

CLIK 21



MOTOR: 1x 14-19g / 40-60 Watt Outrunner
ESC: 1x 6-12A ESC
SERVOS: 1x 8g-11g (ailerons)
2x 4g-6g (rudder and elevator)
PROP: 1x 8-9 inch

RADIO: 4 channel
WINGSPAN: 33"
LENGTH: 47"
AUW: 120g to 130g
depending on components used



SAFETY NOTES

- Before assembling and flying this model, read carefully any instructions and warnings of other manufacturers for all the products you installed or used on your model, especially radio equipment and power source.
- Check thoroughly before every flight that the airplanes' components are in good shape and functioning properly. If you find a fault do not fly the model until you have corrected the problem.
- Radio interference caused by unknown sources can occur at any time without notice. In such a case, your model will be uncontrollable and completely unpredictable. Make sure to perform a range check before every flight. If you detect a control problem or interference during a flight, immediately land the model to prevent a potential accident.
- Youngsters should only be allowed to assemble and fly these models under the instruction and supervision of an experienced adult.
- Do not operate this model in a confined area.
- Do not stand in line with, or in front of a spinning propeller and never touch it with any object.

IMPORTANT: PRIOR TO ANY ASSEMBLY

Please Note: after removing kit from shipping box, lay each piece flat on a hard surface, this will allow the airframe to straighten out if lightly bent from shipping. Do not worry since EPP is very pliable and can be bent back if out of shape.

TWISTED HOBBYS

Website: www.twistedhobbys.com – email: sales@twistedhobbys.com

Thank you for your purchasing a Twisted Hobbys' model. Please read through the entire manual before beginning to build this model. If you have any questions please contact us at the above indicated email address.

WARNING INFORMATION

This R/C Aircraft is not a toy! Read and understand the entire manual before assembly. If misused, it can cause serious bodily harm and property damage. Fly only in open areas, and AMA (*Academy of Model Aeronautics*) approved flying sites. Do not overlook the warnings and instructions enclosed or those provided by other manufactures' products. If you are not an experienced pilot and airplane modeler you must use the help of an experienced pilot or an authorized flight instructor for the building and flying of this model aircraft.

These instructions are suggestions only on how to assemble this model. There are other ways and methods to do so. Twisted Hobbys has no control over the final assembly, the materials and accessories used when assembling this kit, or the manner in which the assembled model, installed radio gear and electronic parts are used and maintained. Thus, no liability is assumed or accepted for any damage resulting from the use of the assembled model aircraft or from this instruction manual including but not limited to direct, indirect, incidental, special, and consequential damages. By the act of using this user-assembled product, the user accepts all resulting liability. In no event shall Twisted Hobbys' liability exceed the original purchase price of the kit.

SHIPPING DAMAGE

Twisted Hobbys checks each plane before shipping to ensure that each kit is in fine condition. We have no bearing on the condition of any component parts damaged by use, modification, or assembly of the model. Inspect the components of this kit upon receipt. If you find any parts damaged or missing, contact Twisted Hobbys immediately. We will not accept the return or replacement of parts on which assembly work has already begun. Twisted Hobbys reserves the right to change this warranty at anytime without notice.

OUR MISSION

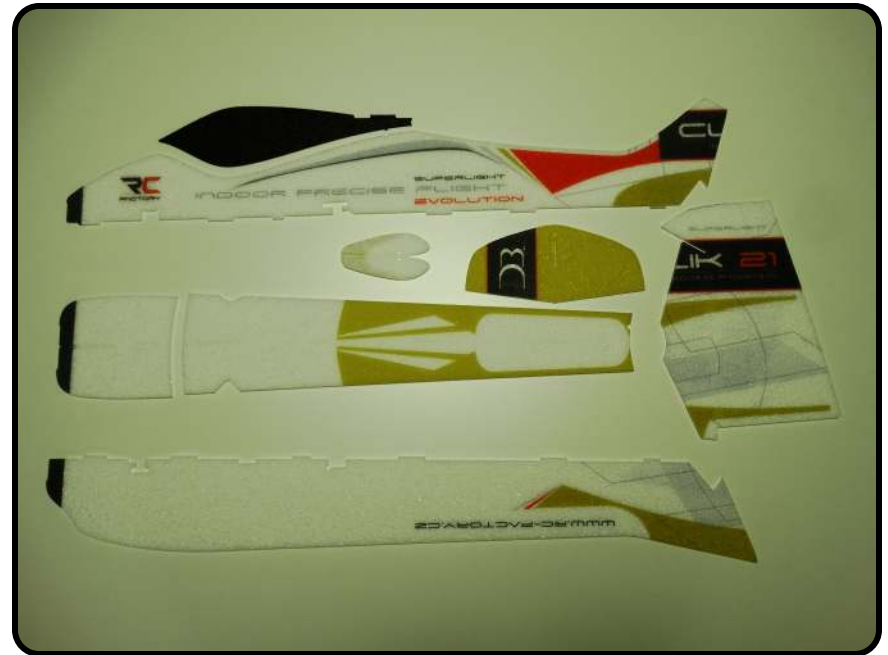
To provide the best products and service to our customers at the lowest prices possible. We take great pride in our company, our commitment to customer service and in the products we sell. Our online store is designed to provide you with a safe and secure environment to browse our product catalog.

Thank you for shopping with Twisted Hobbys!

KIT CONTENTS



Wing Parts

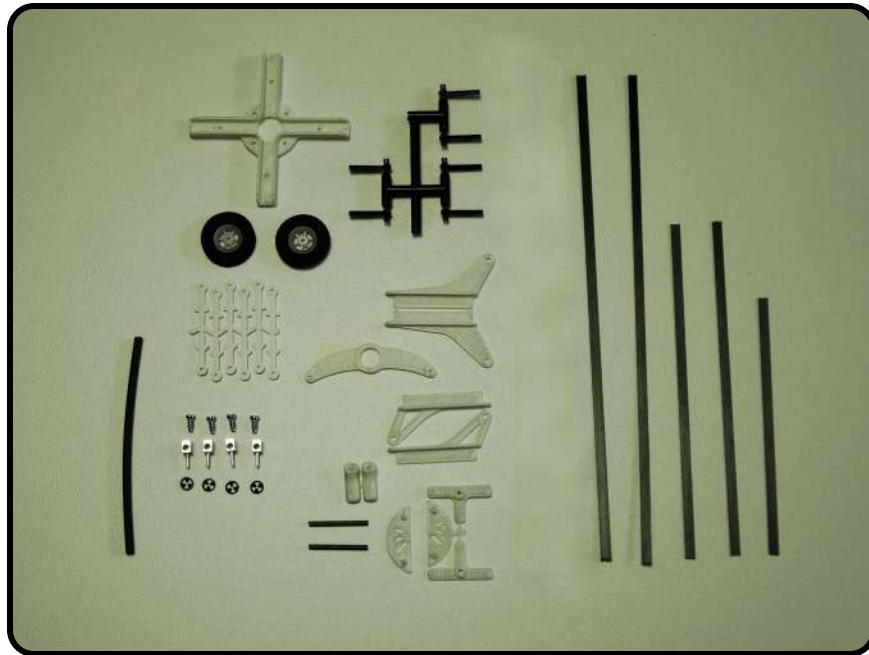


Fuselage Parts

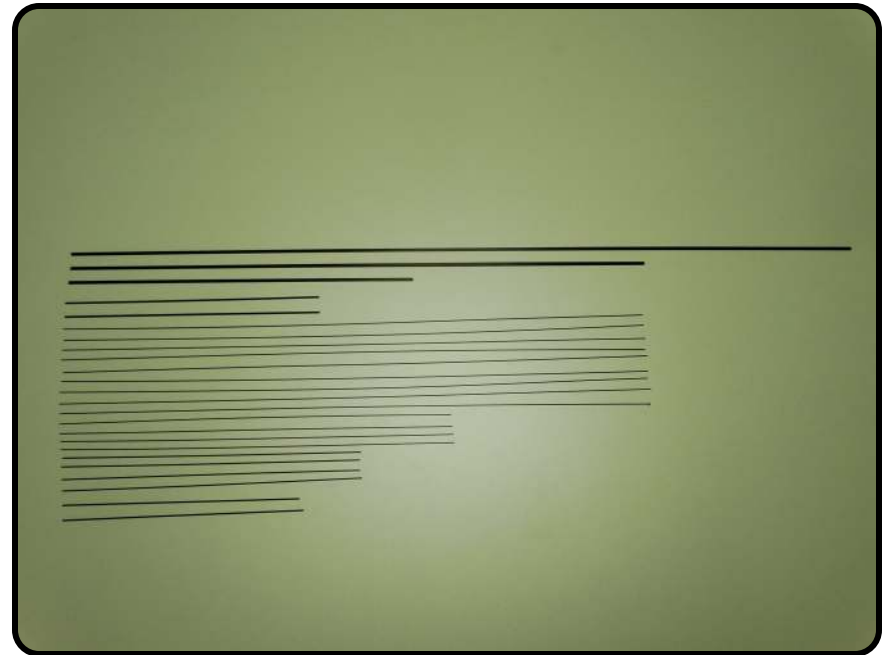
Double check that you have all the above pictured items. Note - Some kits might have slight deviations from the above pictured items.

DETAILED DESCRIPTIONS OF ITEMS WILL BE CALLED OUT IN THE BUILD STEPS

KIT CONTENTS (cont.)



Hardware and Small Carbon



Carbon Bundle Contents

Double check that you have all the above pictured items. Note -
Some kits might have slight deviations from the above pictured items.

DETAILED DESCRIPTIONS OF ITEMS WILL BE CALLED OUT IN THE BUILD STEPS

ELECTRONICS



Power Combo / RX / Glue



Power Combo Details

There are many different combinations of servos, motors, escs, props, etc. Above is a suggestion offered from Twisted Hobbys for good durability and weight management.

***** THESE ARE OPTIONAL ITEMS - THEY ARE NOT INCLUDED IN THE KIT *****

TOOL AND ADHESIVES NEEDED



Tools shown and listed are suggestions only. Depending on your building technique you may not need everything indicated – and/or – you may find that other tools available to yourself may be of benefit to your Build.

It is also recommended that you have a flat building surface, one that will accept stick pins and push pins. An Acroscopic Ceiling panel from your local hardware store fits this bill nicely, and will lay flat on your work table. Over size / long push pins are available at your local craft store. These two items are by no means required, but will aid in the building process, and can be used for future projects

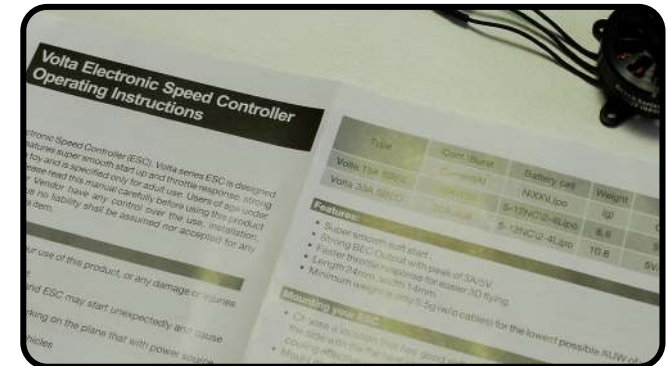
- **Lighter**
- **Small Drill Bits**
- **Tape Measure and Ruler**
- **Black Sewing Thread**
- **Welders or Foam Tac Glue**
- **Hobby Knife w/new Blade**
- **Needle Nose Pliers**
- **Wire Cutters**
- **Low Temp Hot Glue Gun**
- **Course Sand Paper**
- **Scissors**
- **Small Phillips Screw Driver**
- **Thin and Medium CA**
- **CA Applicator Tips**
- **Activator**

THE BUILD

CONSTRUCTION METHODS:

Building surface should be at least 2ft x 4ft and flat. Weights or some small heavy objects will be handy for holding things in place during the time glue is setting.

Welders or FoamTac glue is used for FOAM TO FOAM joints. Thin and Medium CA can be used on the PLASTIC TO FOAM and CARBON TO FOAM joints. **When using the Welders or FoamTac glue for a butt joint, apply a thin film to each surface, allow to sit briefly per mfg instructions, then assemble.** Note that this method will create a nearly instant bond, so locate carefully when bringing the two pieces together. **If alignment is necessary or a slip joint, do not allow the glue to tack up,** simply apply and join immediately, you will have several minutes to locate the two parts before the glue sets up. In most cases the parts being glued can be handled with care in 30 minutes, full cure is approx 24 hours.



- Locate all the electronics that will be used on this model
- Create a model on your transmitter
- Following your radio mfg. instructions, bind your radio to the power combo components
- Calibrate the ESC.
- Confirm all components work properly.

Gently fold back all the control surfaces and let sit



Always start your builds with a fresh Blade



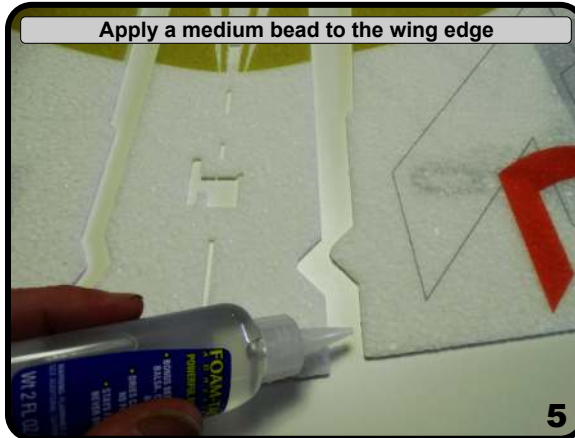
Locate the pcs shown and remove the scrap



FoamTac will be used to attach the wings to fuse



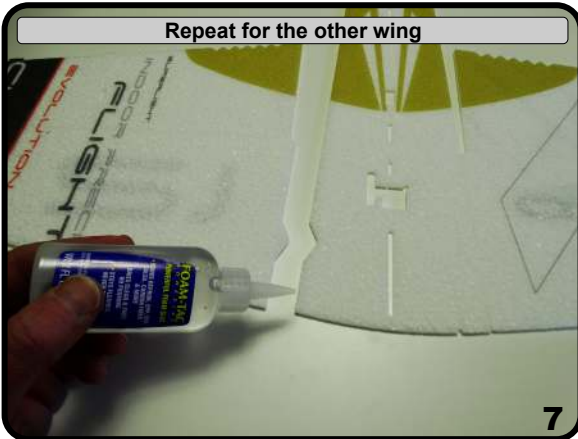
Apply a medium bead to the wing edge



Tack Together, let sit for 60sec the join



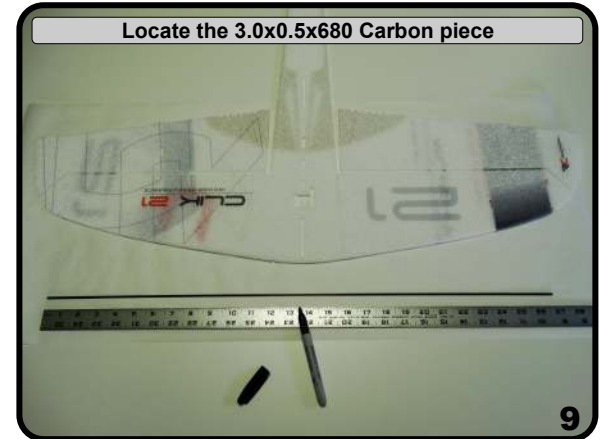
Repeat for the other wing

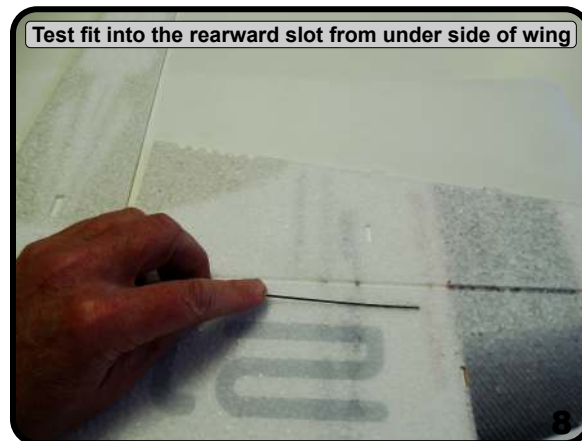
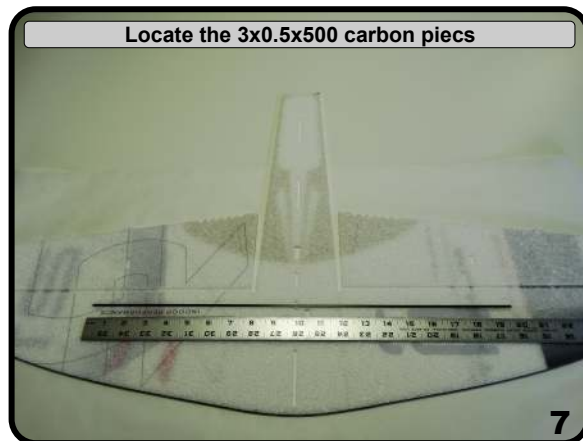
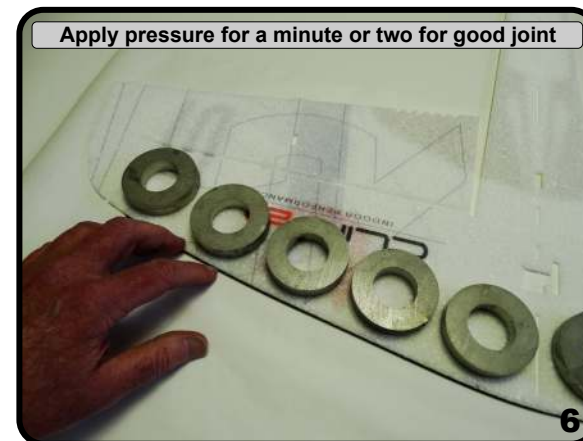
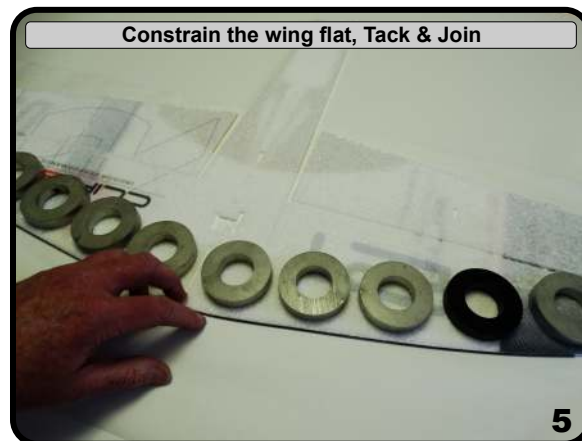
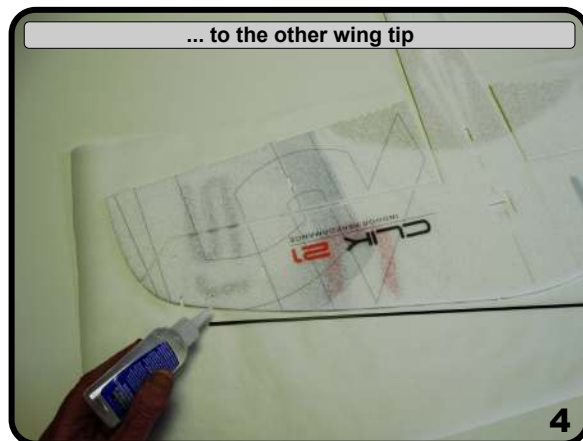
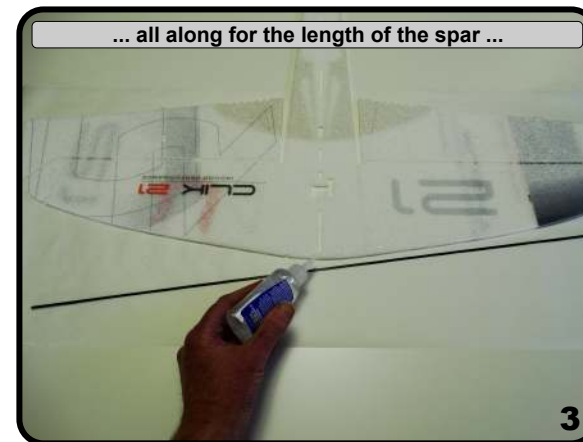
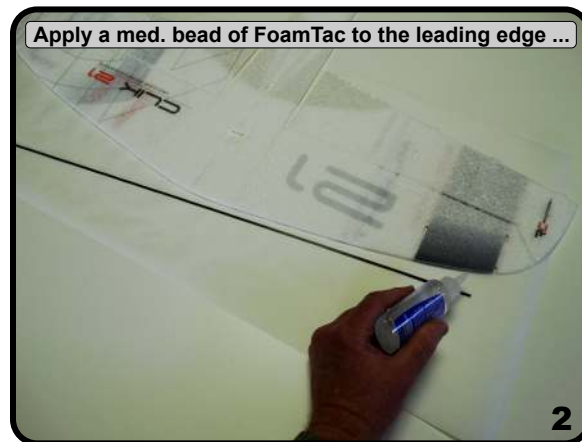
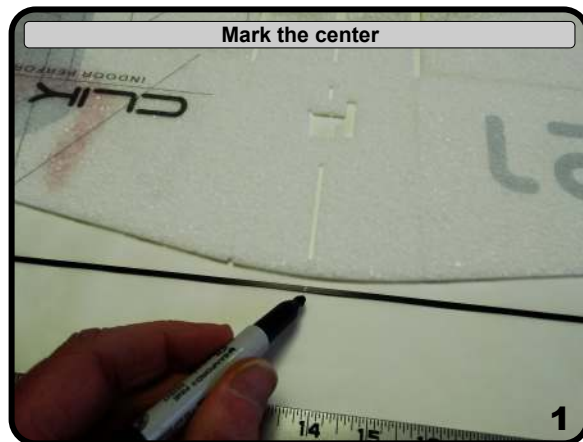


Tack and Join like with the other side



Locate the 3.0x0.5x680 Carbon piece





Apply a med. bead of FoamTac into the slot



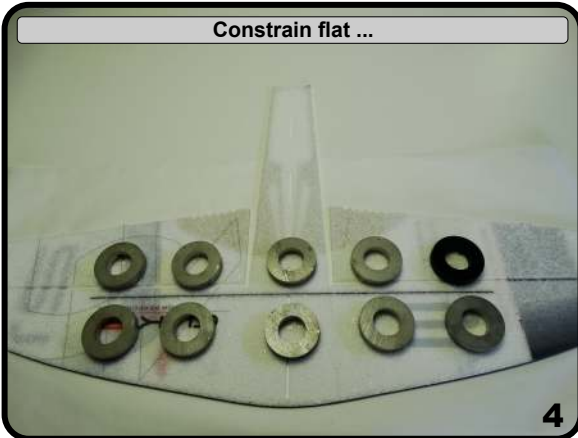
Install the spar



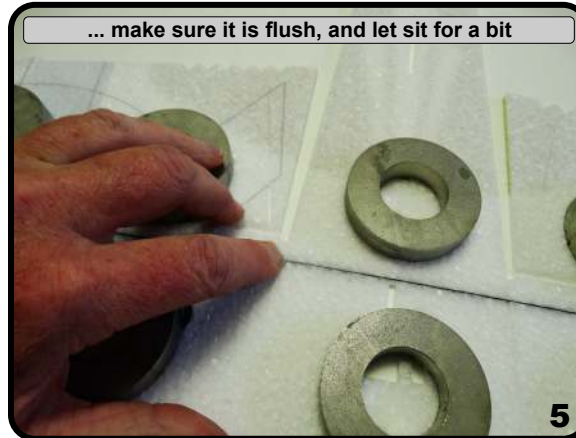
Push flush and wipe away an extra glue



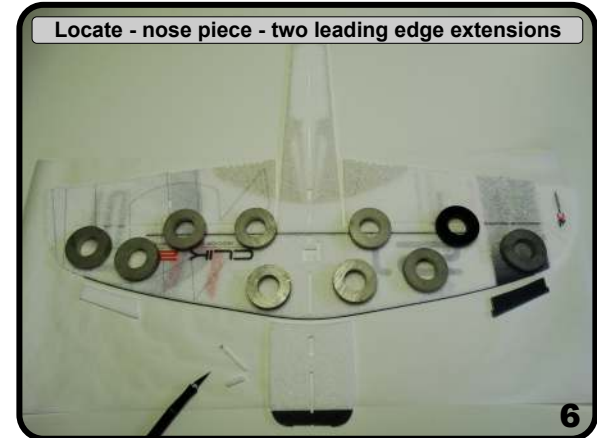
Constrain flat ...



... make sure it is flush, and let sit for a bit



Locate - nose piece - two leading edge extensions



Test fit - make sure slots will align

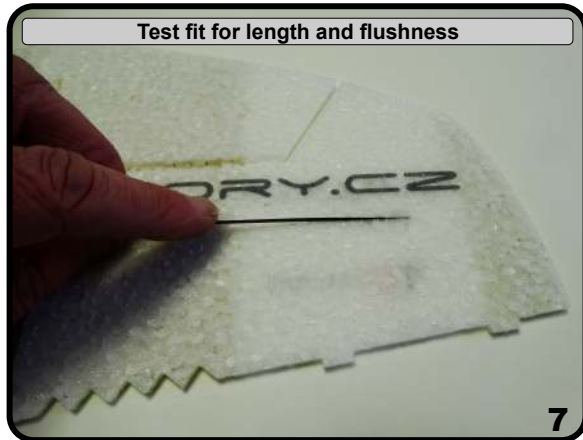
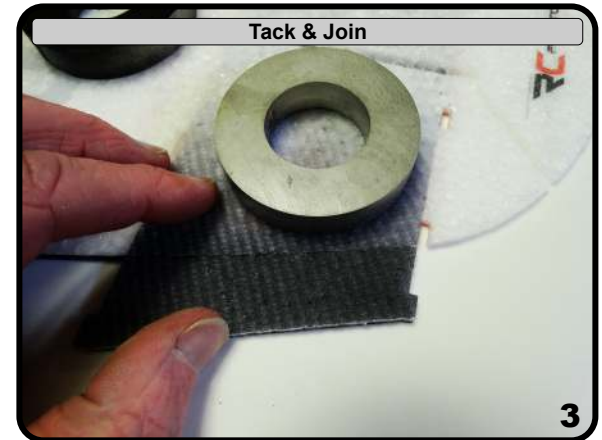


Use the small index marks as an aid



Apply FoamTac to the nose piece



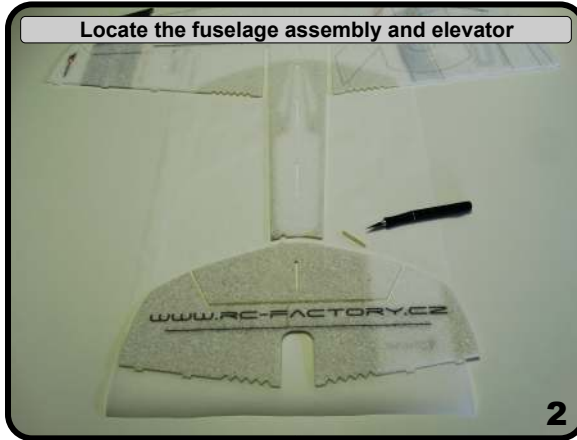


Make sure it is flush, then let sit for a bit



1

Locate the fuselage assembly and elevator



2

Apply a bead of FoamTac to the Elevator



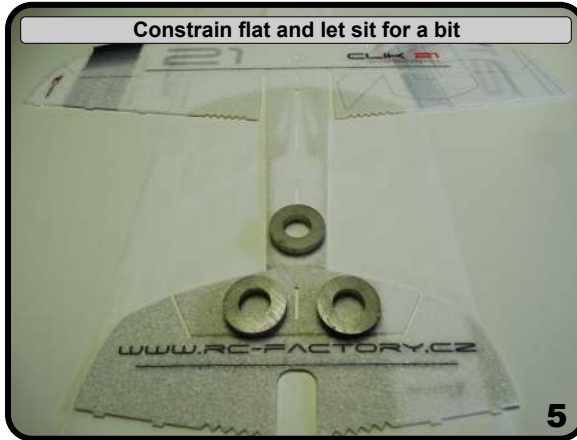
3

Tack & Join



4

Constrain flat and let sit for a bit



5

Locate two of the 0.8x500 rounds



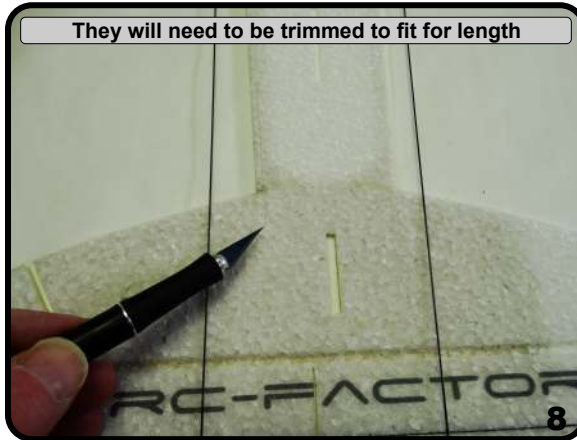
6

They go into the slits on the bottom edge of fuselage



7

They will need to be trimmed to fit for length



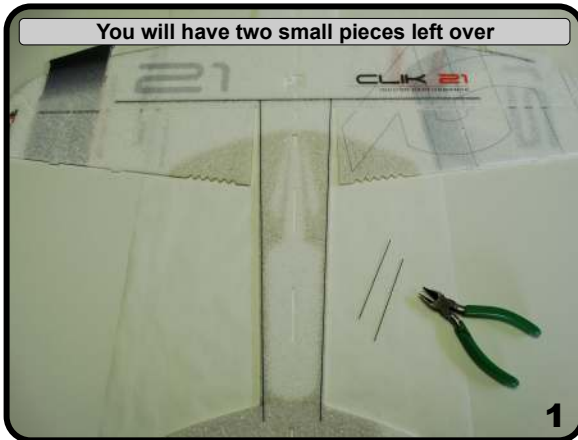
8

Install into the slit and snip to length



9

You will have two small pieces left over



Detail on how the wing spar and fuse spar meet up



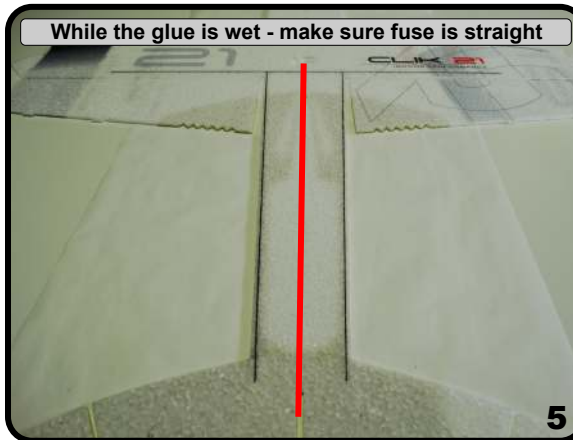
Remove the spars and apply glue in the slit



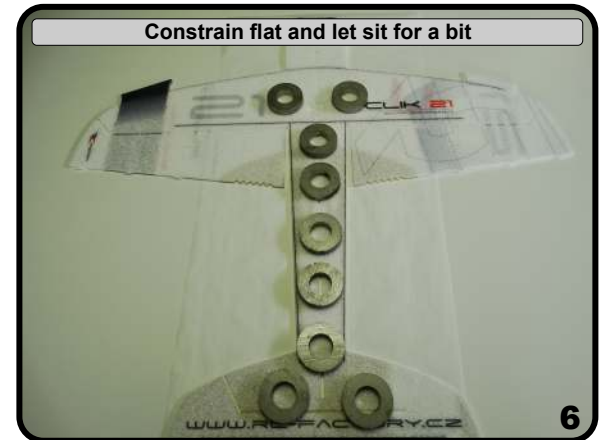
Install the spars, wipe away any extra glue



While the glue is wet - make sure fuse is straight



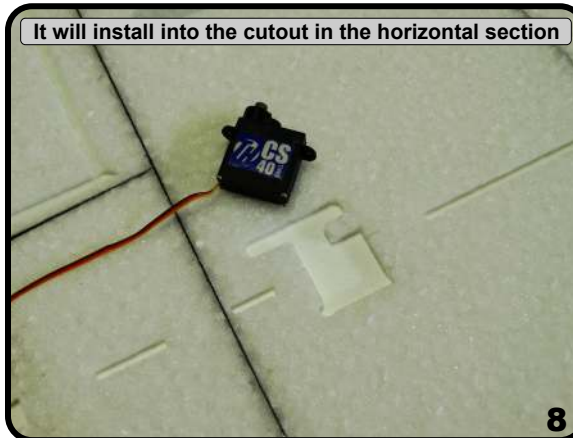
Constrain flat and let sit for a bit



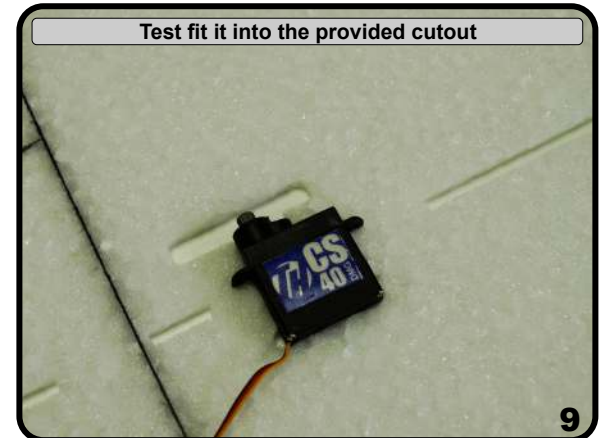
Locate the servo you will use for the elevator



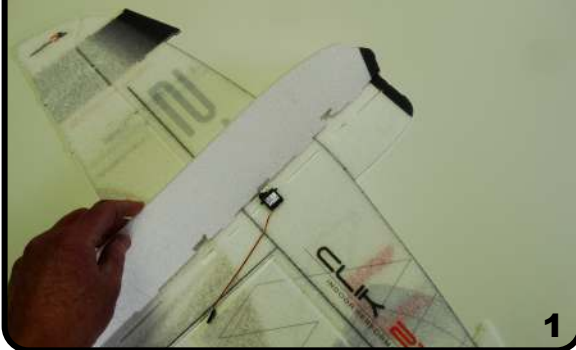
It will install into the cutout in the horizontal section



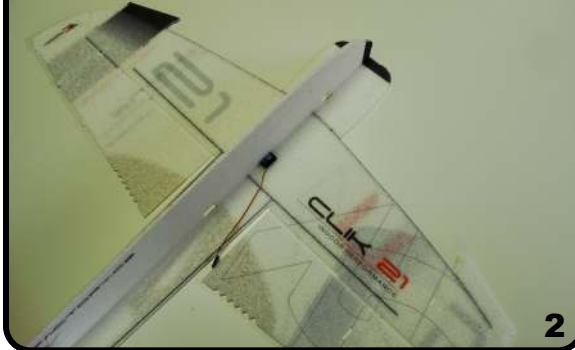
Test fit it into the provided cutout



Grab the lower vertical fuselage section...



... and test fit it as shown



Make sure the fit up is nice and square



Also note that you want the front part flush



When happy with the fit up remove and apply glue



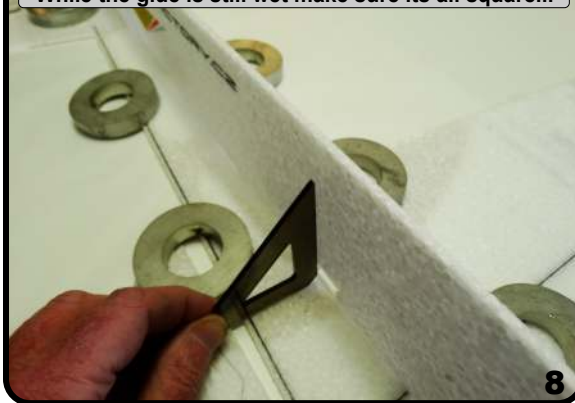
Make sure the main section is flat, and assemble



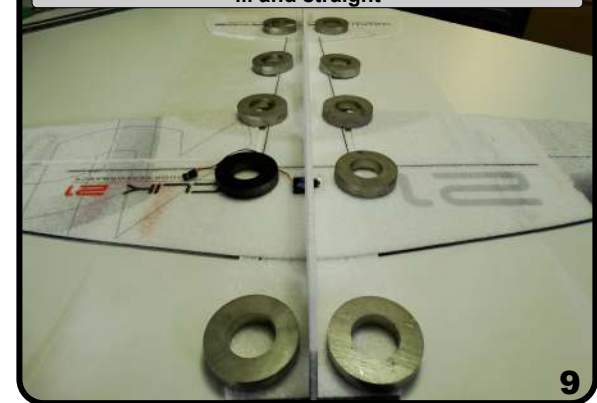
Make sure the tabs and parts are fully seated



While the glue is still wet make sure its all square...



... and straight



Double check that the front is flush and let it all dry



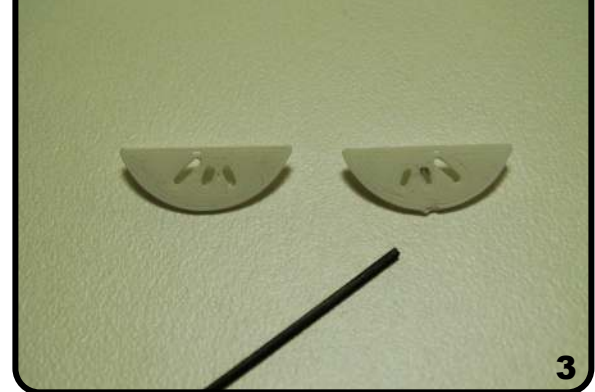
1

Locate the 4 pieces of 1x250mm round & half moons



2

Make sure the cut out in the half moons fit the rod



3

Notice the orientation of the fuselage cutouts



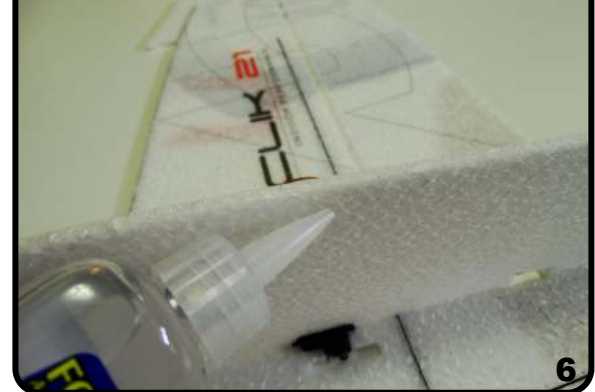
4

The half moons install with the same orientation



5

Apply some glue to the mating fuselage area



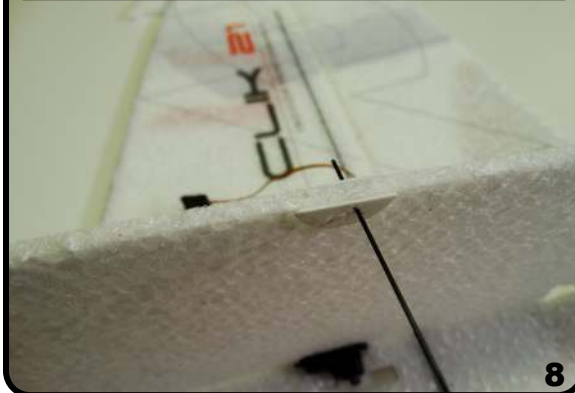
6

And attach a half moon to each side of the fuselage



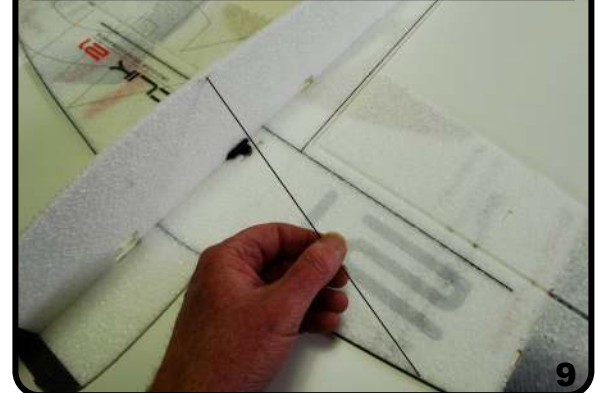
7

Use a rod to clear the slots of any glue



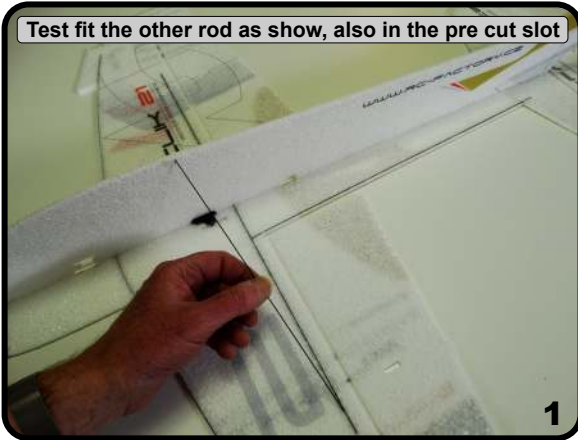
8

Fit the ends as shown - wing side has a pre cut slot



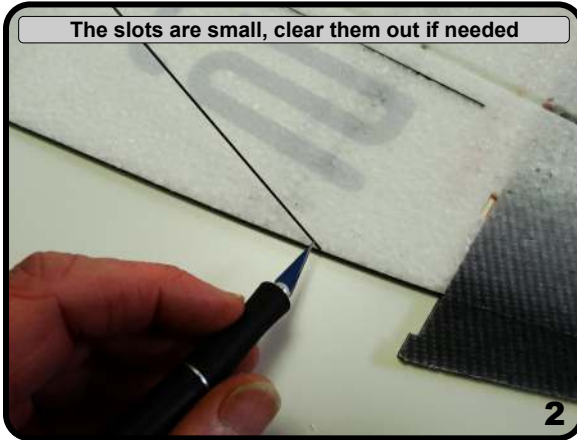
9

Test fit the other rod as show, also in the pre cut slot



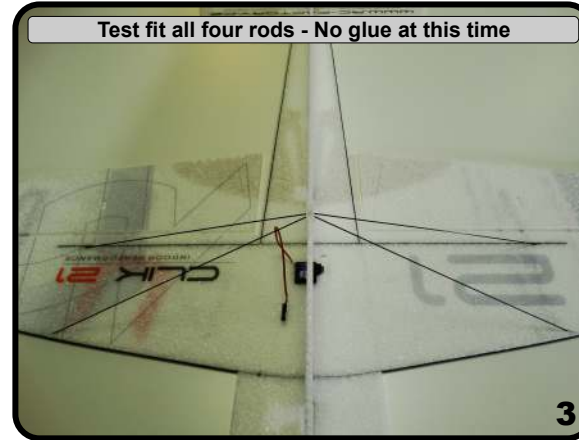
1

The slots are small, clear them out if needed



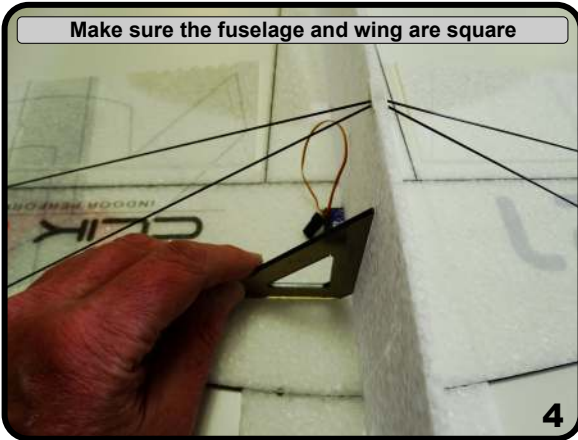
2

Test fit all four rods - No glue at this time



3

Make sure the fuselage and wing are square



4

And that the fuselage is nice and straight



5

Cans could be used to help hold things in place



6

Remove the rods and apply glue to the wing spot...



7

... and fuselage spots

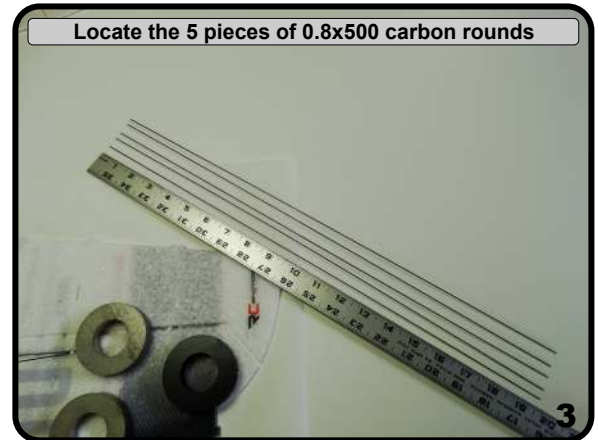


8

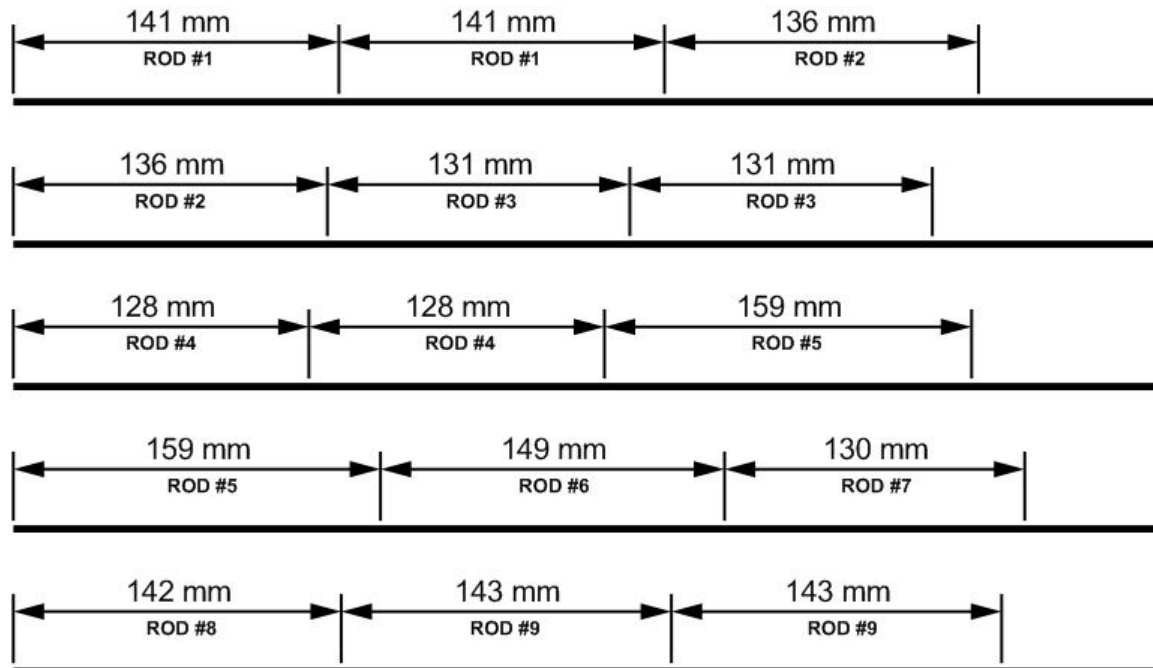
Install the rods



9

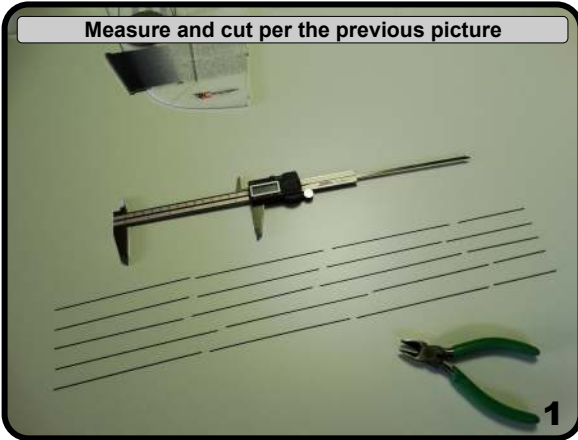


Cut Lengths and Item Numbers for 5x - 0.8x500 carbon spars



4

Measure and cut per the previous picture



Install #1 pieces as shown - No glue at this time



Install #2 pieces as shown - No glue at this time



Install #3 pieces as shown - No glue at this time



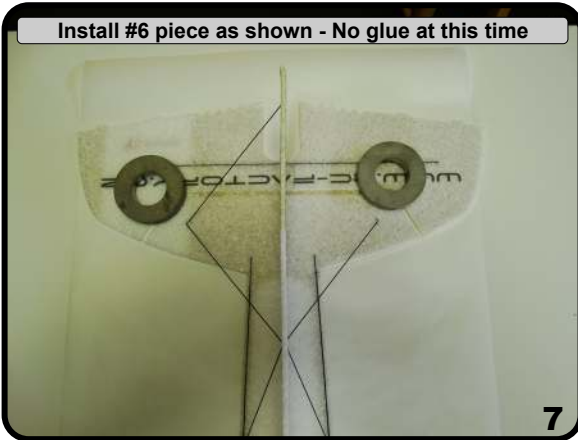
Install #4 pieces as shown - No glue at this time



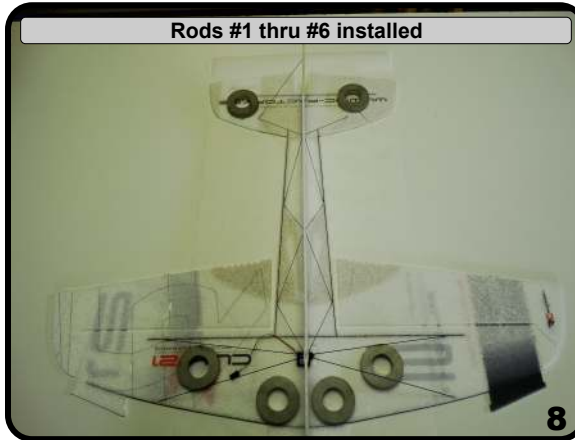
Install #5 pieces as shown - No glue at this time



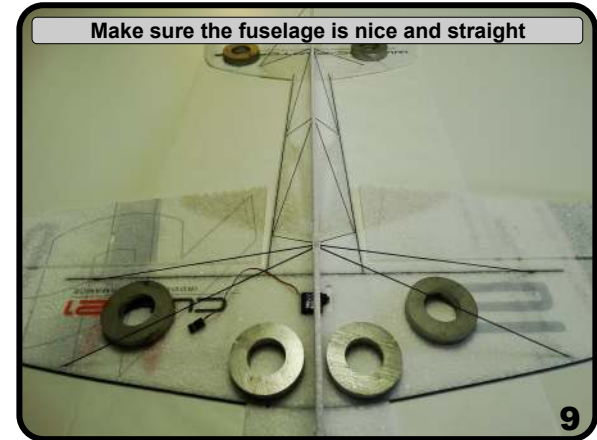
Install #6 piece as shown - No glue at this time



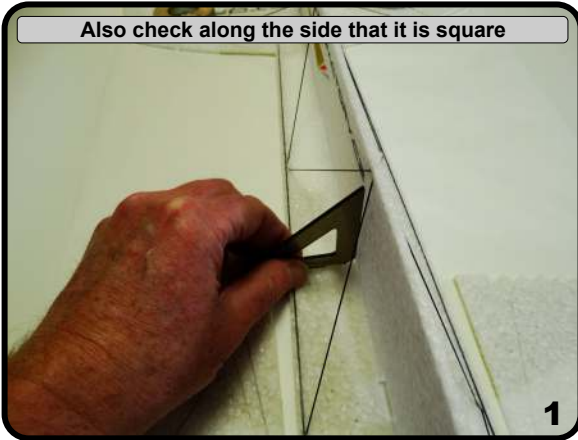
Rods #1 thru #6 installed



Make sure the fuselage is nice and straight



Also check along the side that it is square



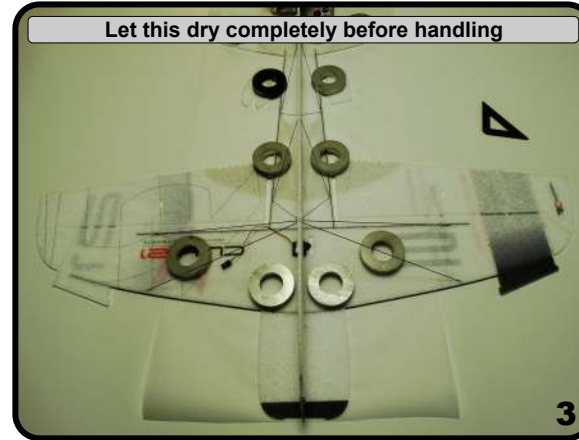
1

Once straight and square apply glue to all end points



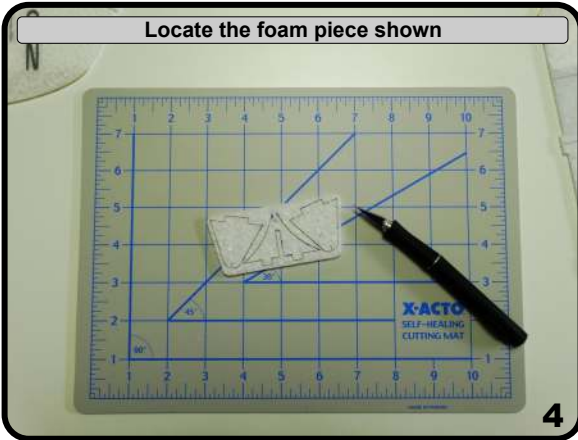
2

Let this dry completely before handling



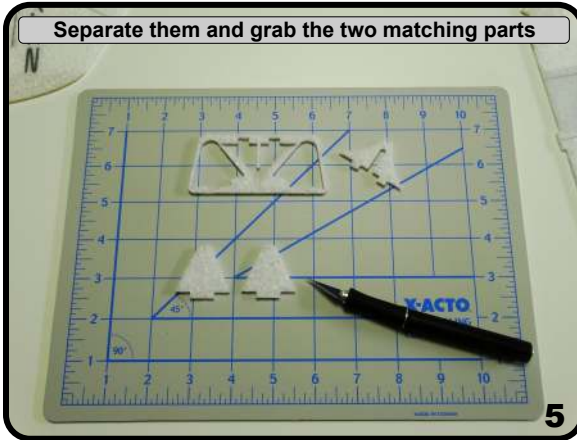
3

Locate the foam piece shown



4

Separate them and grab the two matching parts



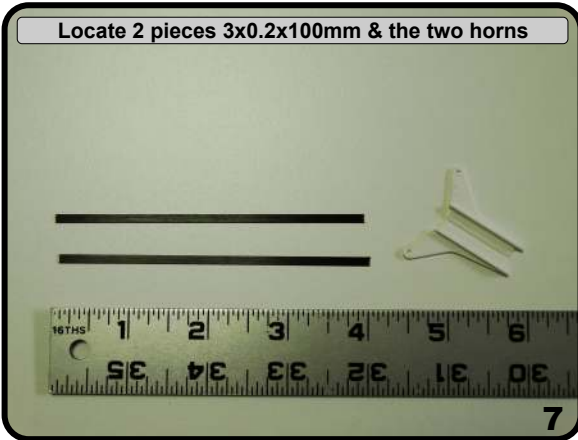
5

Locate the 4 pieces 0.8x330mm carbon rounds



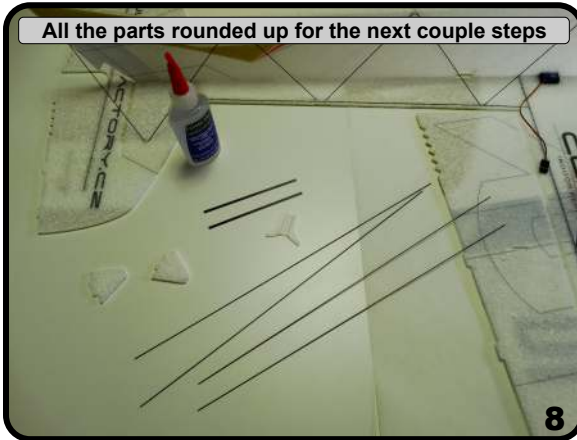
6

Locate 2 pieces 3x0.2x100mm & the two horns



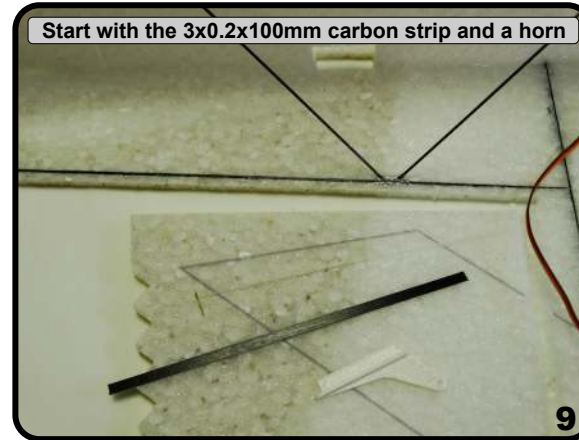
7

All the parts rounded up for the next couple steps



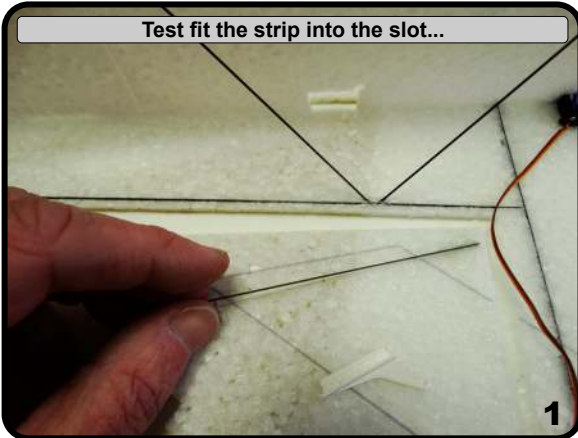
8

Start with the 3x0.2x100mm carbon strip and a horn



9

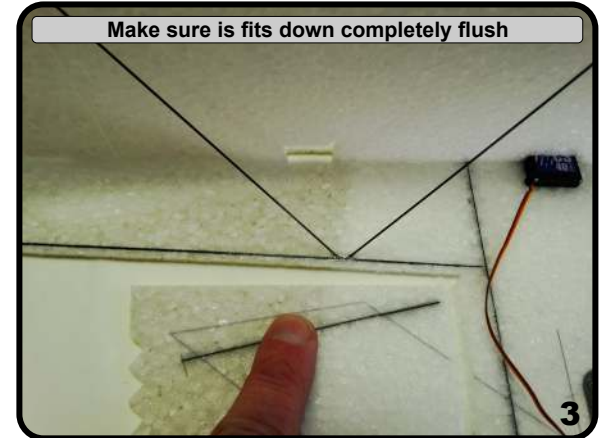
Test fit the strip into the slot...



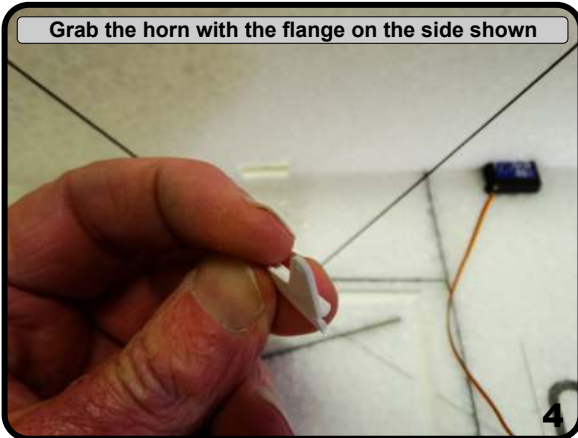
... and trim to length



Make sure it fits down completely flush



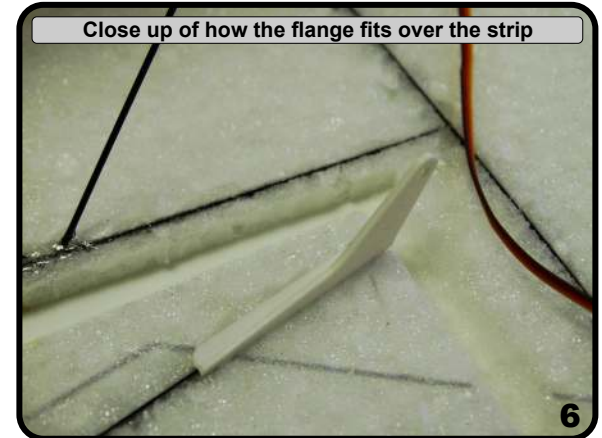
Grab the horn with the flange on the side shown



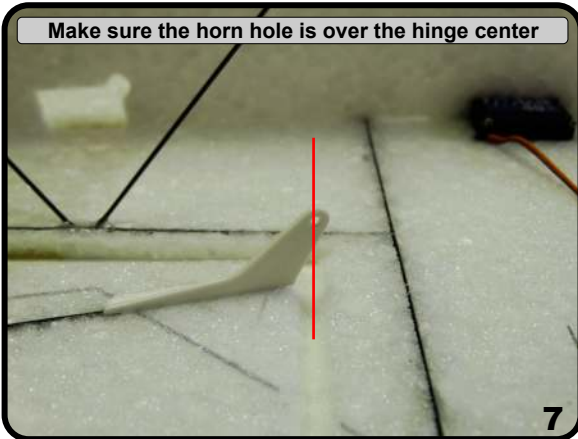
Test fit it as shown with the flange over the strip



Close up of how the flange fits over the strip



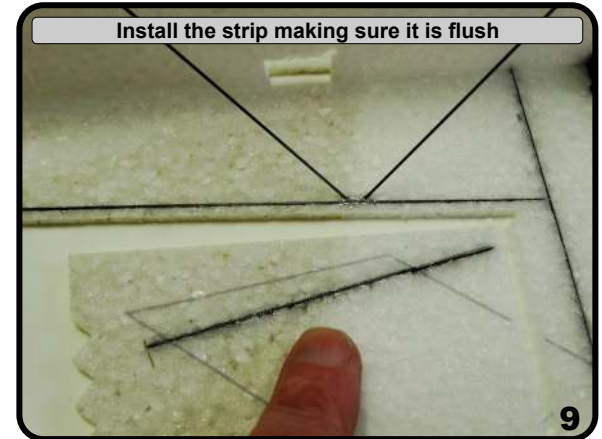
Make sure the horn hole is over the hinge center



When happy with the fit remove and apply glue



Install the strip making sure it is flush

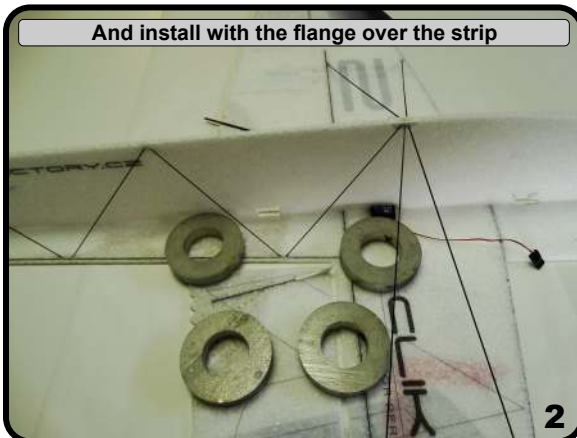


Apply some glue to the horn



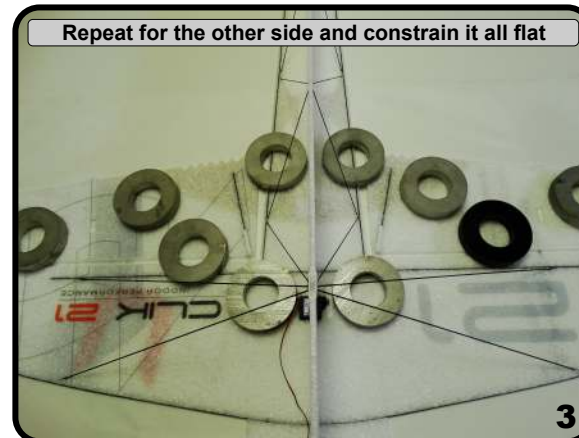
1

And install with the flange over the strip



2

Repeat for the other side and constrain it all flat



3

Grab one of the foam pieces like shown



4

Test fit and apply glue to the mating surfaces



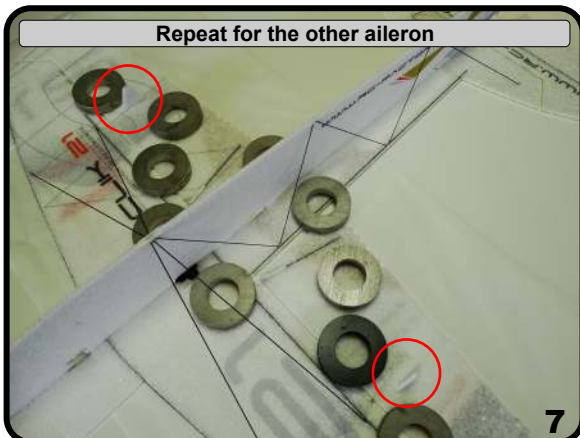
5

While the glue is still wet, make sure it is square



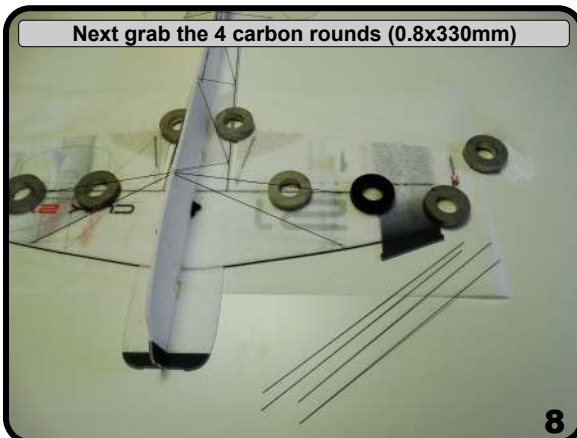
6

Repeat for the other aileron



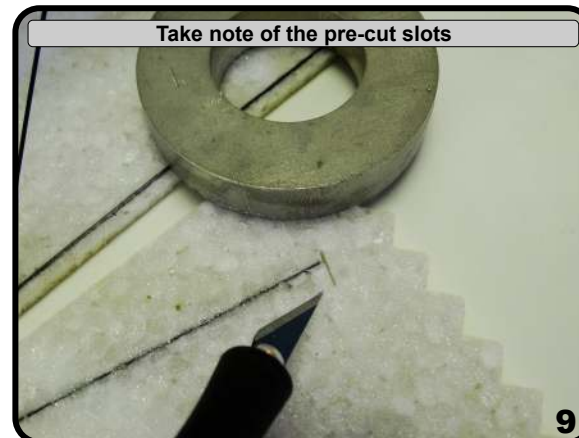
7

Next grab the 4 carbon rounds (0.8x330mm)



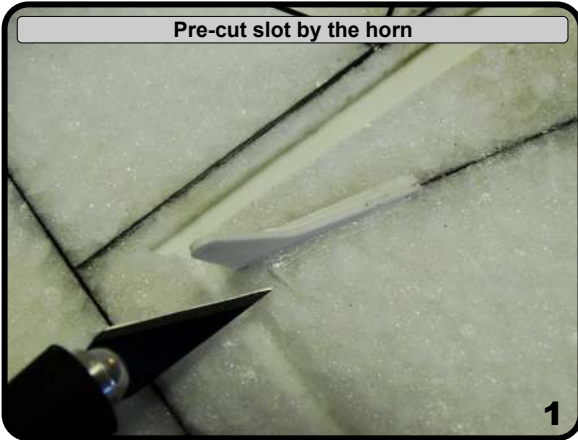
8

Take note of the pre-cut slots

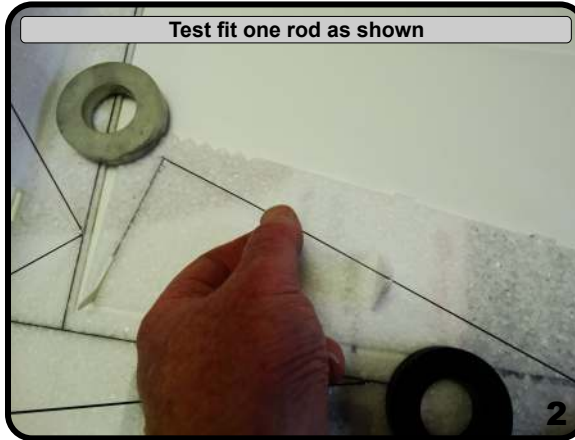


9

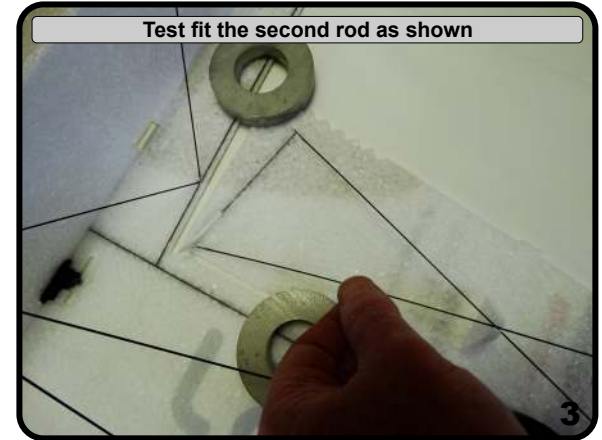
Pre-cut slot by the horn



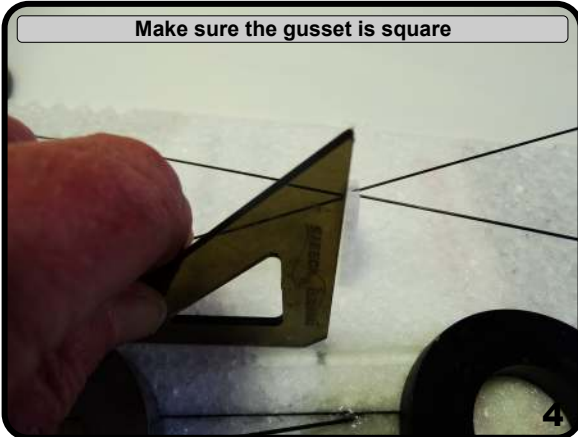
Test fit one rod as shown



Test fit the second rod as shown



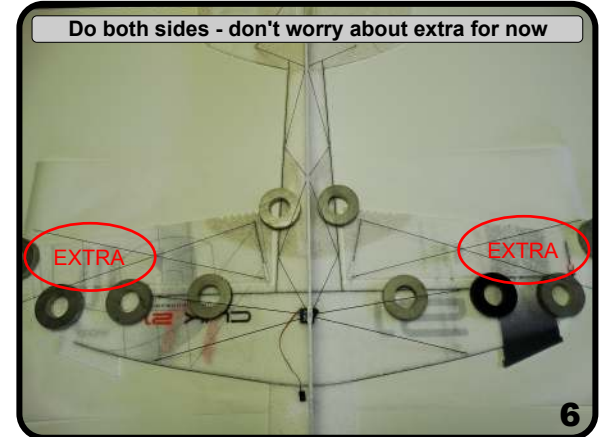
Make sure the gusset is square



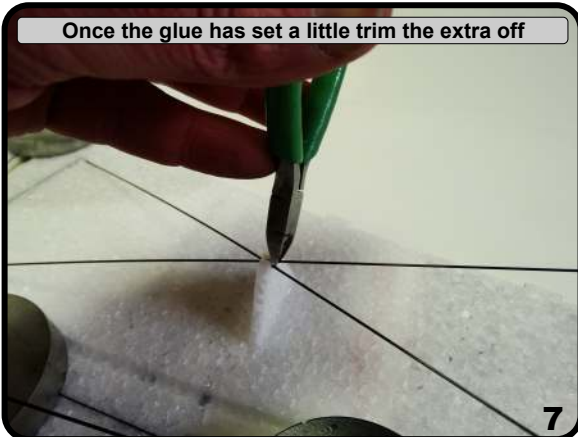
Glue the ends and where they cross over



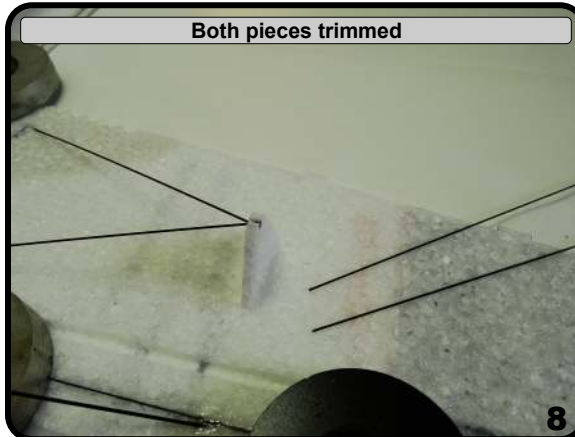
Do both sides - don't worry about extra for now



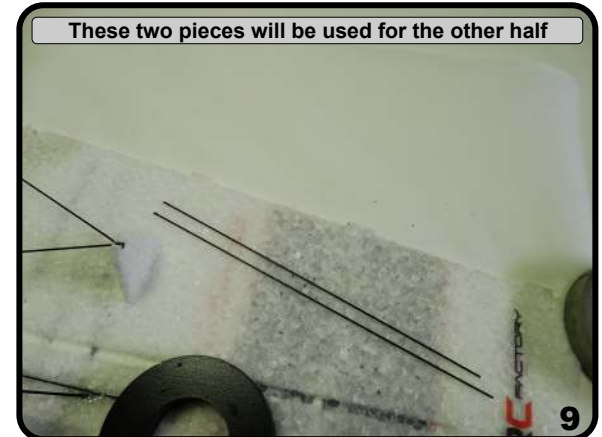
Once the glue has set a little trim the extra off



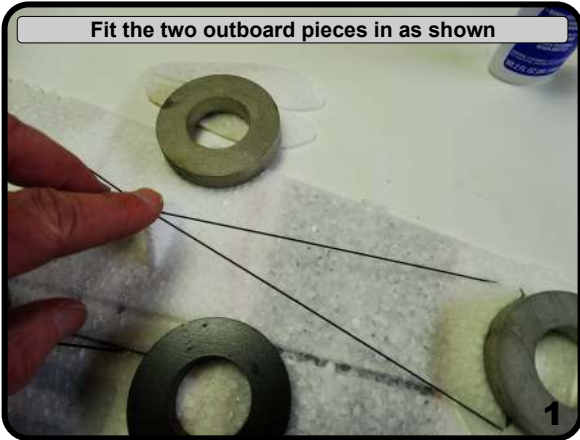
Both pieces trimmed



These two pieces will be used for the other half



Fit the two outboard pieces in as shown



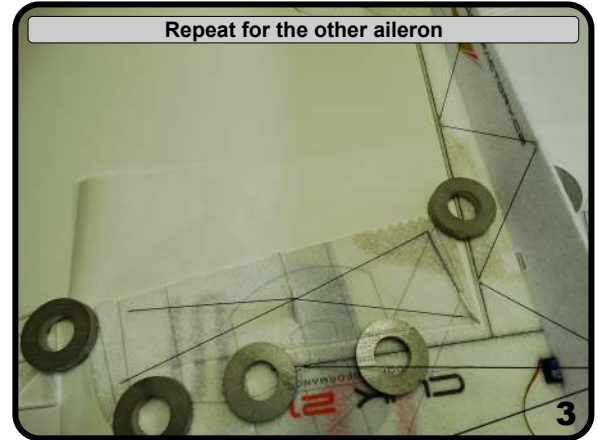
1

Next glue the ends



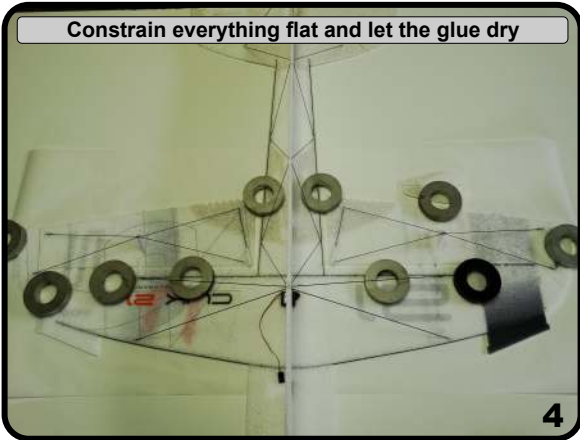
2

Repeat for the other aileron



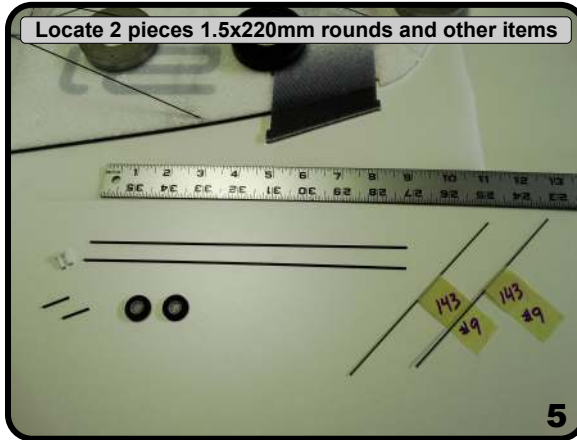
3

Constrain everything flat and let the glue dry



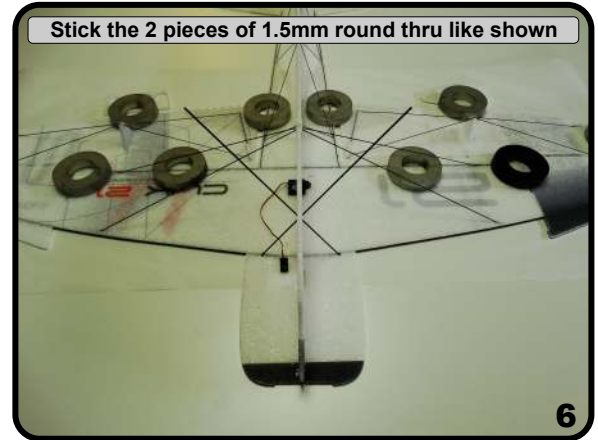
4

Locate 2 pieces 1.5x220mm rounds and other items



5

Stick the 2 pieces of 1.5mm round thru like shown



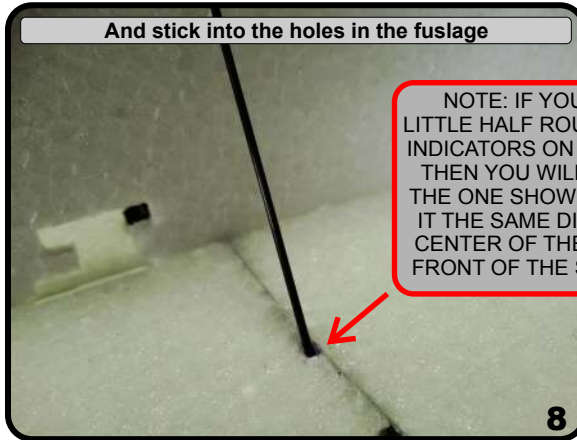
6

They cross over in the middle



7

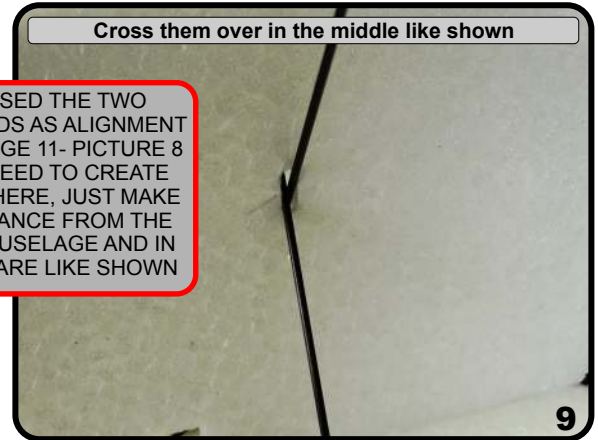
And stick into the holes in the fuselage



8

NOTE: IF YOU USED THE TWO LITTLE HALF ROUNDS AS ALIGNMENT INDICATORS ON PAGE 11- PICTURE 8 THEN YOU WILL NEED TO CREATE THE ONE SHOWN HERE, JUST MAKE IT THE SAME DISTANCE FROM THE CENTER OF THE FUSELAGE AND IN FRONT OF THE SPARE LIKE SHOWN

Cross them over in the middle like shown



9

Next is the wheel hubs and axles



1

Axle will install from this side



2

Test fit and make sure it can go all the way in



3

Test fit the other one



4

Put some glue in the hole



5

Install the axle



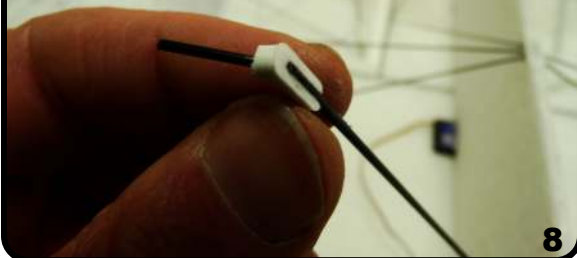
6

This "slot" is for the gear strut



7

It should slide all the way in as shown



8

Secure with some glue



9

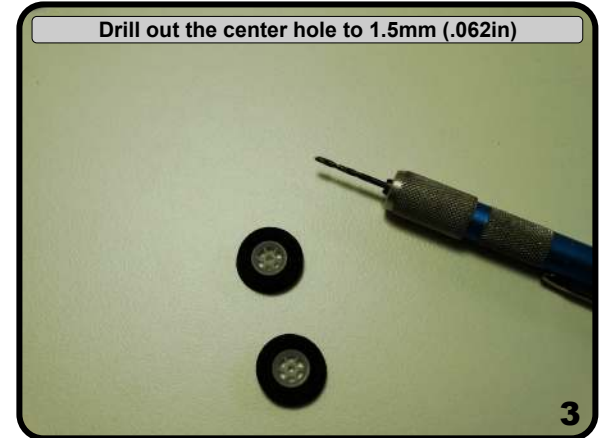
While the glue is still wet line up the axle



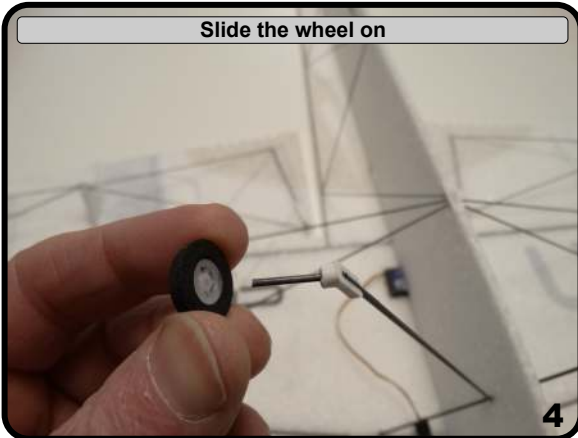
Install the hub and axle - make sure they are even



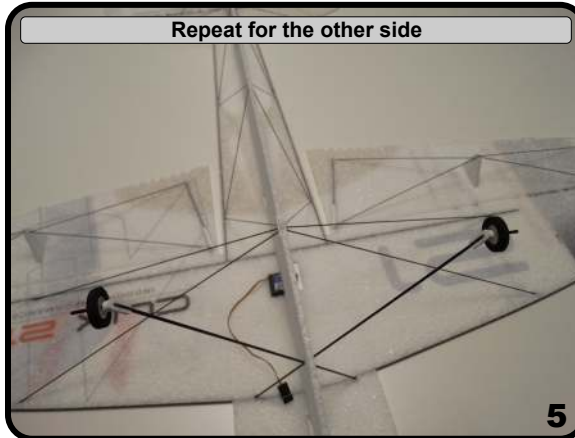
Drill out the center hole to 1.5mm (.062in)



Slide the wheel on



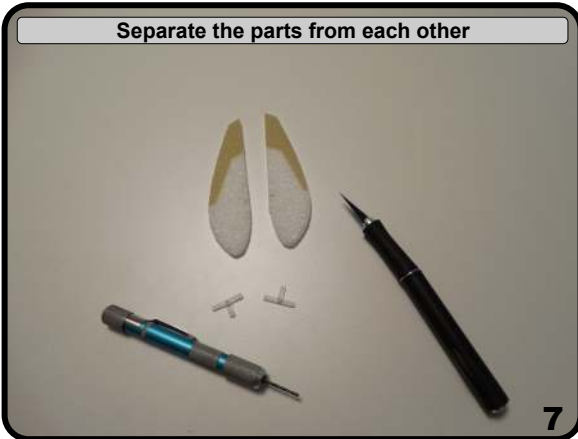
Repeat for the other side



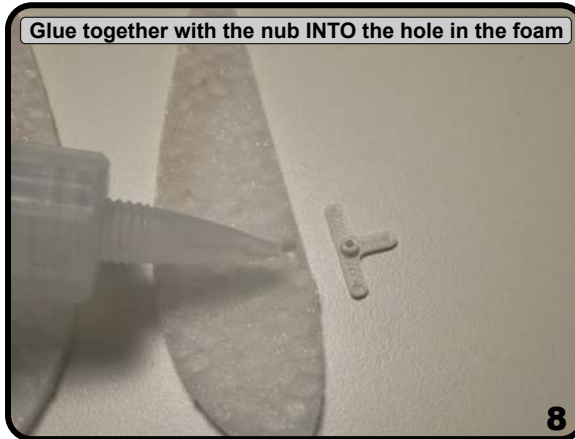
Locate the wheel pants and stiffener



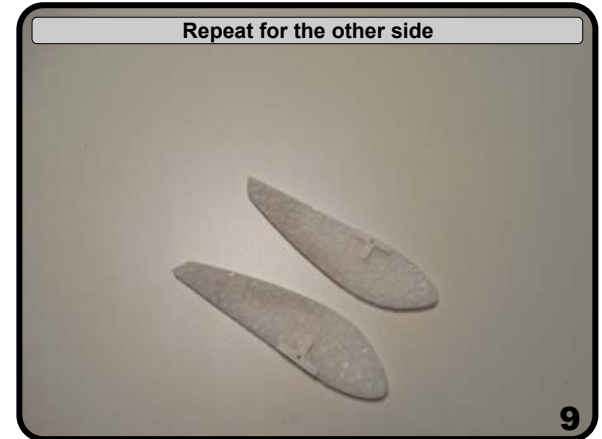
Separate the parts from each other



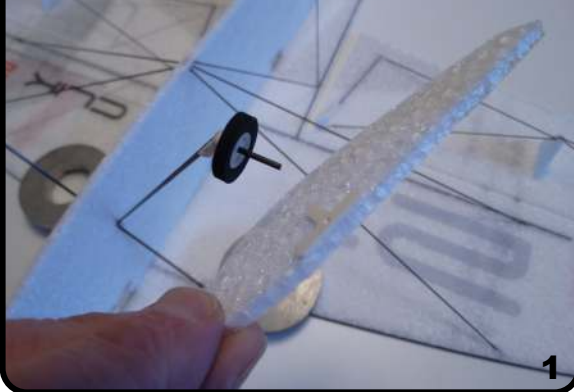
Glue together with the nub INTO the hole in the foam



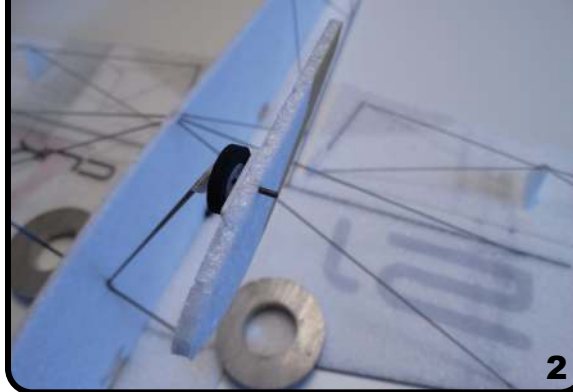
Repeat for the other side



Once it is dry install on to the axle



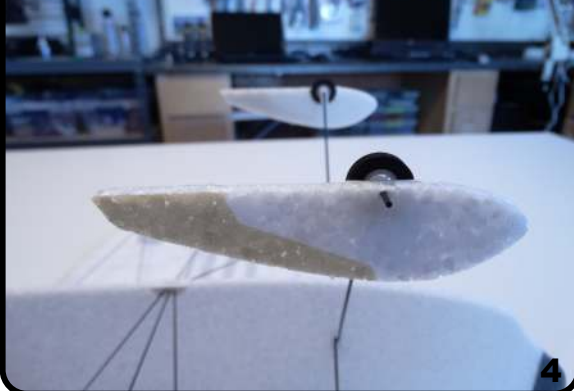
Slide all the way on to capture the wheel



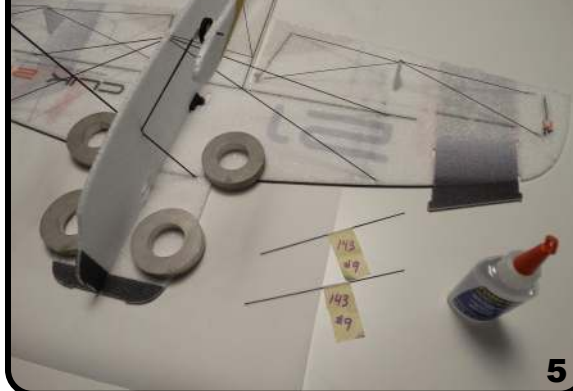
Make sure the wheel can spin and add a dab of glue



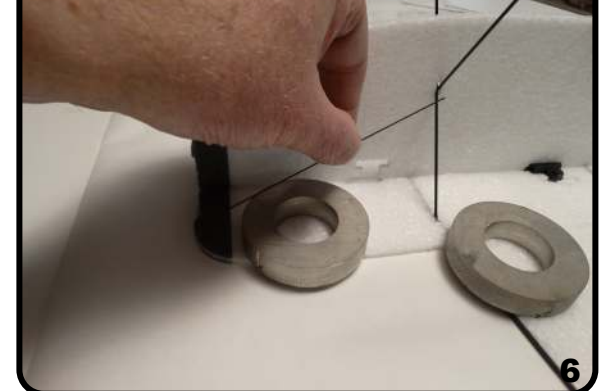
Repeat for the other side - Make them even



Next locate the two #9 carbon rounds



They go from where the struts cross to the nose



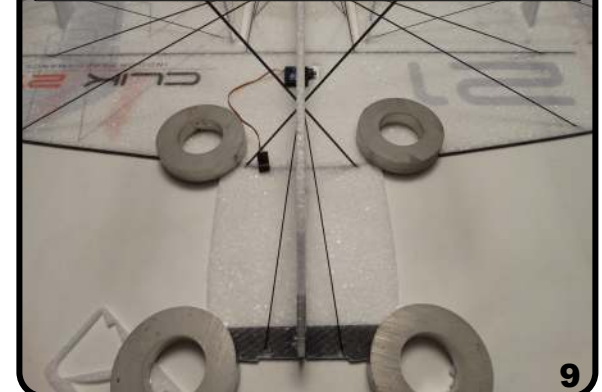
There is a small slit - enlarge it some if needed



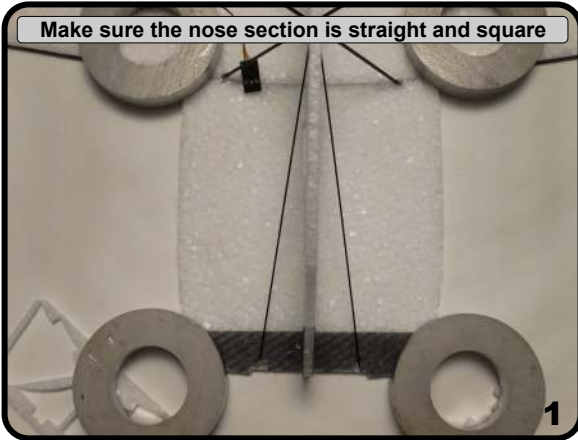
Test fit into place



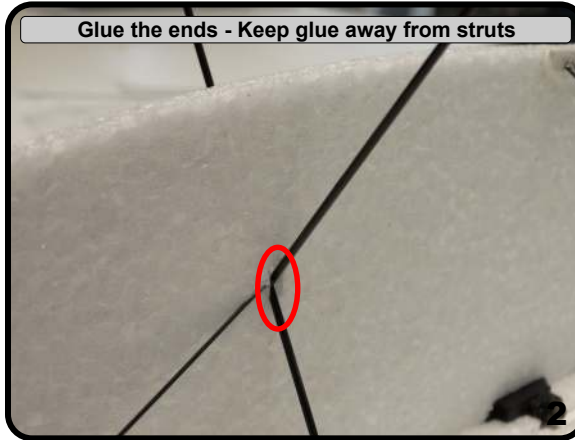
Test fit the other side



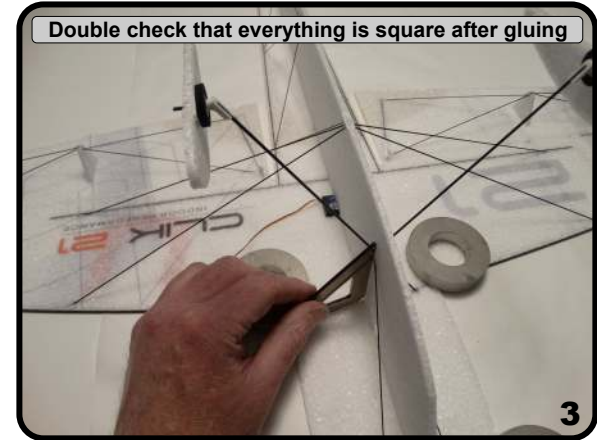
Make sure the nose section is straight and square



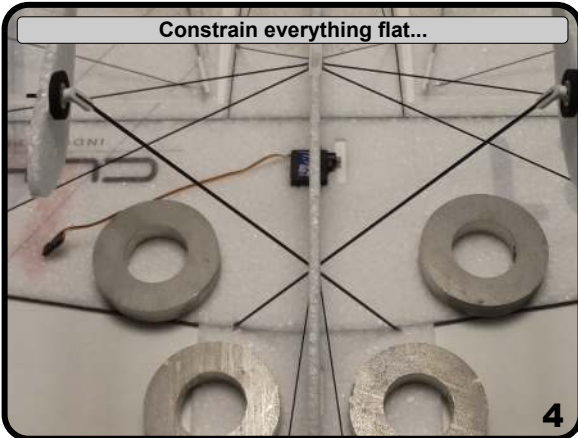
Glue the ends - Keep glue away from struts



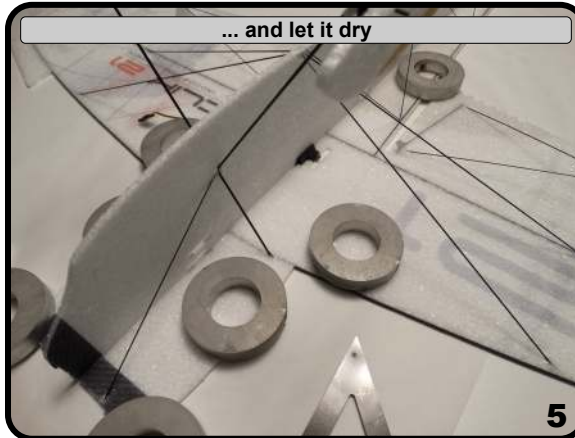
Double check that everything is square after gluing



Constrain everything flat...



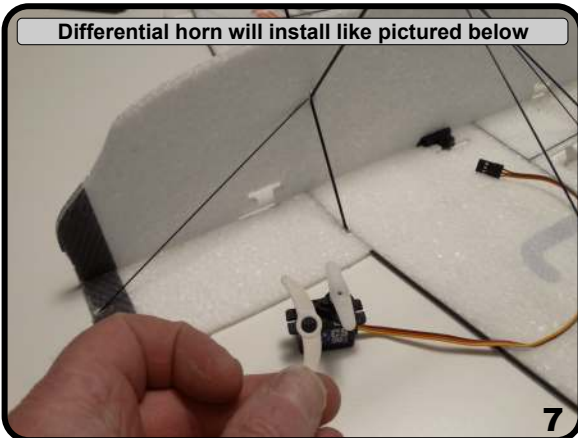
... and let it dry



Aileron servo with double and differential horn



Differential horn will install like pictured below



Put a dab of glue on the stock horn and...



...attach the Diff Horn - Keeping center holes aligned

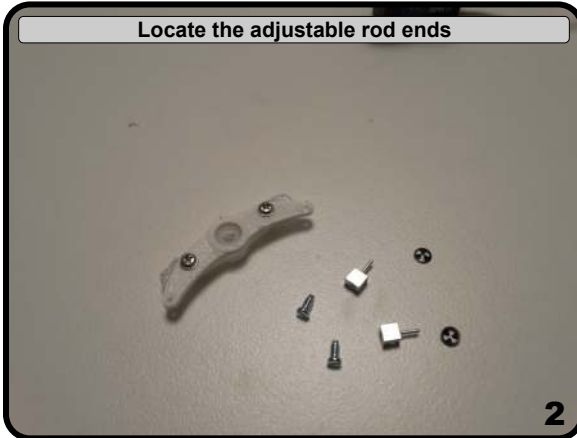


Find two small servo screws and install as shown



1

Locate the adjustable rod ends



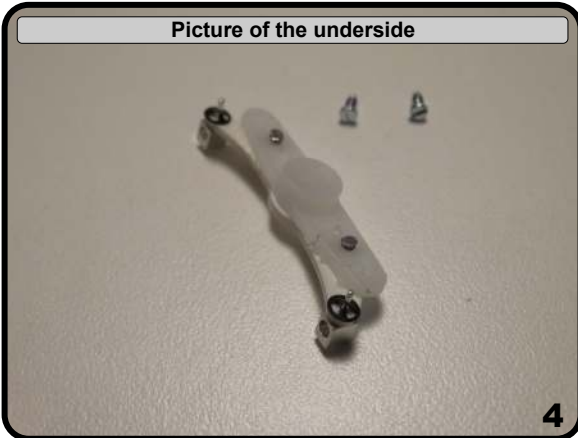
2

Install them as shown below



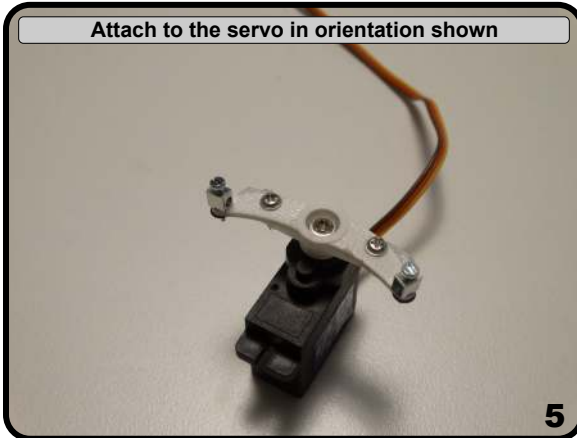
3

Picture of the underside



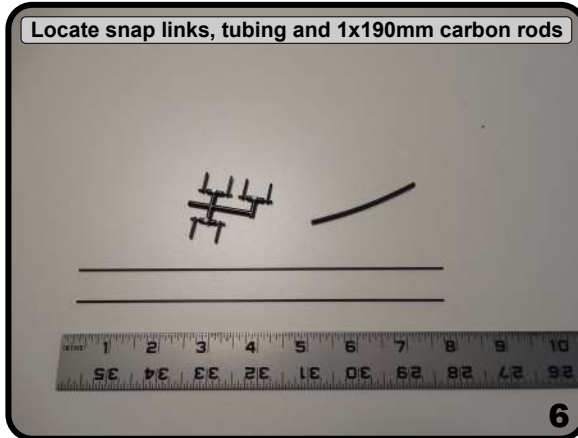
4

Attach to the servo in orientation shown



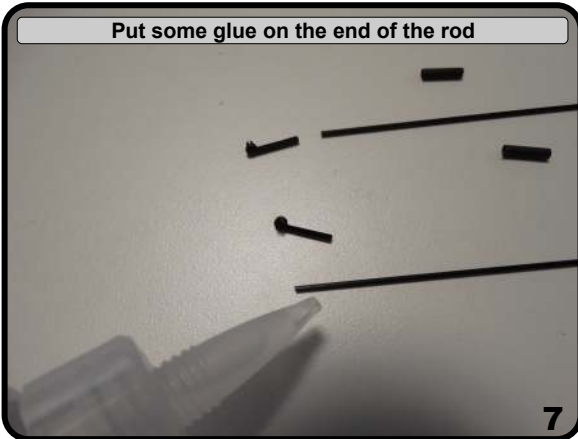
5

Locate snap links, tubing and 1x190mm carbon rods



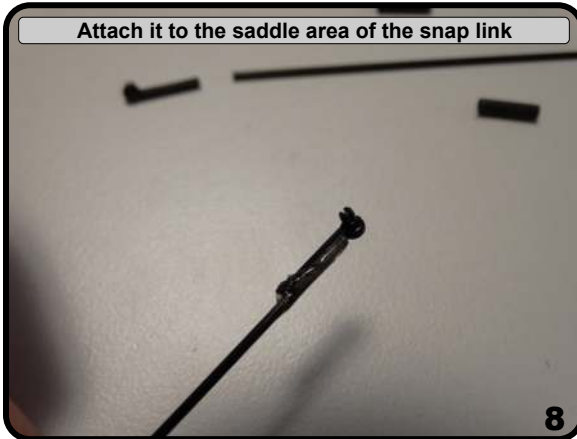
6

Put some glue on the end of the rod



7

Attach it to the saddle area of the snap link



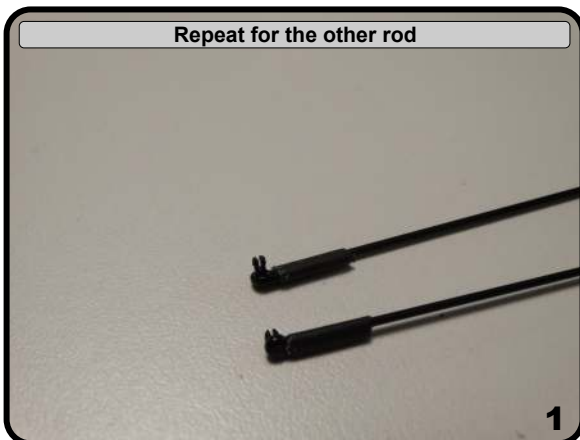
8

Slide a short piece of shrink tubing over - let dry

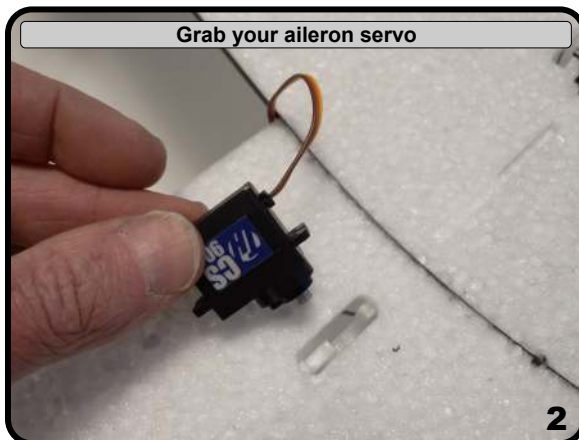


9

Repeat for the other rod



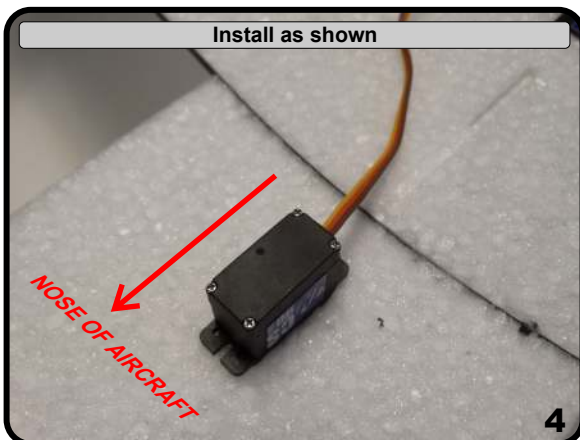
Grab your aileron servo



If needed adjust the size of the cut out so it will fit



Install as shown



Make sure there is clearance on the other side too



Secure with a bead of FoamTac



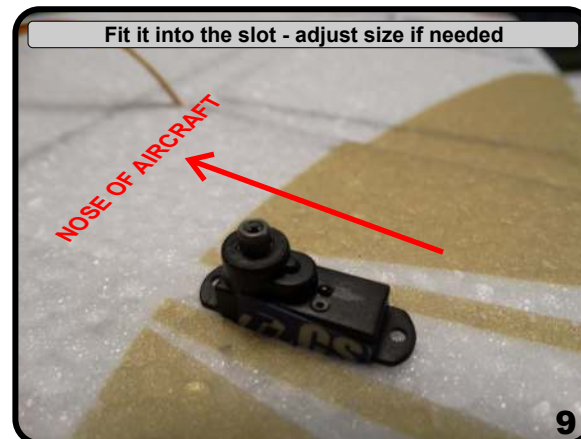
View of aileron servo from the front of aircraft



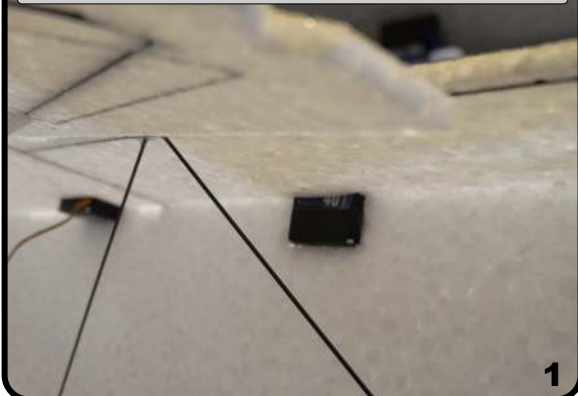
Grab the rudder servo you will be using



Fit it into the slot - adjust size if needed



Make sure there is clearance underneath as well



1

Locate the upper fuselage and canopy pieces



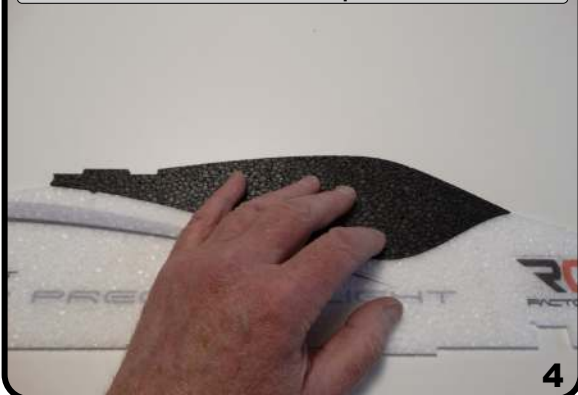
2

Apply a bead of FoamTac to the canopy



3

Attache the two pieces



4

Test fit the upper section to the fuselage assembly



5

Make sure all the tabs can fully engage



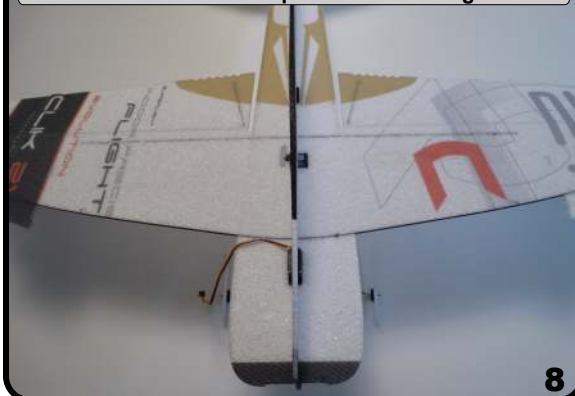
6

Trim a little around the servos if needed



7

Make sure the fit up is nice and straight



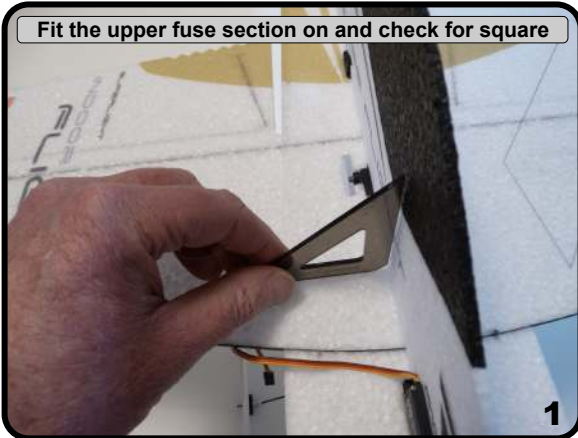
8

Remove and apply glue to the mating surfaces



9

Fit the upper fuse section on and check for square



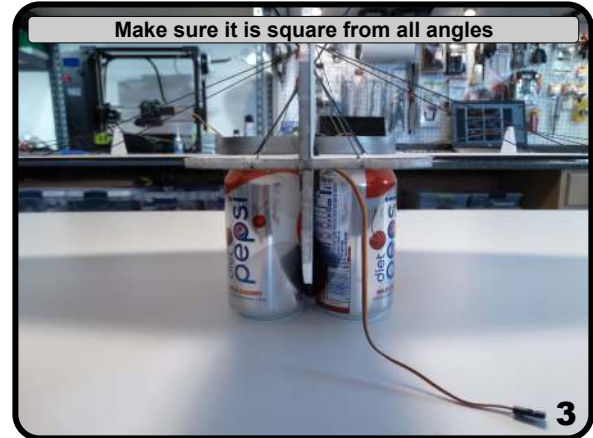
1

Soda Cans can be used to hold everything in place



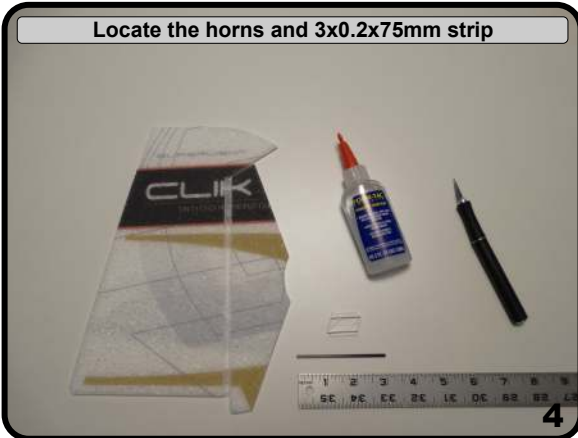
2

Make sure it is square from all angles



3

Locate the horns and 3x0.2x75mm strip



4

Test fit in the slot the secure with glue



5

Make sure it is all the way flush



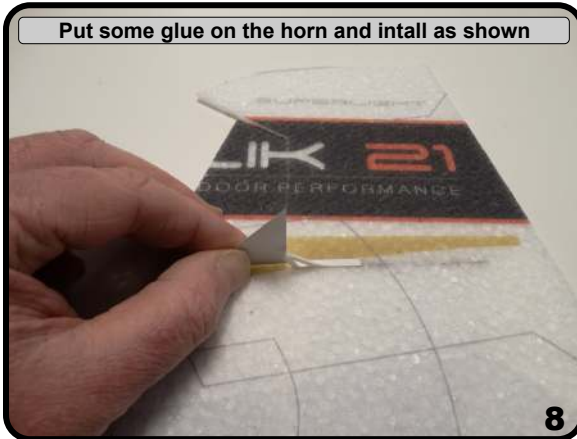
6

Next take the horn as shown below



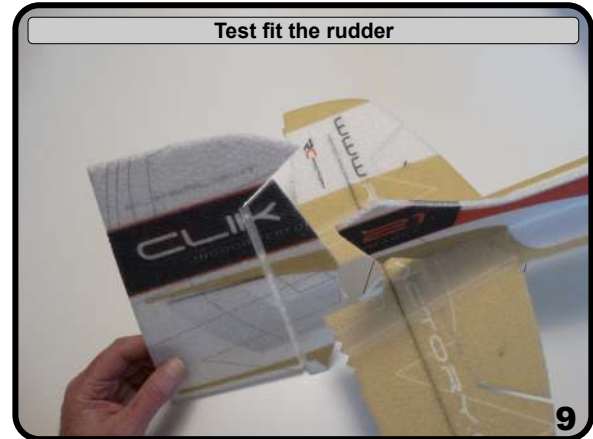
7

Put some glue on the horn and intall as shown



8

Test fit the rudder



9

Apply glue to the mating surfaces



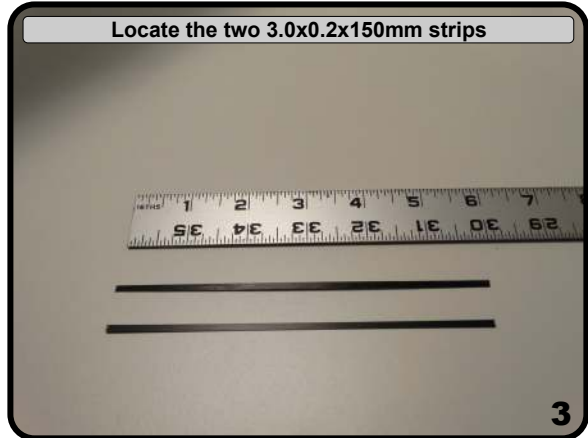
1

Mate the parts together and let glue dry



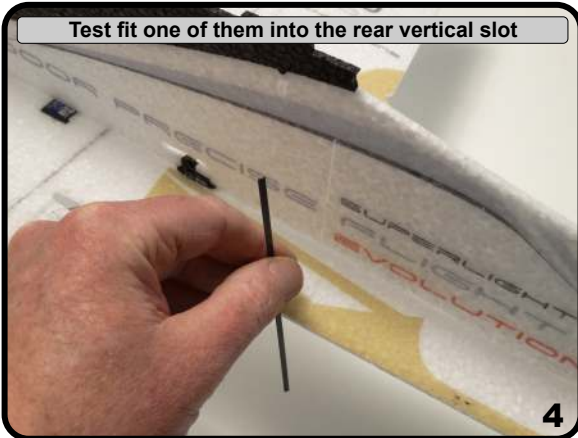
2

Locate the two 3.0x0.2x150mm strips



3

Test fit one of them into the rear vertical slot



4

Should go all the way top to bottom and be flush



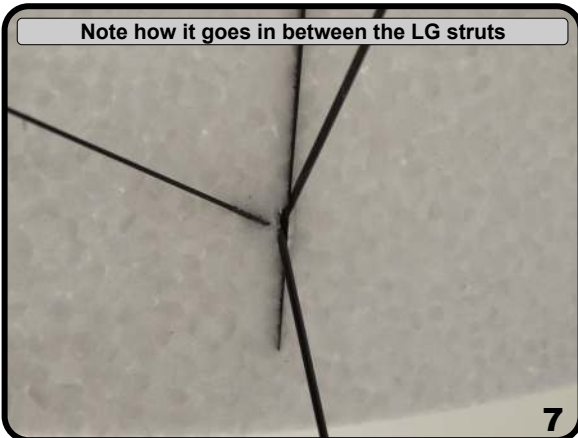
5

Repeat for the front position



6

Note how it goes in between the LG struts



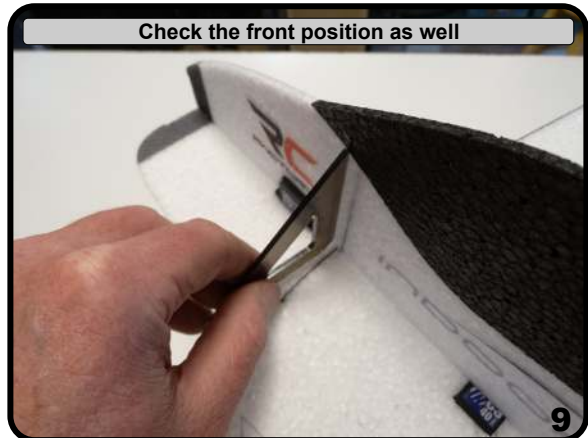
7

Check that everything is square



8

Check the front position as well



9

When happy with fit remove and glue them both in



1

Front and rear done - double check for square



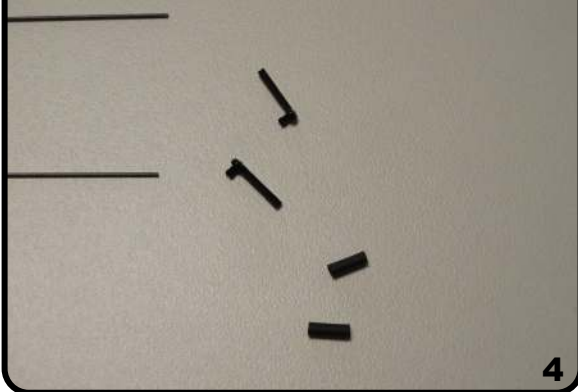
2

Get 2 snap links - tubing - two 0.8x500mm rods



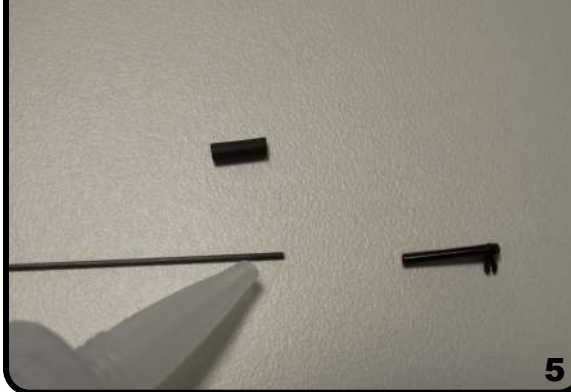
3

Tubing is cut from the left over from other rods



4

Coat the end of the rod with FoamTac



5

Attach link in saddle area, slide tubing on and heat



6

Repeat for the other rod



7

Find a the remaining control horn the rod guides



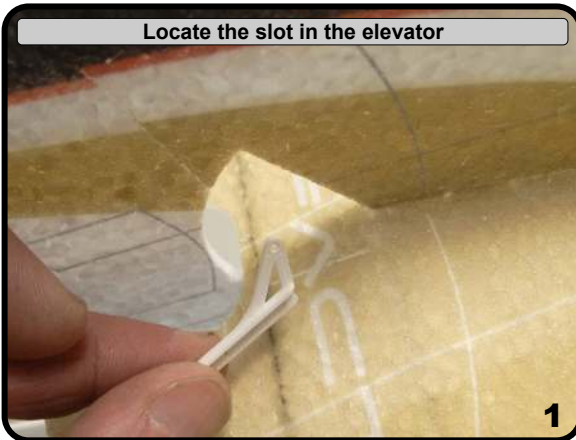
8

Separate the guides



9

Locate the slot in the elevator



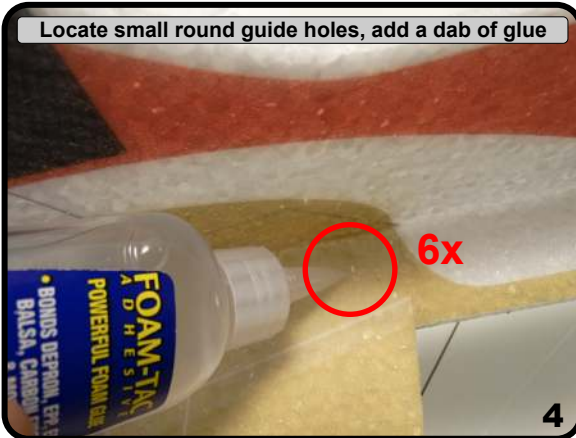
Add some glue to the slit...



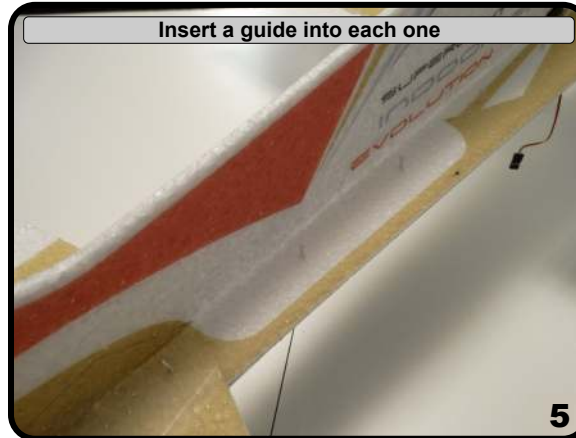
... install the horn with hole over the hinge line



Locate small round guide holes, add a dab of glue



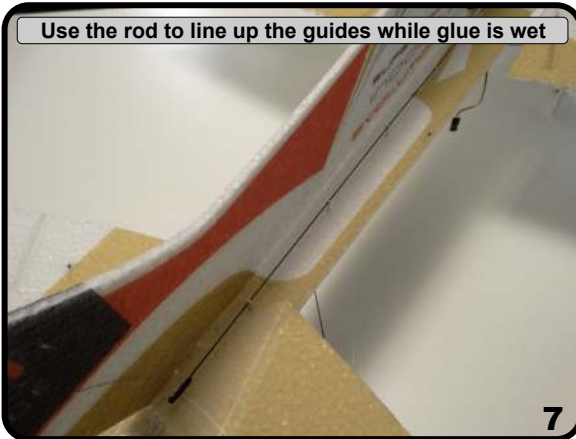
Insert a guide into each one



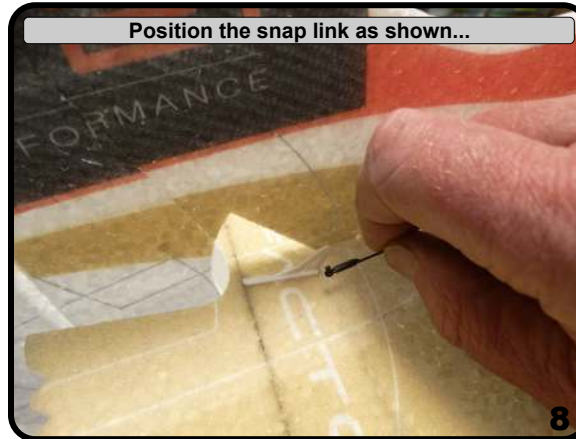
Grab one of the rods and slide thru the guides



Use the rod to line up the guides while glue is wet



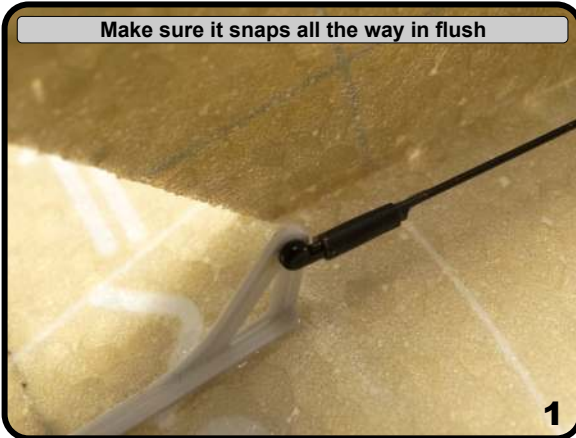
Position the snap link as shown...



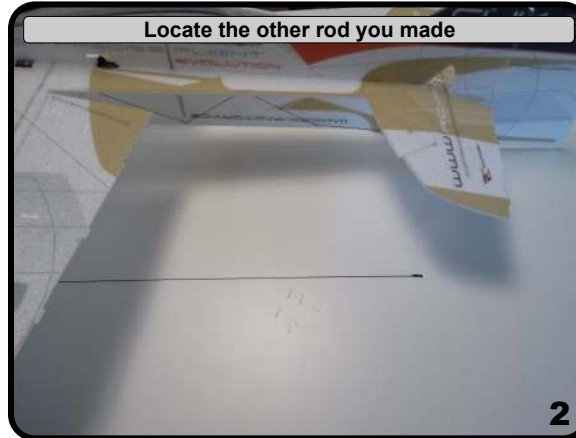
... and snap into the control horn hole with fingers



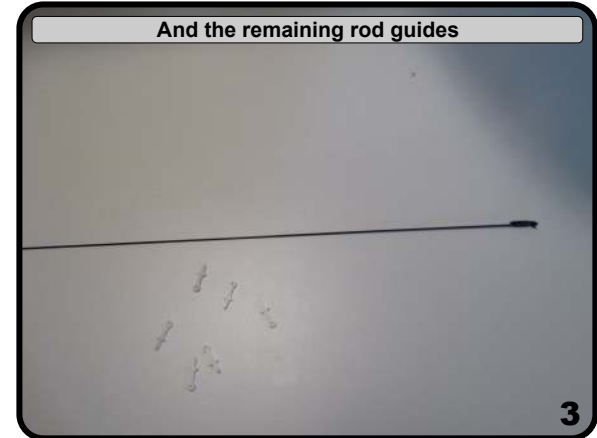
Make sure it snaps all the way in flush



Locate the other rod you made



And the remaining rod guides



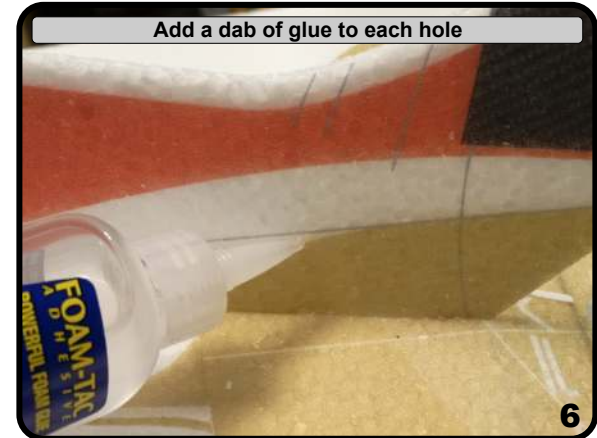
Locate the holes in the upper vertical fuse section



There should be a total of 6 holes



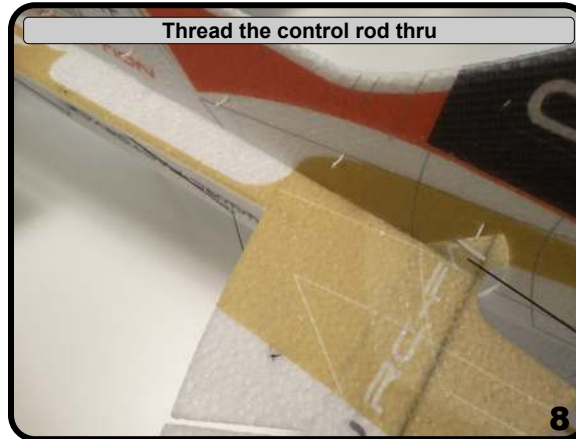
Add a dab of glue to each hole



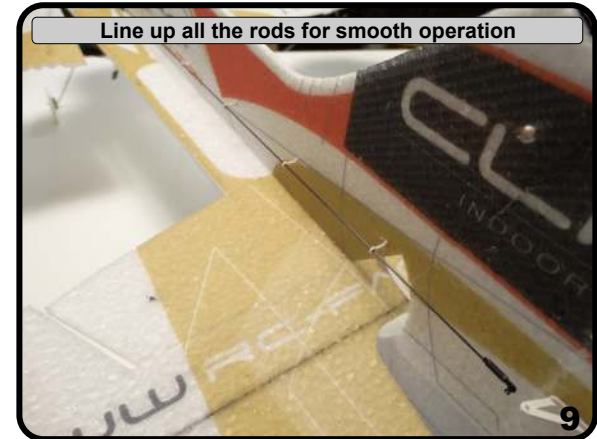
Install a rod guide into each



Thread the control rod thru



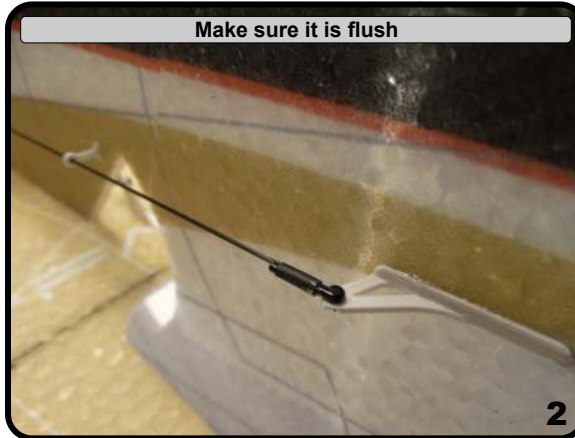
Line up all the rods for smooth operation



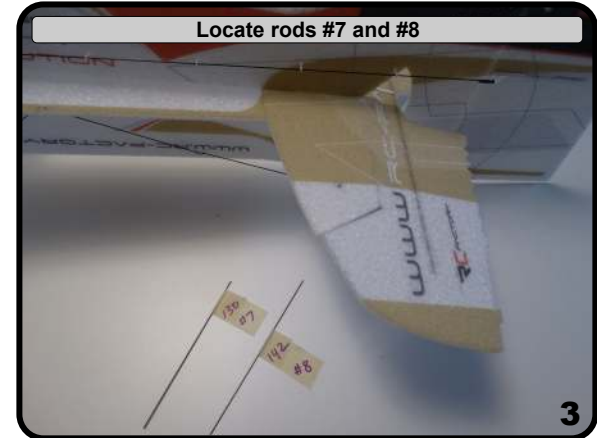
Snap the link into the control horn hole



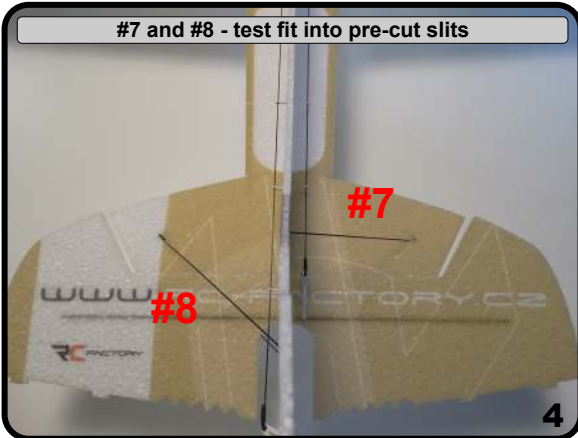
Make sure it is flush



Locate rods #7 and #8



#7 and #8 - test fit into pre-cut slits



Add a dab of glue to the top of #7



Add a dab of glue to the top of #8, let them both dry



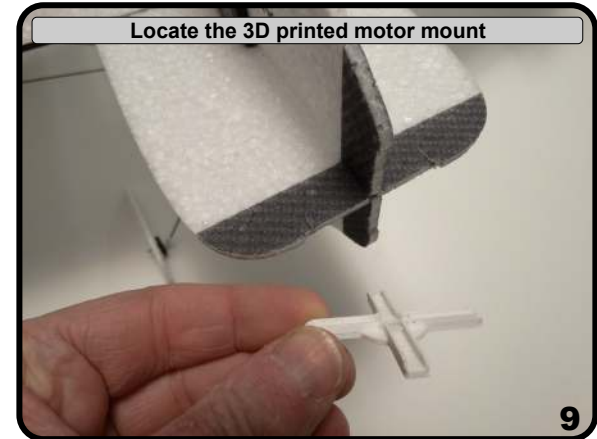
Add a dab of glue to the bottom of each...



.. and adjust so that the rudder is nice and straight



Locate the 3D printed motor mount



Add some glue to the back side of the mount...



1

... and the mating surface of the nose



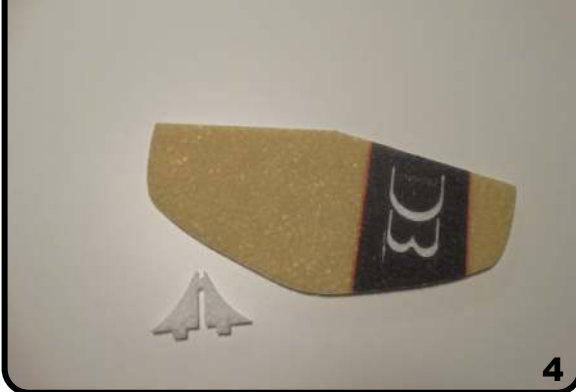
2

Press the mount onto the front as shown



3

Locate the two parts shown



4

Separate out the scrap area



5

Add some glue to the mating surfaces



6

Bring the pieces together and check for square



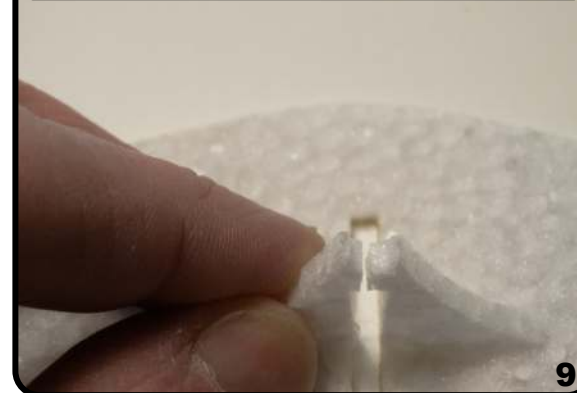
7

With a sharp hobby knife slit the top tab



8

Top tab slit

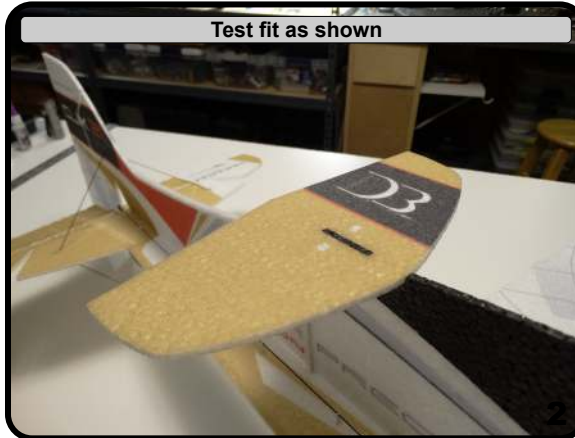


9

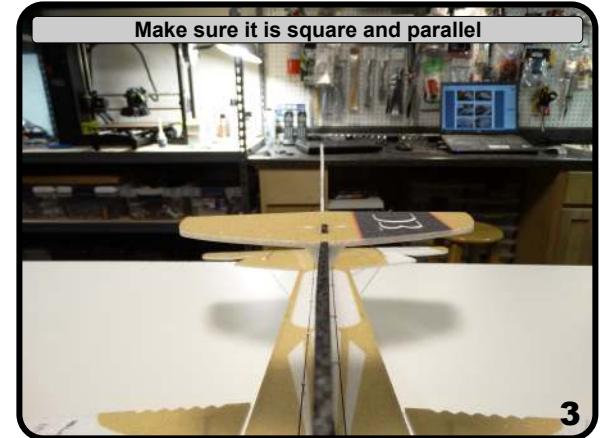
Cantilizer fits to the back of the canopy



Test fit as shown



Make sure it is square and parallel

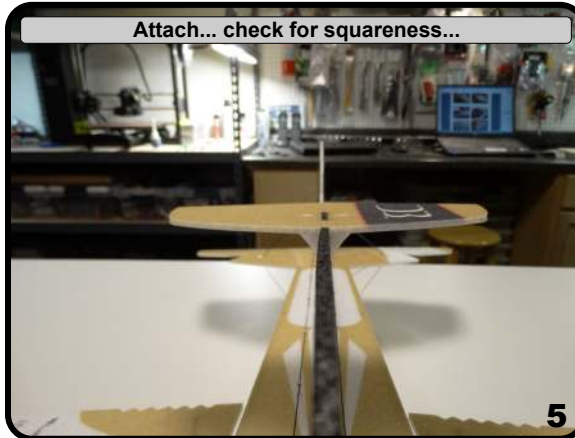


When happy with the fit up, glue mating surfaces

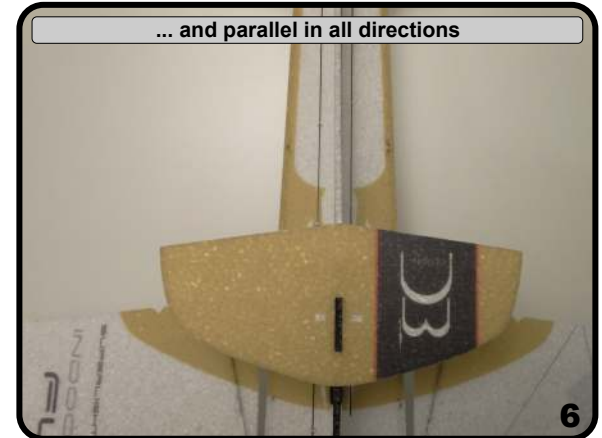


4

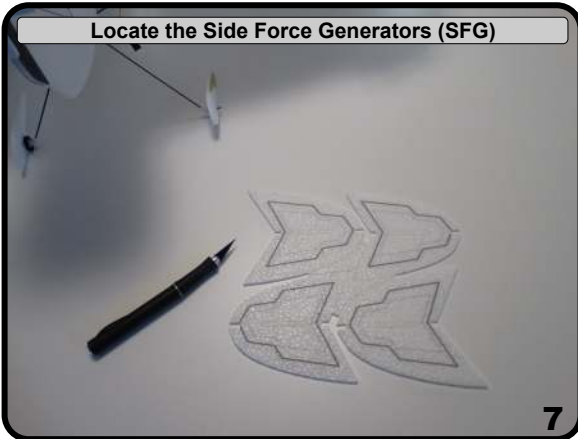
Attach... check for squareness...



... and parallel in all directions

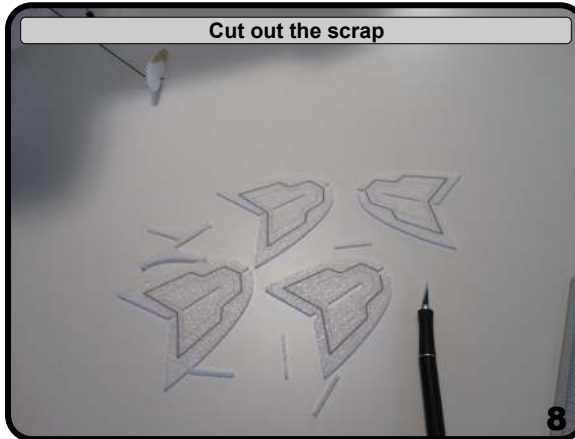


Locate the Side Force Generators (SFG)



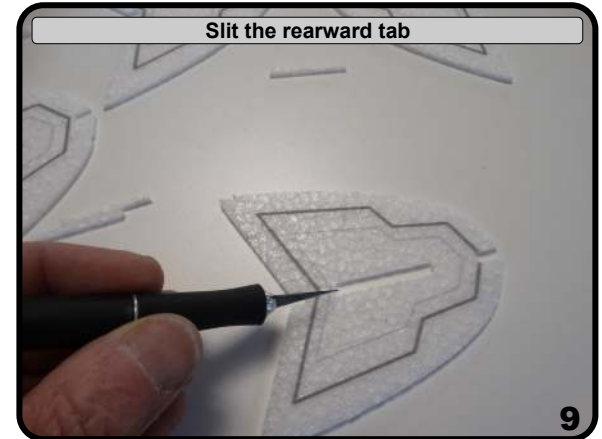
7

Cut out the scrap



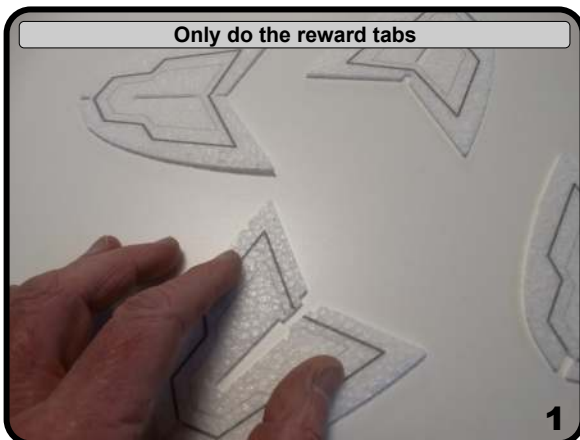
8

Slit the rearward tab



9

Only do the reward tabs



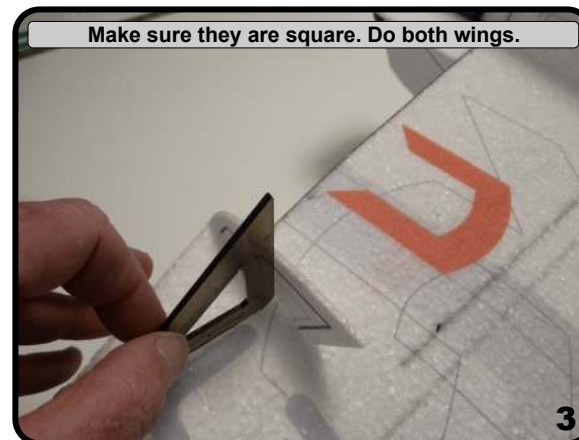
1

Glue them on. Larger one closer to the wing tip



2

Make sure they are square. Do both wings.



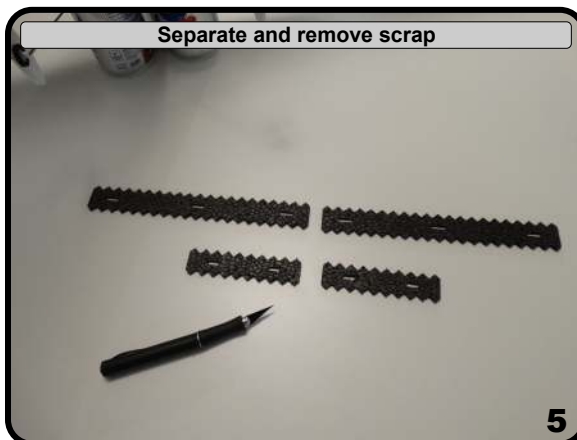
3

Locate the trailing edge fences



4

Separate and remove scrap



5

Glue the longer one onto the aileron trailing edge



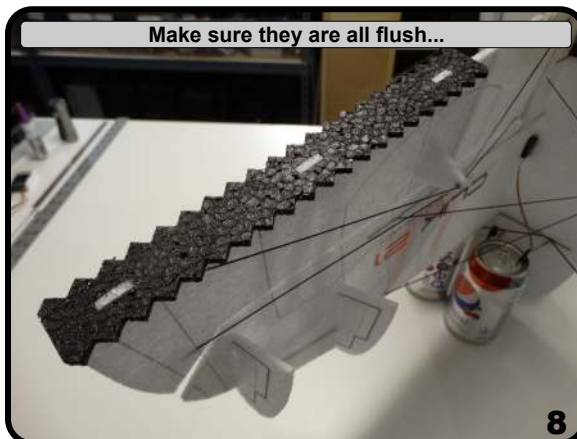
6

And the shorter one to the elevator trailing edge



7

Make sure they are all flush...



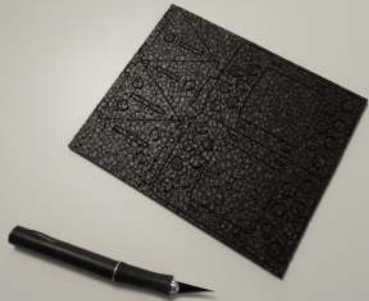
8

... and square to the control surface



9

Locate the sheet shown



1

Separate out and remove scrap



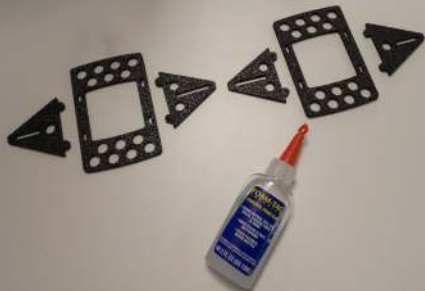
2

Clear/Cut the holes shown in the wing



3

There is an inner and out gusset, apply glue..



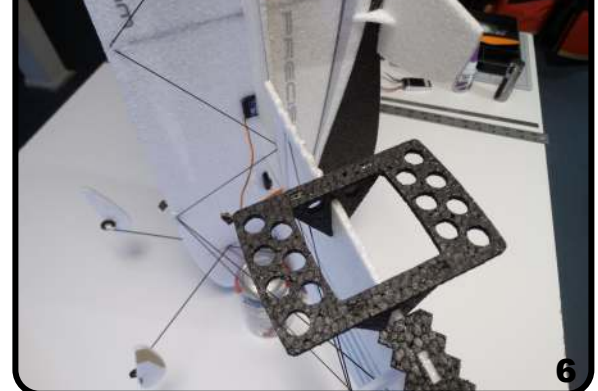
4

... and stick together making a left & right assembly



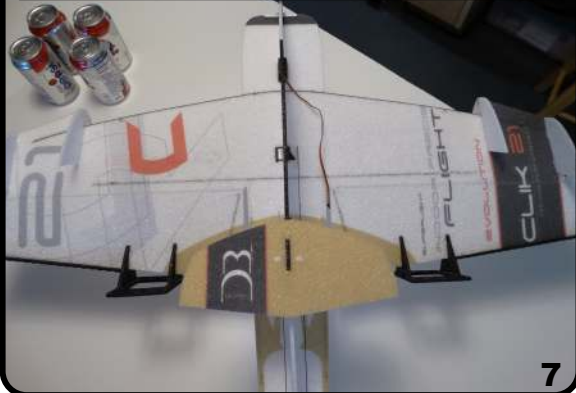
5

Attach as shown



6

Make sure they are perpendicular to flight direction



7

Locate the hardware for the tail servos



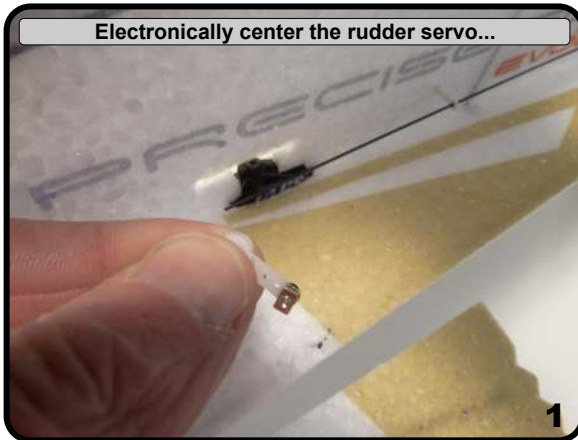
8

Build the arms like shown



9

Electronically center the rudder servo...



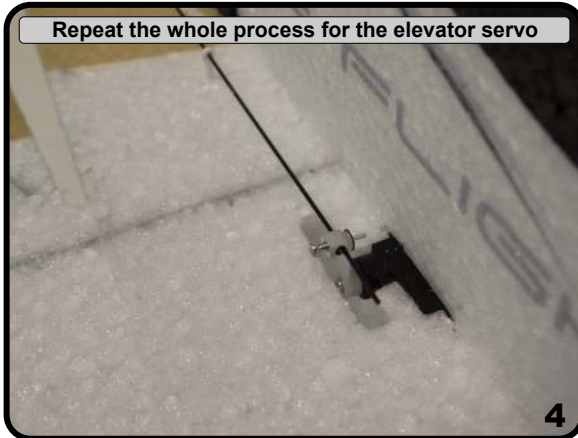
... thread control rod thru and mount to servo



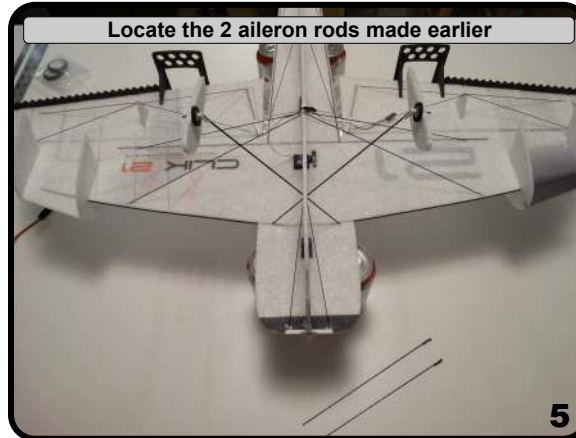
Center the control surface and lightly tighten screw



Repeat the whole process for the elevator servo



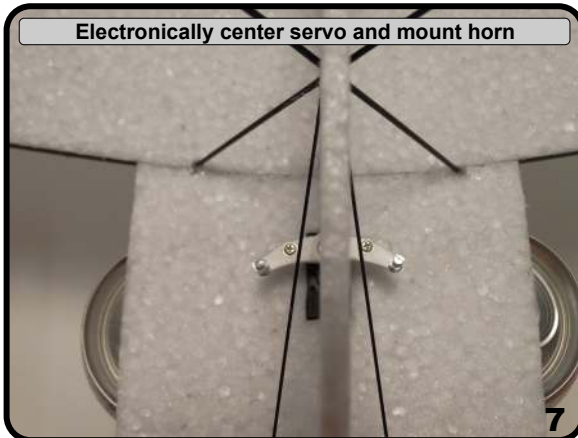
Locate the 2 aileron rods made earlier



Locate the aileron control horn made earlier



Electronically center servo and mount horn



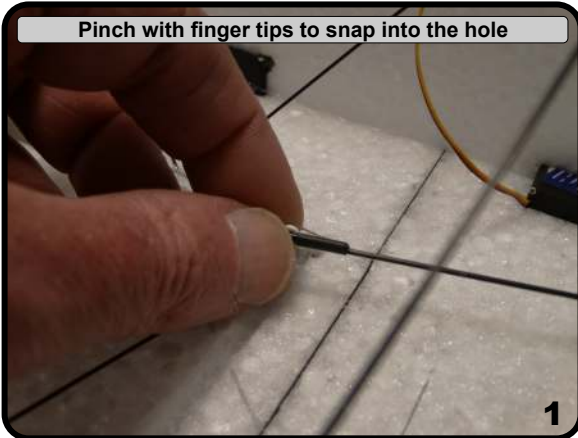
Thread the bare end thru the adjustable link...



...and position the other end like shown

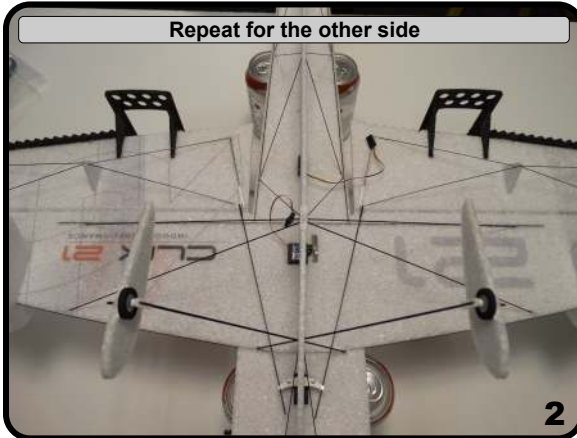


Pinch with finger tips to snap into the hole



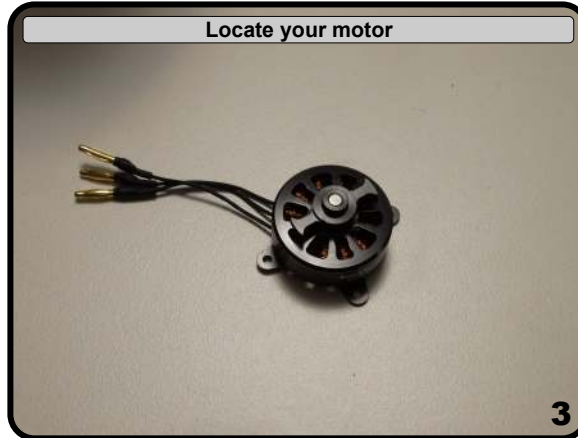
1

Repeat for the other side



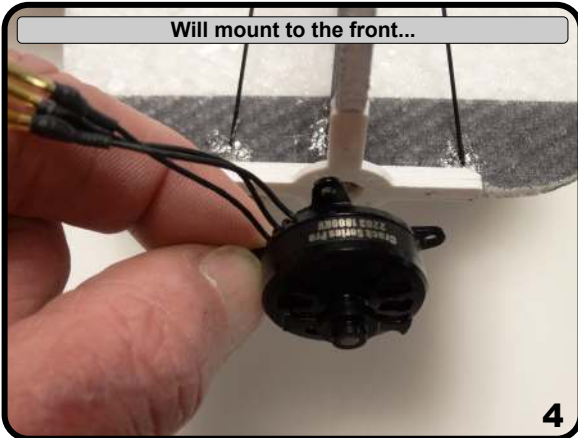
2

Locate your motor



3

Will mount to the front...



4

... with the included screws



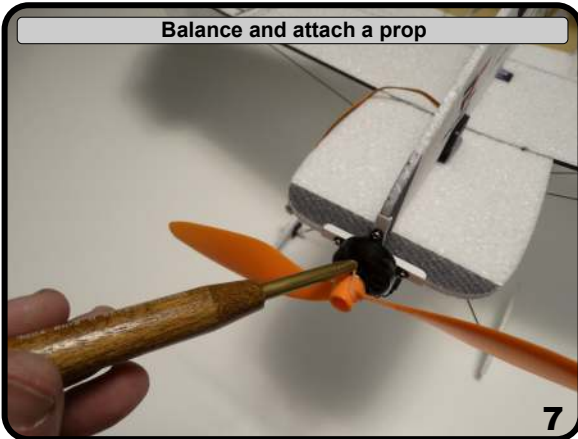
5

Attach with wires going to where ESC will be located



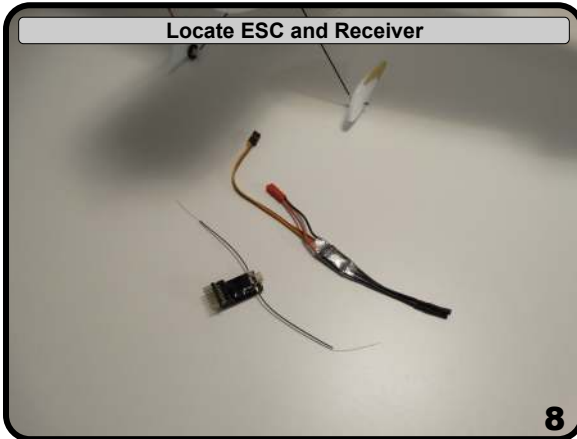
6

Balance and attach a prop



7

Locate ESC and Receiver



8

Mount ESC and Receiver approx. where shown



9



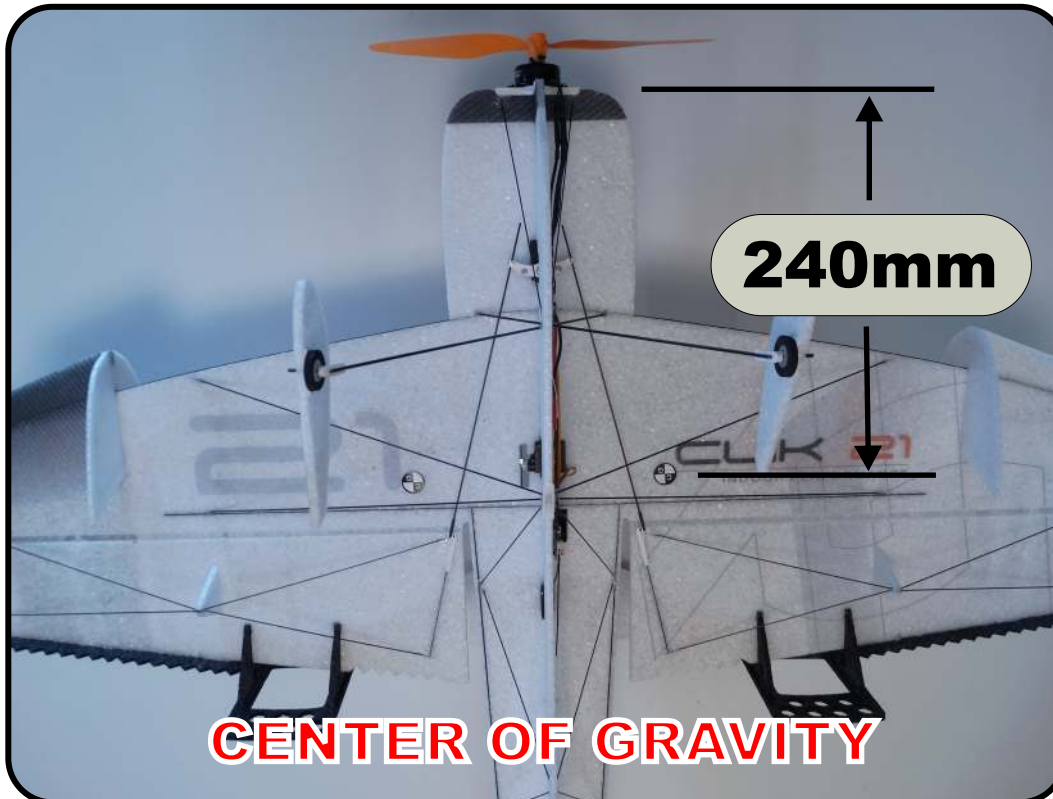
Find yourself a park that is out of the way with a little open space and tear it up, this plan is the perfect size..!!

This completes the build, it's design and construction should give you many hours of flying enjoyment. This airplane will serve you well, whether you are new to precision flying or are a seasoned veteran.

Please visit www.TwistedHobbys.com for other accessories and aircraft.

There are several online resources and forums for this model as well. It is suggested that you visit the RC Groups Thread for this model for additional information, it is a great resource for questions and insight to this aircraft.

CENTER OF GRAVITY AND CONTROL THROWS



C.G. - 240mm from nose

Locate all the electronics to achieve indicated CG point. Use Velcro for initial flights for battery mounting and experiment with it's position until you have determined the best spot for your flying style.

Control Throws

Ailerons: +/- 40 deg
Rudder: +/- 50 deg
Elevator: +/- 50 deg

**Expo and
Dual Rates to suit**

Control Throws should be adjusted to flying style and adjusted to work with in the boundaries of the setup. For extreme flying max throws should be used. For sport and novice flying decrease throws by approx half on all surfaces



PRE-FLIGHT & TESTING

PREFLIGHT CHECKS

Motor: Should run smoothly at all stick positions, and transition smoothly from low to high RPM. If the motor is turning backwards, reverse two of the three wires between the motor and ESC. Check that the screws holding the motor to the airframe are tight and secure.

Flight Controls: Set all to neutral or level positions with sticks in the neutral positions. Ensure that all controls and linkages move freely. Double check that all hinged areas are free from rips or tears. Verify proper control surface directions. Right Roll is – right aileron up, left aileron down, Left Roll is left aileron up and right aileron down.

Batteries: Should be fully charged prior to each flight. Watch transmitter battery level and follow manufactures recommendations. Motor battery should not be drained any further than recommended by the manufacture, use a timer to prevent an over discharged condition.

Radio: All trims should be set to neutral and throttle in the low position. Check that rate switches and mixes are set properly.

Range Check: With and without the motor running per radio manufactures instructions. If there is insufficient range or significant reduction with the motor running, resolve and re-test before flying.

PREFLIGHT CHECKS

The first flights should be done with the CG at the recommended position, and reduced control rates until comfortable with your handling of the aircraft. As your experience with the aircraft grows experiment with different CG points and control rates. After all flights, check the aircraft over for damage and/or other items that may adversely affect flight performance.

This Foamie Plane is a high performance aircraft and will provide hours of entertainment, including the occasional crash. If, as the result of a crash, the foam tears, simply glue with Welders, FoamTac or CA. Many pilots prefer Welders or FoamTac because they remain flexible after drying. CA however, is more suited for the “quick” repair.

This aircraft can be flown indoors or outdoors. It is however designed specifically for indoor precision flying and will be right at home at the local Gym or outdoors on a calm evening.

STORAGE

This EPP plane should be stored hanging directly from it's prop. Storing in other fashions, including on it's landing gear, will put stress on the airframe could cause the airframe to distort. Storage in a hot car could also cause damage.

Be safe and enjoy, thank you again for purchasing a Twisted Hobbys' Product!

TIPS AND TRICKS

A good building surface is a “drop ceiling” panel from a local hardware store on a nice flat board

Use parchment paper between the areas being glued and your work surface

Heavy flat objects (like books, batteries, etc.) could be used to hold everything flat

When resetting your radio, start with all the ATV's or throw volumes at 100%.

Make sure you have set the direction of the servos correctly before attempting to trim for zero position.

If possible try the servo horns in different locations to determine which position will require the least amount of sub trim.

Installing the servo horns in their final location and attaching quick links to the servos may make servo installation much easier later.

On the Orange Rx, the negative pin is the one closest to the flat side of the circuit board.

Keep a good supply of sharp knife blades handy when building a foamie airplane.

Use low temp hot glue for gluing electronics, this will allow for easy removal later if necessary. The low temp hot glue can be “released” by painting” the glue bead with an alcohol soaked cotton swab a couple times.

A business card with the corners clipped off can be used as a small square.

Allowing the Welders glue to set for five minutes before assembly will shorten the tack up time, just be sure if doing it this way that you get the parts into position quickly, as the glue will start to bond on contact. Any joints that you feel are going to require adjustment, it is best to assembly the pieces while the glue is wet. The Green (high tack) masking tape works the best when used to clamp things together on an EPP foam airplane.

When gluing the rudder to the fuselage, stick pins could be used to hold in position if wanting to handle the airframe before it is completely dry

A rotary tool with a cutting wheel could be used to produce grooves in fiber glass parts instead of coarse sand paper. Use a hatch pattern. This creates more bonding area for the glue.

NOTES AND S/U SHEET

Setup Sheet

Transmitter -

Receiver -

Model

Weight - g

oz

CG Point - mm from wing leading edge

timer - min

Travels and Exponential

	low rate	high / 3D
right aileron up -	<input type="text"/>	<input type="text"/>
right aileron down -	<input type="text"/>	<input type="text"/>
left aileron up -	<input type="text"/>	<input type="text"/>
left aileron down -	<input type="text"/>	<input type="text"/>
aileron expo -	<input type="text"/>	<input type="text"/>
rudder right -	<input type="text"/>	<input type="text"/>
rudder left -	<input type="text"/>	<input type="text"/>
rudder expo -	<input type="text"/>	<input type="text"/>
elevator up -	<input type="text"/>	<input type="text"/>
elevator down -	<input type="text"/>	<input type="text"/>
elevator expo -	<input type="text"/>	<input type="text"/>

Electronic Components

Aileron Servo -

Rudder Servo -

Elevator Servo -

Battery -

motor -

ESC -

Propeller -