EXTREME FLIGHT

104” Laser EXP ARF

Assembly Manual



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Please take a few moments to read this instruction manual before beginning assembly. We have outlined a fast, clear and easy method to assemble this aircraft and familiarizing yourself with this process will aid in a quick, easy build. Please read the following paragraph 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 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 with the AMA safety code. It is highly recommended that you join the Academy of Model Aeronautics in order to be properly insured and 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, Ltd. 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.

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Introducing the brand new Extreme Flight 104" Laser EXP! The word is out that the Extreme Flight Laser EXP is THE machine for all things aerobatic. Whether you fly precision aerobatics, low and slow 3D, XA or a combination of them all our Laser series aircraft set the bar for modern aerobatic flight. The 104" 120cc Laser takes it to the next level!

During the development and build up to each new release we work closely with our factory engineers to update and improve our construction methods. We listen closely to customer feedback and constantly strive to build the perfect airframe. We are also very fortunate to work with the top RC aerobatic pilots in the world and their feedback is invaluable to us. The Laser EXP features the most up to date and modern construction methods currently employed in an aerobatic model. It is available in the classic Leo Loudenslager Oracover/Ultracote scheme as well as the stunning RED/WHITE/BLUE printed scheme. A top quality hardware package with genuine Dubro ball inks, composite control horns that ensure proper geometry, carbon main gear and tailwheel assembly as well as a carbon wing and stab tube are all standard fare. The Laser is very easy to assemble and can easily be ready to fly over the course of a weekend.

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Tips for Success:

1. Before starting assembly, take a few minutes to read the entire instruction manual to familiarize yourself with the assembly process.

2. Go over all the seams on the aircraft with a covering iron on a medium heat setting. Also, due to climate changes, wrinkles may develop in the covering. These are easily removed with a little bit of heat. Use a 100% cotton tee-shirt or microfiber cloth and your heat gun and heat the covering while gently rubbing the covering onto the wood with the cloth. Be careful not to use too much heat as the covering may shrink too much and begin to lift at the edges. Take your time, and a beautiful, paint-like finish is attainable.

3. Apply CA to high stress areas such as servo mounting trays, landing gear mounts, anti-rotation pins, wing and stab root ribs, wing mounting tabs and motor box joints etc.

4. By the time your aircraft arrives at your door step, it will have been handled by a lot of people. Occasionally there are small dings or imperfections on some of the surfaces. An effective method to restore these imperfections to original condition is to use a very fine tipped hypodermic needle and inject a drop of water under the covering material and into the ding in the wood. Apply heat to the area with a sealing iron and the imperfection will disappear. Deeper marks may require that this process be repeated a couple of times to achieve the desired result, but you will be surprised at how well this technique works.

5. Use high quality, fresh epoxy for installing the composite control horns and hinges. We highly recommend Pacer Z-Poxy 30 minute Epoxy. We are very pleased with the results and ease of application and cleanup of these products.

6. Take the time to properly balance and trim your aircraft and set up rates with exponential values. Your flying experience will be greatly enhanced once your plane is properly dialed in.

7. Extreme Flight now has their own Vimeo channel. There are many assembly videos providing extreme detail on certain aspects of the assembly. https://vimeo.com/extremeflightrc

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Items needed to complete this model:

1. Gas motor, 85-120cc
2. Engine standoffs
3. Fuel tank, 34 ounce
4. Fuel line, approximately 6 feet
5. Fuel Dot
6. 5” EF carbon spinner with aluminum backplate
7. Propeller
8. Receiver, 8CH minimum
9. Servos, 7 metal gear of at least 500oz, 1 high speed for throttle.
10. Servo extensions, (4) 6’ RX to aileron, (3) 24” 2 for aileron to RX extensions and 1 for throttle, (3) (2) 48” elevators and 1 48” for the rudder
11. Servo arms, (3) 2” half arms for elevators/rudder, (4) 1.5” half arms for ailerons, (1) 1’ half arm for throttle, (1) 4” full arm for rudder if using pull pull rudder setup.

    In addition you will need a basic set of hobby tools, Xacto knife, 30 minute epoxy or equivalent, thin CA, drill and bits, socket head ball drivers, and other miscellaneous hand tools.

Suggested items to complete this model:

1. Desert Aircraft 120cc gas motor
2. Blazing star DA-120 standoff
3. Flowmaster 34oz gas tank
4. Flowmaster Fuel line
5. Xessories anodized fuel dot (color match)
6. EF 5” color match spinner
7. Falcon propeller
8. Receiver
9. MKS servos, options are 777A+/599/380 or equivalent 500oz torque metal gear servo
10. EF 20AWG extensions
11. EF anodized servo arms
12. EF black socket head servo screws 30 or 100pk
13. EF anodized washer set, color match
14. EF color match velcro, 2m X 20mm
15. EF servo safety clips

    All items above are available from Extreme Flight RC.

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Horizontal and wing assembly

1. Locate your horizontal stabilizer, elevator and associated hardware, see figures 1& 2. Let's begin by removing the elevator and extract all pin hinges. You will notice the 3 hinges closest to the root of the horizontal stabilizer are clipped along their length, see figure 2. This shorter side will go into the horizontal stab and in the first 3 holes from the root, be sure to mark these in some fashion for orientation. Next I recommend to scuff the hinges with sandpaper, but do not sand off the barbs, then clean with rubbing alcohol or equivalent. This will help the gluing process. Now mix enough glue (highly recommend 30 minute epoxy) to install the hinges into the horizontal, we will glue to the elevator later. We like to drop some glue into the hole, then swab it around the hole with a toothpick or similar item to ensure the hole is coated, I find about 3-4 drops of glue is sufficient. Then I coat the center of the hinge with a protectant from the epoxy, things like Vaseline, lithium grease, 3 in 1 oil and other items work to protect the center pin hinge portion from getting glue in it. If this process is new to you, we recommend watching the hinging video on our You Tube channel. Once all holes are coated, we apply a very thin layer of glue onto the bottom half of the hinge, then insert it into the horizontal stabilizers hinge holes and twist them as you insert them into the hole. This will help coat the hinge more evenly and ensure a better bond.

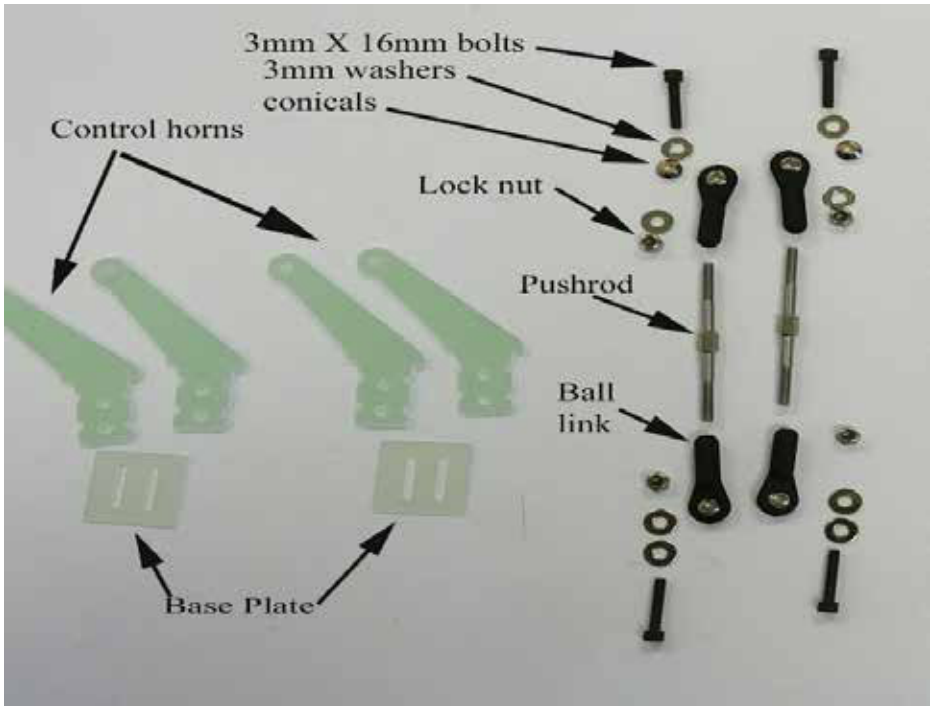


Figure 1

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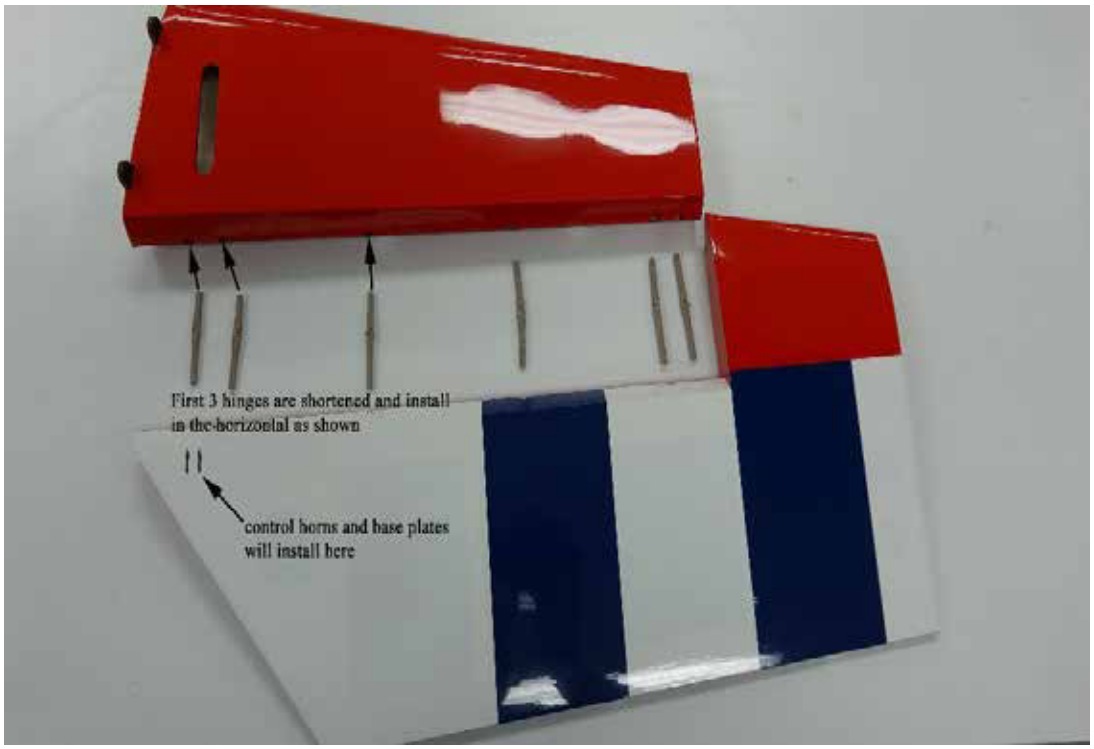


Figure 2

2. Be sure the 3 clipped hinges go into the first 3 holes from the root and that the hinge is at its midpoint into the hole and allow to dry. Clean any excess epoxy with a paper towel soaked with rubbing alcohol. Once fully cured, repeat this process on the elevator. Since you cannot twist the hinge while installing the elevator, I push the elevator fully onto the hinges then pull it about half way apart and make sure glue is coating that hinge, you may need to pull apart and push together a few times to ensure the hinges are coated with glue and allow to dry.
3. While the hinges dry I like to install the control horns and base plates, figure 3. We lightly sand the bottom section of the control horn and the one side of the base plate then clean with rubbing alcohol, this will help the glue adhere. Dry fit the control horns and base plates into the slots on the elevator, if they fully submerse into the slot then you are ready to trim the covering under the base plate. I normally just take an Xacto and lift the base plate slightly to make some marks then remove the base plate/control horn and finish removing the covering, figure 4, or you can place tape around the base plate which also gives a nice guide of where to cut the covering, figure 5. Use either method, but do not cut down into the balsa. If your control horn will not submerse fully into the slot then there is some foreign debris in the slot, using an Xacto knife (#11 blade) will usually be sufficient to clear the obstruction then continue with covering removal as just described. Now you are ready to glue the control horns, so drop some glue into the slots, then coat the bottom section of the control horns and the scuffed side of the base plate and install them into the slots. Clean any excess glue with a paper towel soaked with rubbing alcohol.
4. Now is a good time to seal your hinge gap if desired.

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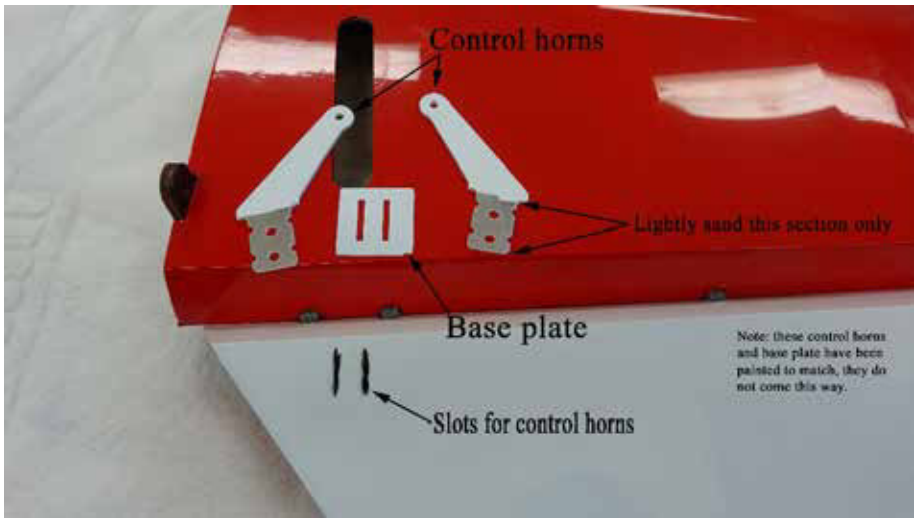
5. 

Figure 3



Figure 4

6. Next we will install the servo and linkage setup. Locate your servo, servo arm and all the hardware, see figure 1, for the horizontal stabilizer/elevator. We begin by installing the servo into the horizontal stabilizer, you will note the slot within the servo bay is oriented to the trailing edge, this is for your servo wire as your servo output shaft will be oriented to the trailing edge of the horizontal stabilizer. Secure your servo with servo screws provided by your servo manufacturer, or we recommend using the EF servo screws as they have an allen head and are black which gives a very nice finished look and much easier to work with than a Phillip's head screw. Once you have the servo mounted, it will require a 48” extension to plug it into your receiver, then center it. Now install the 2” EF servo arm as close to straight up and down as possible, use your transmitter subtrim or centering feature to ensure the arm is perpendicular to the hinge line and elevator at its’ neutral position. Now secure the arm onto the servo and we use blue thread lock (BTL) for all bolts in this section. Now thread the ball links onto the pushrod, note that one end has right hand threads and the other is left hand threads, this allows adjustment once the entire linkage is setup. We found that the ball link must be threaded nearly all the way down the threads.

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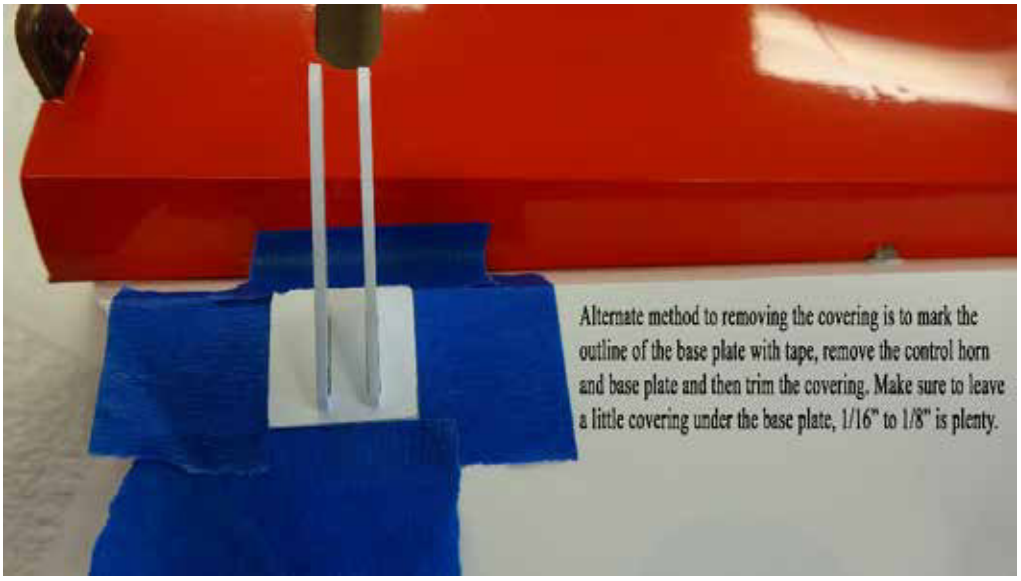


Figure 5



Figure 6

Now take your3mm bolt, then insert a washer, then thru the ball link, next install the conical then thread the bolt onto the servo arm and use BTL. If using an EF servo arm, they have double thickness and a locknut is not necessary but can be installed if desired, however on other brand arms a locknut is usually necessary as they are not as thick. Once again check the servo for center and direction of travel, if correct you may hook the remaining end of the pushrod to the control horns. See figures 7 & 8 for final assembly.

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Figure 7

Repeat the entire processfor the other horizontal stabilizer and elevator.\

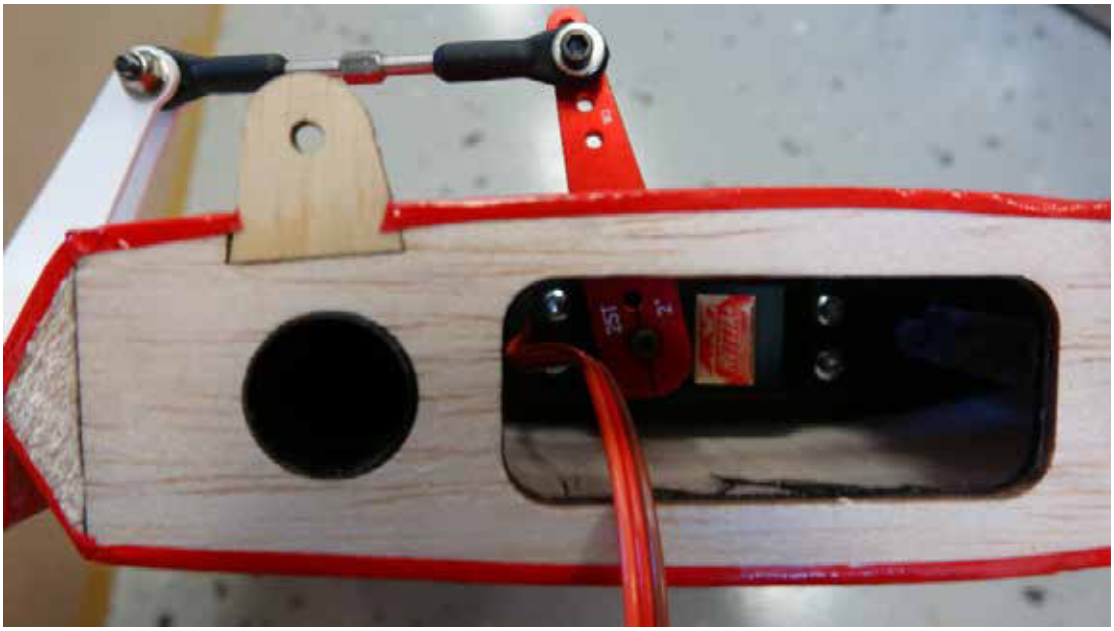


Figure 8

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Wing Assembly

7. The wing assembly is nearly identical to the horizontal stabs. Start with hinging, I recommend putting the hinges into the wing first then mate the aileron. Now move to installing your control horns, both of these items use the same techniques as the horizontal stabilizer and elevator. However the outboard control horns are slightly taller than the inboard. You will need to hold the horns together to identify the taller horns, as they are very close in size, see figure 9.

Servos are mounted next and oriented towards the trailing edge, begin with the outer servo. Secure a 24" extension to the outboard servo, I recommend dental floss or heat shrink to secure this connection as there will likely not be enough room in the wire tube to accommodate other securing devices. Now run it thru the wire tube which ends at the inner servo bay, but there is another short wire tube that gets it to the wing root.

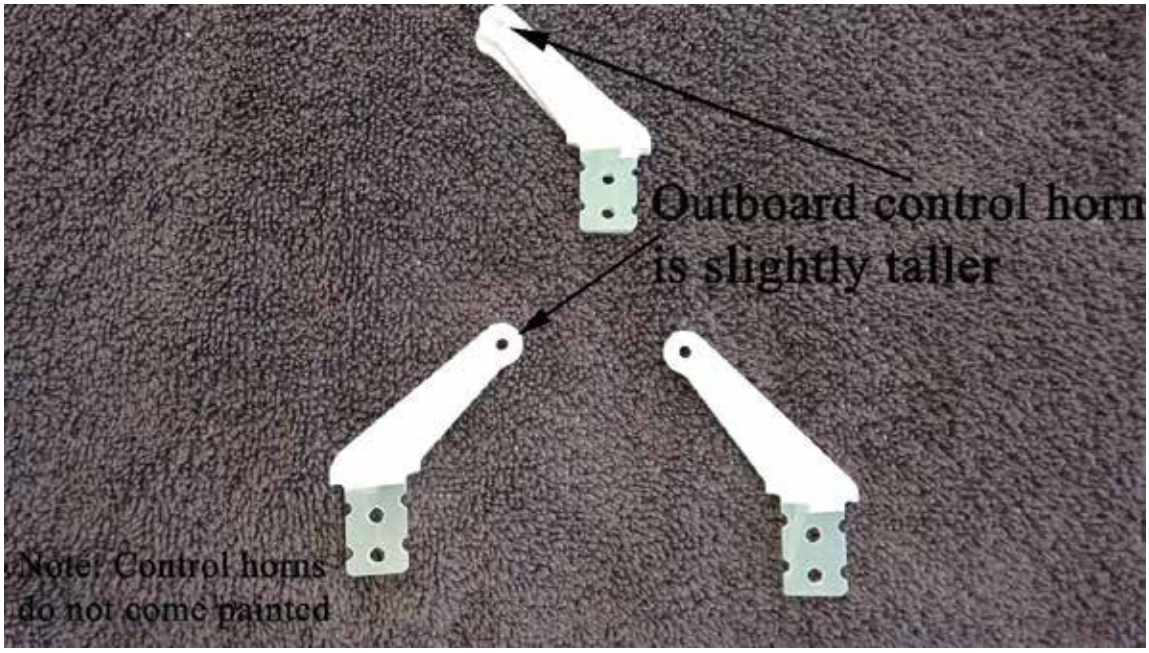


Figure 9

Now install the inner servo and run the wire thru the short wire tube and exit out the wing root, depending on your servo and personal preferences you may or may not need a short extension. Reference figure 10 for a rough layout of the components that will complete wing/aileron assembly. Now secure the servo and install the pushrod and servo arm as we did with the horizontal stabilizer and elevators. I recommend leaving the outer servo pushrod loose where it connects to the control horn, for servo setup later. Repeat for the other wing and this will essentially finish the wing assembly.

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Note: in the upper right hand of Figure 10 that is a MPX multi wire servo plug, it makes aileron wire connections very easy. Available at Extreme Flight RC.



Figure 10

Tailwheel assembly

8. The tailwheel assembly begins with identifying your parts, see Figure 11. Apply some BTL on your 3mm mounting bolts, with washer, and secure the tailwheel assembly to the mounting plate. Snug the bolts but do not overtighten them into the blind nuts. Trial fit the rudder onto the hinges and locate a place on the bottom of the rudder to install the ball link. This is how you will steer the plane on the ground. I use about 1” onto the tiller arm from its’ end, Figure 12shows the ball link at that desired location. Now drill a 3/16” hole in the bottom of the rudder in that location and then scuff the ball link area that will be in that hole, glue it and allow to dry. We will make this final tiller arm connection later when we install the rudder. However the final assembly will look something like figure 12.

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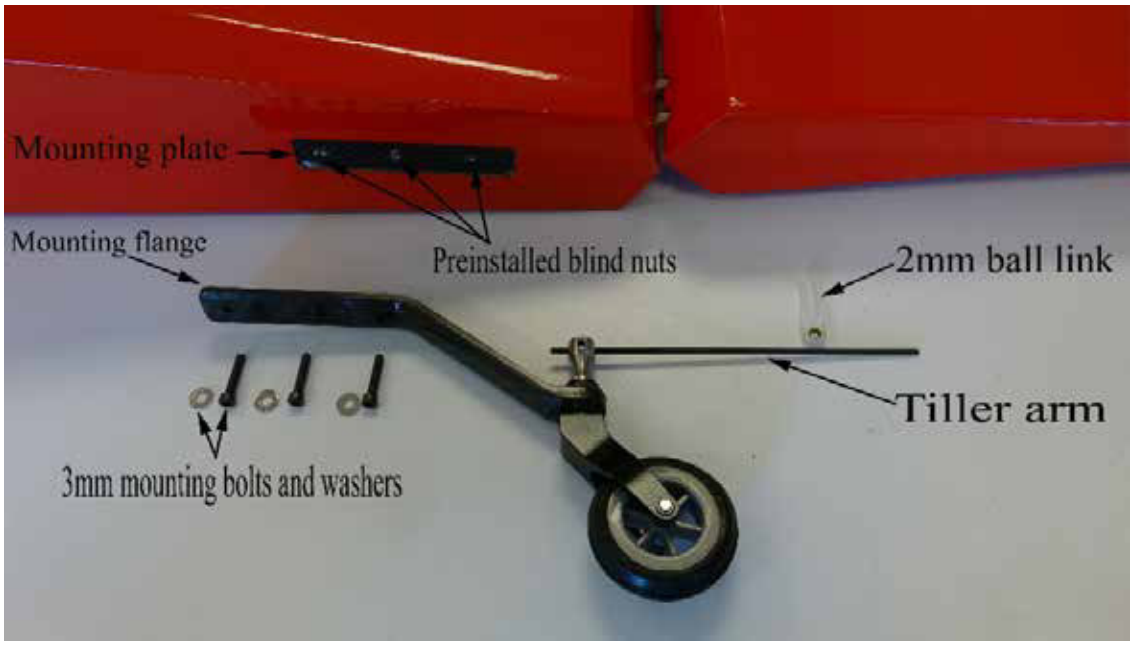


Figure 11



. Figure 12

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Landing Gear

9. Locate your landing gear, wheel cuffs, wheel pants and main landing gear hardware package. See figures 13 and 14 for parts identification.



Figure 13

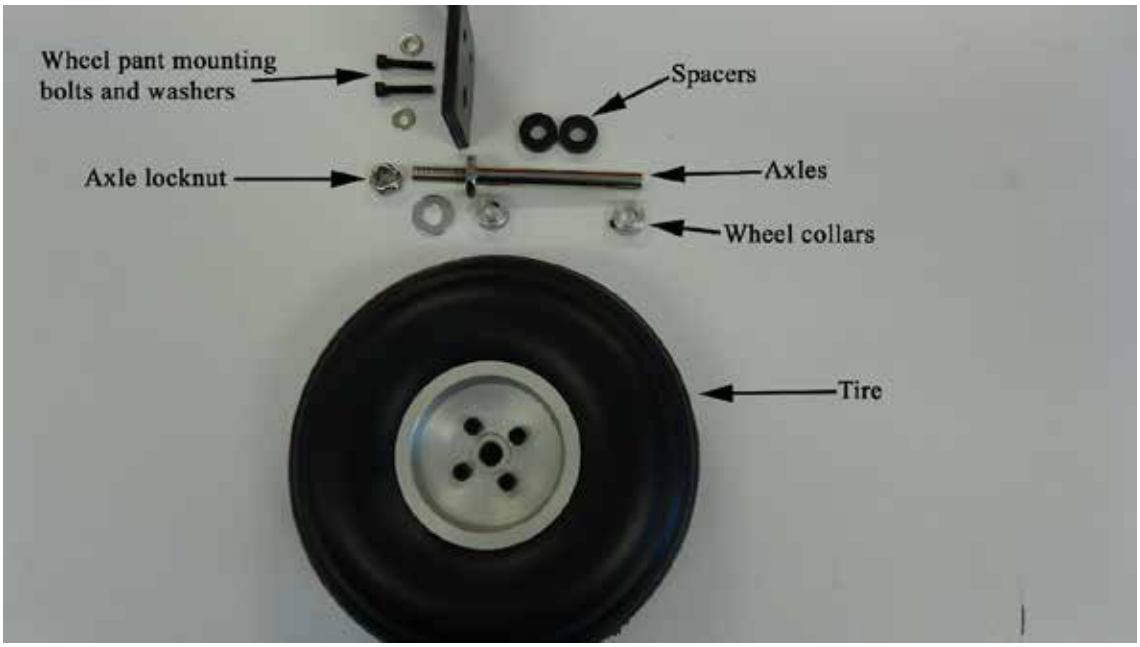


Figure 14

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Take a very close look at the landing gear, you will notice one side is perfectly straight and the other side has a very slight angle. The straight side goes forward, if you are having trouble seeing this, try laying the gear on a flat surface. Flip the gear to each side and it will become easy to notice which side is straight and angled. Mount the gear to the fuselage using the 4mm bolts, washers and locknuts. It does not matter if you put the bolt head inside the fuselage or on the gear side, either way use a washer on each side and tighten the locknut, use BTL. Now proceed to mounting the wheel cuffs. Trial fit the cuffs by sliding them onto the gear and against the fuselage. The cuffs can fit either side but the rounded portion goes forward and the more pointed end will orient to the tail. Once you are happy with the fit, mark that spot with blue tape or similar on the gear and glue them, tape them into place while curing, see figure 15. Next we will install the axles, wheel collars, spacers, tires and wheel pants. Begin by installing the axle, washer and locknut into the gear, be sure to orient the hex head of the axle bolt such that when tight two of the sides will be up and down, this is necessary for the wheel pant to slide over them. Next slide the wheel onto the axle, then trial fit the pant and see where the tire will need to be such that it is in the middle of the opening of the pant. Once you have this location mark it on both sides of the tire and that will be its' location. Remove the pant and tire, now slide a wheel collar onto the axle followed by the spacer and put the spacer at the inner mark you made, tighten the wheel collar and use BTL. Now slide the tire onto the axle followed by the spacer and wheel collar. Now secure the wheel collar and trial fit the pant to be sure it still aligns as desired. If the fit is good use the 3mm bolts and washers to secure the wheel pant, the pant already has the blind nuts secured inside the pant, be sure to use BTL, see figure 16 for a look at the final wheel and pant assembly.



Figure 15

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Figure 16

Engine and Fuel Tank Installation

10. If you are using the DA120 this step will be quite simple, figure 18 will help identify the various parts. The firewall has marks that show the location of the holes to mount the standoff. We highly recommend and use the Blazing Star engine mount for the DA120. You will need to drill holes at the marks, we recommend starting with a nail punch or awl to make a small indentation, then use a small bit and working up to a ¼" drill bit, see figure 17. This method will help keep the hole centered. Trial fit the standoff and engine, we used ¼" X 2.5" bolts (not provided) and both delrin spacers that are included with the Blazing Star mounts to achieve the desired spacing. Once the fit is as desired, you may secure the engine to the plane, but sure to use BTL on all bolts.
    Other engine installations will likely be similar. However you may need to adjust the laser marked holes in order to get the engine to center with the cowling. Also consider your distance from the firewall to the front of the cowling for your standoffs. This distance is 185mm or 7 9/32".
    You may mount your throttle servo at this time. See figures 19 and 20 to help with this process. A pushrod, ball link and EZ connector are included to help in this process. Also included is a laser cut package that will aid in an alternate throttle servo mount.
    Whichever engine you choose figures 20 and 21 will illustrate what a final assembly might resemble. You will notice I bent my throttle pushrod to my preference, use your past experience to decide what works best for your motor. Note I used a piece of velcro and a simple servo mounting screw to secure the fuel line, this will keep the line from interfering with the throttle servo or touching the hot engine.

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Figure 17



Figure 18

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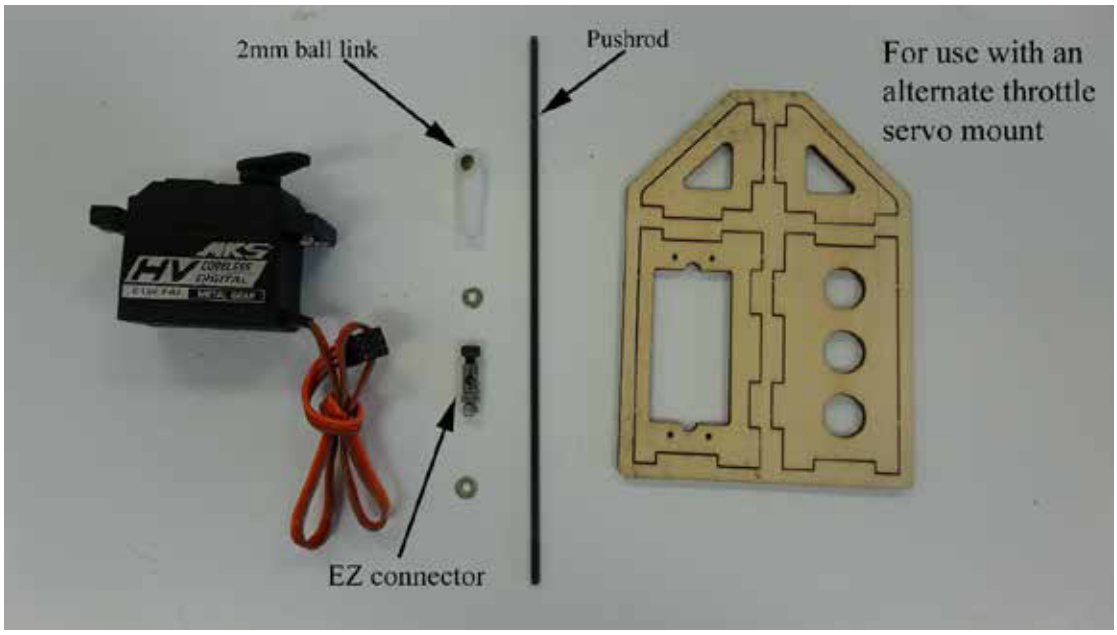


Figure 19

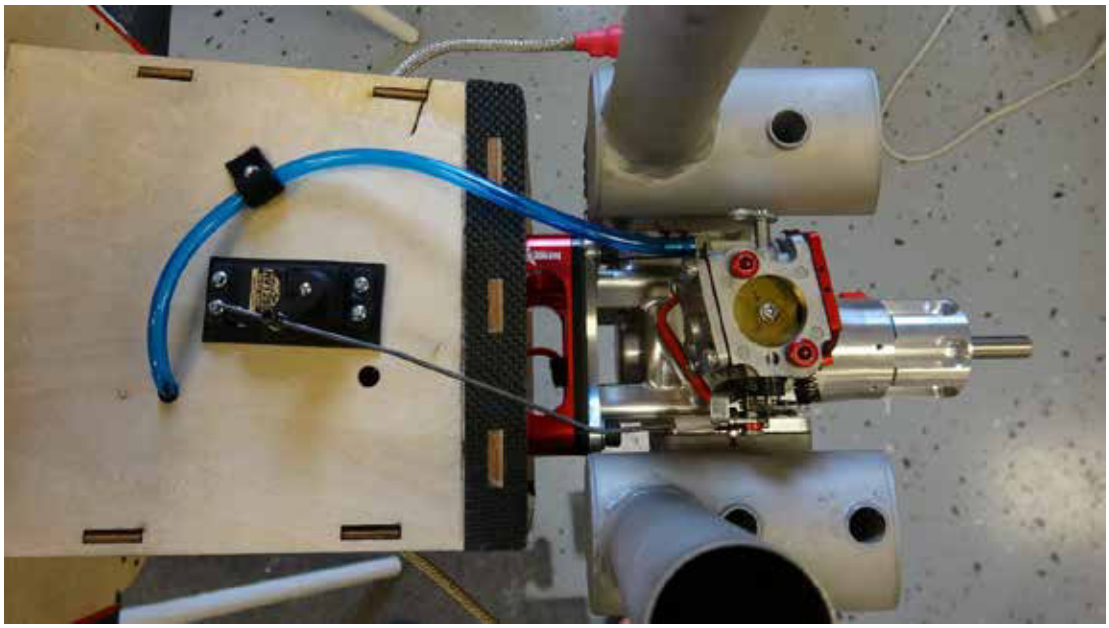


Figure 20

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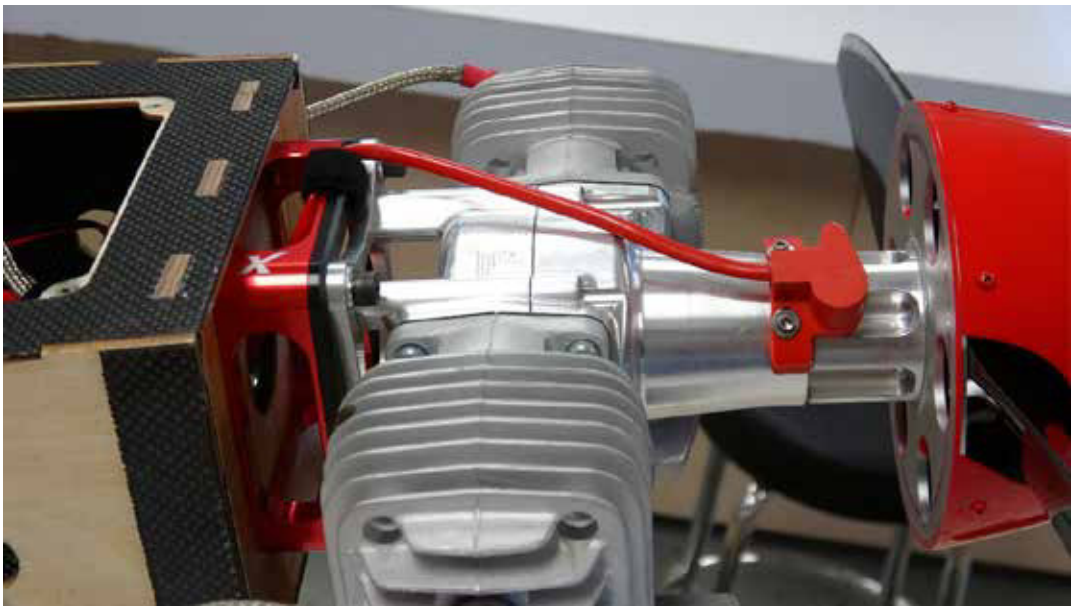


Figure 21

11. A 120cc motor will yield a 10-15 minute flight using a 34oz tank, this makes the Extreme Flight RC 34oz Flowmaster tank the perfect choice. There is a tray just over the wing tube that is custom made for the fuel tank of your choice. We also used Flowmaster fuel line to complete the plumbing for the tank. See figure 22 showing the Flowmaster tank and fuel line.



Figure 22

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12. Plumb your tank as desired and it will usually result in the need for a fuel dot, I chose to use an Extreme Flight RC fuel dot, blue or black are likely choices see figure 23. I mounted mine on the right side of the fuselage near the cowling. Figure 24 will show the overall installation of the fuel tank.



Figure 23

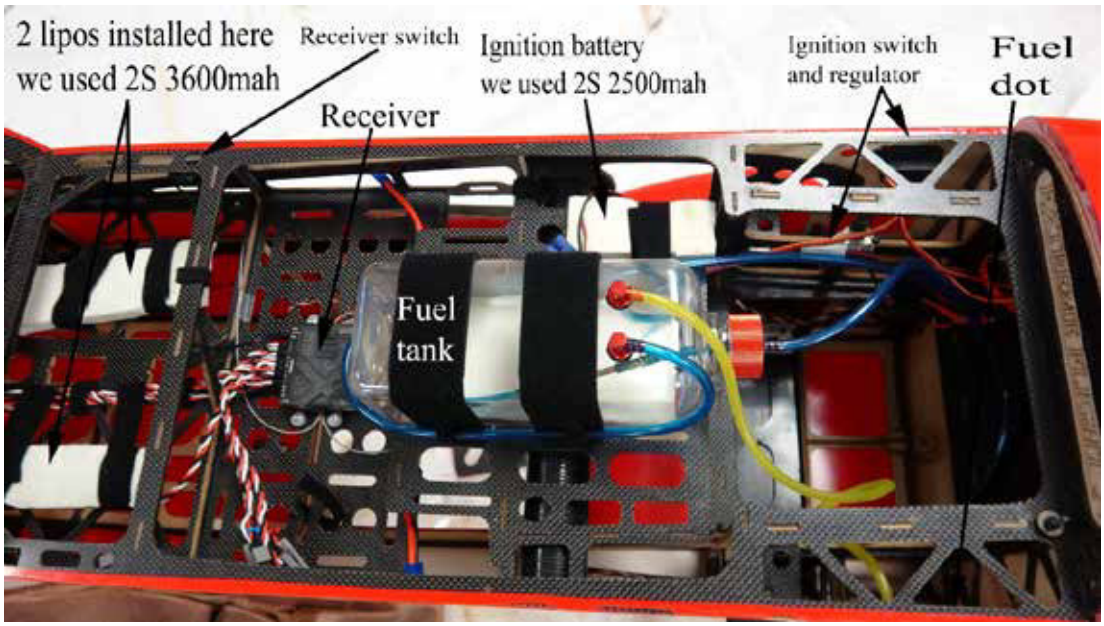


Figure 24

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10. The cowling can now be trial fit to the fuselage. If using standard mufflers, you will need to cut holes for the exhaust stacks. Since it is a two piece cowling I simply held the bottom portion as close to its intended position and then slid it up against the bottom of the muffler stacks and made marks to cut exit holes. Depending on the style of muffler you choose, it may need a relief cut in the front of the cowling to accommodate the left muffler. This will require some patience to get a nice fit, cut a little at a time and then trial fit it. There may be additional holes needing cut to accommodate your engine of choice, for example you may want a hole to run a choke wire thru or a small hole to access your carburetor needles for adjustment. See figures 25 and 26 for our cowling cuts. Once you have the desired fit, then install the bottom portion of the cowling and there will be (3) 3mm bolts/washers that hold it in place. There will 2 bolts that are on the inside back and 1 on the bottom, a small drop of BTL will help hold them in place. Now locate the black baffles and take measurements to see how much will need to be trimmed for your motor of choice and your personal desires on how close these will be to your cylinders. Once you have achieved the desired fit, glue them into the bottom cowl. I use Welders adhesive or Foam Tac with good results. I also suggest installing the upper portion of the cowling and secure in place. There will be (2) 3mm bolts/washers that go just inside the fuselage near the front of where the canopy will sit. The remainging bolts are 2.5mm and go into the perimeter of the cowling. I used BTL on all these bolts to remain secured.

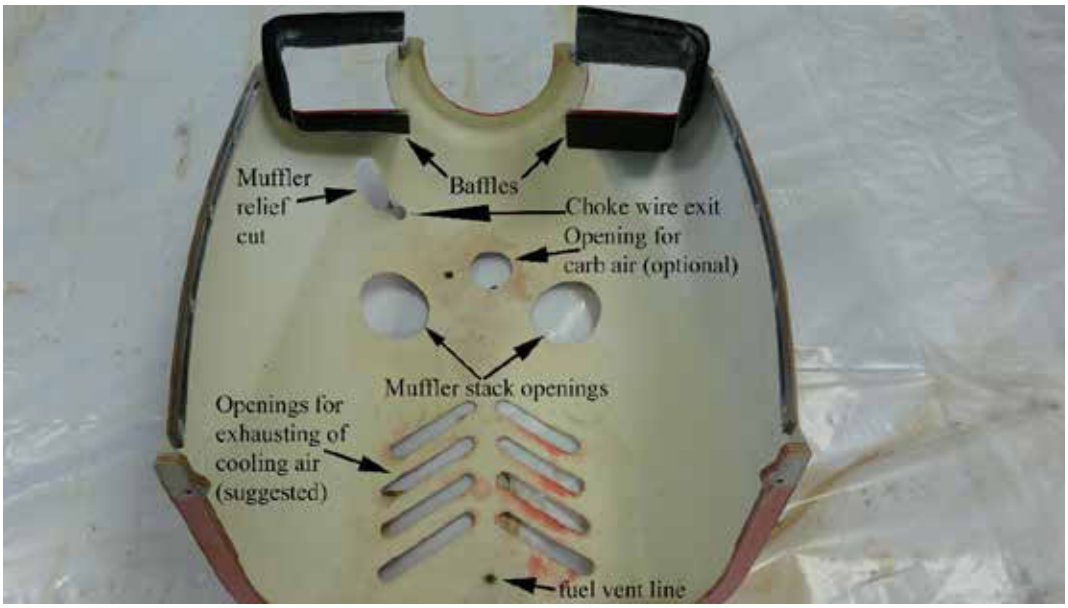


Figure 25

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Figure 26

If you prefer a tuned pipe or canister installation then laser cut piece of plywood is cut and provided to make this easier. It also includes silicon tubing to secure your desired exhaust system. Also 70mm drop headers are needed to reach your pipes. We strongly suggest trial fitting your exhaust before beginning the final installation. Once you are happy with the trial fit, begin by screwing (you can also glue them) the laser plywood into the fuselage bottom to the formers to support your pipes/canisters, then position the tubing in between the various notches and this will support your system. Refer to figures 27, 28 and 29. You will also need to determine how your system will exit the bottom of the fuselage and cut accordingly.

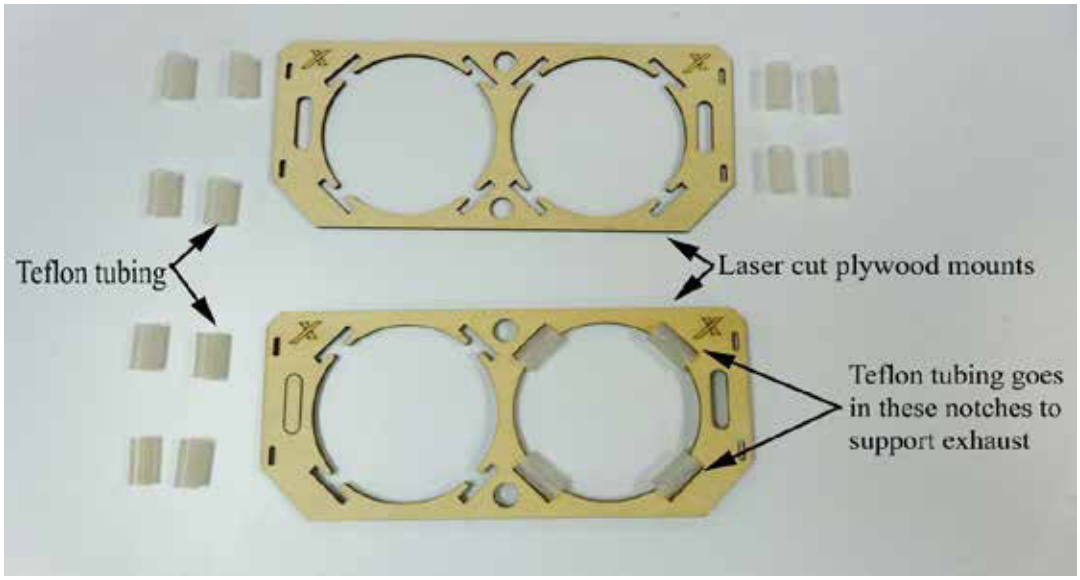


Figure 27

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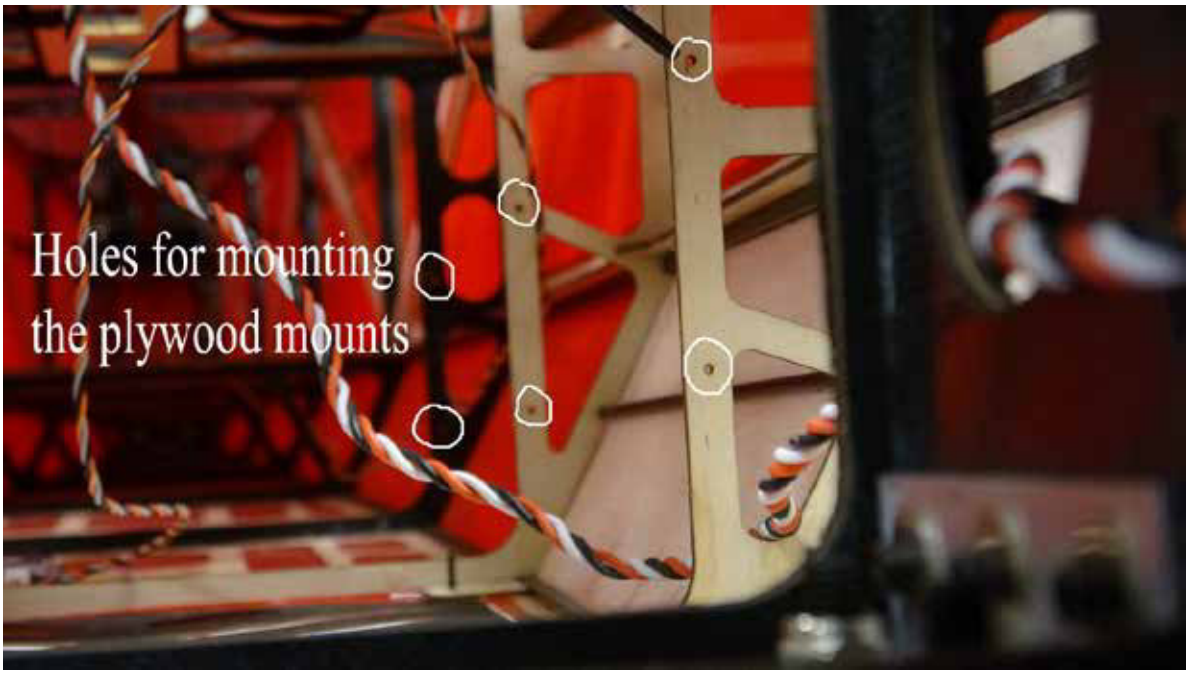


Figure 28

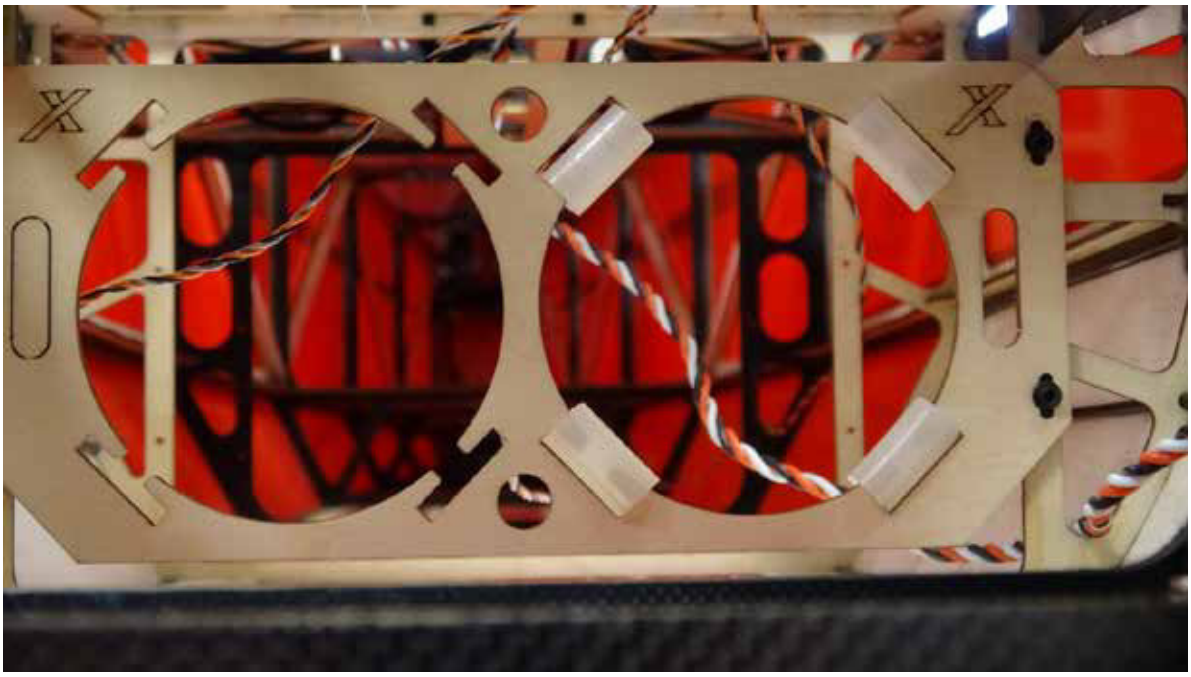


Figure 29

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Rudder and Center of Gravity location

11. Locate the rudder and associated parts bag. This Laser has a removable rudder, as such the assembly is simplified from what you may be used to. The hinges are already glued in so we may proceed to installing the rudder. Install the long pin to hold the hinges together, this installs on the top of the rudder. The pointed end goes down thru the hole on top of the rudder and you may have to work with the rudder to get it thru all the hinge holes. Push it all the way down till the threaded portion is in the hole and against the female threads. Use a small straight screwdriver to tighten and add BTL, you may consider running the tailwheel tiller thru the ball link at this time. Next I suggest we find your CG, in our prototype models a tail mounted rudder servo in push pull configuration yielded a perfect CG. However, ours utilized the DA120 on stock mufflers and your setup may differ in weight. Therefore you will need to put your wings, horizontal stab/elevators and all accessories (batteries/switches/regulators etc) that you intend to use in their respective places, refer back to figure 24 if needed for how we laid out our model. The rudder servo has a bay on both sides of the fuselage near the very rear. Locate these bays and decide which side to use and secure the rudder servo and hardware with tape or similar to the side of the fuselage exactly where it will mount and attempt to find the CG. The CG range is front of the wing tube to its' rear with the ideal range being ½ to ¾ rearward from the front of the wing tube. If your CG is close to the desired range remember you can move batteries or other items around to achieve a desirable CG. The goal is to have a rear mounted rudder servo, but if desired CG is not attainable then move the rudder servo to the tray in the middle of the fuselage and attempt to get your desired CG. Once you have the desired CG location then mount your servo there. If you ended up in the rudder tray then a pull pull is how the rudder will operate and hardware is supplied for that installation, but since the most likely is a rear mounted rudder servo we will cover that style of installation. With a rear mounted servo we chose the right side of the fuselage and used a single servo (MKS 777A+) and found it to give plenty of authority for all maneuvers, but a dual rudder servo can be used. I will continue with explaining a single servo install. If you are using a single servo installation then use the same method we did with the elevator/ailerons. If you choose a dual servo aft or pull pull rudder tray setup then you will need to find the laser cut rudder control alignment tool. It is two pieces of thin plywood and you will install your control horns then use the alignment tool to keep them in place while drying, see figures 29 and 30 for this process. We chose to mount our rudder servo on the right side of the fuselage. Locate that bay again and cut the covering as desired and mount your servo with the output shaft oriented to the front of the plane. This will require a 48" servo extension and we highly recommend the EF extensions since they are 20AWG and have universal connectors. There is also a Carbon tube to route your wires thru and we recommend using this to keep your extensions from flopping around during flight. If you have not put your elevator extensions in the tube (also 48") I recommend threading all 3 extensions at the same time for ease of installation. Consider labeling them to make future connections easier. Now you can thread your ball links onto the pushrod and continue with the final installation in the same manner as the

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elevators/ailerons. We used the outer hole on the 2” servo arm. Note: if you did not insert the tailwheel tiller arm into the ball link earlier in this step make sure to do that now before connecting the remaining ball link into the control horn. Also be sure to recheck the Rudder hinge pin located on the top of the rudder, add some BTL and be sure not to over tighten. We recommend you preflight this at least before each flying session. See figures 30-34 for help with this step.

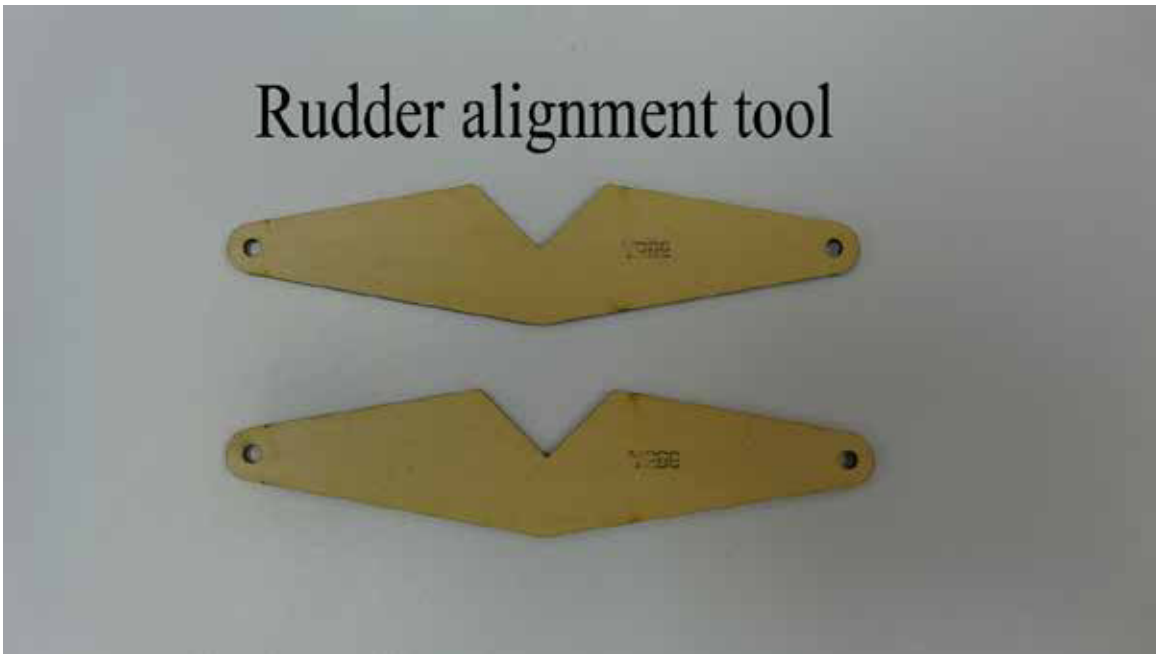


Figure 30



Figure 31

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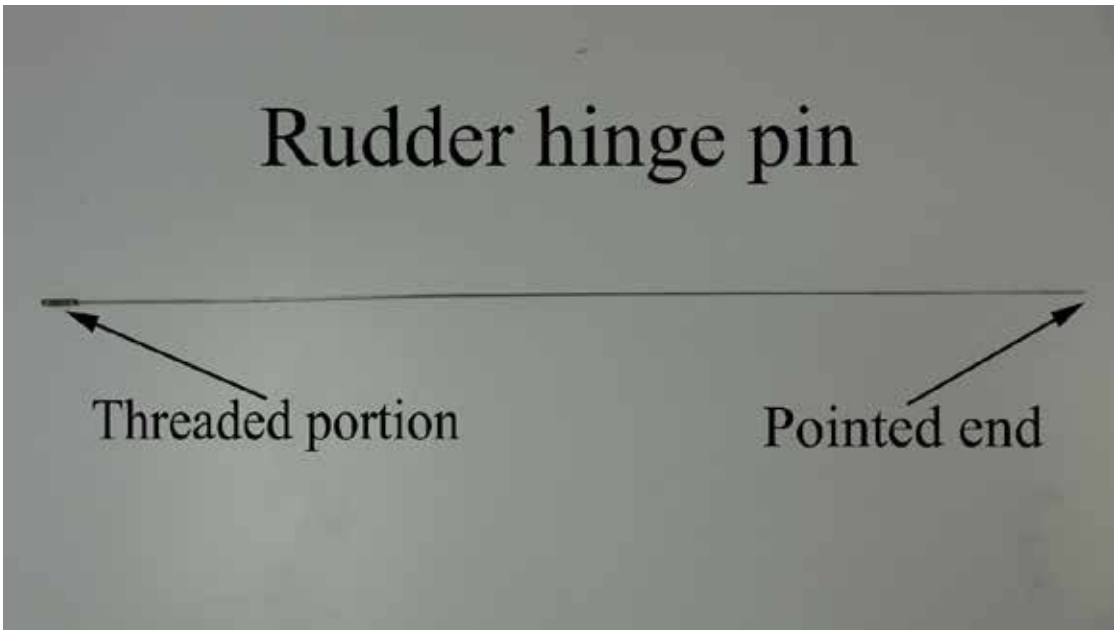


Figure 32



Figure 33

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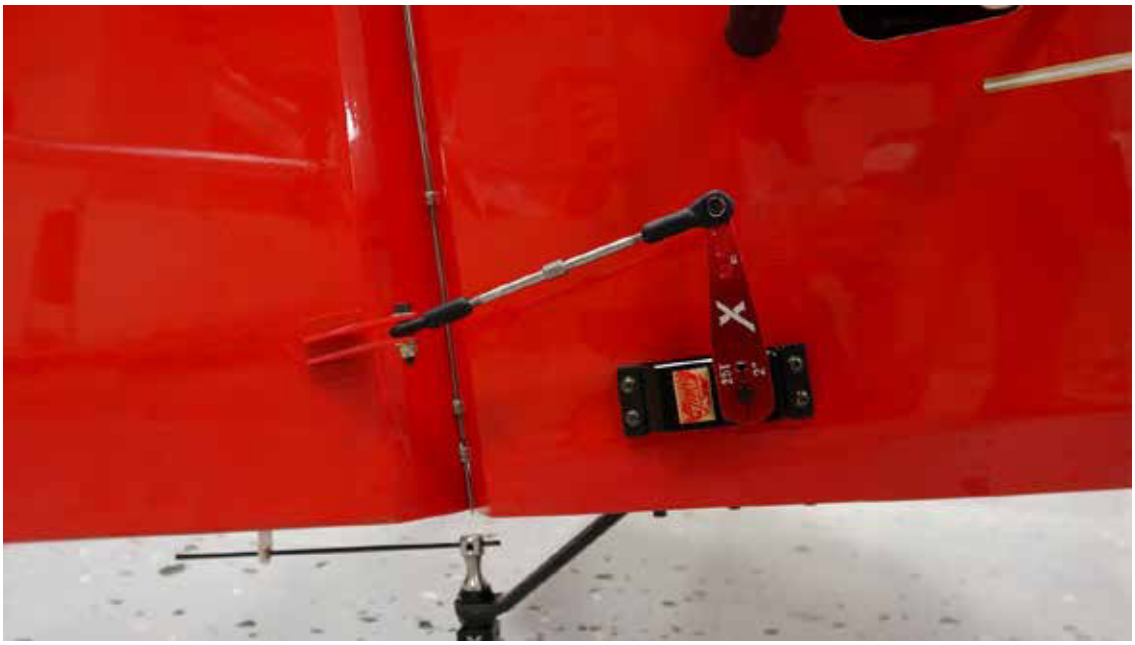


Figure 34

Final Items

This completes the basic assembly of the Laser. However there are still things to consider, for example a prop and spinner. If using the DA120 we find the Falcon 27X11/28X9.5/28X10/29X9 to all be very good prop choices. The spinner we used is a 5” red carbon fiber, the spinner and props are available thru Extreme Flight RC.

The rudder/elevators/wings/canopy are all removable items, be sure to check them and make sure all connections are made. The rudder is secured by the long hinge pin and is discussed in the rudder section. The elevators have 2-3mm bolts that secure them as well as 2 small carbon fiber tubes. The wings have one large carbon fiber tube and each panel is secured by 2-4mm bolts just inside the fuselage. The canopy has two small protrusions or fingers on the front side that slide into pockets behind the cowling and then 2-3mm bolts that secure in near the rear of the canopy and screw into the side of the fuselage. We recommend using the Extreme Flight anodized cone washers, they provide a secure fit and really add a nice look to your model.

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Setup and Flying

Throws:

	Low rates	Middle rates	High rates
Ailerons	25°	32°	38°
Elevators	15°	45°	55°
Rudder	15	As desired	All you can get

A digital throw meter is highly recommended for accurate setup of control surface throws.

The above throws are what we used in the videos, exponential is as follows:

Low 25-30% Middle 35-40% High 45-50%

Keep in mind these are starting points, your personal preference/experience should be considered in final setup.

As with the CG range stated above, it is a starting point and much time/patience should be taken to achieve proper throws and CG to your flying style. It can be the most time consuming process, but once your plane is properly dialed in you will agree it was time well spent. One of the most practical ways to check the CG on an aircraft this size is to insert the carbon fiber wing tube into its sleeve in the fuselage and tie a length of rope around the tube on each side of the fuselage, forming a loop that you can pick the aircraft up with. Slide the wings into position, install the canopy and pick up the plane with the rope. The Laser should balance in a horizontal position. Move your batteries and radio equipment to achieve this condition. This will give you a safe starting place for the first flights. One of the best ways to fine tune the CG for your aircraft is the 45 degree line test. Fly the aircraft in front of you from left to right (or right to left if you prefer) at full throttle. Pull the aircraft into a 45 degree up line and establish this line. Roll the aircraft inverted, neutralize the elevator and pay close attention to what the plane does. Ideally the plane will continue on this line for several hundred feet before it starts to slowly level off. If the airplane immediately drops the nose and dives toward the ground it is nose heavy. If it begins to climb inverted toward the gear it is tail heavy. There is no need to have the Laser excessively tail heavy to perform 3D maneuvers.

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General Information

The 104 Laser is available in two schemes, a printed patriotic/thunderbird scheme and the classic Leo Loudenslager scheme. The printed scheme covering can be purchased from Extreme Flight RC, however there are a few colors that come close to matching the printed scheme. The following Ultracote colors will come very close True Red HANU866, White HANU870, Black HANU874, Pearl Blue HANU845, if you have the classic Leo scheme then True Red HANU866, midnight blue HANU885, Gold HANU879, White HANU870. If you have a mishap replacement parts are available from Extreme Flight RC. We also get many questions concerning the various sizes of the plane so here are some typical measurements of the 104 Laser:

Spinner to end of rudder: 102.5”

Floor to top of Rudder: 26.5”

End of rudder to front of cowling: 95.5”

Width of gear: 27.25” (outer side of tire to outer side of tire, does not include wheel pants)

Gear to top of canopy: 26.5”

Width of horizontal stabilizers: 42.5”

Width of cowling: 13.5”

As a final step clean the entire aircraft with glass cleaner, then apply a coat of spray-on wax and buff the finish to a high gloss. My favorite product for this is Eagle One Wet Wax AS-U-DRY, available in the automotive section of most Wal-Marts, K-marts, Sears, Targets, etc. People often ask me at trade shows how I get the planes to look so shiny, this is my secret. You may wish to apply all of your graphics before applying the coat of wax. A couple coats of this wax also helps to protect the covering form the effects of direct sun exposure and gas/oil.

Thanks again for your purchase of the Extreme Flight RC 104 inch Laser EXP ARF. I hope you enjoy assembling and flying yours as much as I have mine.

See you at the flying field!

Jeff Williams

Team Extreme

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