Manual – Pilot-RC Foamy

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:	Pilot-RC
Wingspan:	33″ (840
Length:	35″ (886
Weight without electronics	3.6oz (10

Flying weight:	7.4-9.8o

INCLUDED HARDWARE:

- Complete air frame in pre-printed high visibility color scheme
- Carbon rods to give the airframe structure and strength
- Pushrods, control horns, wheels and other small accessories

Also available: PNP Combo. Includes model plus motor, speed controller, prop and servos

REQUIRED HARDWARE:

Motor: 2207-1680kv

Prop: 9×4.7

Servos: x3 8g servos (recommended 1.5kg torque)

Battery: 3S 450-550mAh

Also requires receiver and all the usual building tools and supplies

OTHER ACCESSORIES NEEDED TO COMPLETE:

- Cyanocrylate adhesives
- X-Acto and Saw knives
- 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.

If you have any problems and questions, please contact Pilot-RC.

3- Assembly

INITIAL LAYOUT

Open your kit, lay everything out on your table and familiarise yourself with all parts

Foam parts may arrive slightly twisted due to heat changes during transport. Place some weights on them while flat and leave overnight. Any remaining twist will be straightened during construction thanks to the added carbon reinforcements.

CARBON REINFORCEMENTS

Before starting the assembly of the model, we need to add some rigidity to the foam. This is done through the addition of the provided carbon fibre.

The leading edge of the wing, the center of the wing, the elevator, the underside of the fuselage and the intersection of the landing gear all need to be

reinforced
by gluing the provided carbon fibre rods in place.

This is done using cyano glue and kicker. Don’t try and do large sections at once, it is recomendable to glue little by little, and assure a strong bond throughout.

The carbon on the underside of the fuselage can be left long and used as a tail skid.

If you prefer not to use kicker (depending on brand can sometimes cause a more fragile glass like joint) you can leave to dry over-night keeping the carbon held in place with masking tape. Test your masking tape on the underside of the model to make sure its not too sticky and removes any of the printed artwork.


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HINGES

Make sure to leave roughly enough gap between the two surfaces to allow for maximum deflection. Once in place test for maximum deflection, then glue in place with cyano.

ASSEMBLE THE HORIZONTAL PANES

With the model now suitably rigid and hinged, we can start assembling the parts together.

Join up all horizontal parts and glue with cyano. This is the elevator, the center section of the fuselage, the wing and the nose section

ATTACH THE LOWER SECTION OF THE FUSELAGE

Flip the now joined together horizontal parts so they are upside down, and slot in the lower section of the fuselage into the pre-cut slots and glue with cyano.

In doing this, make sure that the fuselage is both straight and at 90° right angles with the rest of the flat horizontal parts. If you don't have a square edge, you can use business cards or similar objects with perfect right angles.

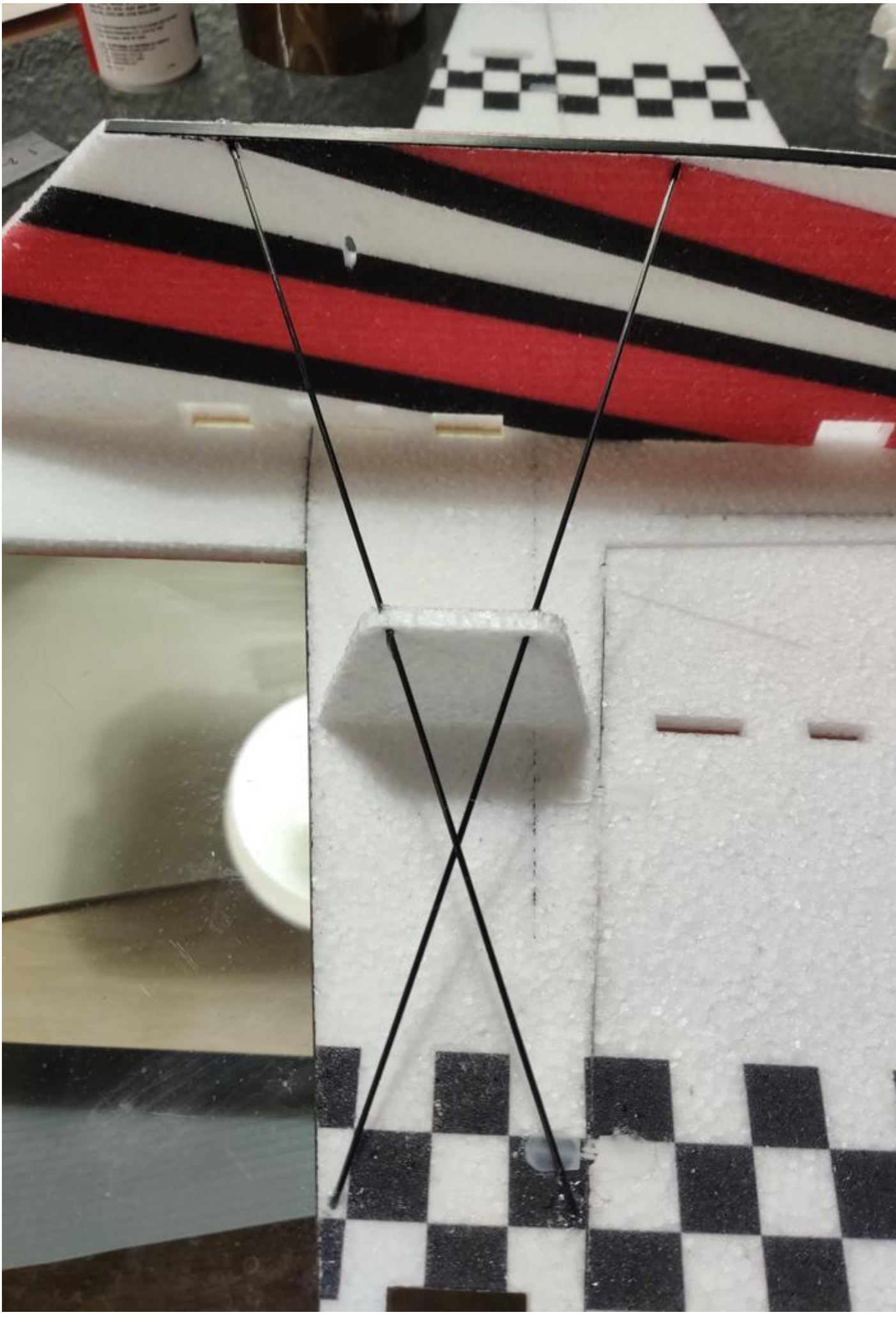
REINFORCE THE WING

The carbon rods added in the first step of this manual are not enough to keep the wing straight in flight.

Most of the wings strength is in face achieved through additional carbon rods, installed in an "X" shape, supported in the middle and both ends, effectively acting as struts between the wing and the fuselage.

These round carbon rods are the larger diameter ones provided with your kit.

Once you achieve the same layout as shown in the pictures below, secure everything in place with cyano glue.

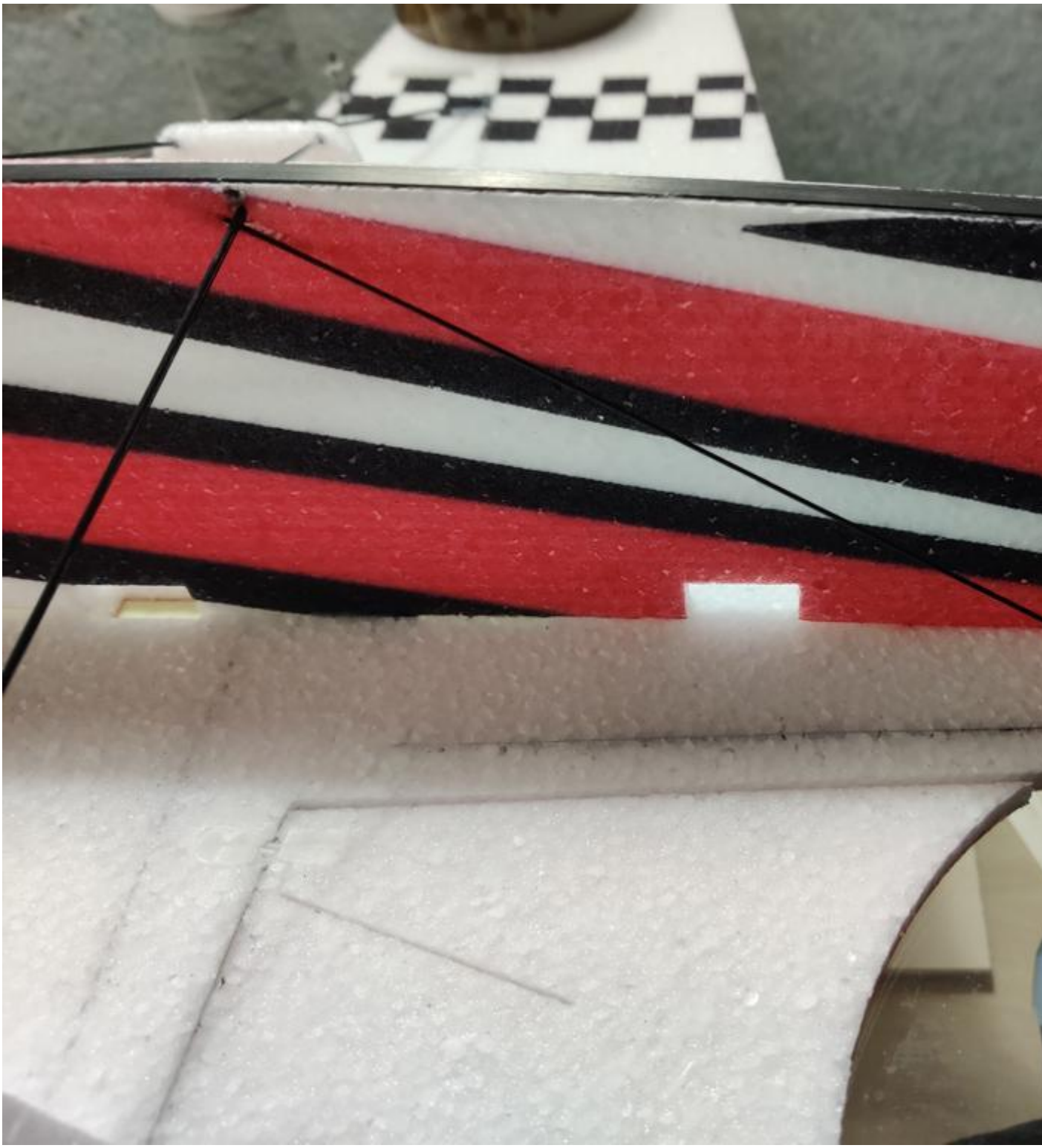


REINFORCE THE UNDERSIDE OF THE FUSELAGE

Continuing with the cross bracing, additional carbon rods are used to provide strength from the wing joint (the tip of the carbon “X” reinforcement from the wing) all the way back to the tail of the model. This prevents the tail from twisting in flight.

These round carbon rods are the smaller diameter ones provided with your kit.

Criss-cross carbon rods between the vertical and horizontal sections of the fuselage until reaching the elevator

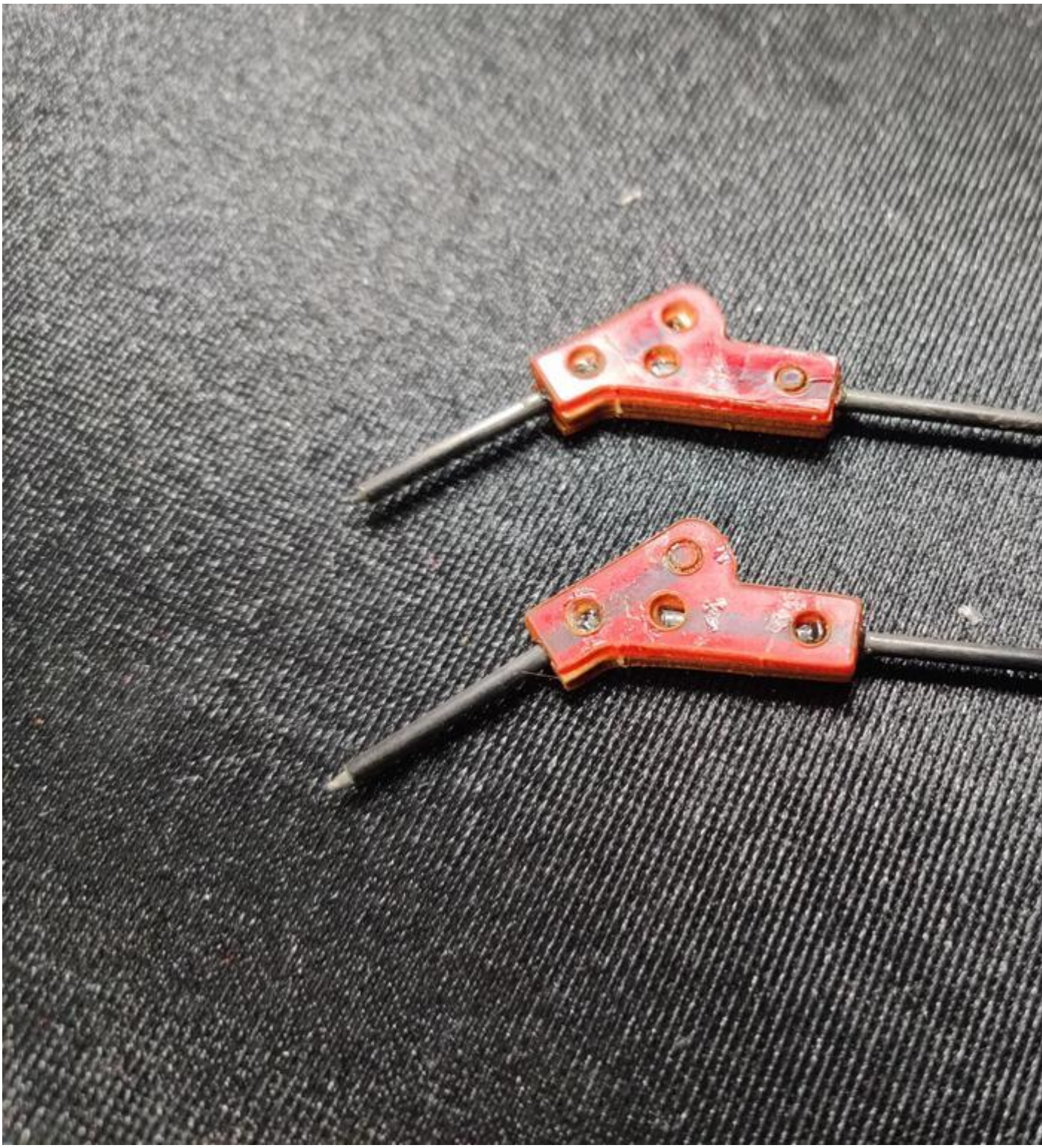


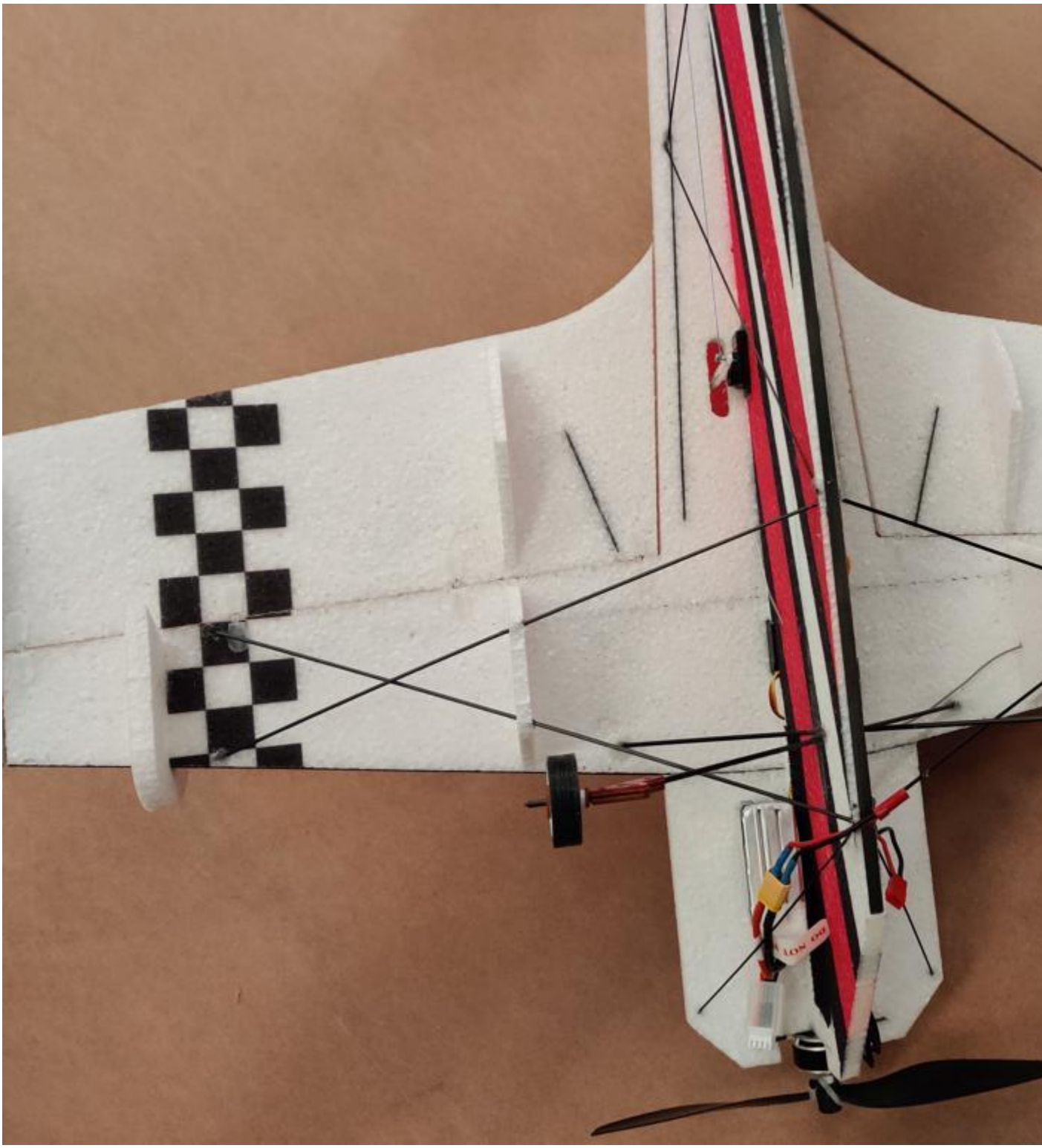
INSTALL THE LANDING GEAR

The landing gear is made up from carbon rod, crossed at the vertical fuselage to create another “X” shape.

The small red parts allow to glue two parts of carbon rod together at the correct angle to be used as wheel axles.

Once you slide the wheels over these “axles” secure in place with the small red washers and fix with cyano, being careful not to stick the wheel also.





INSTALL THE SERVOS

Flip the model right side up and slot the servos into their diverse locations using your preferred method (cyano, hot glue, epoxy...)

It is important to do this before attaching the top half of the fuselage, as this top section will “lock” the servos in place.

ATTACH THE FUSELAGE TOP SECTION

Slot in the top section of the fuselage into the pre-cut slots and glue with cyano.

In doing this, make sure that the fuselage is both straight and at 90° right angles with the rest of the flat horizontal parts. If you don't have a square edge, you can use business cards or similar objects with perfect right angles.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REINFORCE THE RUDDER

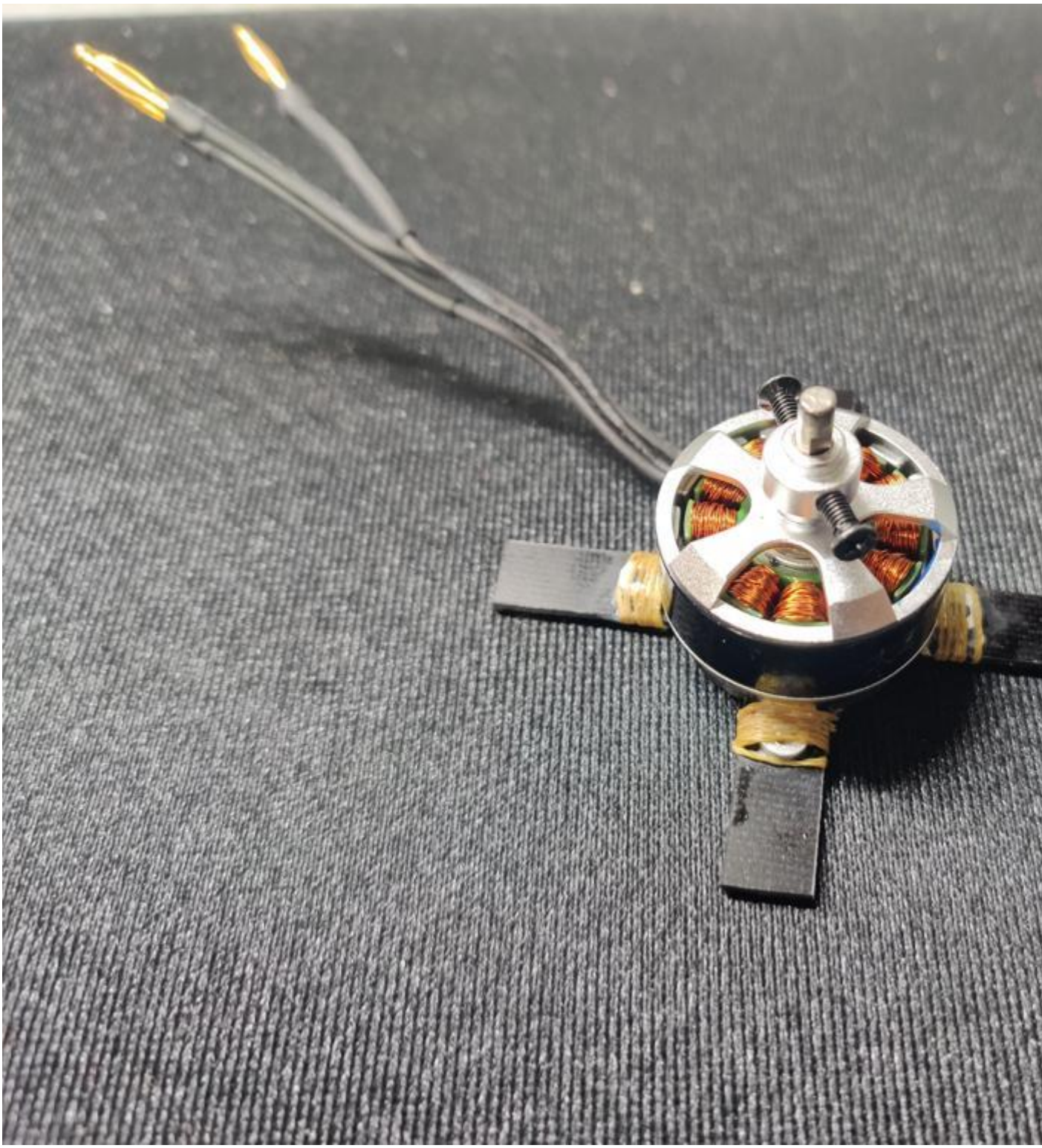
Additional carbon rods are used to provide strength from the elevator (already rigid thanks to the underside cross bracing) to the rudder. This prevents the rudder from twisting in flight.

These round carbon rods are the smaller diameter ones provided with your kit.

INSTALL THE MOTOR

Screw the motor onto the provided motor mount, and glue to the fuselage with a good amount of cyano glue.

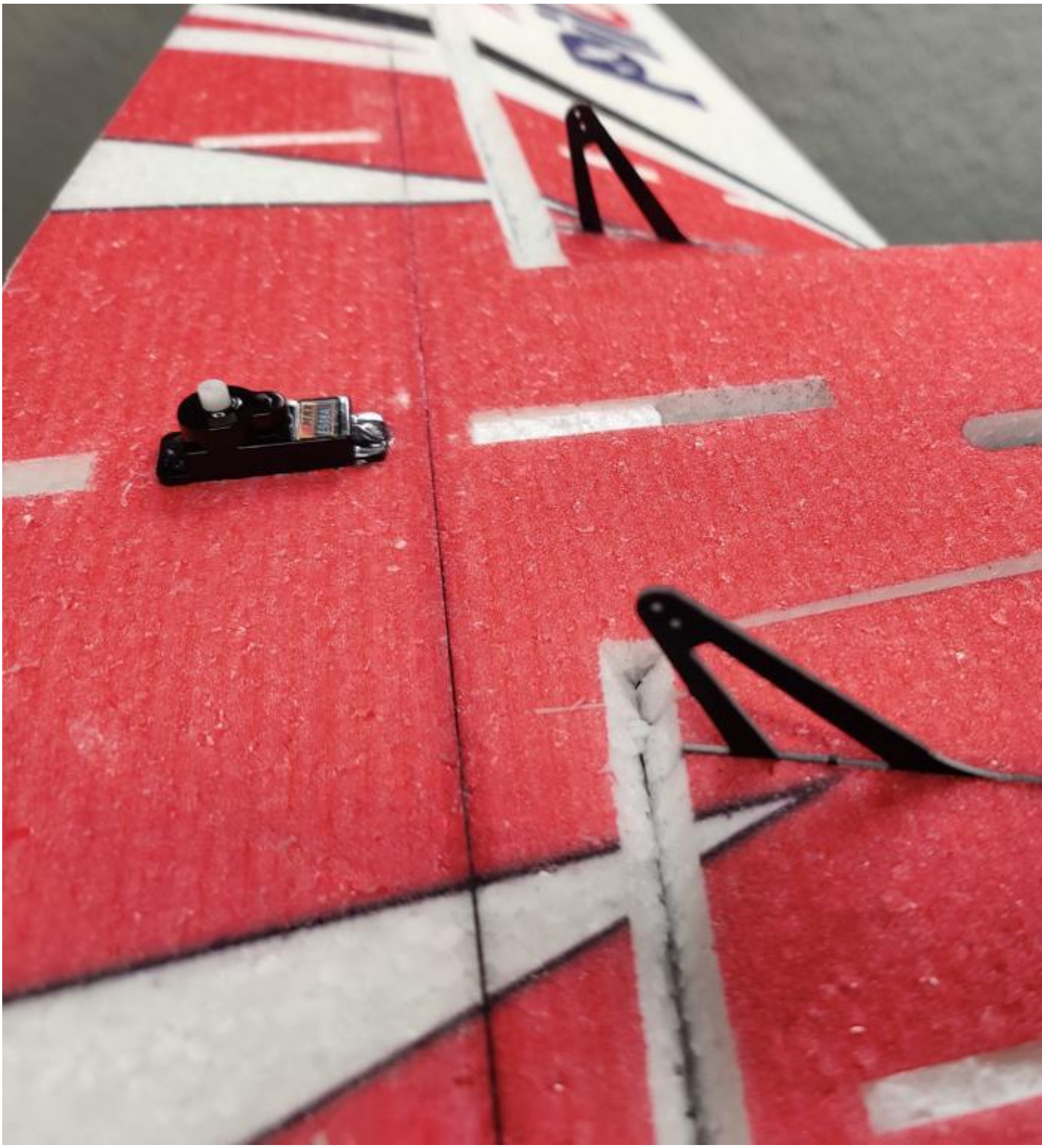
If preferred, rather than screwing the motor, you can also tie it in place using high tensile string and cyano.



INSTALL THE CONTROL HORNS

Slide the control horns into each of the flying surfaces, and glue in place using cyano in anticipation of connecting them with the servos.

Note that there are a total of four control horns, of which there are two singles and two doubles. The singles are for both ailerons, while rudder and elevator are double horns to be used with pull-pull.



CONNECT THE AILERON SERVO TO THE SURFACES

Using the control horns from the previous step, make up what will be the pushrods for the two ailerons.

These are made from the provided carbon rods, and metal rod “Z bends” which will fit into both the servo arm and the control horn.

Make sure to have the correct measurements, and glue the Z bends onto both ends of the carbon pushrod.

In order to provide strength to this join, it is vital that it is also wrapped with the high tensile string provided, and then soaked in cyano. This can all be hidden later with heatshrink tube.

CONNECT THE ELEVATOR AND RUDDER SERVOS TO THEIR SURFACES

The rudder and elevator are connected to their servos through pull-pull.

Tie two pieces of the high tensile string provided to the control horn (one on each side) and run to the servo.

Instead of directly securing to the servo, which would allow for no adjustment, measure the distance required, and at a little longer than necessary, glue the string to a small screw that can then be screwed to the servo arm.

This allows any slack in the string to be removed, either by looping the string round the screw entirely, or fine tuned by tightening the screw.

ADD THE SIDE FORCE GENERATORS

Attach the various foam side force generators to the model using cyano. These provide improved airflow and lateral flight characteristics.

They also provide improved strength and resistance to twisting in flight.

INSTALL YOUR RECEIVER AND BATTERY

Locate the best location for your receiver and battery to assure a correct center of gravity, and fix in place using velcro or your preferred method.

BALANCING THE CG OF AIRPLANE:

The CG is located 150mm back from the leading edge of the wing at the center of the fuselage.

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:	20º

Full 3D acrobatics:

Surface	Deflection
Ailerons:	40º
Elevators:	50º
Rudder:	45º

DOUBLE CHECK:

Double check that all screws are installed, all components tightly secured, batteries 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.

Tony Tan, Pilot-Rc