The Armonia was designed by Filippo Materazzi, F3P, Aeromusical and F6A Italian Champion. It is an innovative and high quality F3P plane especially designed to be strong but very light. It is made with 3 mm depron milled (painted on both sides!) and HCF, a special technique that uses a transparent film glued on depron. In the kit it is included all the professional materials to complete the plane, like carbon rods (pre-cutted!), super light carbon control horns, thread, clips and velcro.

Thanks to its special design is able to fly extremely slow, but it is able to perform pretty fast maneuvers too, like snaps and spins. It is made to be symmetric to obtain wonderful knife edges. It is the perfect plane for competitions but also for the beginners of indoor flight, thanks to its incredibly smooth flying. I am sure you will enjoy this fantastic plane!

Before operating this unit, please read these instructions completely.

Before assembly, please spend some time to read our instructions. Along the way you'll learn how to properly assemble your new airplane in the least amount of time possible. Below are some tips that will help you in the assembly.

1. You need to consider the reserved servo position when installing the elevator and rudder. Also make sure that moving control surfaces do not interfere with reinforcement parts such as strings and linkage poles.

2.Micro holes in depron indicate the position where insert carbon rods.

3. Before fixing carbon with C/A, paper the part that is going to be inserted and fixed in the depron. In this way you can have a stronger glueing.

4. Glue the carbon rods exactly as shown in the pictures. To obtain a rigid and strong plane is very important that the ends of carbon rods touch and are glued together.

5. Correct assembly can assure good flying, before using glue or adhesive, please check the parts position and angle of alignment.

6. Remember to use less glue as possible and to use the lightest electronic parts you find. In F3P plane to save even only 2 grams is important. Less weight means always better flying characteristic!

7. If you want for your plane the best flying characteristic I suggest you to use the high quality electronic parts that I tested and I use on my planes.

Filippo Materazzi

Product Specifications

Fuselage length: 95 cm (37.4 in.)

Wingspan: 84 cm (33 in.)

Flying weight without battery: 80 – 90 g

Flying weight with battery: 90 – 110 g

Motor: 12 – 18 g (suggested: Hacker A10-15S or Kaukoranta contra rotating system)

ESC: 4-8 Amp (suggested: Hacker X5 pro)
Propeller: about 8 x 4 (suggested: Mejzlik 8x4)

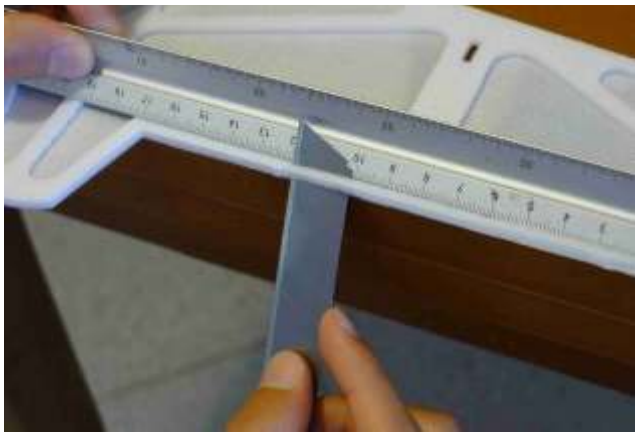
Servo: 4 – 6 g (suggested: 3 x JR 318 or 3 x 319 HV)

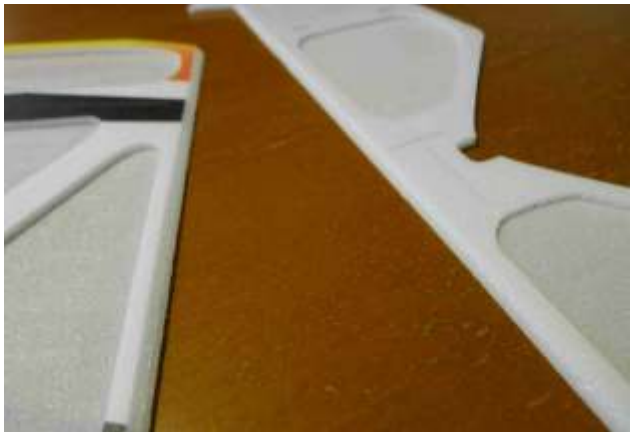
Radio: 4/more channel (suggested: 1,5 - 4 g receiver)

Battery: 2S 200-250mAh LiPo (suggested: 10 - 15 g battery)

Do not fly under the conditions below
Windy conditions
A street with many trees or street lamps
Close to high voltage electrical wires
High Population density areas
Cautions for flying
Armonia is made for indoor flight. Of course it is able to fly outdoor in absense of wind. Make sure you have permission to fly and follow safety guidelines set by local authorities.
Note for Storage
Please disconnect the lipo packs when finished flying
Do not press or crush the airplane when storing

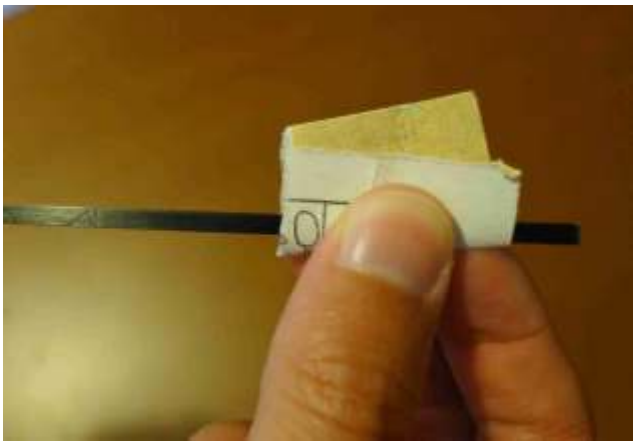
CG Position: 21-22 cm from the nose

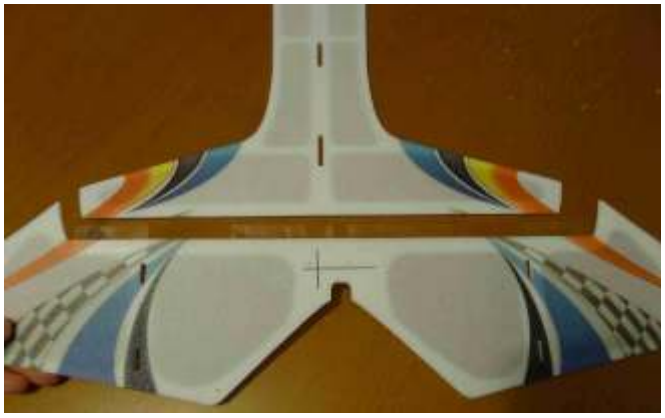




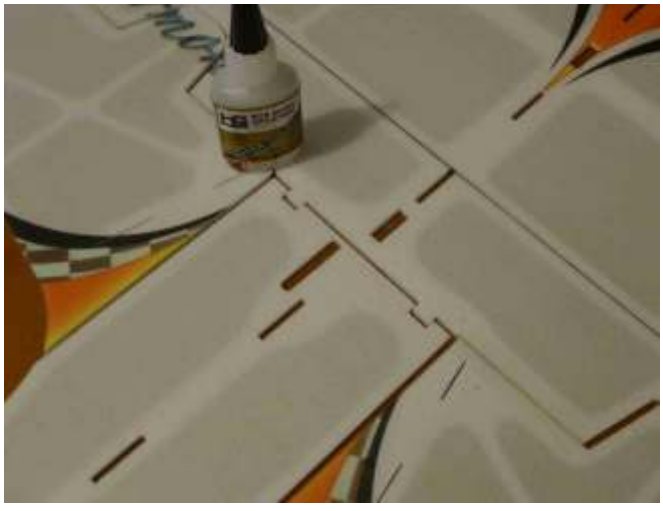
Cut a 50° bevel on ailerons, elevator and rudder.

Use some C/A to glue the 62 cm long carbon strip on the wing as shown in the picture. NOTE: position the wing on a flat surface.





Fix the ailerons to the wing with 3M tape.Do the same with elevator.

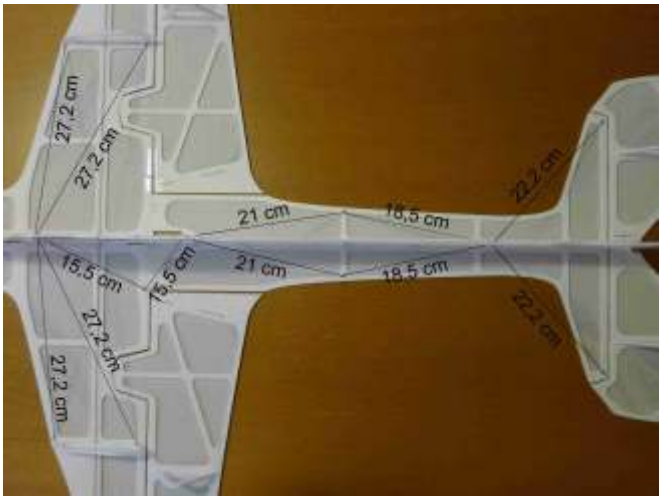


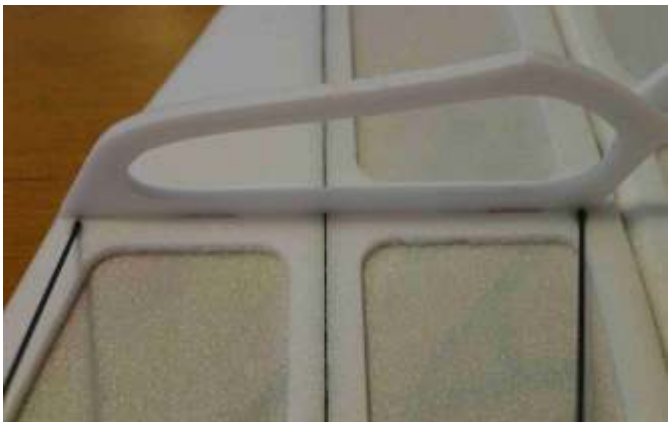
Fix the horizontal fuselage to the wing with C/A.

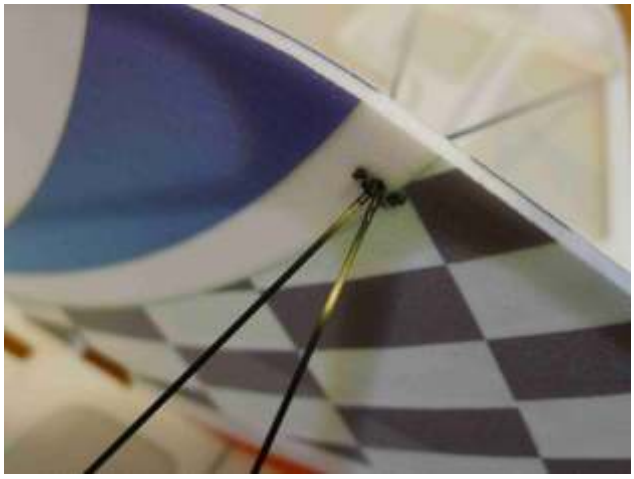
Use some C/A to fix the lower vertical fuselage on the horizontal fuselage. Be vertical and no distortion!

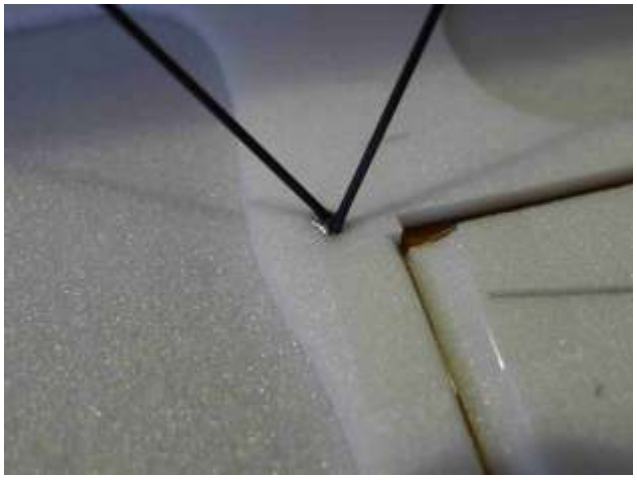
Insert the downside vertical winglets into the pre-reserved slots on the downside of the wing and apply some C/A to fix.

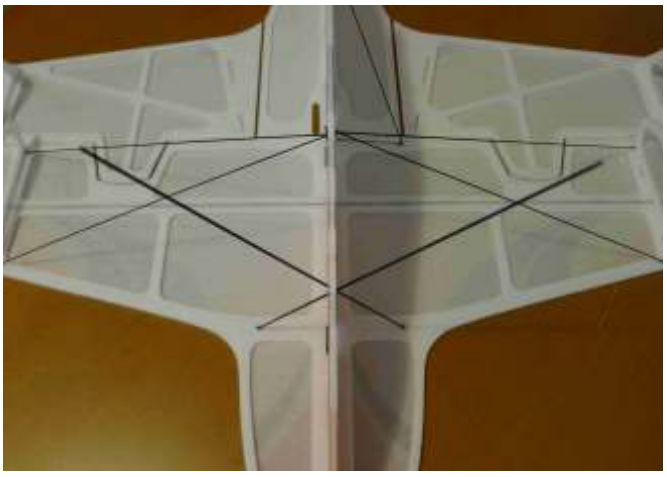
Insert the parts to reinforce surfaces on ailerons and on elevator into the pre-reserved slots and apply some C/A to fix.





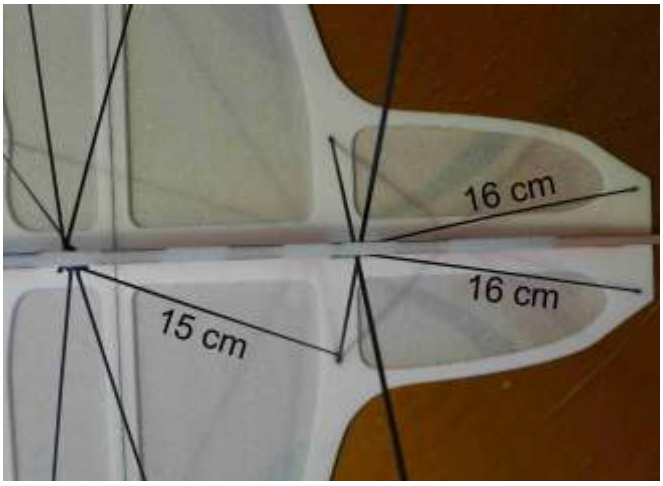




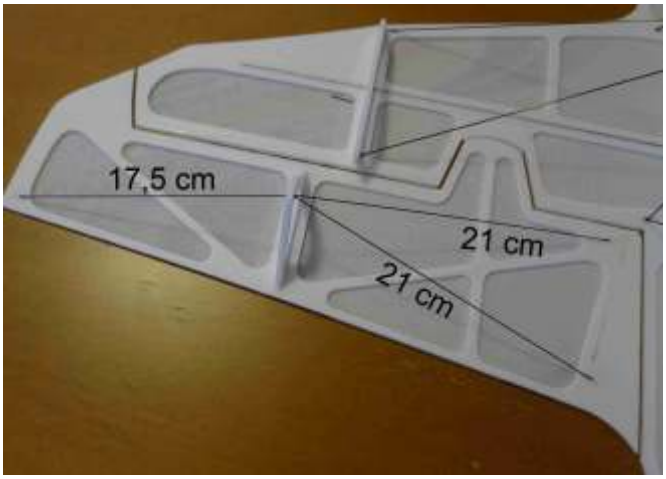


Install all the 1 mm carbon rods as shown in the pictures.First of all fix with C/A the wing carbon rods.

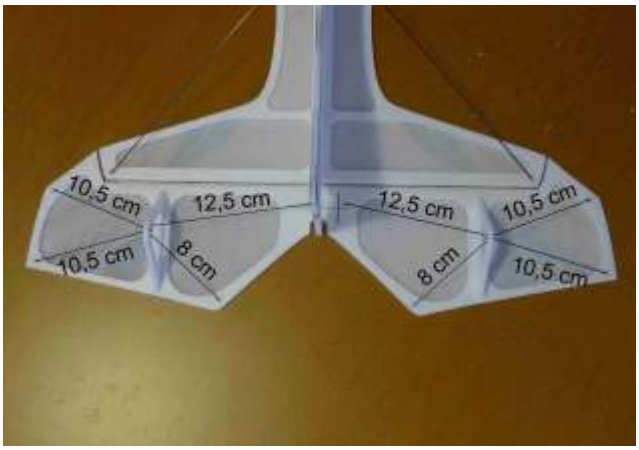
Install the landing gear. Please insert through the pre-reserved holes on the fuselage and wing the two 1,5 mm x 24 cm carbon rods, then use C/A to fix.

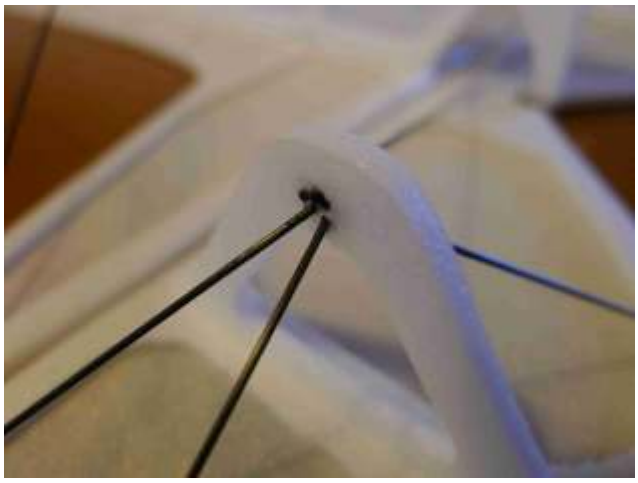


Fix with C/A the three 1 mm carbon rods as shown in the picture.

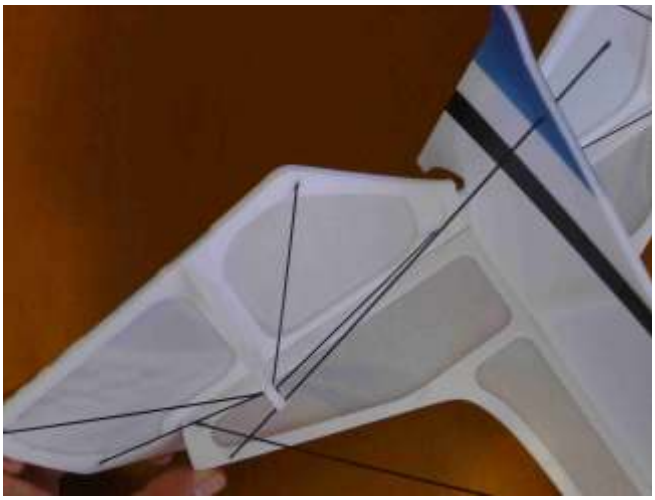


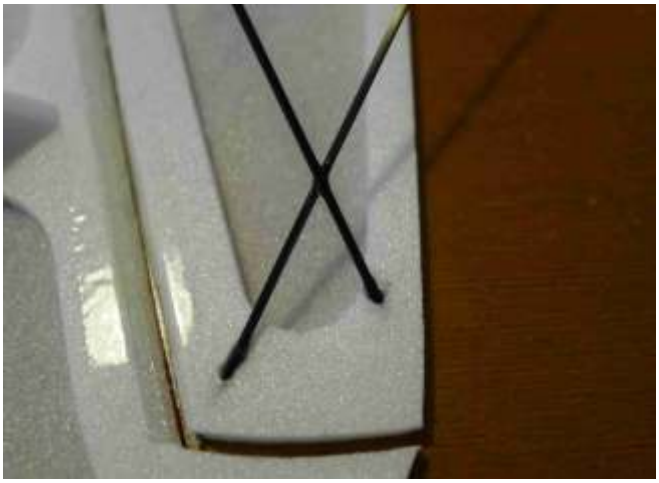
Fix with C/A the 0,8 mm carbon rods to reinforce the ailerons.



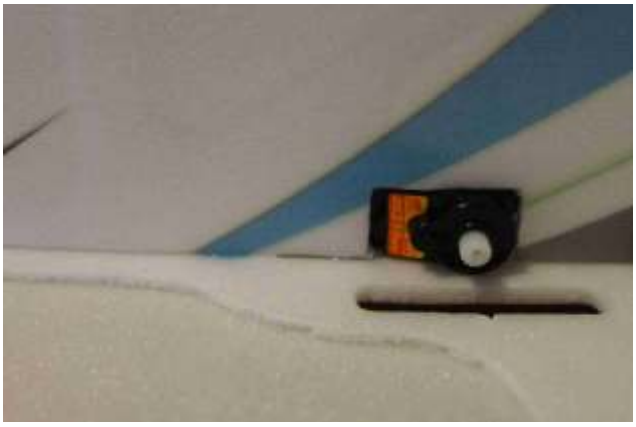


Fix with C/A the 0,8 mm carbon rods to reinforce the elevator.



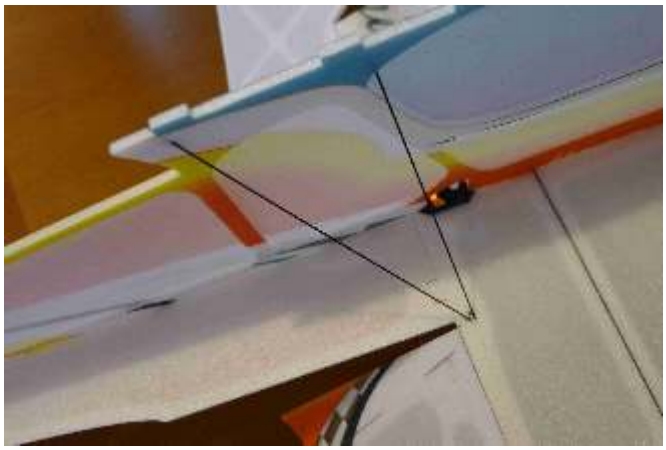


Install the 1 mm x 18,5 cm carbon rod paying attention to the elevator deflection. ATTENTION: elevator, when moves down, must not touch this carbon rod!



Install the rudder to the fuselage with some 3M tape.

Fix the three servos with C/A as shown in the pictures. Please adjust the servo holes according to the size of your own servo.

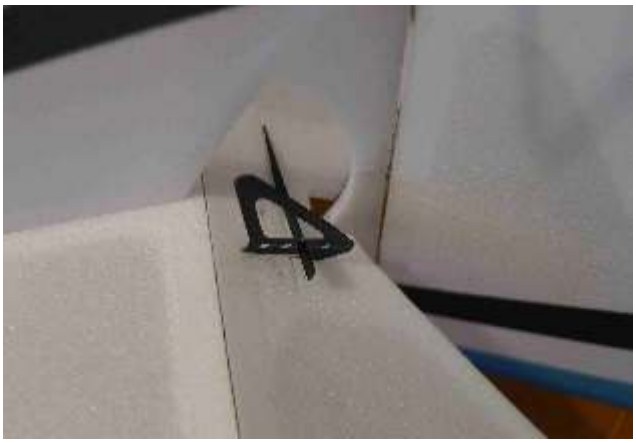


Fix with C/A the two 0,8 mm x 17 cm carbon rod to reinforce vertical fuselage.

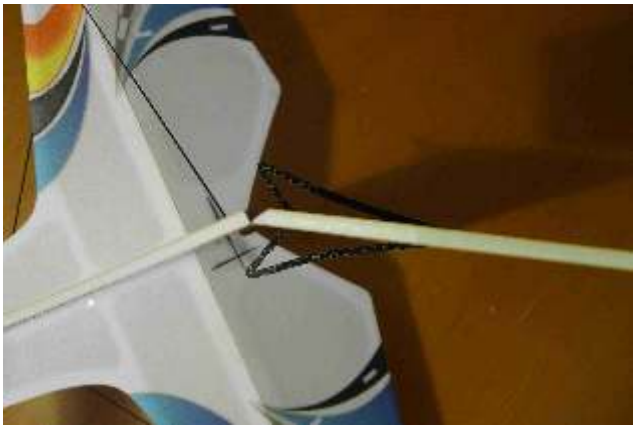
Use C/A to fix the upper vertical fuselage into the horizontal fuselage. Be vertical, no distortion.

Fix with C/A the 0,8 mm x 20 cm carbon rod.

Send the lower part of control horns.

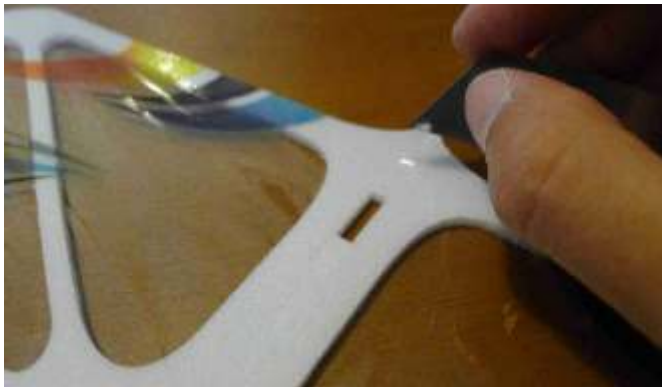


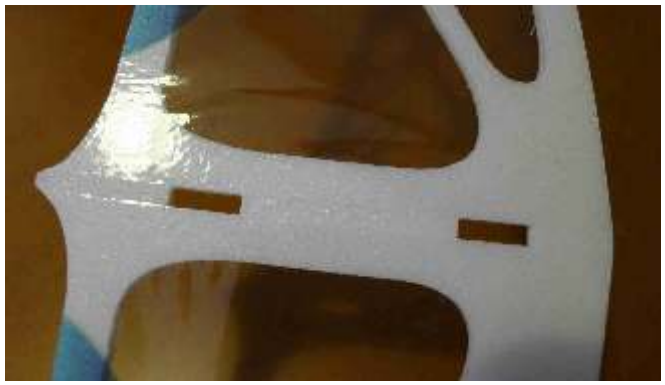
Insert the 0,5 mm x 4 cm carbon strip in the elevator control horn.Then glue them together in the pre-reserved slot. ATTENTION: elevator and rudder control horns are asymmetric. The shorter part goes on the side of mobile surface where there is the 50° bevel for movement.



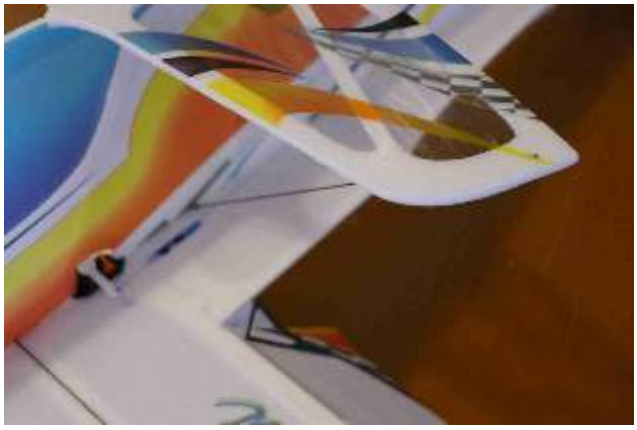
Then fix the ailerons and rudder control horns.

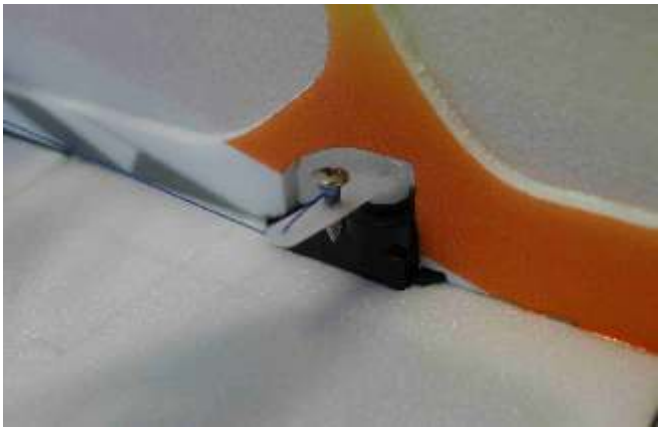
Insert the upside vertical winglets into the pre-reserved slots on the upside of the wing and apply some C/A to fix.

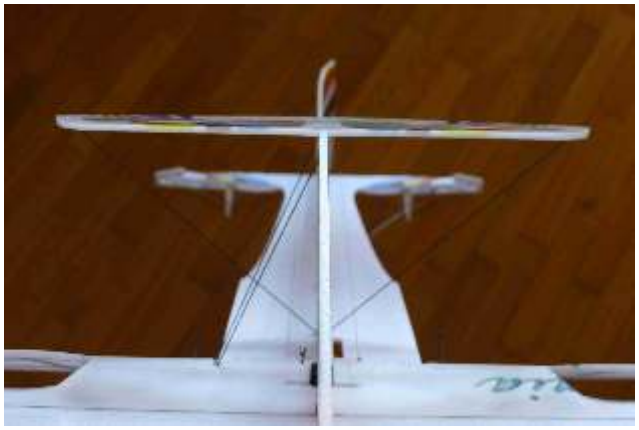




Remove with a cutter 3 mm of transparent film from the bottom horizontal winglet.

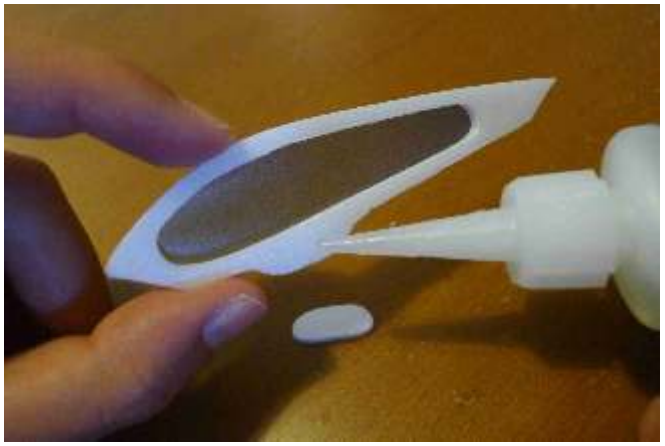






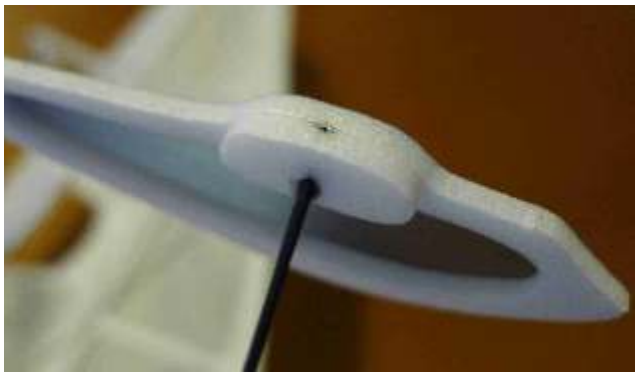
Use receiver to trim the servo arms in neutral, then fix the servo arms. Connect the servos and control horns with thread. Make sure the thread is taut and have the control surfaces in a horizontal position.

Fix both horizontal winglets using C/A and fix the two 0,8 mm x 38cm carbon rod. NOTE: be sure that both winglets are perfectly aligned with the wing!



Fix the small depron piece to the wheel pants to reinforce it.

Install the motor with 3M tape and C/A.



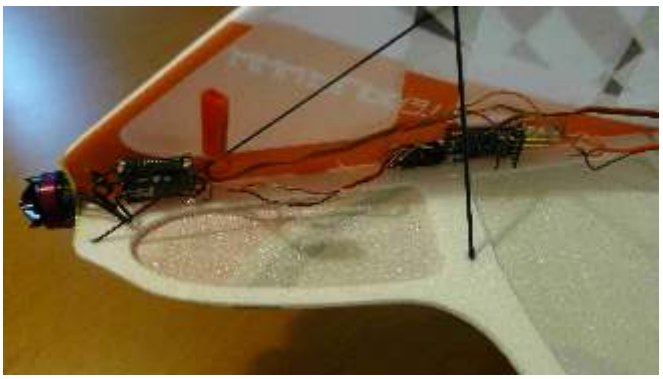
Pierce the wheel pants and fix them with C/A in the landing gear as shown in the picture.

Fix with C/A a small piece of velcro on each wheel pant.

Do the same on “tail landing gear” as shown in the picture.

Install ailerons linkages using the four clips and the two 1,3 mm x 15,5 cm carbon rods included in the kit.

Fix with C/A the four brakes on elevator and ailerons as shown in the picture. NOTE: they must be positioned symmetrically.



Use small pieces of velcro to fix the ESC, receiver and battery.NOTE: you can adjust the place of battery according to the CG position.

A perfect Armonia is done after your careful assembly. While assembly, the flying weight is really critical to the flight performance and will be affected by adding weight, so you should reduce any unnecessary weight while assembly. Then you'll get the best flying performance.

For technical informations about planes, pls contact with: filippo.materazzi@gmail.com

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