

# SebArt *professional line*

## *PittS 12 Python 50E* ARF

### ASSEMBLY MANUAL

The new *PittS 12 Python 50E ARF* was designed by Italy aerobatic pilot, Sebastiano Silvestri.

This professional ARF kit is the result of Sebastiano's long research in 3D performance and precision. This combined with an extremely lightweight structure, the all wood airframe and the big control surfaces give the *PittS 12 Python 50E* an impressive thrust-to-weight ratio and crisp control authority at any airspeed and flight condition.

The *PittS 12 Python 50E* can do it all... precision aerobatics manouvres... easy harriers, torque rolls, blenders, waterfalls and all this for a biplane of this class is unbelievable!

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

#### *Specifications:*

Wing Span:.....135 cm  
Length:..... 145 cm  
Wing Area:..... 61 dm<sup>2</sup>  
Weight:.....2.300 g. RTF less battery  
Radio: 6-Channel with 4 mini + 2 standard servo

#### *Recommended power set up:*

Motor:..... Hacker A50-16S  
ESC:.....Master basic 70 S-BEC  
Battery: .....Flight Power 4270-6S  
Propeller: ..... APC 17x8E

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## **Required radio, motor and battery**

### *Radio equipment:*

- 6-channel radio system
- 4 digital mini servo for ailerons, recommended JR PROPO DS385 or DS381
- 2 digital standard servos, recommended JR PROPO DS 9401
- 2 servo extension 300mm, for rudder and elevator servos
- 4 servo extension 100mm, for aileron servos
- 2 “Y” leads for aileron servos

### *Recommended electric motor for best performance:*

- Hacker A50-16S + Master Basic 70 S-BEC + APC 17x8E

### *Recommended Li-Po battery pack for best performance:*

- FlightPower 3700mAh 6S.....for unlimited 3D
- FlightPower 4250mAh 6S.....for 3D, duration and precision

## **Additional required item, tools and adhesives**

### *Tools:*

- Drill
- Drill bits: 1,5mm; 2mm; 2,5mm; 3mm
- Phillips screwdriver large and small
- Hobby knife
- Sand paper
- Soldering iron

### *Adhesives:*

- 5-minute epoxy
- thin CA
- medium CA

## **Warning**

This RC aircraft is not a toy!

If misused, it can cause serious 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.

This plane is a compromise between Aerobatics and 3D flying, and not a pylon racer.

It is built with a very light structure and for this reason we hardly recommend:

→ **Do NOT fly your airplane at high speeds, because this may cause structural failures or flutter due to the extremely large control surfaces.**

## **Before starting assembly**

Before starting the assembly of your *PittS 12 Python 50E*, 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.

Remember to take your time and follow the directions.

## **Warranty information**

SebArt guarantees 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.

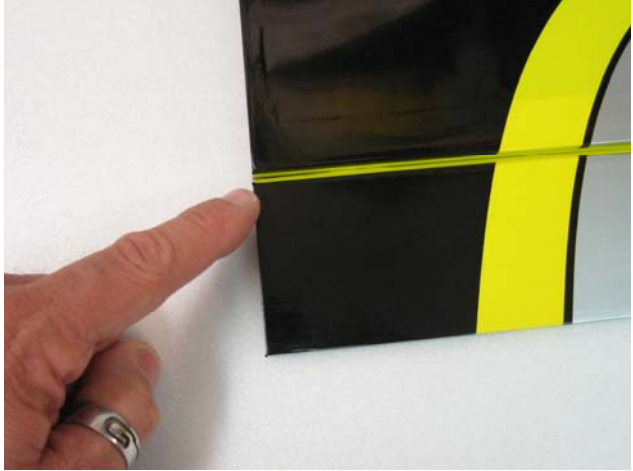
If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

***SebArt di Sebastiano Silvestri***  
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*38017 Mezzolombardo (TN) – Italy*  
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## Section1 – top & bottom wing’s 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

Locate the aileron and carefully glue, with some drops of thin CA, the hinges into the wing panel.



□□□□ **step 4**

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

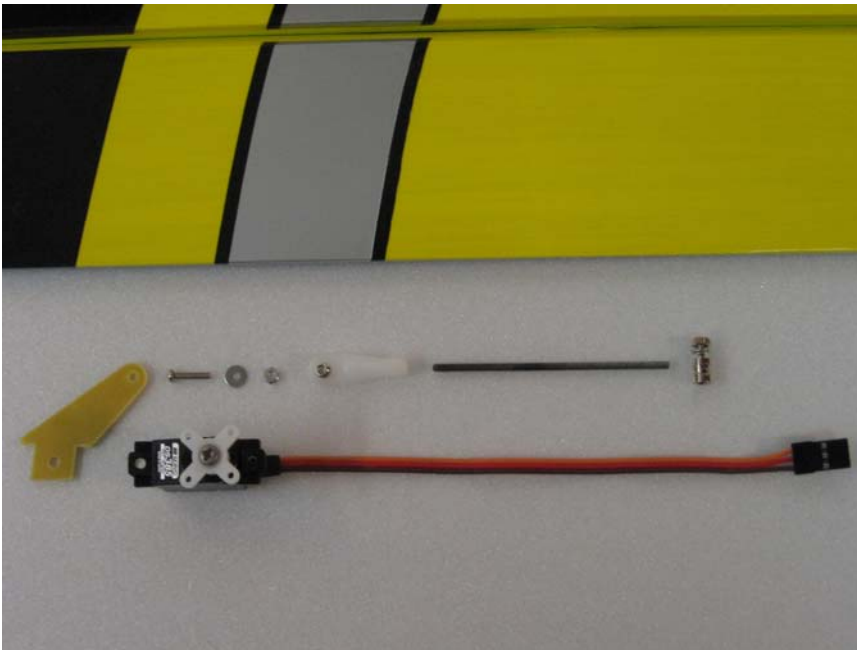
□□□ **step 5**

Repeat steps 1 through 4 for the remaining ailerons.

**Section 2 – aileron servo & control horn installation**

□□□□ **step 1**

Locate the following items included in the hardware pack and the servo.



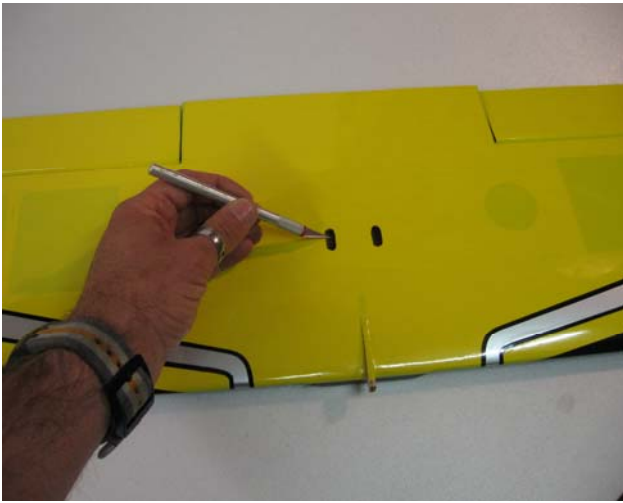
□□□□ **step 2**

With the hobby knife open the servo bay and the control horn location.



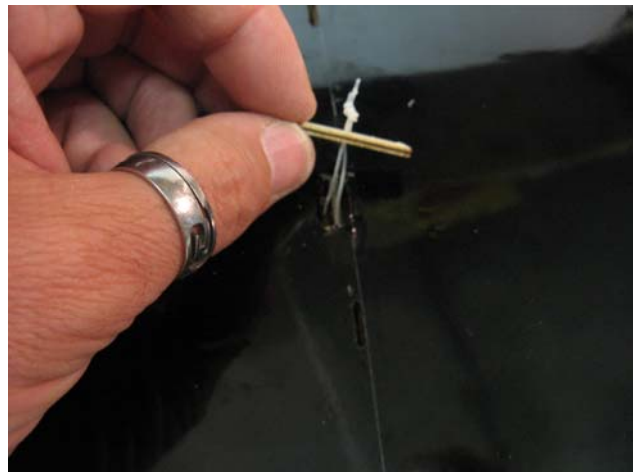
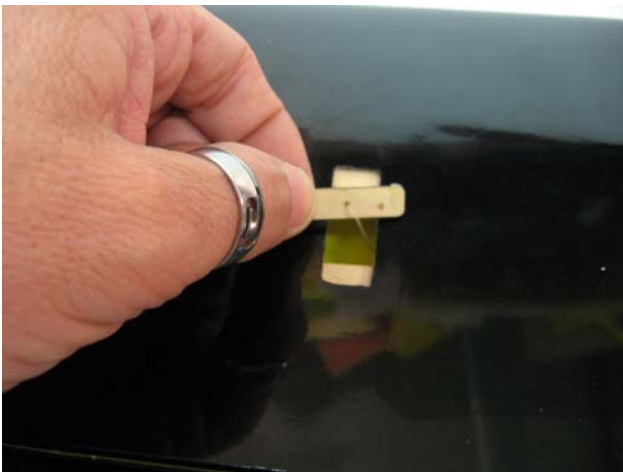
□ **step 3**

With the hobby knife open the servo lead exits in the bottom & top wing.



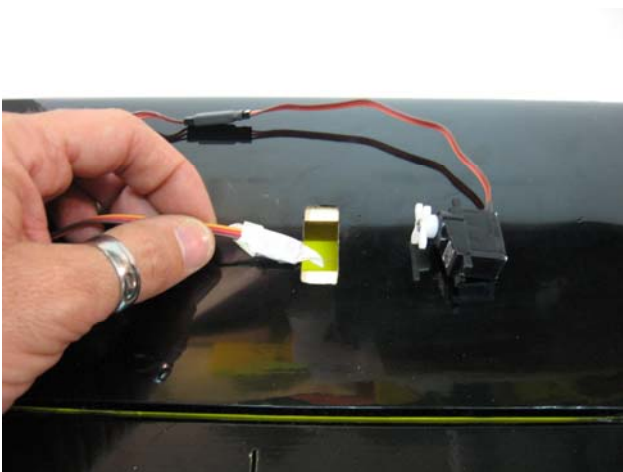
□□□□ **step 4**

Carefully take out from the wing panels the nylon cable, factory located.



□□□□ **step 5**

Install the servo hardware (gommets and eyelets), put the servo into the wing panel and bring out the servo lead, as per pictures.





□□□□ **step 6**

Drill the location for the self-tapping screw using a 1.5mm drill bit and install the servo into the wing panel as per the picture.



□□□□ **step 7**

Glue the fibreglass horn with medium CA into the aileron.



□□□□ **step 8**

Install the control horn as per picture.





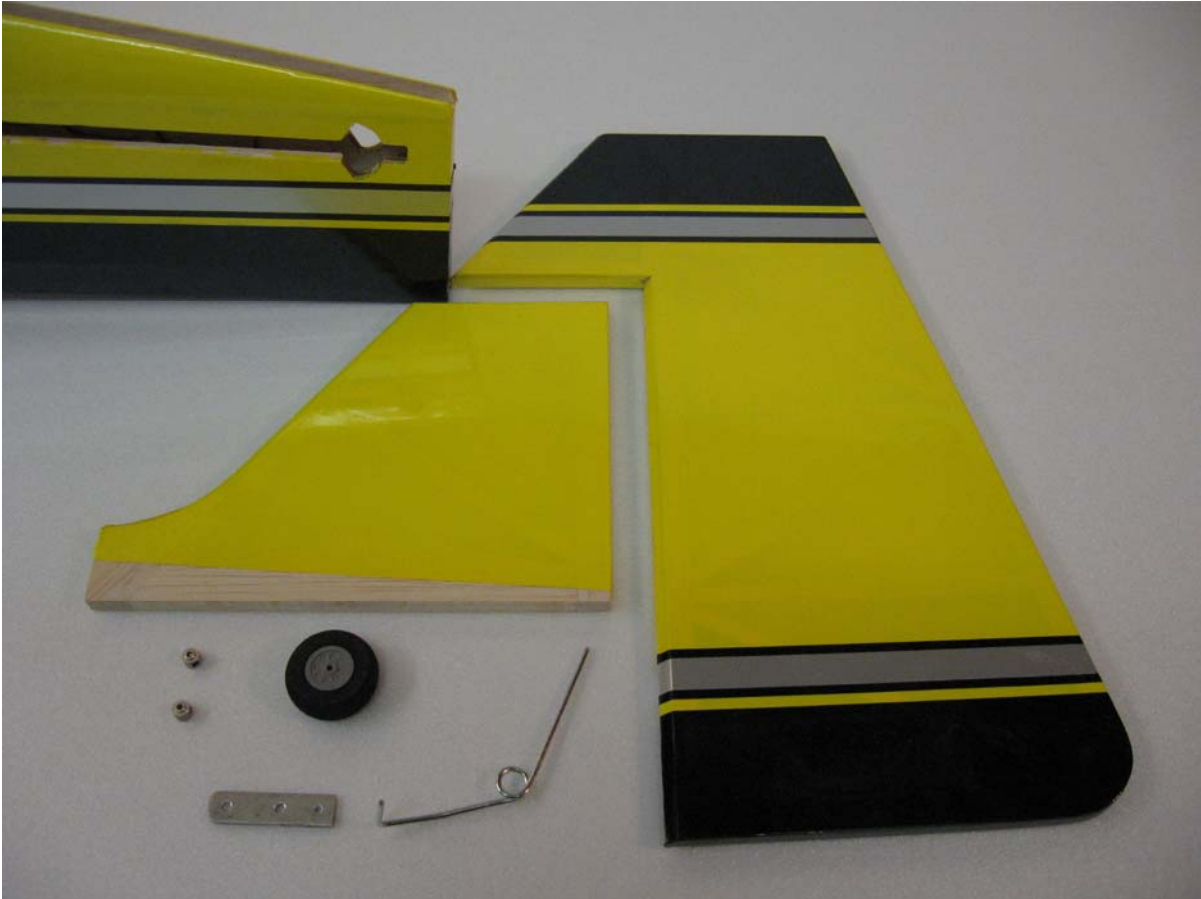
□□□ **step 9**

Repeat steps 1 through 2 and 4 through 8 for the remaining ailerons.

**Section 3 – rudder installation & tail wheel installation**

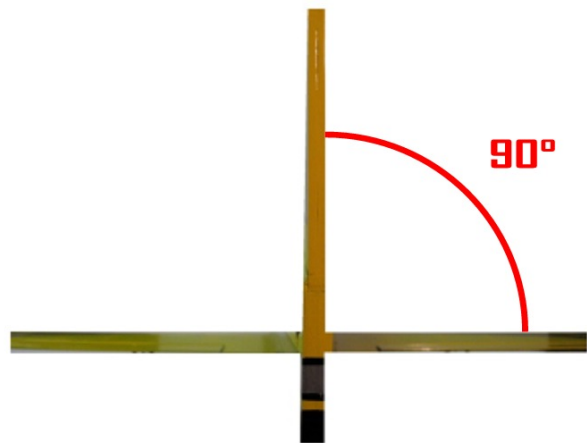
□ **step 1**

Locate the following items.



□ **step 2**

Locate the rudder in his place and check the alignment with the fuselage.



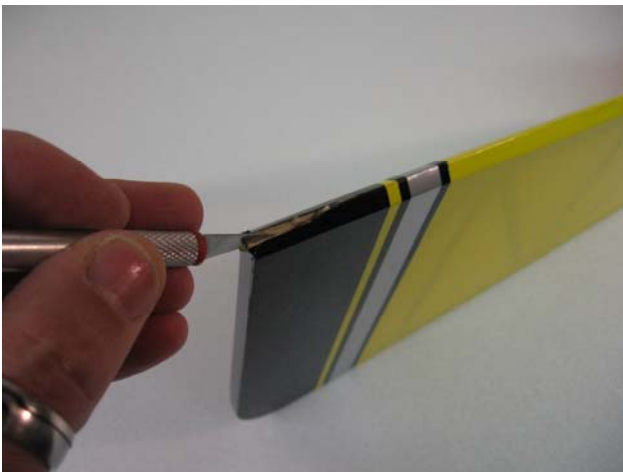
□ **step 3**

Glue the rudder with some drops of medium CA, as per pictures.



□ **step 4**

With the hobby knife cut a groove of 20mm length into the rudder. Drill in the rudder, 20mm from the bottom, the location for the tail wheel using a 2mm drill bit.



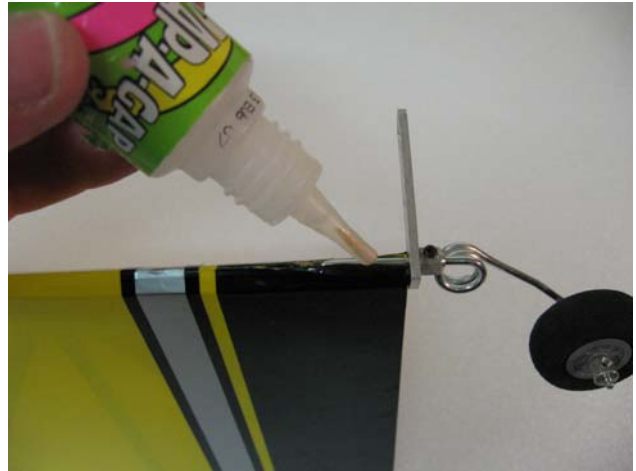
□ **step 5**

Assemble the tail wheel, as per follow.



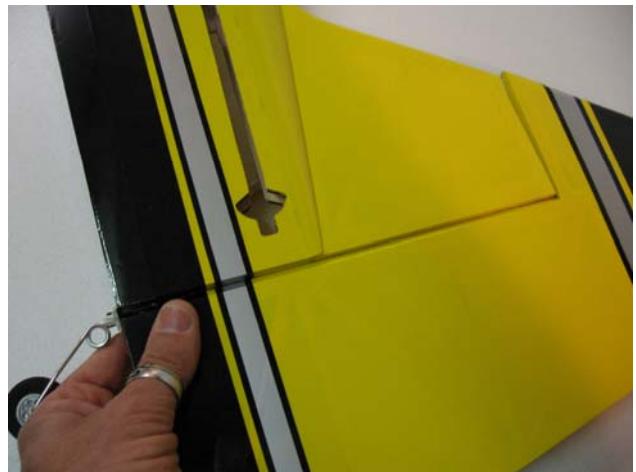
□ **step 6**

Insert the three hinges in their appropriate slots of the rudder, and glue them with some drops of thin CA.



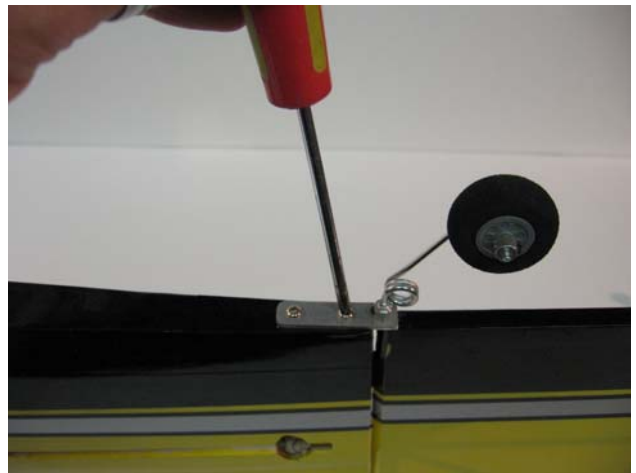
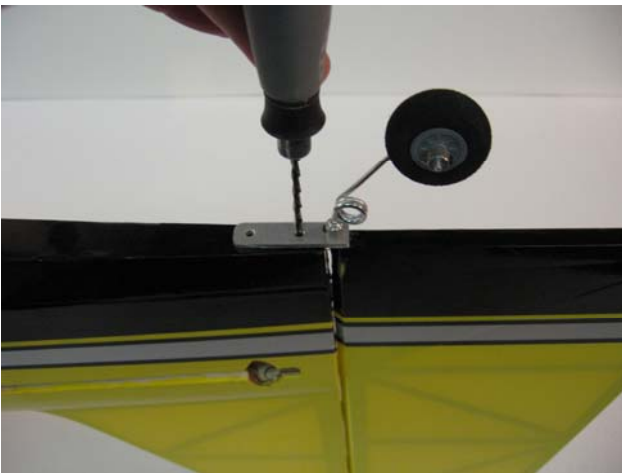
□ **step 7**

Carefully locate the rudder and glue the hinges with some drops of thin CA.



□ **step 8**

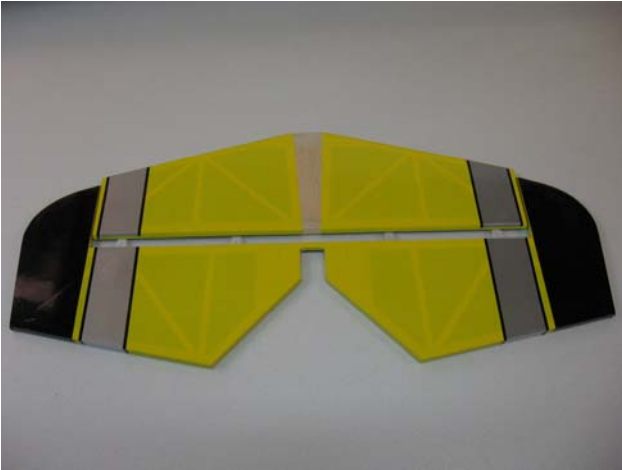
Drill the screw locations for the tail wheel using a 1,5mm drill bit, and install it as per picture.



## Section 4 – elevator installation

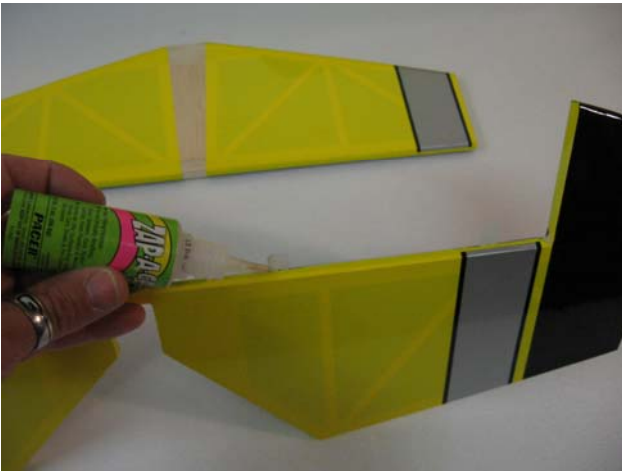
### □ step 1

Insert in the elevator the four hinges into their appropriate slots and verify the correct position and alignment of the elevator with the stabilizer.



### □ step 2

Carefully glue the hinges, with some drops of thin CA, in the elevator only. Then insert carefully the elevator through the fuselage.



### □ step 3

Insert the stabiliser into fuselage space.





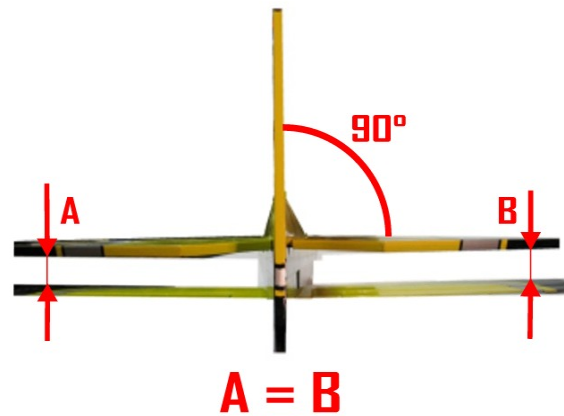
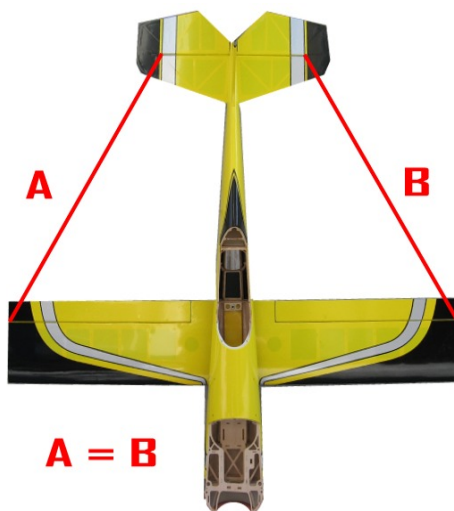
□ **step 4**

Glue carefully the hinges in the stabiliser with some drops of thin CA.



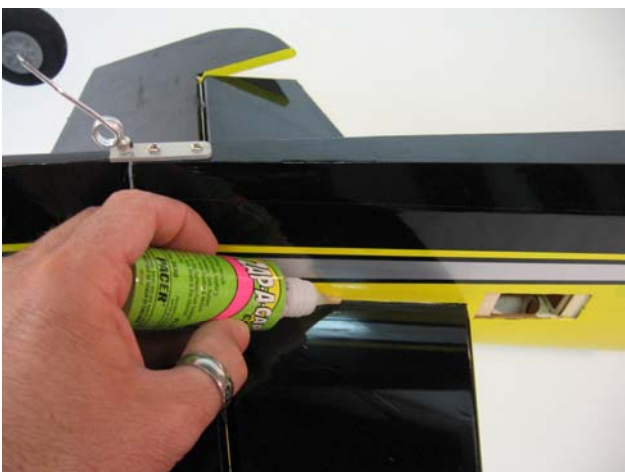
□ **step 5**

Check carefully the alignment of stabilizer with the bottom wing.



□ **step 6**

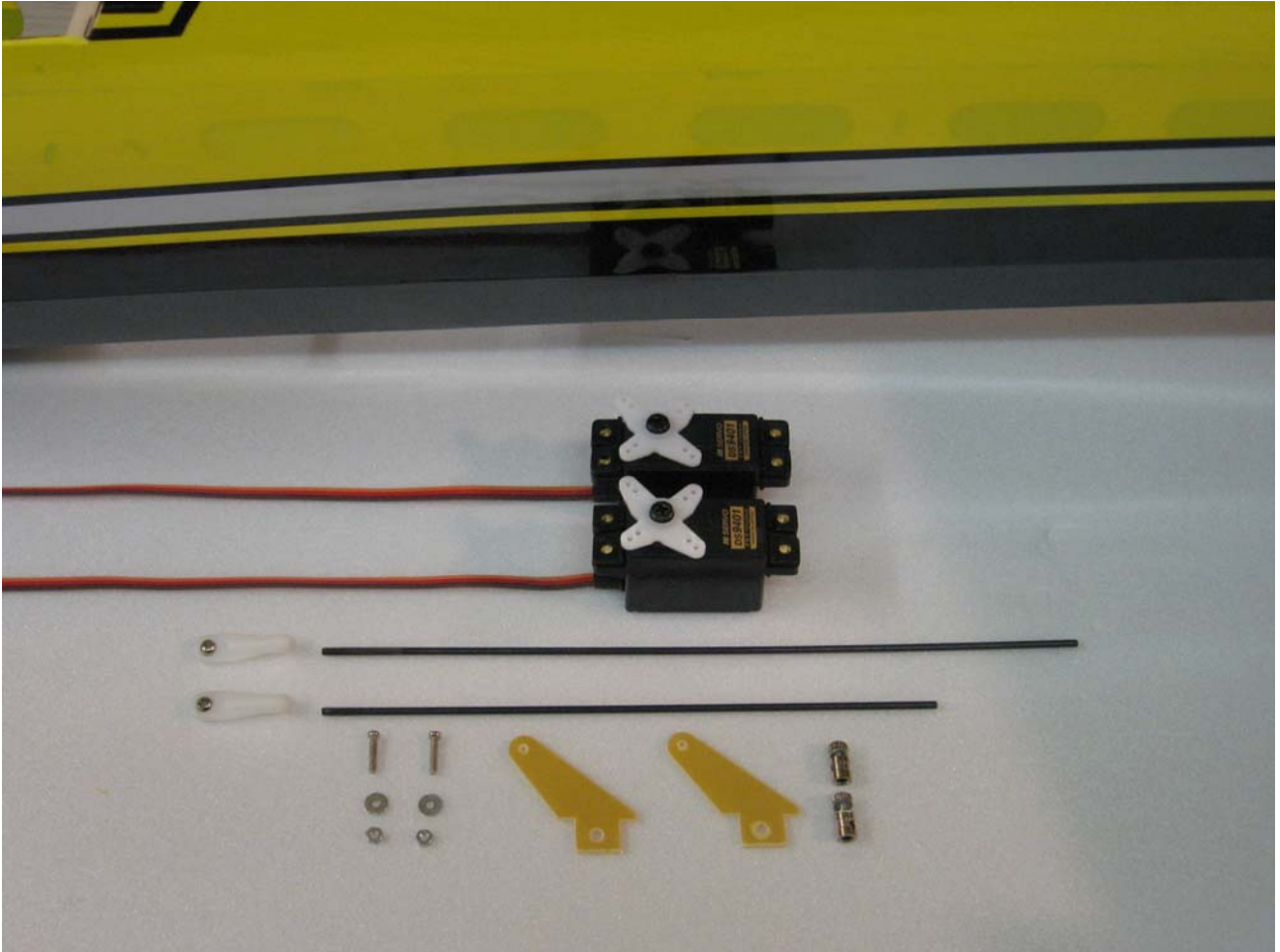
Once satisfied with the alignment, glue carefully with thin CA the stabilizer at the fuselage.



## Section 5 – elevator servo & control horn installation

### □ step 1

Locate the following items included in the hardware pack, the servo extension 400mm long and the servo for elevator and rudder.



### □ step 2

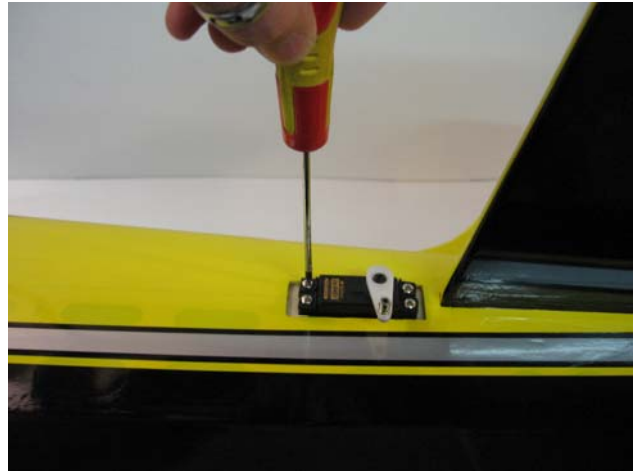
Install the servo hardware (gommets and eyelets) and locate the elevator servo into the fuselage.





□ **step 3**

Drill the location for the four self-tapping screw using a 1.5mm drill bit and install the servo into the wing panel as per the picture.



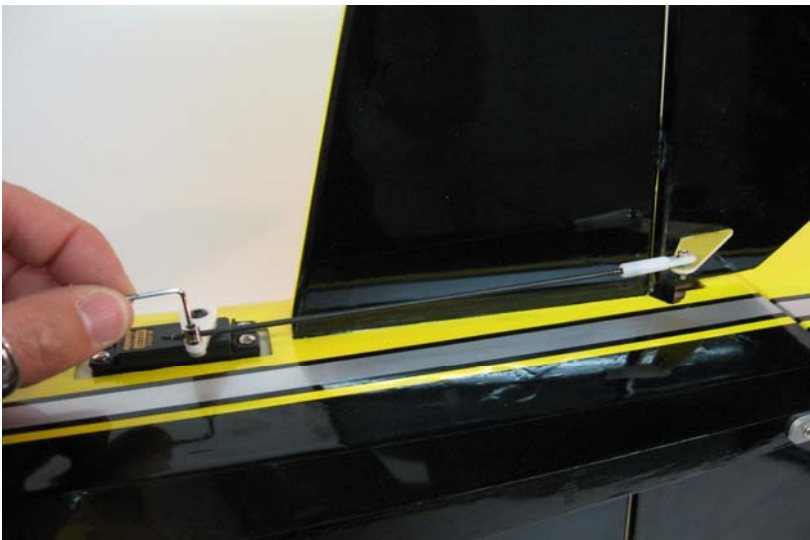
□ **step 4**

Glue the fibreglass horn with medium CA into the elevator.



□ **step 5**

Install the hardware and make the final adjustment as per picture



## Section 6 – rudder servo & control horn installation

### □ step 1

Install the servo hardware (gommets and eyelets) and locate the rudder servo into the fuselage.



### □ step 2

Drill the location for the four self-tapping screw using a 1.5mm drill bit and install the servo into the wing panel as per the picture.



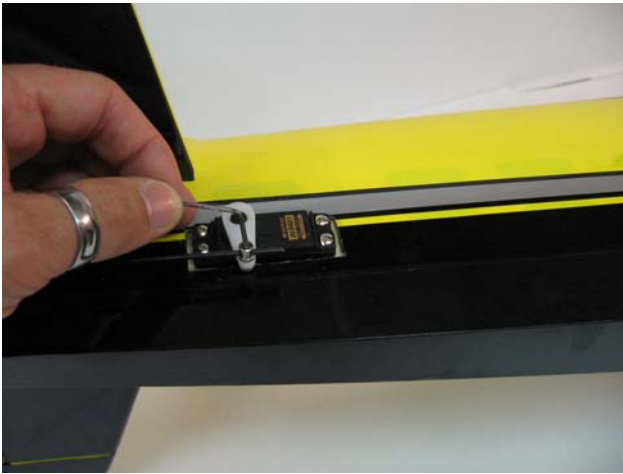
### □ step 3

Glue the fibreglass horn with medium CA into the elevator.



**□ step 4**

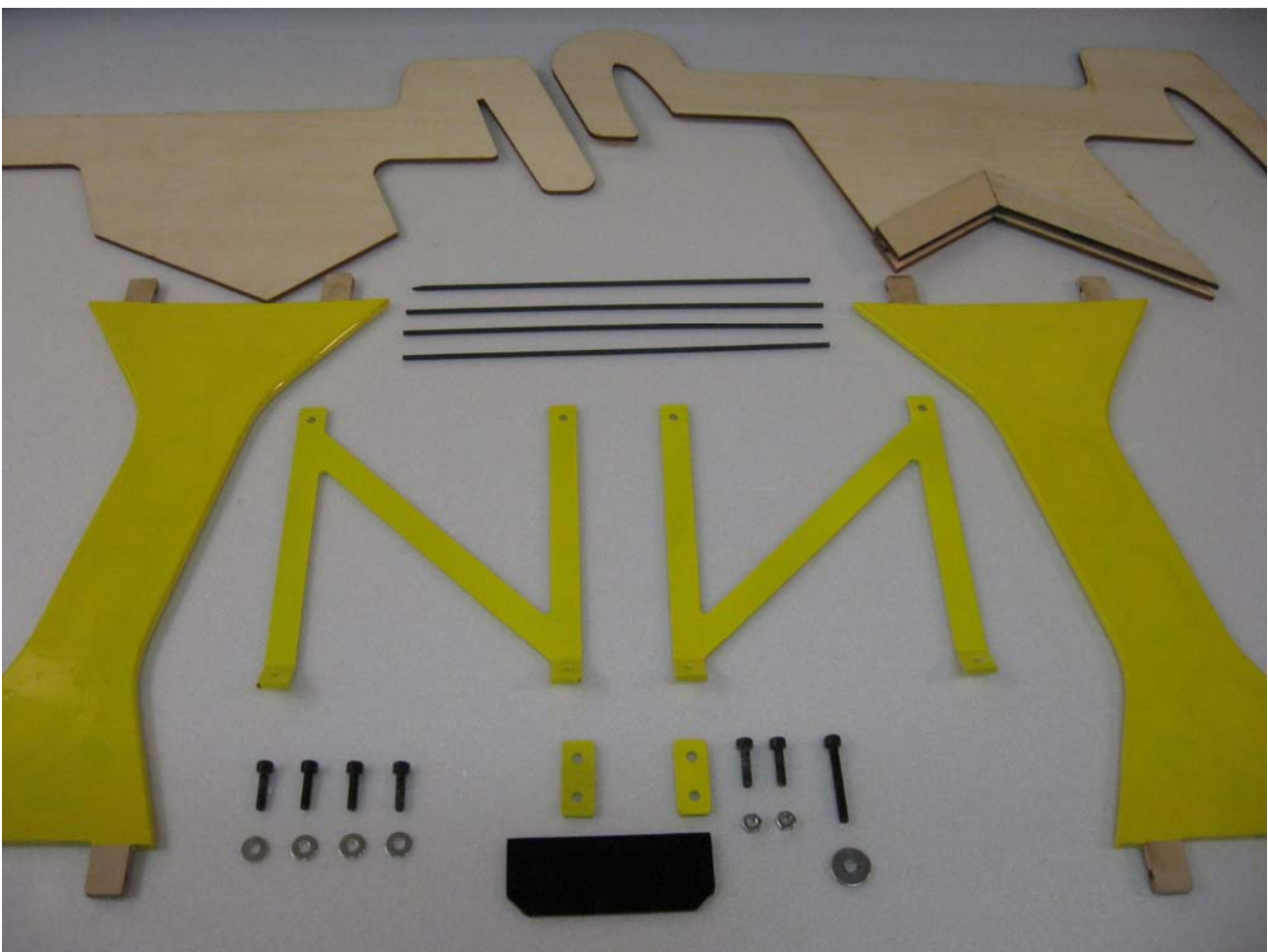
Install the hardware and make the final adjustment as per picture



**Section 7 – wing's pylons & top wing installation**

**□ step 1**

Locate all the necessary items.



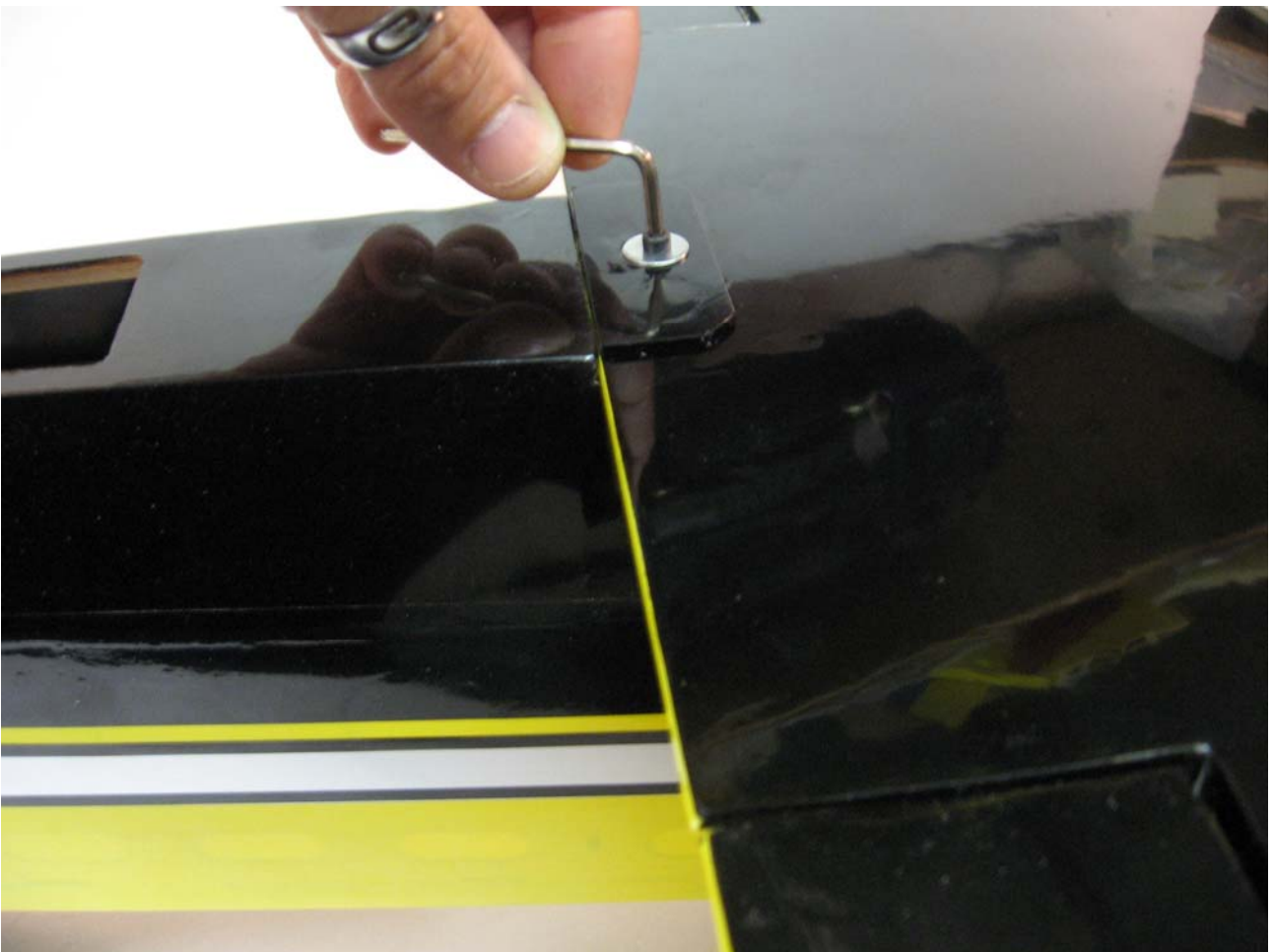
□ **step 2**

Locate and glue the plywood reinforcement on bottom wing as per picture.



□ **step 3**

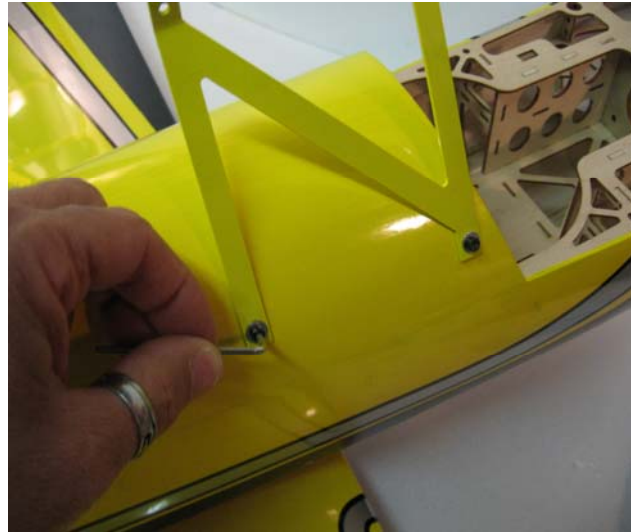
Locate and fix the bottom wing, with the washer and 3mm screw, as per picture.





□ **step 4**

Locate and fix the aluminium top wing holder, with the washers and 3mm screws, as per picture.  
Note: use loctite to secure the screws on fuselage.



□ **step 5**

Locate and fix the two aluminium pieces (that after need to be glued into top wing), with 3mm screws, as per picture.



□ **step 6**

Sand the two aluminium pieces, in order to be ready to glued into top wing.



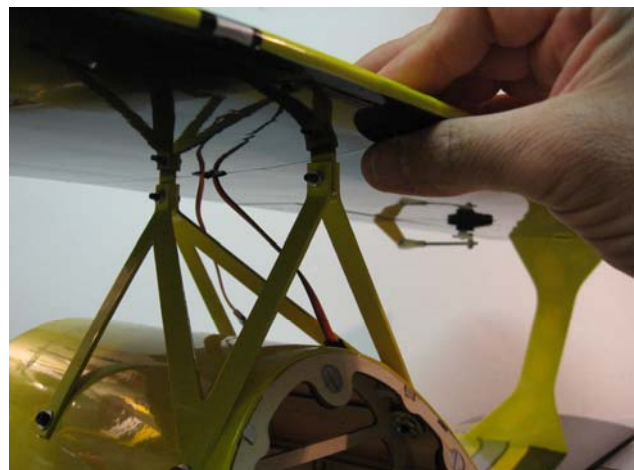
□ **step 7**

With the hobby knife cut holes the pylons location into top and bottom wing, and install the pylons in the bottom wing with the pins, as per picture.



□ **step 8**

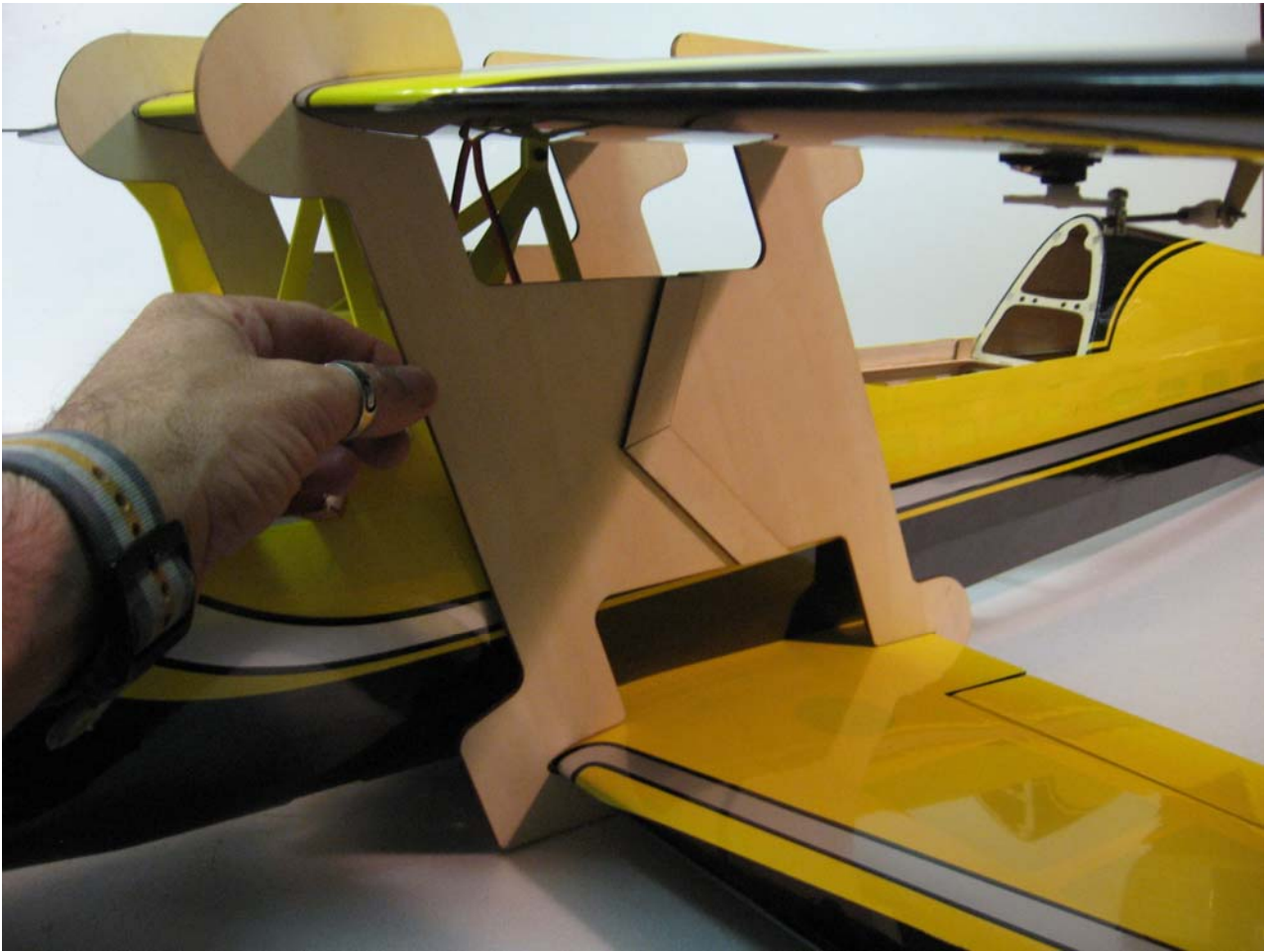
Install the top wing and test assembling and alignment.





□ **step 9**

Check incidence of wings with the provided plywood support, included in the hardware.



□ **step 10**

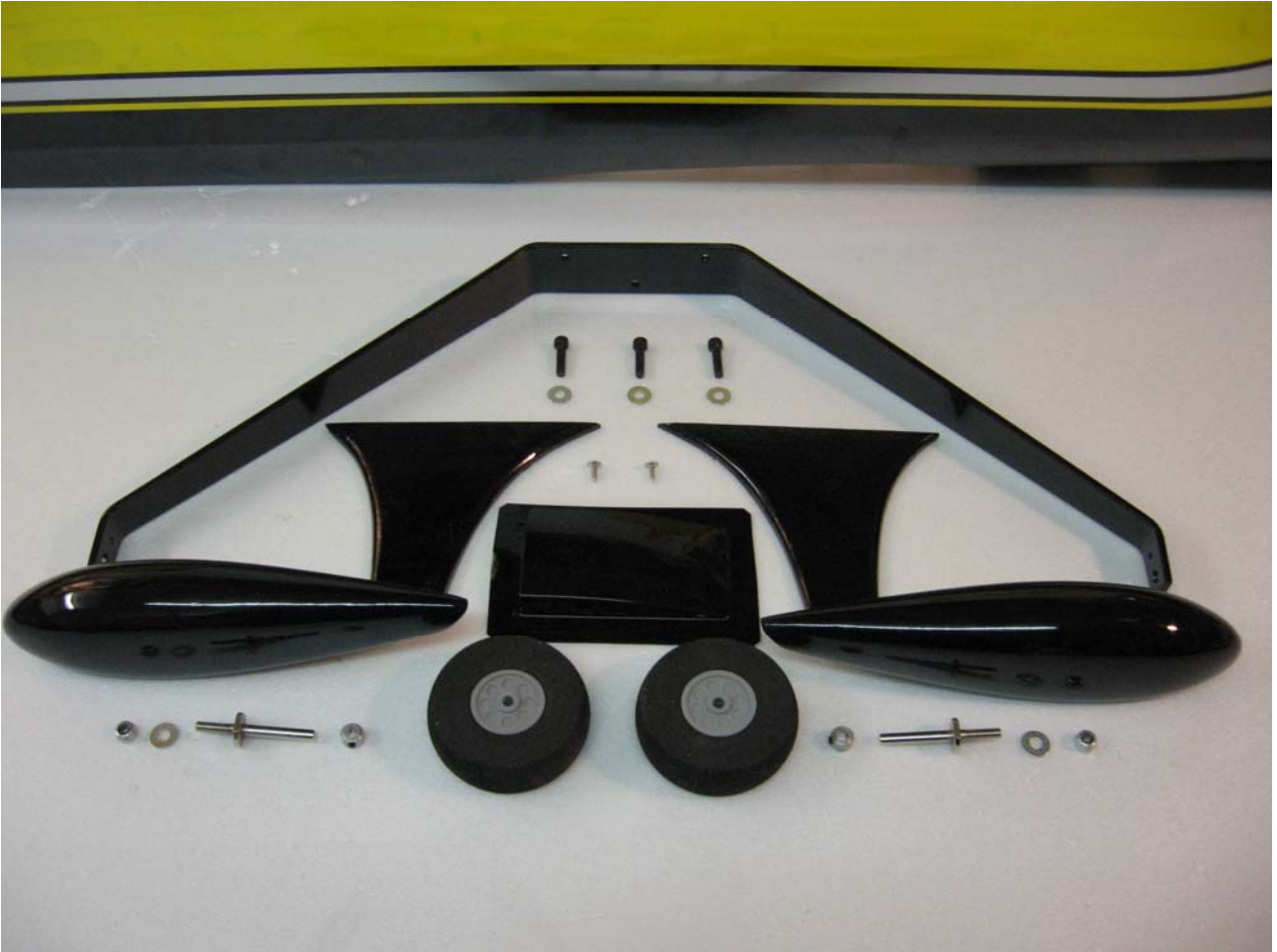
Once satisfied with the alignment and incidences, disassemble the top wing and put the 5 minutes epoxy glue in the two aluminium locations and reassemble it rapidly, repeating step 8 and step 9.



## Section 8 – landing gear & wheels installation

### □ step 1

Locate all the necessary items.



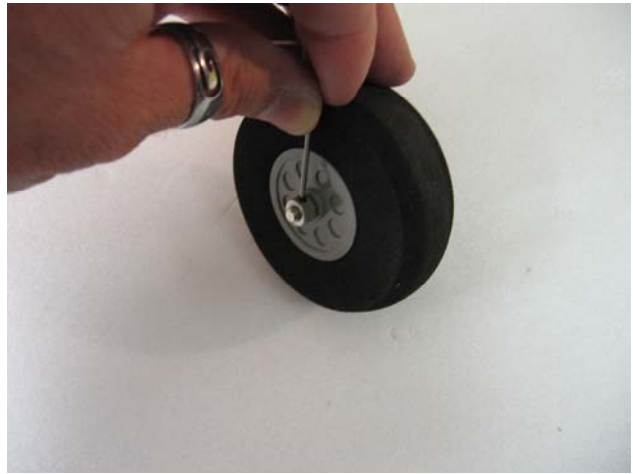
### □ step 2

Install the landing gear as follow.



□□ **step 3**

Install the axle, wheel as follow.



□□ **step 4**

Install wheel and wheel pant as follow.



□□ **step 5**

Hold the wheel pant parallel to the fuselage and drill the location for the wheel pant screw using a 1,5mm drill bit. Attach the wheel pant to the landing gear using a 2mm short self-tapping screw.





□□ **step 6**

Test fit the landing gear fillet and his alignment. Once satisfied with the fit, glue the fillet on the landing gear using medium CA. Use the glue carefully avoid over runs on other areas.

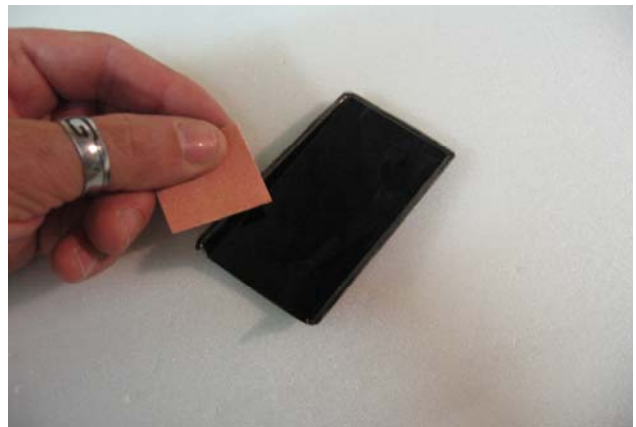


□ **step 7**

Repeat steps 3 through 7 for the opposite landing gear side.

□ **step 8**

Cut and send the plastic cover as follow.



□ **step 9**

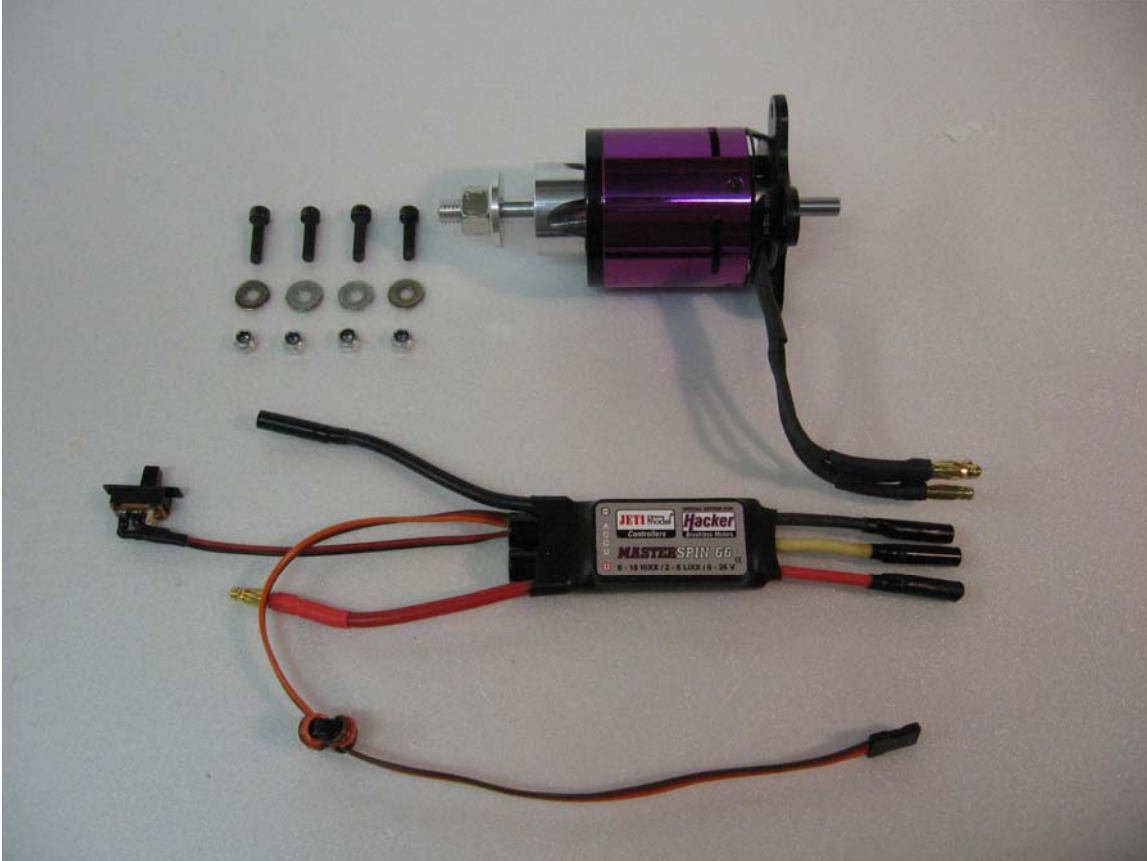
Glue it with medium CA. Use the glue carefully avoid over runs on other areas.



## Section 9 – electric motor installation

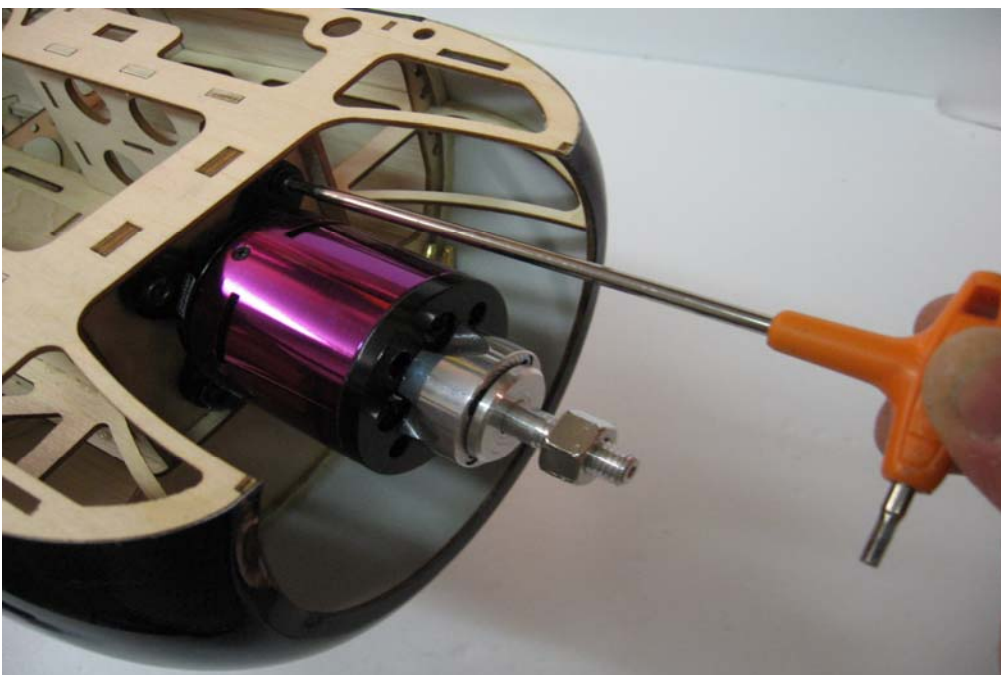
We recommend to fly HACKER motor, you need the following item (not included):

- Hacker A50-16S + MasterBasic70 SBEC + APC 17x8E + 4270-6S Flight Power pack



### □ step 1

Locate the motor and fix it with the four screws included in the motor hardware pack.



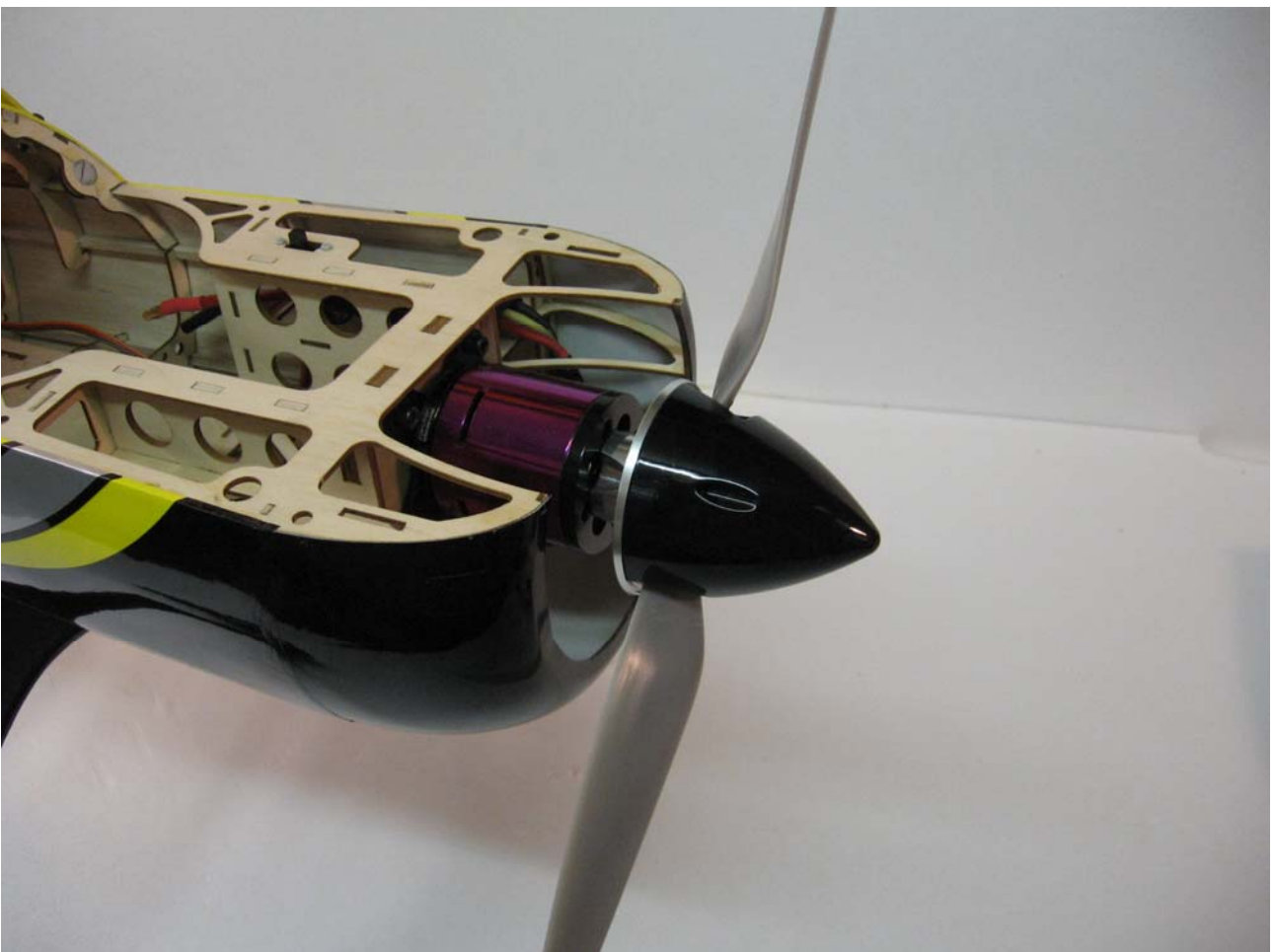
□ **step 2**

Locate and fix the ESC and his switch as per picture.



□ **step 3**

Fix carefully the prop and spinner.

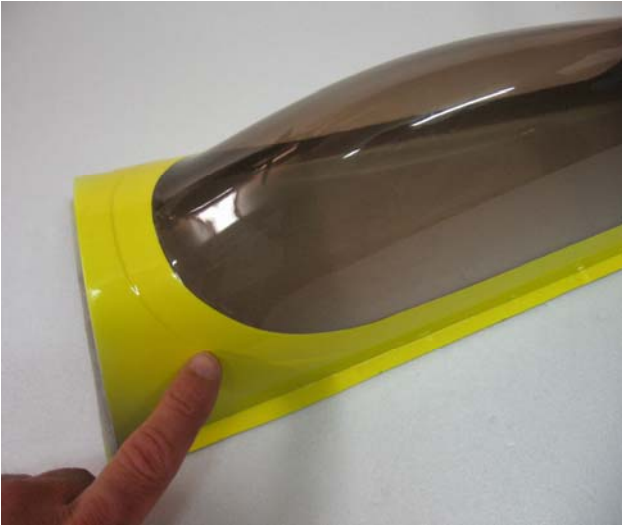




## Section 10 – transparent canopy installation

### □ step 1

Cut very carefully the canopy following the border.



### □ step 2

Locate the canopy on the fuselage and sign the border, as follow.



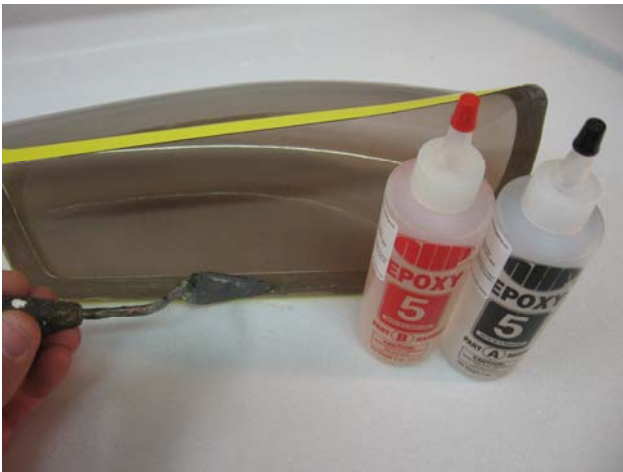
□ **step 3**

Send the canopy on the inside and the oracover surface on fuselage.



□ **step 4**

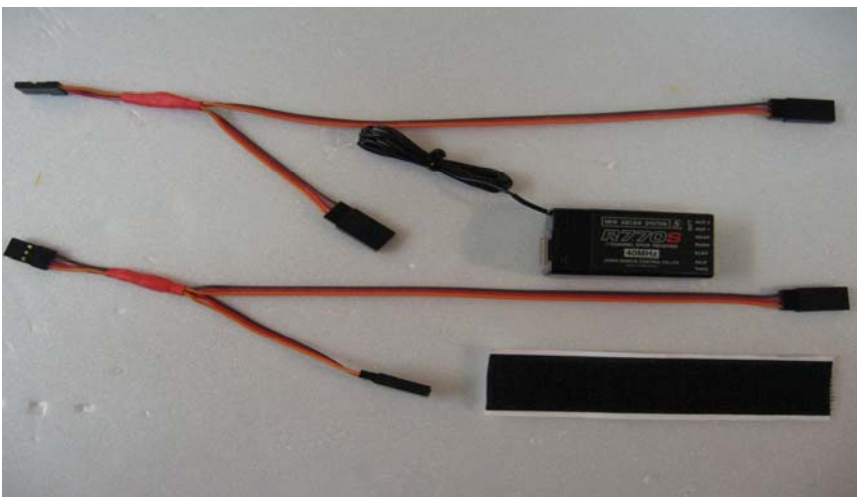
Using 5 minutes epoxy glue carefully the canopy on the fuselage.



**Section 11 – final radio installation**

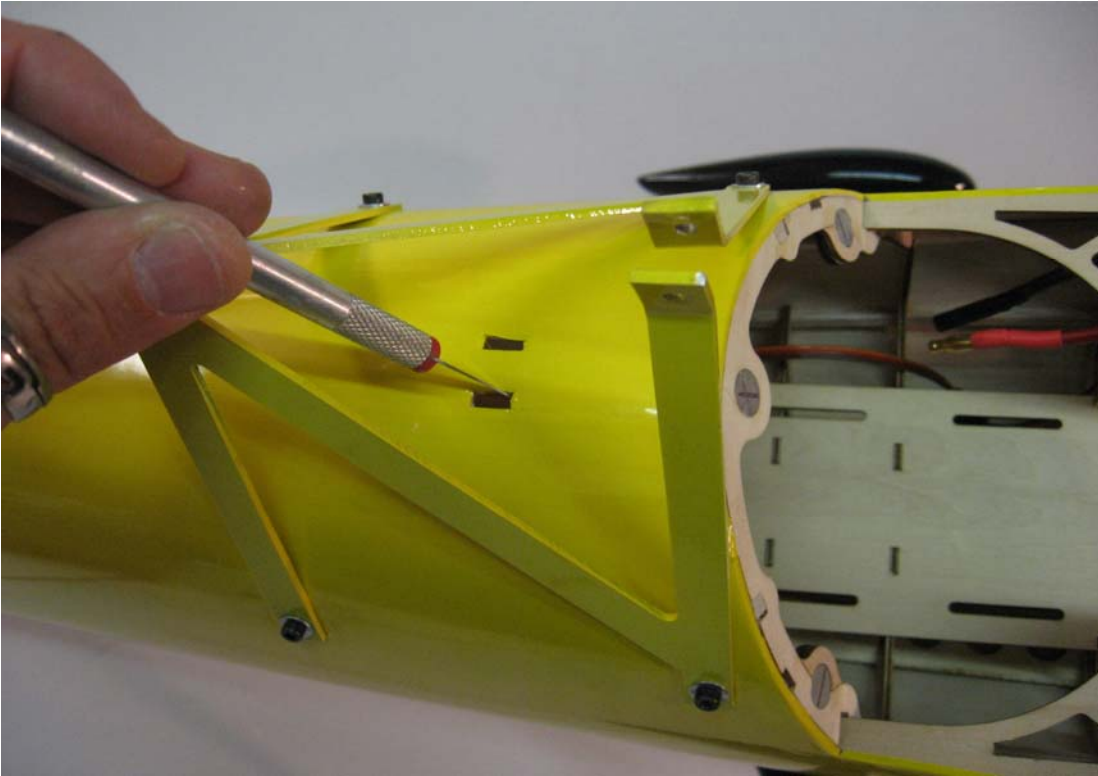
□ **step 1**

Locate two “Y” hardness, the receiver and the velcro to fix the battery in the fuselage.



□ **step 2**

With the hobby knife, open the locations were to glue the servo extensions for top wing's servos.

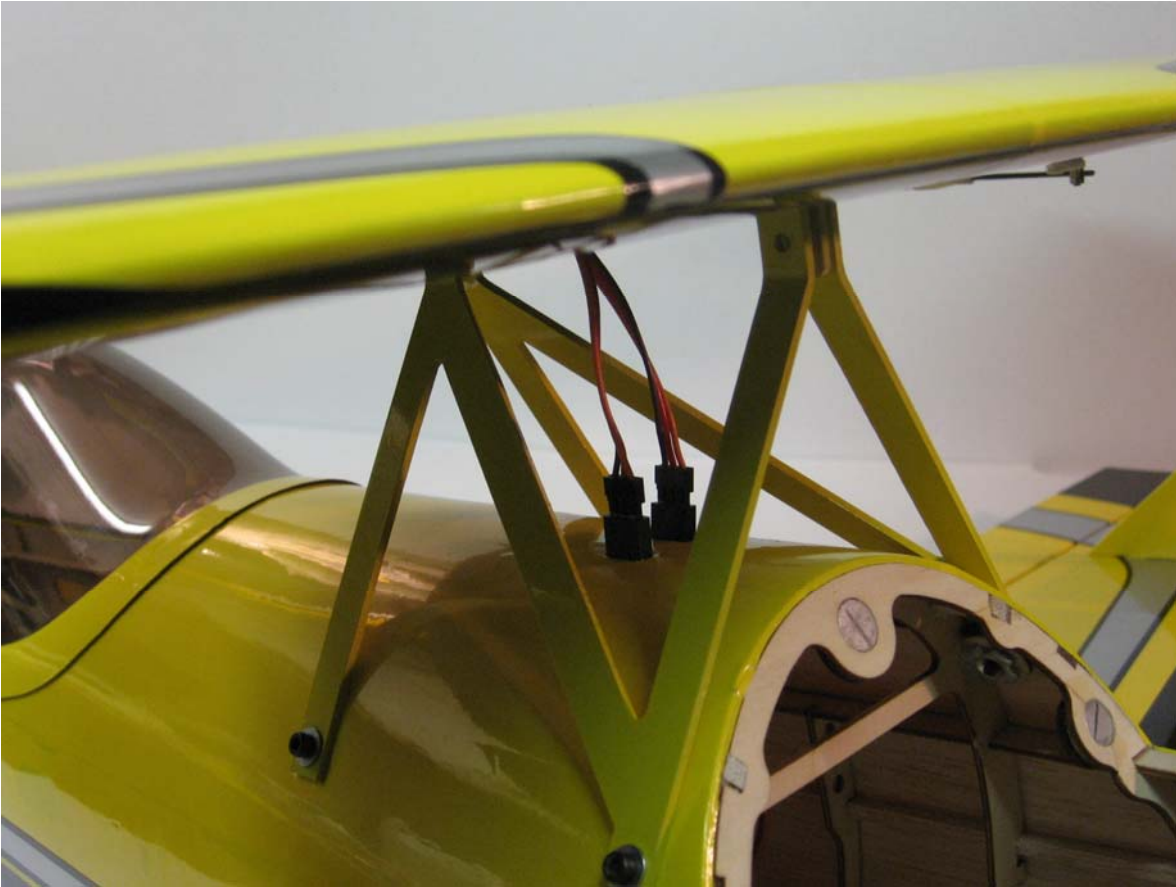


□ **step 3**

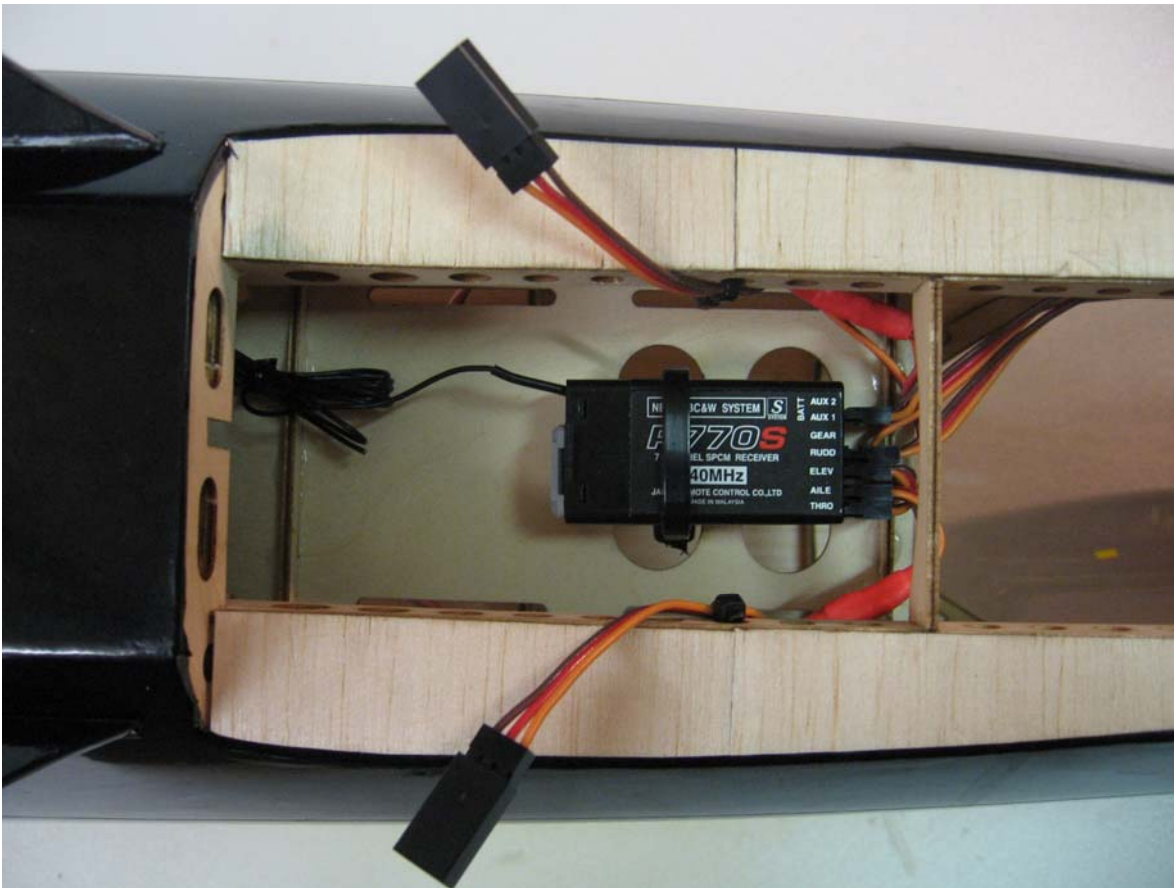
Secure on top of the fuselage the servo leads with medium CA.





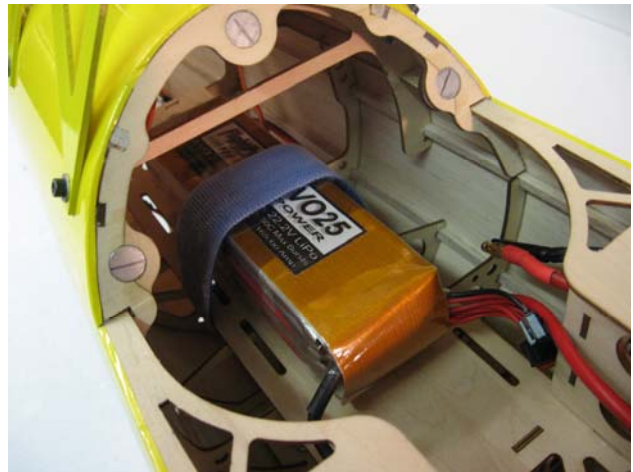
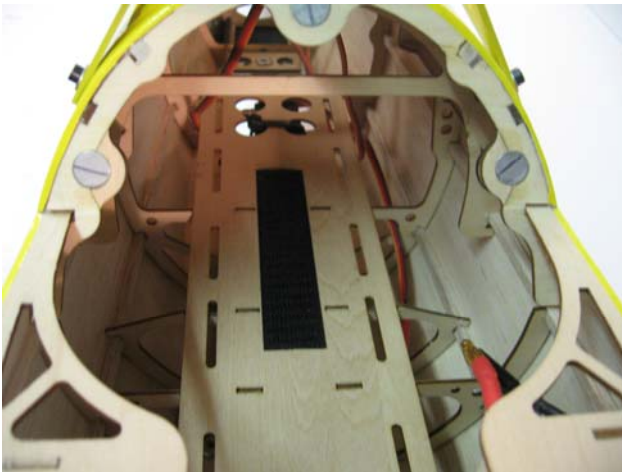


□ **step 4**  
Install receiver as per picture.



□ **step 5**

Install the battery pack as follow.



**Section 12 – decal set application**



### Control throws

We recommend the use of a computer radio, that will allow you to do quite a bit of fine-tuning of the feel of the plane, which will make aerobatics even easier.

Please, follow carefully the recommended linkage setups:

For the AILERON we recommend the following throws:

**Low rate:** 20° up / 20° down      **Expo:** 40%

**3D rate:** 45° up / 45° down      **Expo:** 80%

For the ELEVATOR we recommend the following throws:

**Low rate:** 20° up / 20° down      **Expo:** 25%

**3D rate:** 60° up / 60° down      **Expo:** 80%

For the RUDDER we recommend 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.



## Mixing

For best performance, we recommend a linear-mix\*:

### **Rudder → Elevator UP**

When you give full rudder to the right or left side, the elevator have to go up (positive) approx. 8%

### **Rudder → Ailerons**

When you give full rudder to the right, all four ailerons need to go left, approx. 2%

when you give full rudder to the left, all four ailerons need to go right, approx. 2%

\* if you have a programmable computer radio.

## Rates & expos

Use the recommended expos to soften the feel of the model, especially 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 manover. As soon as the manover is done, flip back down to low rate to avoid over-controlling the model.

## Recommended CG

The recommended **Center of Gravity** location is **110mm** behind the TOP WING leading edge.

- **100mm** is good for pattern flying.
- **120mm** is good for 3D flying.

If you fly with electric motor, you can use the Flight Power battery pack, moving it forward or backward, to achieve the correct balance.

## Pre-flight

### ***Never attempt to make full throttle dives!***

This model have to be flown like a full-scale airplane. If the airframe goes too fast, such as in a high throttle dive, it may fail.

**Throttle management is absolutely necessary.**

## Range test your radio

- ✓ Before fly, be sure to range check your radio as manufacturer's instruction manual of you radio-system recommend.
- ✓ Double-check all controls (aileron, elevator, rudder and throttle) move in the correct direction.
- ✓ Be sure that your Flight Power 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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