



# PilotRC EDGE540 67"

## USER MANUAL

WINGSPAN:1710mm

LENGTH:1554mm

## Introduction

Thank you for purchasing our Edge 540 plane. we strive to achieve a good quality quick build ARF aircraft .

It requires the least amount of assembly of any ARF kit to obtain the maximum performance.

Both the design and manufacturing have been undertaken to the highest standards, using best quality hardware, covering, wood & glue during factory construction stage.

By optimal weight and balance along with reliable construction, you will find this plane ideal for 3D - Freestyle and aerobatic flying.

We hope that every effort and service we offer will, in turn, give you confidence using PILOT Models.

Have a wonderful time flying your 3D aircraft in a suitable safe space!

## Warrant

- All Pilot-RC products are guaranteed against defects for 30 days of receiving your airplane. This warranty is limited to construction or production defects in both material and workmanship , it does not cover any component parts damaged through use or modification .
- The manufacture cannot supervise the assembly, operation or maintenance, and is not responsible for radio malfunctions. Please ensure your radio system is in good condition. **We are not responsible for any accident or damage while using this product.** It is impossible to determine for certain whether crash damage was the result of improper installation of our products, a radio system failure, or pilot error. Model airplane owners use our products at their own risk.
- Pilot-RC will not be liable for any costs, unless agreed and proved beyond doubt the failure was due to faulty materials or fabrication. Any agreed cost will not exceed the cost of the airframe and not include engine, radio equipment or third party claims.
- Should you wish to return a product or receive replacement parts, all shipping cost must be paid by the customer.

## Attention

- 1. **Do not regard this plane as a toy!**
  - 2. To ensure safety, please read the instruction manual thoroughly before assembly.
  - 3. Building and operating an RC Plane of this nature requires previous experience and competence to an experienced level. This plane is not for a beginner!
  - 4. If you are in doubt have an experienced pilot at hand. Diligent practicing and correct guidance is essential, accidents can cause bodily harm and property damage.
  - 5. Seek assistance from an experienced person or airplane model clubs in assembly, operation and maintenance to ensure successful training.
  - 6. **Fly only in a registered RC model club airfield** that is approved by your local Academy of Model Aeronautics (AMA).
- Pilot-RC has the right to revise the plane, the instructions and the limited warranty without notice. If you have any problems and questions please contact Pilot –RC:  
Email: pilot-rc@139.com , info@pilot-rc.com  
Phone:+86 760 88781293  
FAX: +86 760 88780293  
Address: No.34, Chengnan Er Road , Zhongshan city, 528400, Guangdong Province, China

## Included Hardware:

- Complete air frame with all basic accessories (such as carbon fibre main undercarriage, tail-gear assembly and wing-tube as well as fibreglass control horns and wheel pants)
- Ready to install hinges and pre-mounted canopy
- Wheels, axels and wheel pants
- Pushrods with ball links
- Matching plastic spinner
- Wing bags
- Servo extension wires

## Required Hardware:

Propeller: 15x8E

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

Engine Option 1 : Gasoline

Transmitters and Receivers

Gasoline engine - 20cc ) (for example DLE-20RA)

Servos (5pcs) (for example Pilot-RC PY-20AL)

Batteries of your choice - RX and / or Ignition

Engine Option 2: Electric

Transmitters and Receivers

Servos (4pcs) (for example Pilot-RC PY-20AL)

Electric motor (Pilot-RC CC20/400KV motor)

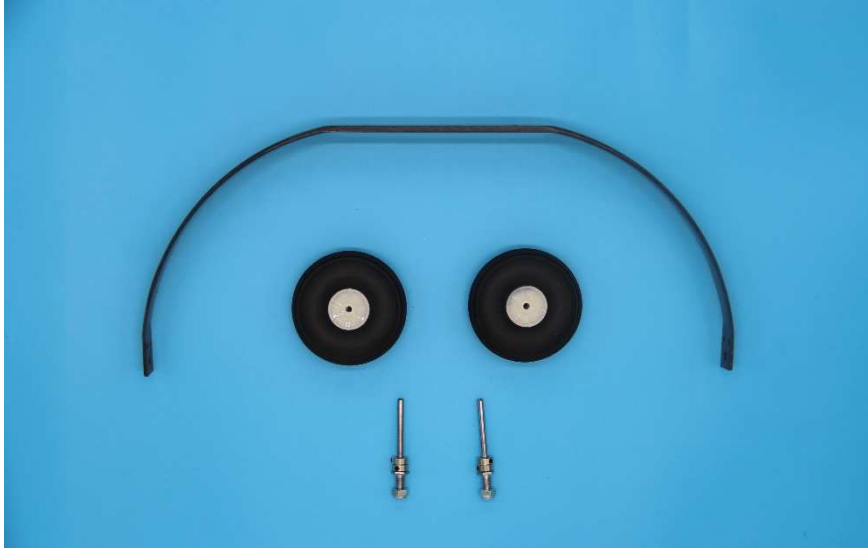
ESC (100A )

Batteries of your choice (3300-4500mah 6S 22.2V 35C lipo battery)

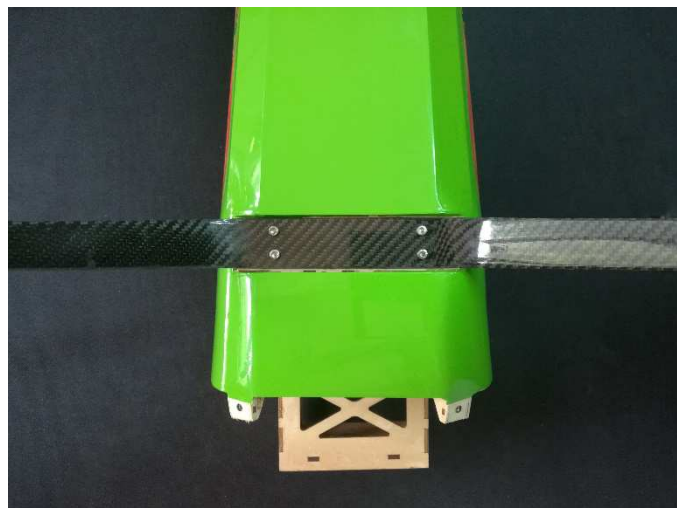
## Other Accessories Needed To Complete:

- 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

## Main Landing Gear Assembly



Position the fuselage upside down and screw on the carbon undercarriage to the fuselage using the nuts and bolts provided. Screw the wheel axles on to the landing gear, and then slide on the wheels and secure in place with the provided grub screws. Some users may prefer to leave the wheels until the end of the build, to prevent the model moving on the build table.

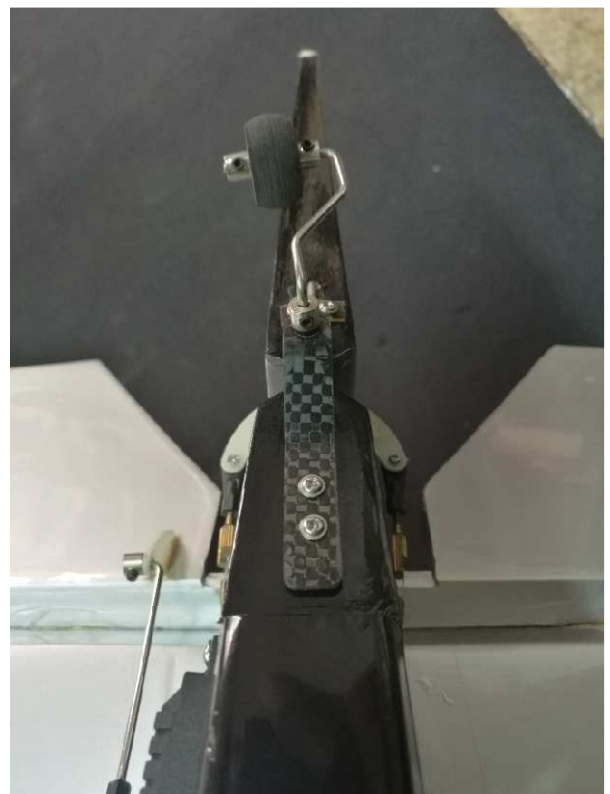
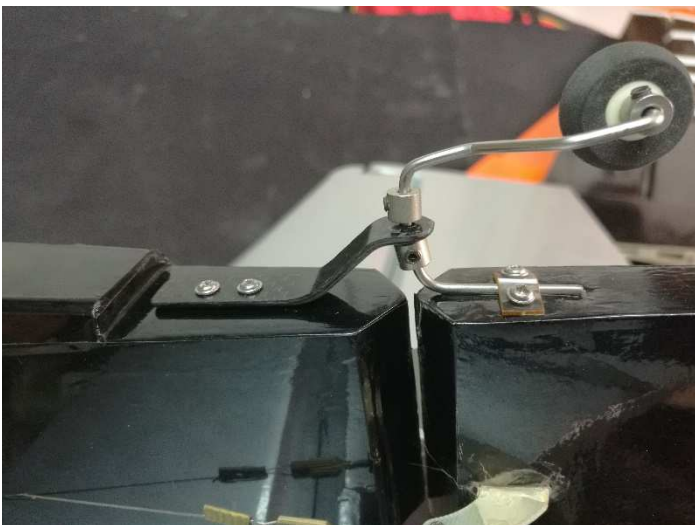


## Tail wheel Installation

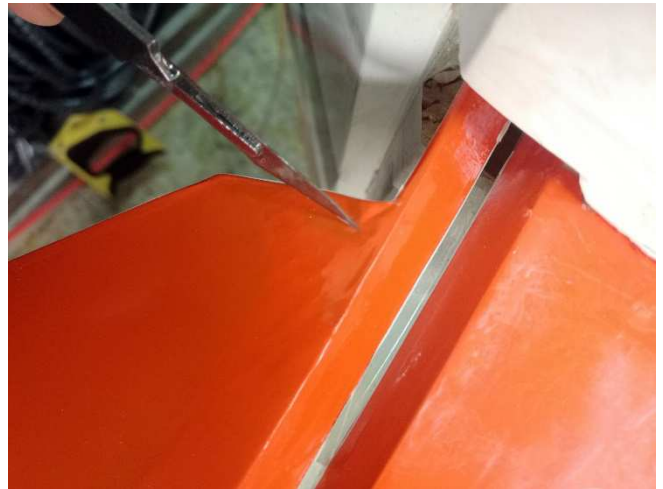


With the model still upside down, position the carbon tail wheel unit on its correct location and mark on the underside of the fuselage to drill the holes for the screws that will hold the tail wheel in place. Screw the tail wheel unit to the fuselage using the blind nuts and bolts provided. Attach the springs to the underside of the rudder using the metal arm supplied.

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.



## Servo Horn On The Elevator Installing:



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

## Servo Horn On The Rudder Installing:



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Excess epoxy glue can be removed with acetone

## Servo Horn On The Ailerons Installing:



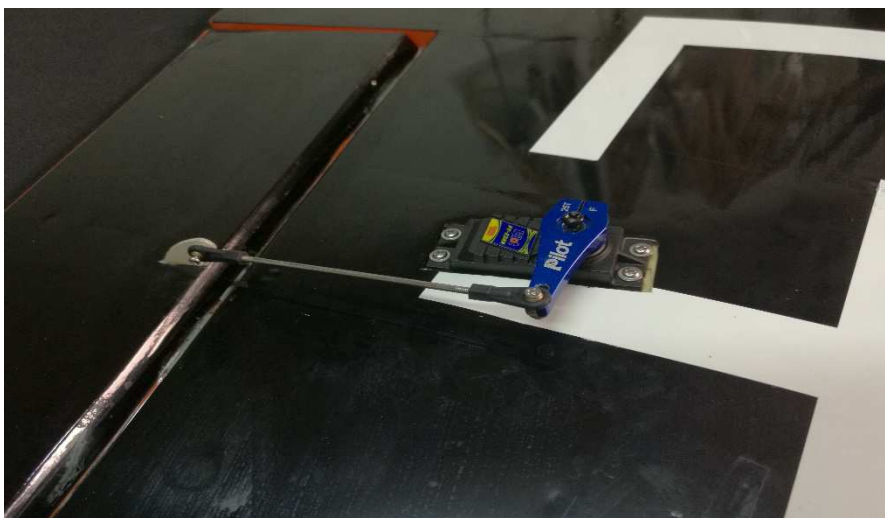
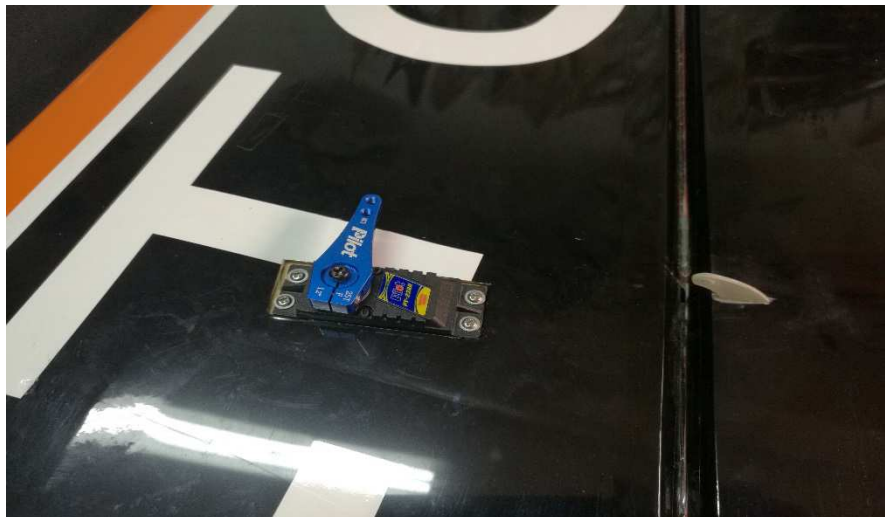
It is very important to sand horn to assure a strong bond once glued to the model.

Locate and cut the covering where the horns will be glued

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## Aileron Servo Installation:



Install and glue the included hinges.

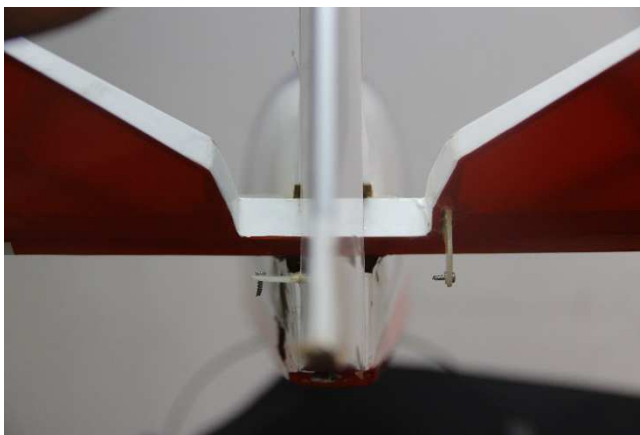
Locate and cut the covering where the servos will be installed.

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.



## Stabilizer installation:



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.

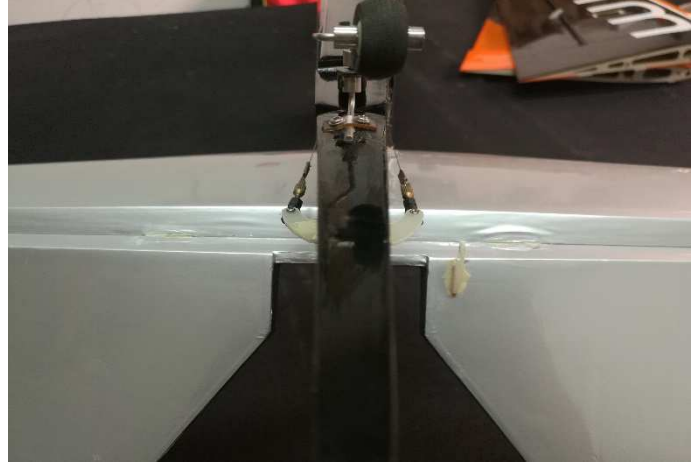
Install and glue the included hinges.

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

## Rudder Servo Installation:



Install and glue the included hinges.

Centre the servo, attach the servo arm and connect the pull-pull wires to the servo using the accessories included, securely crimping the wires with the brass tubing, then cover with heat shrink.

Position the other end of the wires through the rudder horn, pull the wires tight and crimp as before.

Fine adjustments can be made from the threaded rod connected to the ball links.

## Elevator Servo Installation:

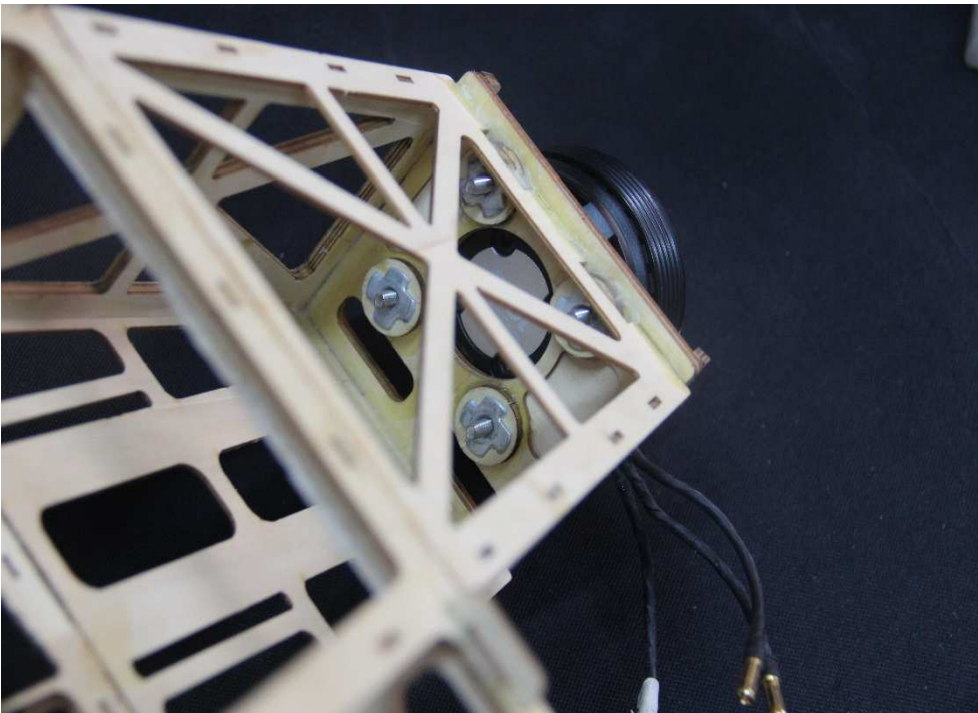
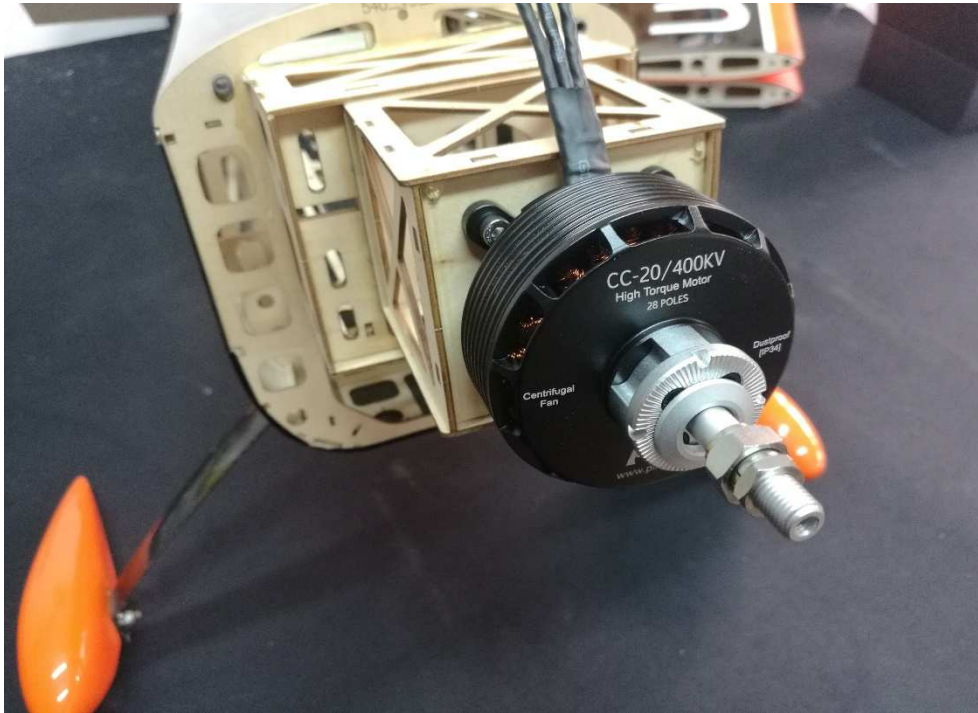


Locate and cut the covering where the servo will be installed, at the rear of the fuselage, under the elevator.

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:



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 standoffs 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, we recommend on top of the firewall however this may vary depending on your installation.

## Motor Installation:

Replace the cowling with the screws

Measure the distance for the motor installation

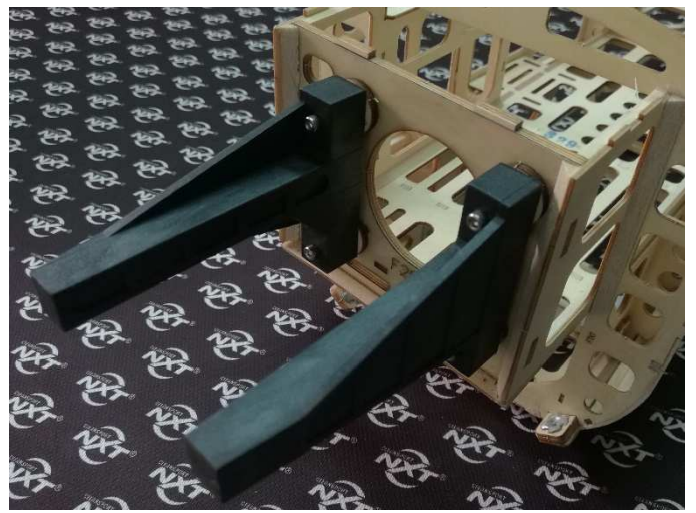
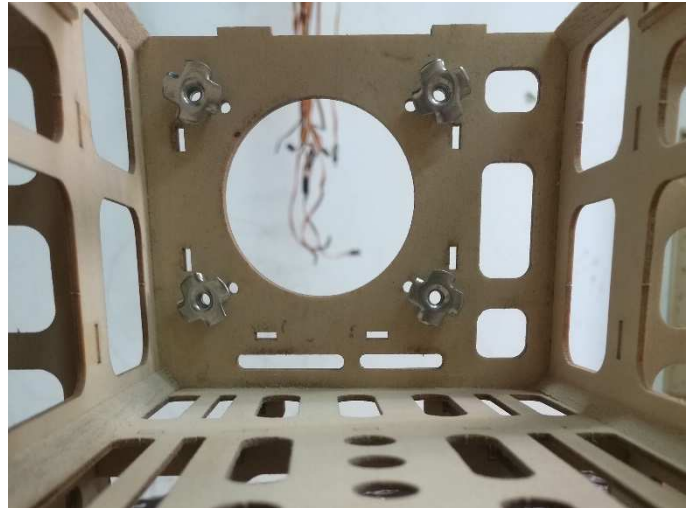


Verification for clearance gap, should be about 1 to 1.5 cm

Follow the same procedure for petrol engine



## Gas Engine Installation:



Install the the plastic support to the fuselage, use the mounting screws to tightening it.

Install the engine

Validate the required space between the engine cowl and the propeller bed before permanently installing the engine in place

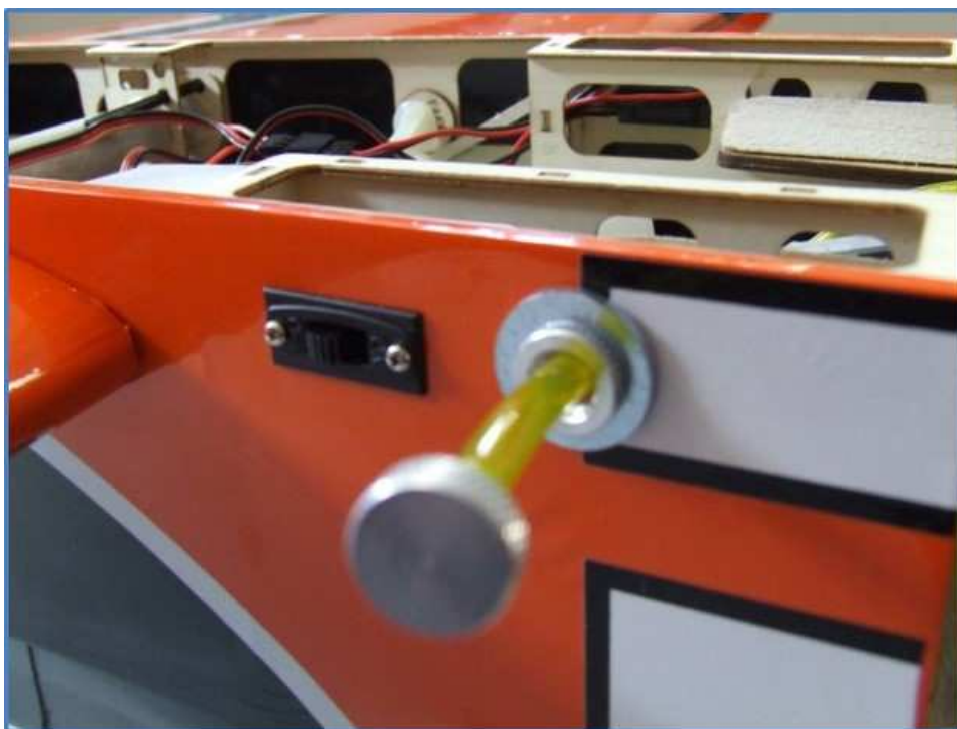
## Gas Engine component Installation:



After engine installation, then you can install the engine components like battery, oil tank, receiver, and engine servo(include the servo arm, linkage. ect) in fuselage.

Before install these components, check the correct location of components depending on your CG.

## Gas Engine component Installation:



Locate the appropriate hole and install the fuel dot in the side of the fuselage

Screw the ignition switch to the side of the fuselage through the appropriate hole, or install an electronic ignition kill switch.

## Cowling Installation:



The cowling is secured using two separate methods. The top half is secured with screws installed through the canopy hatch opening, while the bottom half is secured with two screws installed from the outside.

Place the model upside down and put masking tape next to the two blind nuts that will secure the bottom half of the cowl.

Draw a line, and mark how far the hole is from a given point on the masking tape.

Place the model upright, and position the engine cowling in place and secure using the top screws.

Turn the model over again, add masking tape to the cowl and continue the previously drawn line onto the cowl, and mark the location of the hole.

Remove the cowl and drill the two holes as required.



## Ancillary Components Installation:



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

Glue 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.

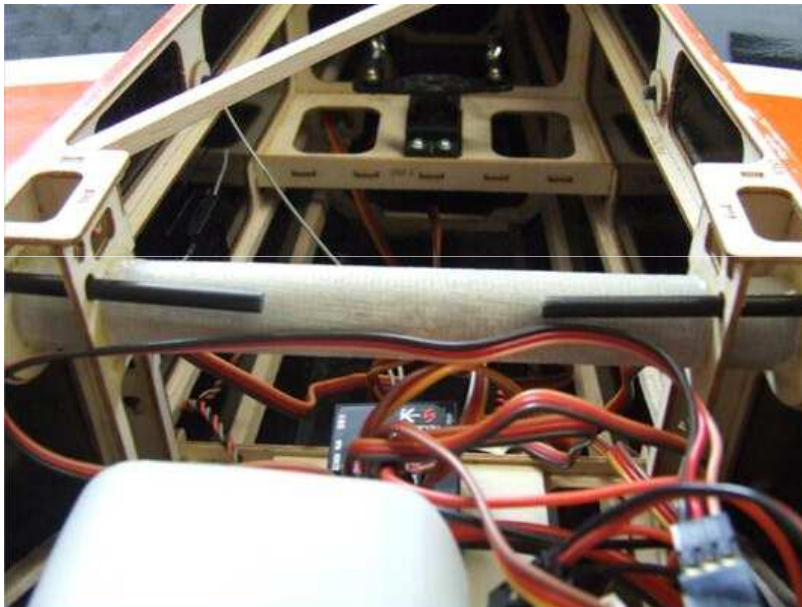
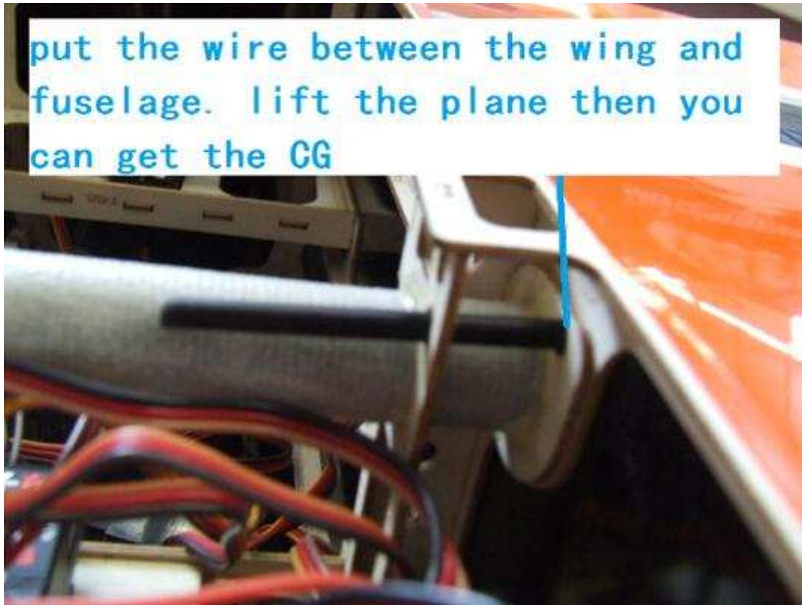
## Wheels Installation:



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.

## Balance CG of Airplane:



Install the two balance rods in their position as shown in the picture below

Loop some wire/string over the rods between on the outside of the fuselage (between fuselage and wing) Install the canopy and all final components and accessories

Lift the model by the wire/string and this should balance.  
If it does not balance, please move your batteries accordingly until correctly balanced.

Final presentation of your model :



## ***Flight Preparation***

- Make sure you have the right model programmed into your transmitter
- Check the direction of each surface not and also right before you take off .
- Remember nothing wrong on the ground ever improves in the air
- Check the air plane with the engine running and do a range check with your body between you and the plane at least 150 feet.
- Check your battery voltage after each flight, in case one servo is draining your battery
- Recheck all screws ,horns and linkages for slop after your maiden fight and check for damage if you made a bad landing you first time
- Have an experienced pilot fly it for you the first time if you have any doubts in your mind about the maiden flight
- Take a break after you first flight and let the adrenaline burned off by bragging to your fellow members how good it flies
- Fly low and at a medium speed on your first few flight
- Listen to your engine run and have an observer with you to remember what you talked about during the flight or if you get into trouble . Always balance your props, vibration is a killer.
- Remember nose heavy airplanes fly all the time, tail heavy airplanes fly only once. Be on the CG!
- Flying two mistakes: high in the beginning and not close to people, planes or runways. Being a center of the runway hog does not endear you to many modelers.

## **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 SUCCESSFUL MAIDEN AND MANY HAPPY FLIGHTS WITH YOUR  
NEW MODEL**

Tony Tan, Pilot-RC



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