



VETTORE

INSTRUCTION MANUAL



SUMMARY

Introduction, safety Information	3
Kit parts, technical data	4
Functions, servos, set up	5
Fuselage – karman opening	6 - 7
Servo base	8 - 9
Elevator	10 - 11
Rudder	12 - 15
Canopy base (cockpit)	15 - 20
Canopy gluing	21
WINGS (aileron plus flaps controls)	23 - 27
Wings locking system	28 - 29

INTRODUCTION

Vettore is a 4 mt. wingspan glider, for thermic, slope and mid- aerobic flight. It is a full composite glider made of GFK (Glass Fiber + KEVLAR) or CFK (Carbon Fiber + KEVLAR).

SAFETY INFORMATION

Even if we perform on every model extensive quality checks, there should be the possibility that some imperfections arise.

In this case, we kindly ask you to check all the parts before start assembling. If a part/component presents some imperfections, we are available to examine and replace it after checking. Do not hesitate to contact us.

Please be advise that parts already worked by the customers are excluded by replacement.

ATTENTION!! These instructions would help you to complete the assembling of Vettore, as per our suggestions/methods.

For servos and accessories, what we are suggesting can be obviously replaced by other similar items from other brands/producers.

RC gliders are not toys; their assembling and use need technical knowledge and craftsmanship.

Mistakes and negligence in building and flying may cause damage to people and things.

We underline these facts, as we are not responsible for your assembling work, maintenance and flight with this model.

KIT PARTS

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

TECHNICAL DATA

Wingspan	4000 mm
Fuselage length	1.963 mm
Wing area	92 dm ²
Weight (OD layout, glider conf.)	5,3 Kg
Wing load	58 g/dm ²
Wing profile	Mod. MH
Center of gravity	65 mm

Functions, servos, setup

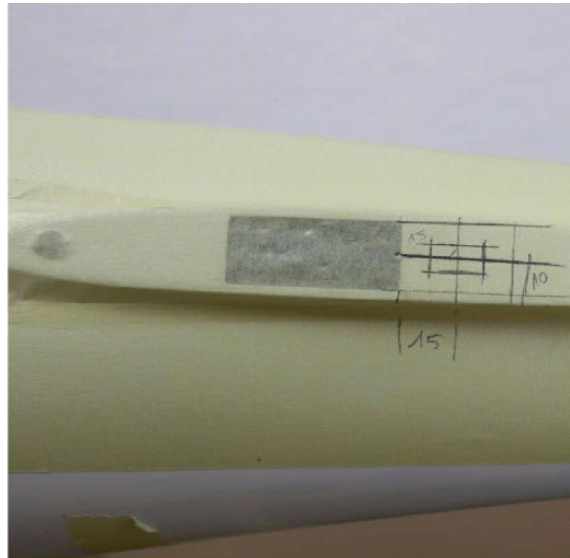
Function	(suggested) Servo	Excursion
Aileron	KST X10	10mm
Flaps	KST X10	35 mm
Rudder	KST DS589	40 mm
Tailplane	KST X10 710	10 mm

FUSELAGE (Karman openings)

We suggest covering the fuselage (close to karman) with paper-tape to avoid scratches and glue drops).

Wing servos connectors

Mark the connector position in each size of the fuselage

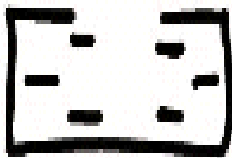


Open the hole (with Dremel blade). We use MULTIPLEX GREEN CONNECTOR (MPX 6 pins – female)

Cut the extension cable (karman – receiver) and solder it to the MPX connector

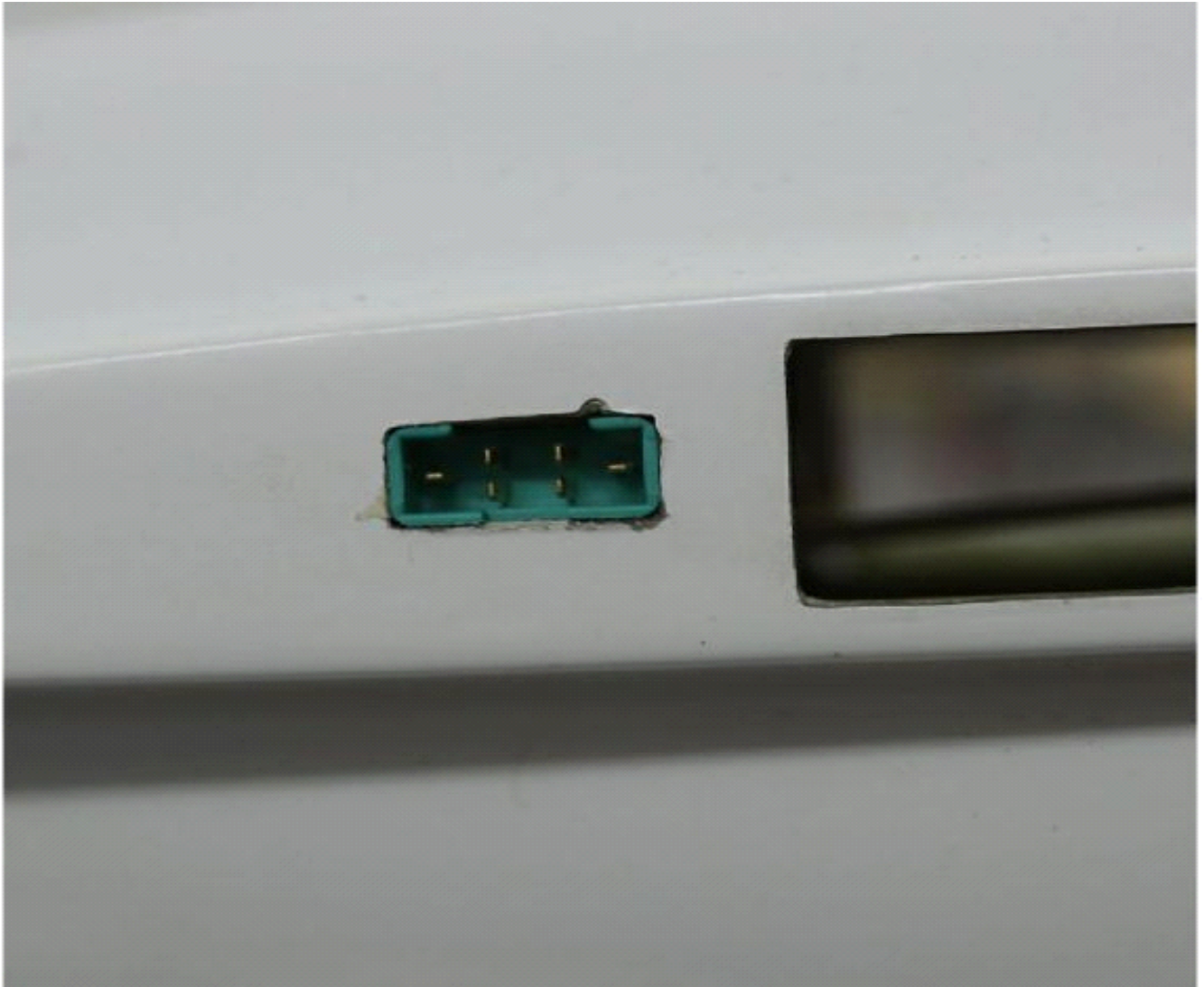
Use the shrink tube to cover the connection

Every servo needs 3 pins; mark your scheme



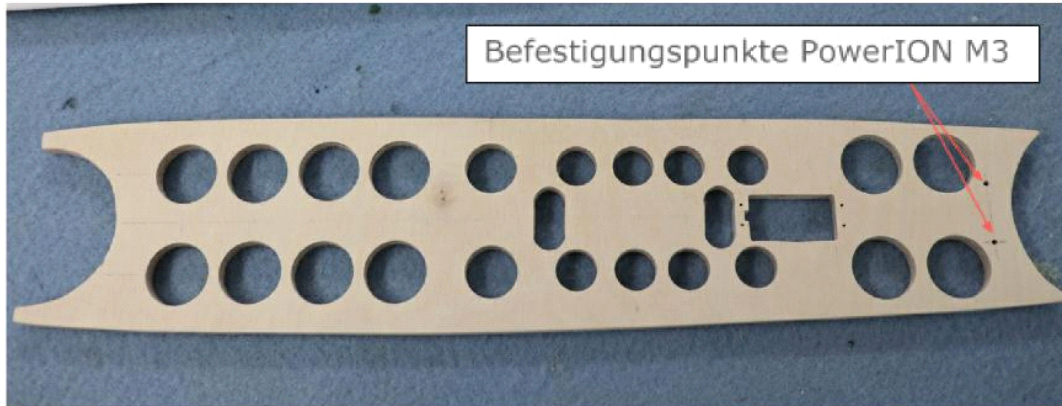
Now you can glue the MPX (female) connector to the fuselage

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 plywood base to install servos + receiver + battery.



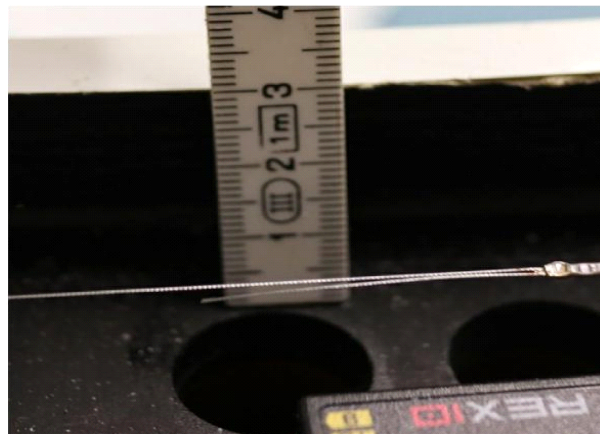
Mark a cardboard with fuselage shape (canopy zone); use it to realize the plywood base (thickness: 5 – 6 mm)

Please consider that we also sell an optional kit of accessories 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 gluing the base, test the right position of rudder servo, battery, receiver etc.

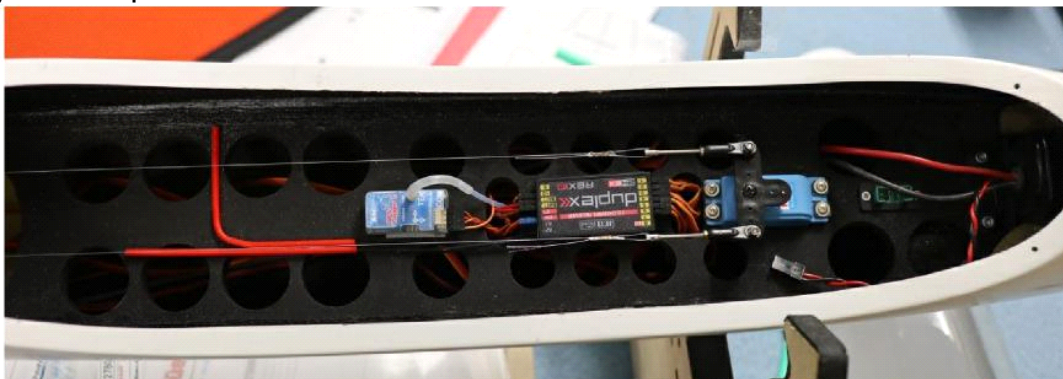
The plywood base needs to be glued to the fuse at about 3 cm down from the edge of the canopy (see the picture)



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



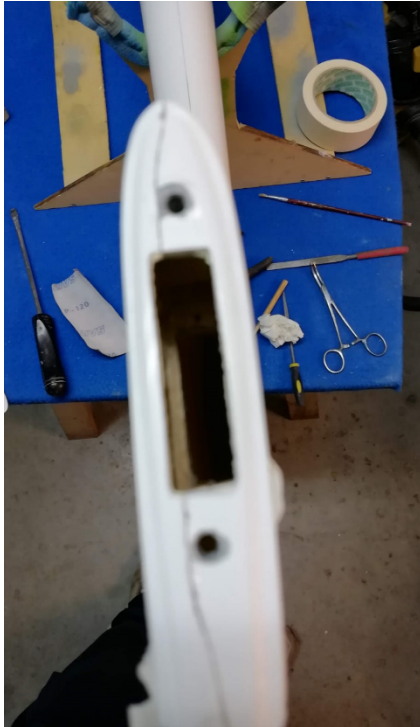
Now you can paint the base



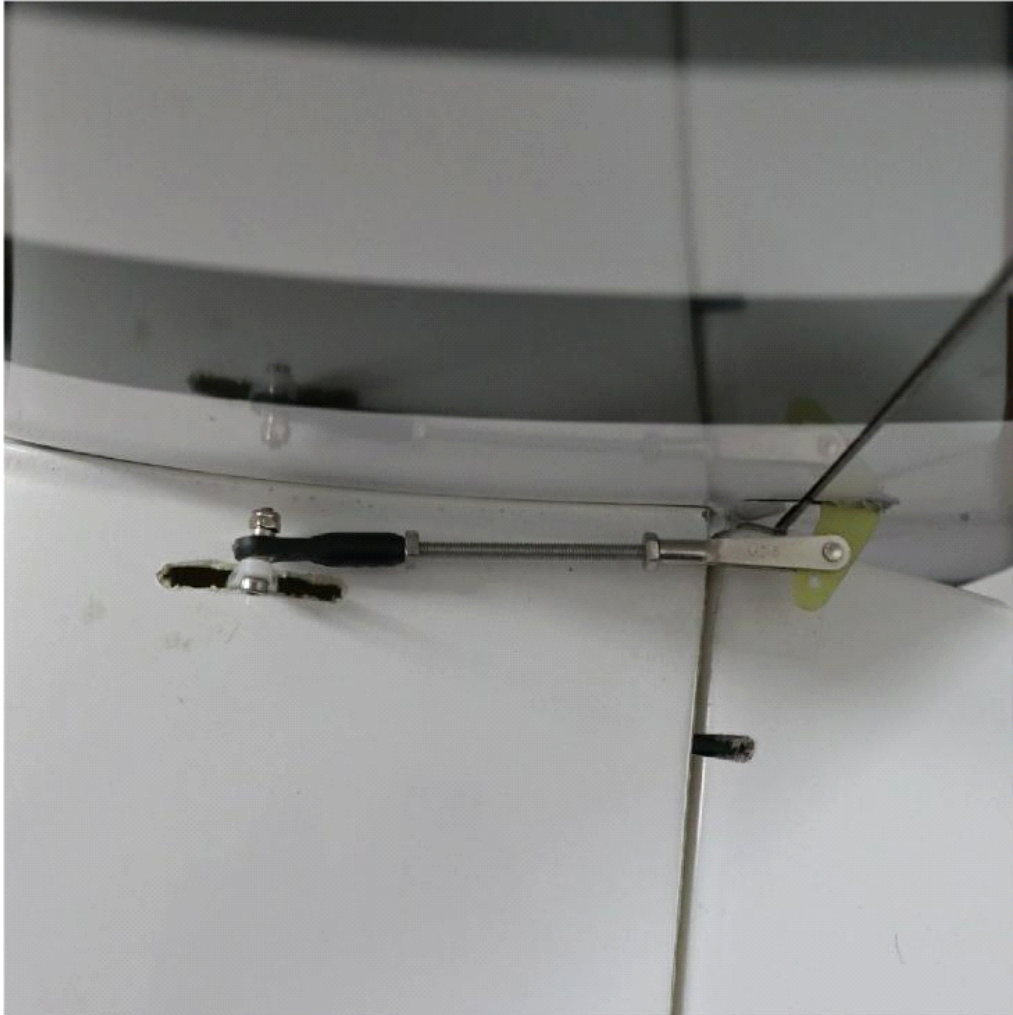
ELEVATOR

The elevator servo is installed inside the vertical rudder

Open the upper side of the rudder; make a plywood servo base and glue it inside the rudder, as shown in the pictures



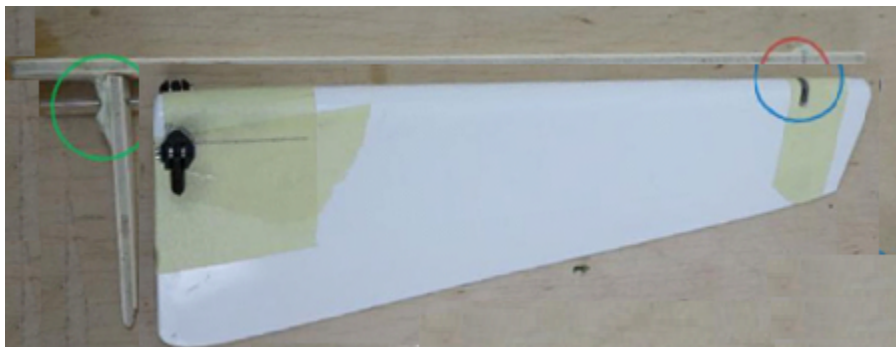
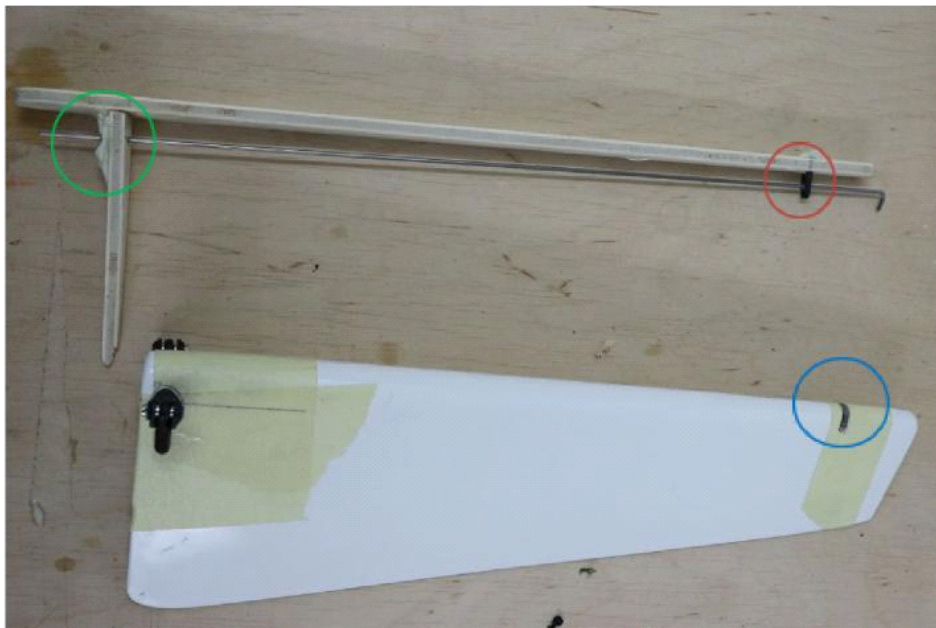
Final result



RUDDER

For the rudder control we suggest a PULL-PULL system

- Make the plywood 4-5 mm plug (as shown in the picture);
- Cut the rudder as shown in the BLU CIRCLE;
- Make two Vetronite (fiberglas or carbon) sticks and glue them in the plywood (RED + GREEN CIRCLES);
- Hole the vetronite sticks and insert a steel bar (1,5 mm), this is the hinge system of the rudder;
- Join the rudder to the "hinge system" using the steel bar 1,5 mm;



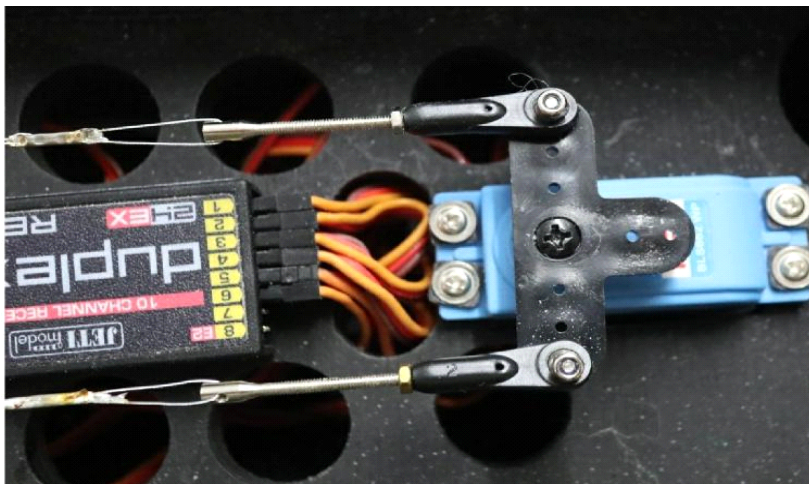
- Install the rudder moving part inside the fuselage and check (without gluing) if the movement is correct;
- Glue the rudder hinge system as shown in the picture;



- Make two opposite holes in the fuselage, as shown in the picture, about 3-4 cm from the end of the vertical rudder;



- 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; we suggest two method.

1st METHOD:

Glue a wood bar to the front side of the canopy base



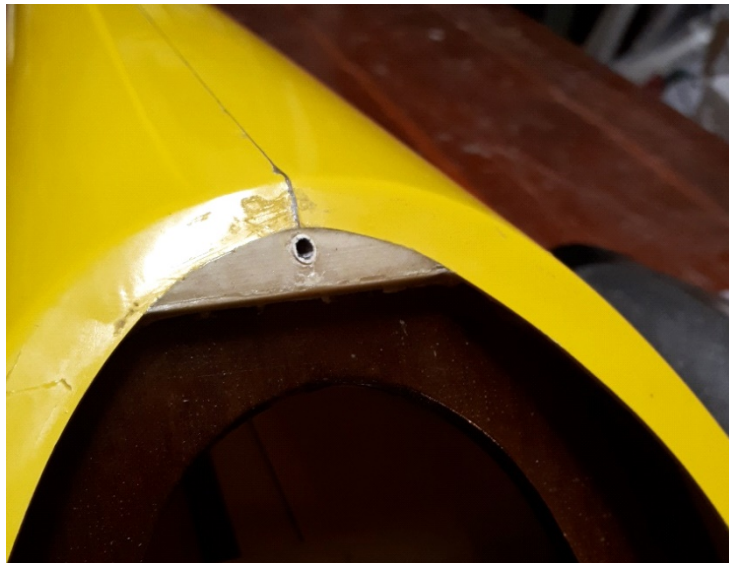
Make a slot in the front side of the fuse



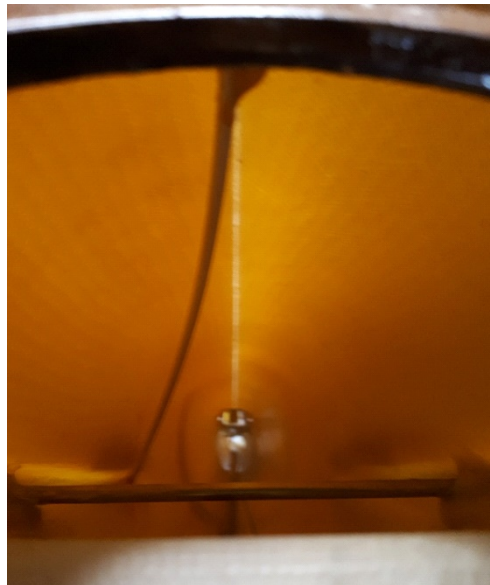
Glue (epoxi 5 min.) to the back side of the cockpit base a piece of plywood



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



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



Sharp a steel bar (same Bowden diameter) and 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



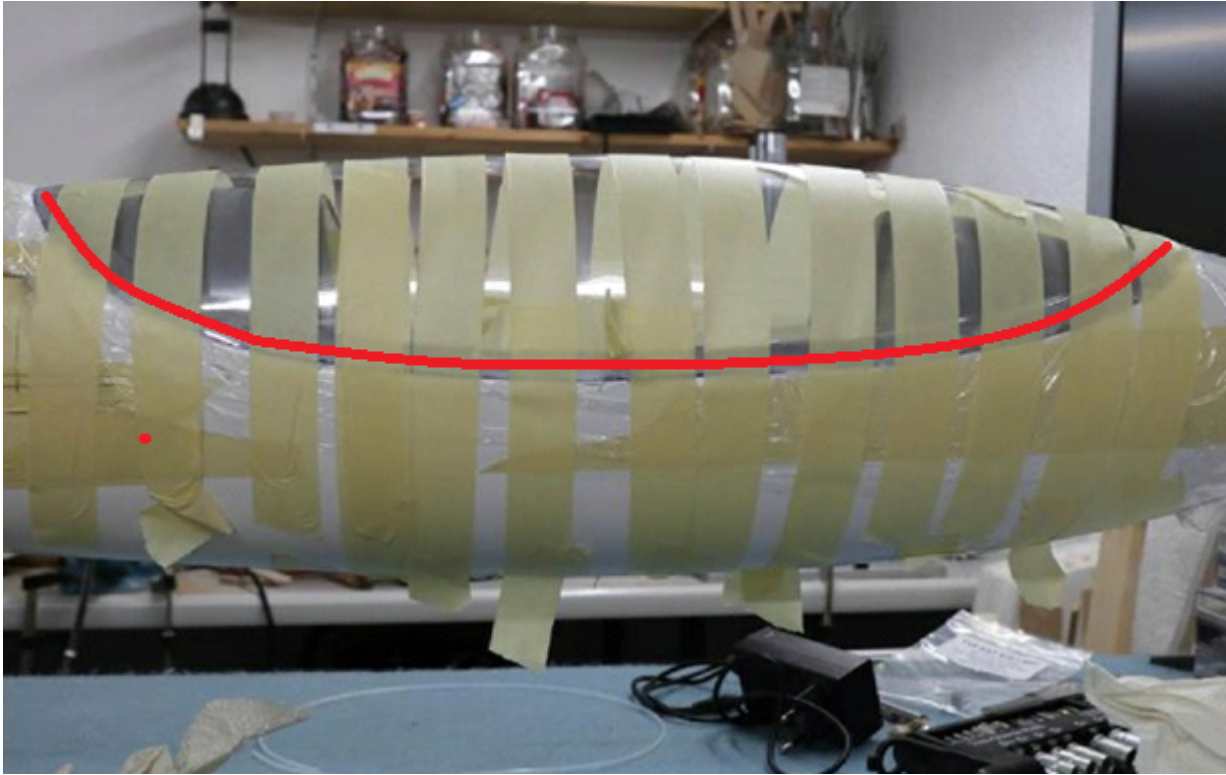
2nd METHOD:

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



IMPORTANT: USE A VERY "STRONG" MAGNET

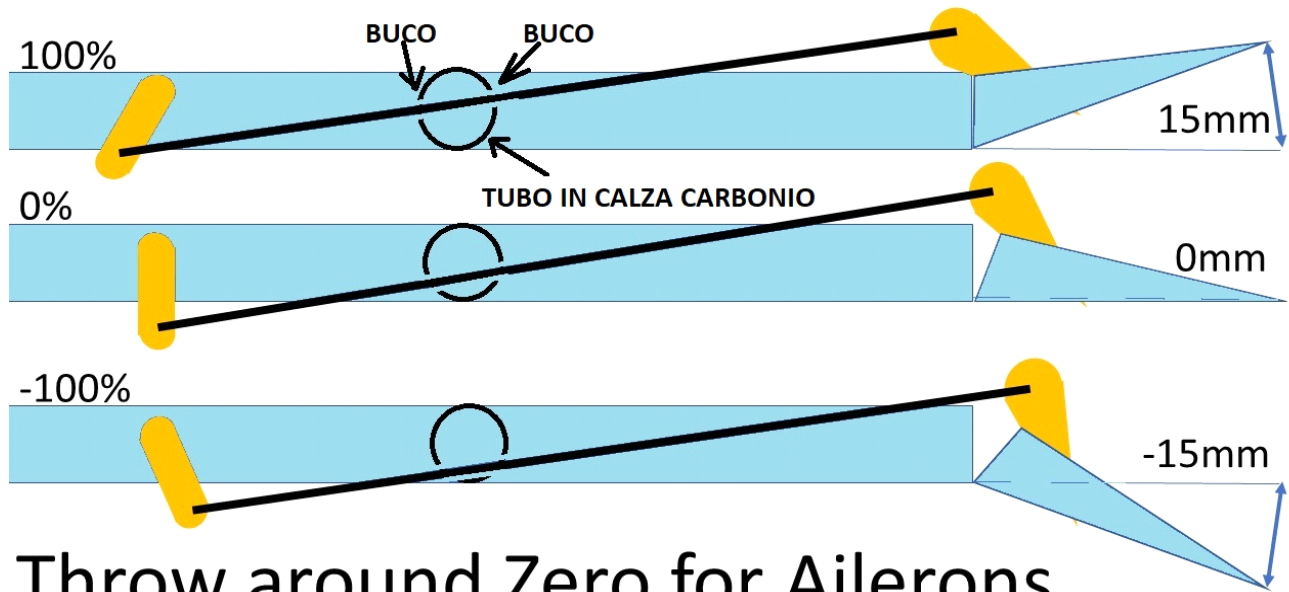
CANOPY GLUING



- 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 people);
- Hold the canopy with paper tape.

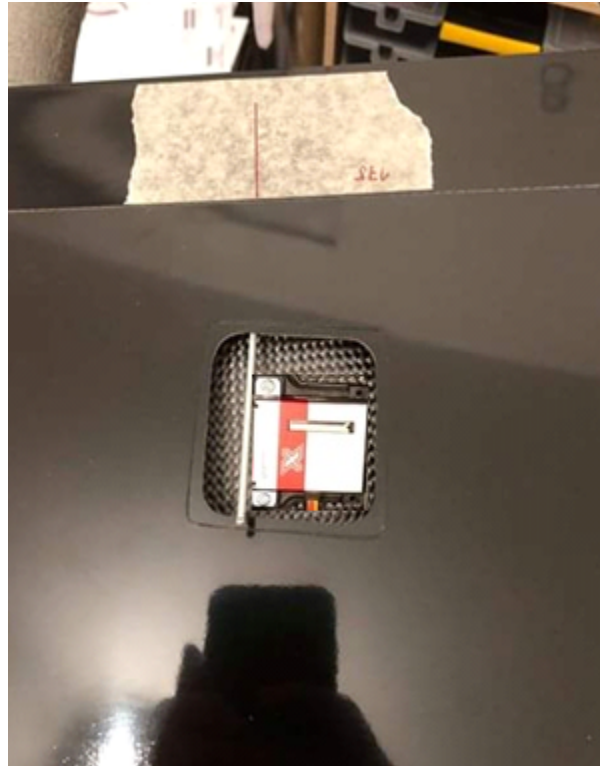
WINGS (aileron + flaps controls)

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



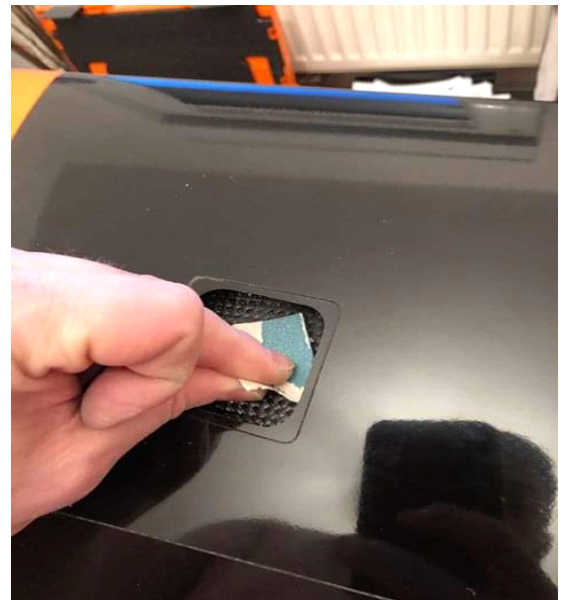
Mark the same axis position also in the upper side of the aileron; cut (with Dremel) the opening for control horn and cut the "nail" opening in the wings



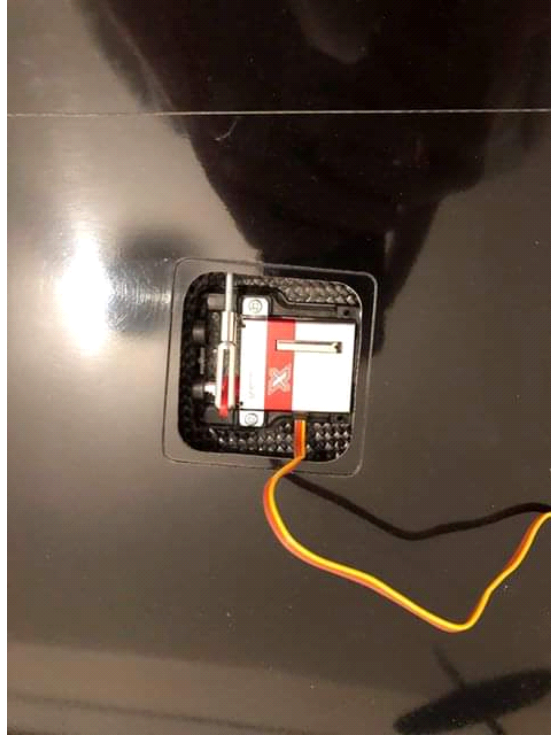
Now you have to hole the carbon tube inside the wings as shown in the picture



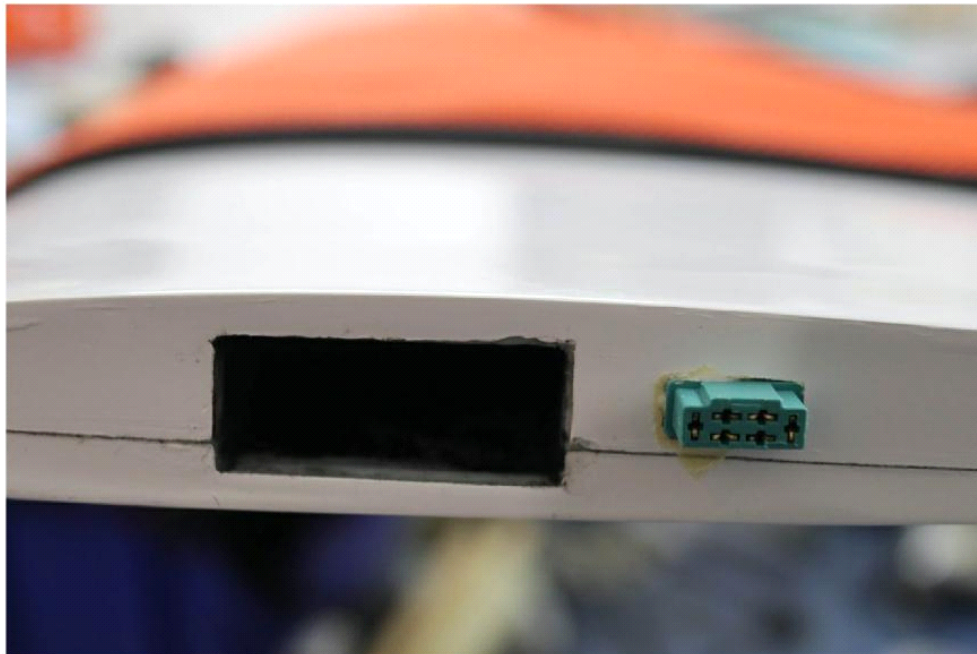
Test the clevis linkage + rod with the control horn
If the movement is correct glue the control horn



Sand the gluing surface



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 wings to the fuse.



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



Join the servo cover to the wings with transparent tape

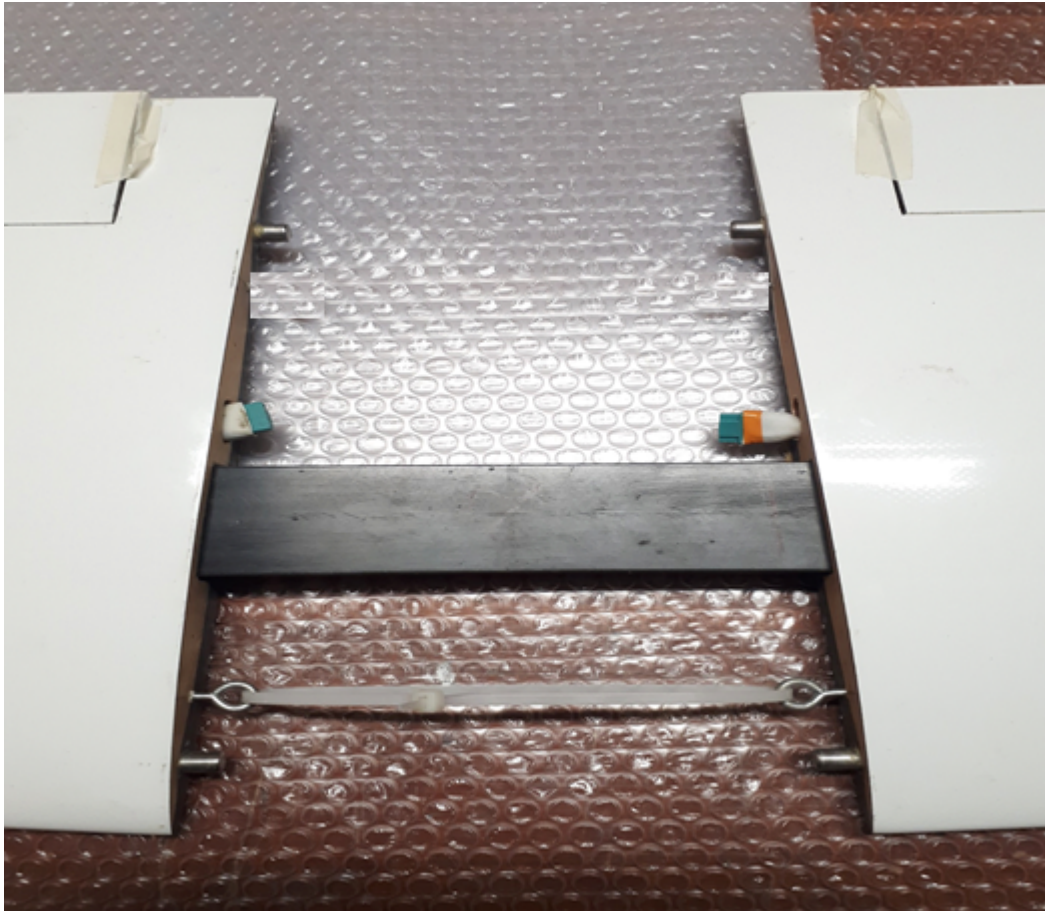
WINGS LOCKING SYSTEM

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





Have nice flights with your new Vettore from Glider_it!!

