

JET TENG MODELS
SPORT JET

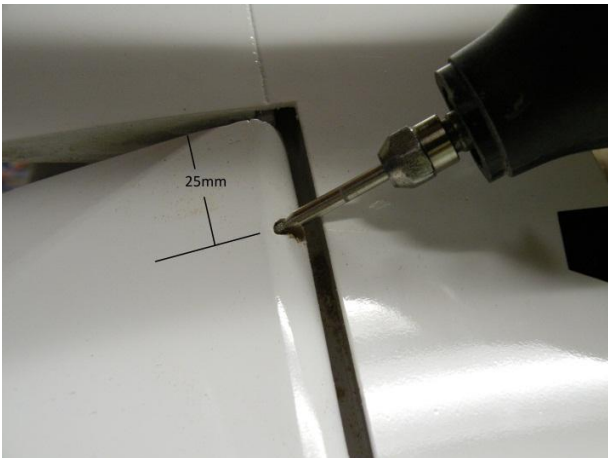
Index

	Page
Aileron Servos	2
Flap Servos	3
Rudder Servo	5
Elevator Servos	5
Main Landing Gear	7
Nose Gear & Door	10
Retract & Brake Servos	

Aileron Servo – Flush Linkage



- Clearance trailing edge spar for pushrod
- clearance aft spar for pushrod clearance.
- The trailing edge spar slot can be cut with a 3/32" dia. long drill bit drilling thru each corner then use an X-Acto #11 blade to cut between holes. The aft spar will need clearance cut for aileron linkage only.



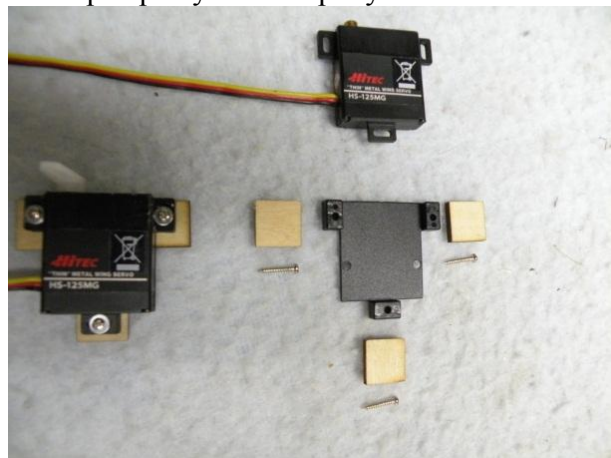
- Mark position for control horn per picture 25mm in from aileron inner edge.
- Slot aileron for control horn, note angle of slot as this will prevent cutting thru the top skin of the aileron, use extreme caution and maintain this sharp angle. The control horns for the aileron need to be trimmed to 20 mm overall length.



- A relief will need to be cut for clearance of the quick link, note one side is offset 6 mm to allow opening the quick link up for install.



- Epoxy control horn in place using care to wipe up any excess epoxy.



- This servo install instruction is for suggested Hitec HS125MG with mounting plate. Pre-assemble the servo, mounting plate, and (3)

plywood pads. Drill 1/16" dia. hole for mounting screws to avoid spitting the plywood pads.

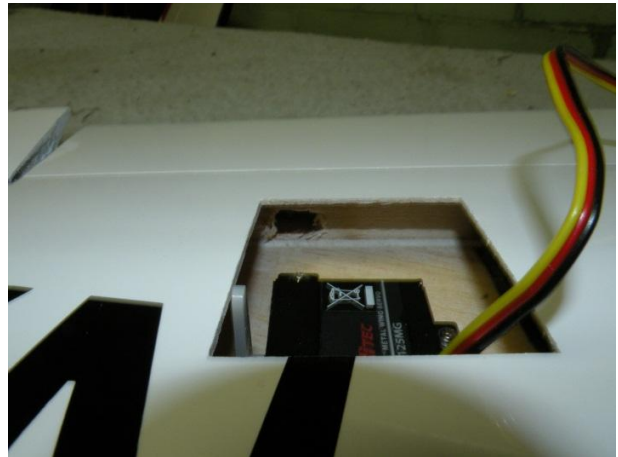
- Trim the servo arm so only the hole closest to center, 10mm from center screw, is left in place.** Center the servo and attach servo arm.



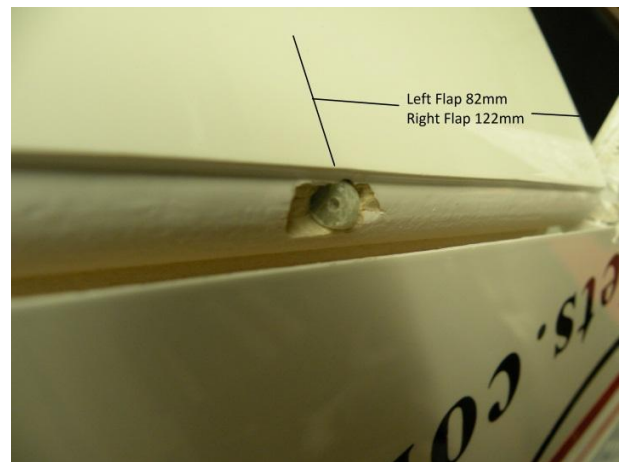
- Apply epoxy to servo mounting pads then place servo assembly in wing, connect aileron pushrod quick-link to inner hole of servo arm and position servo so aileron is centered with servo centered, servo should be forward in bay, forward mounting pad will be very near the main spar, make sure you have access to all (3) mounting screws for servo maintenance.*

Flap Servo – Flush Linkage

- Follow the same method used for the ailerons only this time control horn install is on the top of the wing.



- The trailing edge spar slot can be cut with a 3/32" dia. long drill bit drilling thru each corner then use an X-Acto #11 blade to cut between holes. The aft spar will need clearance cut for aileron linkage only.



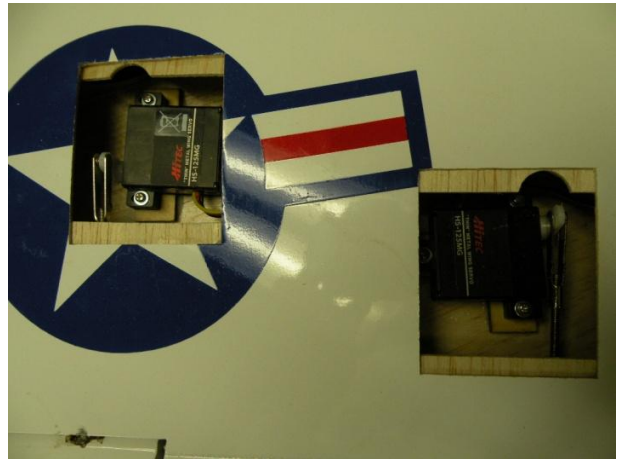
- Mark position for control horn per 82mm in from flap outer edge for the right flap and at 122mm from flap outer edge for right flap. The servos will be mounted with the servo arm toward center of aircraft on left flap and away from center of aircraft on right flap, this is done so reversing servos are not required.
- Again slot flap for control horn as done on the aileron, note angle of slot as this will prevent cutting thru the bottom skin of the flap, use extreme caution and maintain this sharp angle. The control horns for the

aileron need to be trimmed to 20 mm overall length.

- Epoxy control horn in place.
- This servo install instruction is for suggested Hitec HS125MG servo with mounting plate. Pre-assemble the servo, mounting plate, and (3) plywood pads. Drill 1/16" dia. hole for mounting screws to avoid spitting the plywood pads.
- For the flaps a new 1/16" dia. hole can be drilled in the arm 7mm from the center, then trim arm to reduced length. With the flap servo in the up position the servo arm should be 90 degrees to the linkage.



- Apply epoxy to servo mounting pads then place servo assembly in wing, connect flap pushrod quick-link to inner hole of servo arm and position servo so flap is up with servo at 100% up travel, again make sure you have access to all (3) mounting screws for servo maintenance. Use tape on upper surface of flap to hold flap in up position.

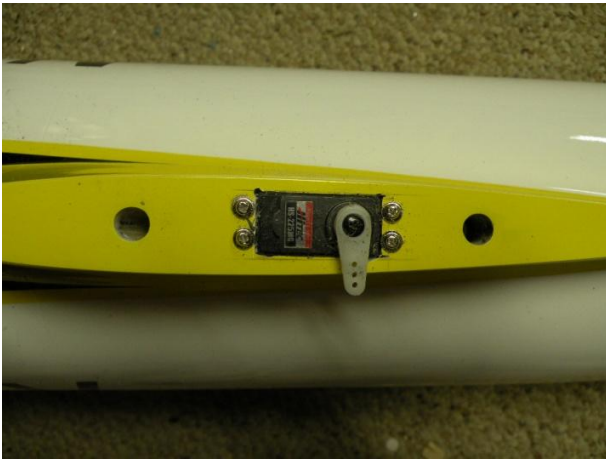


- A pad is now glued in place to hold the servo covers to the right height for a flush fit, these can be made of scrap balsa or plywood. Place and front and rear of servo openings.

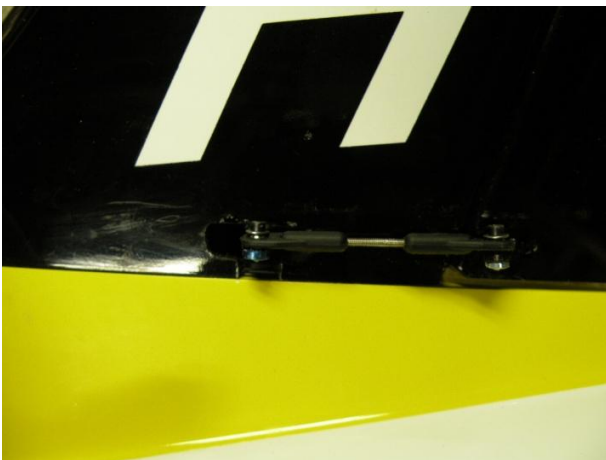


- Place servo covers and use clear tape (i.e. Scotch Tape) to hold in place. Covers may need a light sanding on edges to fit loosely.

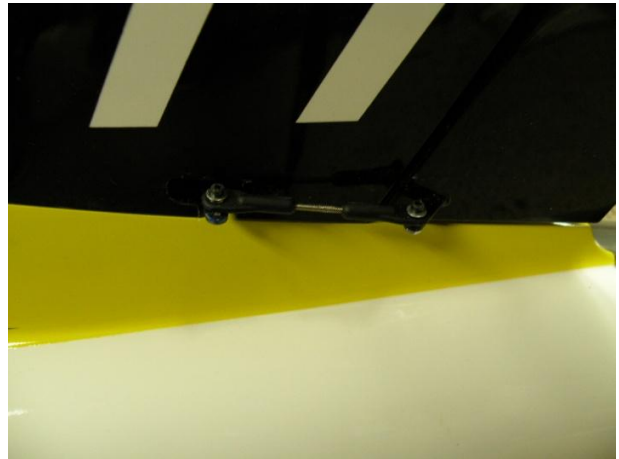
Rudder Servo



- The rudder servo, a Hitec HS-85MG shown is mounted in the fuselage with the servo grommets located below the skin. Cut this servo hole so it is forward of the fin spar reinforcement block. Install the servo from underneath, use a scrap piece of plywood for a screw plate to sandwich the servo to the fuselage skin.



- Slot the fin to receive the servo arm, shape it like a "T" to allow the fin to be installed with the servo centered. The rudder horn is installed in similar fashion as the aileron horns were installed with a slot cut in the rudder at an angle then epoxy in place.

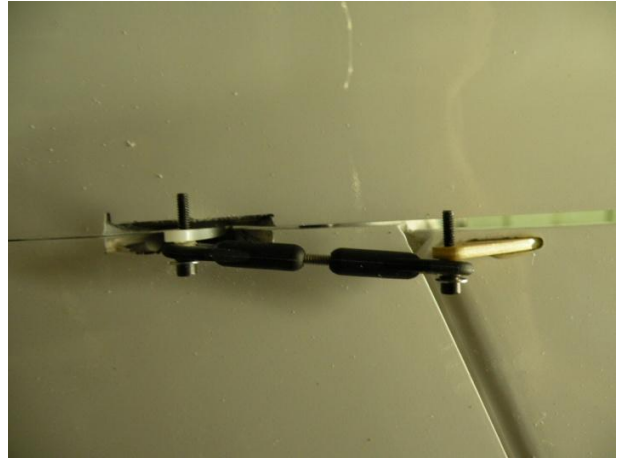
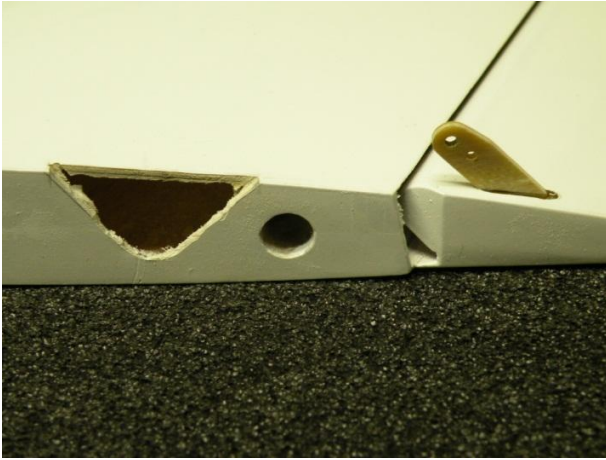


- The linkage consist of (2) ball ends to allow for the swept angle of the rudder.

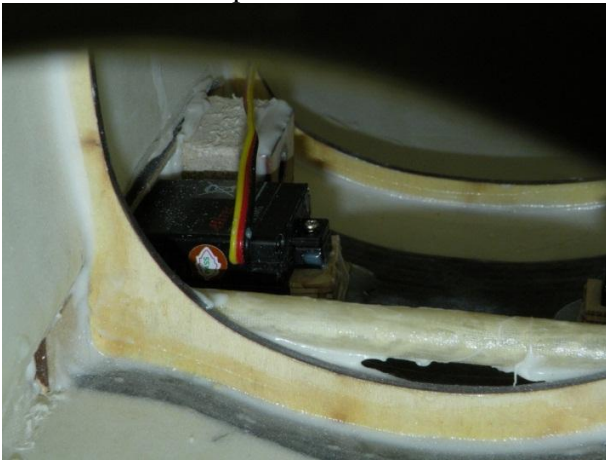
Elevator Servos

- The elevator servo, a pair of Hitec HS125MG's with mounting plates are mounted in the fuselage on the bottom skin with the servo arm sticking thru the fuselage horizontal stabilizer airfoil shape. Again screw the servos to plywood pads but the elevator will require use of multiple pads on the bottom pad to shim the servo parallel to the stabilizer surface.





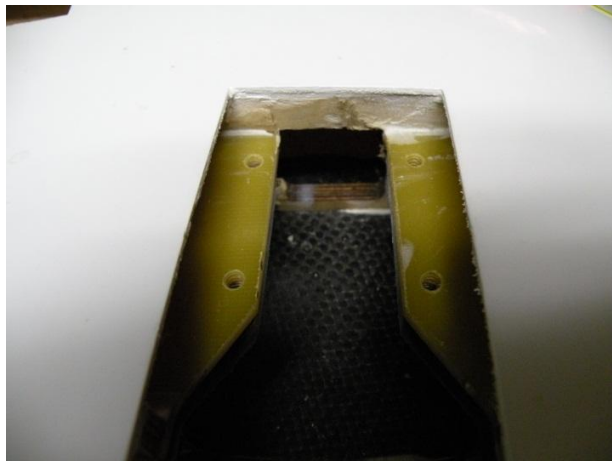
- Cut the clearance for the servo arm movement along with a matching cut in the stabilizer. The elevator horn slot again is cut in at an extreme angle to avoid cutting thru the upper surface of the elevator. Epoxy servo horns in place.



- These two photos show the finished linkage installation.

- The servo can now be epoxied in place by reaching thru the tailpipe end, epoxy pads to bottom of the fuselage skin. Note the inside pad (nearest centerline) is made of multiple pads to align servo perpendicular to the stab mounting face.

Main Landing Gear Installation



- Drill and tap for 6-32 thread all retract mounting plates, main gear and nose gear. Harden threads by wicking in thin CA on threads, allow to harden before install screws
- Install air hose to retract units prior to installation.



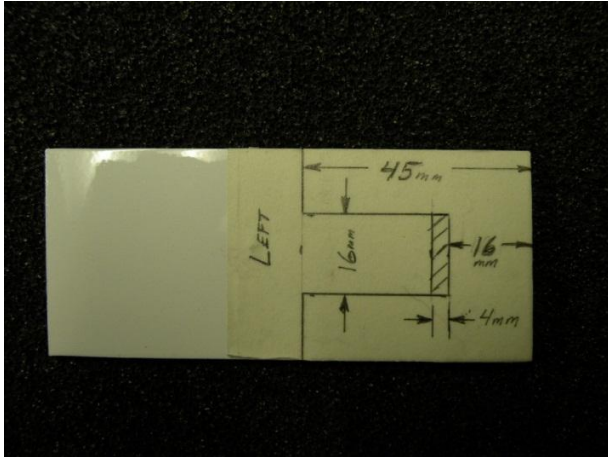
- Install the main gear retract units, route both air hoses to back side of the wheel well and thru the rear spar.



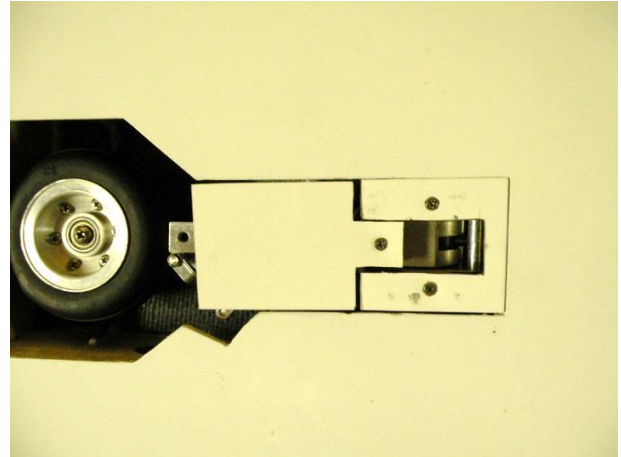
Next cut a 15mm diameter hole thru the center rib for routing the air hoses back to the fuselage. Air connectors are attached at the end of the hoses for assembly when fitting the wings to the fuselage.



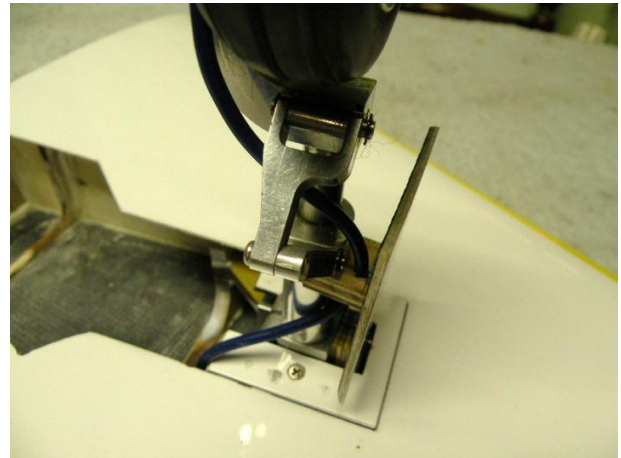
Cut a matching hole for the hoses & servo wires to enter the fuselage. Place the wings on the fuselage at this time and accurately confirm wheel alignment. The trunnion clamp bolt can be loosened if out of alignment to adjust toe-in or toe-out by rotating the landing gear strut in the retract unit.



- Main Gear strut door will need to be cut out and fitted to gear strut and wing pocket. Pictured are the dimensions utilized on the prototype, verify these dimensions are correct for your wings prior to cutting to shape. The cutout to the left will mount on the main gear strut and the remaining part to the right is used as a retract cover. Note the gear doors are not flat but actually have a twist in them to match the curve of the wing, be sure to match the gear door blank to the appropriate left or right wing panel.
- Epoxy spacers on the main gear covers and the strut doors to space them up from the retract unit so the outer surface of the cover matches the outer surface of the wing. Sand spacers to achieve proper height.

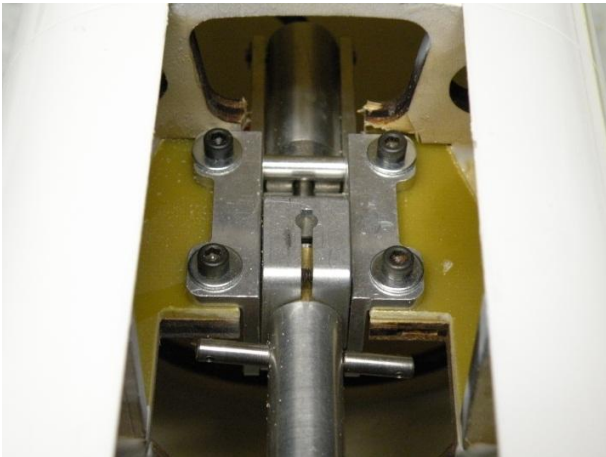


- The cover is held in place with 2-56 screws located per the picture. Drill and tap in to the landing gear for solid retention. The main gear strut door is bolted to the retract unit trunnion with a 2-56 screw. You will need to drill and tap for this in assembly.

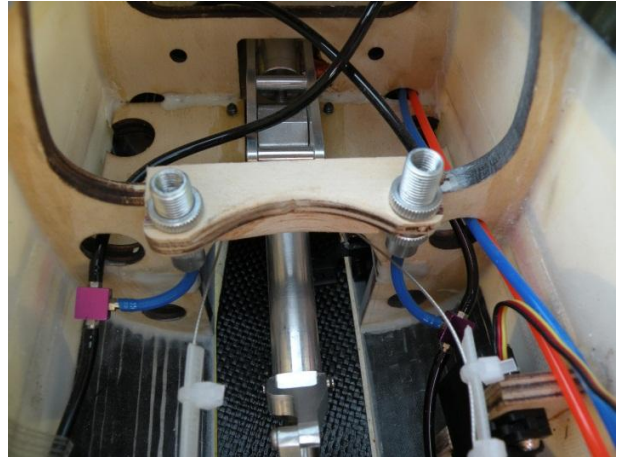


- At the lower end of the main gear strut door shape a plywood spacer to support the lower end. Epoxy this spacer to the door and strut during final installation of the
- Check for proper operation of the landing gear and gear doors. Make sure there is no binding between the strut door and the retract cover.
- **Inner gear door installation details to be determined based on prototype. More detail & conversation to follow.**

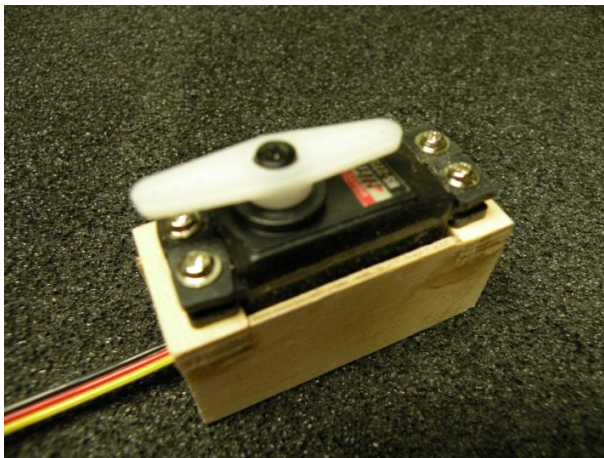
Nose Gear Installation



- Drill and tap for 6-32 thread all retract mounting plates, main gear and nose gear. Harden threads by wicking in thin CA on threads, allow to harden before install screws
- Install air hose to retract units prior to installation. Route hoses thru holes in former above the retract unit.



- Run cables from steering servo to nose gear strut. Use a length of tie-wrap to spread the wires when the gear is in the up position.
- Install (2) air fill valves as shown, one is for the retract systems, and one for the brake systems. Route all hoses as shown with the air tanks located in the nose section of the model ahead of the nose gear former. Some minor trimming of the fiberglass at the front of the canopy hatch opening will be required to clear the air tanks.



- Build a servo box for the steering servo and then epoxy in place behind the wheel well opening directly to the bottom of the fuselage.

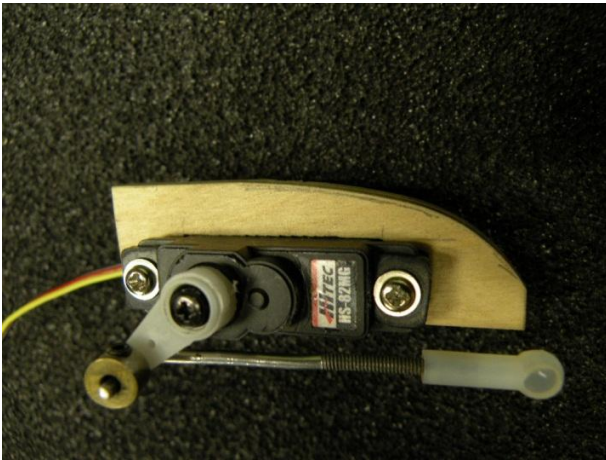
NOSE GEAR DOOR



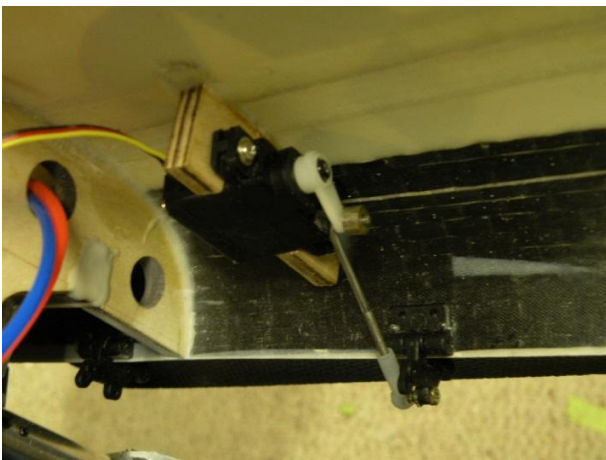
- Start the nose gear door installation by trial fitting the door in place. From scrap plywood material make up a door stop lip to

fit the door flush with the fuselage outer surface.

- *Install the nose gear door hinges as marked above.* First mount the hinges to the fuselage, then tape the nose gear door in position and drill with a small drill down from the top.

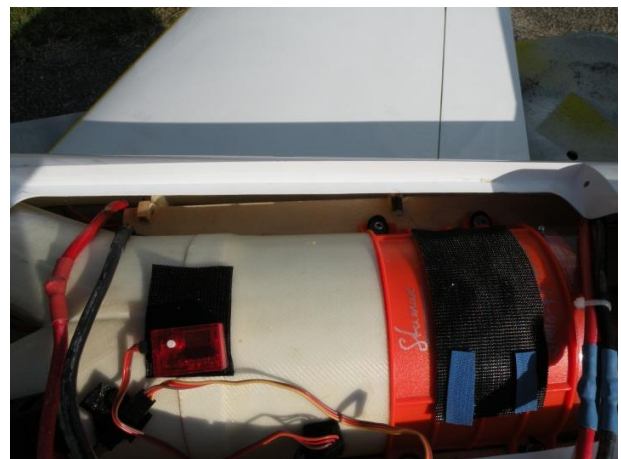


- Locate the nose gear door servo mount and mount servo. Make up a 1 1/2" long linkage with a quick link on the door end. Attach quick link to hinge bellcrank, position servo as shown for up position, then epoxy servo assembly in place.

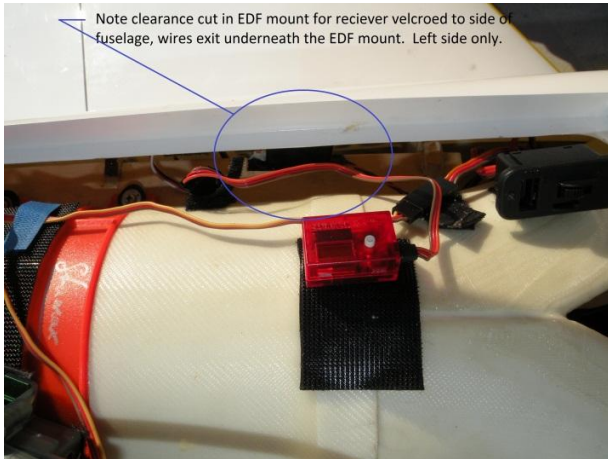


EDF Installation *(More to come)*

- A StuMax 110mm diameter EDF is recommended for this model. Position the EDF unit in the fuselage between the (2) mounting rails.

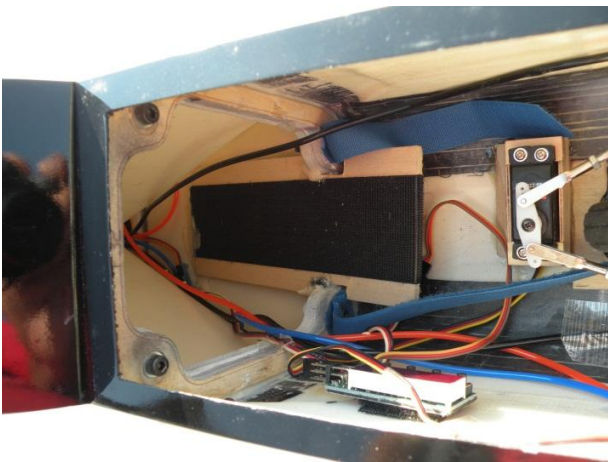


Good view of the mounting rails and position of the EDF unit, note keep aft for CG reasons.



Note clearance cut in EDF mount for receiver velcroed to side of fuselage, wires exit underneath the EDF mount. Left side only.

Receiver mounted on left side of the fuselage.



Battery tray mounts between the inlets and is epoxied in place only at the aft end to the floor and at the front only to the rear former to allow the fuselage to be unbolted allowing the front section to be removed when required. DO NOT epoxy battery tray to forward section former.

SETUP & FLYING

- The Blaze is a high performance model as must be treated that way. The recommended CG and control throws are as used on the prototype, they work well. The model is normally flown in low rate elevator and ailerons, high rates are for extreme aerobatics only. Low rate rudder is used for takeoff, then back to high rate to allow extreme knife edge passes.
No elevator mix is has been found to be required with use of the flaps. If flying with forward center of gravity a small amount of up elevator mix may be required to increase elevator authority for the final flare on landing.

Center of Gravity : 195mm measured from leading edge of wing at root

Control Throws

	Rate	Travel	Expo
Elevator	Low	+/- 9 mm	6%
	High	+/- 12mm	10%
Aileron	Low	+/- 10mm	25%
	High	+/- 13mm	30%
Rudder	Low	+/- 15 mm	20%
	High	+/- 20mm	25%
Flaps	Takeoff	9 mm	No Elevator
	Landing	35mm	mix required

Drill & Tap Reference

6-32	#36 (.1067")	#27 (.1440")
M4x0.7	3.30mm or #30 (.1285")	4.5mm or #16 (.1770")