



ASW 15

INSTRUCTION MANUAL



KIT PARTS

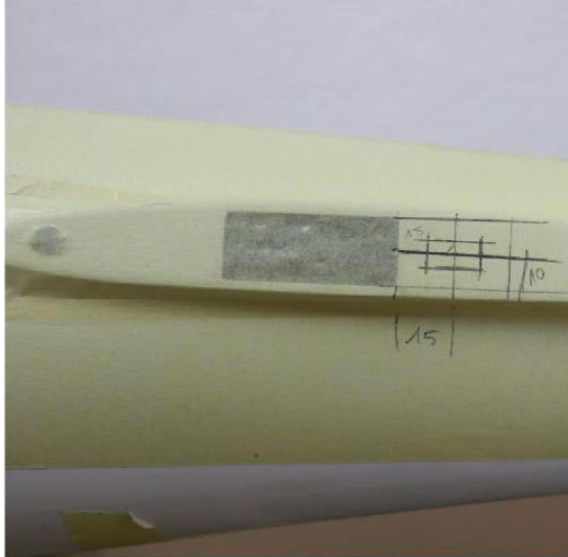
- 1 wings (left/right)
- 1 fuselage
- 1 elevator (+ movement kit)
- 1 rudder
- 1 wing joiner
- 1 canopy + cockpit
- 4 servo covers (ailerons + flaps)

FUSELAGE (Karman openings)

We suggest to cover the fuselage (Karman site) with Paper-Tape (to avoid scratch and glue dirty)

Fuselage – wing servos connectors

Mark the position of the connector in each size of the fuse.



Open the windows (with Dremel blade) – we use MULTIPLEX GREEN CONNECTOR (MPX 6 pins – female).

Cut the extension cable (Karman – Receiver) and solder it to the MPX Connector.

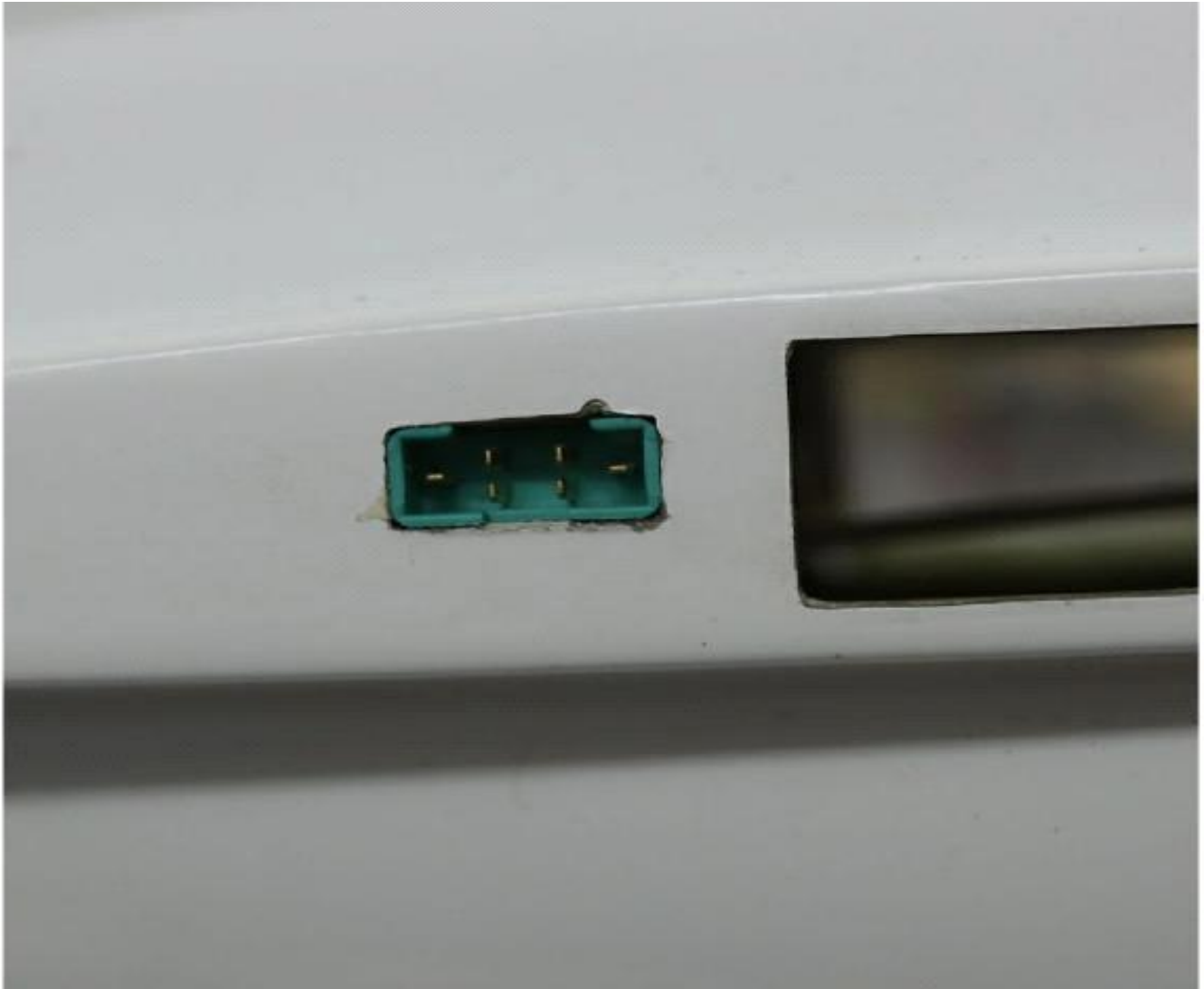
Use the shrink tube to cover the connection.

Every Servo needs 3 pins; mark your scheme



Now you can glue the MPX (female) Connector to the fuselage.

We suggest UHU PLUS ENDFEST 300 (or resin + tyxotropic agent)



SERVO BASE

There are several methods to install the hardware inside the fuselage; we show you a single base to install servos + receiver + battery



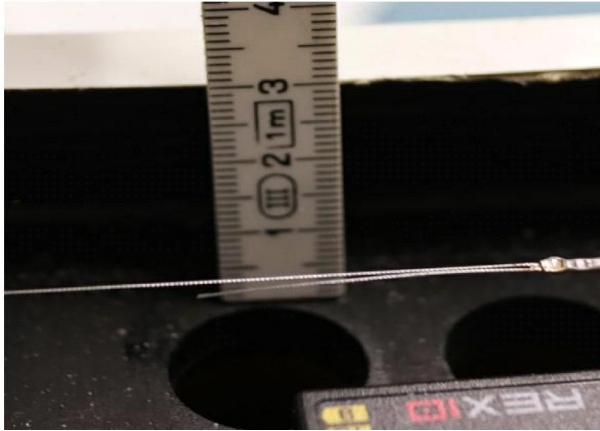
Mark a cardboard with the shape of the fuselage (canopy zone); use the cardboard shape to realize the plywood base (thickness: 5 - 6 mm.)

Anyway we sell an optional kit of accessories (€ 60,00) that includes:

- Servo base (plywood - cnc cutted)
- Oval rib - internal fuselage (plywood - cnc cutted)

- Vetrinite control horns
- PLA (3d printed) Servo base for ailerons/flaps

Before glueing the base, test the right position of rudder servo, receiver.....
The plywood base have to be glued to the fuse at about 3 cm. down the edge of the canopy (see the picture)



Use sand paper inside the fuse and glue the plywood base with resin+tyxotropic (or UHU PLUS ENDFEST 300).



ELEVATOR SERVO

Components:



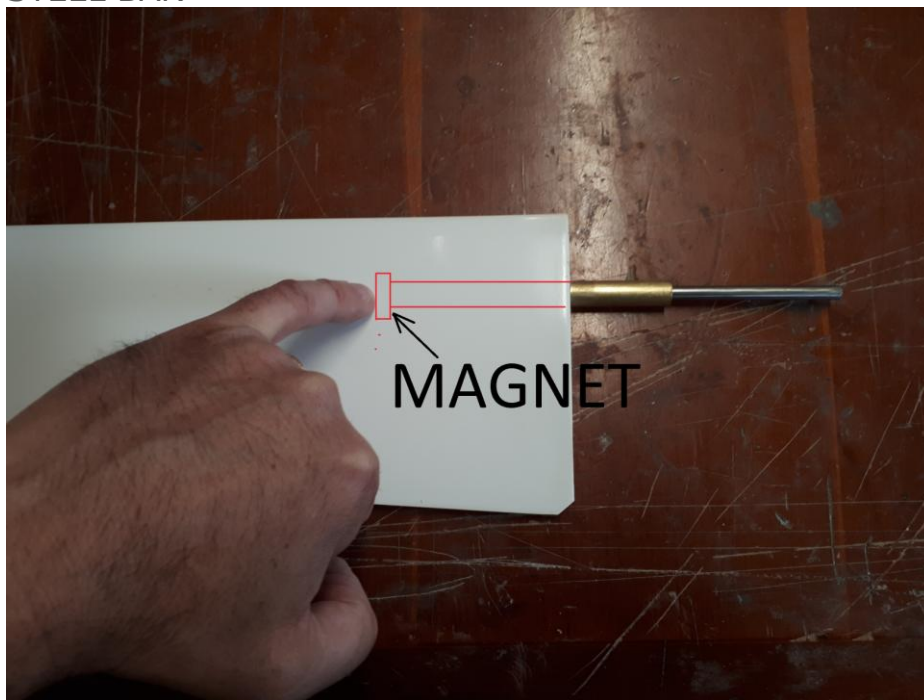
INSTALL THE BALL BEARINGS INSIDE THE BRASS TUBE AND THE STEEL BAR INSIDE THE BALL BEARINGS





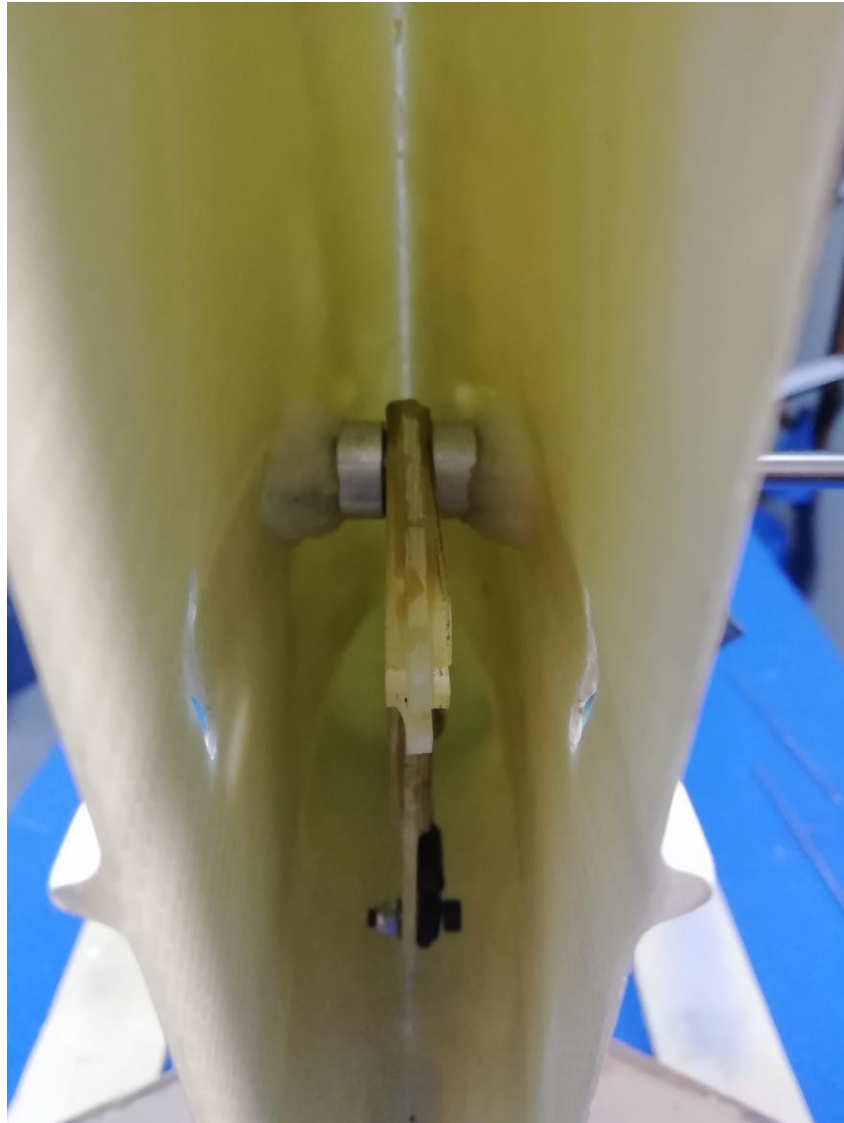


INSIDE THE TAILPLANE THERE IS A MAGNET ABLE TO JOIN IT TO THE STEEL BAR





INSTALL THE TAIPLANE AND ALIGN IT WITH THE WINGS



GLUE THE SYSTEM WITH RESIN + THIXOTROPIC AGENT



BUILD THE HINGE SYSTEM FOR THE RUDDER

- Install the rudder moving part inside the fuselage and check (without gluing) the movement is correct.
- Glue the rudder hinge system as shown in the next picture



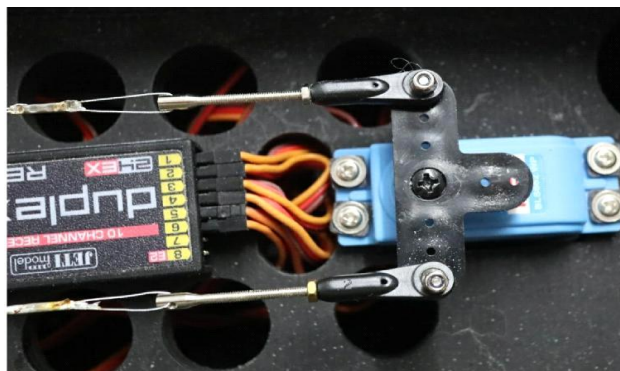
GLUE THE RUDDER TO THE FUSELAGE WITH RESIN (or UHU PLUS ENDFEST 300).

RUDDER (MOOVING PART)

For the rudder control we suggest the PULL-PULL system



Install the steel cable inside the fuse and crimp it to the servo and to the rudder moving part

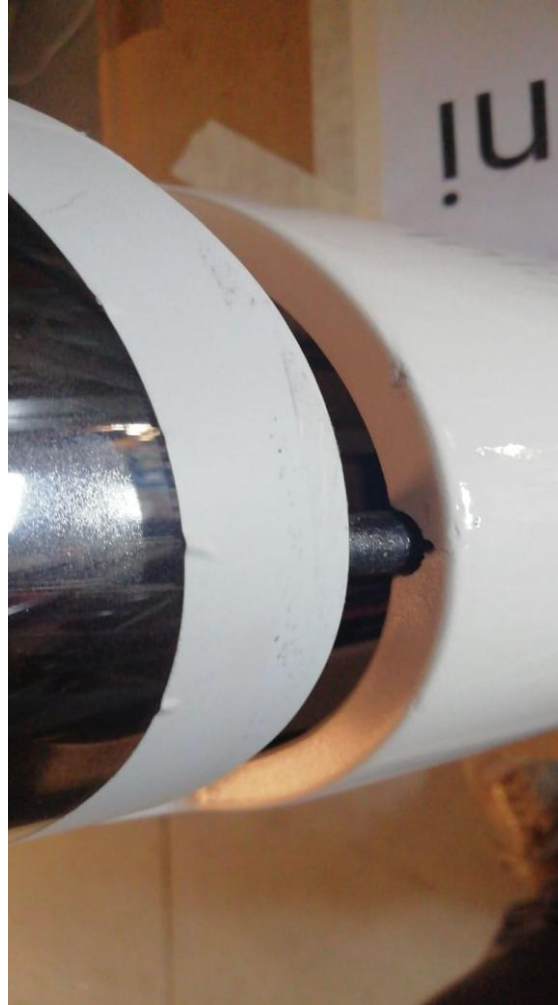


CANOPY BASE

There are several way to lock the canopy base to the fuse;

1ST METHOD: Glue a carbon tube to the front side of the canopy base





Make a slot in the front side of the fuse



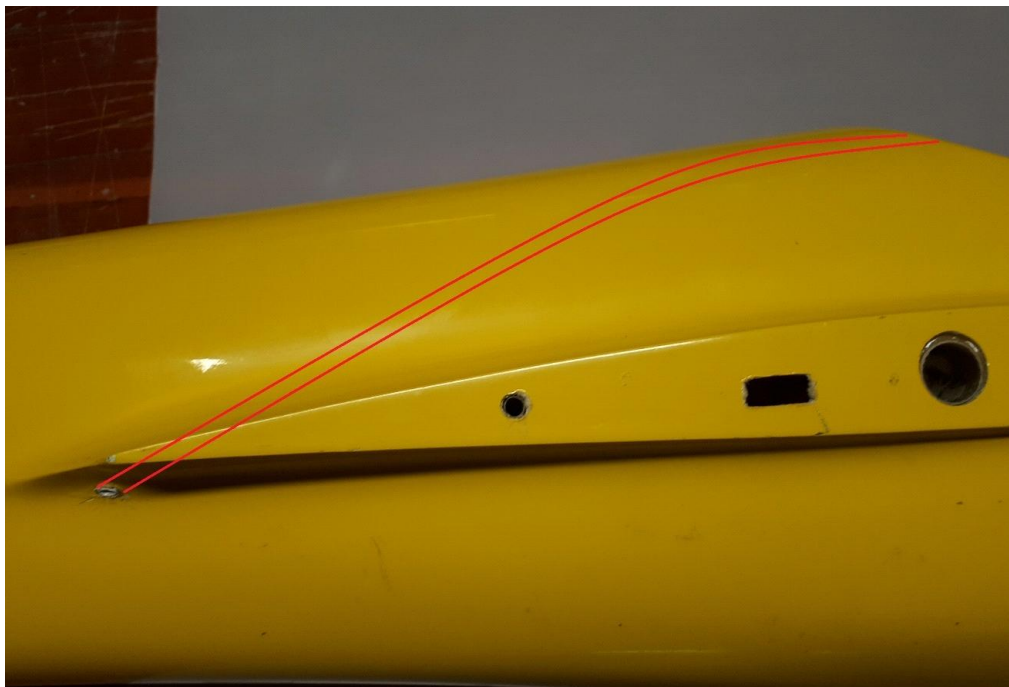
Glue (epoxi 5 min.) to the back side of the cockpit base, a piece of plywood

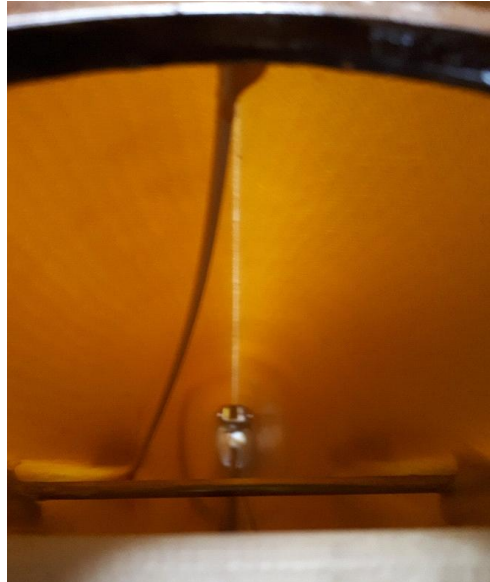


Glue a piece of plywood in the back side of the fuselage opening and make an hole (Bowden diameter)



Make a hole behind the karman end insert a bowden as shown in the picture – glue it with epoxi 5 min.

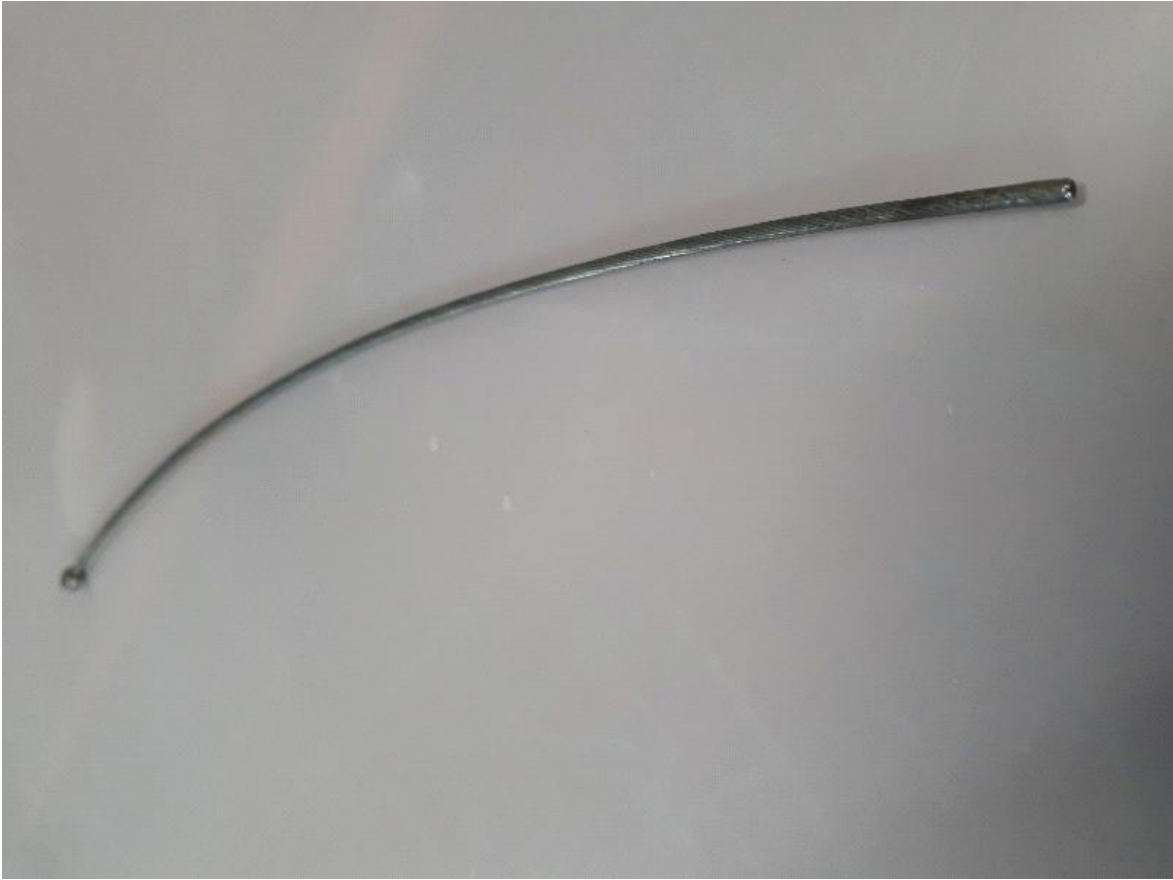




- sharp a steel bar (same Bowden diameter)
- using a drill, hole the piece of plywood glued to the canopy base



Use a braided steel cable as a pin to close the canopy base



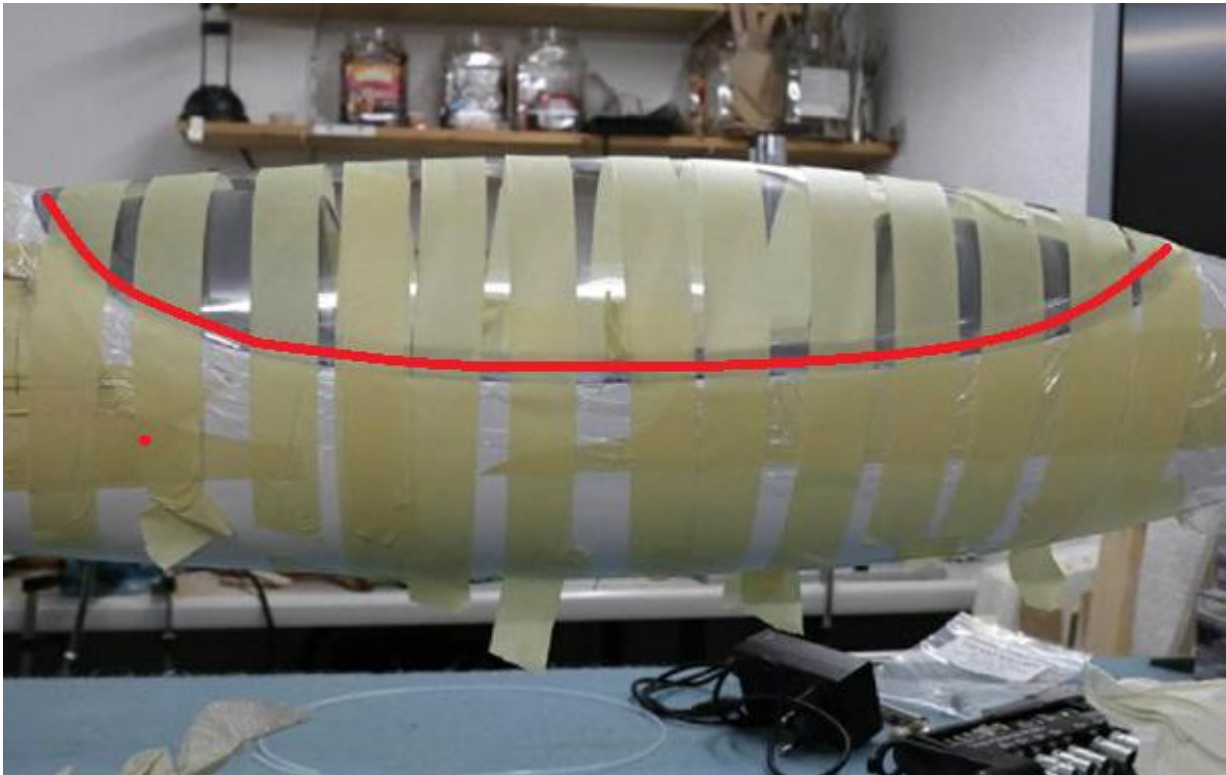
2nd METHOD:

- Glue e magnet to the fuselage and a steel plate to the canopy base



IMPORTANT: USE A "STRONG" MAGNET

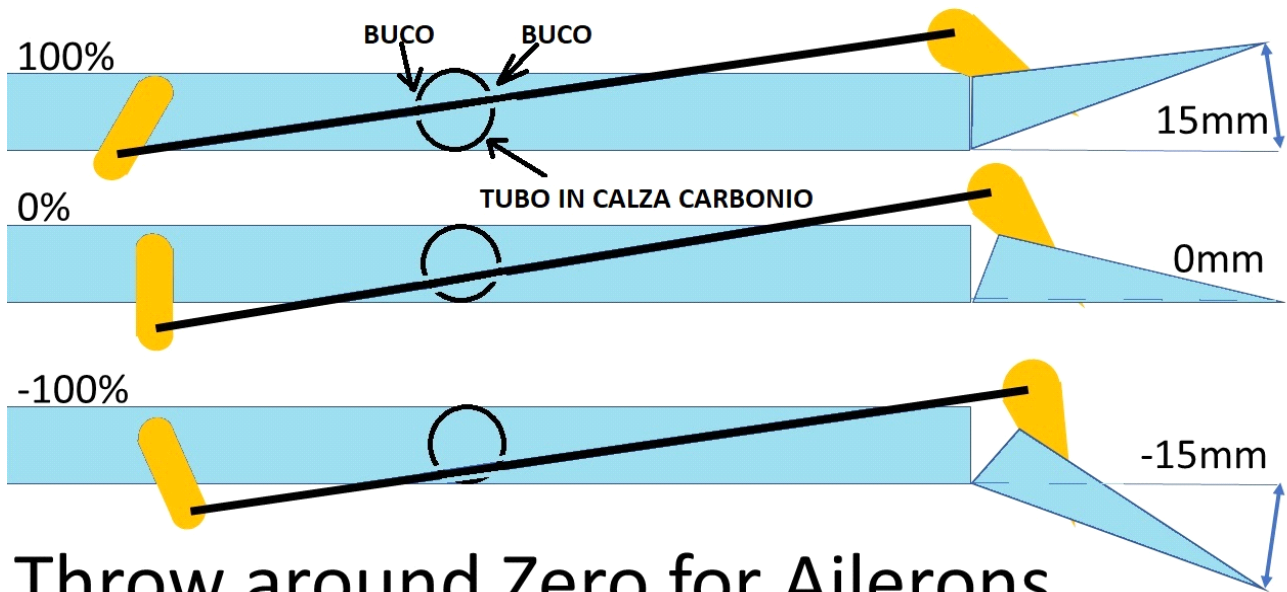
CANOPY GLUING



- Protect the fuselage with tape (canopy area)
- Spread Mold Release Wax.
- Install the canopy base
- Prepare Resin + Tyxotropic agent
- With a syringe put a cord of resin (thick about 3 mm.) along the cockpit base (as shown in the picture "in red")
- Put the transparent canopy over the canopy base (we suggest to do it in two person)
- Hold the canopy with paper tape

WINGS (AILERON + FLAPS CONTROLS)

Flaps and Ailerons are hinged in the bottom side of the wings, therefore we suggest the TOP-DRIVE system as shown in the below image



Throw around Zero for Ailerons

Mark the right axis position in the bottom side of the aileron and do the same in the upper side



Mark the same axis position also in the upper side of the aileron; cut (with Dremel) the opening for control horn and cut the "nail" opening in the wings



Now you have to hole the carbon tube inside the wings, as shown in the picture



Test the clevis linkage + rod with the control horn.
If the movement is correct, glue the control horn.



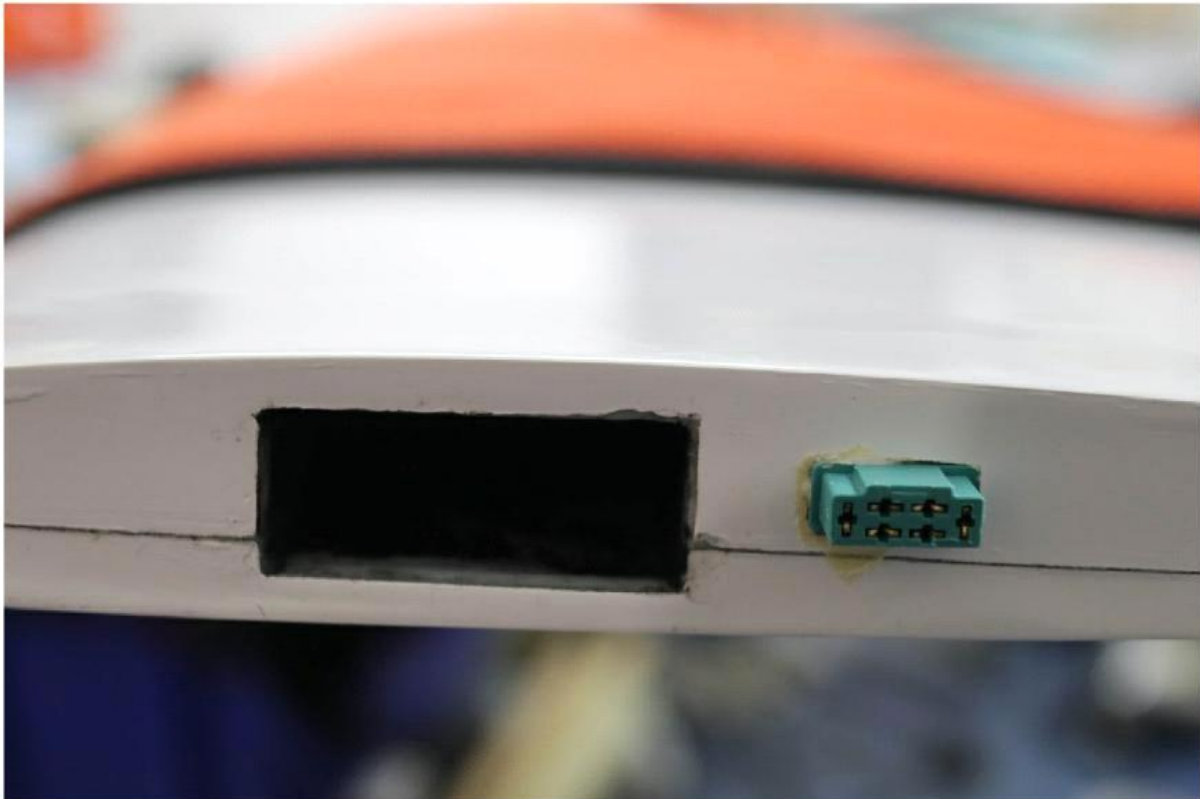
Sand the gluing surface

Arrange the servo and all the linkage system; if it works properly, glue the servo base to the wing.



Solder the servo cable to the MPX connector (6 pins – male) following the scheme previously used for the female connector.

Before gluing it to the wing, check the right connection (MPX male/female) of the winds to the fuse.



Put the servo cover over the opening, mark the cutting area with paper tape and remove with shissor the excess part



Join the servo cover to the wings with transparent tape

WING LOCKING SYSTEM

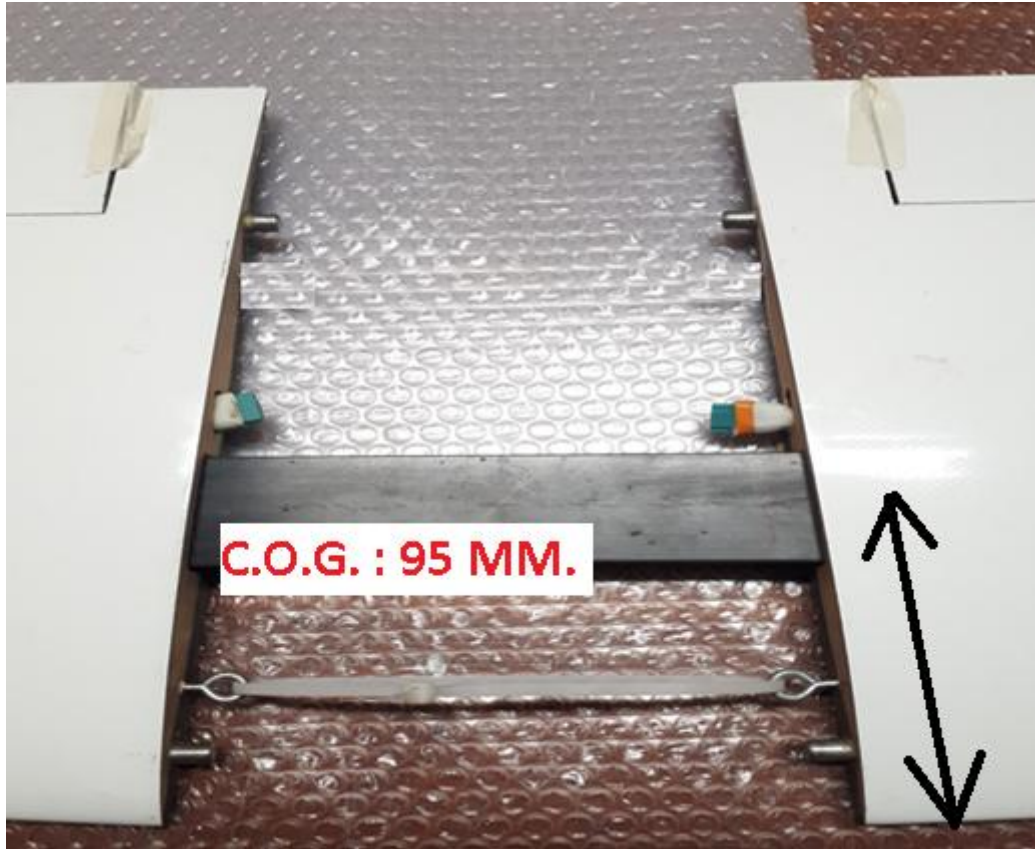
A simple method to join the wings to the fuselings described in the following photos:

Install a Screw Hook in the wing rib.

Open a window in the Karman to insert the Screw Hook

Join the wings to the fuselage with a plastic cable tie





C.O.G.: 95 MM. FROM THE LEADING
EDGE