Manual – Extra NG – 67″

1- Introduction:

WELCOME TO THE PILOT-RC TEAM!

Thank you for choosing a Pilot-Rc plane as your next model. We hope that you enjoy many successful and exhilarating flights with your new plane. Please read through these instructions before you start building or flying to assure a successful experience, and welcome to Team Pilot-Rc!

YOUR MODEL:

Model:	Extra NG
Wingspan:	67″ (1.702mm)
Length:	65.4″ (1.661mm)
Wing area:	872 “² (5,632 cm²)

Weight:	8.1lbs (3.7kg)

INCLUDED HARDWARE:

- Complete air frame with all basic accessories (such as carbon fibre main undercarriage, tail-gear assembly and wing-tubes as well as fibreglass control horns and wheel pants)
- Included wing bags
- Included extension wires
- Pre-prepared hinges ready to be installed and pre-mounted canopy
- Fuel tank, fuel dot and fuel tubing pre-prepared
- Wheels, axels and wheel pants
- Pre-prepared pushrods with ball links
- Included spinner

REQUIRED HARDWARE:

Motor: 20cc or equivalent electric

*Please note that the setup of this plane allows both electric or gas engines, however in order to use a gas engine, the firewall and engine box must be reinforced.

Servos: 4 high torque plus throttle // Uses x1 per aileron, x1 for elevator and x1 for rudder

*Please note that the servo slots are designed to accept a medium size servo (35mm x 15mm) however the wood has been prepared and marked, should you wish to enlarge in order to accept standard size servos.

Also requires all the usual accessories such as transmitter, receiver, propeller, batteries, powerbox, extension leads and possibly other small accessories.

PILOT-RC RECOMMENDED HARDWARE:

- **Servos:** Pilot-Rc PW16AH (16Kg at 8,4v)
- **Servo arms:** Pilot-Rc 1,2" Aluminium arms (included with Pilot-Rc servos)
- **Electric Motor Combo**: Pilot-RC Power Pack for 67" plane (3D acrobatic)
- **Electric Motor & Servos Combo:** Pilot-RC Power Pack for 67" plane WITH servos (3D acrobatic)

OTHER ACCESSORIES NEEDED TO COMPLETE:

- Epoxy Adhesives
- Cyanocrylate adhesives
- X-Acto and Saw knives
- Sandpaper
- Thread lock
- Aircraft stand or support
- Drill, screw drivers, allen keys, wrench set, pliers, etc

2- DISCLAIMER

All Pilot-RC products are guaranteed against defects for 30 days of your receiving the model. This warranty is limited to construction or production defects in both material and workmanship, and does not cover any parts damaged due to misuse or modification.

Should you wish to return this airplane for any reason, all shipping costs are the responsibility of customer.

If any parts are needed to be replaced by the manufacturer, the original parts must be returned, at the costumers expense.

Do not regard this plane as a toy! This plane is meant for ages 14 and above.

The manufacturer can not supervise the assembly and maintenance of the model or ensure your correct radio installation. Therefore, the manufacturer can not be made responsible or liable for any damage occurring during the use of this radio controlled model. As such all responsibility for the correct build, maintantence and operation must be accepted by the customer. The operation of the model is taken as acceptance by the customer of their acceptance to the above.

The model is highly prefabricated and ready for use, however please also assure that any pre-installed (such as pushrodand ball link sets, fuel tank, etc) components are tight, secure and airworthy both for the first flight and subsequent flights as part of your routine maintenence and verification.

In no event does Pilot-RC accept any liability to exceed the original cost of the basic Pilot-Rc airframe provided (accesories such as engine or radio system are also excluded from liability).

To ensure safety, please read the instruction manual thoroughly before assembly. Building and operating model planes requires diligent practice and correct guidance. Any neglect, carelessness or lack of experience can cause serious bodily harm or damage to property.

Seek the assistant of local model flying clubs and or an experienced aeromodeller for assembly, operation and maintenance to ensure a quick and successful learning process.

Fly only at designated model flying fields approved by the AMA (Academy of Model Aeronautics), the MAAC (Model Aeronautic Association of Canada) or the similar corresponding governing body for your country.

Pilot-RC reserves the right to update the model, instructions and limited warranty without notice.

3- Assembly

MAIN LANDING GEAR ASSEMBLY:

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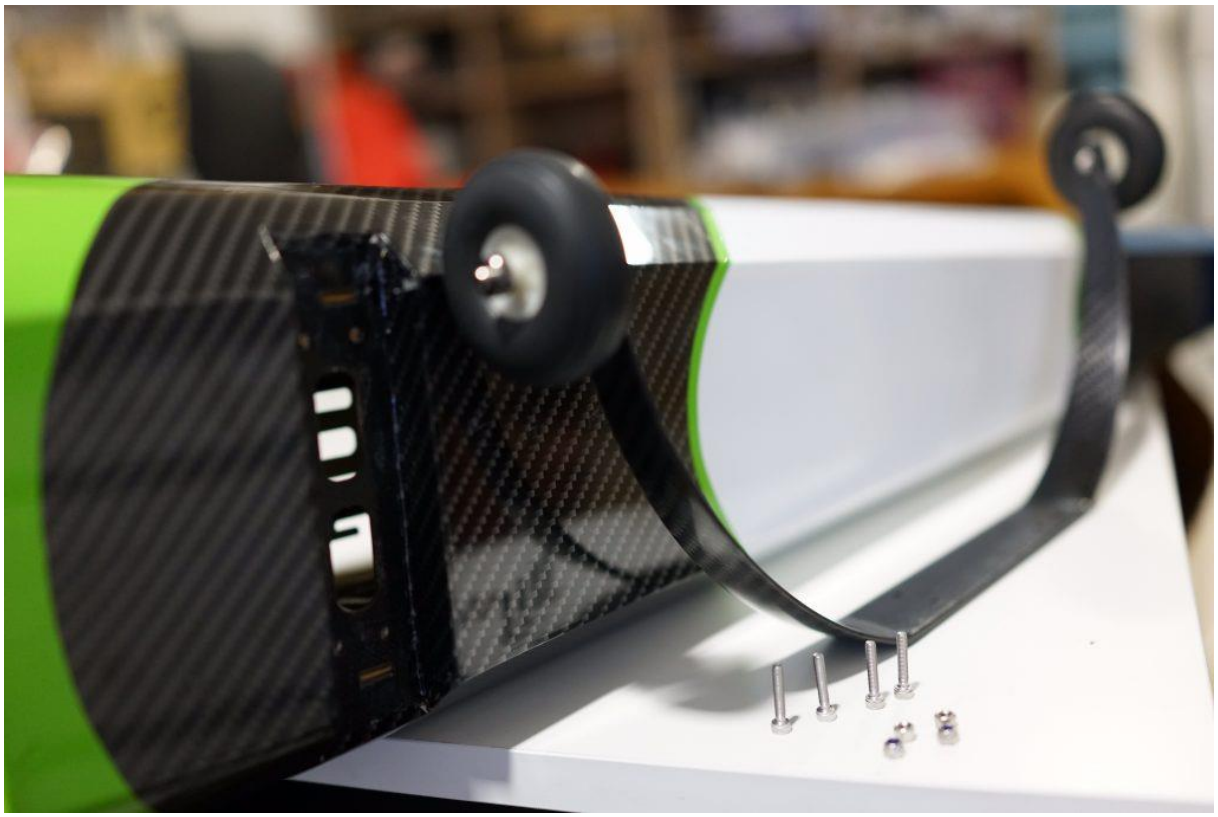
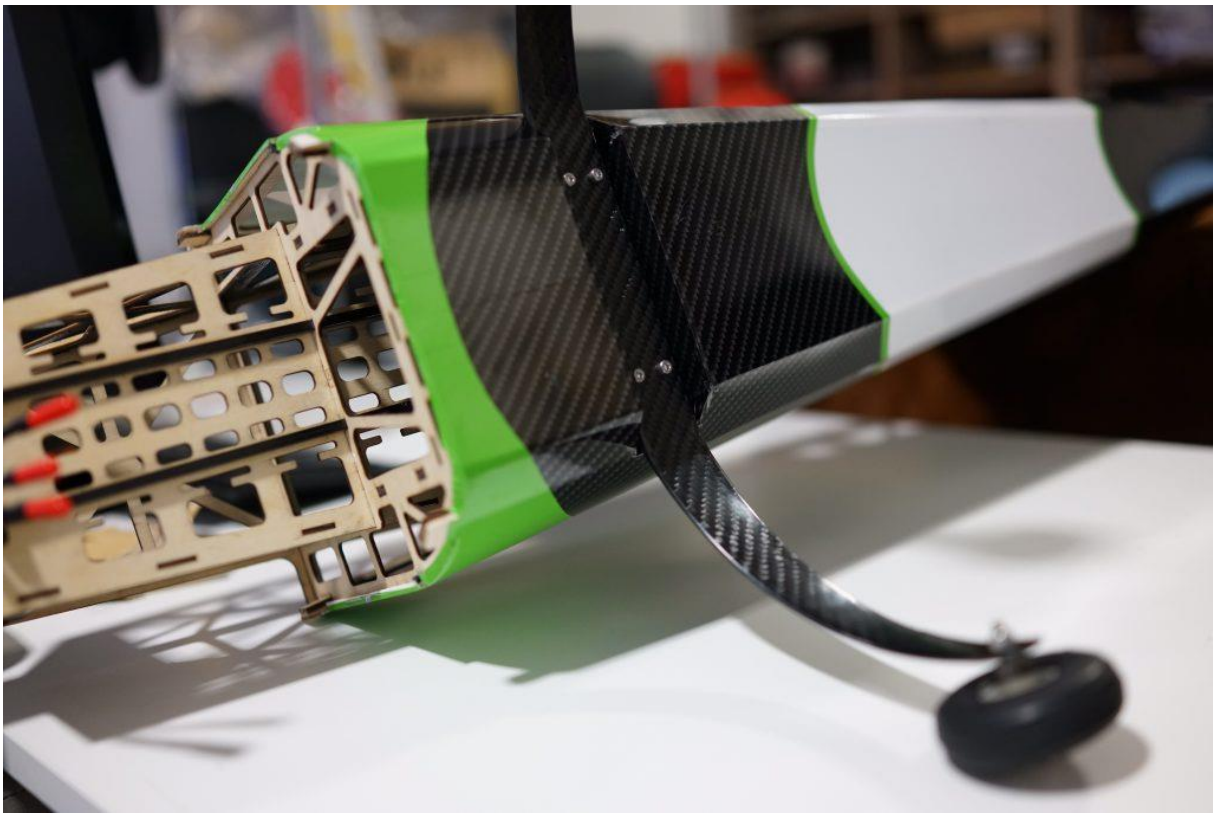
- 

- 
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Screw the wheel axles on to the landing gear, and then slide on the wheels and secure in place with the provided grub screws.

Position the fuselage upside down and screw on the carbon undercarriage to the fuselage using the nuts and bolts provided.

Some users may prefer to leave the wheels until the end of the build, to prevent the model moving on the build table.

TAIL WHEEL INSTALLATION:

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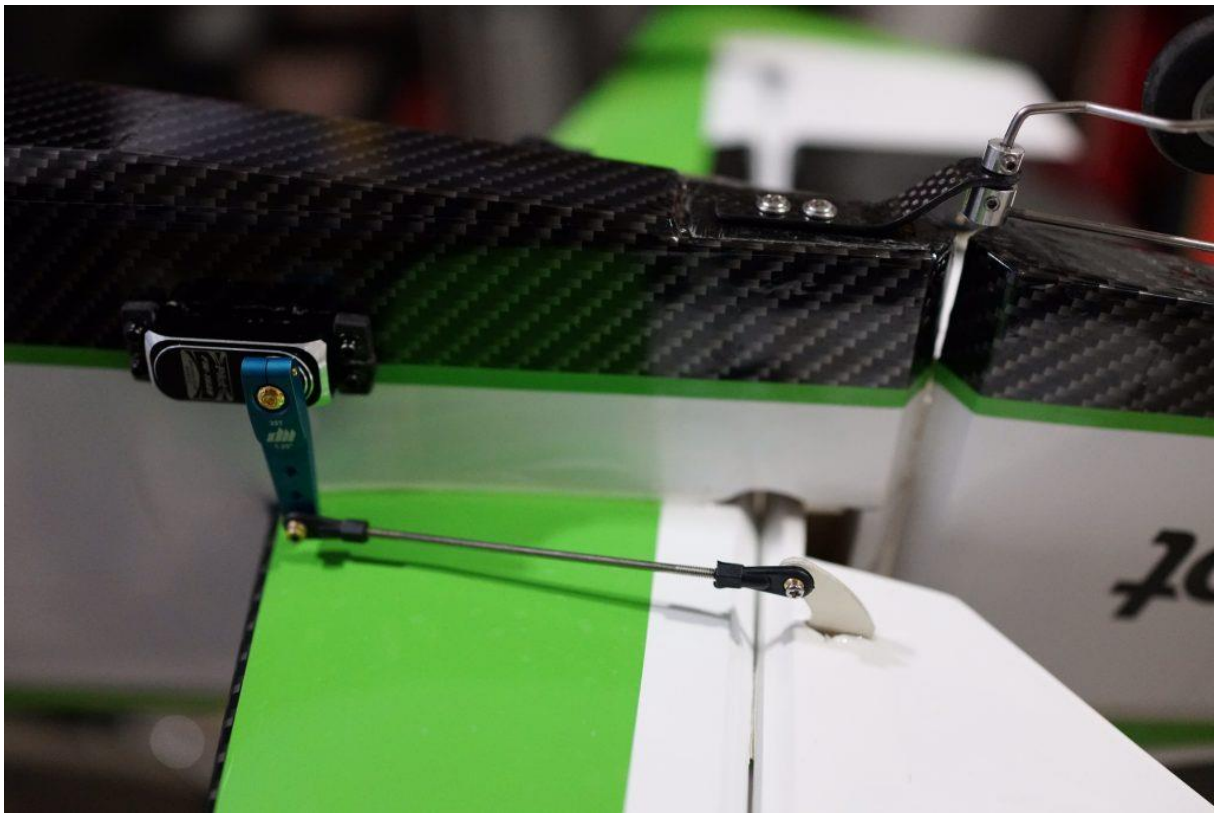
- 

With the model still upside down, position the carbon tail wheel unit on its correct location and mark on the underside of the fuselage to drill the holes for the screws that will hold the tail wheel in place.

Attach the ball link to the underside of the rudder using a small amount of Epoxy.

Run the control rod through the above ball link and screw the tail wheel unit to the fuselage using the wood screws provided.

We recommend to keep the pivot point of the tail wheel as in line with the hinge line as possible to assure a bind free movement of the springs.

STABILISER INSTALLATION:

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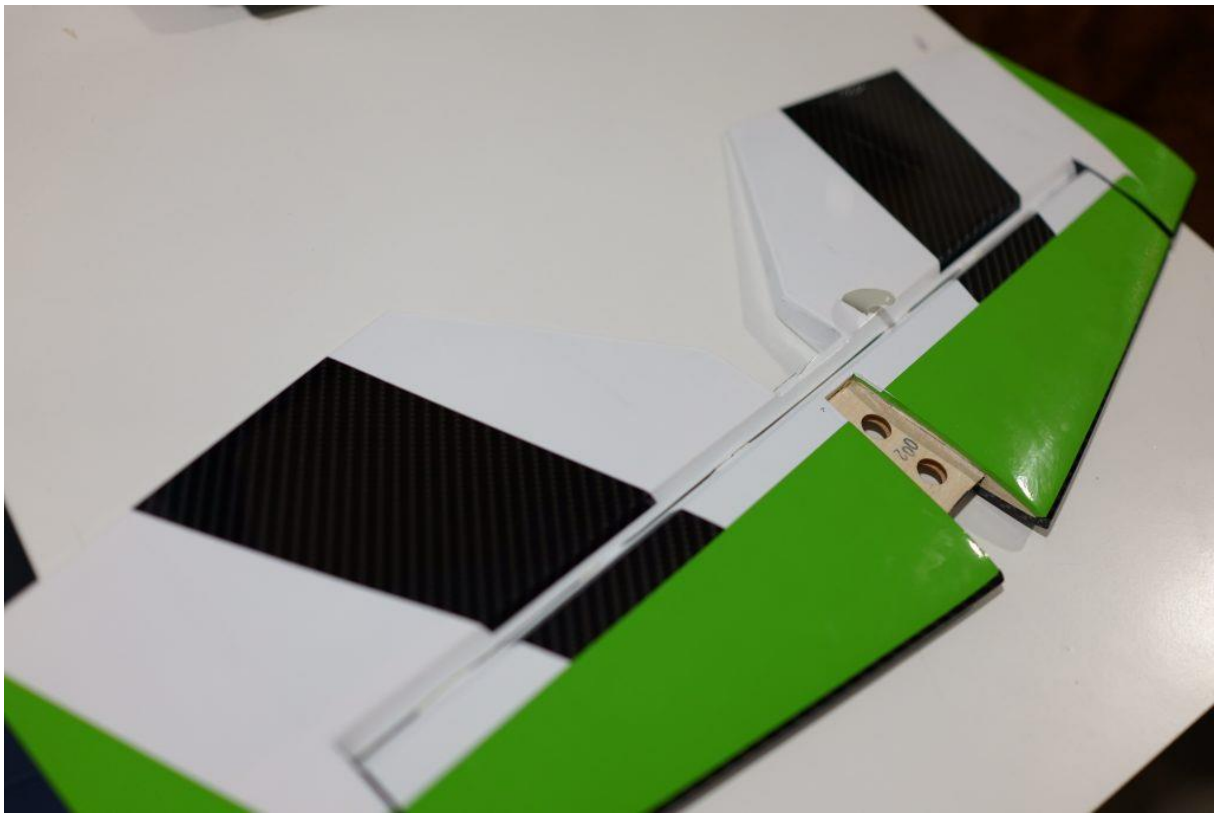
- 

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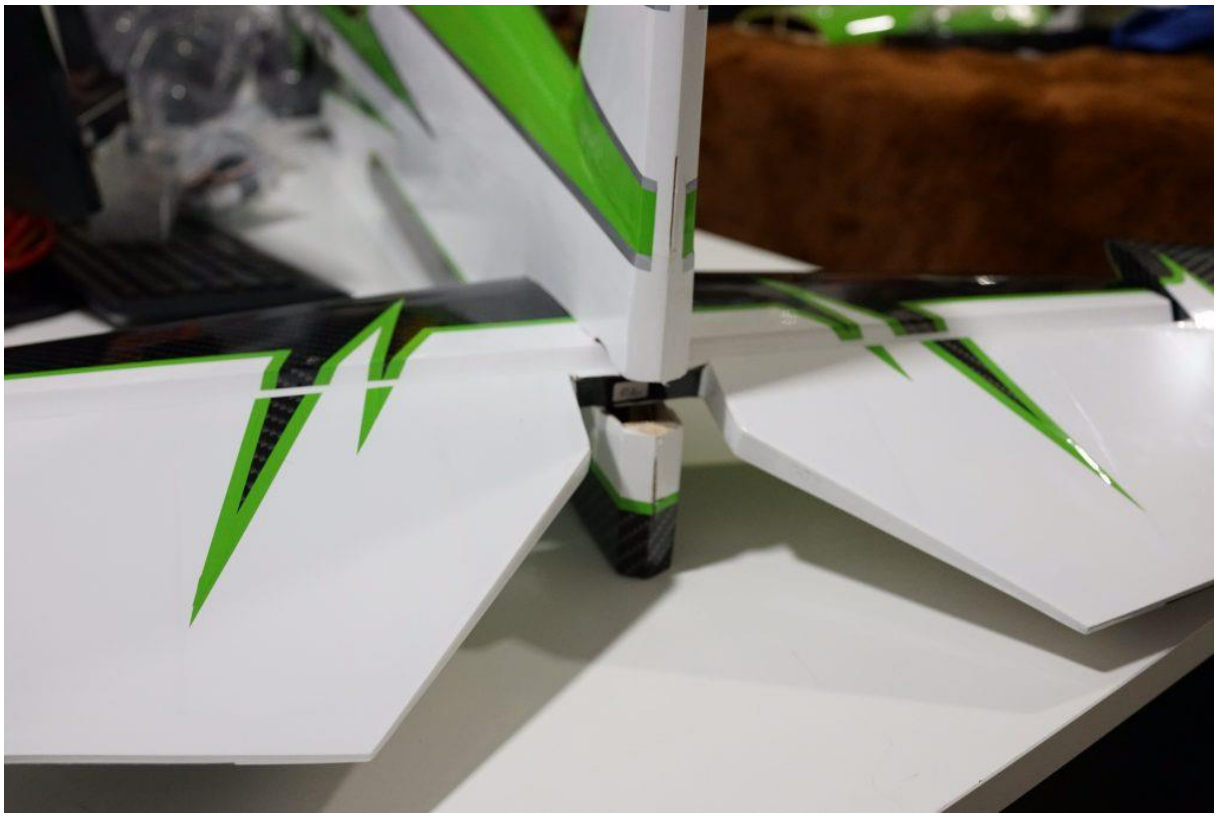
- 

Cut free the trailing edge of the vertical rudder in line with the stabiliser, in order to allow you to slide the stabiliser into the fuselage. Keep the removed section for later.

Trial fit the stabiliser into the fuselage. Make sure that it is centered (measure the tip of the stabiliser to the tip of the wing on both sides and make sure they are the same distance) and correctly aligned (looking at wings and stabiliser, should show all being parallel)

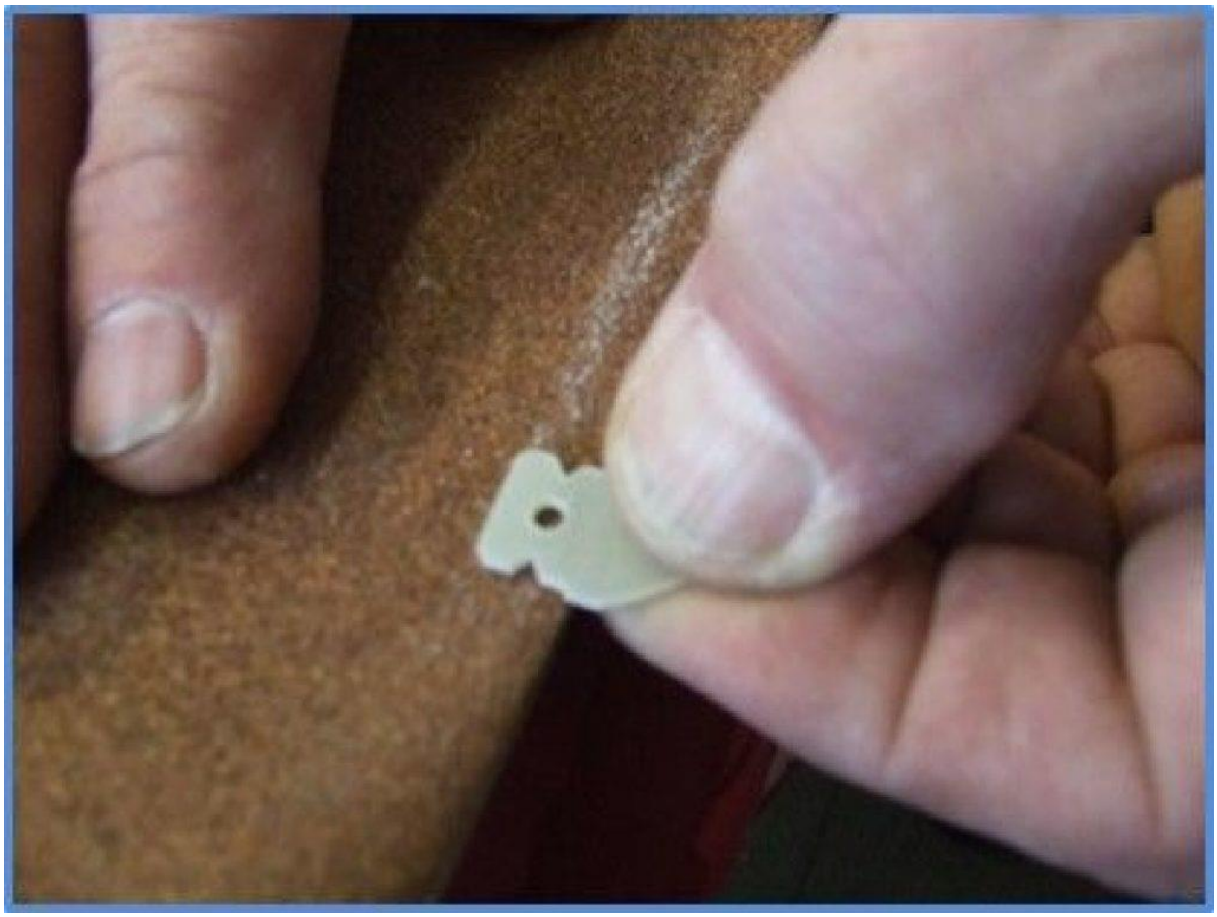
Once centred and aligned, mark where it meets the fuselage. Remove the stabiliser and carefully cut the covering on the inside of your mark, for gluing.

Prepare a mix of Epoxy and generously coat the inside of the fuselage where the stabiliser will fit, then re-insert the stabiliser into its final location, checking again that it is centred and aligned.

Glue back into place the section removed earlier in this process.

Excess epoxy glue can be removed with acetone

INSTALLING THE SERVO HORN ON THE ELEVATOR:

- 
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It is very important to sand horn to assure a strong bond once glued to the model.

Locate and cut the covering where the horns will be glued

Glue them to the surface using epoxy glue

Excess epoxy glue can be removed with acetone

INSTALLING THE SERVO HORN ON THE RUDDER:

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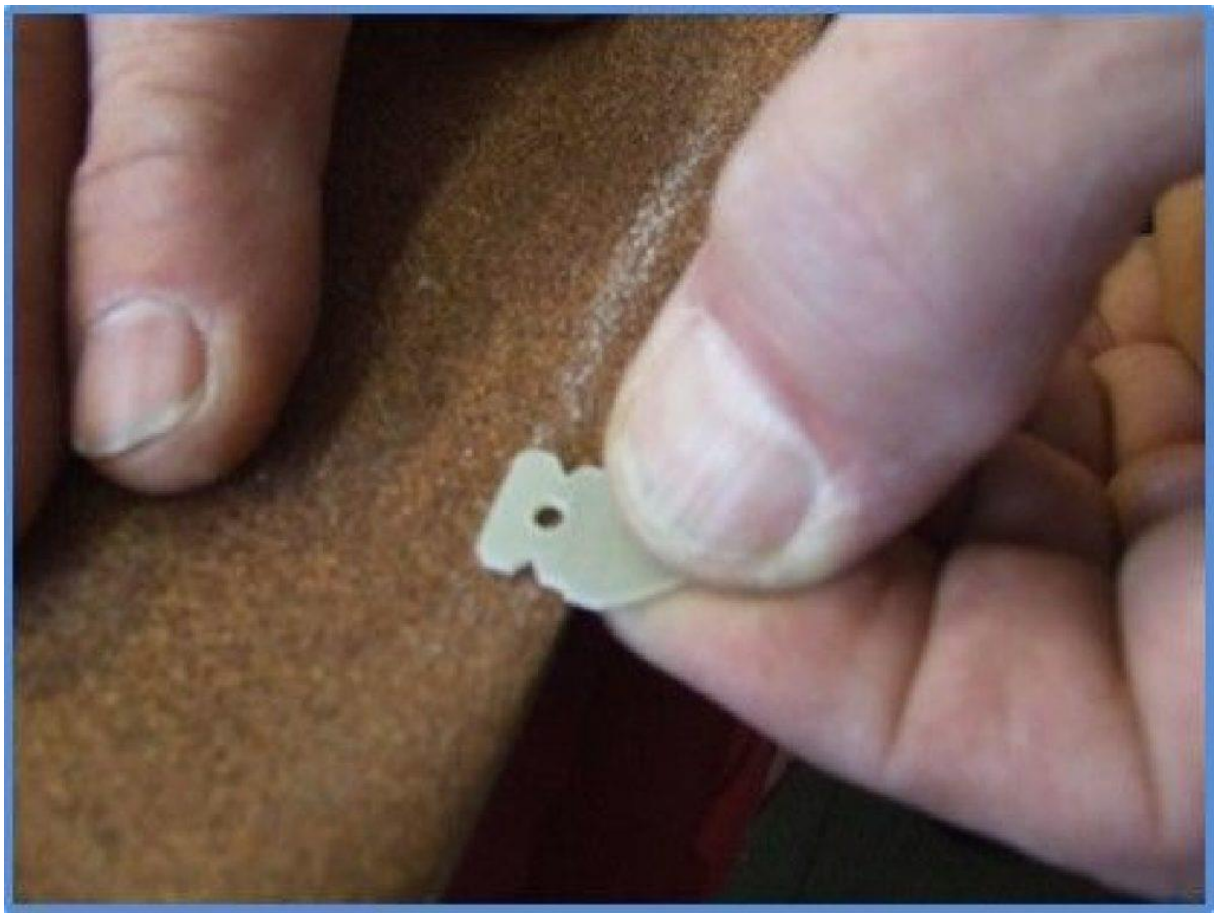
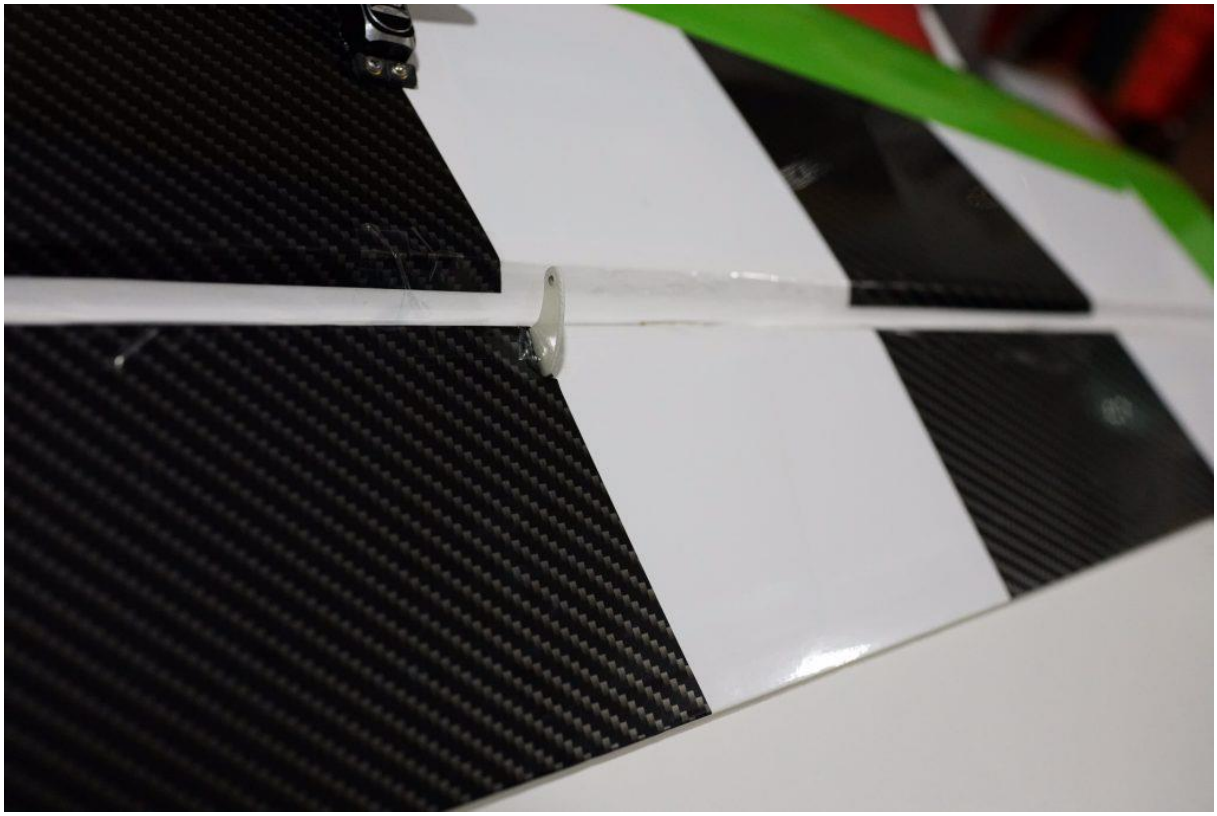
It is very important to sand horn to assure a strong bond once glued to the model.

Locate and cut the covering where the horns will be glued

Glue them to the surface using epoxy glue

Excess epoxy glue can be removed with acetone

INSTALLING THE SERVO HORN ON THE AILERONS:

- 
- 

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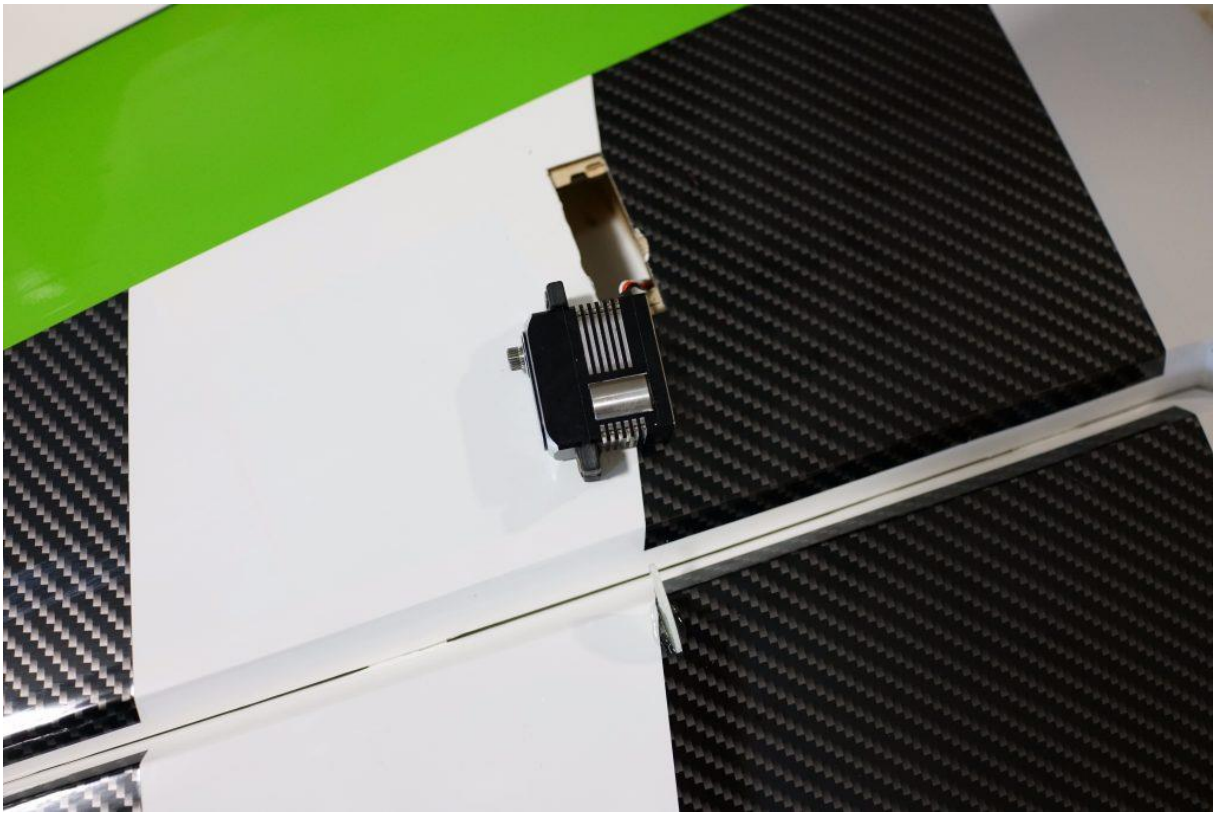
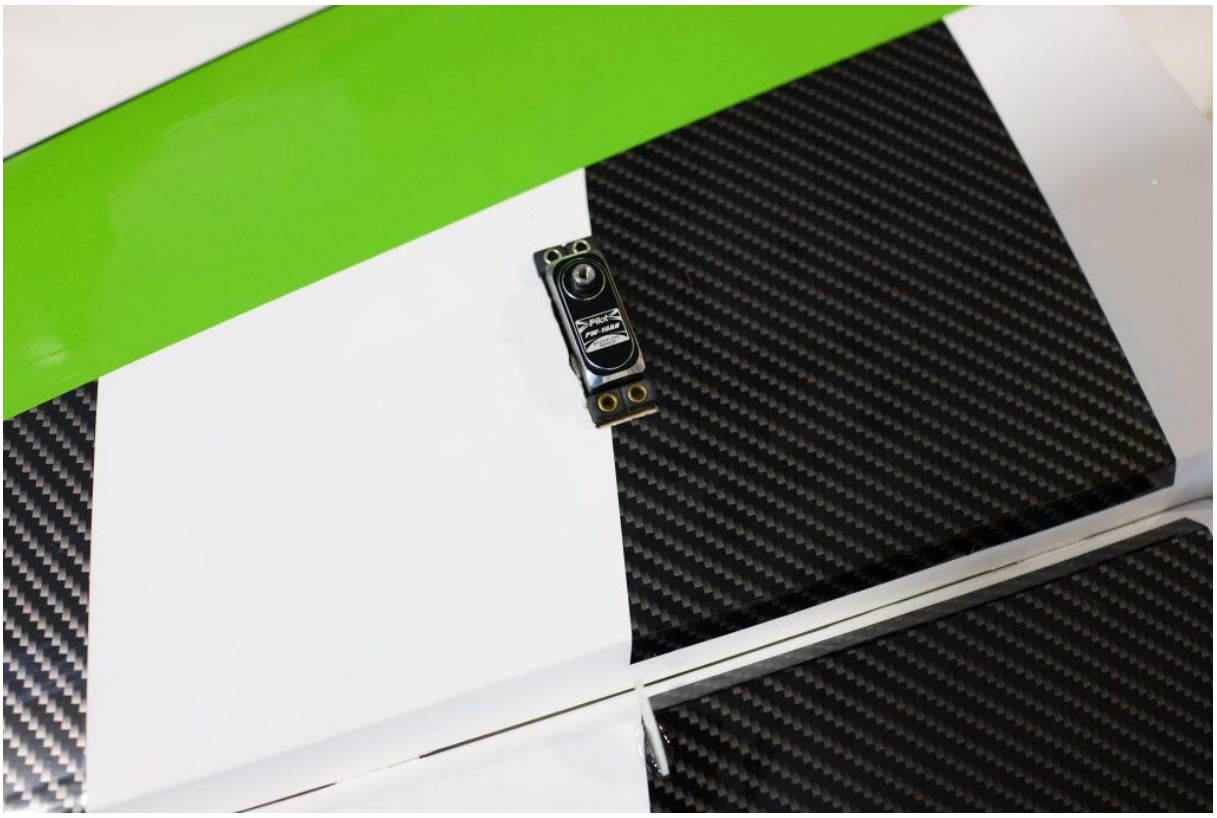
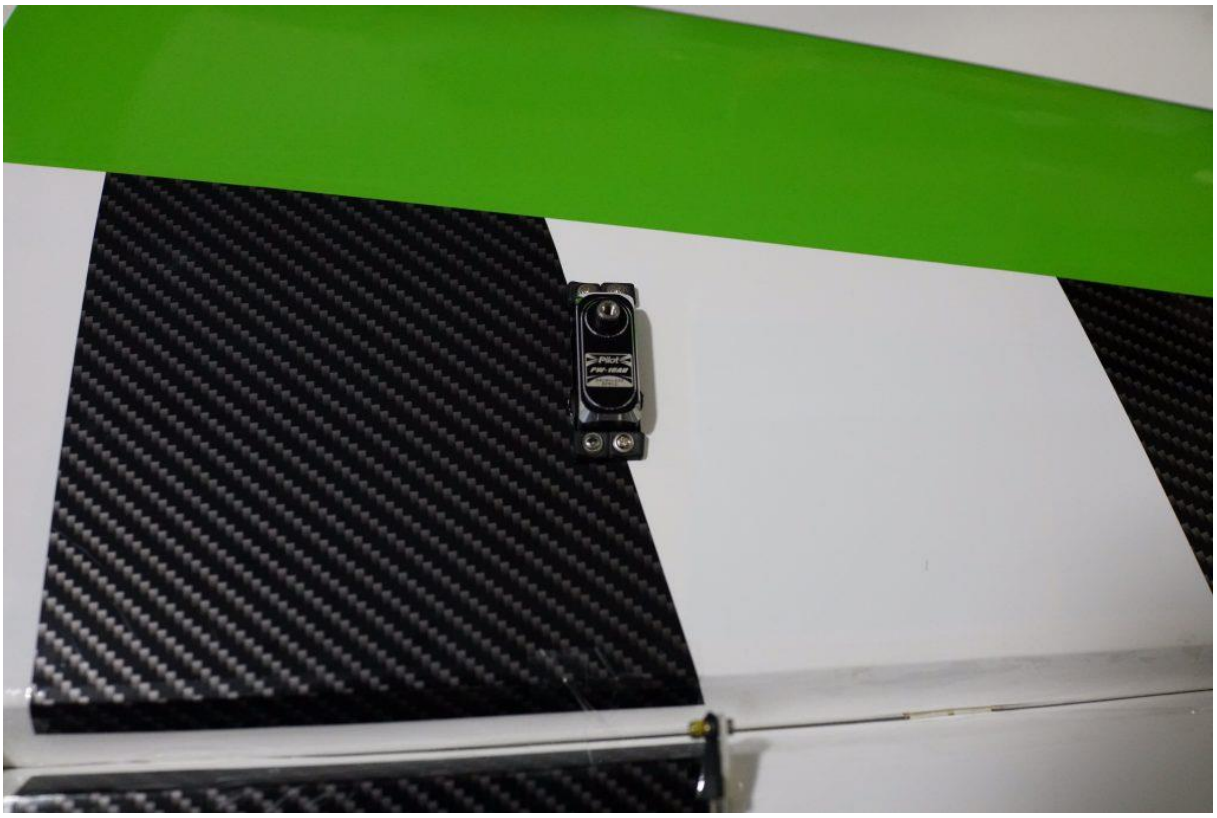
Glue them to the surface using epoxy glue

Excess epoxy glue can be removed with acetone

AILERON SERVO INSTALLATION:

- 

- 
- 

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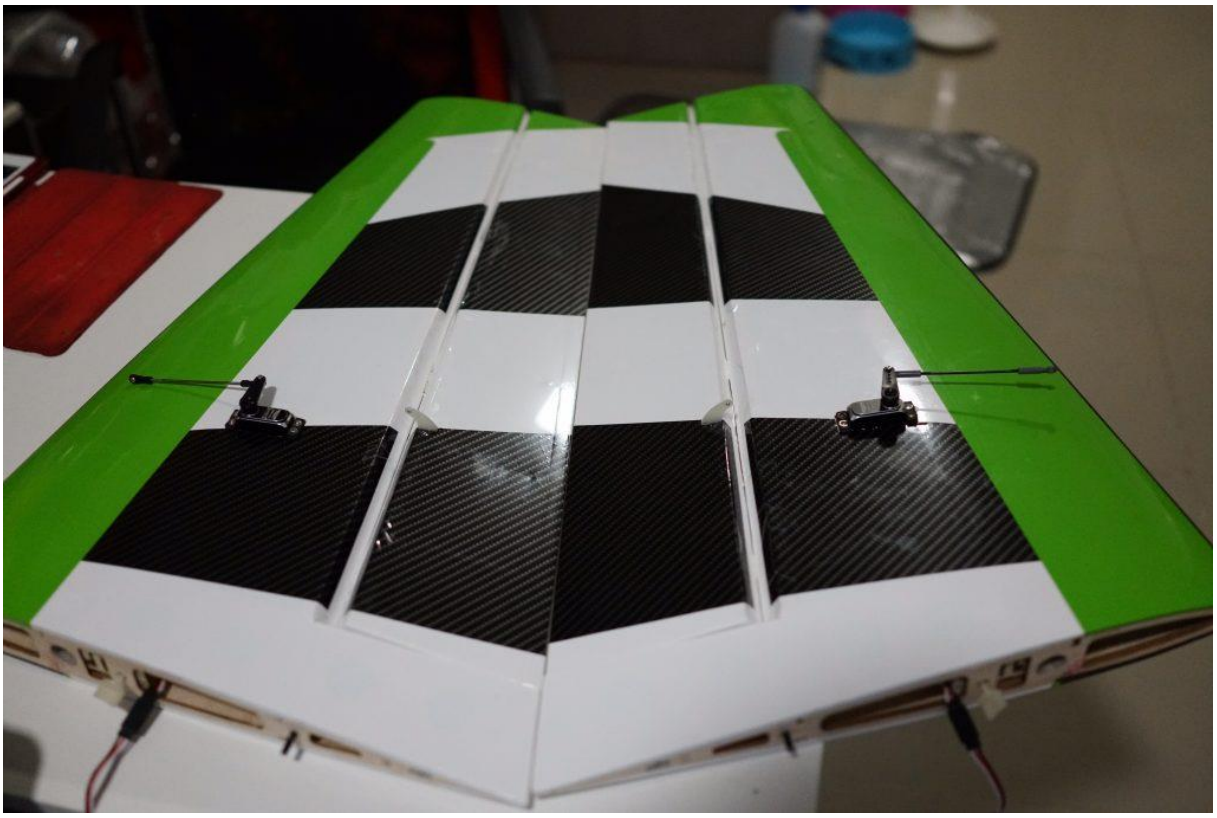
- 

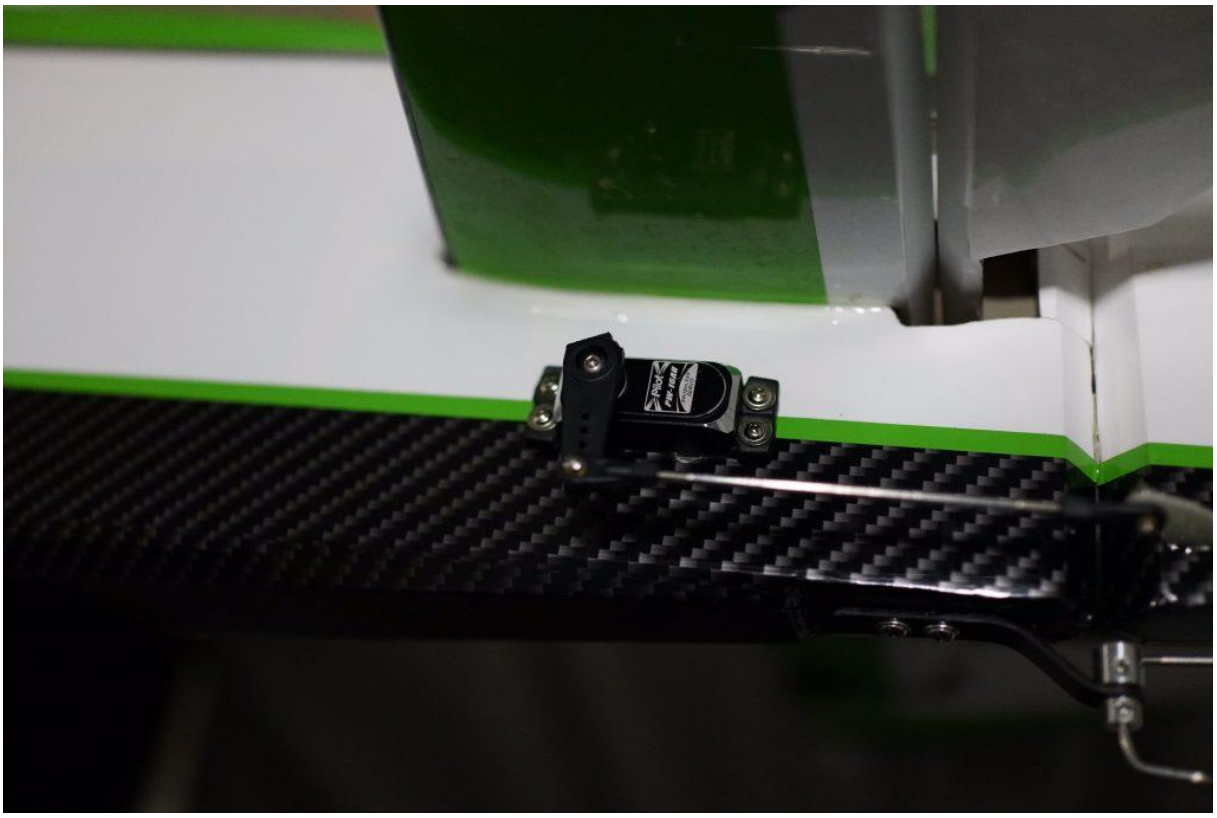
Install and glue the included hinges.

Locate and cut the covering where the servos will be installed.

Route the servo wire through the wing and screw the servo in place.

Centre the servo with your transmitter, attach the servo arm and connect the servo to the ailerons with the pushrods provided.

RUDDER SERVO INSTALLATION:

- 

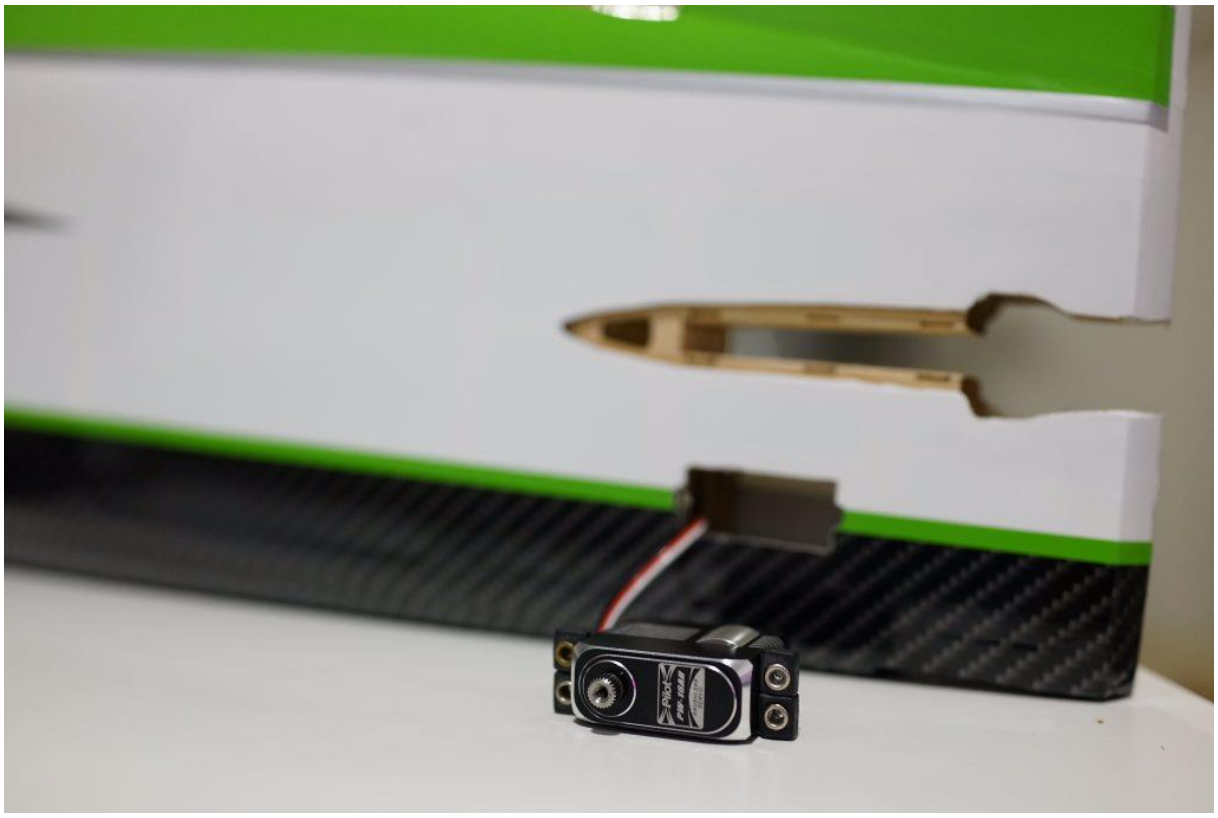
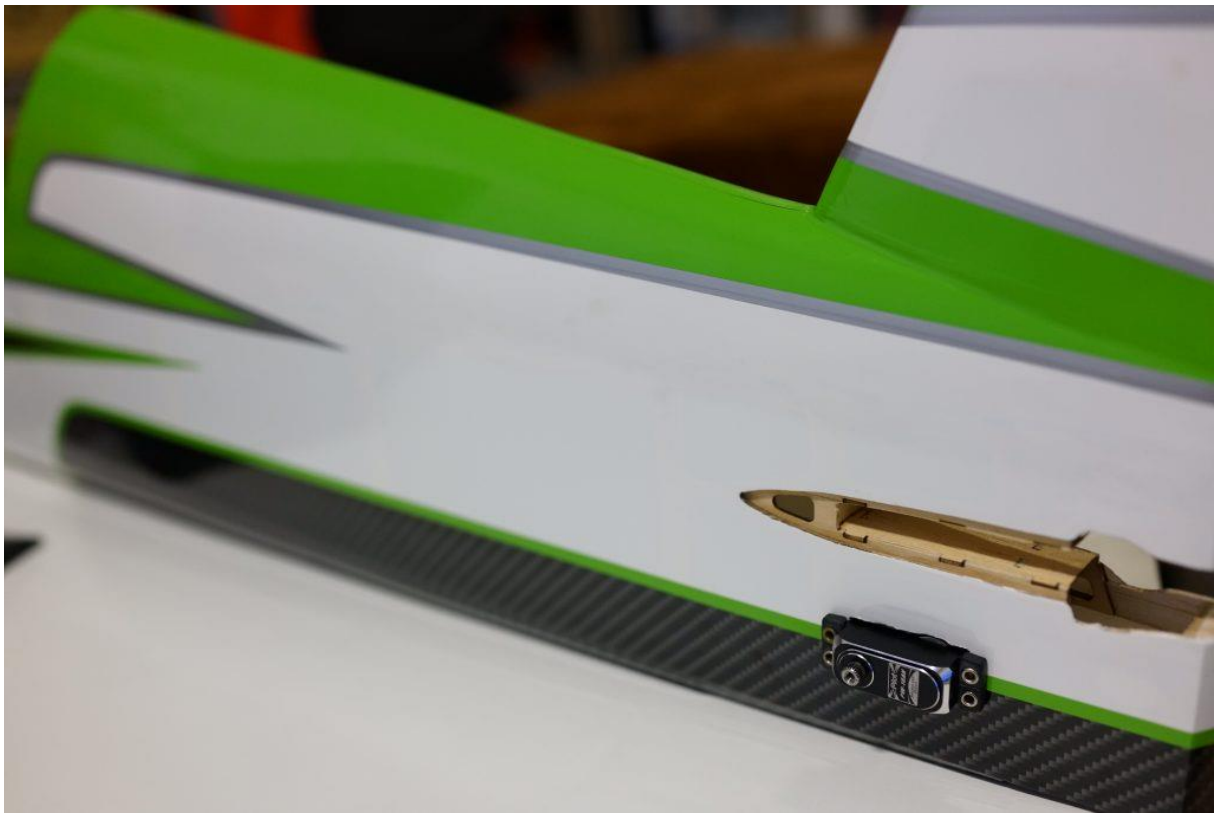
Install and glue the included hinges.

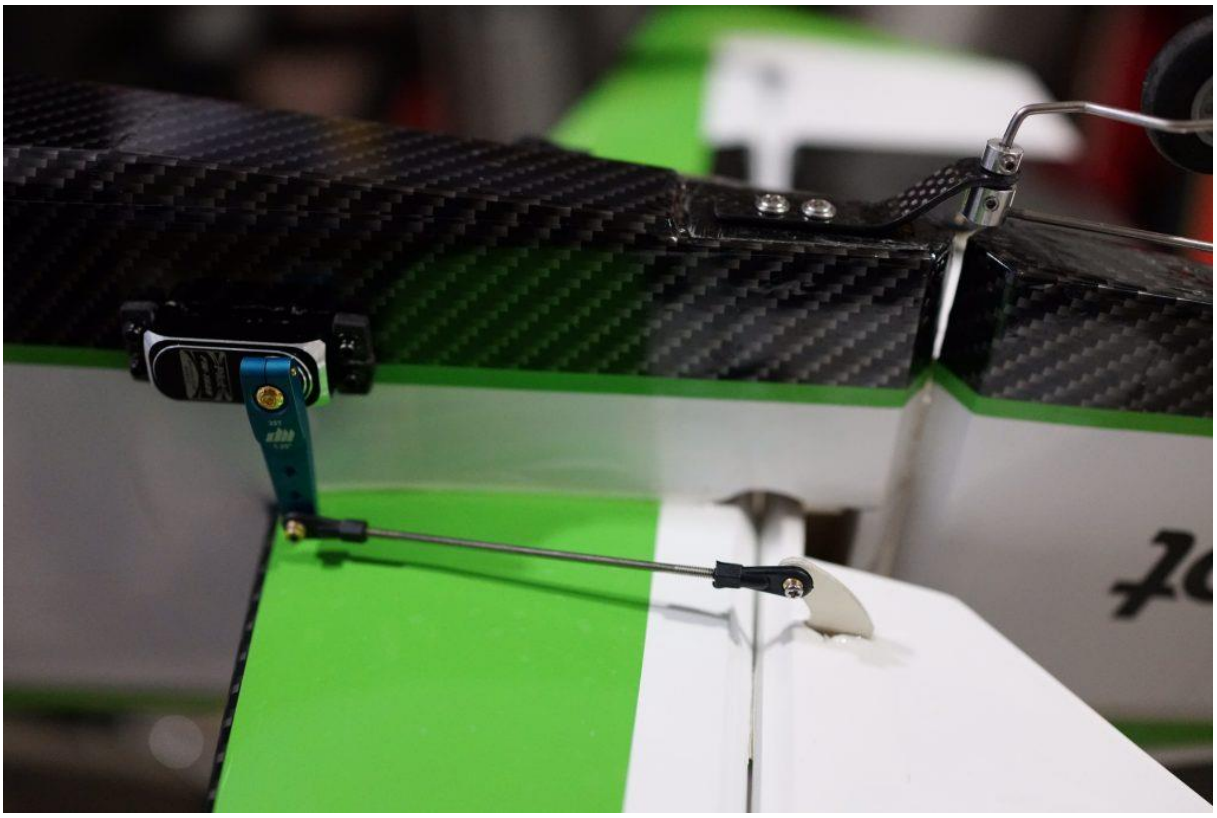
Locate and cut the covering where the servo will be installed, at the rear of the fuselage, under the elevator.

Route the servo wire through the wing and screw the servo in place.

Centre the servo with your transmitter, attach the servo arm and connect the servo to the ailerons with the pushrods provided.

ELEVATOR SERVO INSTALLATION:

- 
- 

- 

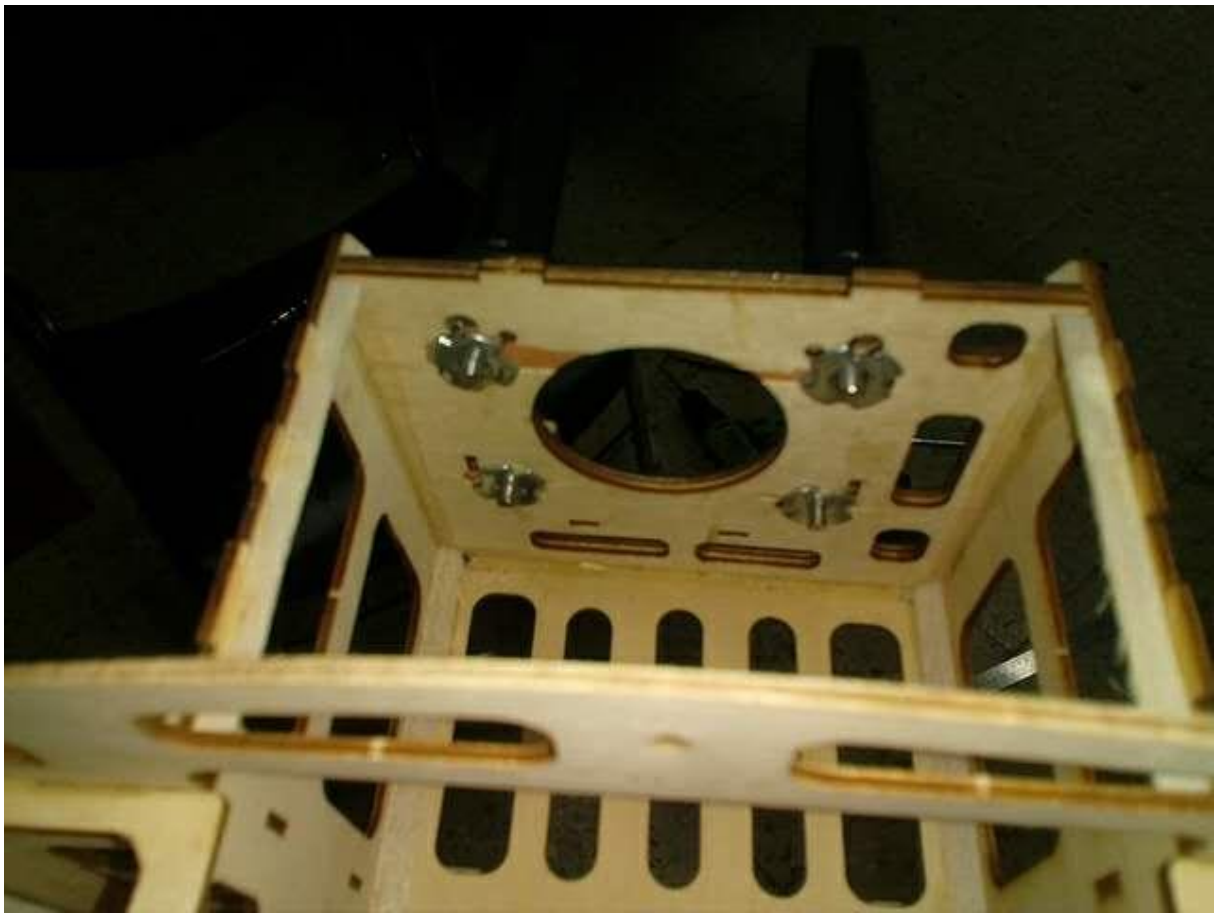
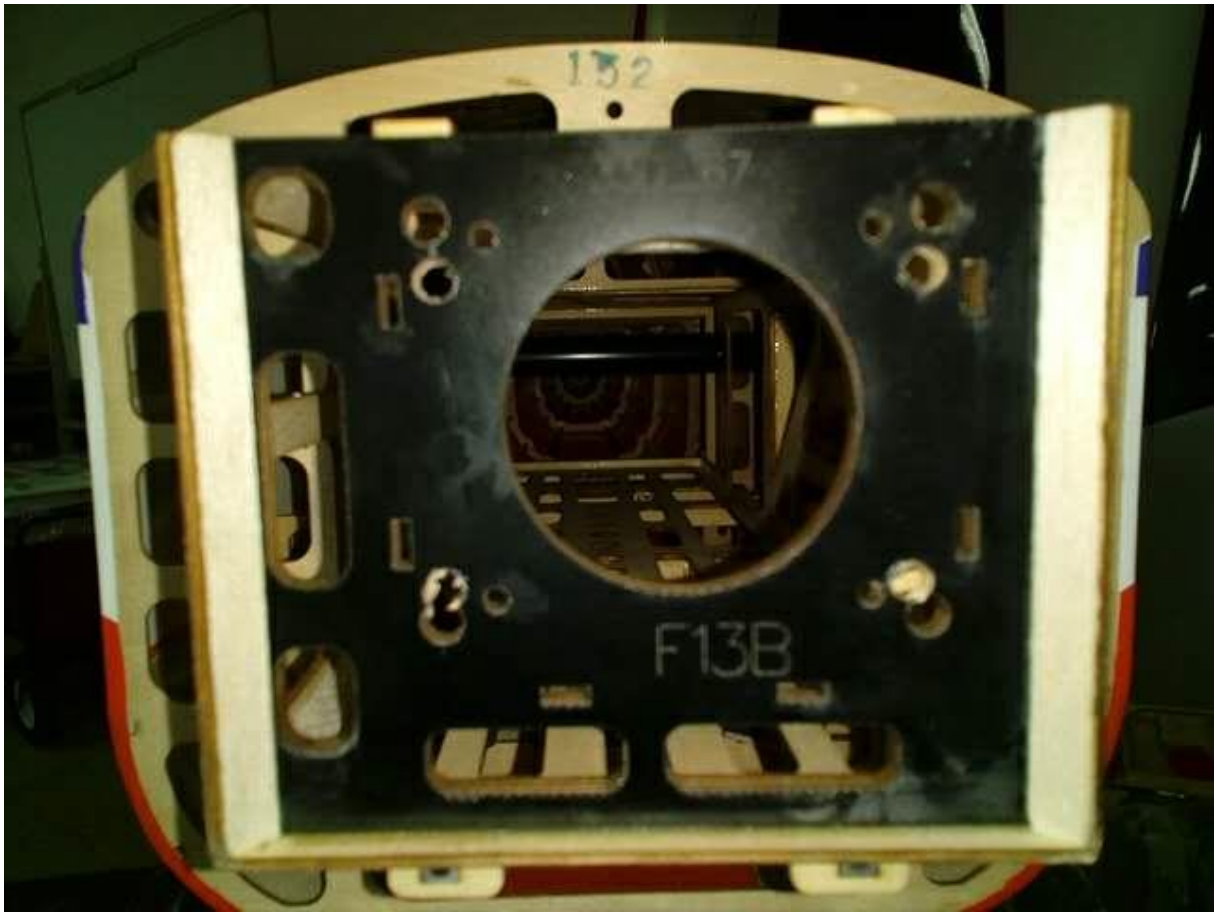
Install and glue the included hinges.

Locate and cut the covering where the servo will be installed, at the rear of the fuselage, under the elevator.

Route the servo wire through the wing and screw the servo in place.

Centre the servo with your transmitter, attach the servo arm and connect the servo to the ailerons with the pushrods provided.

MOTOR INSTALLATION – FOR ELECTRIC SETUP:

- 
- 
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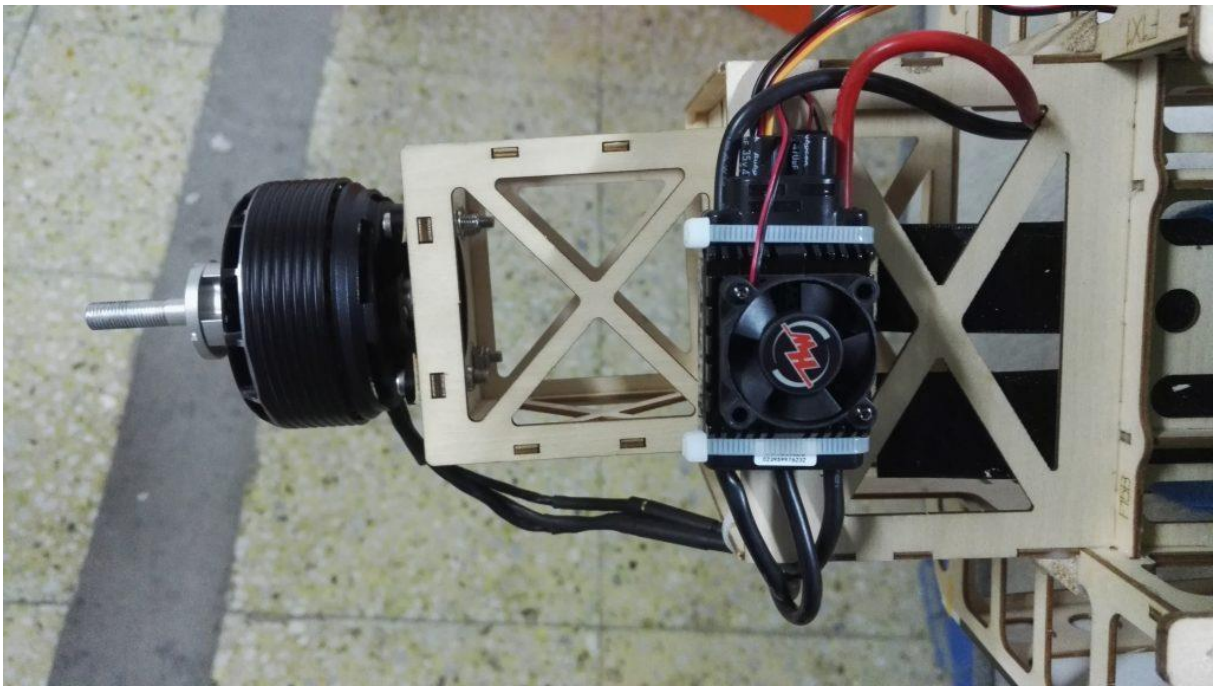
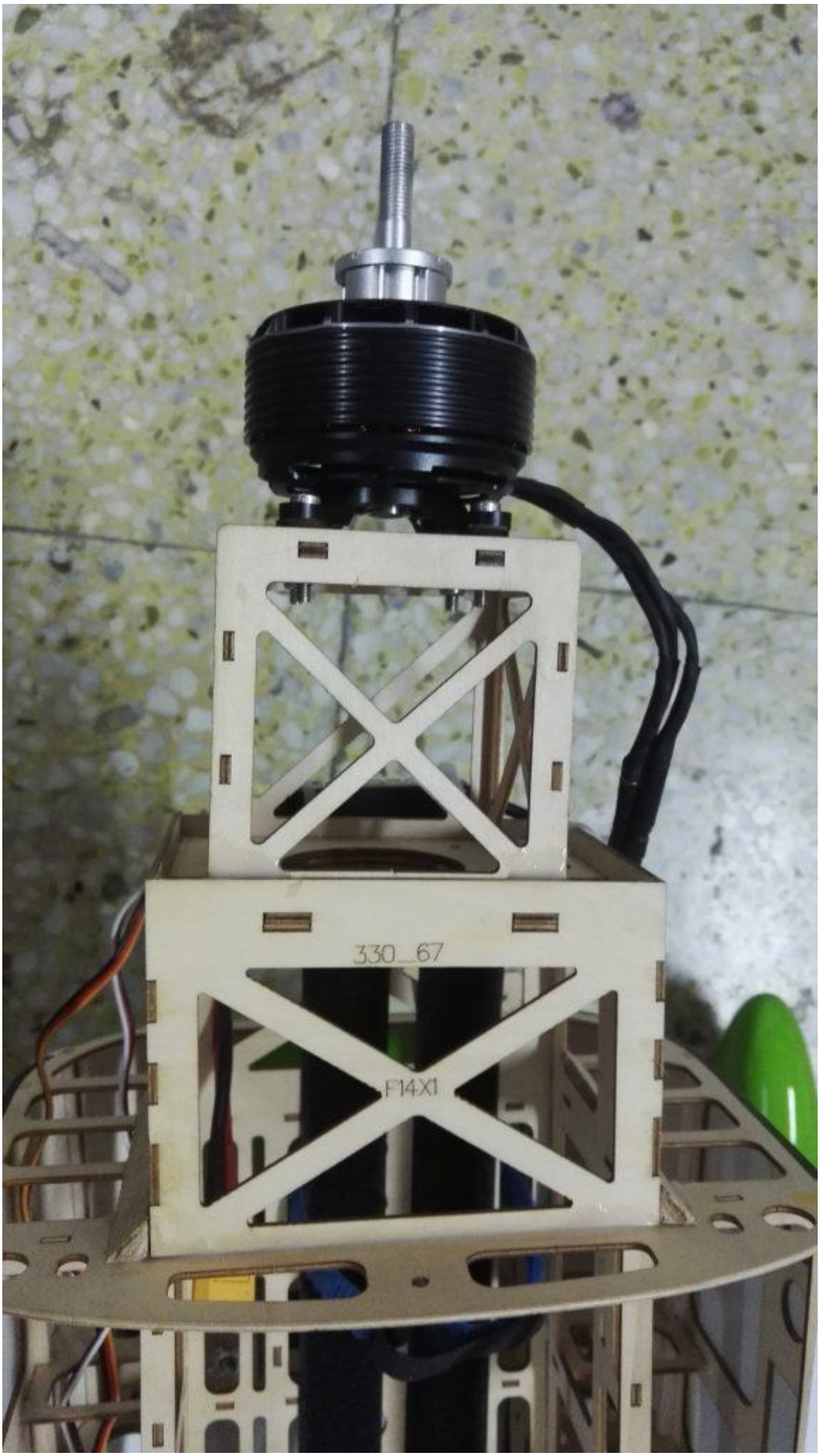
- 

- 
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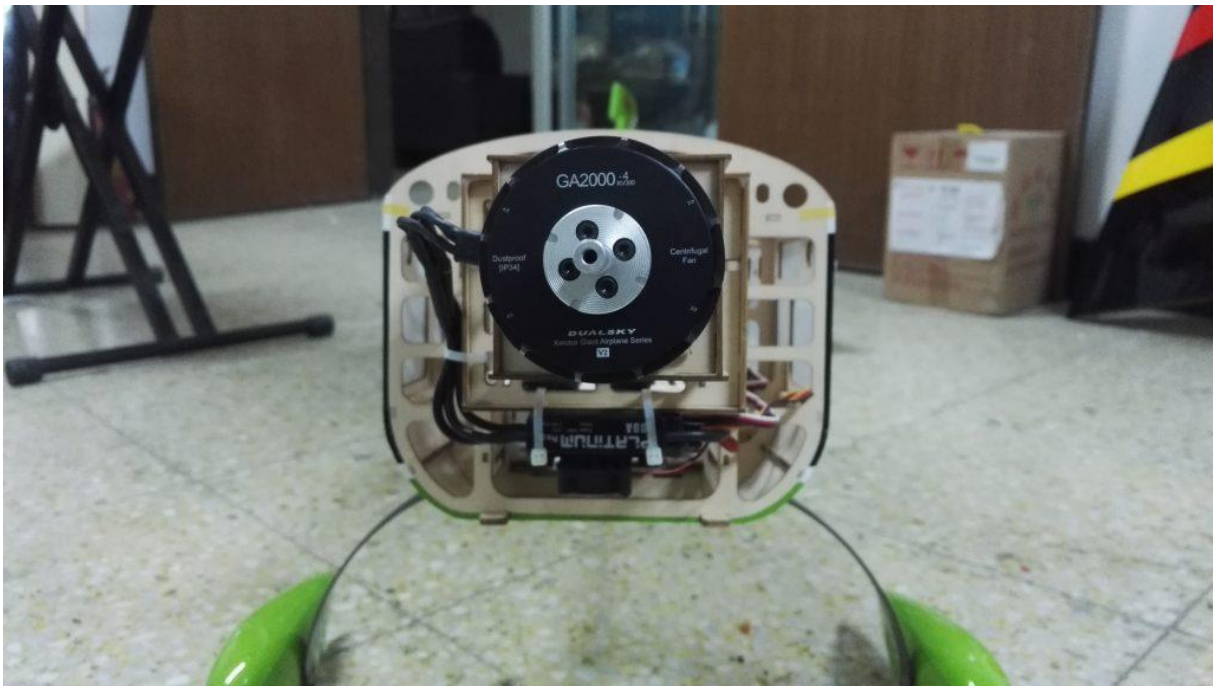
- 

First, locate the secondary firewall box that acts as a standoff for the electric motor. Attach it to the main firewall using the provided bolts and blind nuts.l

Follow the laser diagram on the firewall to drill the necessary holes for the motor. These are designed for use with the Pilot-RC CC20 motor. If using a different motor, hole position may vary.

Check if your engine requires any additional standoffs or washers in order to reach the necessary position, before attaching permanently to the model using bolts and blind nuts as per the images.

Secure your ESC to the firewall close to the motor, ideally in a location that will allow airflow over the ESC to aid in its cooling.

MOTOR INSTALLATION – FOR GAS SETUP:

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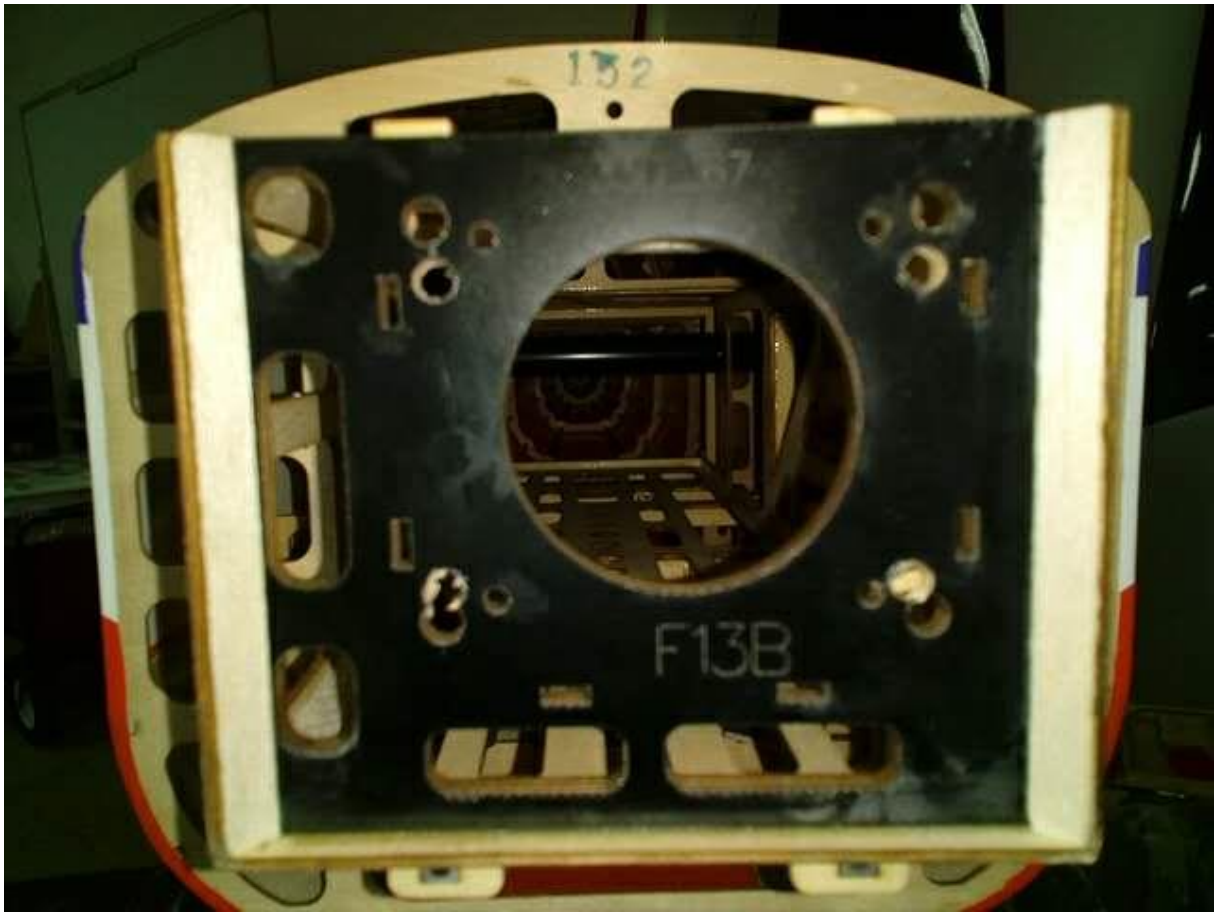
- 
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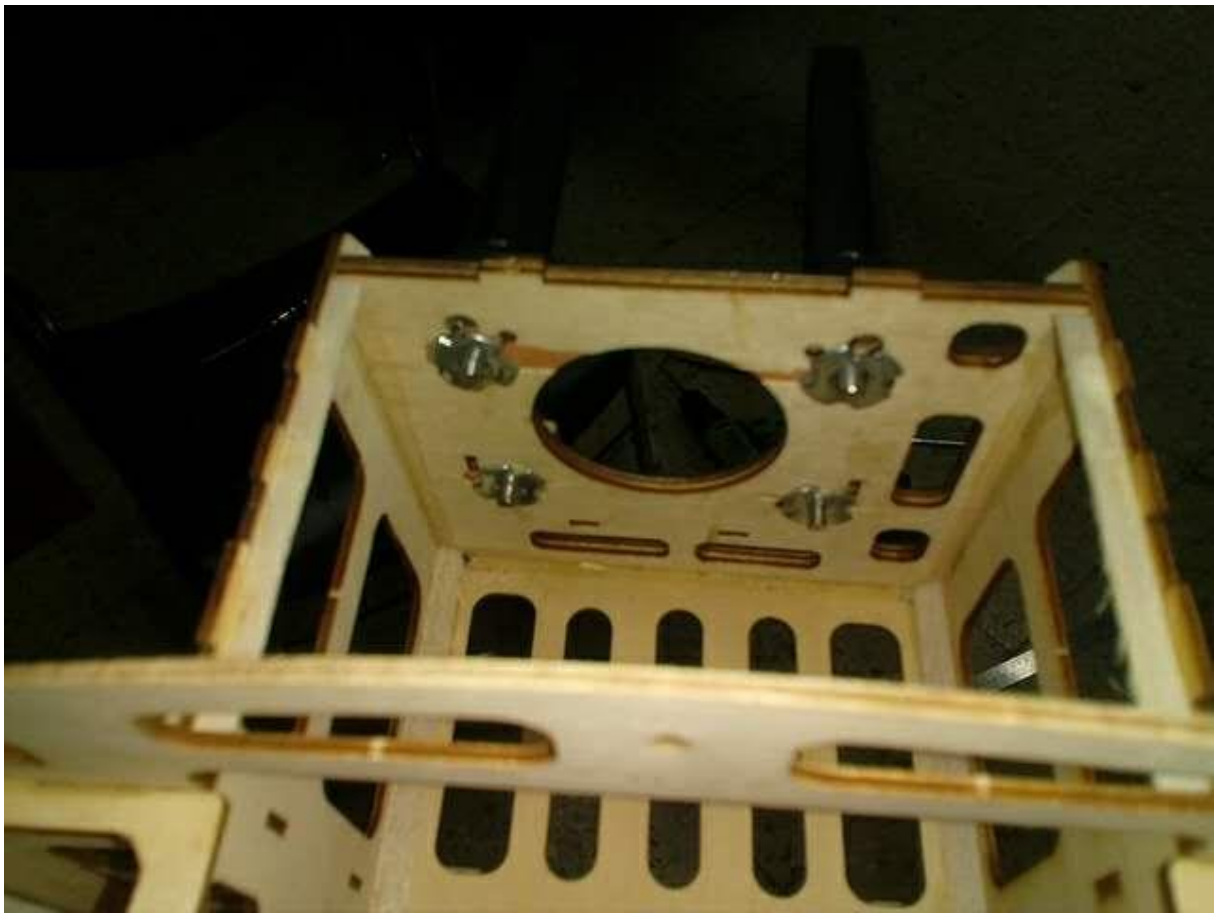
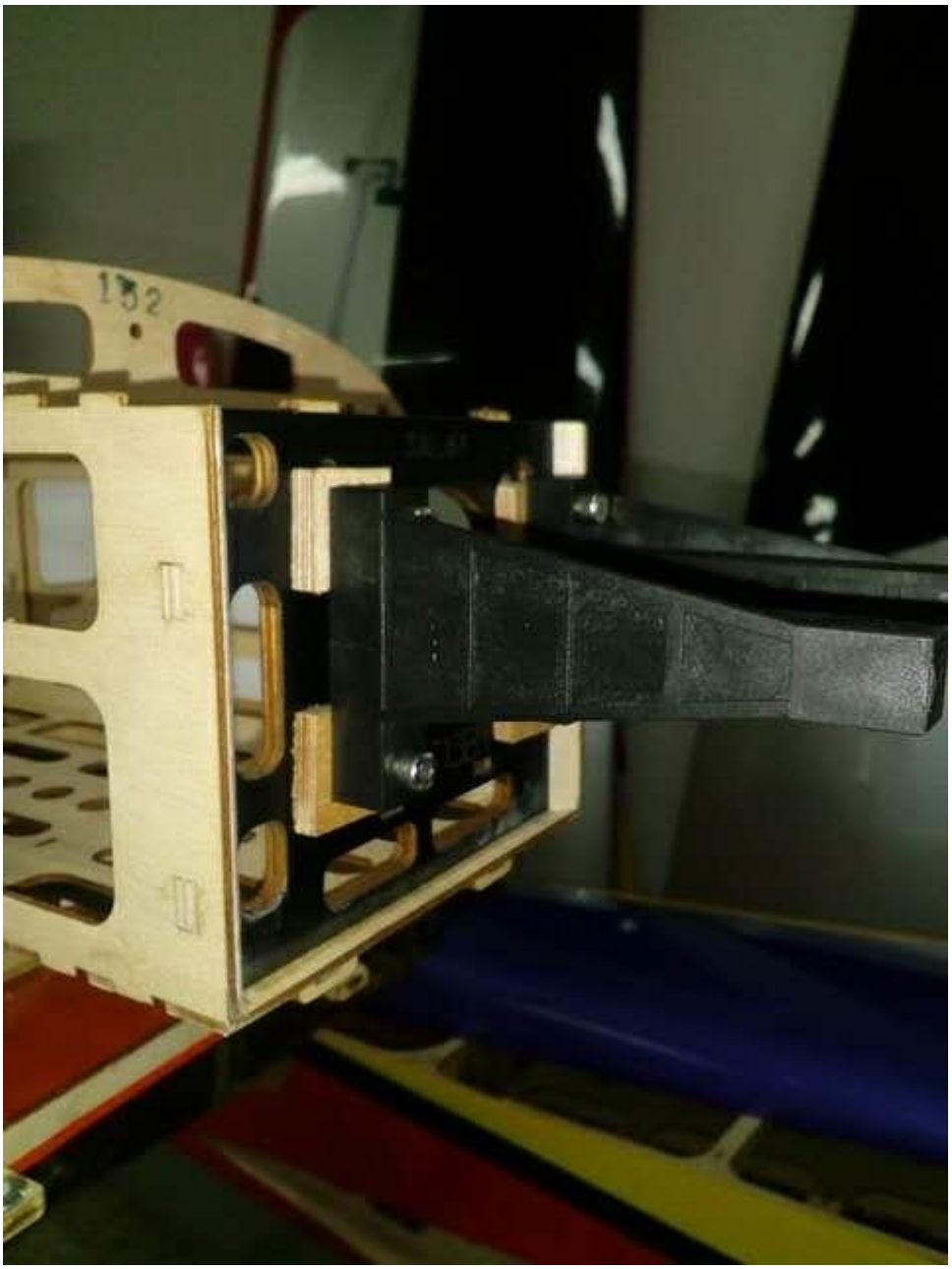
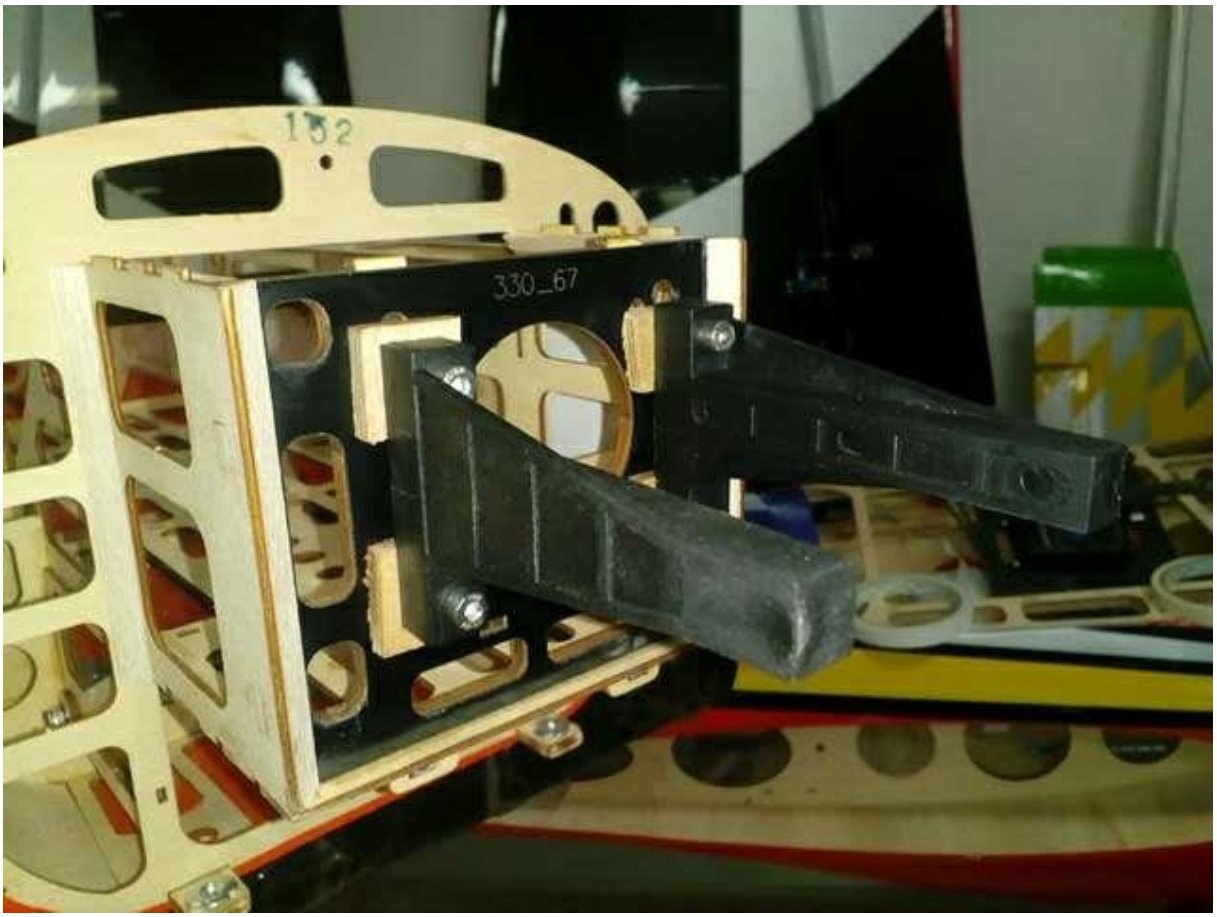
- 

- 

- 
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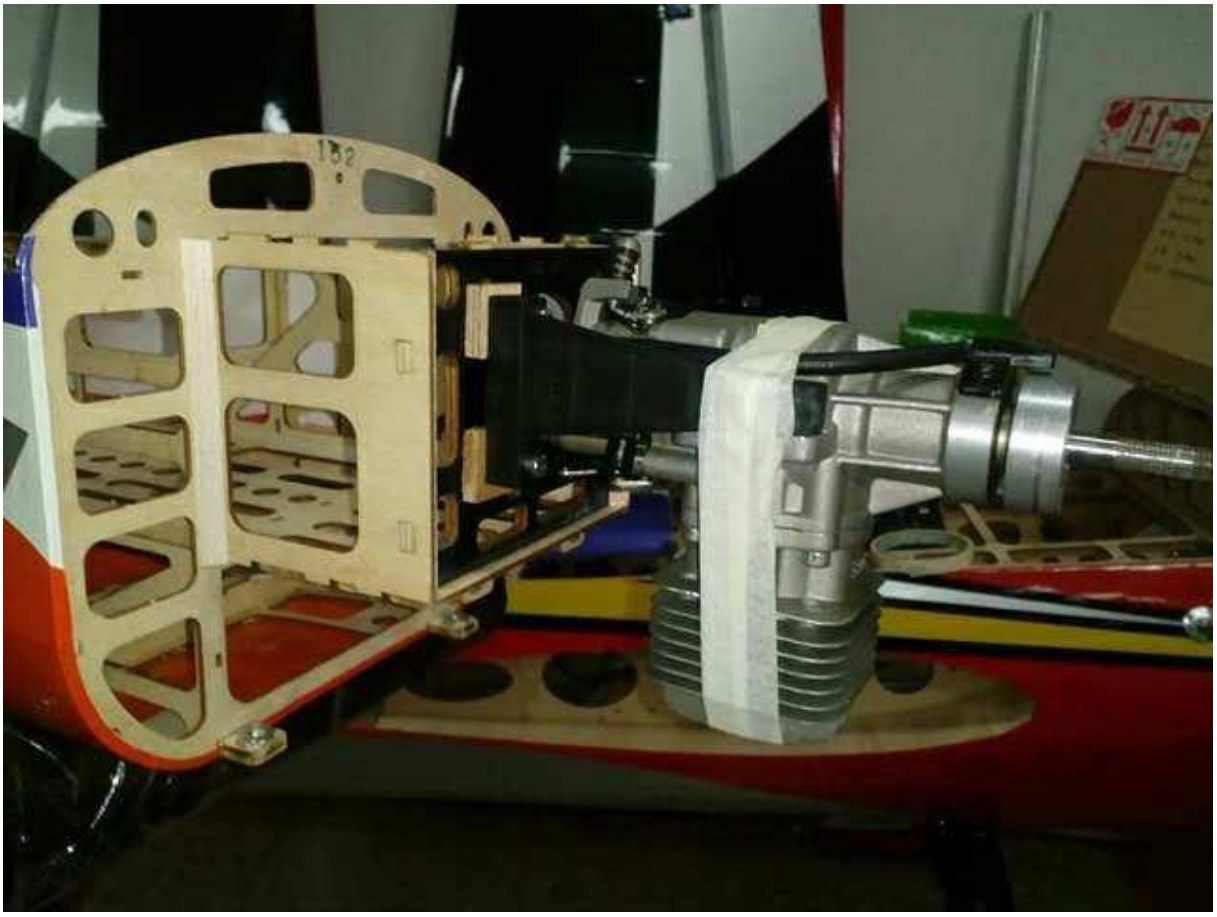
- 

Attach the the plastic motor mount to the fuselage, use the mounting screws to secure in place.

Position the engine onto the plastic motor mount beams and check the required space between the engine cowl and the motor hub.

Once the correct separation has been determined, permanently fix the motor to the plastic motor mount beams.

FIREWALL AND COWLING REINFORCEMENT

- 
throttle servo bracket
for standard servo
for small servo
Pilot
Made in China
www.pilot-rc.com

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Please note it is important to install the triangular reinforcement for the front former, this helps assure correct alignment between the canopy and the cowl.

This applies both to electric and gas setups!

COWLING INSTALLATION:

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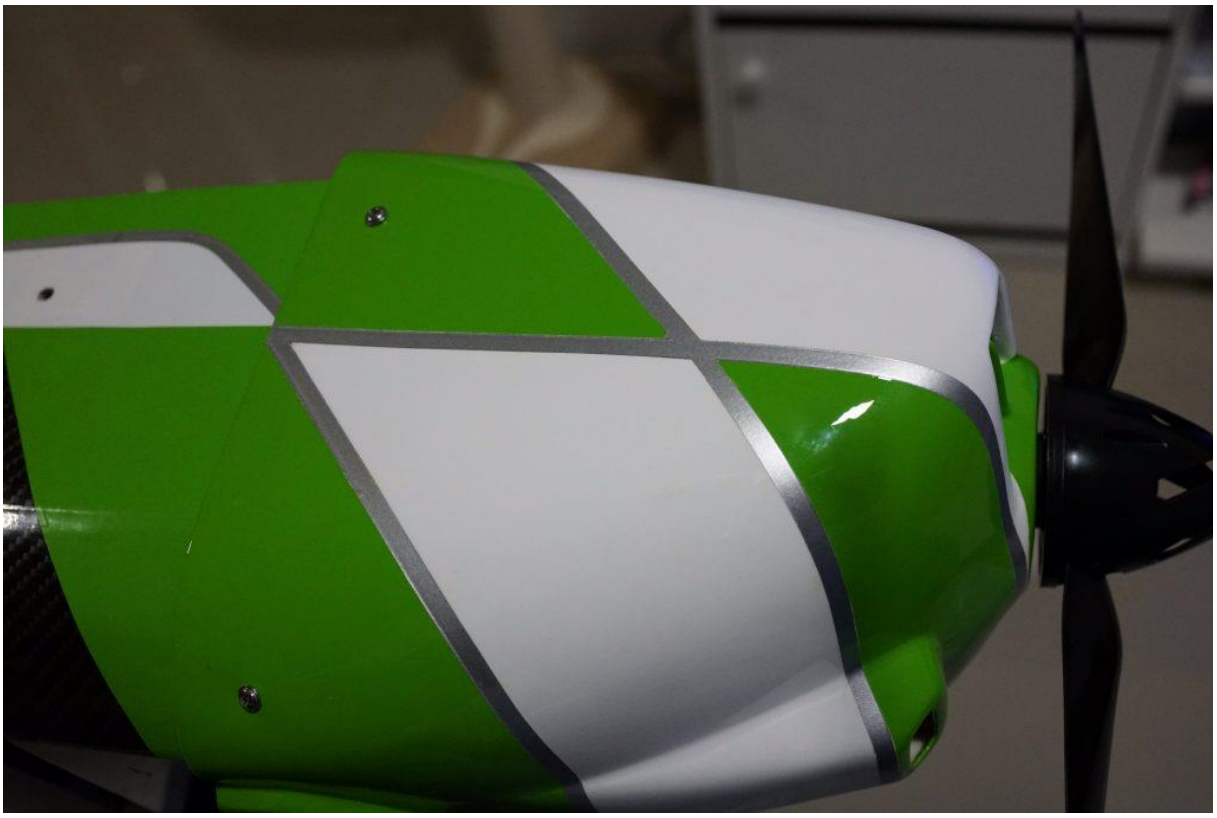
- 

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The cowling is installed using four screws that go into four “tabs” in the fuselage.

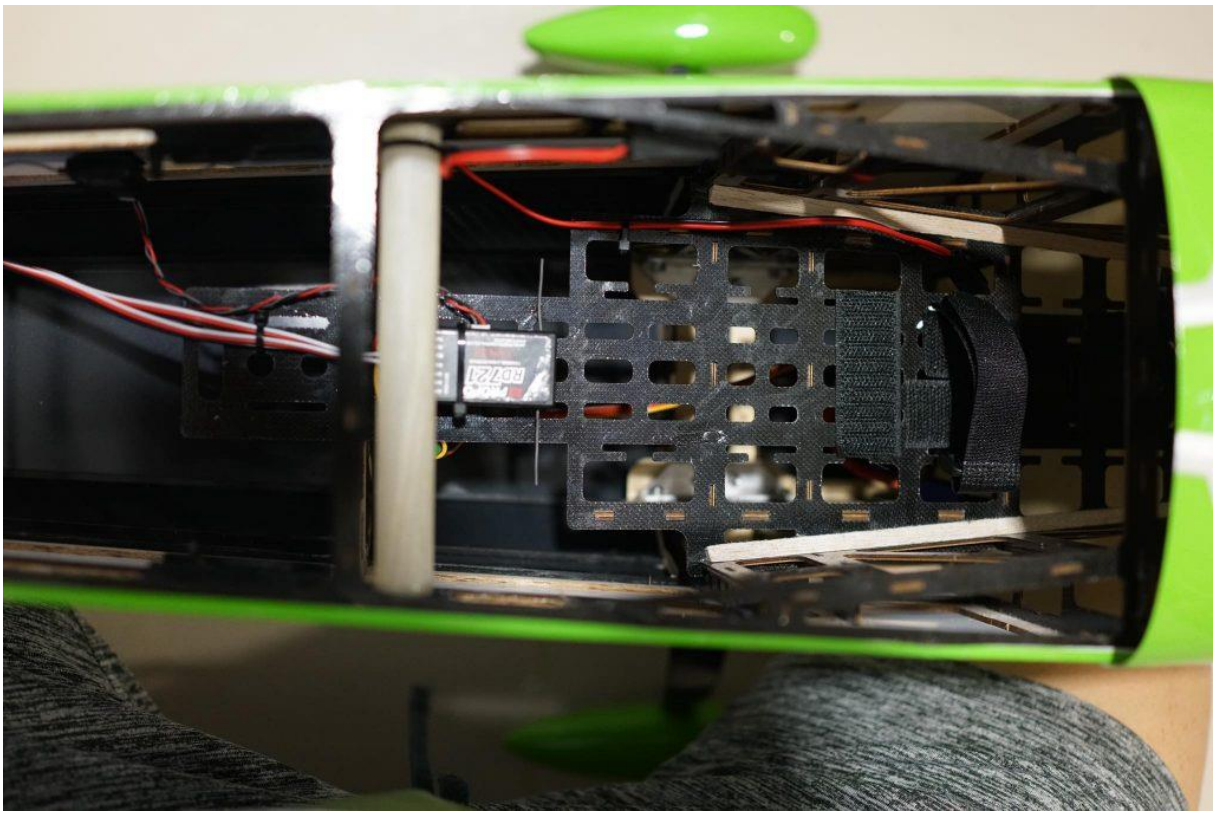
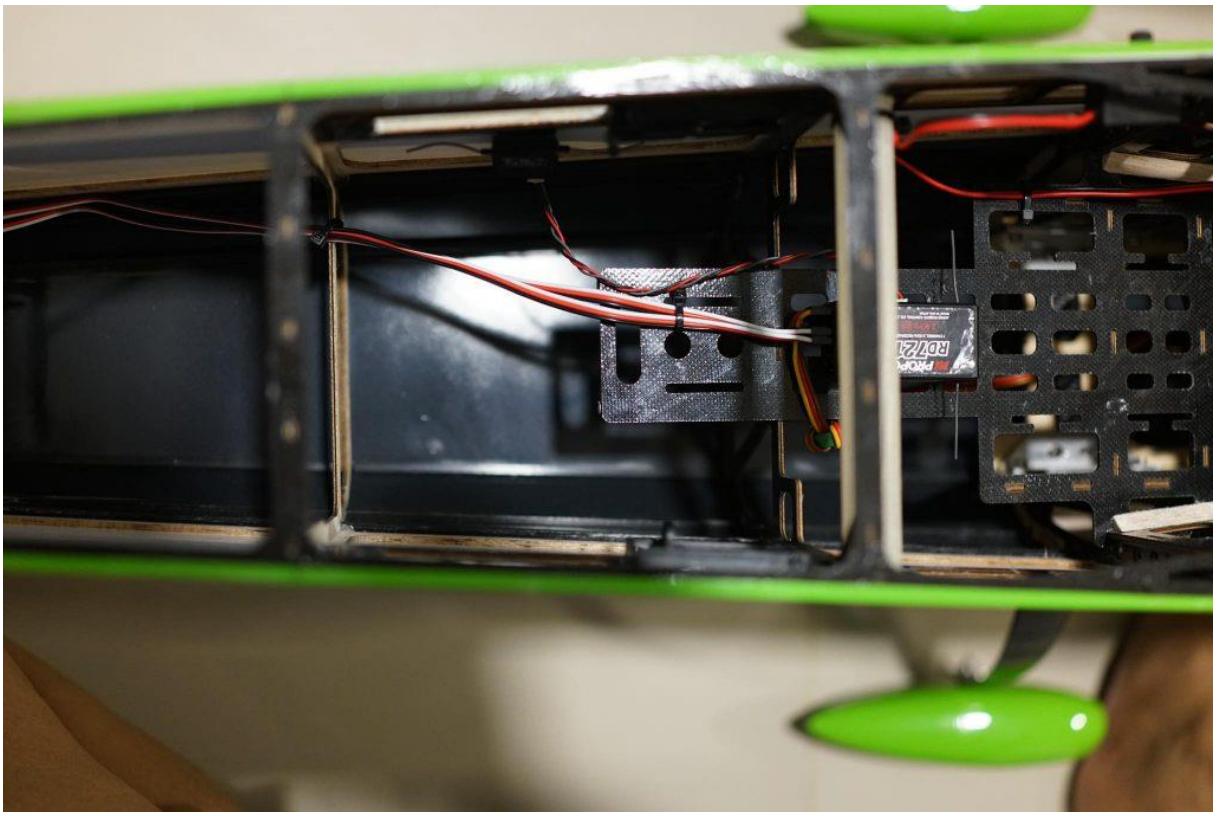
The exact location of the cowling can be adjusted slightly to allow an easy fit of whichever your chosen motor is (longer or shorter)

In order to assure drilling in the correct location, with the cowl off, place some small strips of masking tape in line with the four tabs where we want the cowling screws to go. Pin point on the masking tape where the center of the tab is. Now draw a straight line on the masking tape going back from that center mark, and mark/measure where the hole is relative to the lines. Offer up the cowling to the fuselage, and once in place, use additional masking tape to keep temporarily in place.

Now, on the cowling, using the straight lines and measurements drawn previously, mark where each of the four screws need to go.

Drill out the necessary holes, remove all the masking tapes and re-install the cowl using the four screws.

INSTALLATION OF ANCILLARY COMPONENTS:

- 
- 

Check the correct location of your chosen battery depending on your CG.

Glue the Velcro strip to the battery tray (and battery), as well as threading a velcro strap round the battery tray, assuring a completely secure battery once fully installed.

Finally install your receiver with double sided tape or velcro, making sure that all servo leads can be easily connected without being too tight, and that the receiver is securely fixed in place.

For specific tips on receiver and antenna location, please consult your receivers manual.

WHEELS PANTS INSTALLATION:

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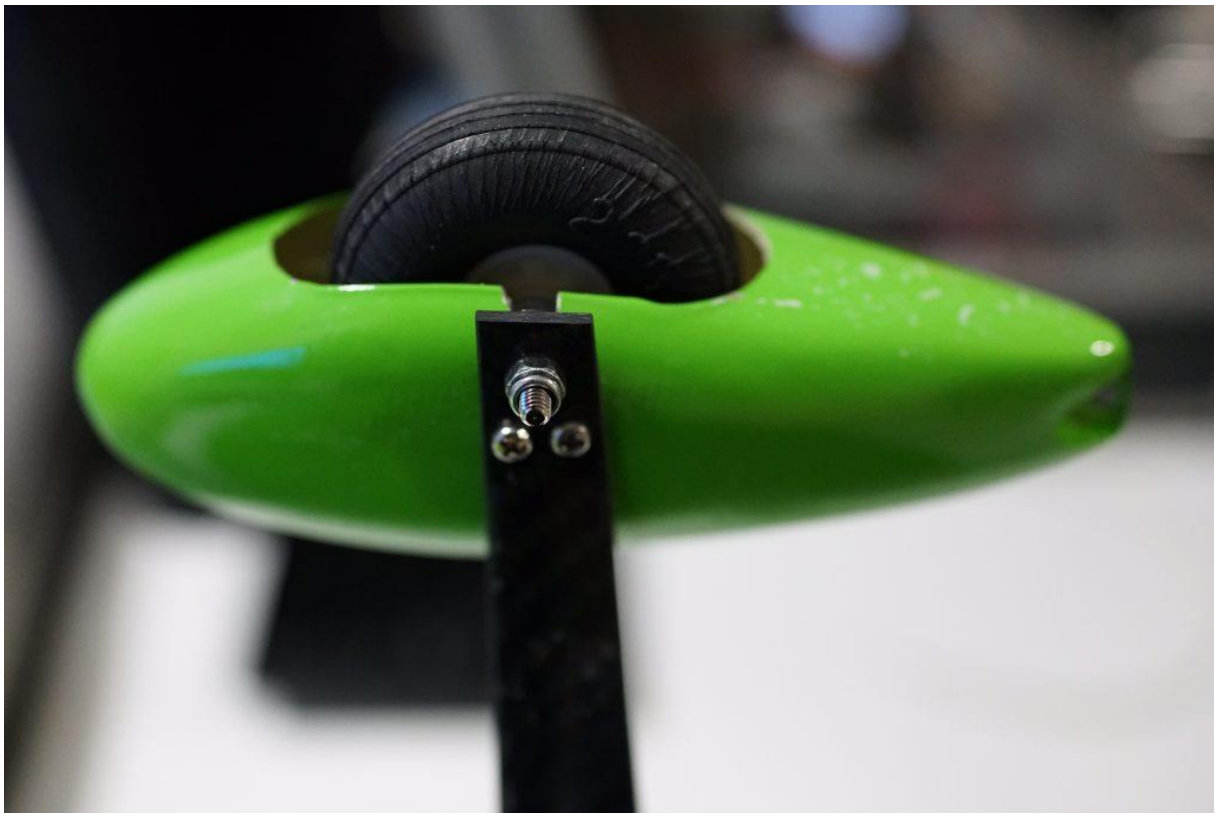
- 

Slide the wheel pants over the wheels and axles, supporting the rear of the pants to line up with the ground and mark where to drill the two screw holes in the wheel pants.

Remove the wheel pants and drill the holes for the appropriate holes.

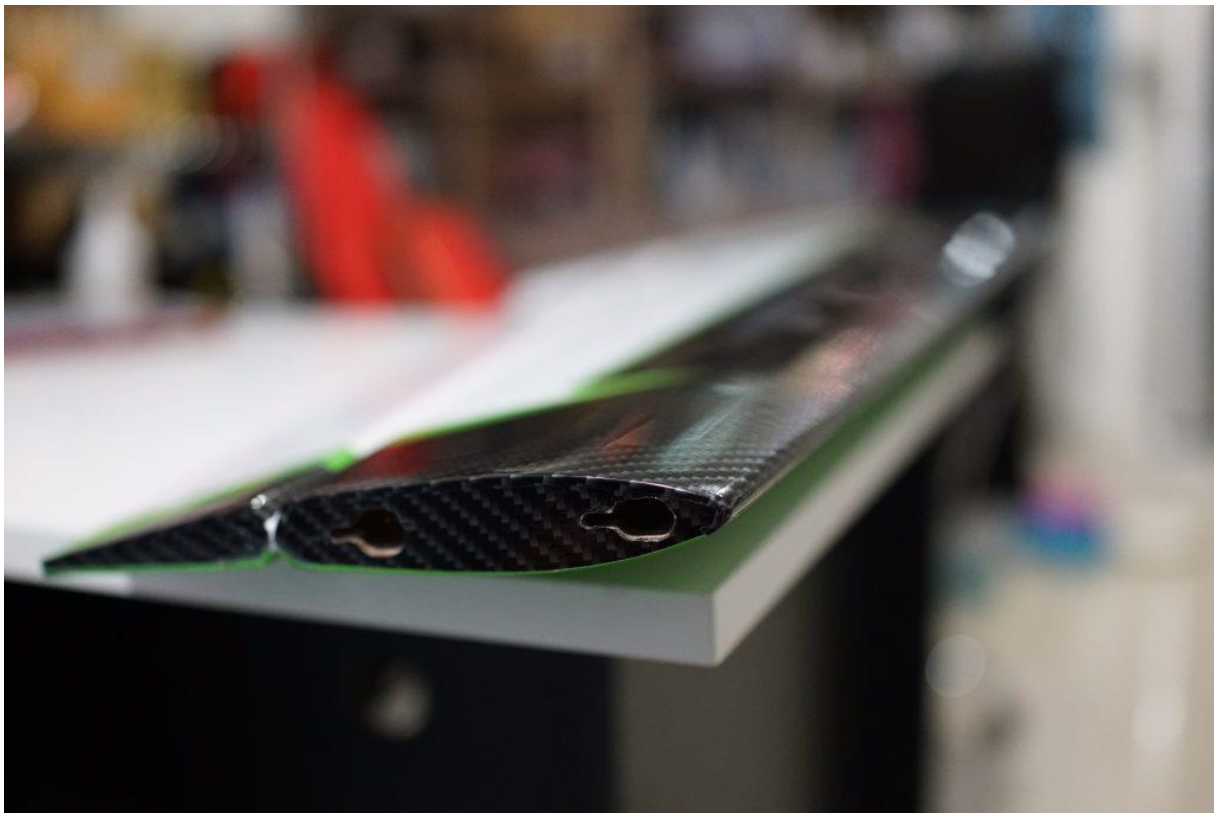
Before putting back on the plane, mount the bolt with the blind nut on the wheel pant and tighten until the nut sits flush with the wheel pant.

Remove the bolts and the nuts should stay in place.

Slide the wheel pants back over the wheel and bolt in place.

SFG – SIDE FORCE GENERATORS:

If you choose to use the included SFG's with quick release system, simply bolt these to the wing-tips using the provided finger screws.

- 
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Pilot

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BALANCING THE CG OF AIRPLANE:

The CG is marked inside the fuselage, near the wing tube.

Install the included balance rods in their position, attach the canopy and check the balance of the model. Move your batteries accordingly until correctly balanced.

Personal CG preference can be adjusted following the first flight.

CONTROL THROW DEFLECTIONS AND SUGGESTED EXPO.

General flying:

Surface	**Deflection**
Ailerons:	20º
Elevators:	20º
Rudder:	35º

Full 3D acrobatics:

Surface	Deflection
Ailerons:	38º
Elevators:	55º
Rudder:	45º

DOUBLE CHECK:

Double check that all screws are installed, all components tightly secured, batteries and or fuel tank are full, all surfaces are working in the correct directions, balance is correct and range test passed before performing your maiden flight.

WE WISH YOU A SUCCESFUL MAIDEN AND MANY HAPPY FLIGHTS WITH YOUR NEW MODEL.