

HET MIG15 Manual

ITEM NEEDED TO COMPLETE:

- 4 channel transmitter
- HET 6904 fan unit
- 2w, 3w, 2w-20, 2w-23 motor
- 40-80 amp speed control depending on motor used
- 3s-5s lipo battery pack
- 3 mini servos (HS-65mg or equivalent)
- Optional HET air retracts

BELOW IS A PICTURE OF THE COMPLETE KIT AND ALL
REQUIRED ACCESSORIES.



The first thing to do is mark the exit holes on the vertical stabilizer for the elevator control rods. The first measurement is $2\frac{1}{8}$ " from the bottom rear corner of the horizontal stabilizer housing on the vertical stabilizer (see picture below).



The next measurement is $\frac{5}{8}$ " down from the horizontal stabilizer saddle on the vertical stabilizer and put a mark. (see picture below).

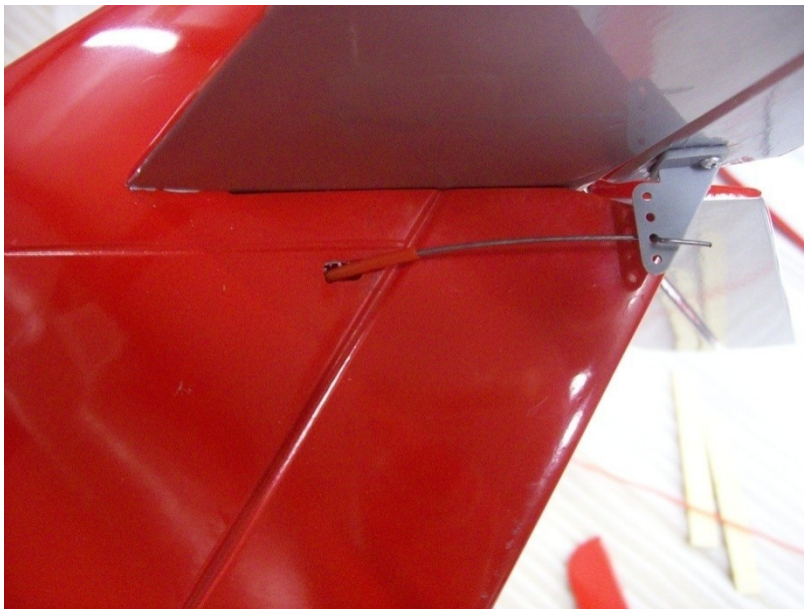
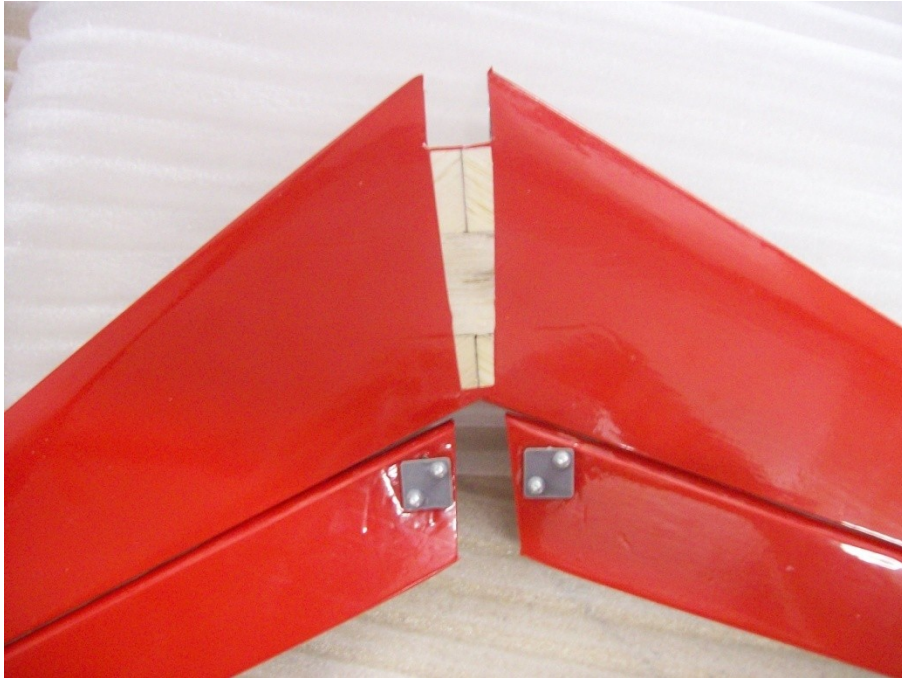
Where these two lines intersect is where the elevator control rod needs to exit. Make a $\frac{1}{8}$ " X $\frac{3}{4}$ " rectangle hole for the rod to exit. Once the hole is cut install the elevator control rod. (see pictures below)



Now repeat these steps on the other side of the vertical stabilizer. (There is one control rod for either elevator half.)

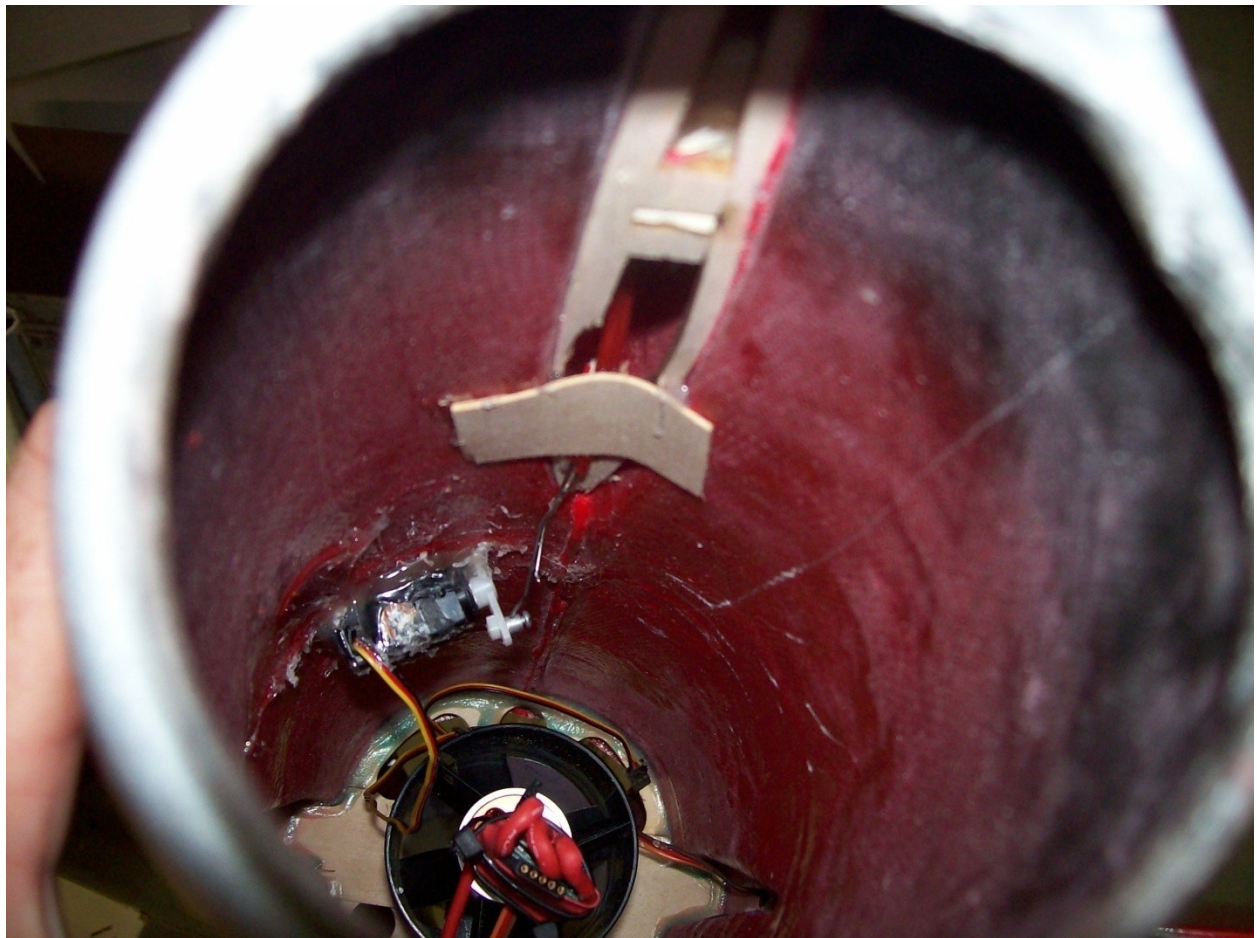
Now that the control rods are in place it's time to glue the horizontal stabilizer on. First place the horizontal stabilizer in place and mark with a pencil the outside of the vertical stabilizer; (what your doing here is going to cut the covering off to give a good glue joint between the horizontal stabilizer and the vertical stabilizer. Now is also a good time to glue on your elevator halves to the horizontal stabilizer. Before you glue on the elevator halves attach one control horn to each

elevator. Make sure the control horn is facing down. From this point you can glue the horizontal stab in place with 5 minute epoxy. (see pictures below).



Now that the control rods are installed it's time to mount the servo. Before we mount the servo install a ez-connector on the servo control horn. Now take both

control rods and install them into the ez-connector and place the servo two inches towards the front of the jet from the front of the vertical stabilizer wood frame work. (I recommend hot gluing the elevator servo in place). Now that the servo is installed a piece of scrap balsa is needed on the control rod tubing to keep them from flexing during servo deflection. The best way to do this is with a simple piece of scrap 1/16" balsa. The balsa needs to be glued to the red control rod housing and then to the fuselage. This piece of wood is critical and without it you will NOT have proper elevator control!



Next comes the aileron servo installation. The servo wire route needs to be hogged out with a long drill bit. Really anything that is long and has less than a 1/2" diameter will work to open up this access hole because it is only small amounts of foam that you are removing. This is rather strait forward because the servo cutout is already done for you from the factory. PS: before you glue the servo in with hotglue make sure the control horn is cerntered. Next comes the aileron hinge mount. Simply glue the hinges in place with thin C.A. PLEASE SEE PICTURE BELOW..

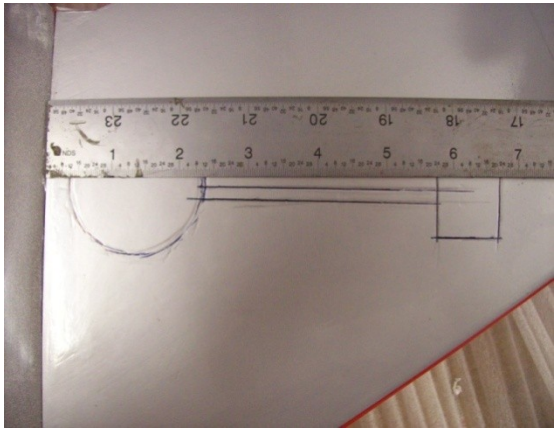
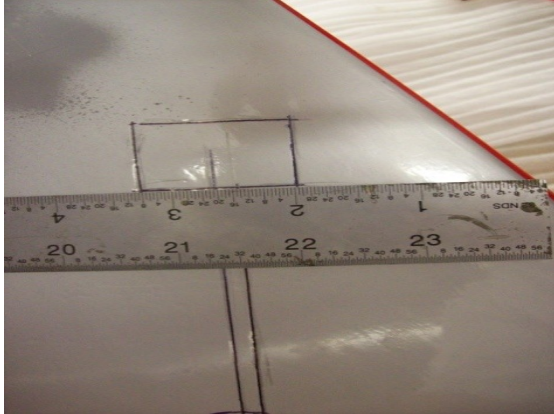


Now that we have the servo mounted it is time to install the control horn on the aileron. This horn is attatched with the two screws provided. Once the horn is installed it's time to install the aileron control rod. Install this in such A manner that when the servo is in the neutral position so is the aileron.

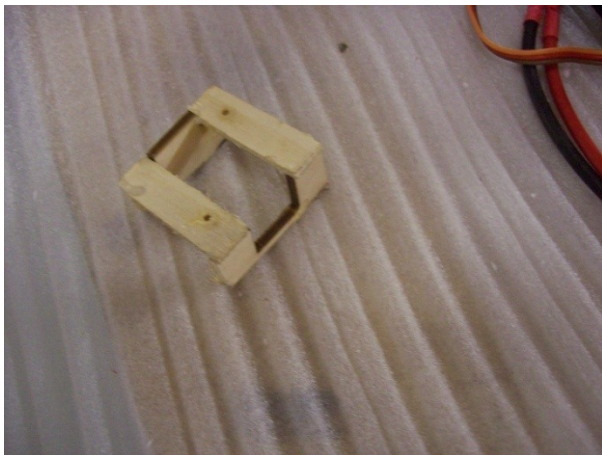
PLEASE SEE THE PIC BELOW. Repeat these steps for the other aileron.



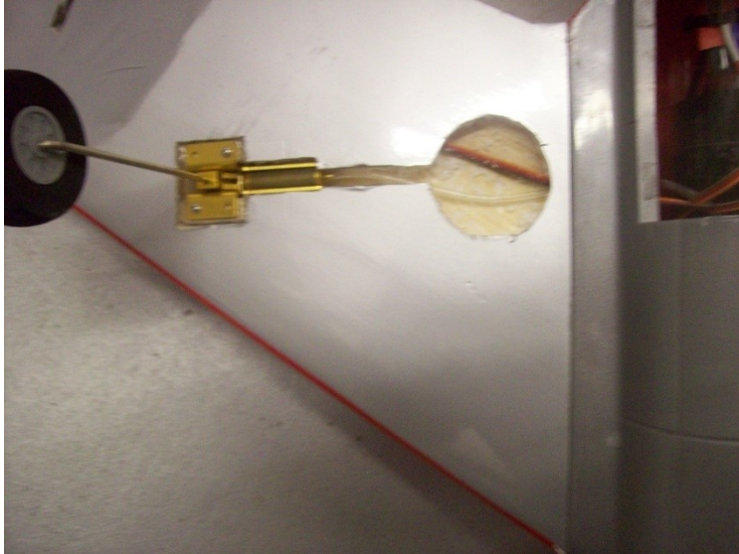
Next comes the OPTIONAL retract installation. First we need to mark where the retracts will be mounted. Note this is the bottom right wing we are working on. Measure $5\frac{3}{4}$ " and $6\frac{3}{4}$ " from the root of the wing towards the wing tip and make a mark at each increment. Now with a pencil at these two marks draw two lines parallel to the root of the wing. These two lines are the sides of the retract mount housing. Next we need to find the depth of the retract housings. Now put a ruler on the $5\frac{3}{4}$ " line and make sure the ruler is parallel to the root of the wing. Now measure 2" and $3\frac{1}{4}$ " back from the leading edge of the wing and make a mark at each measurement. These marks are the ends of your retract mount housing. Now that we have the retract housing marked on the wing it's time to mark where the strut will go. This will vary from each application depending on the wheel size chosen, but from the two pictures below you can see what needs to be done. Please see the pictures below. Once satisfied with the placement cut out the retract housing.



Now that we have the retract housing cutout we can make our mounts. The mounts are made out of four separate pieces of plywood. (note make sure and make one left side and one right side.) SEE PIC BELOW



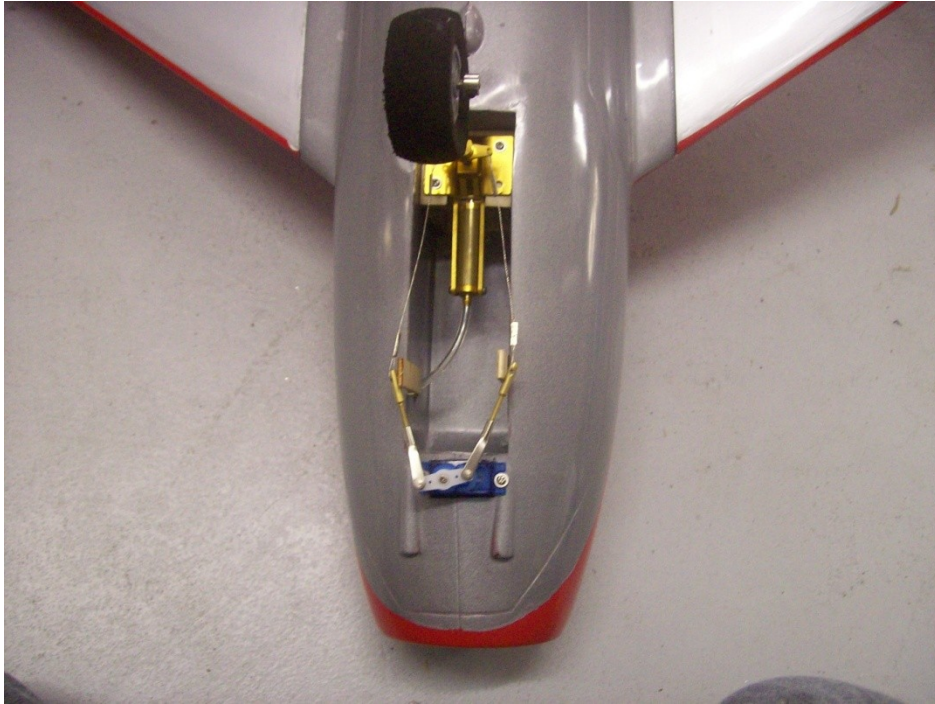
Once the retract mounts are built they need to be epoxied in place. Once they are epoxied in place the retracts can be mounted with four screws. See picture below.



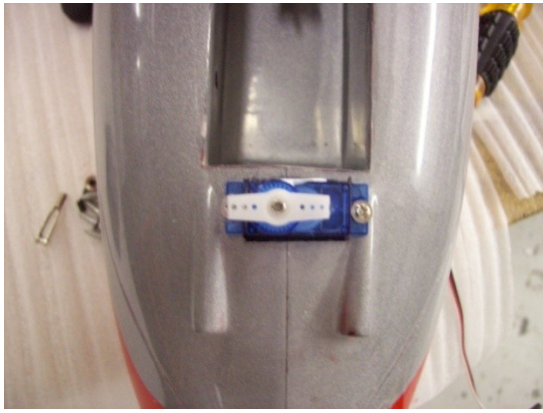
Now we can work on the nose gear retract. The first thing to do is build the nose gear retract mount. The mount is built using 4 pieces of plywood. Please assemble as the picture below.



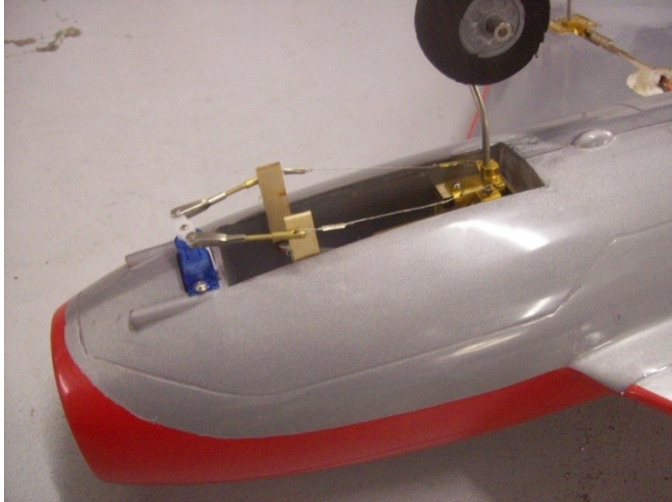
From this point the nose gear retract mount can be mounted permanently with epoxy and the nose retract can be screwed on with four screws.



Now we can mount the steerable nose wheel servo. The servo gets mounted just in front of the recess in the fuselage. Put your servo in place and outline the servo and then cut a hole in the fiberglass fuselage to allow the servo to fit flush with the bottom of the fuselage. From this point the servo can be screwed in place. SEE PICS BELOW.



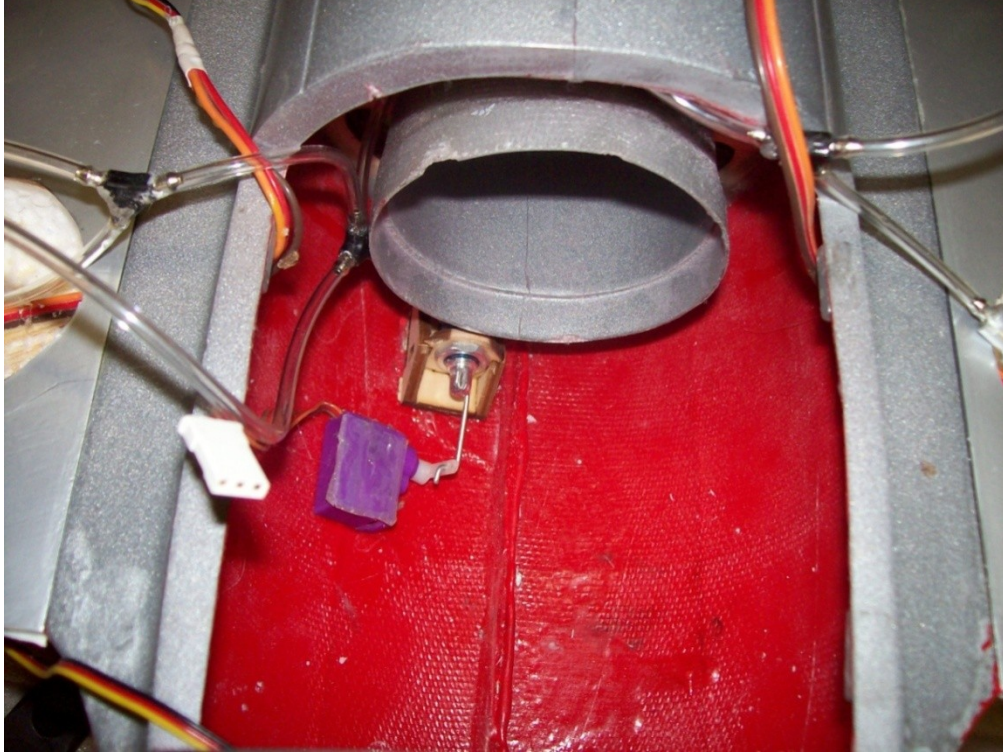
Now that the steerable nose wheel servo is in place we need to connect the linkage. First begin by installing your control linkage. Next use two pieces of scrap 1/8" plywood 1" back from the servo on either side of the retract recess. These plywood pieces keep the retract linkage from getting tangled around the strut when the nose wheel is retracted. See pic below.



Now that we have the aileron mounted and the aileron servo and linkage done we can glue the wings on. First thing to do is sand down the corners of the plywood wing spar (the reason for this is to help it slide into the wing and fuselage mount.) Next mix up a generous amount of 30 min epoxy and add a generous amount to the wing spar housing on both the wing and the fuselage. From this point add some epoxy to the entire wing root rib and to the area of the fuselage where the wing will contact the fuselage. You want to make sure when the wing is joined to the fuse you get a good strong glue joint. Now add a small amount of 30 minute epoxy to the wing spar. From this point put the wing spar into the wing spar housing on the fuselage (push it all the way in until it stops). Next carefully put the wing onto the main spar and press it firmly against the fuselage (note don't forget to guide the aileron servo wire in through the cutout on the side of the fuselage.) Now that the wing is in place use some masking tape to hold it in place until the glue cures. Use some rubbing alcohol to clean all excess epoxy before it cures. SEE PICTURES BELOW.

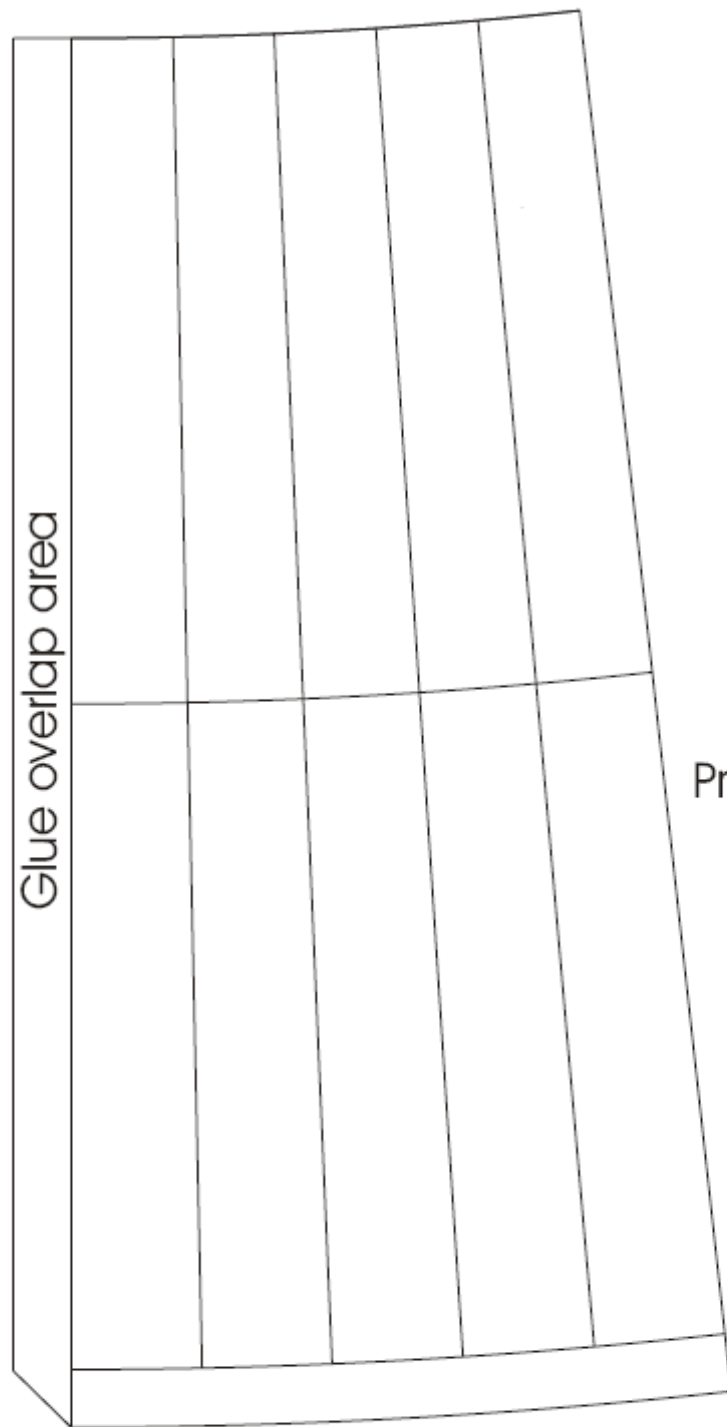


Now that the wings are installed we can mount the air valve and retract valve servo, and all airlines. From the picture below you can see where the retract valve needs to be mounted along with the servo. The retract air tank mounts up in the canopy area. Please see pics below



Next we need to mount the fan assembly. This setup is very easy to install. First make up your exhaust tube out of the included mylar clear sheet. Then tape the mylar tube to the rear of the fan. Now we can insert the fan and exhaust tube assembly into the jet. Next simply use a few drops of hot glue on the fan housing to secure it to the intake ducting...





Trusttube
template

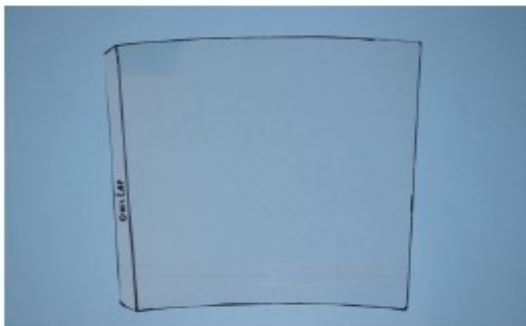
Print out twice



Print out the template 2 times cut them out and glue or tape them together. This template is A4 size.



Place the template under the supplied pvc sheet and trace the outline with a marker. Do this twice as there are 2 fanunits.



Cut out the unrolled surface for both trust tubes. Put the overlap area inside. Roll the pvc to a tube and apply outside adhesive tape. The Edge should match the innerline of the overlap area. Now you have a perfect conical trust tube.



Read the installation instruction from your fan-unit first. Install motor and ESC first. You can either install the ESC inside the thrust tube or outside. We recommend to place the ESC behind the motor inside the thrust tube.



On the left picture you see the 4 channel micro receiver attached next to the servo with Velcro. You can also tape the servo wires to the top. So the wires will not be in the way when you install the ducted fan.



Before you install the fan-unit you must add some tape to the front off the shroud, so that the shroud will fit tight in the intake tube. Also the battery extension wires should be routed first through the fuselage.

Settings:

Center of Gravity: 4 3/8" – 4 7/8" back from the leading edge of the wing

Elevator throw: 10mm up and down

Aileron throw: 10mm up and down

First Flight.

Use a bungee to start the plane. Before start is good to use some up trim. After start level the plane don't attempt to turn, climb and trim the plane. The Starfighter can be flown very slow with a high AOT But never make turns with a high angle of attack (nose high position) You risk to drop a wing.

You will find the airplane is very nimble but has excellent stability. Loops and snap rolls are easily obtained with adequate entry speeds.. **Just remember to land level;** as to avoid damage to the plane . Happy Flying.

WARNING!

Although the Starfighter is a stable airplane, it is not a trainer or first EDF airplane. This airplane is capable of very high speeds and therefore can cause serious personal injury and property damage. We strongly urge you to seek the help of an AMA approved instructor if this is your first aircraft of this type.

Please use common sense

Fly in suitable areas for a high-speed aircraft such as an AMA approved field.

High-end Technology Holland assumes no liability for the operation or performance of this product. It is the responsibility of the operator to use this product in a safe and responsible manner.

The End

