EXTREME FLIGHT

EXTRA AG

67" / 1.7M
8lbs / 3.6 Kg
T-motor AM670
6s 4000-5000mah

ARF ASSEMBLY GUIDE

EXTREME FLIGHT

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 safety code(or the appropriate model code for your region). 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. 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.

Extreme Flight RC in no way warranties its aircraft against flutter. We have put these aircraft through the most grueling flight tests imaginable and have not experienced any control surface flutter. Proper servo selection and linkage set-up is absolutely essential. Inadequate servos or improper linkage set up may result in flutter and possibly the complete destruction of your aircraft. If you are not experienced in this type of linkage set-up or have questions regarding servo choices, please contact us at info@extremeflightrc.com or 770-887-1794. It is your responsibility to ensure the airworthiness of your model.

Special notes on the 67" Extra NG aircraft:

The 67" Extra NG is super-high-performance 3D and XA aerobatic machine. It is perfectly matched to the T-Motor AM670 motor and AM116 ESC with T-motor 18x8 carbon or 17x10 composite prop. This is the configuration we used in development testing.

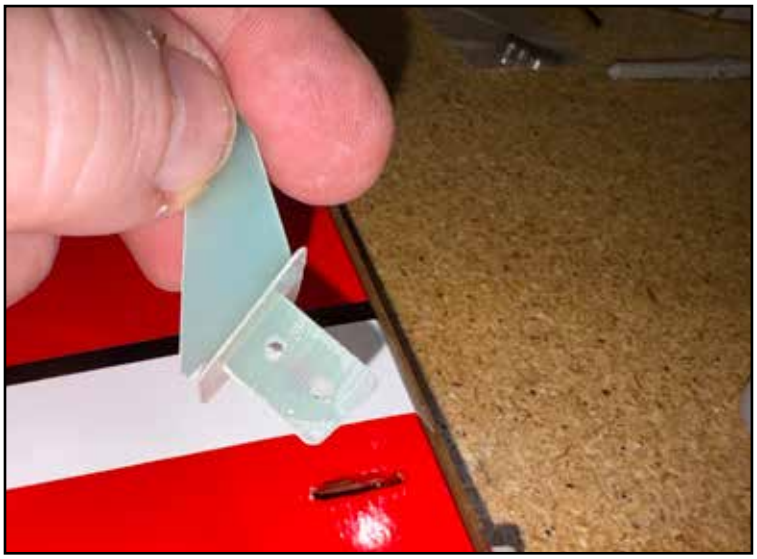
Be sure to use a premium, very high quality servo, such as the EF/Theta 989 or Savox SV-1261MG.

Please read through this guide before beginning assembly to familiarize yourself with the tools and materials.

10.

Installing control horns: All of the control horns on your aircraft install in the same way. Locate the correct control horn for each surface. Prep the horns by lightly scuffing the gluing area (the part which will go into the control surface) with sandpaper or an emery board. Test fit the horn and cover plate without glue to make sure it goes all the way into the surface as shown. To permanently install the horn, place medium CA glue into the slot, insert the horn fully and firmly into the slot, and then add a few drops of thin CA for extra insurance as shown. Clean up any spilled CA with acetone. Allow to dry.

Note: If you prefer to use epoxy glue to install your control horns, this also works very well. Use denatured alcohol to clean up any excess epoxy.



2.

Installing main landing gear: Attach the carbon landing gear to the fuselage with screws as shown, use blue Loctite (or other medium-strength threadlocker) on these screws. Note that there is a "front" to the landing gear and when installed, they sweep slightly forward. Install the decorative cover plate as shown using Gorilla Clear Bond, GOOP, or other rubberized adhesive. Locate the fairings, test fit them, and then premanently attach them to the landing gear (not the fuselage) using a generous amount of rubberized adhesive.

Allow to dry. Locate the axles, attach to the landing gear as shown with washer and locking nut. Note there is a flat spot on the axle to engage the wheel collar set screw. Install the wheel and wheel collar, use loctite on the collar set screw. Install the wheel pant with screw and loctite as shown.

3.

Installing the horizontal stab and elevators: Remove the tail filler piece as shown. Test fit the stabilizer without glue. Make sure it fully inserts into the fuselage as shown. Make sure you have it right-side-up.

When you have the stabilizer perfectly fitted, glue it in place with thin CA glue, using the servo opening and rear opening for access. apply 10-12 large drops of thin CA to permanently. Clean up any spilled CA with acetone. NOTE: IF you wish to use epoxy glue to attach your stab, this also works well. Apply the epoxy in a thing layer on the joint before inserting permanently in the slot. Use denatured alcohol to clean up any excess expoxy.

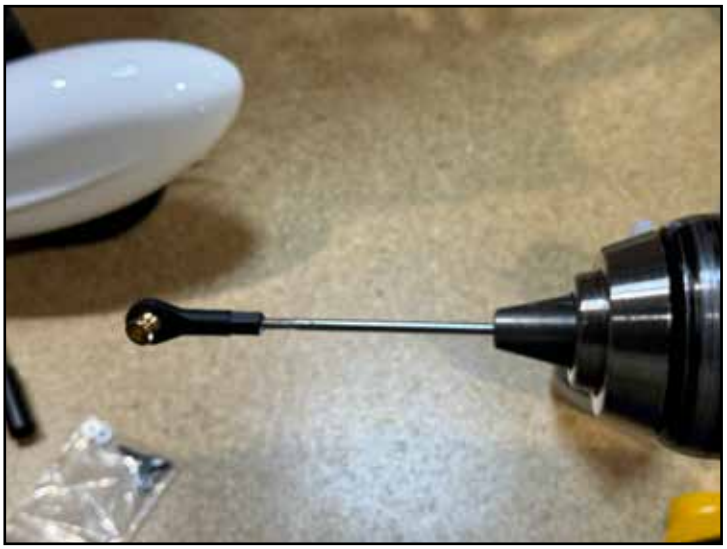
Locate the tail filler piece. Fit it as shown. When it is perfectly aligned, apply thin CA glue as shown. Clean up any spilled CA with acetone.

4.

The rudder is retained with a wire. Place the rudder in position and install the wire from the bottom as shown. Install the tailwheel as shown. The tiller (the part which attaches to the rudder and turns the actual wheel) is attached to the rudder with its own screw. DO NOT tighten this particular screw completely, the tiller need to slide a bit against the rudder.

5. Assemble and install the pushrods onto each control horn. The pushrods are assembled from a threaded steel wire rod and two ball joints. Note there are two styles of ball joints. One has a narrow, simple bronze ball. This style goes onto the control horn at the surface. The other style has a conical pedestal. This style goes onto the servo arm.

We use a cordless drill to help spin the ball joints onto the metal rod. Both threads are right-handed. Install the ball joint onto the control horn with bolt, washers, and locking nut as shown.



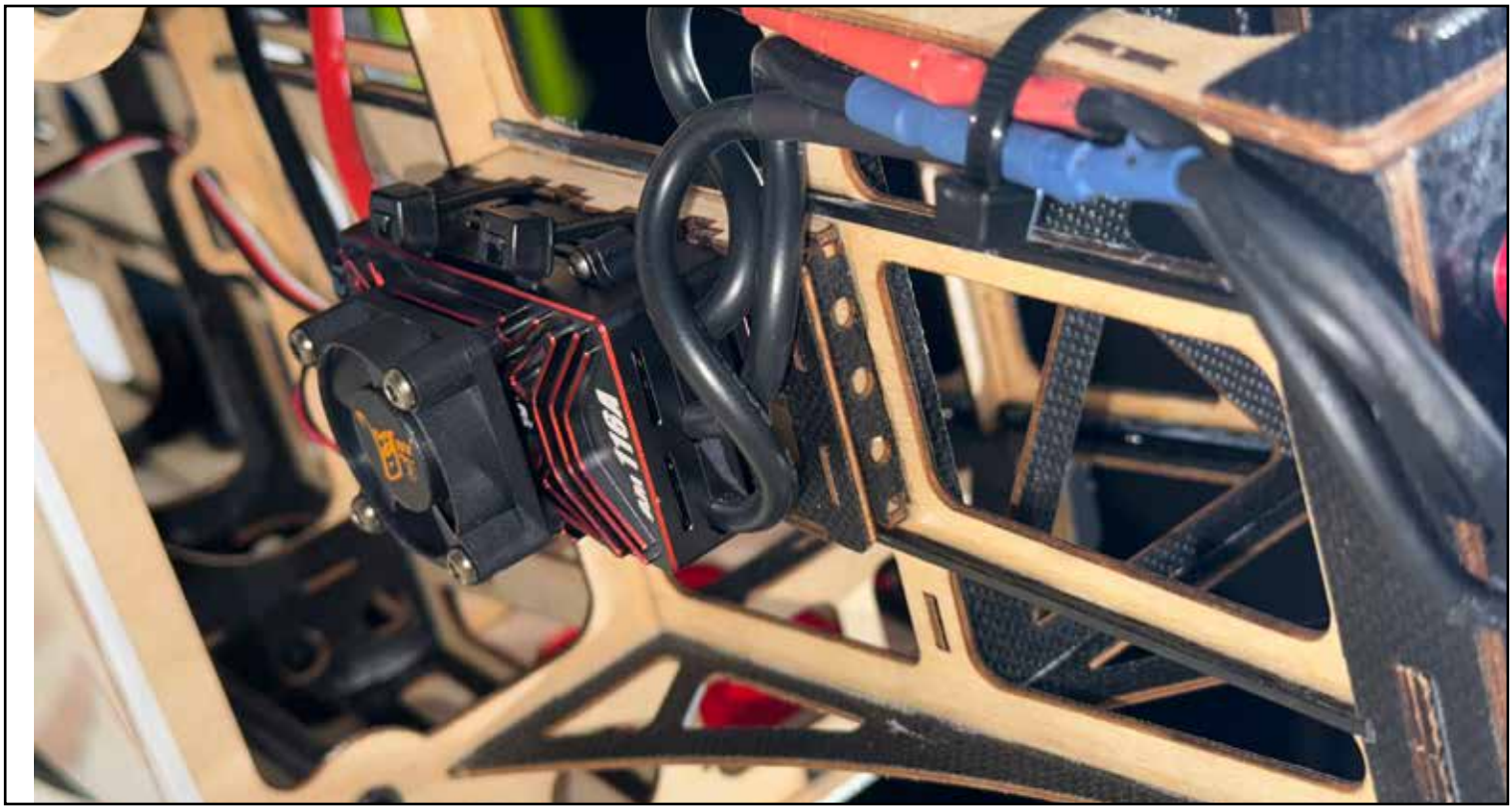
6.

Attach servo wire extensions to your servos and use tape or a wire lock to make sure they do not become disconnected in flight. Install the servos in the positions and orientations shown. Center your servos using your radio or a servo tester, then install your arms. Install the linkage as shown using screws, washers, and locking nuts as shown.

NOTE: The exact position of the pushrods on the servo arms will vary with different setups. Shown is our typical set for 3D/Freestyle flying. We use the outermost hole on the elevtor arm, and we use the #2 hole on the ailerons and rudder. This allows us to "max out" the servo travel in our radio on all channels, and get our desired high-rate throws. Your setup may vary.

7.

The 67” Extra NG is configured for easy installation of the T-motor AM670 power system. Other systems will install similarly. Mount the motor X-mount to the firewall as shown, use Loctite. Attach the motor to the X-mount as shown, use loctite. Mount the ESC to the mounting pad on the bottom of the motor box with zip-ties as shown. Neatly run the wires and retain them with zip ties.



8.

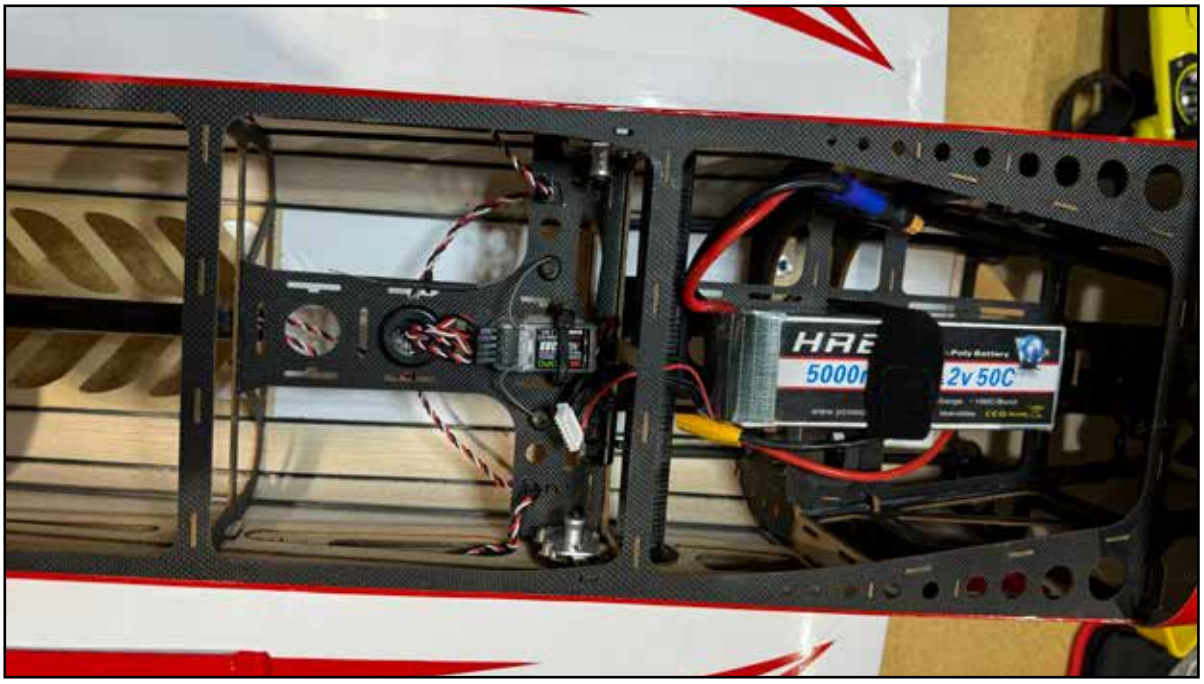
Attach the cowl to the fuselage with screws and rubber washers as shown. Adjust and tighten the prop mount and make sure you have a small amount of clearance (approx 2mm) between the spinner backplate and cowl. NOTE: if you are new to high performance aerobatic aircraft, your motor points 2.5 degrees to the RIGHT to balance torque and prop forces. This is by design and is correct.

NOTE: For safety, never connect your flight battery on your workbench with the prop installed. Take the time to remove the prop when connecting the battery for setup work.

9.

Install your receiver in the position shown. If using the T-Motor power system, install the power capacitor into any open channel of your receiver as shown. We prefer to use double-sided foam tape and a zip-tie to mount our receivers. Install your lipo battery and two strong velcro straps as shown.

Install your prop and spinner. Check the Center-of-Gravity of your plane and move the battery to achieve the location you want. Our favorite CG position is marked inside the fuselage. This is very slightly behind the fuselage former. You can quickly check by lifting the aircraft by the former. If it hangs close to level, you're fine for your maiden flight.



10.

We prefer to use a cell phone with an angle-finder app as a control throw guage, but any accurate gauge is fine. Set your control throws as recommended below. We have recommended high expo for your maiden flight; if you have a favorite expo value you typically run on 3D aircraft, use it. Otherwise set it to the recommended expo and reduce as desired.

Elevator: Low Rate 8-10 deg. 15-20% expo
3D Rate 45-50 deg. 60-65% expo
XA/Tumbling rate 55 deg. 65-70% expo

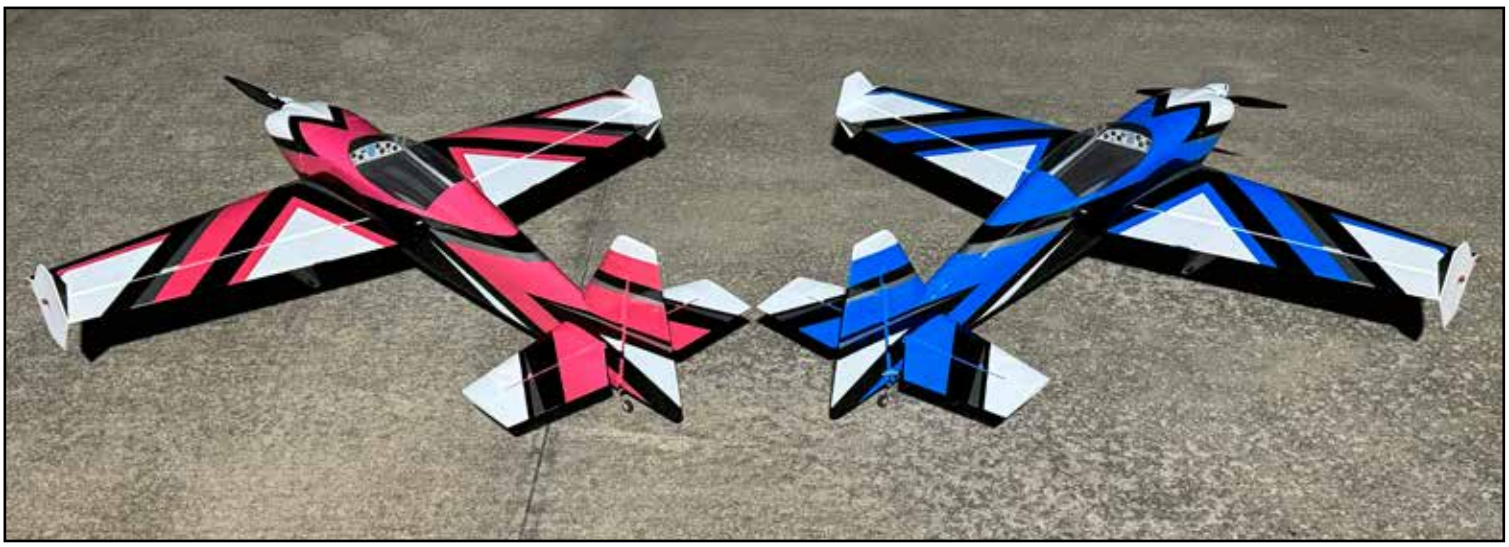
Aileron: Low Rate 15-20 deg. 40-45% expo
High Rate 38-40 deg. 70-75% expo

Rudder: Low Rate 20 deg 40-45% expo
High Rate 45-50 deg. 80-90% expo

11.

Your kit includes flat aerodynamic plates for the wingtips, called “SFG’s” (side-force generators). The effect of the SFG’s is to add stability in roll through 3D maneuvers. All of us, even our pro team pilots, prefer to use SFG’s on 67” aircraft.

Your SFG’s mount to the wingtips with thumb screws and clear plastic spacers as shown. There are clear plastic pads as shown for the outside of the SFG’s to reduce wear. We like to attach these to the SFG’s with Gorilla Clear Bond glue as shown.



Before flight, you should use a covering iron to run over all of the covering seams and stripes on your aircraft, and as your Extra is exposed to sunlight and the airframe adjusts to your location, wrinkles will appear in your covering. You can shrink these wrinkles out of the covering with a covering iron or heat gun. If you have never worked with covering before, we recommend you watch a covering video, such as our Extreme Flight 60" build video on YouTube, which has a detailed section on covering maintenance and many other tips.

If you need to repair your Extra NG, spare parts are available from your Extreme Flight dealer, and color-matched covering is available in either the Oracover or Ultracote systems.

Oracover colors	Ultracote colors
Blue Scheme	
Blue #50	Deep Blue - #HANU 873
Silver #91	Silver #HANU881
White #10	White -# HANU870
Black #71	Black - # HANU 874
Red scheme	
White #10	White-# HANU870
Ferrari Red #23	True Red #HANU 866
Silver #91	Silver #HANU881
Black #71	Black - # HANU 874
Pink Scheme	
Pink #24	Deep pink - #HANU 867
Silver #91	Silver #HANU881
White #10	White -# HANU870
Black #71	Black - # HANU 874