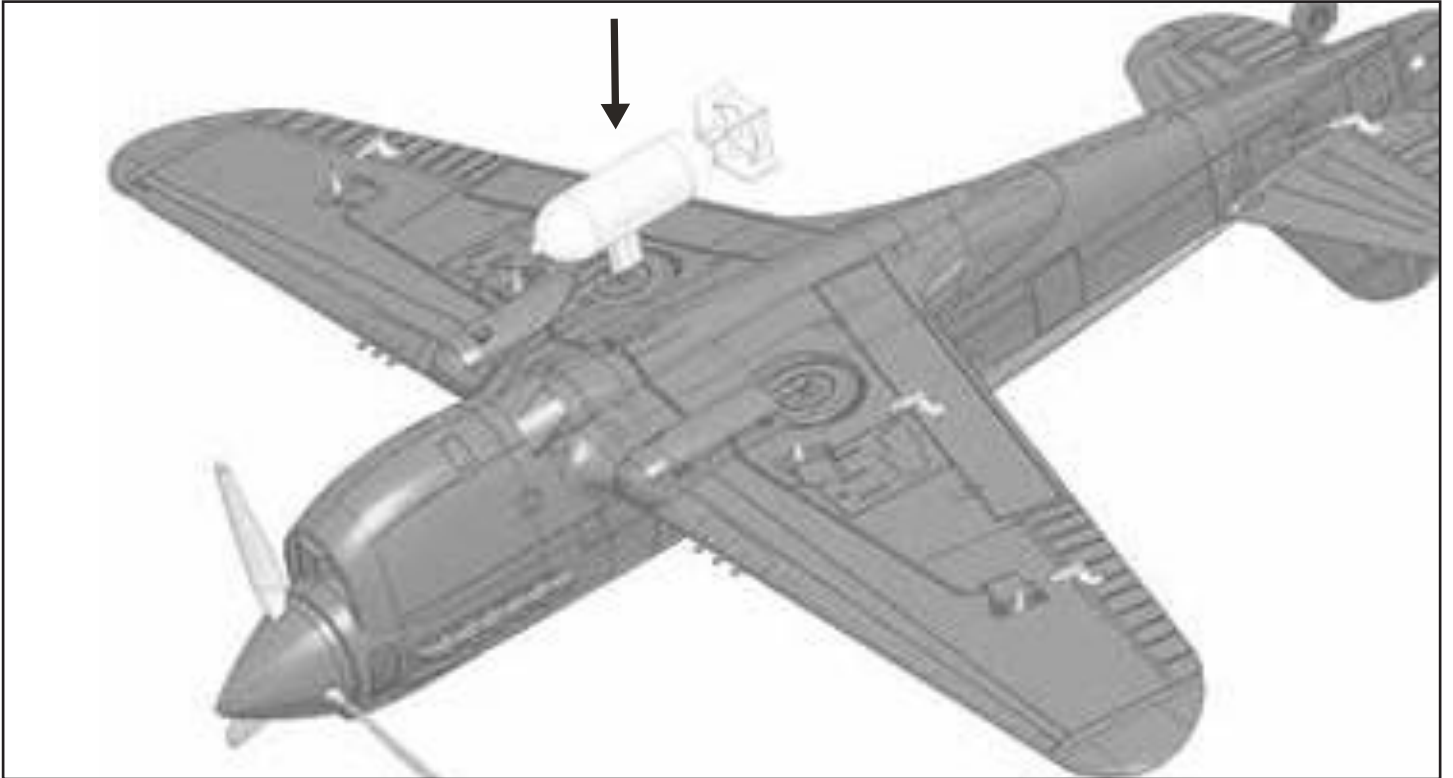
9. Using a small amount of the glue supplied, glue the longer aerial into the slot behind the canopy, the short aerial into the slot of the battery hatch and the pitot tube onto the leading edge of the left wing panel as illustrated below.



10. Position the radiator cowl into place on the bottom leading edge of the wing. Using the 2x20mm screws supplied screw directly into the foam under the screw holes and into the internal plywood inserts. It is recommended not to over tighten these screws so as to make wing removal easier when required.



11. The final stage of assembly is to test fit droppable bomb. Simply drop the bomb into the slot on the underside of the wing center and you are done, the magnets will take care of the rest! The bomb release system is covered on page 12 of this manual.



Assembly of your Banana Hobby P-40N is now complete.

Before you move onto the final set-up of the model, check all screws, bolts and components ensuring all are secure and firmly in place.

1. With your receiver installed and all servos plugged into their corresponding channels, connect the flight battery to the ESC to power up the electronics. With the model now armed, ensure all servos are centered and all control surfaces are level. If not, adjust by turning the control clevis's by hand accordingly until the control surfaces are level as shown.

2. Check all control surfaces are moving in the correct direction with the applicable stick input (see below)

Note: For safety reasons, it is advised that this is done with the prop removed from the model.



Elevator



Ailerons



Rudder

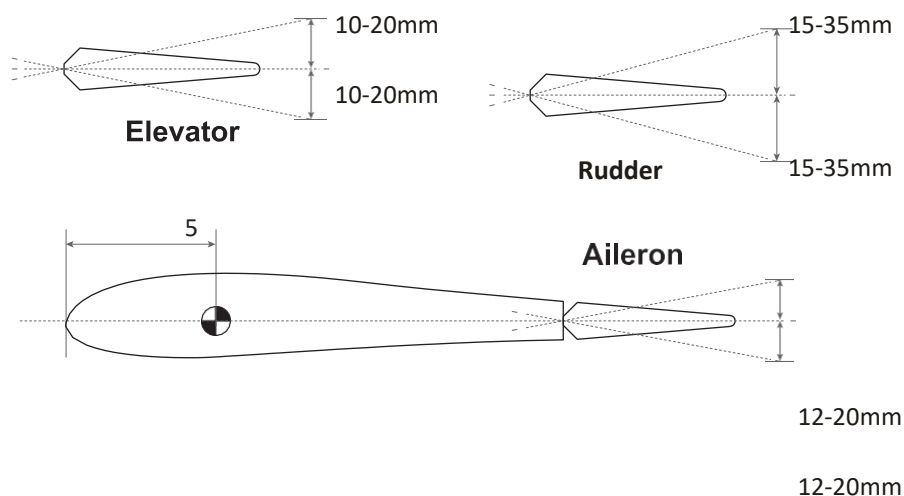
	Roll left		Aileron (Roll)
	Roll right		

	Pitch up		Elevator (Pitch)
	Pitch down		

	Yaw left		Rudder (Yaw)
	Yaw right		

3. The P-40N handles very well in flight but requires setting up beforehand. Please follow the recommended settings below for good all round flight performance.

Control throws:



* Elevator 'low rates' 10mm 'high rates' 20mm in either direction from neutral.

* Aileron 'low rates' 12mm 'high rates' 20mm in either direction from neutral.

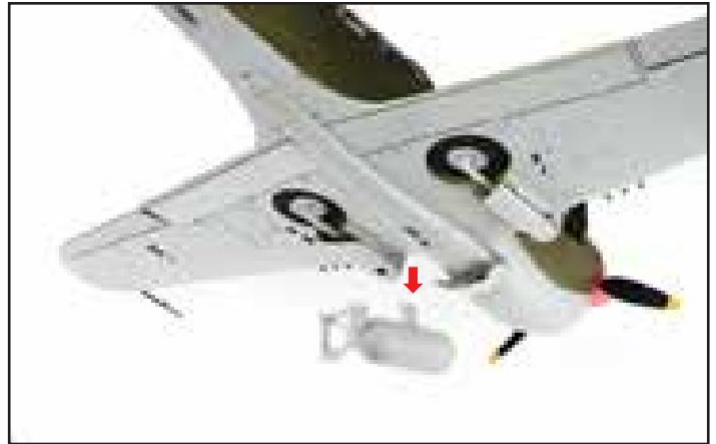
* Rudder 'low rates' 15mm 'high rates' 35mm in either direction from neutral

* Bomb/AUX switch 100% up -100% down. If you can hear bomb servo straining, adjust this percentage.

4. Flaps on the P-40N will need to be set for 3 stages (up flap, mid flap and full flap). Either via your radio or mechanically by turning the clevis's on the flap control rod (or via both in most cases), set mid flap with a distance of 25mm(1") between the trailing edge of the wing and the flap (see below). For full flaps a distance of 60mm(2.3") is recommended. In the 'up flap' position ensure the flaps close fully without straining the servos. Also check that both flap deploy equally.

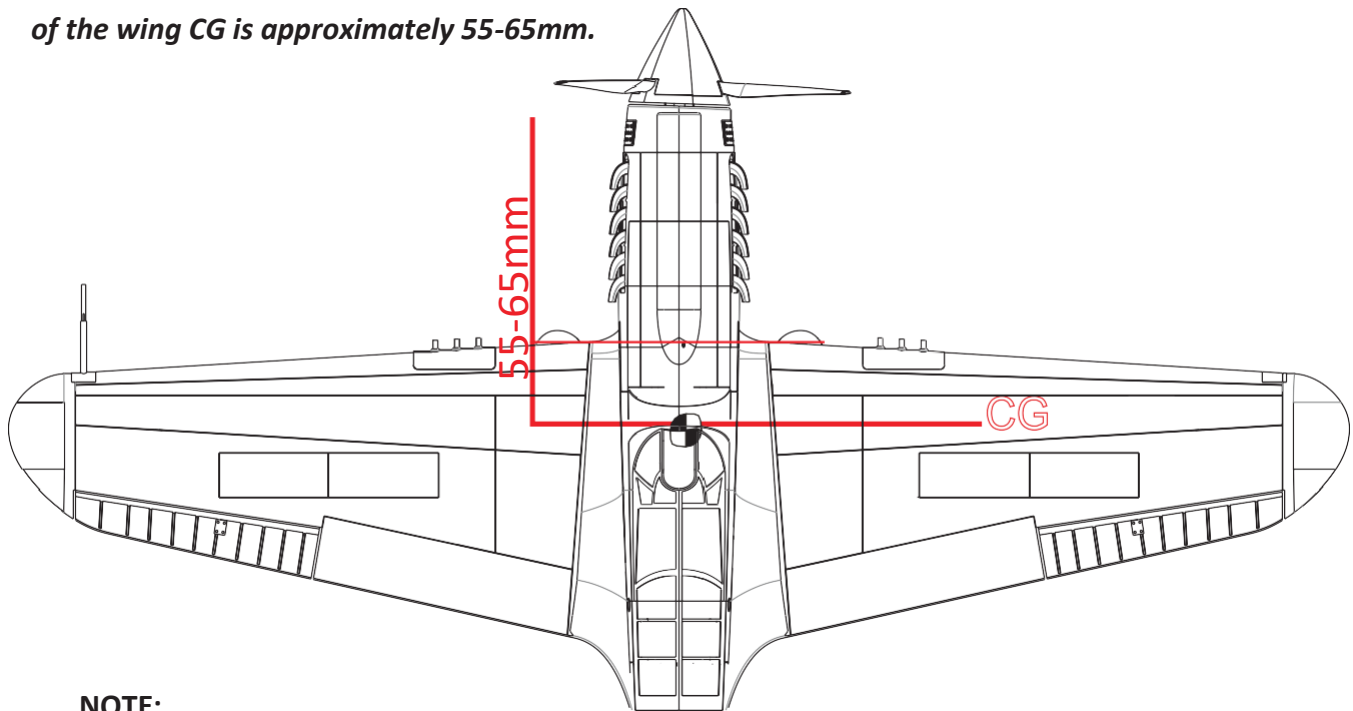


Your P-40's scale bomb drop system operates via a 2 position aux switch on your radio. With the bomb drop servo connected to the corresponding channel on your receiver, ensure that the bomb holds firmly (but without any servo strain) in position 1 of the switch and drops freely in position 2. If not, adjust the travel/end points on this aux channel until satisfied.



CG AND BATTERY PLACEMENT

Make sure the center gravity (CG) is as indicated in the following diagram. From the leading edge of the wing CG is approximately 55-65mm.

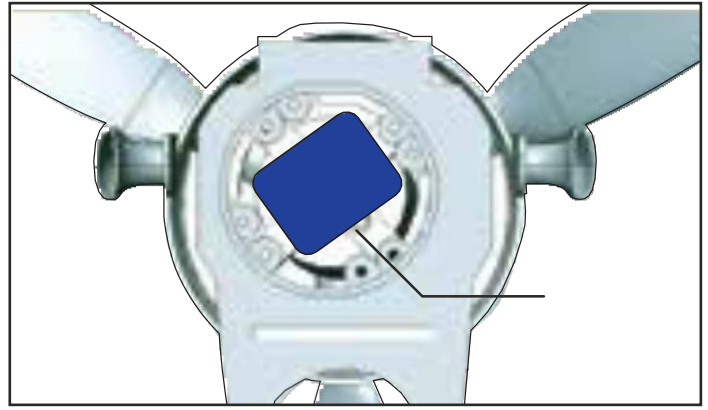


NOTE:

Your P-40N has two lipo options, either a **60-65C 2200mah 3S**, or **25-30C 2200mah 4S**, both options weigh approximately the same. Your lipo's position to achieve the correct CG is the same for both, as far forward as possible directly behind the motor mount. To get the lipo this far forward you will have to install the lipo on its edge as shown in the following images. It's an unorthodox approach but it's better than adding dead weight to achieve the correct CG and the Velcro strap ensures the lipo is held firm and unable to move. See images on the next page for details.

Battery and receiver location positioning

Battery angle required for correct CG



TROUBLE SHOOTING:

Problem	Cause	Solution
Motor does not turn	<ol style="list-style-type: none"> 1. Battery is not fully charged. 2. Transmitter battery low. 3. Motors not connected. 4. The motor is damaged. 5. Receiver is not bound to Tx. 6. ESC in set-up mode. 	<ol style="list-style-type: none"> 1. Charge the batteries. 2. Install a full charged battery. 3. Check for connection between the ESC and motor. 4. Replace motor. 5. Consult Radio manual and go through bind procedure again. 6. Hold model and move throttle to full position then back down to idle.
<u>Model moves backwards</u>	<ol style="list-style-type: none"> 1. Prop installed backwards 	<ol style="list-style-type: none"> 1. Turn the props around.
<u>Control surfaces not moving with stick input</u>	<ol style="list-style-type: none"> 1. The servo lead is connected to Rx incorrectly. 2. The servo is damaged. 	<ol style="list-style-type: none"> 1. Make sure the servo leads are connect properly. 2. Replace servo.
<u>Model does not fly straight</u>	<ol style="list-style-type: none"> 1. Control surfaces not centered. 2. CG is not in the correct position. 	<ol style="list-style-type: none"> 1. Adjust the trims on the transmitter. 2. Re-position lipo as suggested.
<u>Model does not climb well</u>	<ol style="list-style-type: none"> 1. The battery is not fully charged. 2. Elevator servo is reversed. 3. CG too far backwards. 	<ol style="list-style-type: none"> 1. Charge the battery. 2. Change servo direction via Tx. 3. Move battery forwards.
<u>Limited Radio Range</u>	<ol style="list-style-type: none"> 1. Transmitter/Receiver batteries are flat. 	<ol style="list-style-type: none"> 1. charge/replace batteries.