SebArt *professional line*

KatanaS 30E

ARF

ASSEMBLY MANUAL

The new *KatanaS 30E ARF* was designed by Italy aerobatic pilot, Sebastiano Silvestri and the design is based on of his successful and famous ***KatanaS*** Tournament Of Champion's airplane.
This professional ARTF kit is the result of Sebastiano's long research in *3D* performance. This combined with an extremely lightweight structure, the all wood airframe and the big control surfaces give the *KatanaS 30E* an impressive thrust-to-weight ratio and crisp control authority at any airspeed and flight condition….That for this small class of airplane is revolutionary!

The *KatanaS 30E* can do it all…unbelievable easy harriers, torque rolls, blenders, waterfalls and almost anything else you can dream up are waiting you!

.....the only aerobatic limit is your fantasy!

Specifications

Wingspan:….....125 cm (49,21 in)
Length:…..…… 125 cm (49,21 in)
Wing Area:….....36,5 dm² (56,57 sq.in)
Weight:…..1.2 kg (2,64 lb) with 2.150 LiPo F.P.
Radio:……minimum 4-channel with 4 servos 12g
Engines:….Hacker A30-14L + X40 controller

Table of contents

Required radio, motor and battery

Radio equipment:

- Minimum 4-channel radio system
- 4 digital mini servos, recommended JR PROPO DS 385
- 2 servo extension 300mm, for elevator and rudder servos
- 4 servo extension 100mm, for aileron's servos

Recommended electric motor for best performance:

- Hacker A30-12L + X40 controller + APC 13 x 6.5 E
- Hacker A30-14L + X40 controller + APC 14 x 7 E

Recommended Li-Po battery pack for best performance:

- ***FlightPower*** EVO 25 1800mAh 3S…..for unlimited 3D
- ***FlightPower*** EVO 25 2170mAh 3S…..for everything
- ***FlightPower*** EVO 25 2500mAh 3S…..for duration and precision

Additional required item, tools and adhesives

Tools:

- Drill
- Drill bits: 1,5mm
- Phillips screwdriver
- Hobby knife
- Masking tape
- Soldering iron

Adhesives:

- thin CA
- medium CA

Warning

This RC aircraft is not a toy!
If misused, it can cause serius bodily harm and damage to property.
Fly only in open areas, preferably in official flying sites, following all instructions included with your radio and motor.

Before starting assembly

Before starting the assebly of your KatanaS 30E, remove each part from its bag and protection for a prior inspection. Closely inspect the fuselage, wing panels, rudder, and stabilizer for damage. If you find any damage or missing parts, contact the place of purchase.
If you find any wrinkles in the covering, use a heat gun or covering iron to remove them. Use caution while working around areas where the covering material overlap to prevent separating the covers.

Using the manual

This manual is divided into sections to help make assembly easier to understand and to provide breaks between each major section.
In addition, check boxes (□) have been placed next to each step to keep track of each step completed. Steps with two boxes indicate that the step will require repeating, such as for a right or left wing panel, two servos, etc.
Rember to take your time and follow the directions.

Warranty information

SebArt garantees this kit to be free from defects in both material and workmanship at the date of purchase.
This warranty does not cover any parts damage by use or modification, and in no case shall SebArt's liability exceed the original cost of the purchased kit.
Further, SebArt reserve the right to change or modify this warranty without notice.
In that SebArt has no control over the final assembly or material used for the final assembly, no liability shall be assumed or accepted for any damage of the final user-assembled product. By the act of using the product, the user accepts all resulting liability.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

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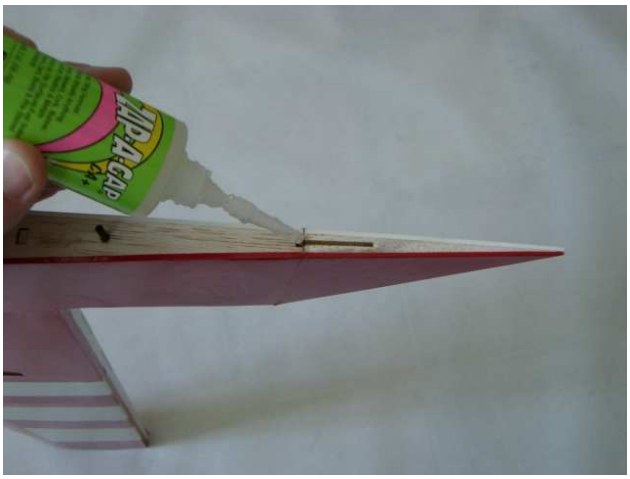
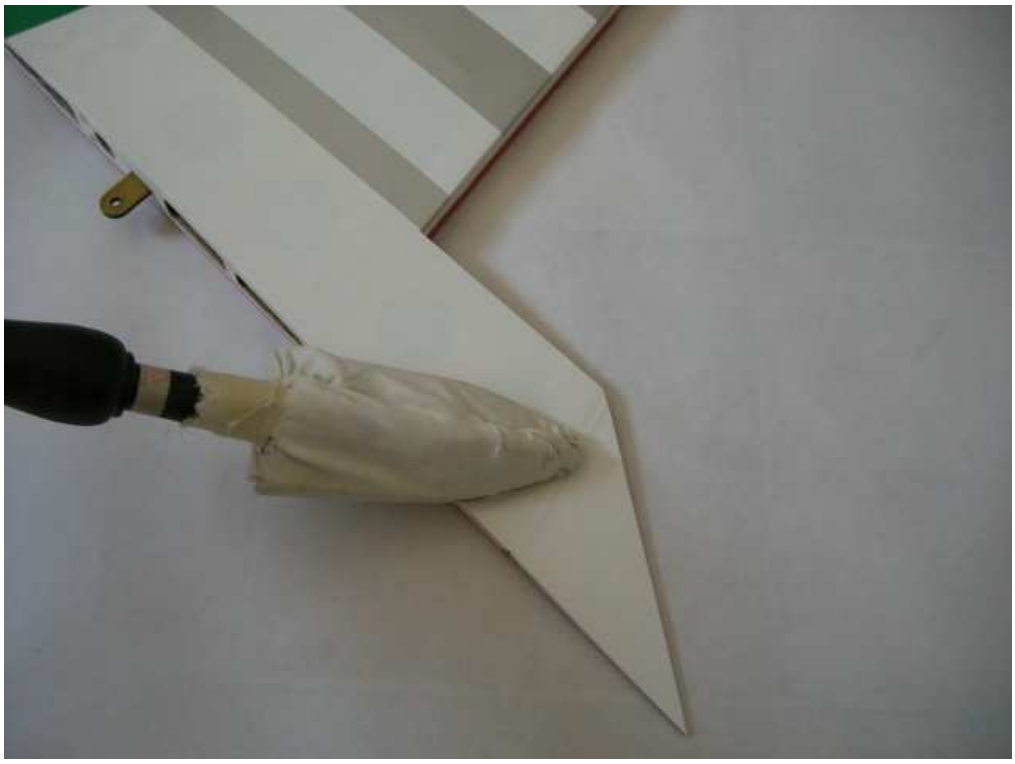
Section 1 – wing fillet installation

□□ step 1
Locate the corresponding wing fillet to the wing.
Test fit the fillet and his alignment with the wing panel.
Once satisfied with the fit, glue the wing fillet to the wing panel using medium CA.
Use the glue carefully avoid over runs onto the area to be covered with the material.



□□ step 2
Use the covering iron carrefully, at a medium temperature, to glue the cover material down around the area of the fillet. Use caution while working around areas where the cover material overlaps to prevent separating the covers.



□ step 3
Repeat steps 1 through 2 for the remaining wing panel and wing fillet.

Section 2 – ailerons installation

□□ step 1
Trial fit the four aileron hinges, included in the hardware pack, in their place and verify the correct position and alignment of the aileron with the wing panel.

□□ step 2
Carefully glue, with some drops of thin CA, each of the four hinges in the aileron.

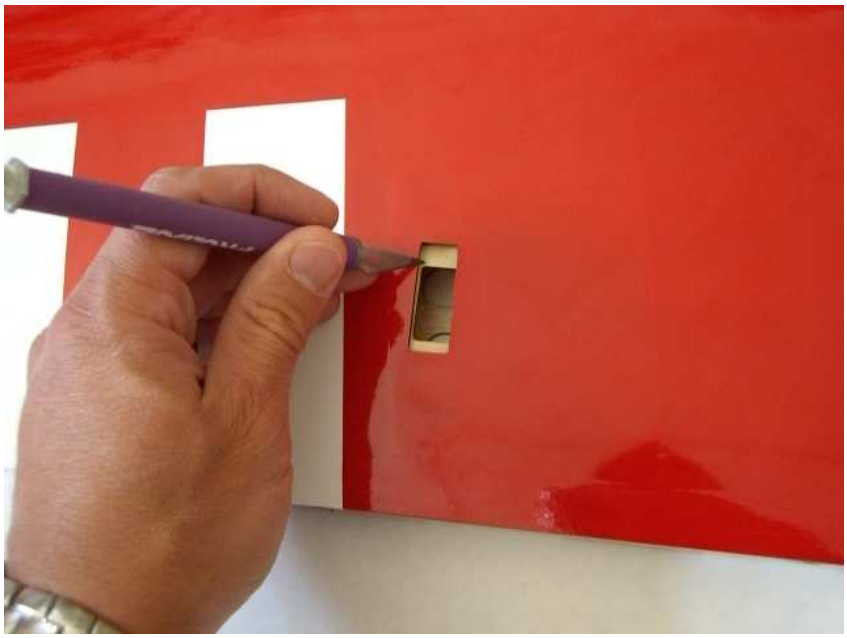
□□ step 3
Carefully glue, with some drops of thin CA, each of the four hinges into the wing panel.

□□ step 4
Work the aileron up and down some times to work the hinges and check for proper movement.

□ step 5
Repeat steps 1 through 4 for the remaining wing panel.

<u>Section 3 – aileron servo & control horn installation</u>

□□ step 1
With the hobby knife open the servo bay in each wing.



□□ step 2
Locate the following items, one servo extension 100mm long and the servo.

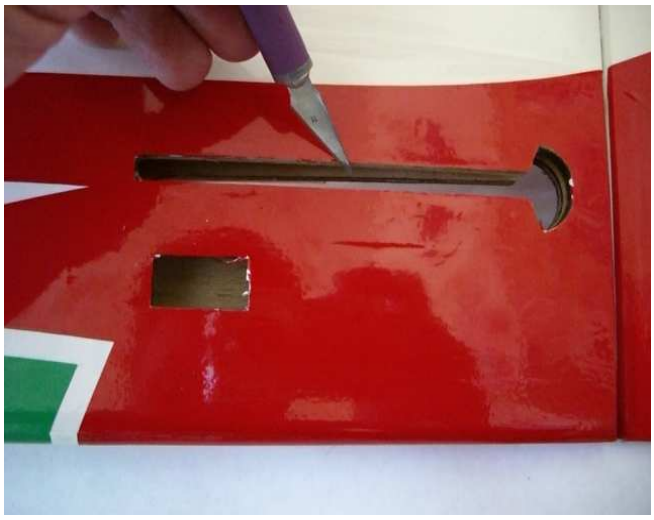
□□ step 3
Install the servo hardware (gommets and eyelets) included with the servo.
Install the servo and control horn into the wing panel as per the picture.

□ step 4
Repeat steps 1 through 3 for the remaining wing panel.

Section 4 – rudder installation

□ step 1

With the hobby knife open the bay for the servos and the stabiliser on both sides of the the fuselage. Than place the rudder in his place into the fuselage, check for a correct alignment and than glue it with some drops of thin CA.



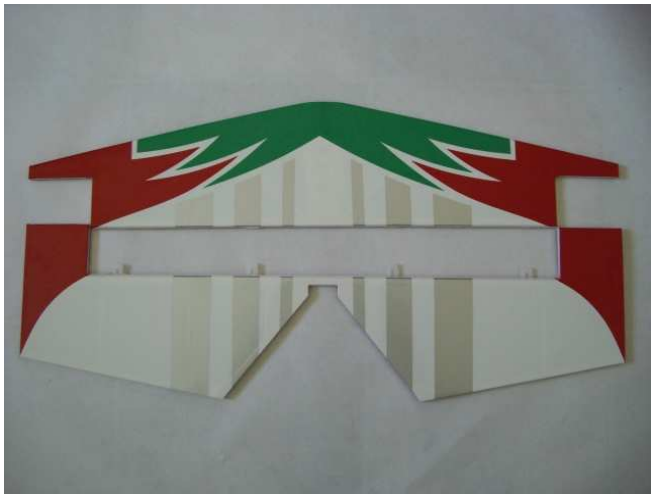
□ step 2

Insert the three hinges in there appropriate slots in the rudder, and verify the correct position and alignment.

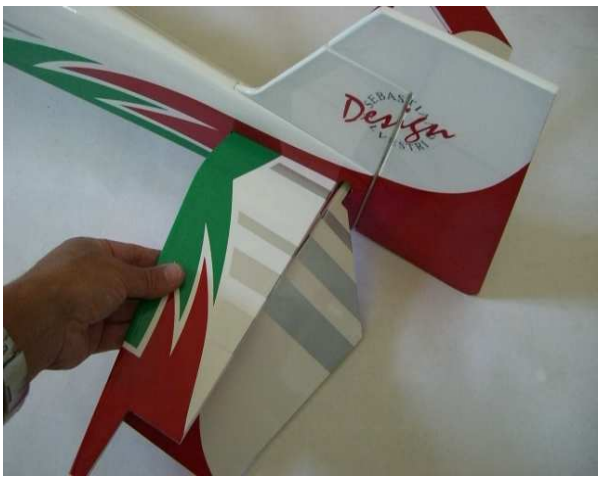
Carefully glue the hinges, with some drops of thin CA.

Section 5 – elevator installation

□ step 1
Insert the four hinges into there appropriate slots in the elevator and verify the correct position and alignment of the elevator with the stabilizer.
Then carefully glue the hinges, with some drops of thin CA, in the elevator only.

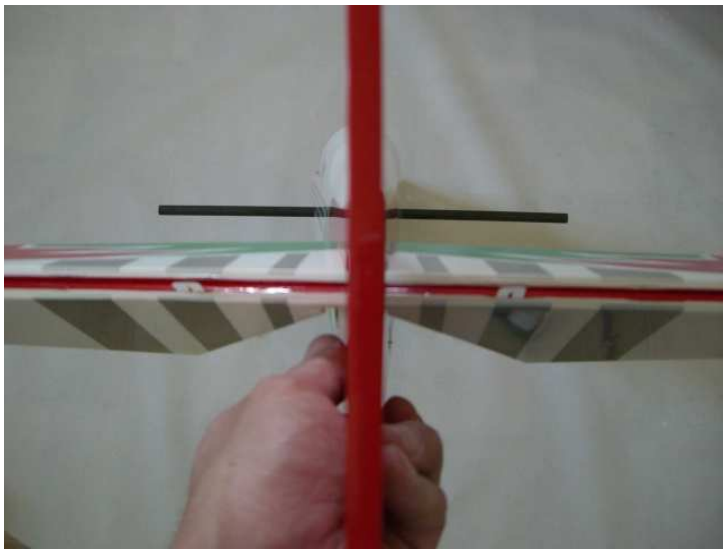



□ step 2
Insert carefully the elevator through the fuselage then insert the stabiliser into fuselage space.

□ step 3
With the hobby knife open the place for the carbon tube, extension and wing pin.

□ step 4
Locate the carbon tube in his position and check the alignment with the stabilizer.

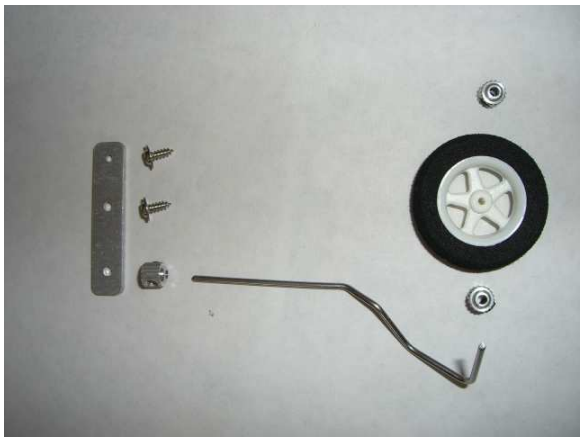


□ step 5
Carefully place the hinges in their place, and glue the hinges with some drops of thin CA.

□ step 6
Once satisfied with the alignment, glue with some drops of thin CA the stabilizer at the fuselage.

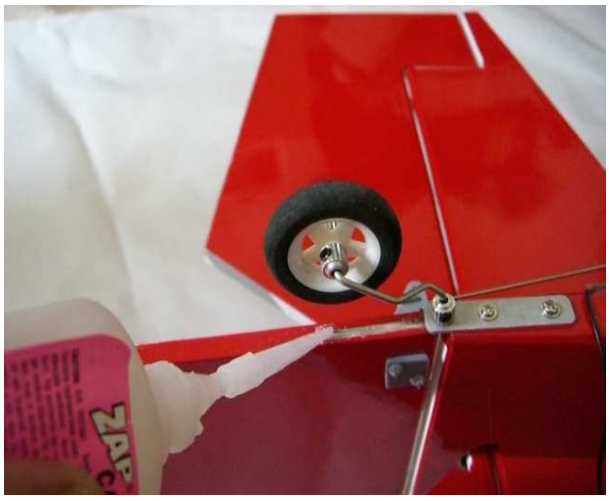
Section 6 – tail wheel installation

□ step 1
Locate the items included in the hardware pack as follow.



□ step 2
With the hobby knife cut a groove of 20mm length into the rudder.

□ step 3
Install the tail wheel and apply some drops of thin CA, as per picture.



Section 7 – elevator / rudder servo & control horn installation

□ step 1
Locate the following , servo extension 300mm long and the servo. Install the servo hardware (gommets and eyelets) included with the servo.

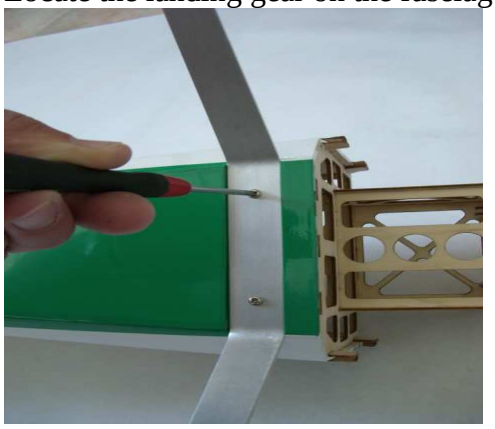
□ step 2

Install the elevator servo and control horn into the fuselage as per picture.

□ step 3
Install the rudder servo and control horn into the fuselage as per picture.

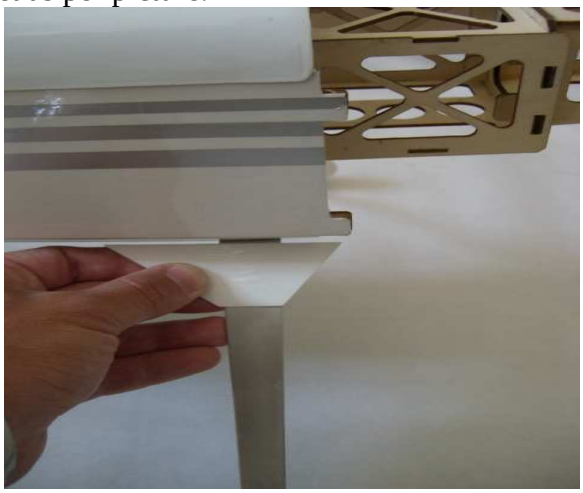
Section 8 – landing gear & wheels installation

□ step 1
Locate the landing gear on the fuselage and fix with the two screws included in the hardware pack.



□□ step 2
Locate all the necessary items for installing wheel and wheel pants. Than install all the items as per pictures and fix the wheel pant with some drops of thin CA at the landing gear.

□□ step 3
Glue with medium CA the landing gear fillet as per picture.



□ step 4
Repeat steps 2 and 3 for the other side of the landing gear.

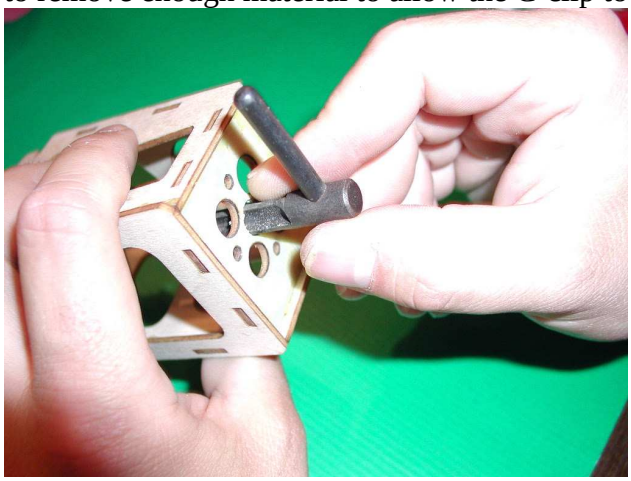
Section 9 – electric motor installation

We recommend to use HACKER motor, and you need one of this two options:

- Hacker A30-12L + X40 controller + APC 13 x 6.5 E
- Hacker A30-14L + X40 controller + APC 14 x 7 E

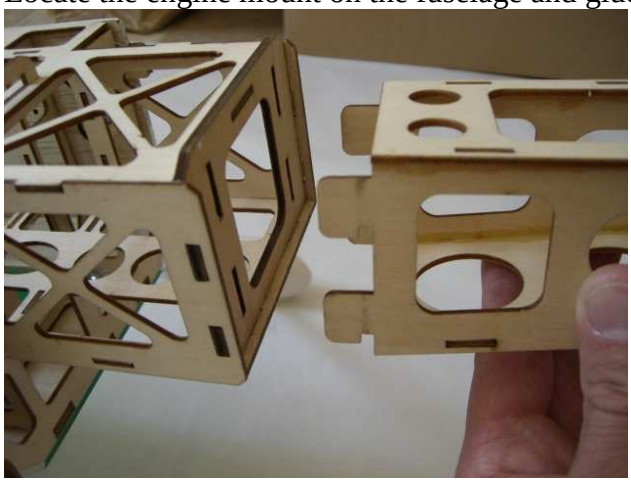
□ step 1

Open the hole in the motor mounting plate to clear the C-clip on the motor, using a tapered reamer to remove enough material to allow the C-clip to clear the surrounding wood and rotate freely.



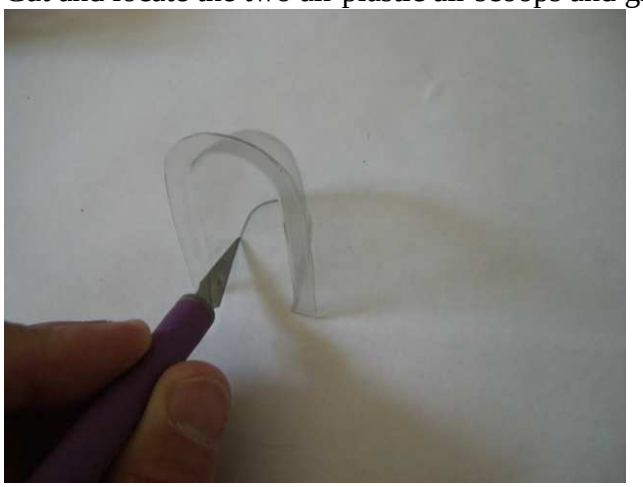
□ step 2

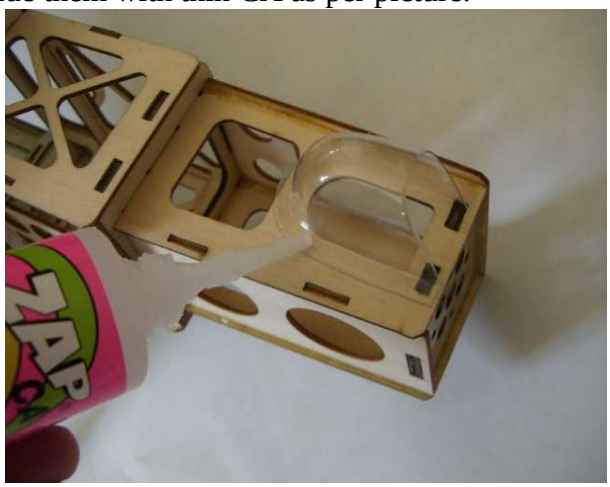
Locate the engine mount on the fuselage and glue it with medium CA.



□ step 3

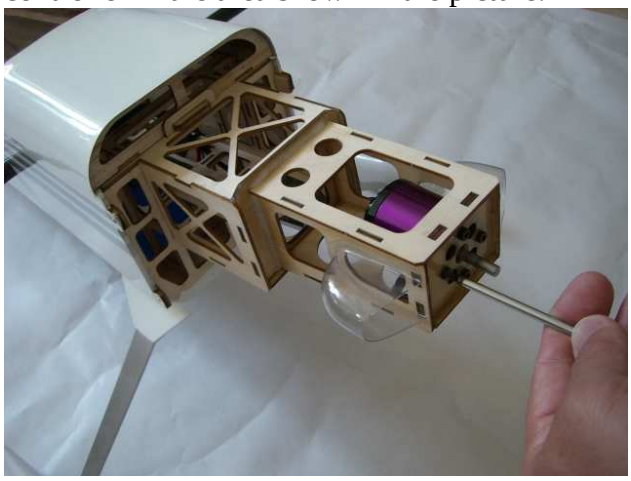
Cut and locate the two air plastic air scoops and glue them with thin CA as per picture.

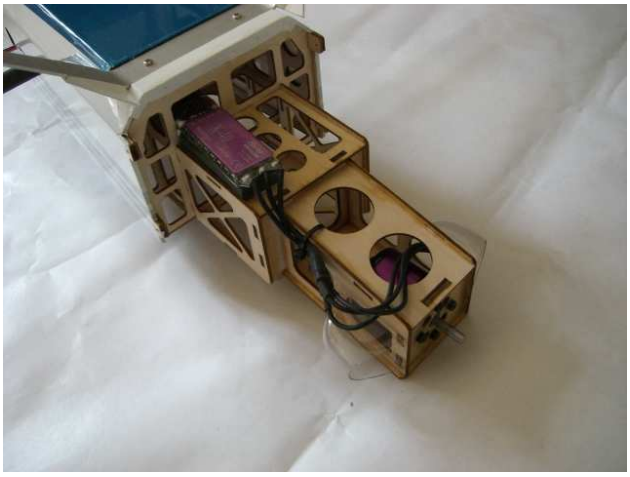




□ step 4

Locate the motor and fix it with the four screws included in the motor hardware pack, then fix the controller in the area shown in the picture.

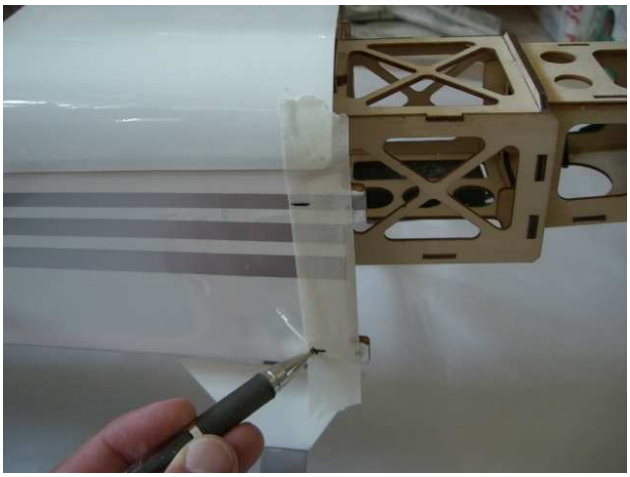




Section 10 – cowl installation

□ step 1

Apply a piece of masking tape on the line were you have to make the holes for the cowl fixing screws, then mark the position as per the picture.



□ step 2

Slide the cowling onto the fuselage and install the spinner back plate. Position and hold the cowl so there is 2mm gap between the back plate and the cowl. Then apply another piece of masking tape on the same line of the one applied before. Drill the location for the four self-tapping screw using a 1.5mm drill bit.

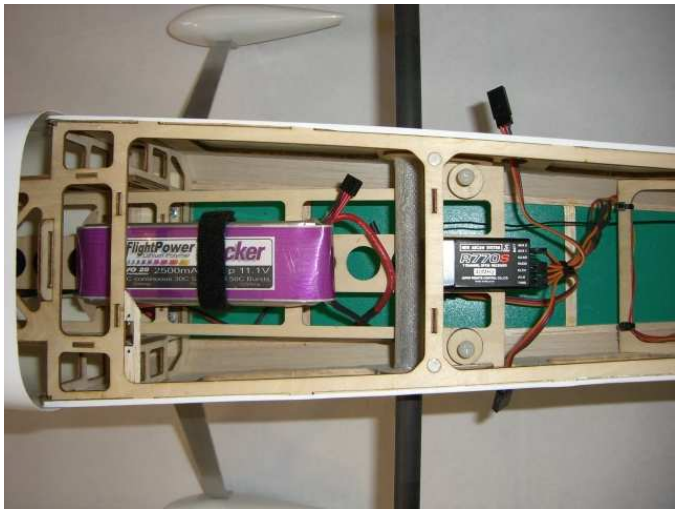

□ step 3

Attach the cowl using the four self-tapping screws, included in hardware pack, and a Phillips screwdriver.

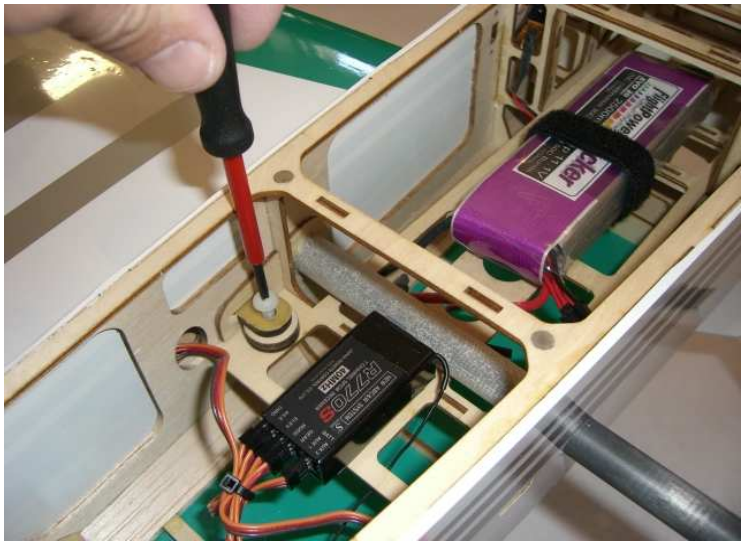
□ step 4

Fix carefully the prop and spinner.


Section 11 – final radio installation



Section 12 – wings installation



Control throws

Please, follow carefully the recommended linkage setups for ailerons and elevators.

For the AILERON we recommand the following throws:
Low rate: 20° up / 20° down **Expo:** 40%
3D rate: 45° up / 45° down **Expo:** 80%

For the ELEVATOR we recommand the following throws:
Low rate: 20° up / 20° down **Expo:** 25%
3D rate: 50° up / 50° down **Expo:** 80%

For the RUDDER we recommand the following throws:
Low rate: 30° left / 30° right **Expo:** 30%
3D rate: 50° left / 50° right **Expo:** 60%

Note: the **Expo** is (+) for JR systems, and (–) for Futaba systems.

Rates and expos

Use the recommanded expos to soften the feel of the model, expecially on high 3D rates. The goal is to get the model to feel the same around neutral as it does on low rates.
Use low rate settings for all flying, included starts and landings, and high rate for 3D aerobatics.
For precision flying or general sport fliers, the low rate throws are perfect, even for snap rolls. When doing 3D aerobatics, flip to 3D rates just before the manouer. As soon as the manouver is done, flip back down to low rate to avoid over-controlling the model.

Recommended CG

The recommended **Center of Gravity** location is **115mm** behind the leading edge of the wing against the fuselage: exactly in center of the wings carbon tube.

- **110mm** is good for pattern flying.
- **120mm** is good for 3D flying.

Use the ***FlightPower*** battery pack, moving it forward or backward, to achieve the correct balance.
A ***FlightPower*** 3s 2170 for more agility and a 3s 2500 for precision and sports flying.

Range test your radio

step 1
Before fly, be sure to range check your radio as manufacturer's instruction manual of you radio-system recommand.

step 2
Double-check all controls (aileron,elevator, rudder and throttle) move in the correct direction.

step 3
Be sure that your ***FlightPower*** batteries are fully charged, as per the instructions included with your batteries and that your radio is fully charged as per its instructions.

Finally...

have a nice flight!

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