



Build Manual



Vector & Xtra Slick



Warning information – this is not a toy!

Read and understand entire manual before assembling model

Do not overlook the warnings and instructions enclosed or those provide by other manufactures products, and the official AMA (Academy of Model Aeronautics) Safety Code. They were designed to assist you in preventing damage or injury.

The instructions included are our 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 you use when assembling this kit or the manner in which the assembled model and the installed radio system 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. In no event shall Twisted Hobbys liability exceed the original purchase price of the kit.

By the act of assembling and operation the assembled model you assume and accept full liability for your actions.

Radio controlled model aircraft that are not properly assembled, operated and maintained can cause serious damage to body and property. If you are not an experienced pilot and airplane modeler you must use the help of an experienced pilot or preferably an authorized flight instructor who will assist you with the assembly and flying of this model.

Safety Notes:

1. 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).
2. Check thoroughly before every flight that the airplanes components are in good shape and function correctly. If you find a fault do not fly the model until you have corrected it.
3. 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
4. Youngsters should only be allowed to assemble and fly these models under the instruction and supervision of an experienced adult.
5. Do not operate this model in a confined area.
6. Do not stand in line with, or in front of a spinning propeller and never touch it with any object.

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, modifications or assembly of this 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.

Thank you for your purchase of our product and enjoy.

**Kit includes:**

- Painted airframe, pre-hinges, carbon fiber & wing spars pre-slotted.
- Motor stick mount
- Carbon fiber connecting rods and wing spars
- Pre Bent Z-bends, Control horns, Precut shrink tubing
- Velcro.
- Assembly required.

Vector/Slick/Crazy 88 Power-Combo kit (Purchased separately)**Kit includes:**

- (1) 24g motor and prop saver adapter with o-ring
- (1) 10a esc also (1) female jst connector
- (1) 9g servos and horns/screws
- (2) 5g servos and horns/screws
- (1) 9x4.7 prop

Build materials needed:

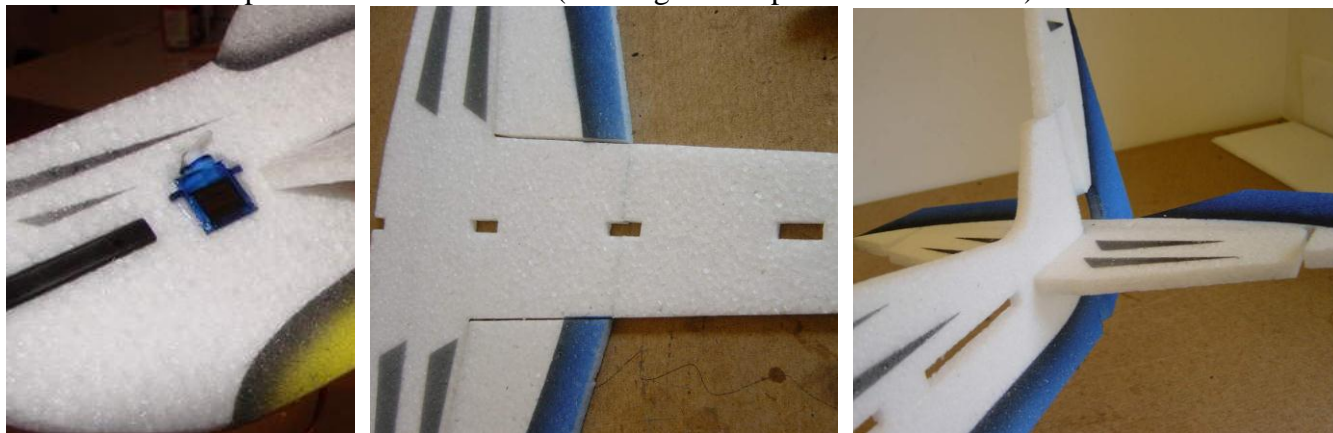
- Hobby knife
- Welder Adhesive or Hot Glue
- Phillips head screw driver
- Soldering gun and solder
- Cutting pliers
- Scissors
- Lighter/Heat Gun

Please note: After removing kit from shipping box, lay each piece flat on 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 bent out of shape easily.

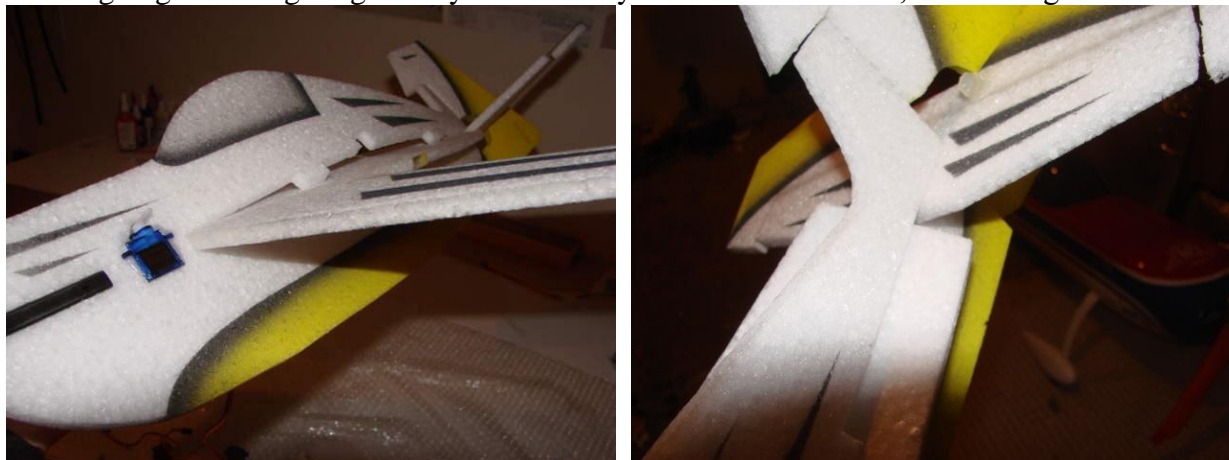
-Also before building your model it's best to check all electrical components and centering each servo before continuing with your build. The ESC will need a battery connector soldered, we use JST connectors. Make sure Red is positive and Black is negative. The ESC motor wires (3) will also need to be solder to the motor but first checked for correct rotation of the prop. If the motor spins backward, reverse any two of the three wires, this will reverse rotation of motor.

1st step.

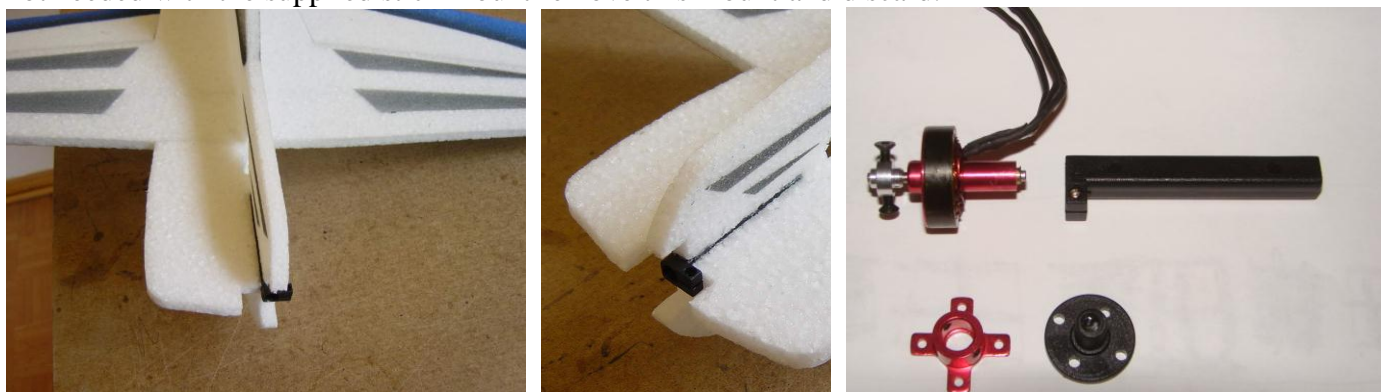
Install the black motor stick mount and also the 9g aileron servo and with glue as shown below. Then glue main wing to the mid-fuse piece and let dry. Now pull fuse slightly apart which will allow the assembled elevator to fit into place toward the rudder (do not glue this piece in as this time)



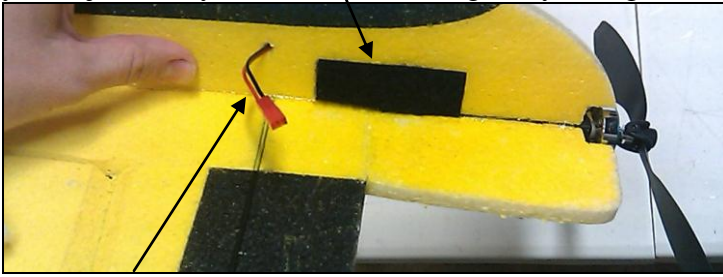
Carefully pull apart the fuse to insert the main wing assembly. Find all tabs which will keep all pieces straight. Once all pieces are square to themselves apply a small bead of glue around all mating surfaces. *remember its best to go light on all gluing since you can always add more if needed, too much glue isn't what we want*



The nose pieces are installed the same way, make sure everything is square before the glue is dry. **Please note when installing the motor there will be an alum flange mount which is held on with small set screws, this is not needed with the supplied stick mount remove this mount and discard.**

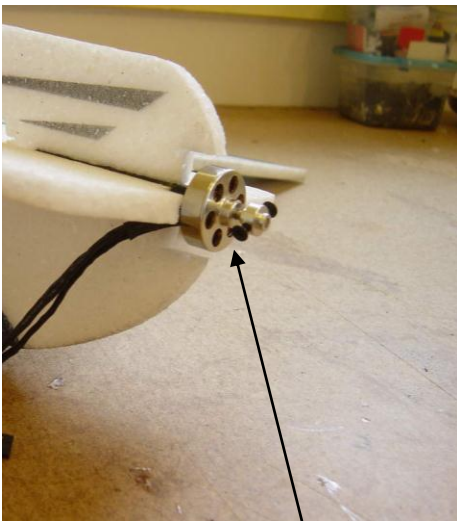


Now add the **battery** Velcro (notice the location is centered from the front leading edge of wing) this will give you adjustability for small center of gravity changes with the battery.

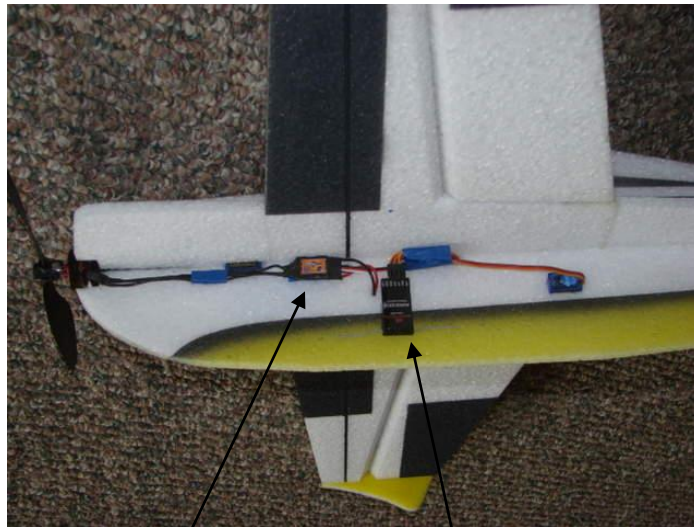


Notice JST battery connector location

Once airframe is square and dry, you can install the running gear as shown in the pictures below. The motor and esc can now be installed along with the receiver on the opposite side of the fuse of the battery. Velcro the receiver and esc as supplied in your hardware (glue the Velcro with Welder's or epoxy to both matting surfaces).



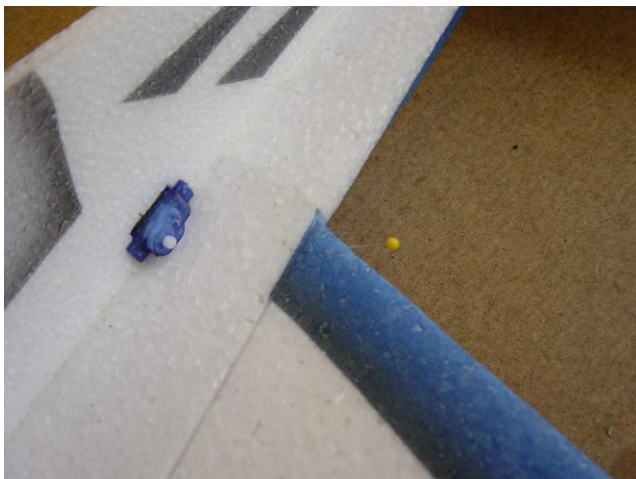
Motor



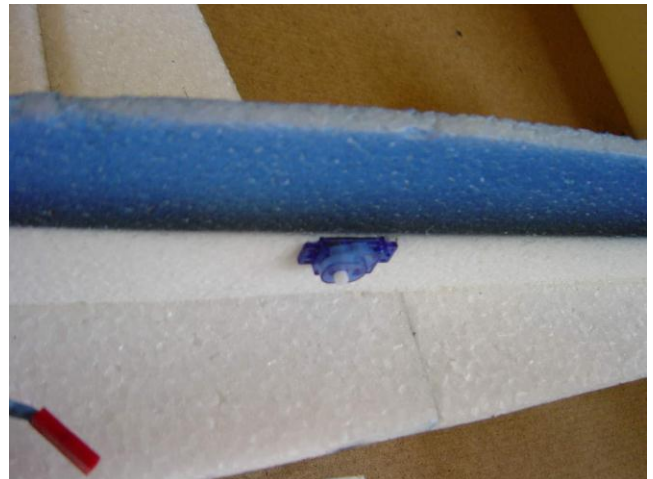
ESC

Receiver

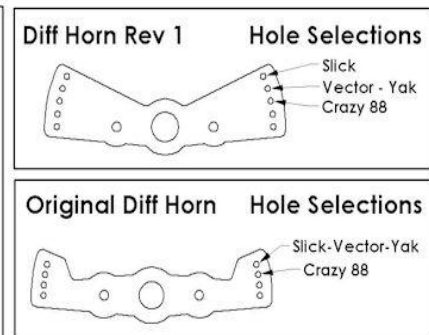
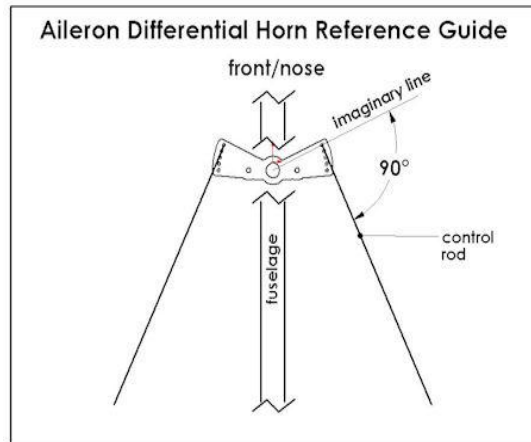
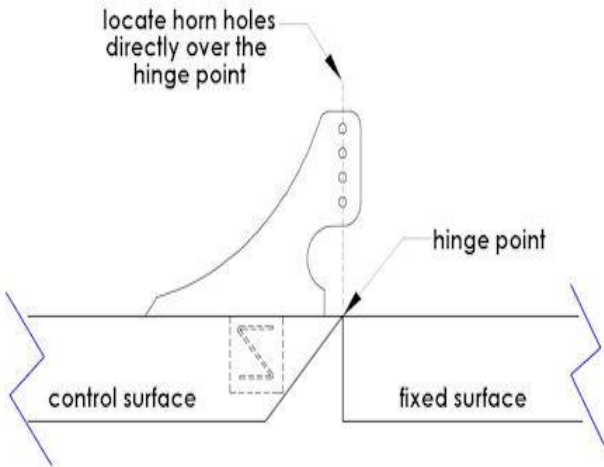
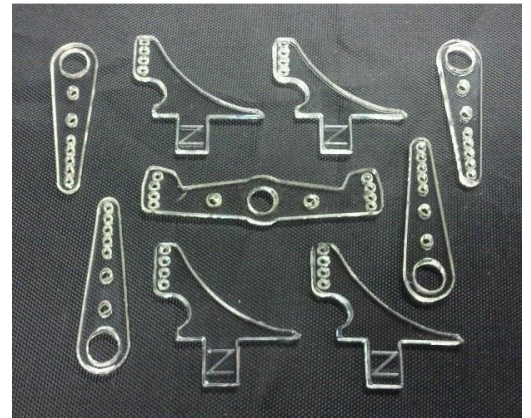
Elevator servo installed with glue as show below



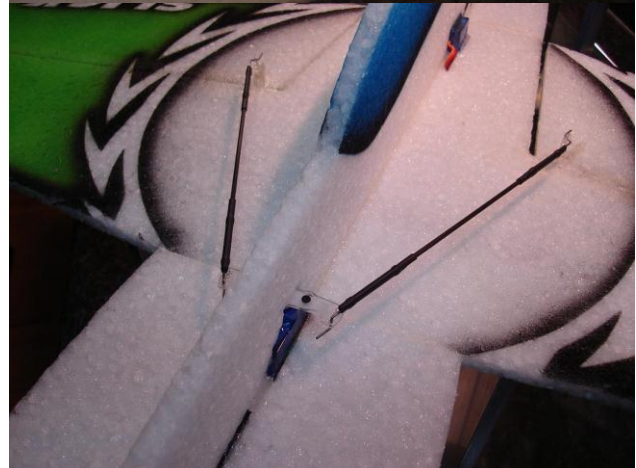
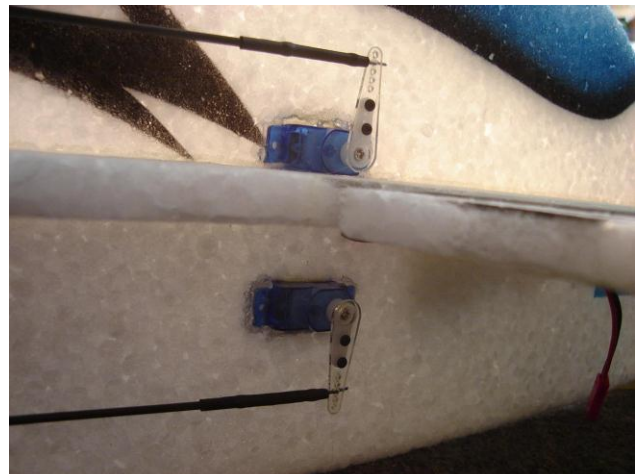
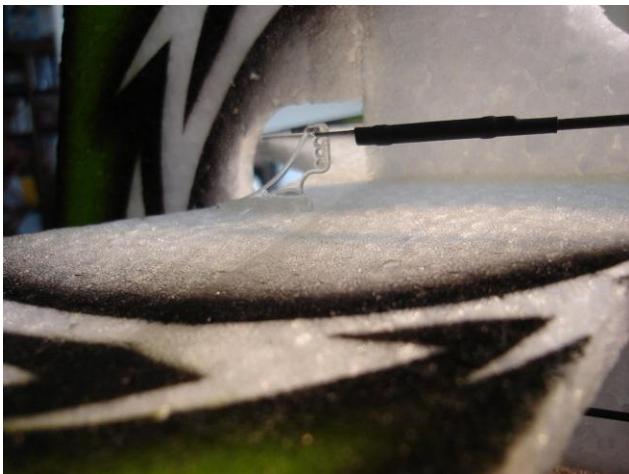
Rudder servo shown underneath of plane

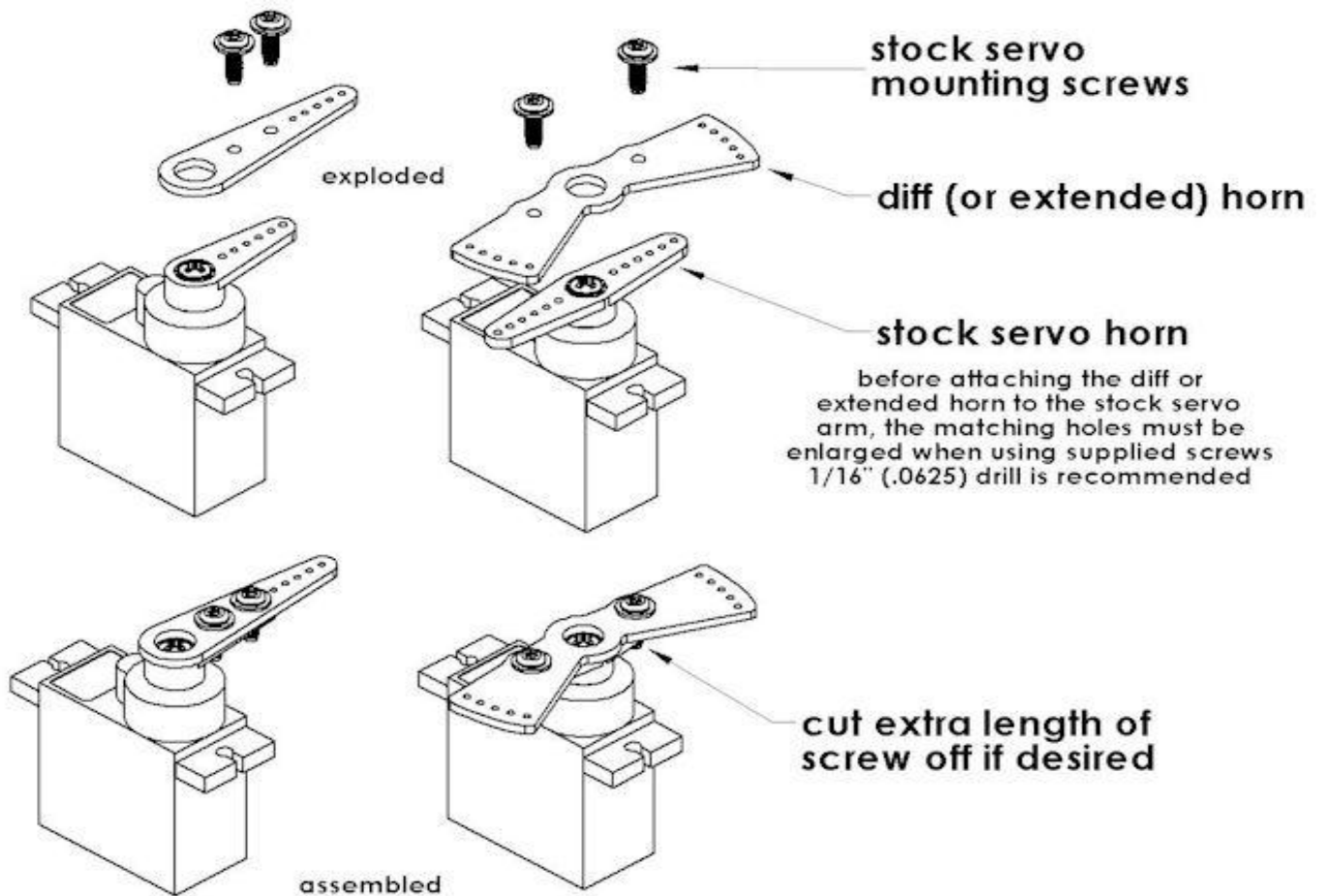


Find all of the pre-cut slots in each control surface, then glue into place. Horns shown below my change with updates.



Differential Horns shown indicate the holes that are ideal for the different models





Push rod/z-bend assembly show below:



- (3) 13" carbon rods (1) for rudder and (1) for elevator and the 3rd is cut in half for each aileron.
- (4) horns (1) Aileron differential hole and (2) servo arm extensions
- (8) Z-bends
- (8) 1" shrink tubing

-Clean and scuff each metal z-bend to remove oil or dirt to allow them to adhere stronger to the CA Glue and Carbon Fiber.

-Apply 1 drop of CA glue then apply heat shrink tubing (we used a lighter).



Be careful not to have the CA glue run down and get in the horn's eye holes.
Begin z-bends connections for each control surface first. Then tape or pin the control surfaces to a neutral position before you finish trimming carbon rod final length. Trim carbon rod 3/4" before servo horn, then repeat z-bend process to complete control linkages.

-Flight setup-

Center of gravity: 2" 3/4 to 3" 1/4 from leading edge. 3" is a good place to start.

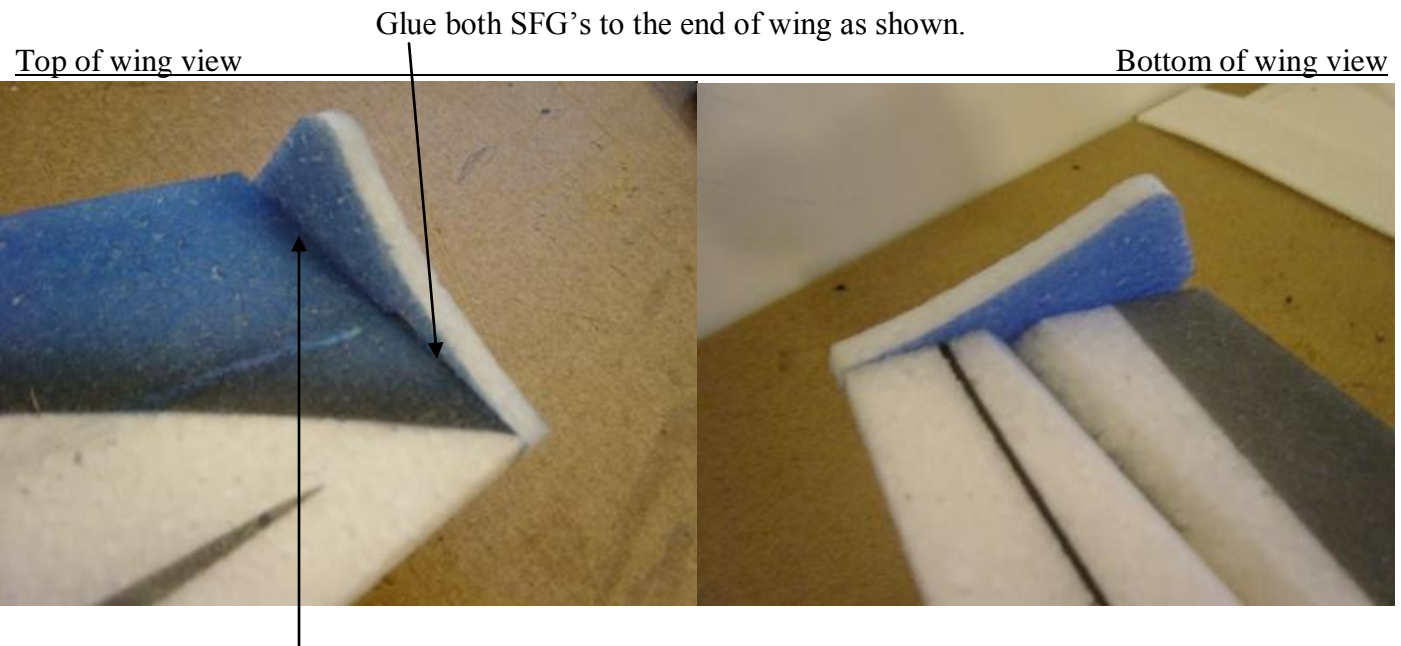
Control throws for 3d setup: Ailerons=35 degrees. Elevator = 45 degrees. Rudder = 35-45 degrees.

Exponential settings: 75 % Ailerons, 75% Elevator, 75% Rudder (subject to the pilot's likes and feel)

*Control hinges can be tight for the first couple flights, they are design to wear in and become more flexible in time. We suggest you check movement on all control surfaces after a few flights. Any tearing or damage to the airframe/hinges can be fixed with Welder Adhesive

Storage of this EPP planes should be hung from its prop and let airframe hang, doing otherwise can cause airframe twisting. Also these planes shouldn't be stored in a hot car which can also damage airframe.

Slick airframe only: SFG's installation is optional. SFG's add stability in harriers also give more rudder authority.



Make sure there is a gap between the aileron flap and SFG's, **do not glue them together!**