RXR

Receiver-Ready Aircraft by

EXTREME FLIGHT

49” Assembly Guide

Please read the following paragraphs before beginning assembly of your aircraft!

THIS IS NOT A TOY! Serious injury, destruction of property, or even death may result from the misuse of this product. Extreme Flight RC is providing you, the consumer with a very high quality model aircraft component kit, from which you, the consumer, will assemble a flying model. It is beyond our control to monitor the finished aircraft you produce. Extreme Flight RC will in no way accept or assume responsibility or liability for damages resulting from the use of this user assembled product. This aircraft should be flown in accordance to the AMA (or alternate appropriate to your region) safety code. It is highly recommended that you join the Academy of Model Aeronautics in order to be properly insured, and to operate your model at AMA sanctioned flying fields only (or the appropriate model aviation sanctioning body in your geographical region). If you are not willing to accept ALL liability for the use of this product, please return it to the place of purchase immediately.

Extreme Flight RC guarantees this kit to be free of defects in materials and workmanship for a period of 30 DAYS from the date of purchase. All warranty claims must be accompanied by the original dated receipt. This warranty is extended to the original purchaser of the aircraft kit only.

If you need assistance with your aircraft, please contact the selling dealer. In the United States, please contact us at info@extremeflightrc.com or 770-887-1794. It is your responsibility to ensure the airworthiness of your model.

Required tools and Materials

This Extreme Flight RXR aircraft requires your Transmitter, Receiver, Lipo Battery and any adaptor you need to connect to your Lipo battery. Your 49" RXR comes with an XT-60 battery connector installed. A variety of adaptors are availble to convert to nearly any battery connector. You will also need self-adhesive velcro to attach each of your LiPo batteries to the aircraft.

You will also need thin CA glue, medium or thick CA glue, and basic hand tools including 2mm and 2.5mm hex drivers . We also recommend a threadlocker, such as Loctite blue #242.

When using CA glue, if you spill excess glue onto your airplane, we recommend Acetone (available at hardware and home improvement stores) and a paper towel to clean.

Your aircraft has been on a journey around the world since it left our factory. Although the covering material was perfectly smooth when it was boxed up, changes in weather and humidity may have wrinkled the covering material. For certain, wrinkles will appear in the covering once you have unpacked your aircraft and it adjusts to the atmospheric conditions in your region. Learning to remove wrinkles from covering is a necessary skill to maintain your wood aircraft.

Your Extreme-Flight produced aircraft is covered in Ultracote covering material (US market name), also called Oracover in global markets. If you need replacement covering to repair damage, Ultracote/Oracover is widely available from retail hobby suppliers. Also, each roll of Ultracote/Oracover includes excellent instructions which are also available online. Please refer to them for details about working with and/or repairing your covering.

The basic tools are a covering iron and a hobby heat gun. When you unpack your new aircraft, start by using the iron at 220F (104C) to seal all of the edges on the covering scheme. This is CRITICAL on the leading edges of wings and stabilizers. Then use the iron at 300F (149C) or a heat gun to shrink out any wrinkles in the covering. Remove the plastic canopy from the aircraft when using a heat gun to protect it from heat damage. GO SLOWLY AND CAREFULLY to avoid over-shrinking or burning the covering. This is a skill which takes a bit of practice. There are many tutorial videos online demonstrating shrinking wrinkles from Ultracote. BE CAREFUL when you first try using a heat gun to shrink covering! Heat guns are EXTREMELY powerful and even experienced modelers occasionally can over-shrink an area, lifting a seam or causing a stripe to become crooked, when using a heat gun.

Small sections of repair covering are included in your kit box. If you need additional covering material to repair your aircraft, the color codes are are listed in the datasheet for your aircraft, posted on the ExtremeFlightRC.com website.

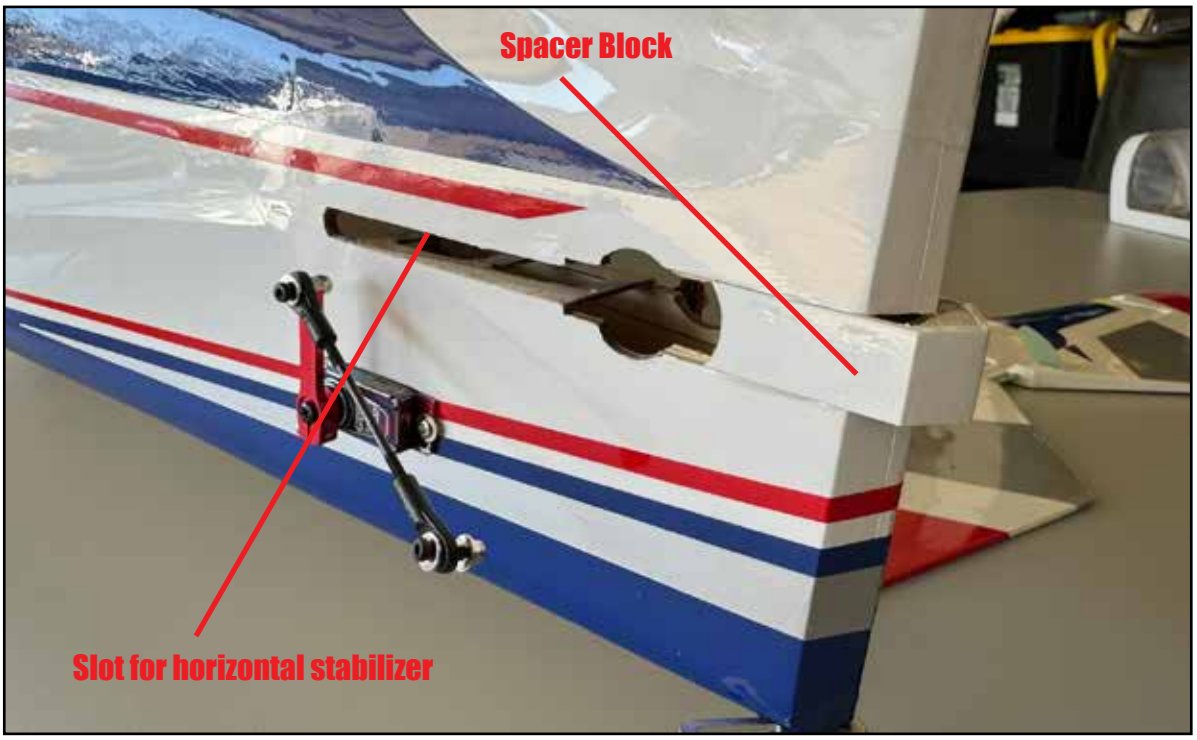
ExtremeFlight RC also carries all of the spare parts you might need to repair your aircraft in the event of damage.

1 Unbox and unwrap all parts, check for any damage. If you need assistance, contact your dealer. In the United States, contact Extreme Flight RC at the phone number or email address posted on our website, www.ExtremeFlightRc.com. Carefully inspect the inside of the shipping box for ALL included parts and give it a close look for any screws. Do not dispose of the box until your build is finished, this may save you from a crisis if something was accidentally left inside.

2 Attach the landing gear to the fuselage using the bolts in the fuselage, apply a drop of thread-locker to each bolt before screwing them in.

3

Your kit may use a spacer block in the position indicated. Remove this block and set aside carefully.



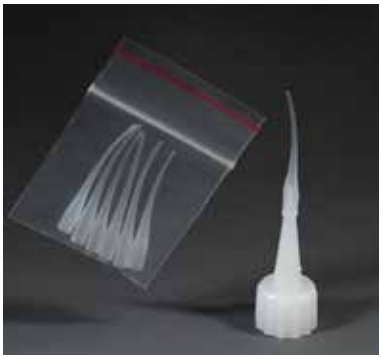
4 Slide the horizontal stabilizer into the slot in the fuselage. Take your time. Make sure it is right-side-up, make sure it is fully engaged into the fuselage. Push it fully in. You will see that the joiner bar between the elevator halves rides in a cutout so that it has room to move and the elevator can flex fully up and down.

NOTES ON USING THIN CA GLUE IF YOU HAVE NOT BEFORE:

We recommend to glue the horizontal stabilizer in (step 5) with thin CA glue. You will also use it to attach the rudder hinges(step 8). Thin CA dries nearly instantly and is very strong and is perfect for this very quick build. It requires only 8-10 drops of thin CA total around the horizontal stabilizer seam to fully attach it. If you have never used thin CA glue before, we recommend two things:

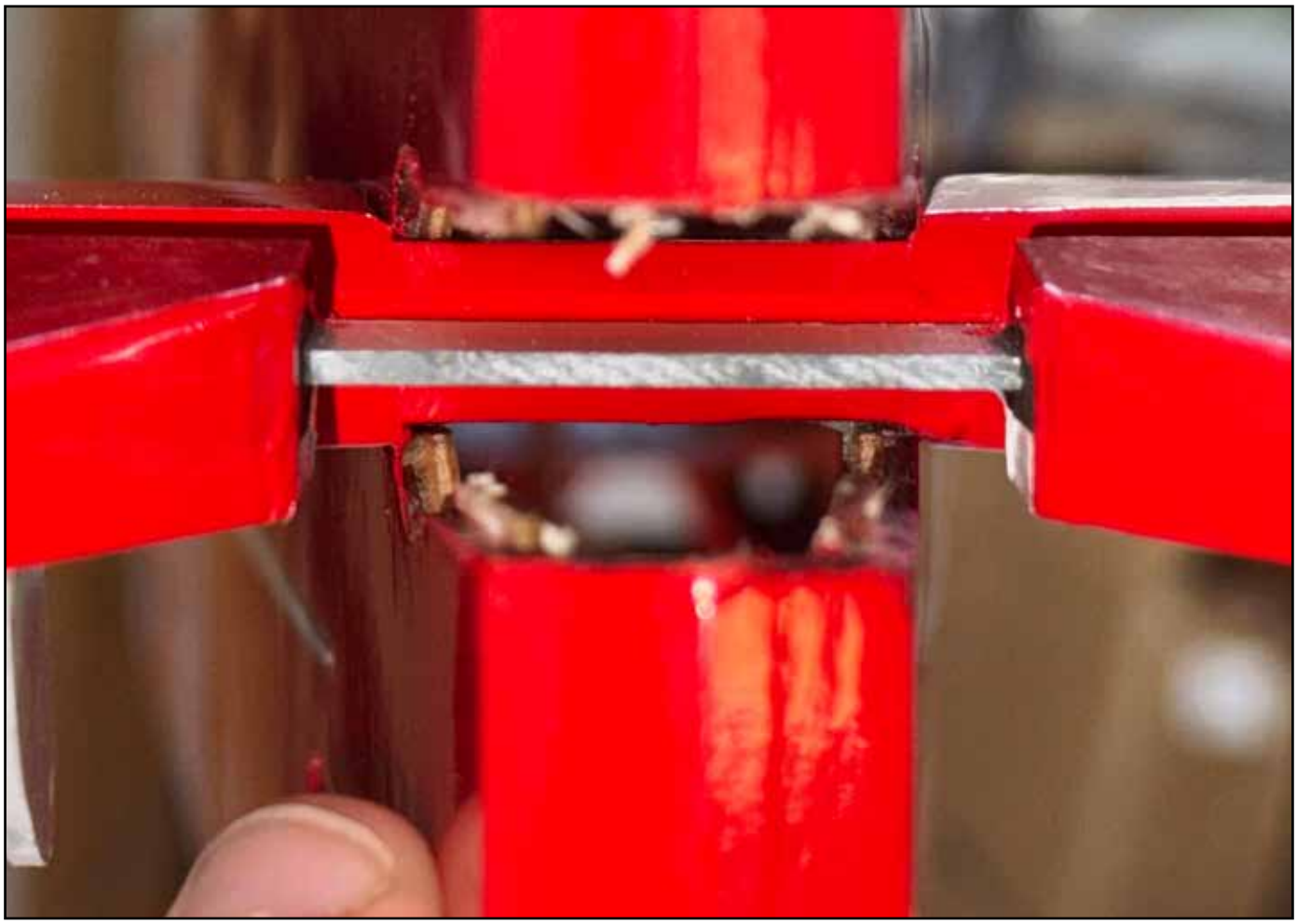
A.Thin CA glue can spill easily, because it is thinner than water and runs very freely. It can be difficult to precisely apply only one drop without practice. So, practice! Take your thin CA glue and some scrap material and practice applying one drop of glue, precisely. After four or five drops, you'll get the hang of it. Much better than practicing on your airplane.

B.The job is made easier by using a glue tip. This is a piece of tapering teflon tubing which attaches to the spout of your glue bottle. They are extremely inexpensive and can be changed frequently if clogged:



Finally, thin CA glue is not the only kind of glue you can use to attach the horizontal stabilizer. Although it adds time to the build, epoxy glue also works well for this job. Apply the epoxy to the mating surfaces BEFORE sliding the stabilizer into place, and use Denatured Alcohol on a paper towel to clean up any excess.

5 When you have the horizontal stabilizer fully engaged into the fuselage slot and slid all of the way forward, apply thin CA glue to the joint as shown, top and bottom. Clean up any spilled CA glue with acetone and a paper towel. Allow to cure. Locate the tail filler piece. Insert the filler piece to fill the gap in the tail as shown. Glue with a few drops of thin CA glue. Clean up any spilled glue.



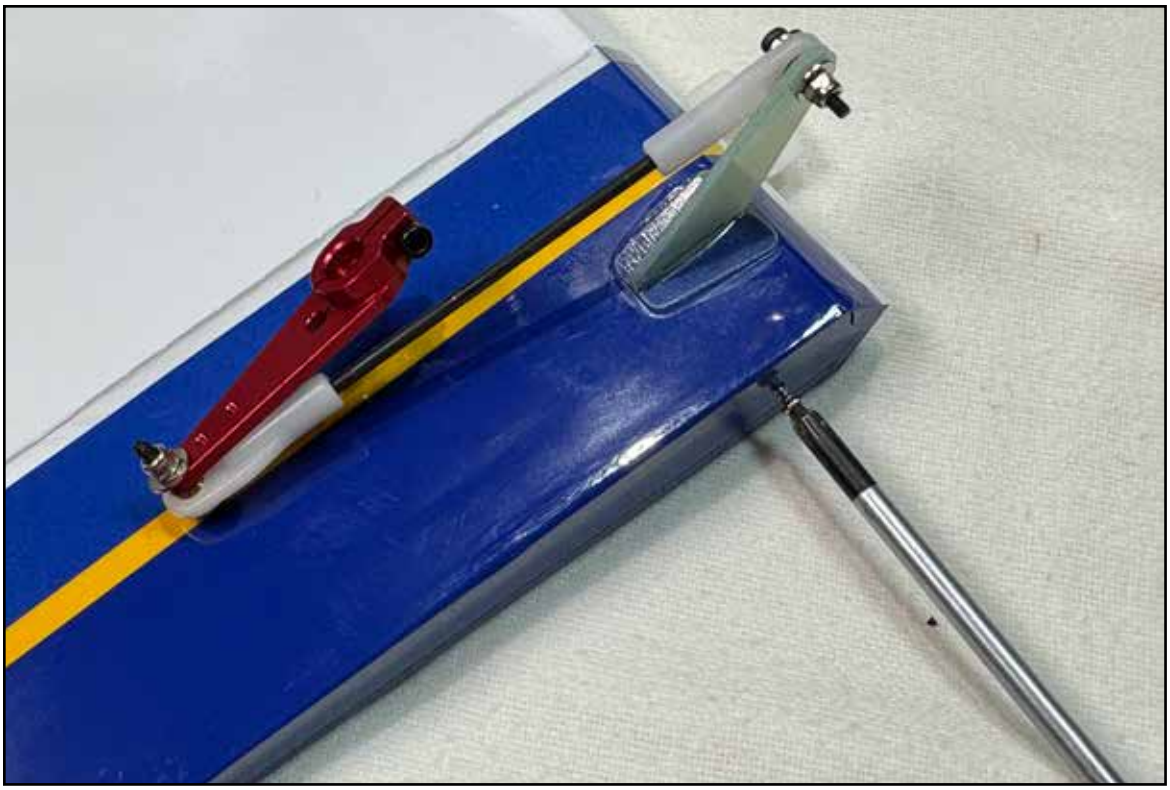
6

Using medium or thick CA glue, glue the spacer block back in place.

7

Locate the rudder. Remove the screw from the bottom as shown. This screw engages the tailwheel mechanism to steer the airplane on the ground. Set it aside carefully.

The rudder on the 49" RxR series attaches to the fin and fuselage using CA-type hinges. These come pre-glued into the rudder. A few spare hinges are included in your kit in case of crash damage.



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The fuselage and fin has slots to receive the hinges. These are very narrow and might be hard to see at first. Insert the rudder hinges into the slots using an up-and-down sawing motion as you press the rudder in. This is a particular skill. Once you feel it, it becomes easy and you'll swiftly insert CA hinges on your builds for the rest of your modeling career, but this first time may require some patience. Go slow and it will happen. Push the rudder all the way on, then flex it back and forth a few times. This will automatically set the "gap" in the hinge line to about 1mm. Make sure the gap is straight and consistent.

9

Turn the airplane on its side and apply 1-2 drops of thin CA directly onto each hinge. It will wick into the hinge slot and cure very quickly. Once the rudder is glued, replace the screw on the bottom of the rudder so it engagaes the tailwheel tiller as shown. Don't tighten fully, the tiller needs to be able to slide slightly. Flex the rudder and check for free movement.

10

Now we attach the servo arms and pushrods to the rudder and elevator servos. Remove the phillips screw on the servo output spline, push the servo arm onto the spline, add a small drop of threadlocker to the screw and screw it back in. Then tighten the pinch bolt on the servo arm as shown. This page shows the arms and pushrods for the Extra NG airplane. Other aircraft's servos and pushrods are shown on subsequent pages.

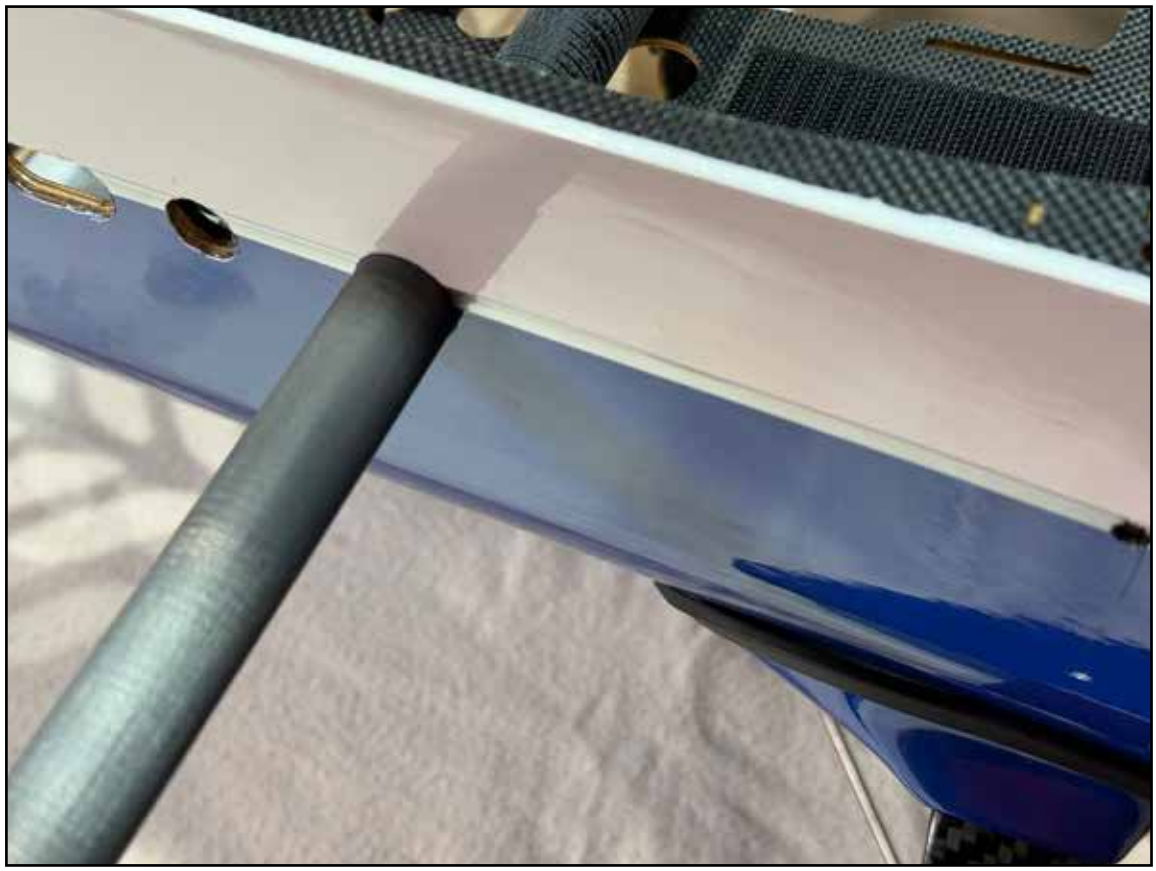
NOTE: Pilots use many different radio systems with the RxR aircraft, and we cannot anticipate all possible combinations. Currently, we ship the RxR aircraft with the pushrods attached in the OUTERMOST hole on the servo arms, and this works for virtually any radio system, allowing you to achieve full 3D throw. However, on many radio systems which offer extended servo travel, you can actually use the middle or inner hole location and achieve better servo performance in centering and torque. This is a tuning point to explore as you get used to your aircraft.

11

Install your receiver using double-sided tape and/or a zip-tie.

12

Install your wings. Open the wing latch mechnism by puling the knob out and sliding the knob up. On some models a plastic flag pops up as shown. Slide the carbon wing tube into its socket and slide the wings onto the tube. Thread the aileron servo wire into the fuselage as shown and connect to your reciver. Close the wing latch.



13

For safety, before programmingyour airplane, remove the prop.

14

Install your lipo battery (for the 49" RxR series, it should be 6S 1800-2200mah). Use the velcro strap to go around your battery, also place self-adhesive velcro between the battery and the tray in the airplane.

Power up your reciever and reverse any servos which need it.

Use a cell phone with an angle-finder app, or a throw gauge to set your control throws in your transmitter. To use a phone, hold the phone against the control surface at the neutral point, zero the app, then move the surface to full travel and hold the phone against the surface again to read the throw.

We have recommended a high expo value for your first flights. Experienced pilots may want to start with lower expo.

Control settings:

Elevator: Low Rate 8-10 deg. 15-20% expo
High Rate 55 deg. 60-65% expo

Aileron: Low Rate 15-20 deg. 40-45% expo
High Rate 36 degrees up, 35 degrees down 70-75% expo

Rudder: Low Rate 20 deg 40-45% expo
High Rate 55 deg. 80-90% expo

15

While the prop is OFF of the airplane, calibrate your throttle channel to the ESC.

Move your transmitter stick to FULL THOTTLE

Power on your airplane

Wait for the ASCENDING TONES

Move the stick to LOW THOTTLE

Wait for the DESCENDING TONES

Calibration is complete.

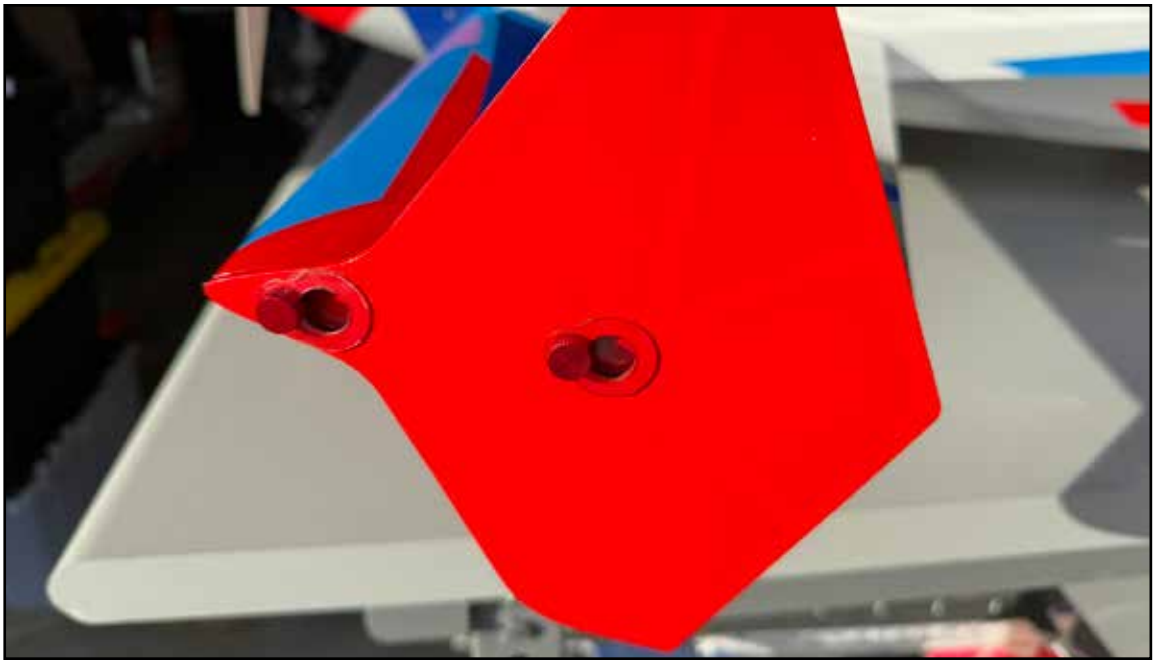
ALWAYS do this kind of work with the prop removed.

NOTE: If the system is unresponsive to throttle when you power it up, most likely your *throttle channel needs to be reversed* (especially Futaba radios) or you need to trim/subtrim your throttle channel LOWER so that the ESC receives the correct signal to arm.

Now you can install your prop and install the spinner cone.

16

Your kit includes SFG's (Side-force-generators), flat aerodynamic plates which attach to the wing-tip via screws or thumbscrews. There is a clear plastic spacer which rides in-between the SFG and the wingtip to minimize interference between the SFG and aileron. The SFG's are removable so that you can fit your wings into the wing carrying bags for transport. The effect of SFG's is to make the plane easier and more gentle in 3D aerobatic flight. Try your airplane with and without the SFG's to determine your preference. Our pro team pilots prefer to fly WITH sfg's on the 49".



Your kit includes a cosmetic cover plate for the landing gear mount area. Install it with two dollops of rubberized glue as shown, we prefer Gorilla brand "Clear Bond" glue, Goop or Silicone are good alternatives.

17

Center of gravity:

Your model has a very wide Center of Gravity range. Unlike some types of model aircraft, CG is not merely a point on these 3D aerobatic aircraft, it is a range.

At the front of the range, a more nose-heavy airplane will:

Fly in straight lines without much pilot attention.
Be overall less responsive, especially less responsive to elevator.
Tend to keep its nose down on final approach for easy landings.

At the back of the range, a more tail-heavy airplane will:

Tend to need more attention to hold perfectly straight lines.
Be overall more responsive, especially more responsive to elevator.
Tend to need the pilot to hold the nose down on final approach.

On these aircraft, to balance at a nose heavy CG, assemble the aircraft except for the canopy hatch. Pick the airplane up by its carbon wing spar tube. It should hang level or slightly nose-down. Adjust the battery position as needed.

If you would rather have a more tail-heavy CG for high performance 3D flight, pick the aircraft up and set the battery so it hangs level:

49” Laser: When supported by the knobs of the wing locks.

49” Extra 260: When supported byu the wood former immediately behind the wing tube.

Your final CG location should be determined after testing at different positions to find your best one.