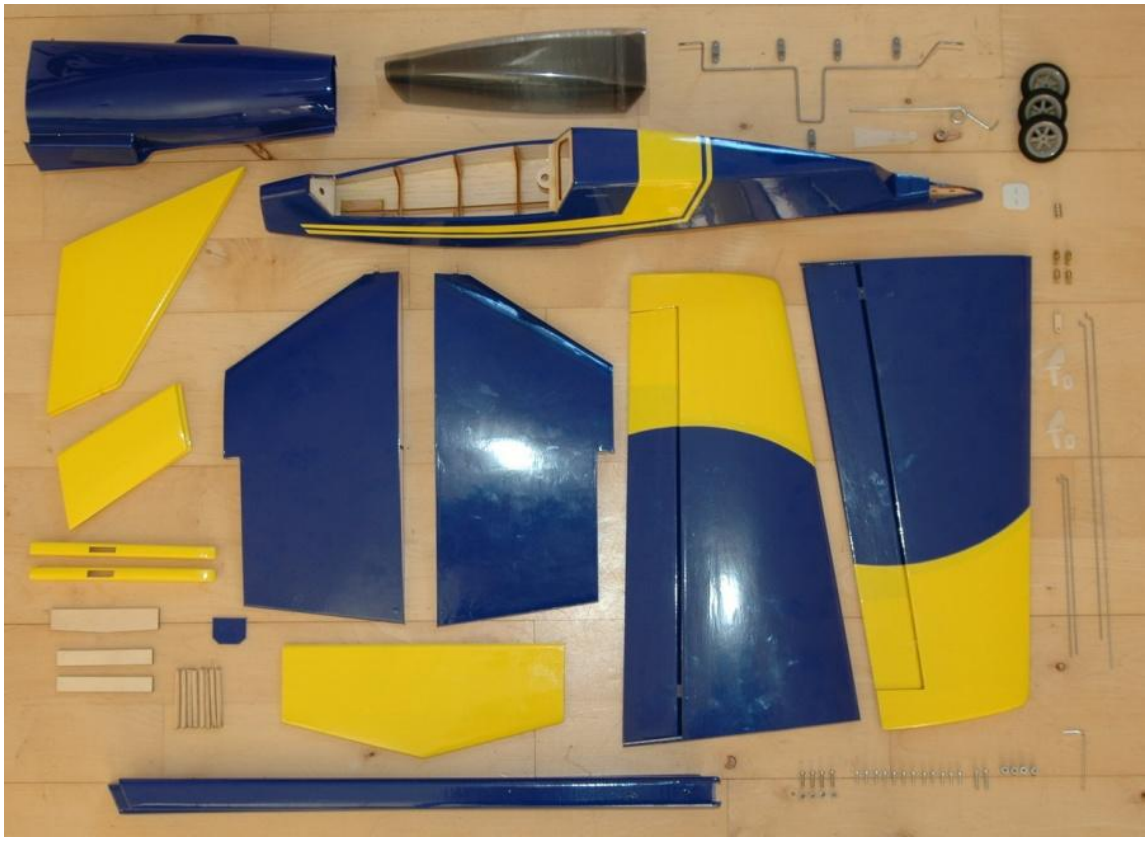
Velocity Slingjet

Specifications:

Construction	Balsa/foam/film
Span	1055mm (41.54”)
Length	1040mm (40.95”)
Take-off weight w/ gear	1050g (37oz)
Recommended servos w/o nose-steering	3 (pcs.) + 1 for nose-wheel-steering
Recommended fan	WM400 /70mm
Recommended motor	Mega 16 size
Recommended controller	Voltron ESC-60A

Parts List



Parts List:

1. Fuselage
2. Duct
3. Canopy, with magnets
4. Vertical-fin (1 pair)
5. Stabilizer-fin (1 pair)
6. Vertical-fin beam (1 pair)
7. Main wing
8. Stabilizer
9. Tail-boom (1 pair)
10. Wheels (3 pcs.)
11. Plastic parts
    - Tube (spacers for LG)
    - Nose-gear support
    - Mail-gear support
    - Horn (pair)
    - Nose (Not illustrated)
12. Metal parts
    - Screws
    - Collars w/set screw
    - Pushrods (4 pcs.)
    - Main landing gear
    - Nose landing gear
    - Stabilizer spar (not illustrated)
    - Linkage stoppers w/ set screw (4 pcs.)
13. Wooden parts
    - Wing Joiners
    - Dovels
    - Horn (stabilizer)
    - Wing reinforcement
    - Nose-wheel-steering horn w/ set screw
14. Umbraco-tool
15. Wing-hinge
16. Manual

Velocity Slingjet

Tools needed to assemble this model:

Scale
Epoxy glue
CA glue
Permanent pencil
Philips screw-driver (Medium / Small)
Monkey wrench

Scissor
Wire-cutter
Clear tape
Sharp hobby knife
Drill

Caution
Covering should be removed in areas where epoxy glue is apply'ed. Do not cut into the the wood.

You also need wire, to extend the servo wires.

Fuselage

Pair the magnets two and two, and glue the lower magnet in place in the fuselage, and the upper magnet in the canopy with Epoxy-glue

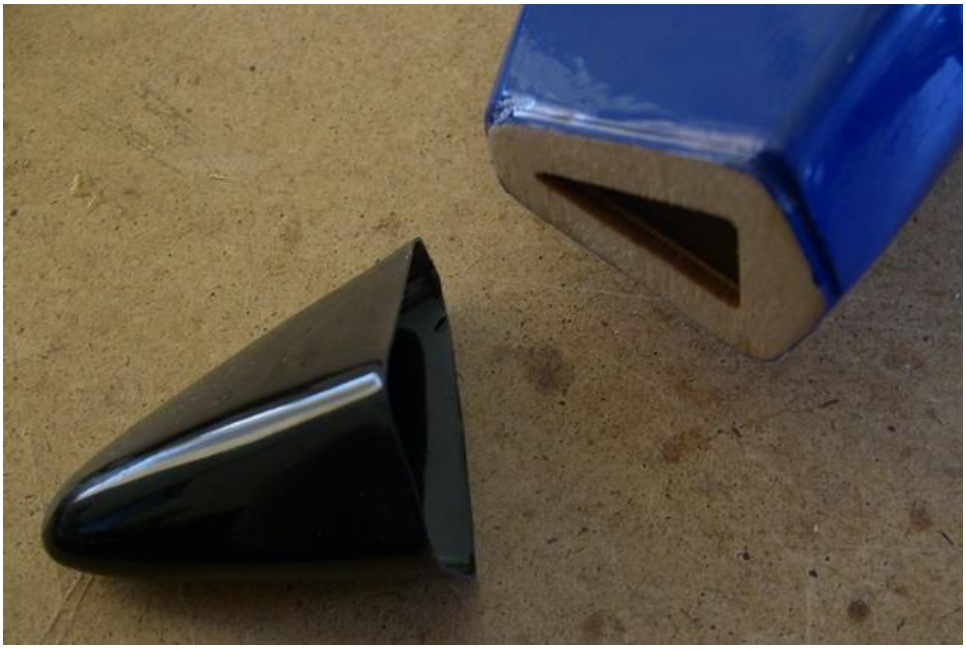
Place the canopy, over the magnets, when the epoxy-glue cures

Fuselage

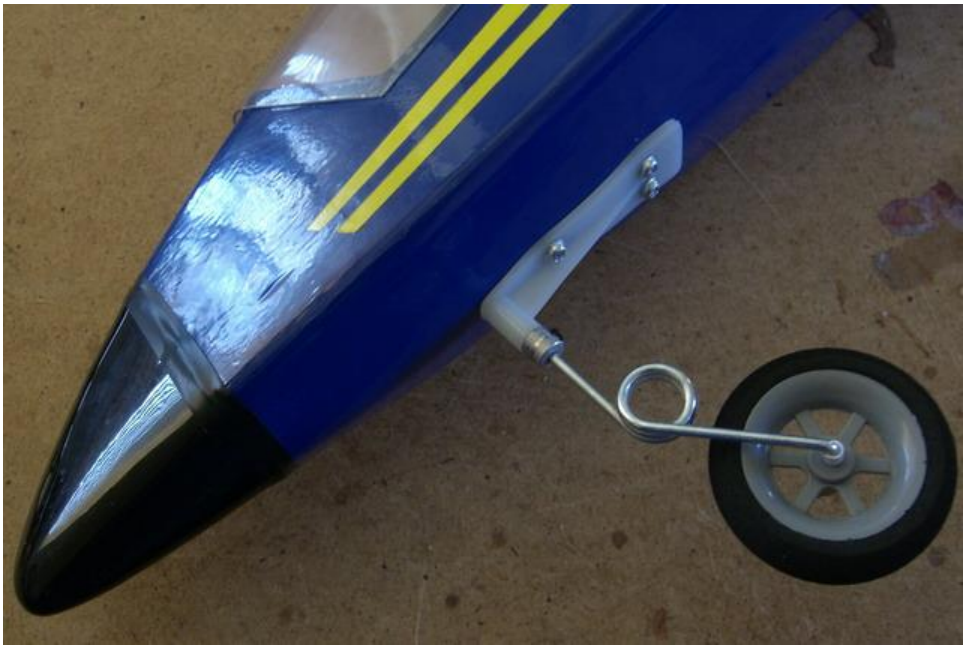
When the epoxy-glue has cured, you have a canopy, which make a Perfekt fit to the fuselage.

Trim the canopy glass, to the hatch, and fix it with canopy-glue or tape

Fuselage

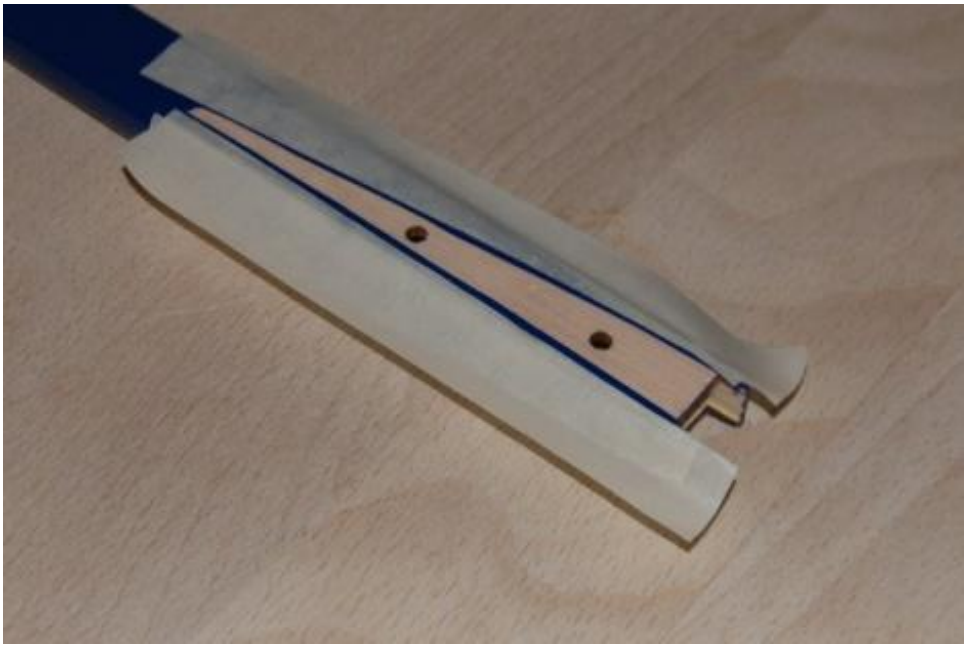


Glue the Nose in place with CA and/or tape



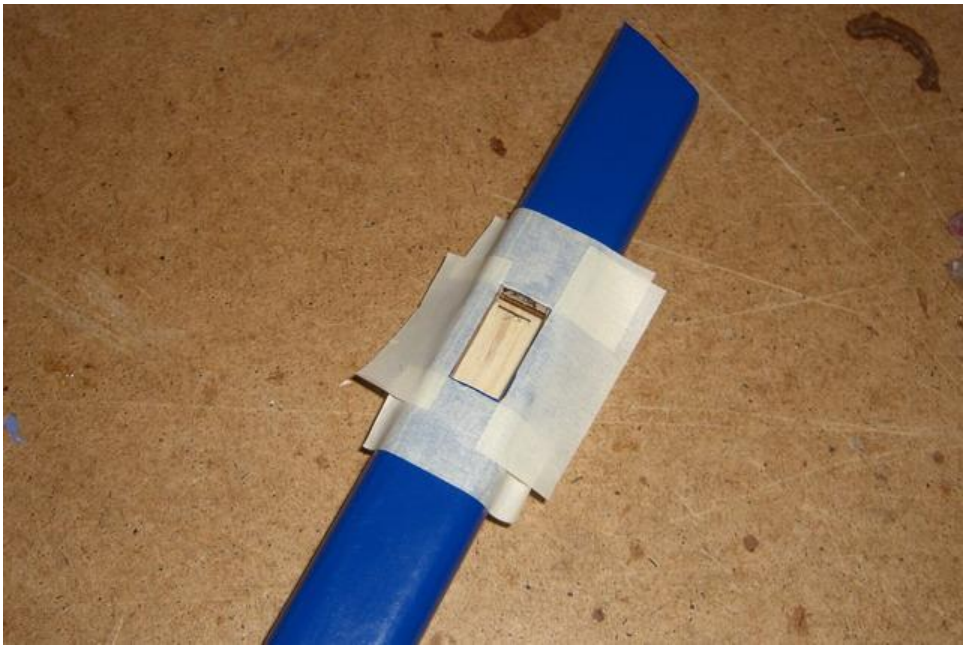
Tail-boom

Mark area which should be uncovered on both booms, here the LH



Do not cut into the wood when you cut the covering

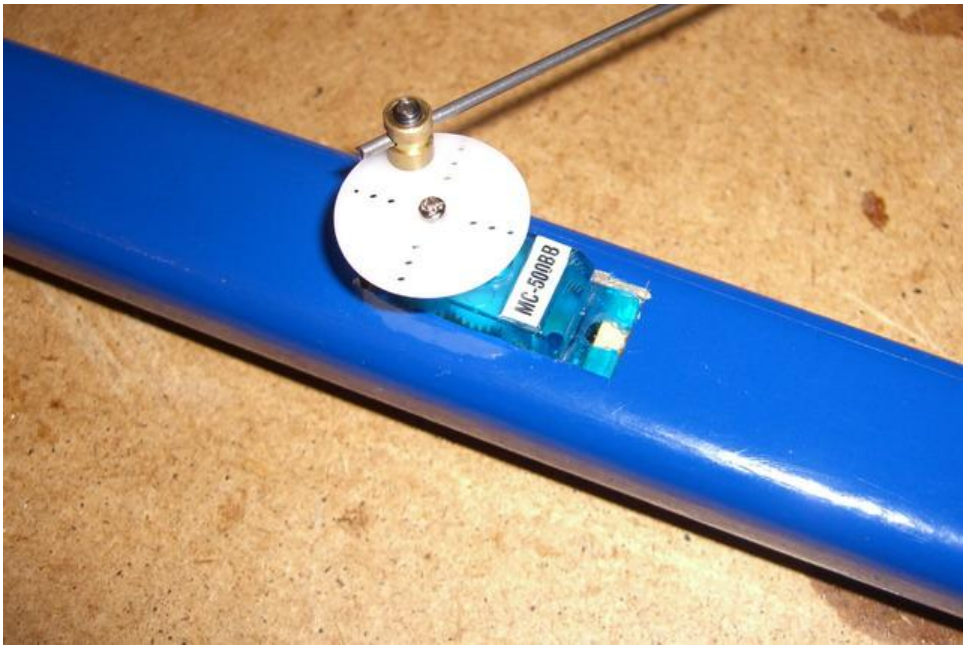
Tail-boom



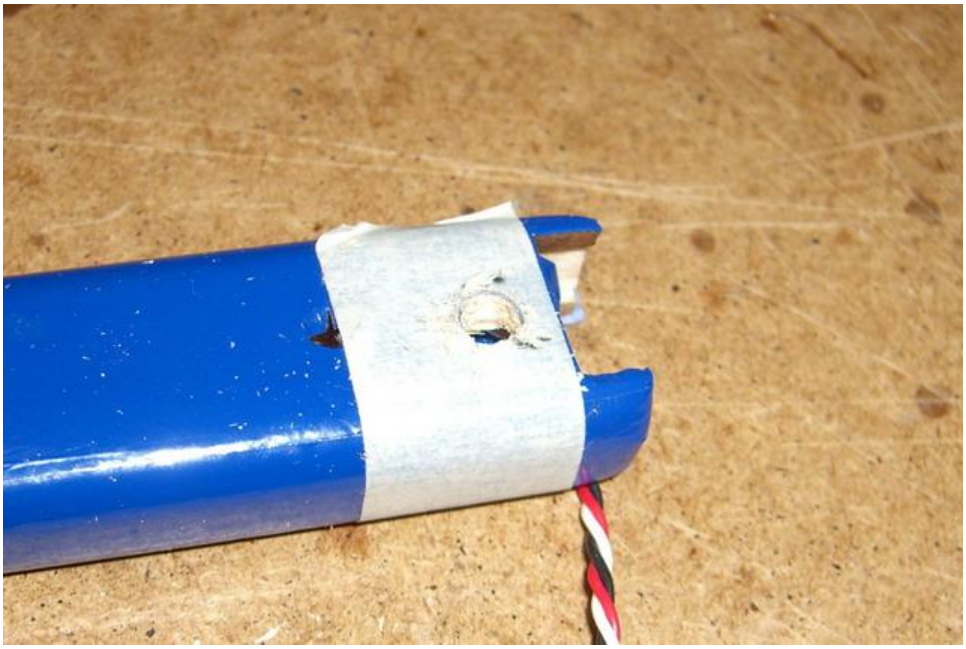
In the RH boom you should cut out for the servo, in center of the to tail-fin dovels

Place the servo in the RH tail-boom, remenber to extend the servo-wire, and let it travel trough the boom.

Tail-boom

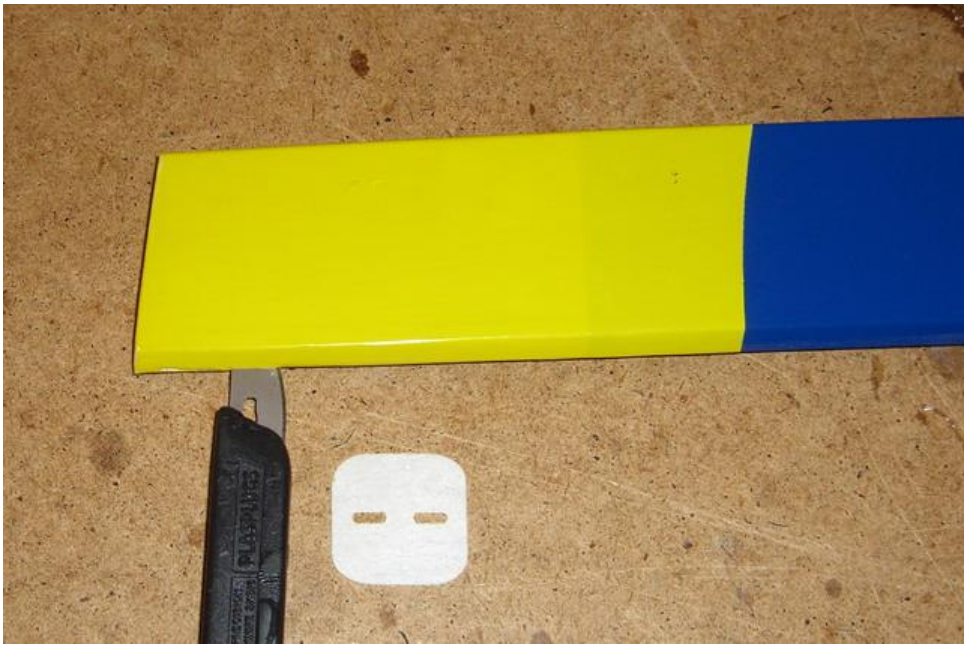


Screw or glue with epoxy-glue the servo in place, and install the linkage-stopper in the servo-horn, for later rod-installation

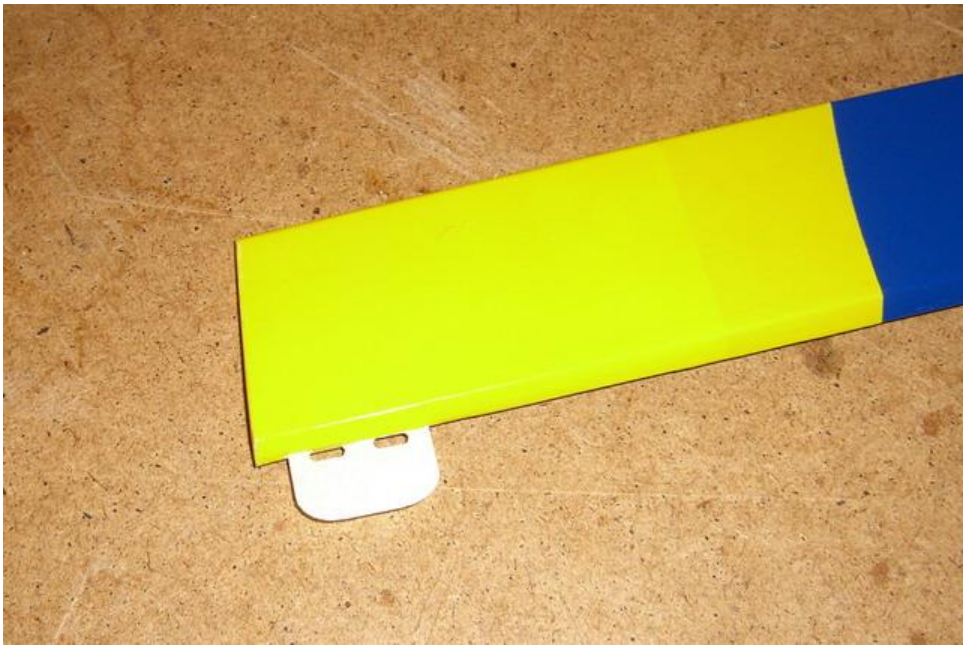


Drill a 4-5mm hole throuth the boom. Center 5mm behind wing-spar. RH and LH are equal.

Aileron

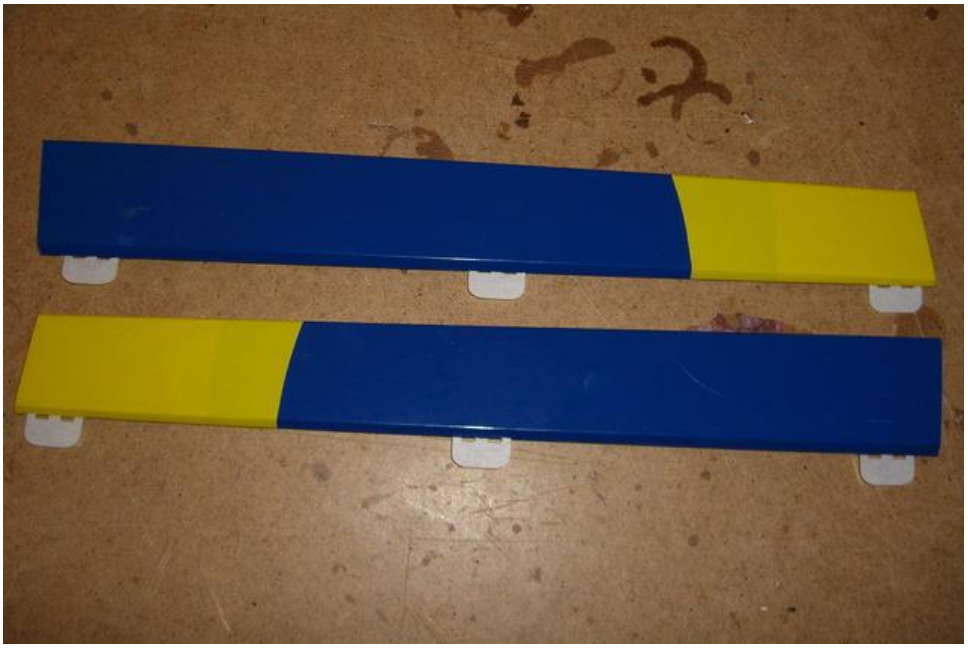


Make a cut in center of aileron to make space for the hinge.



Glue the hinge in with thick CA, or epoxy-glue

Aileron



Glue the hinges in place as illustrated.

Glue the hinge in then wing with thick CA, or epoxy-glue, and move The aileron up and down untill the glue has cured.

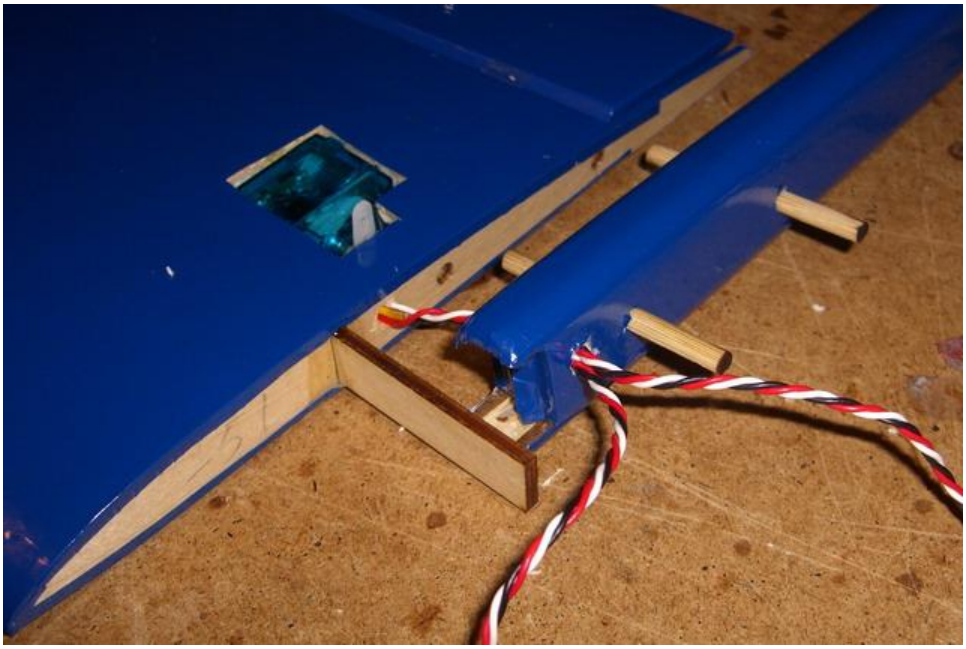
Aileron servo-installation

Cut out the aileron-servo-placement sheet, from the manual, and place it on the wing as illustarted. LH and RH are equal

Cut out in the upper layer of wood, and remove foam to make space for the aileron-servo.

Aileron servo-installation

Drill 4-5mm hole for servo-wire in the wing, aligned with the hole you made in the boom for the servo-wire.



Pre-install servo, and route the RH aileron,servo wire and
the tail-servo wire throuth the hole in the boom. LH is equal but without the tail-wire

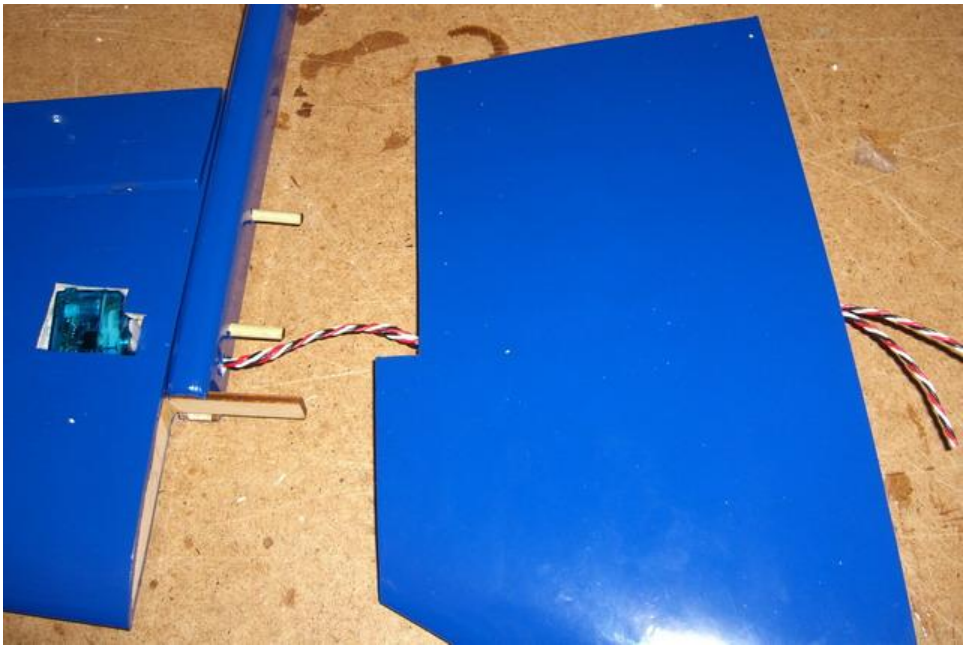
Servo-wire installation

Drill 4-5mm hole for servo-wire in the outher center-part-wings, alined to the hole in the boom

Drill two 4-5mm hole in the inner part of the center-part-wings. One vertical, one horisontal, for routing the wires throuth the wings upper skin. RH is equal but there are a tail-servo-wire too

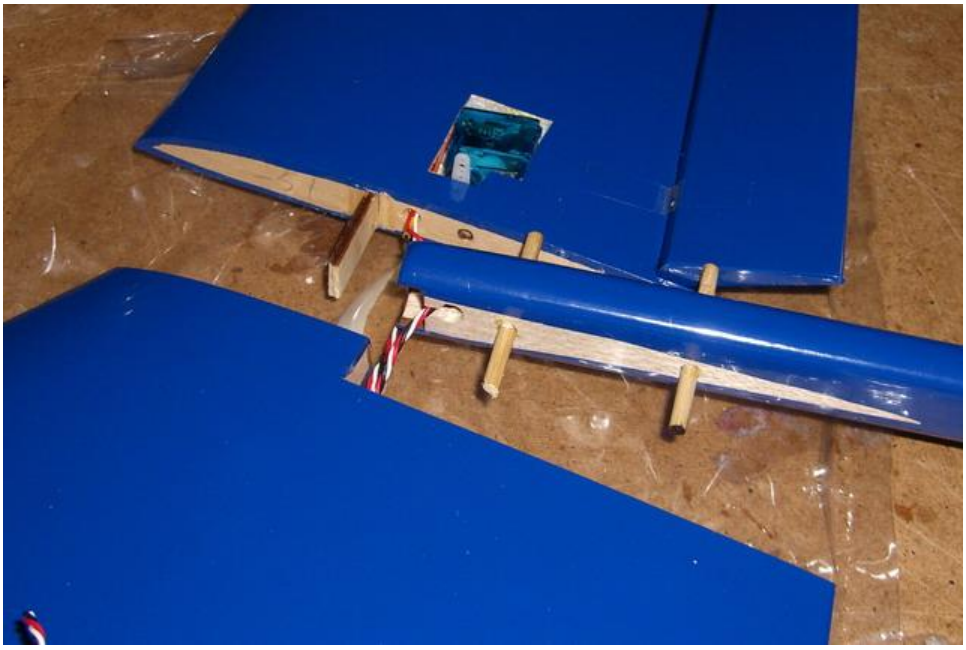
Aileron servo-installation

You could use the stabilizer-axle for wire-routing. Tape the wire to The axle and slide them trought the wing

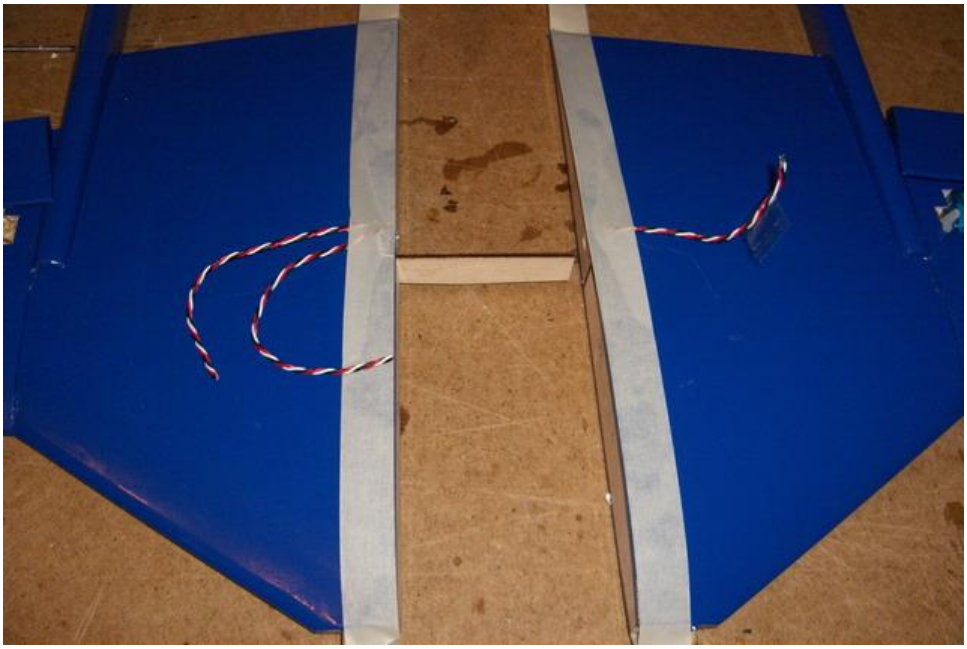


The wires are now routed and be ready for glueing the wing-parts together.

Wing

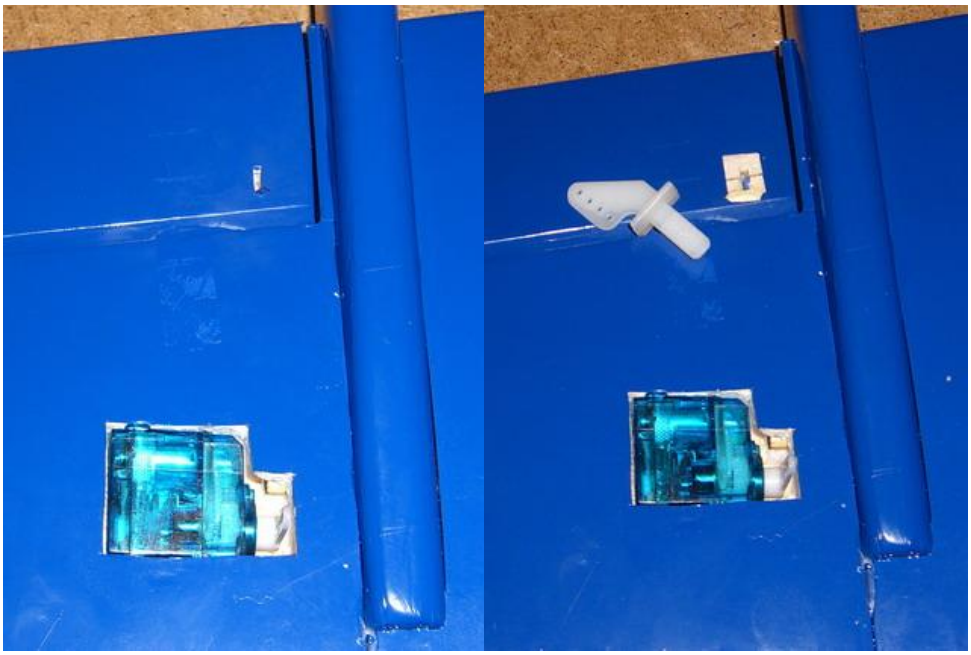


Apply epoxy-glue to all parts,boom, wing-spar, both wing-parts and dowels. Hold every thing tight untill glue has cured. RH/LH is equal. Booms must be parallel



Apply epoxy-glue, to both wing-parts and spar. The flat side of the Wing-spar must be up, to make the correct v-shape on the wing.

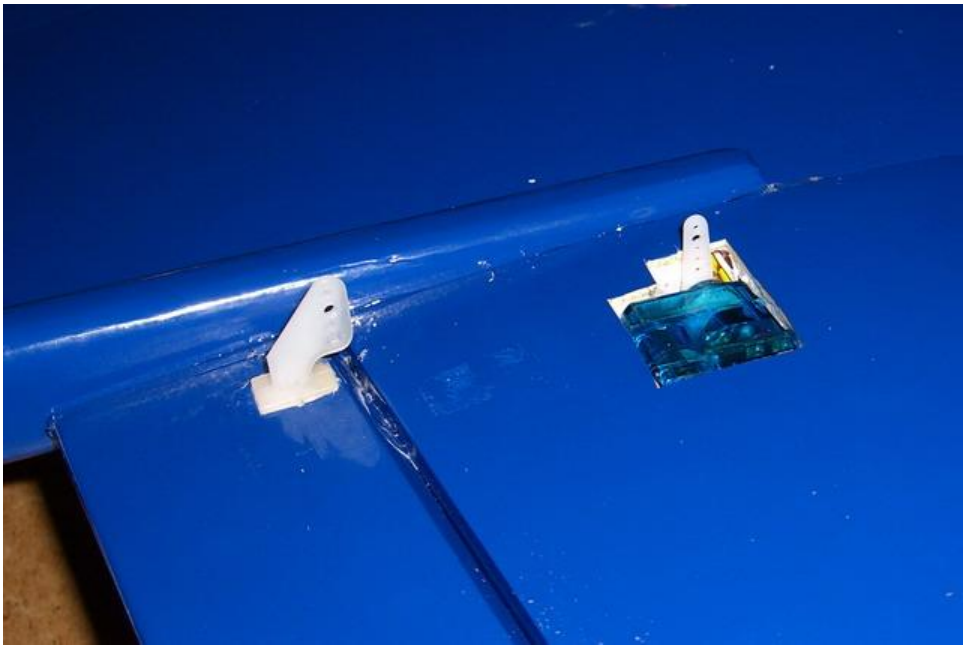
Aileron



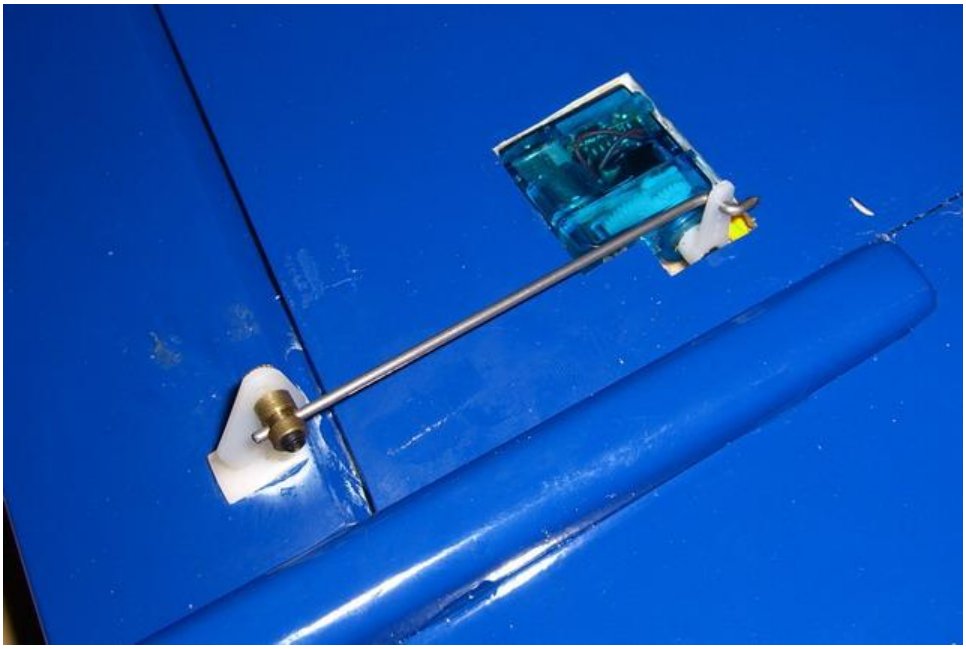
Cut a hole for the horn, in line with the servo-horn. Cut covering away
And glue in place with epoxy. Both side equal

On the lower side of the aileron press the horn-locking plate in place

Aileron

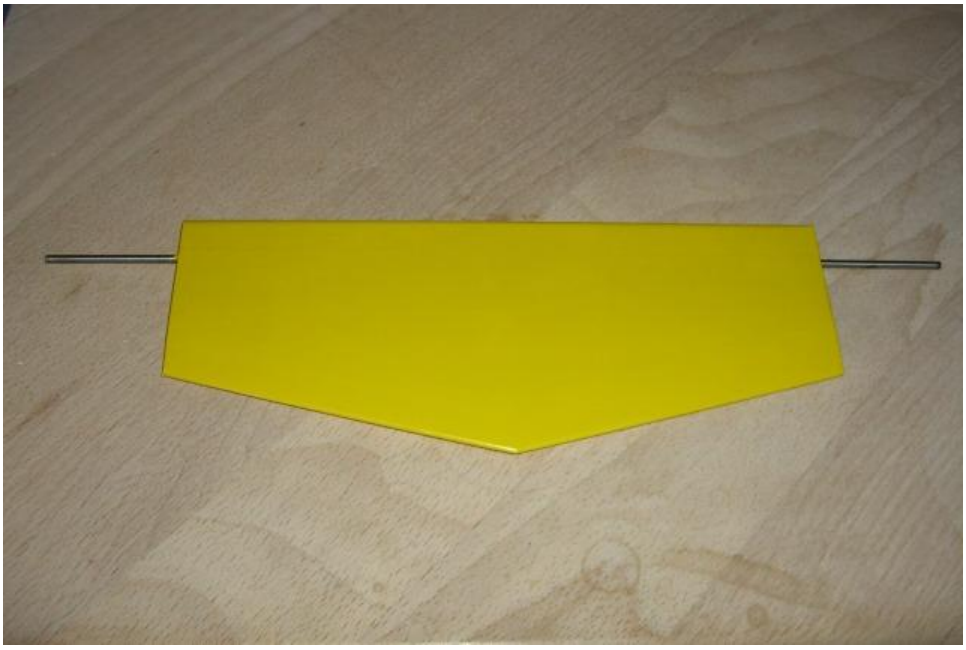


Drill hole in both horns, in both sides.

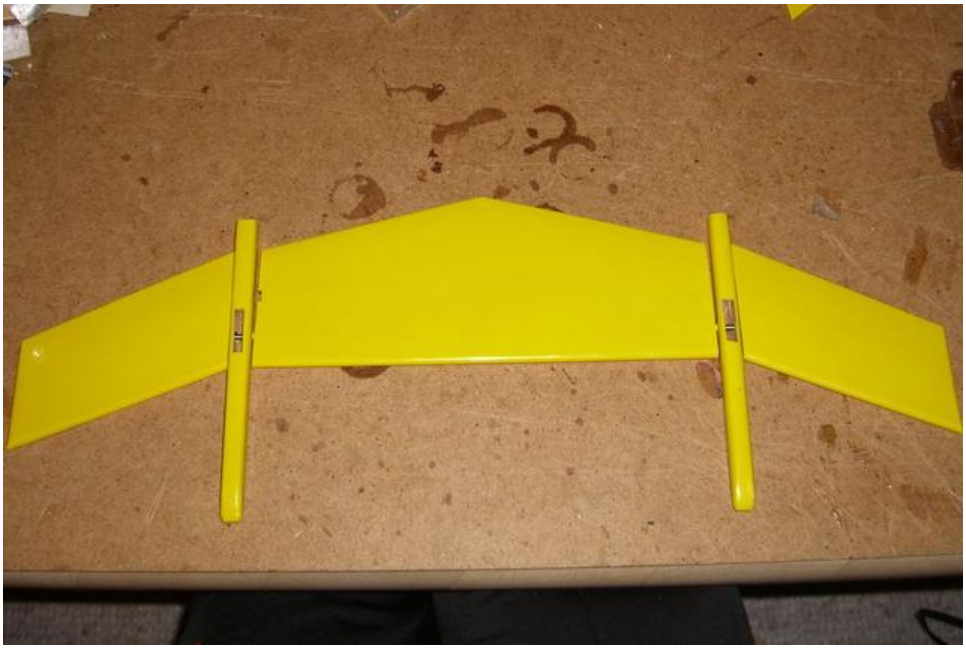


Install the linkage-stopper, glue the nut with CA. Center the servo wih the radio, screw the servo-horn in place, and glue the servo in place the epoxy-glue. Install and the push-pull rod. (Aileron centered)

Tail

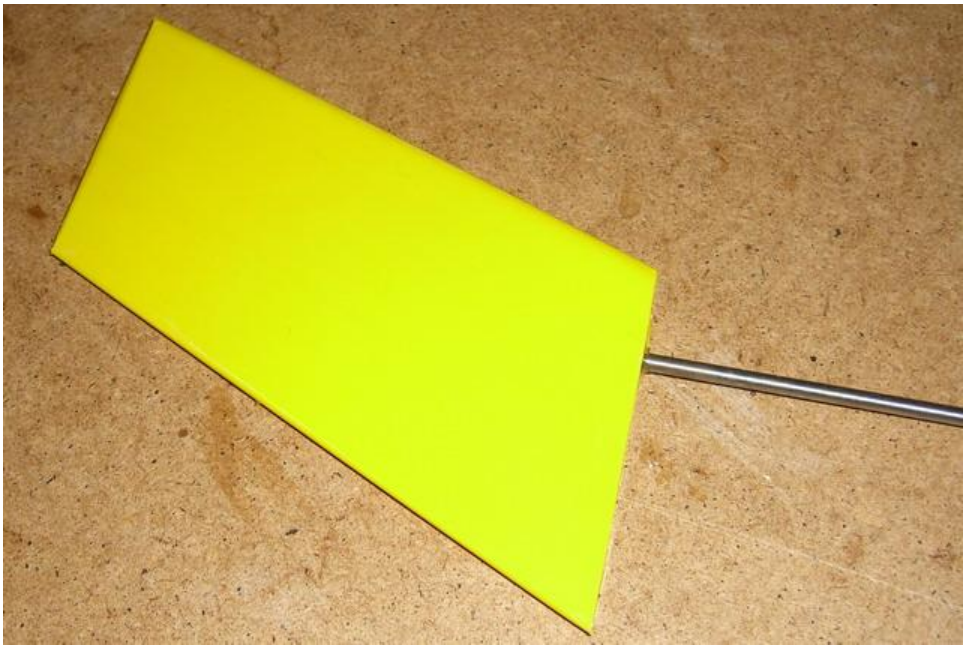


Slide in the stabilizer axle into the stabilized. Do NOT glue it in.

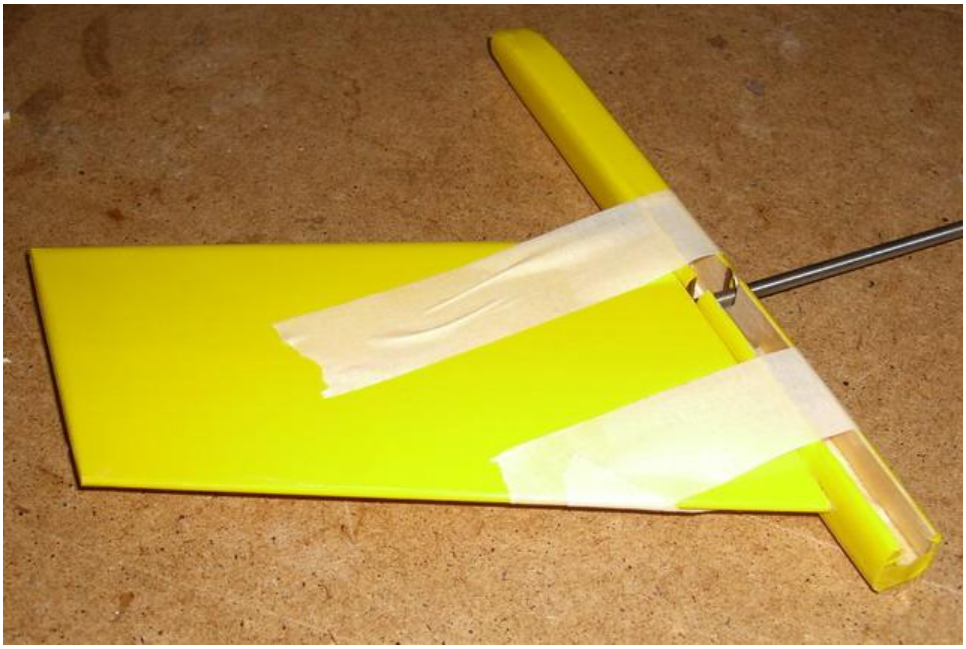


Make a pre-fit test, to see how long the axle must go into the Stabilizer-fins, take note of the RH one in first place.

Tail

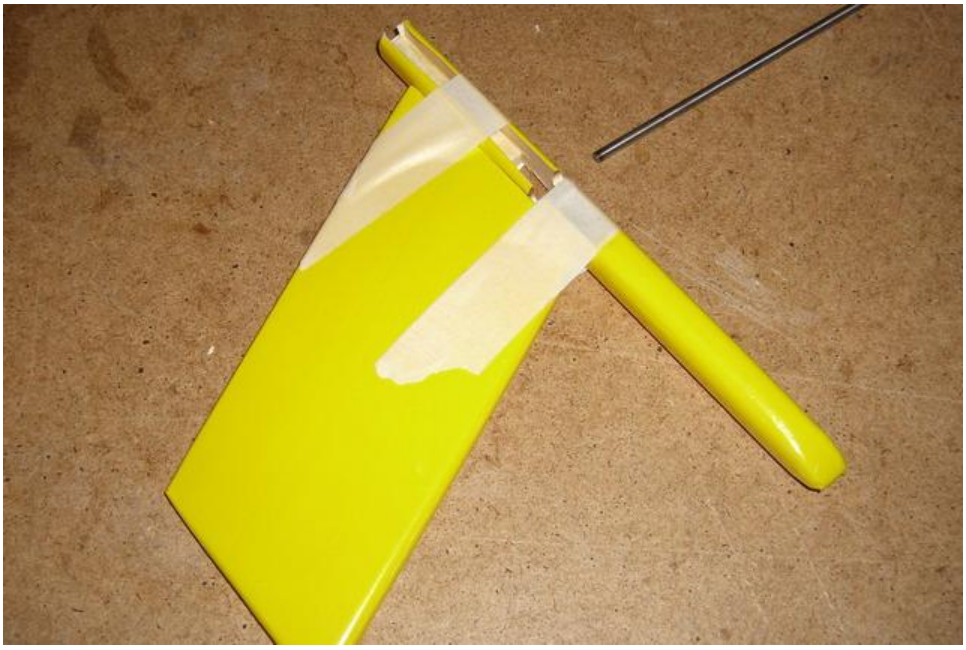


Glue the axle into the RH fin, with epoxy-glue

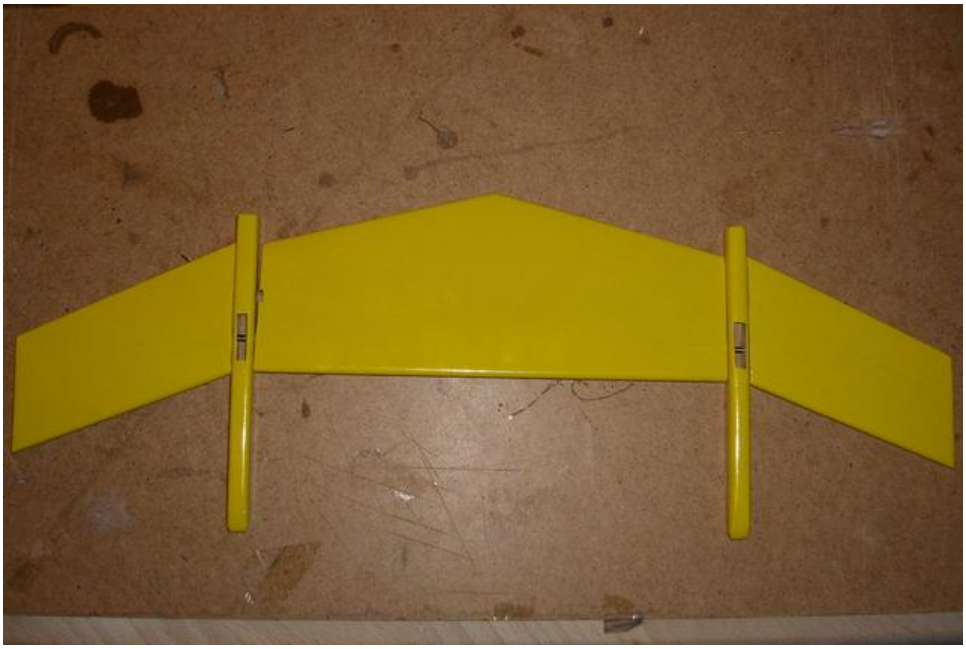


Glue the fin to the RH fin-beam with epoxy-glue, remember to remove the covering in the glueing area.

Tail

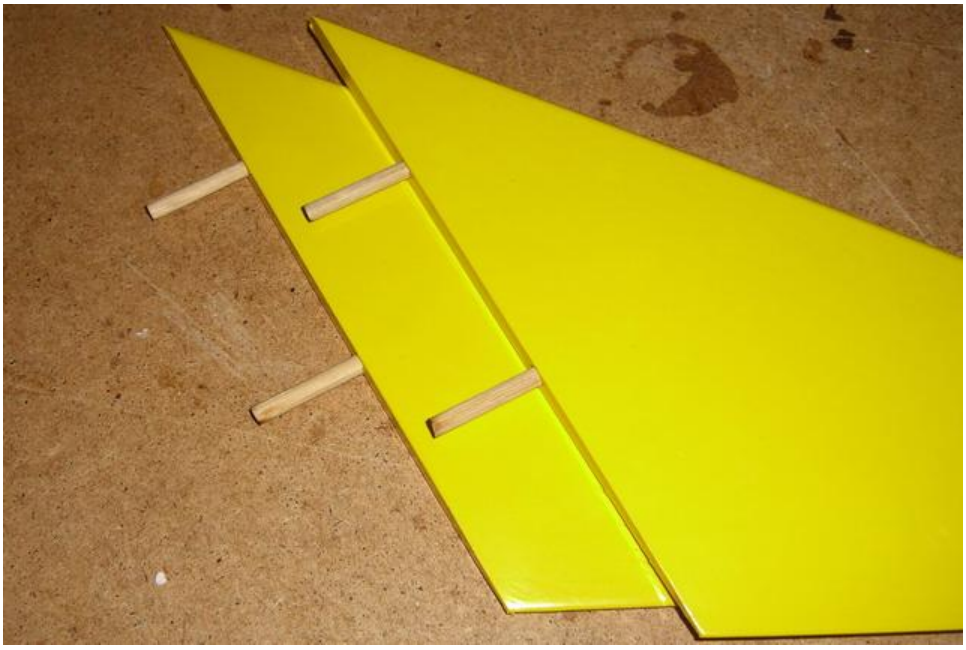


Glue the LH fin to the fin-beam, with epoxy-glue. Remember to align the axle hole to the grove.

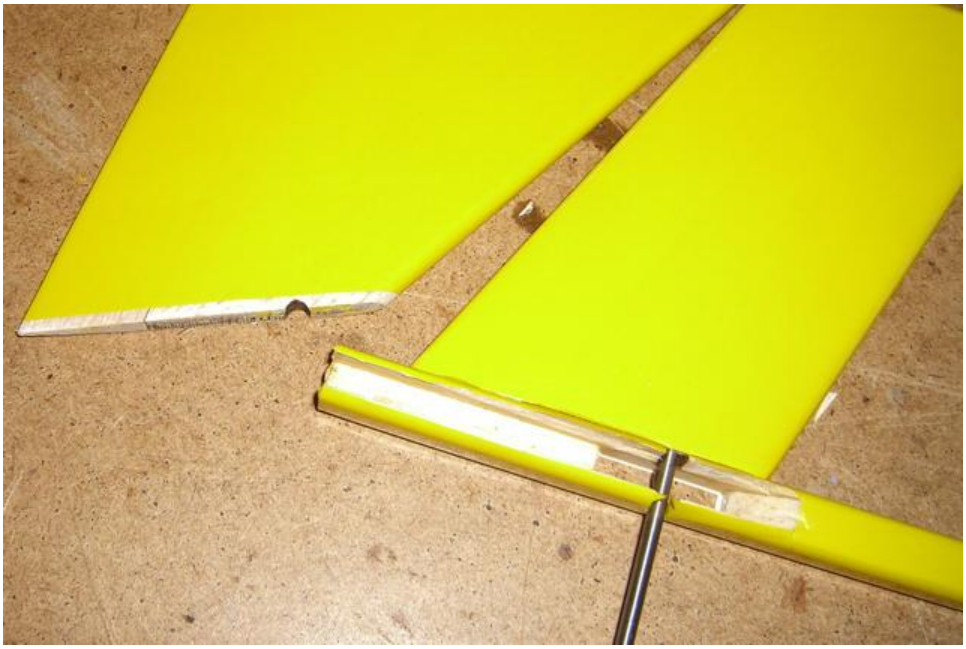


Slide in the stabilizer, and glue in the axle to the LH fin with epoxy-glue. Do not add glue to stabilizer, it must run freely. Remember the grove for the horn, must be in RH side.

Tail

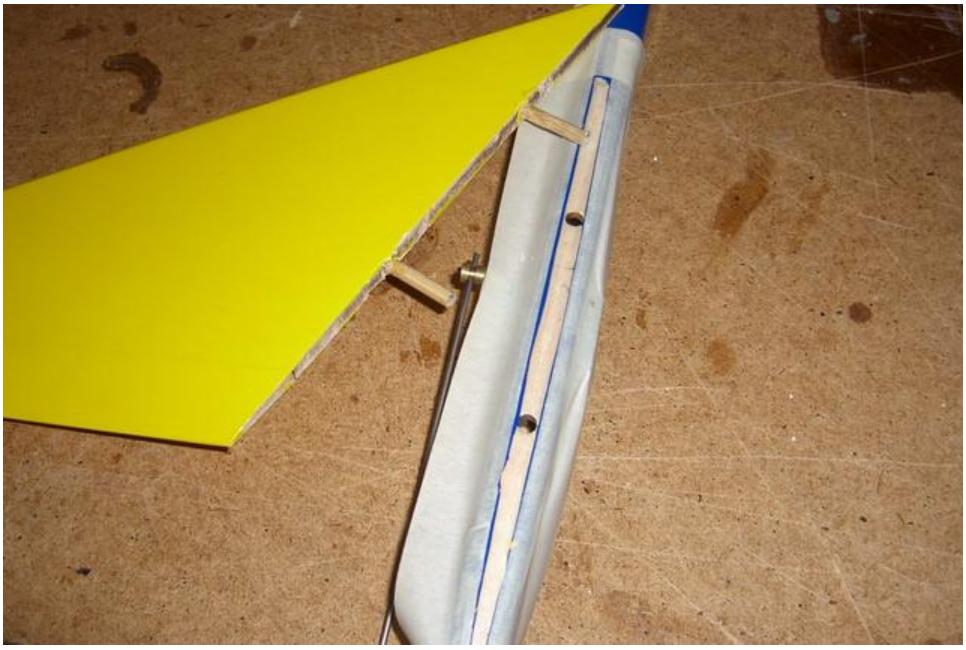


Glue the dovels half into the fin with epoxy-glue.

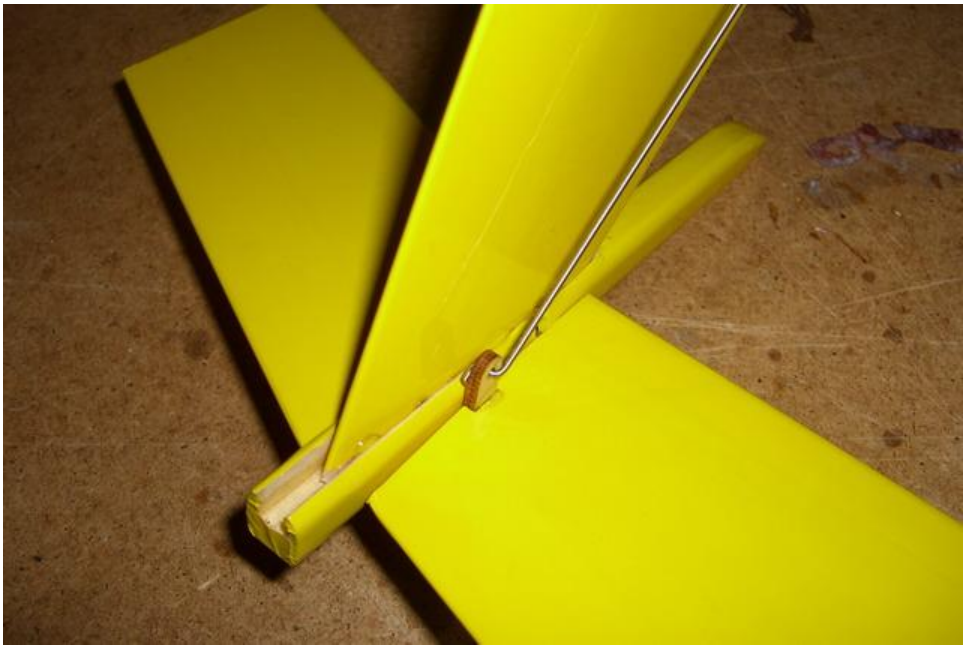


Remove covering on fin top.

Tail



Glue the fin and dovels to the tail-boom with epoxy-glue. Rember to angle them.



Remove covering and glue in the horn with epoxy-glue.
Install push-pull-rod in same way as the ailerons. Remember to center the servo

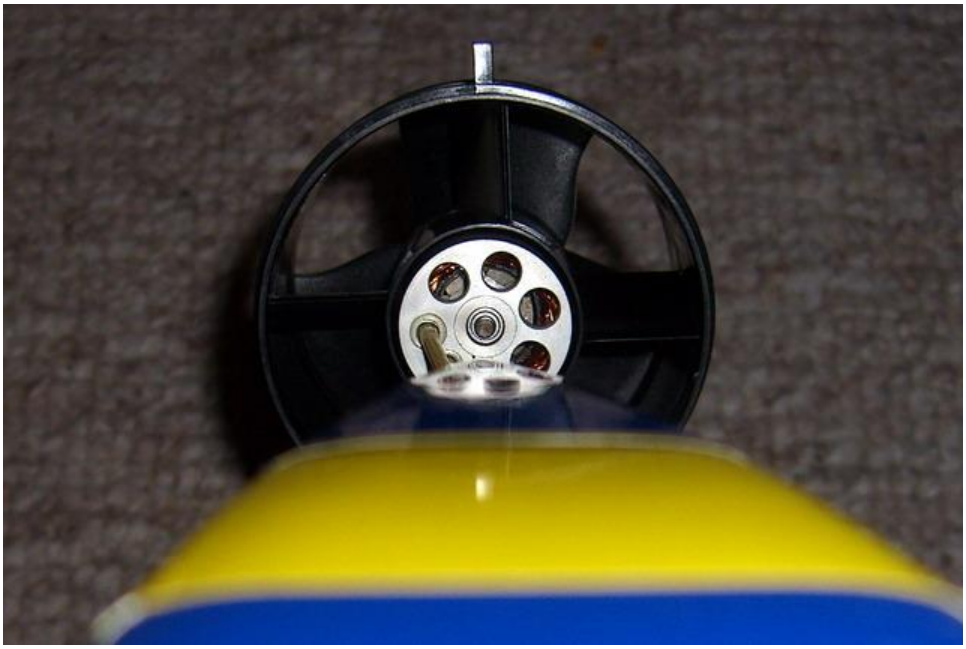
Wing/Tail

You will now have a complete wing with two booms,

and a complete tail

Fan

Cut hole in fuselage for motor-wires



Install fan centered to the fuselage

Fan

Install fan with to machine-screws and nuts.

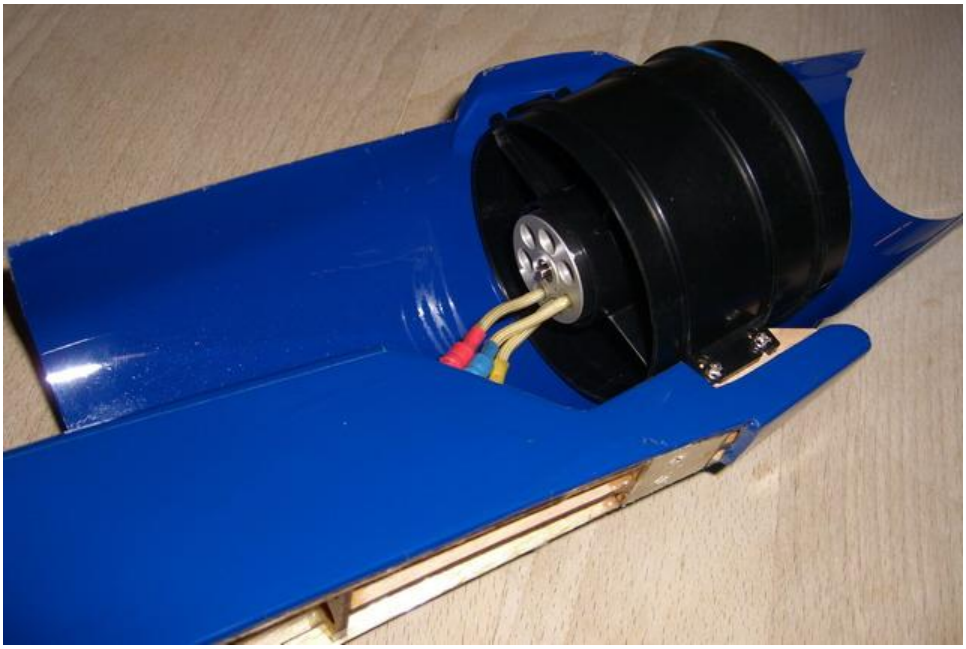
Install ESC in the fuselage and connect it to the motor, check for correct rotation

Duct

Trim duct for perfect fit to the fuselage, and fan

Duct/fan

Take note, that the WM400 fan have the rotor spinning at the rear.



Motor in front of the fan

Duct/fan

Use CA and/or tape to fit the duct in place

Front view. Make the duct go dupple for better stability, and the rear perfectly round. Use CA to fit

Landing-gear (Not nessesary)

The parts for the nose-wheel system. Except a small plastic tube. The leg is here cutted to the right length.

Pre-fit holder, mark screw-holes, and drill 1,2mm holes. The hole for The leg has already been made, find it under the covering

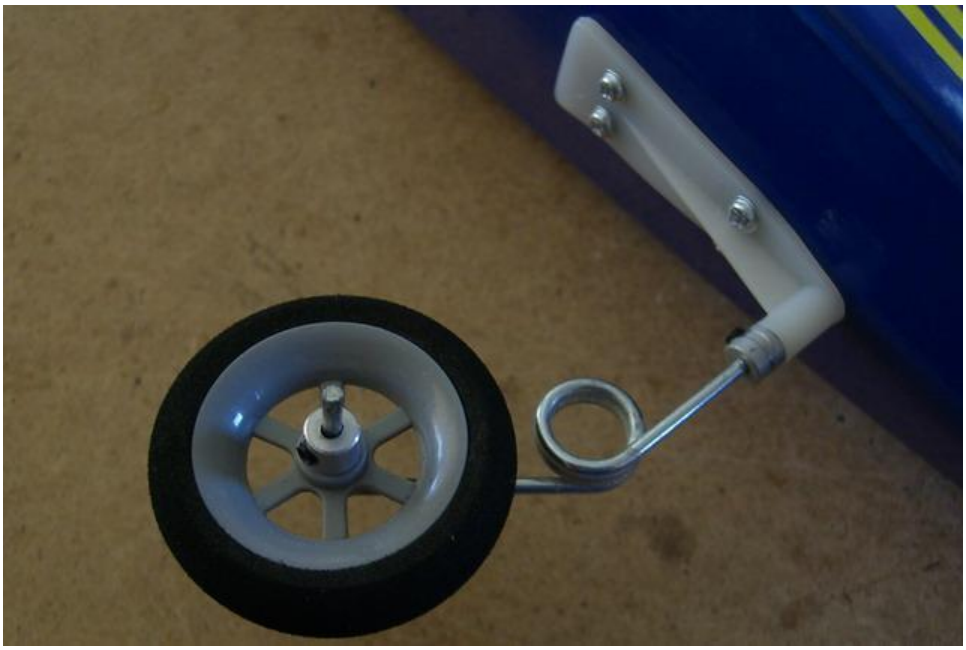
Landing-gear (Not nessesary)

Screw in the nose-gear support, and install leg with collar

Install the nose-gear-horn, If you want nose-wheel steering, install servo, with push-pull rod, linkage-stopper and glue the servo into the bottom of the fuselage.

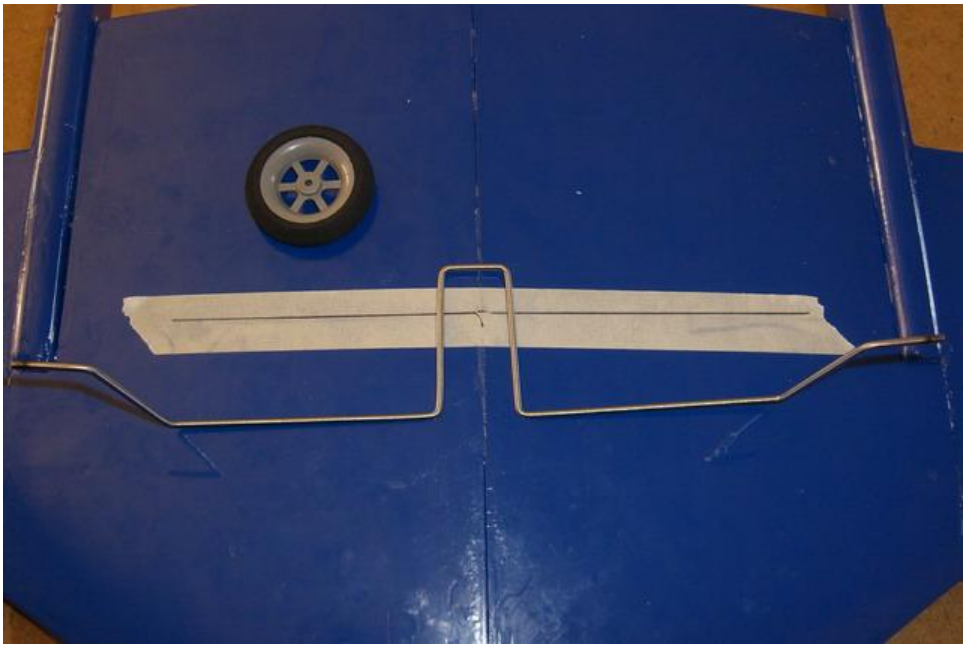
Landing-gear (Not nessesary)

Place a small tube on the leg, to make wheel/leg clearence

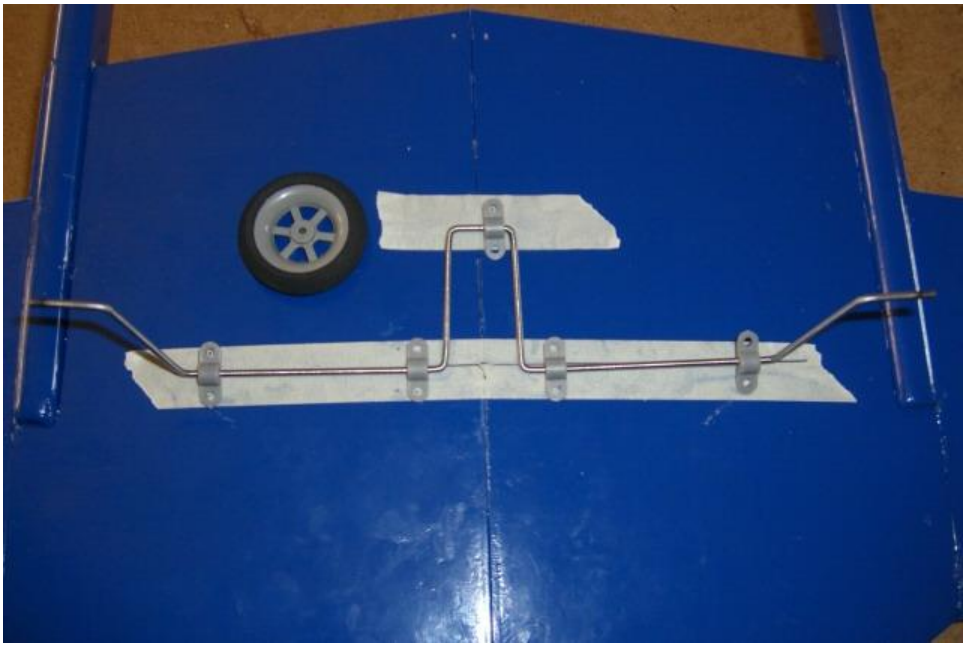


Secure the wheel with a collar.

Landing-gear (Not nessesary)

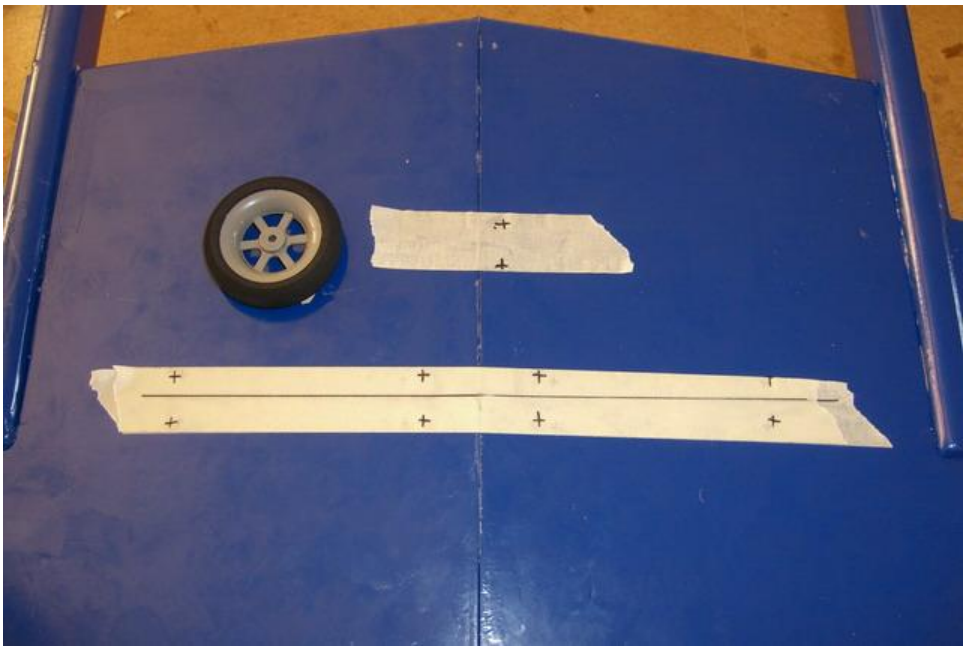


Make a line 10mm behind the booms starting point



Place the LG over the line, and place the holders as illustrated

Landing-gear (Not nessesary)



Mark the screws placement, and drill 1mm holes

Screw the holders in place, reinforce the holes with CA. Install wheels in same way as the nosewheel.

Near ready for maiden flight

Install the small hard-wood spacer, and screw the wing in place.
Remember to install the reciever if it should be over the wing-area.

Your models shape should now look like this.

Near ready for maiden flight

Befoce you fly:

Place CG 120-135mm from leading-edge
Stabilizer-travel, 8mm up/down
Aileron-travel, 10mm up 6mm down

Check:
Ailerons, and stabilizer is running freely, and correct direction
If nose-wheel-steering is installed connect it to yaw channel