

Radio control model

**45 Class (2T engine)**

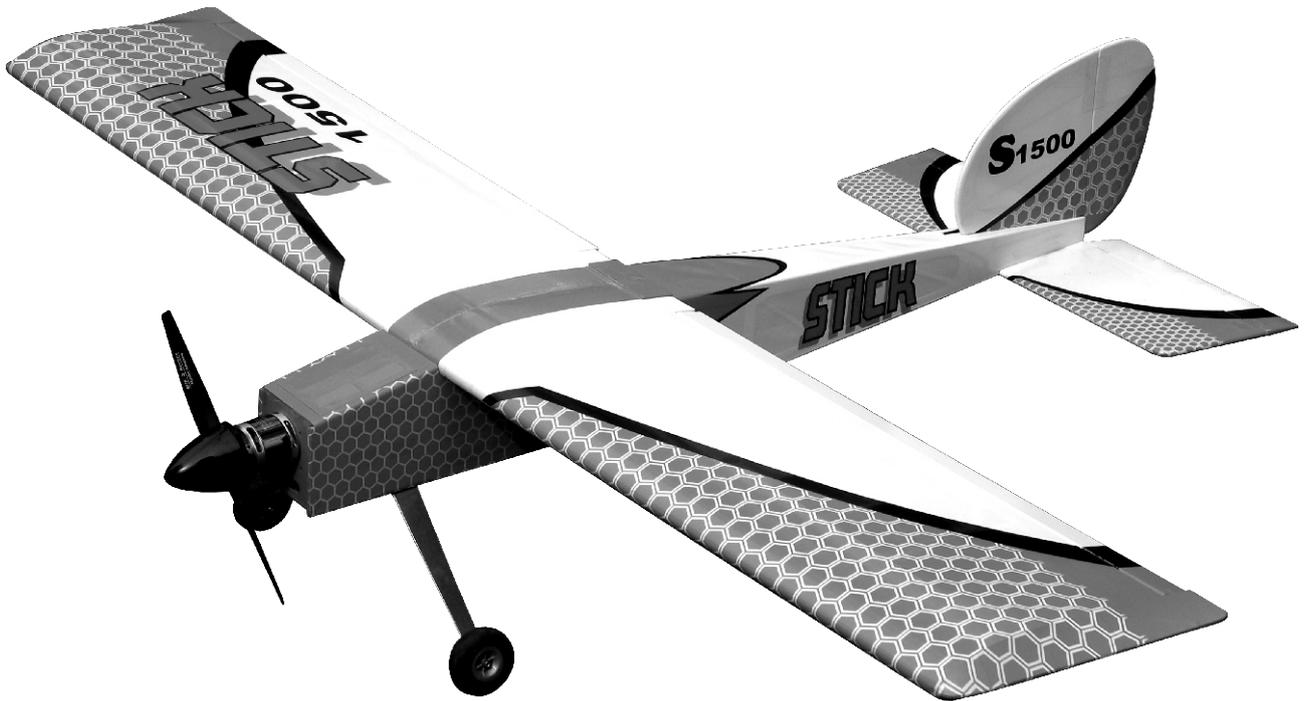
**60 Class (4T engine)**

*Or Electric equivalent*

## INSTRUCTION MANUAL

# STICK

# F - 1500



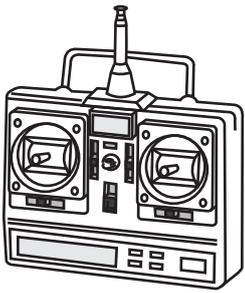
### SPECIFICATIONS

Wingspan	60 in.
Length	38.5 in.
Electric Motor	650 Watt
Glow Engine	.45 2-T / .60 4-T
Radio	5 Channel / 5 Servos



**WARNING!** This radio controlled model is NOT a toy. If modified or flown carelessly it could go out of control and cause serious human injury or property damage. Before flying your airplane, ensure the air field is spacious enough. Always fly it outdoors in safe areas and seek professional advice if you are unexperienced.

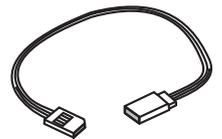
# REQUIRED FOR OPERATION (Purchase separately)



Minimum 5 channel radio for airplane

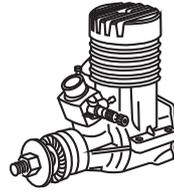
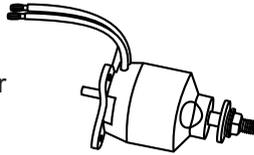


Propeller 11x8 for electric motor / 11x6 for glow engine

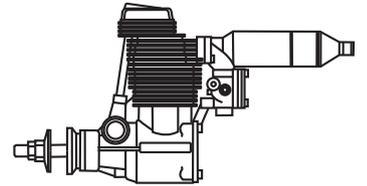


Extension cord

Brushless Motor  
**650 Watt**  
 Brushless ESC  
**Brushless Regler**  
 Battery **3700mAh-11.1V**



.46 cu.in.



.52 cu.in



Cyanoacrylate Glue

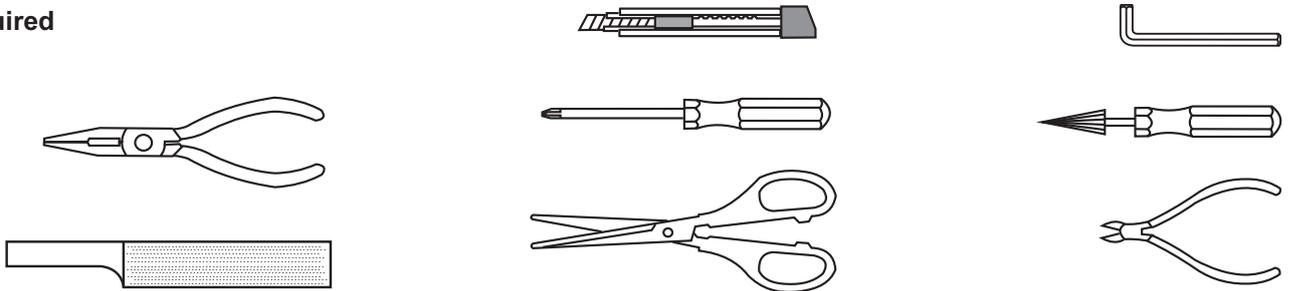


Silicon Glue

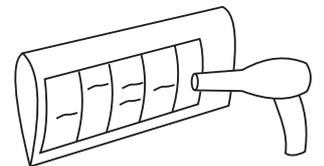


Epoxy Glue (30 minutes type)

## Tool Required



If exposed to direct sunlight and / or heat, wrinkles can appear. Storing the model in a cool place will let the wrinkles disappear. Otherwise, remove wrinkles in covering film with a hair-dryer, starting with low temperature. You can fix the corners by using a hot iron.



Drill holes using the stated size of drill (in this case 1.5 mm Ø)	Take particular care here	Hatched-in areas: remove covering film carefully	Check during assembly that these parts move freely, without binding
Use epoxy glue	Apply cyano glue	Assemble left and right sides the same way.	Not included. These parts must be purchased separately

## CONVERSION TABLE

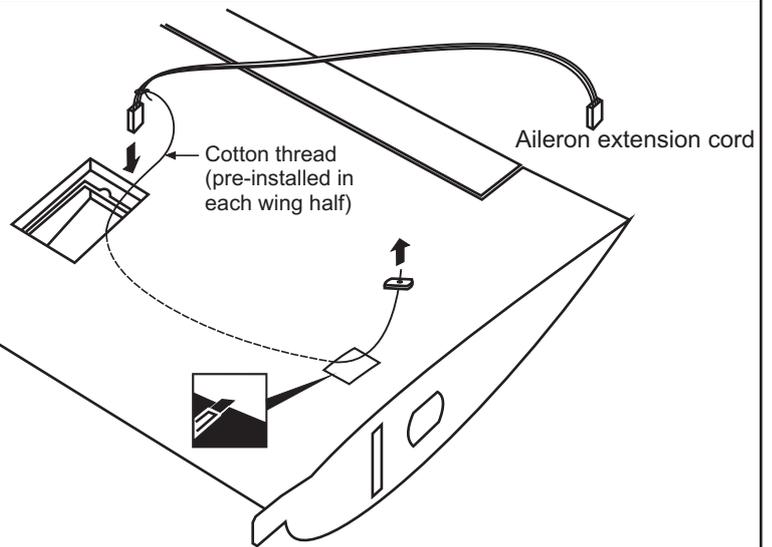
1.0mm = 3/64"	3.0mm = 1/8"	10mm = 13/32"	25mm = 1"
1.5mm = 1/16"	4.0mm = 5/32"	12mm = 15/32"	30mm = 1-3/16"
2.0mm = 5/64"	5.0mm = 13/64"	15mm = 19/32"	45mm = 1-51/64"
2.5mm = 3/32"	6.0mm = 15/64"	20mm = 51/64"	

## 1- Aileron extension cord

WING BOTTOM-VIEW

Cut through both the covering and the balsa wood of the wing bottom where the aileron extension cord goes.

Install the servo extension cord in to the wing.

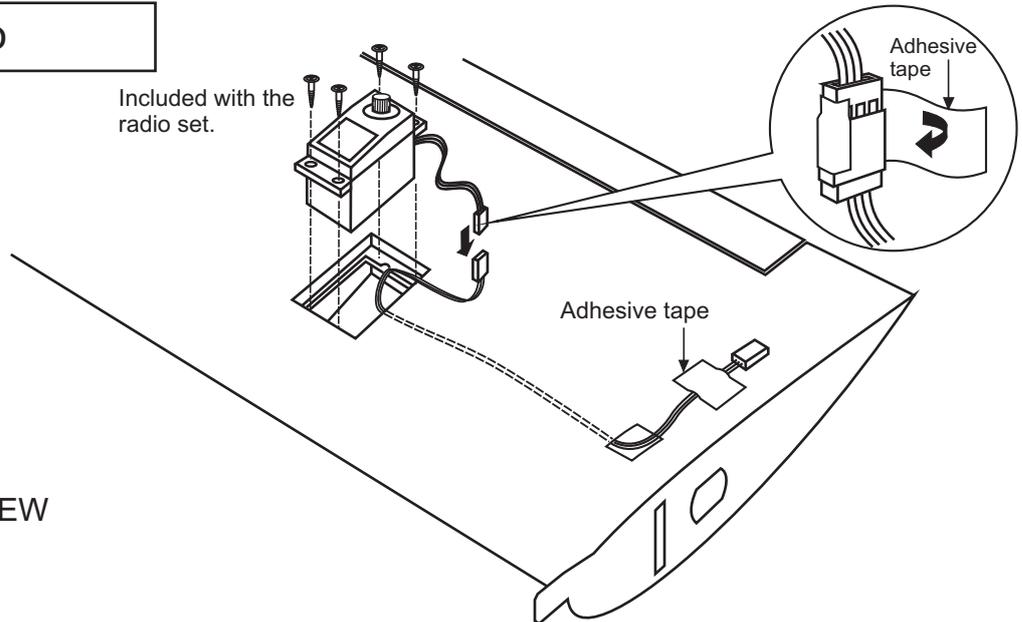


## 2- Aileron servo

WING BOTTOM-VIEW

Included with the radio set.

Adhesive tape



## 3- Joining the wing

WING TOP-VIEW

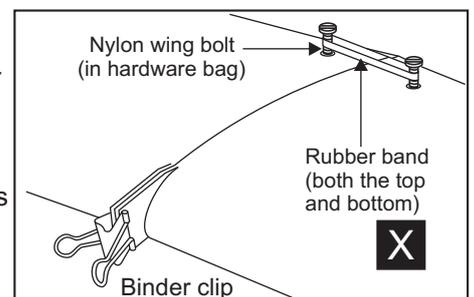
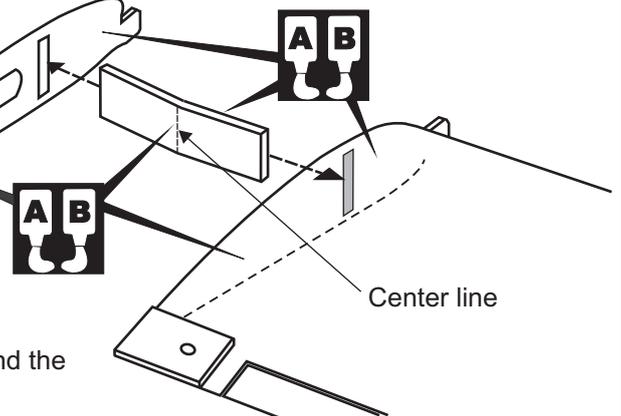
1- Trial fit the wing joiner, into one of the wing panels. It should insert smoothly up to the center line marked. Next, slide the other wing half onto the dihedral brace until the wing panels meet. If the fit is overly tight, it may be necessary to lightly sand the dihedral brace.

2- Check for the correct dihedral angle

3- Apply a generous amount of epoxy into the wing joiner cavity of one wing half. Next, Coat one half of the dihedral brace with epoxy up to the center line. Install the epoxy-coated side of the dihedral brace into the wing joiner cavity up to the center line.

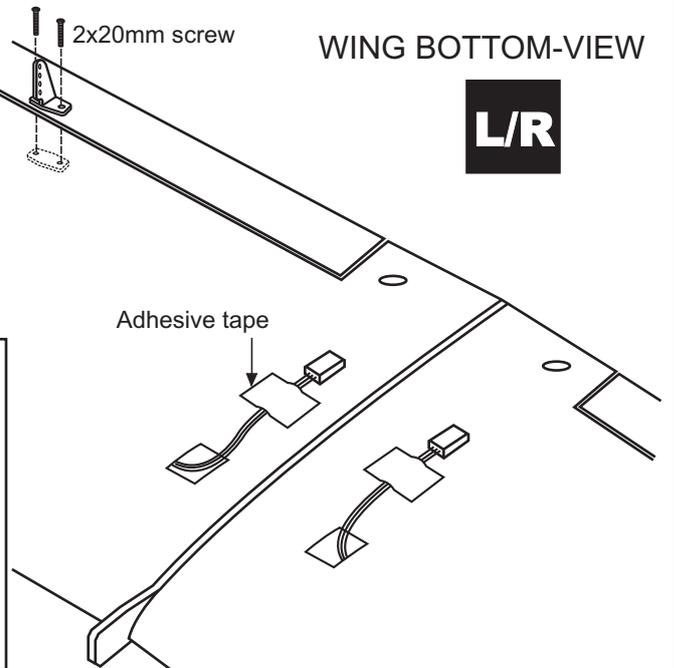
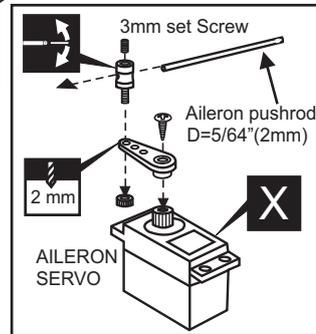
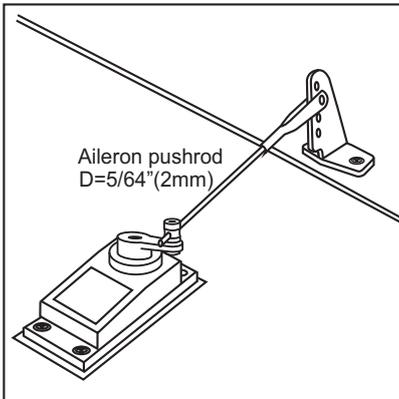
4- Do the same way with the other wing half. Carefully slide the wing halves together, ensuring that they are accurately aligned. Firmly press the two halves together, allowing the excess epoxy to run out. Clean off the excess epoxy with kerosene (do not use strong sloven or pure alcohol ).

5- Using the binder clip and rubber band to hold the wing together securely while the epoxy cures.



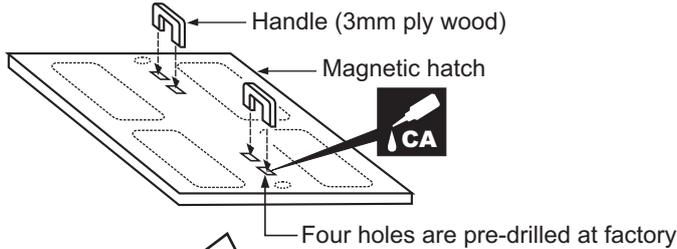
## 4- Aileron linkage

-  .....2
-  2x20mm.....4
-  .....2

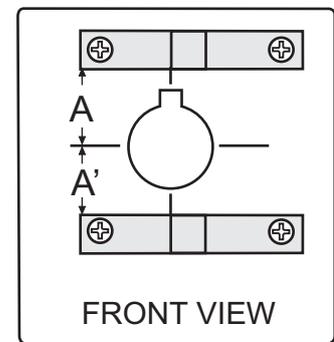
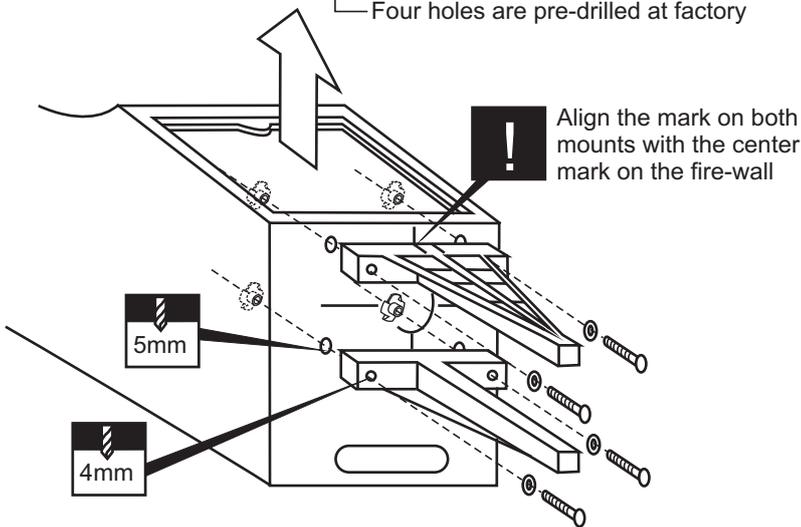


## 5- Engine - 4T

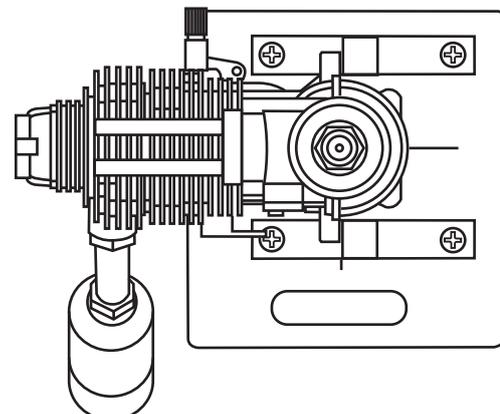
### TOP-VIEW



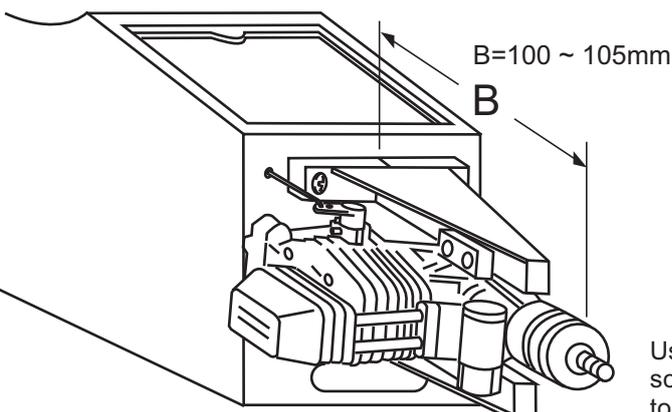
-  3x20mm screw .....4
-  4x15mm screw .....4
-  3mm nut .....4
-  Blind-nut .....4
-  3mm washer .....4
-  4mm washer .....4



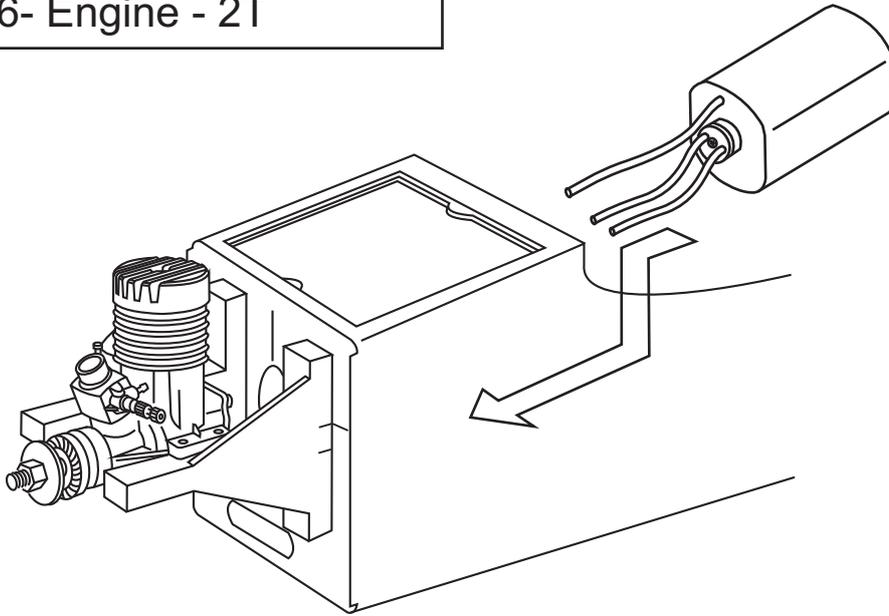
Align the engine center with fire-wall marked line (A=A')



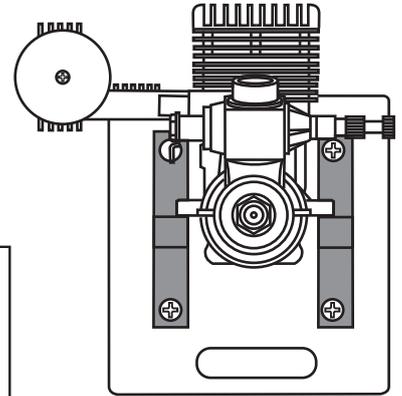
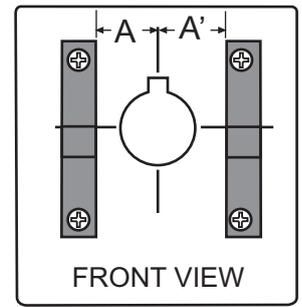
Using the four 3x20mm screws securing the engine to the engine-mount



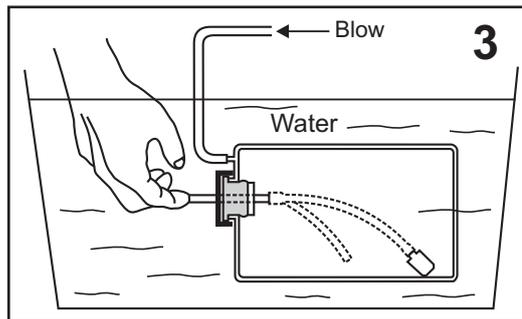
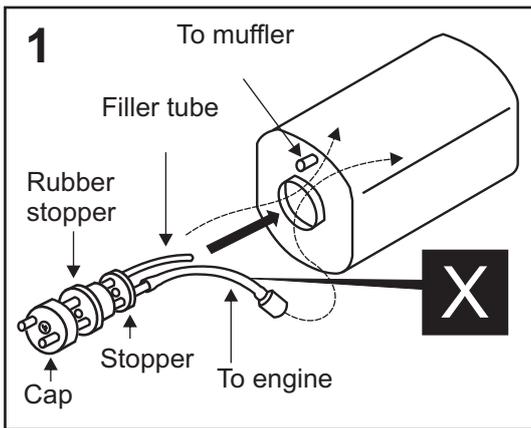
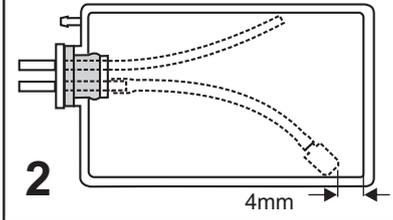
## 6- Engine - 2T



Align the engine center with fire-wall marked line (A=A')



After confirming the direction . Insert and tighten the screw.



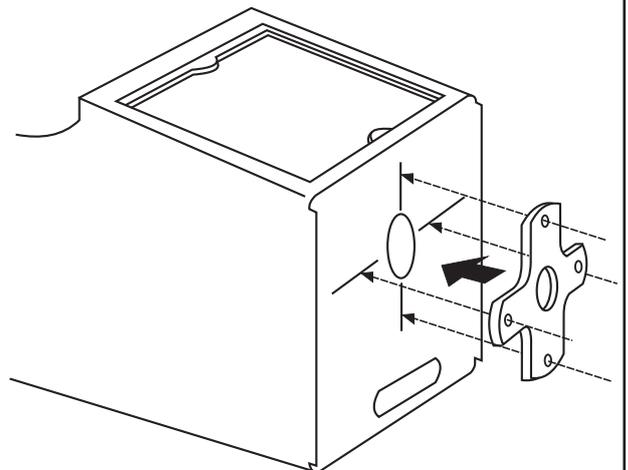
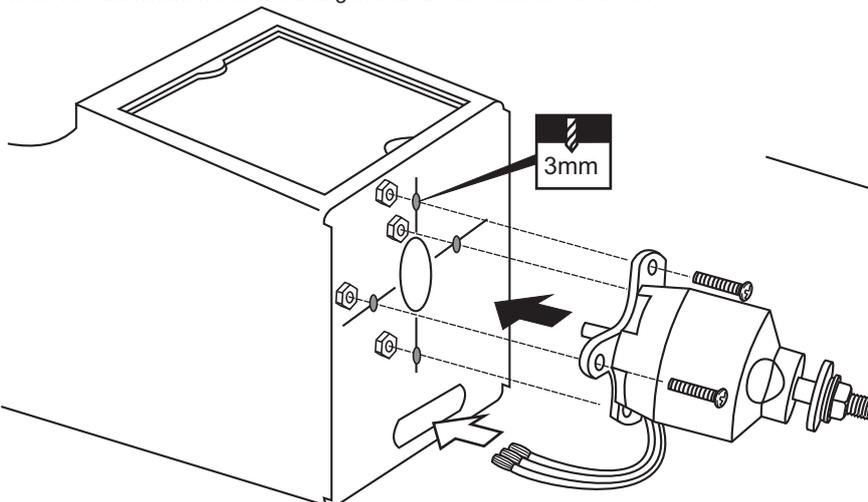
Checking for leaks - block the vents and blow into the feed - if in doubt submersing the tank in a blow of water will show up any problems.

## 7- Electric Motor

Using a aluminum motor mounting plate as a template, mark the Fire-wall where the four holes are to be drilled .

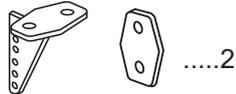
Remove the aluminum motor mounting plate and drill a 1/8"(3mm) hole through the fire-wall at each of the four marks marked .

Note: The aluminum motor mounting included with electric motor set.

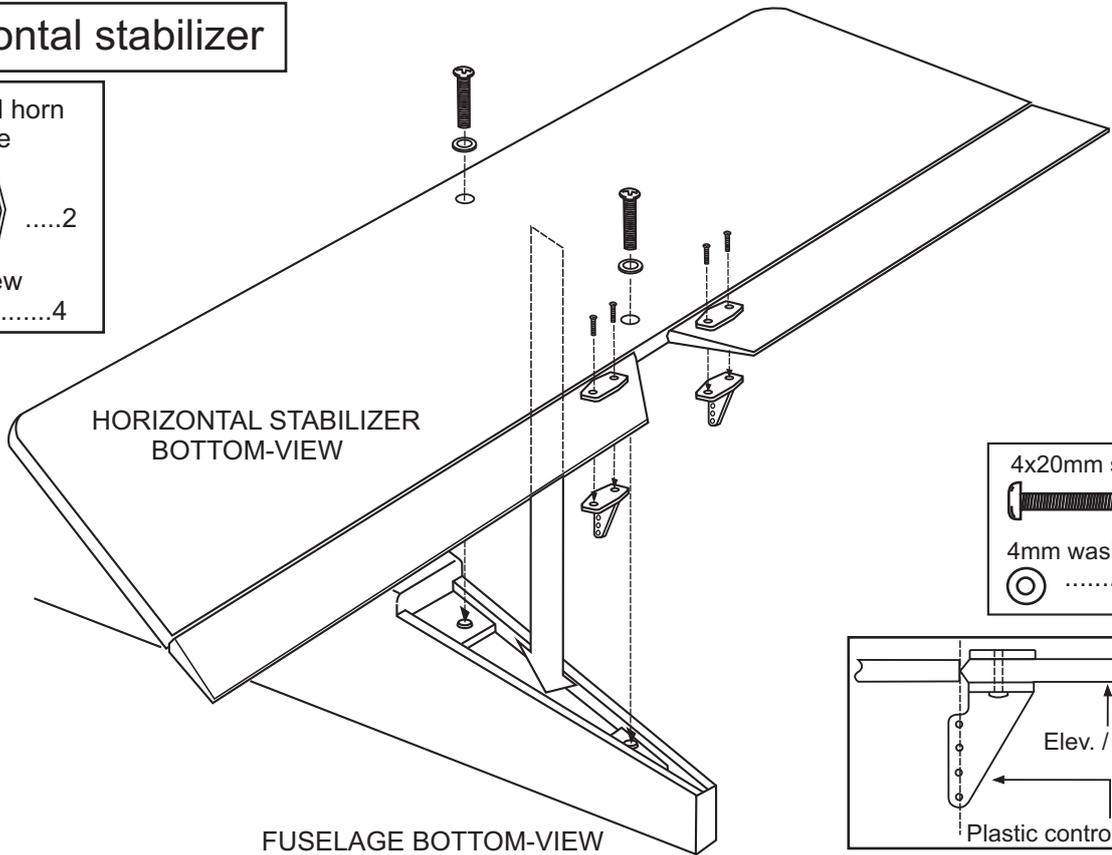


## 8- Horizontal stabilizer

Plastic control horn and back plate



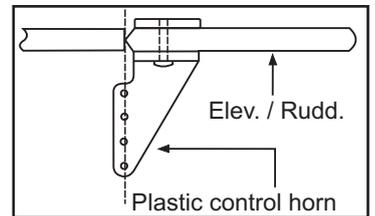
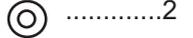
2x12mm screw



4x20mm screw

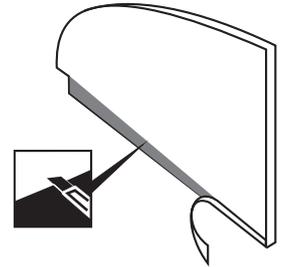
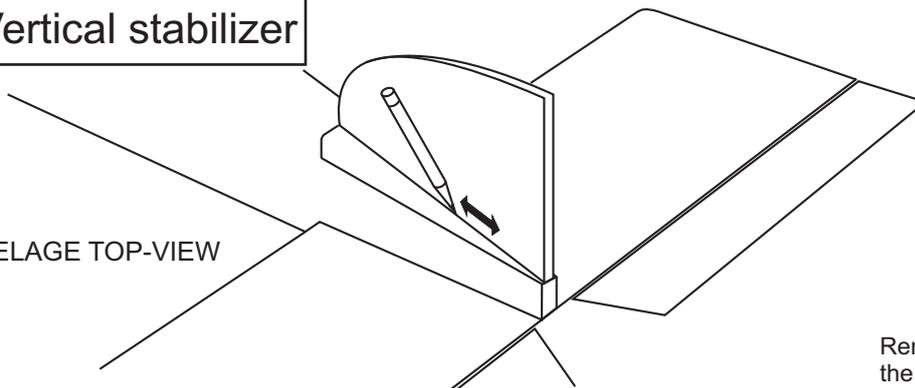


4mm washer



## 9- Vertical stabilizer

FUSELAGE TOP-VIEW



Trial fit the vertical fin in position. Using a 90-degree triangle, ensure that the vertical stabilizer is perpendicular to the horizontal stabilizer.

Use a pencil, trace around the vertical stabilizer where it meets the fuselage

Remove the vertical stabilizer from the fuselage. Using a sharp hobby knife, cut away both sides the covering below the lines which were drawn in the previous step. Do NOT cut into the wood.

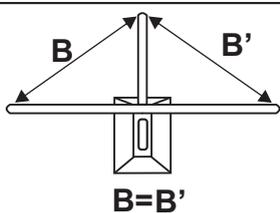
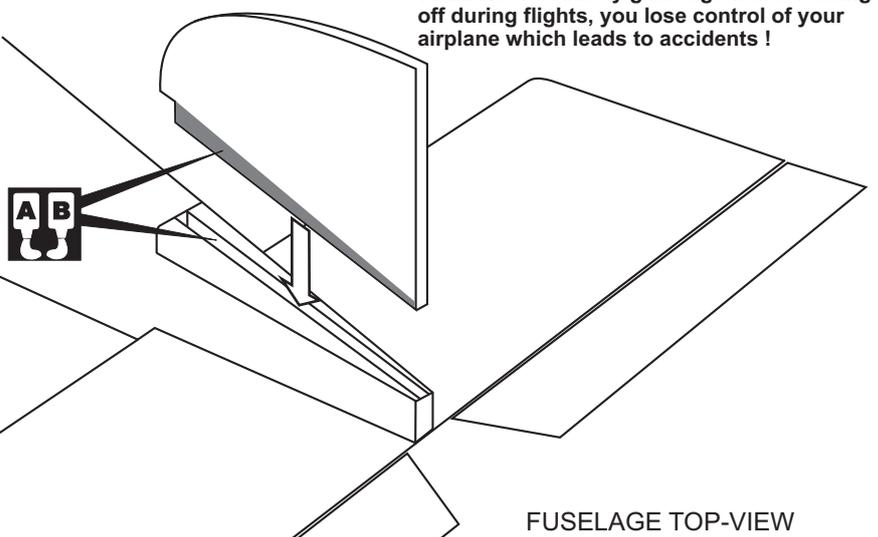
## 10- Vertical stabilizer

Spread epoxy (30 minute) onto the both sides of the vertical stabilizer along the area where the covering was removed and to the fuselage where the vertical stabilizer mounts.

Install the vertical stabilizer into the fuselage and adjust the alignment as described in step 9.

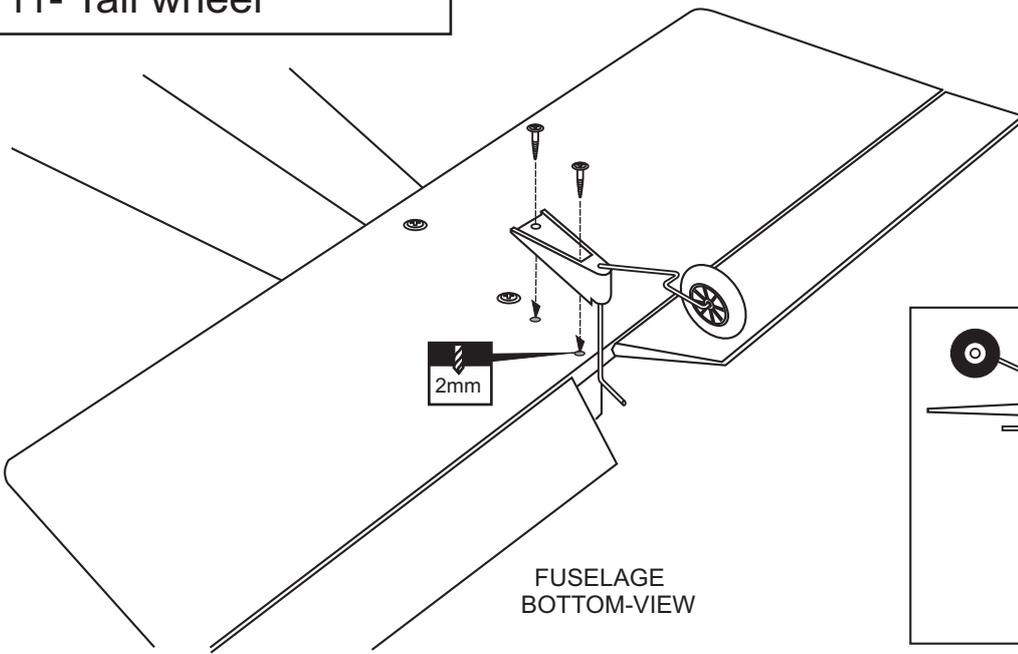
Allow the epoxy to cure before proceeding to next step.

**WARNING! Securely glue together. If coming off during flights, you lose control of your airplane which leads to accidents !**

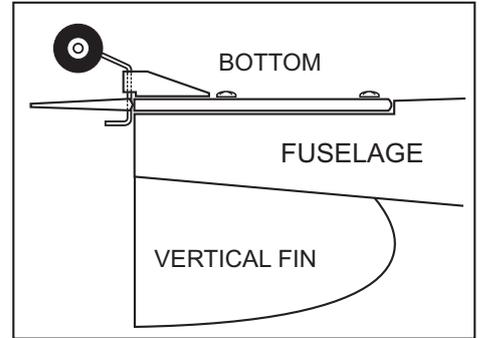


FUSELAGE TOP-VIEW

## 11- Tail wheel



-  2.2mm collar.....1
-  Vis 3x12mm.....2
-  Tail wheel.....1
-  Tail gear mount .....1



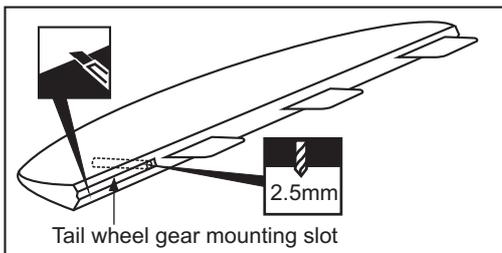
## 12- Rudder

Test-fit the hinges of rudder into the slots.

Using a pencil, mark the rudder where the tail wheel gear meet the rudder.

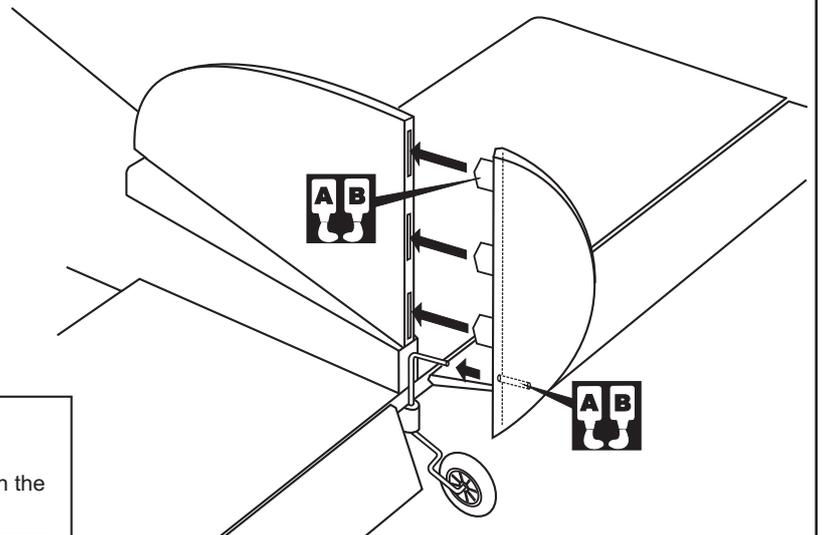
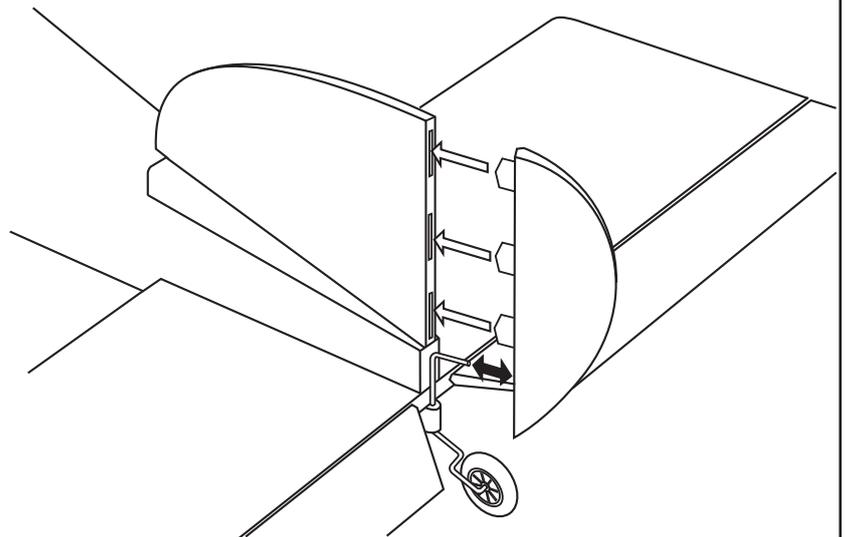
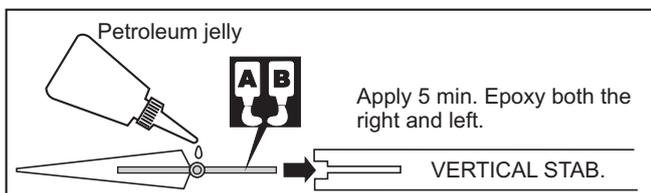
Cut 1-3/16" (30mm) long slots along the hinge line in the leading edge of the rudder.

Drill a 3/32" (2.5mm) diameter hole in tail wheel gear mounting slot, marking sure that you drill the hole perpendicular to the leading edge of the rudder.

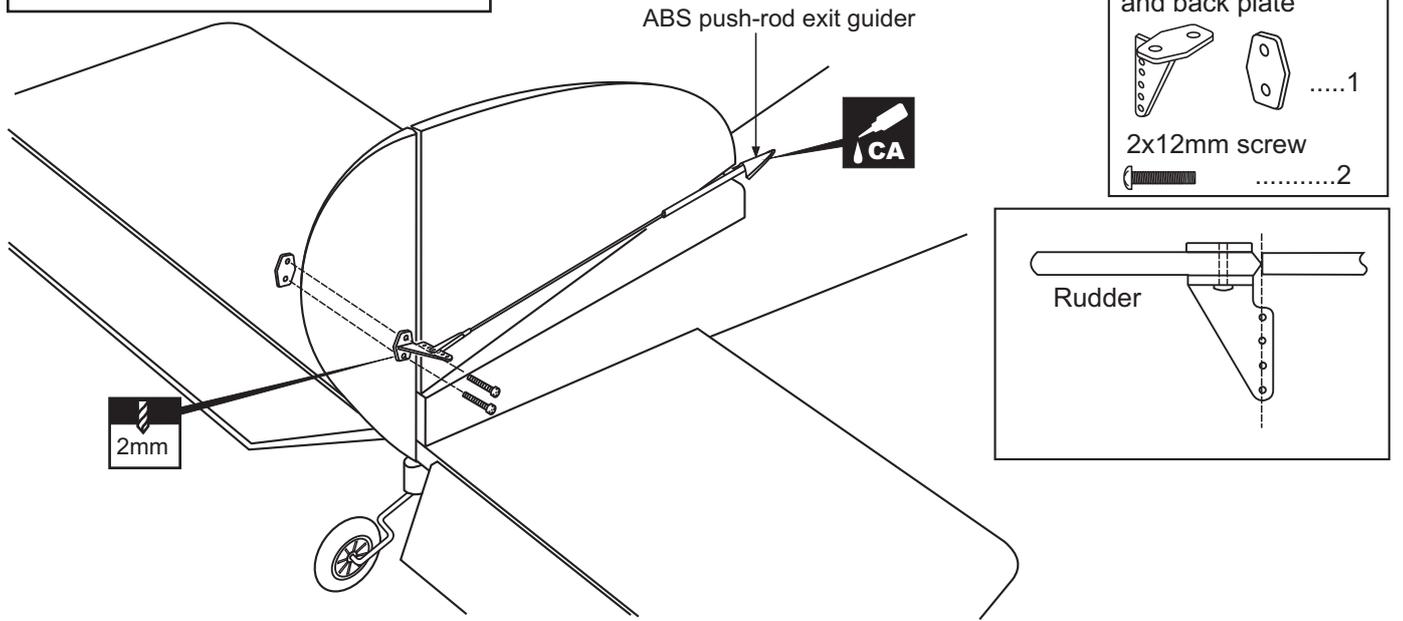


Without using glue yet, push the rudder and its hinges into the hinge slots in the trailing edge of the vertical stabilizer, marking sure that the tail wheel gear is firmly seated in the slot in the rudder. There should be a minimal hinge gap and the end of the rudder should not rub against the vertical stabilizer.

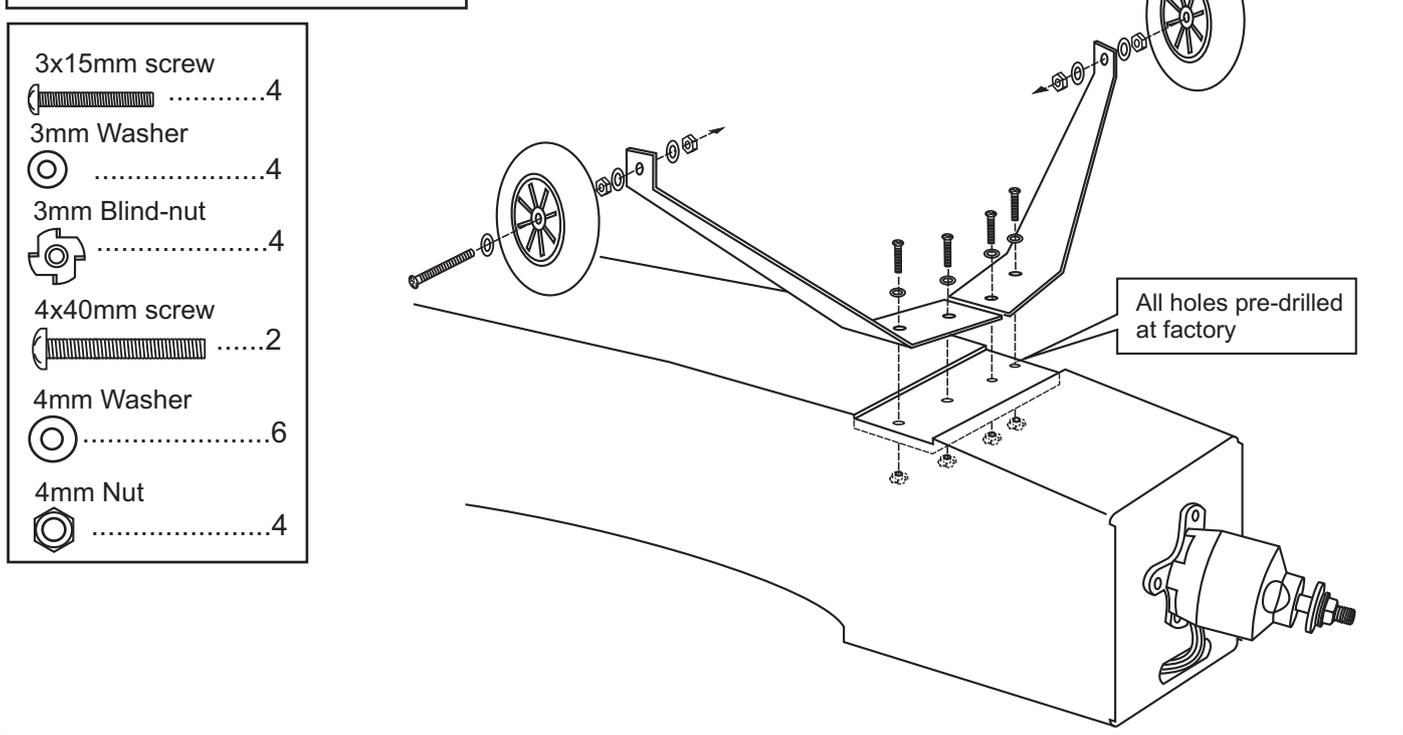
When satisfied with the fit and alignment, hinge the rudder to the vertical stabilizer, using 5 minute epoxy. Make sure to apply a thin layer of epoxy to the right and left of both hinges and to the inside the tail wheel gear mounting slot.



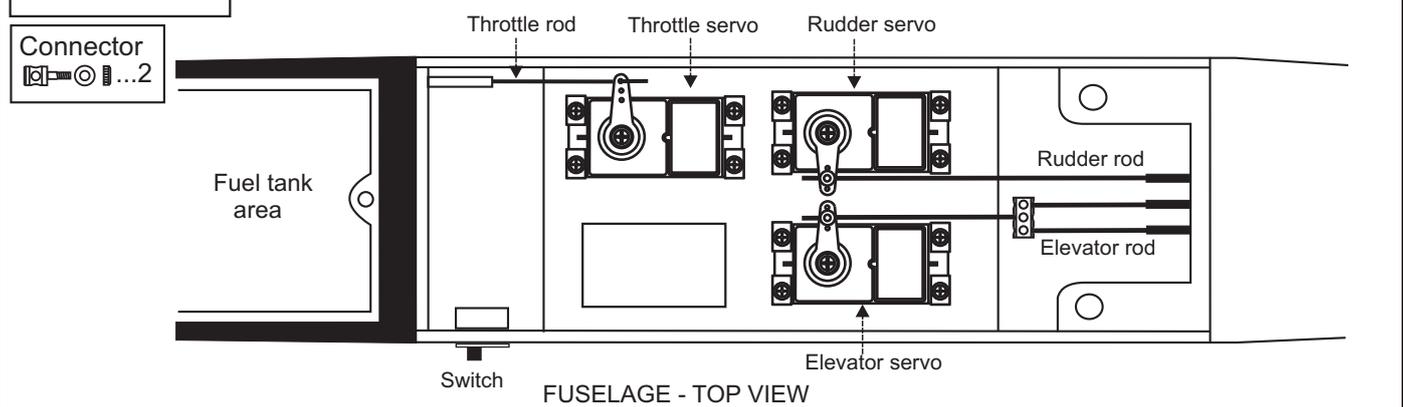
### 13- Rudder control horn



### 14- Main landing gear

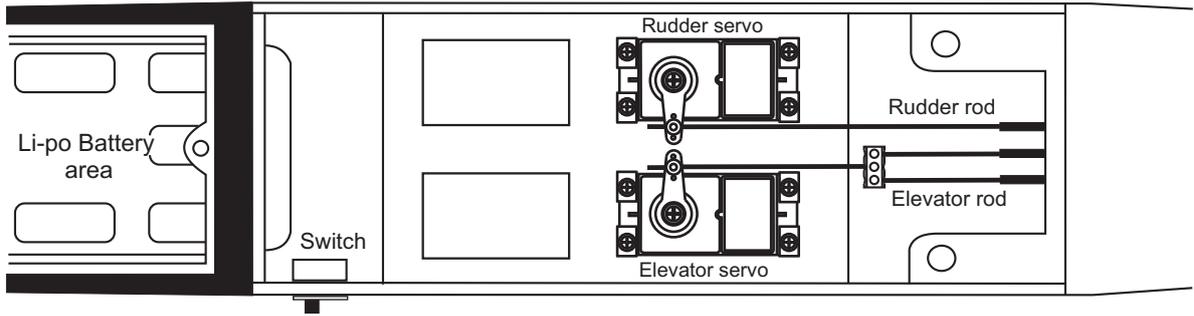


### 15-Servo



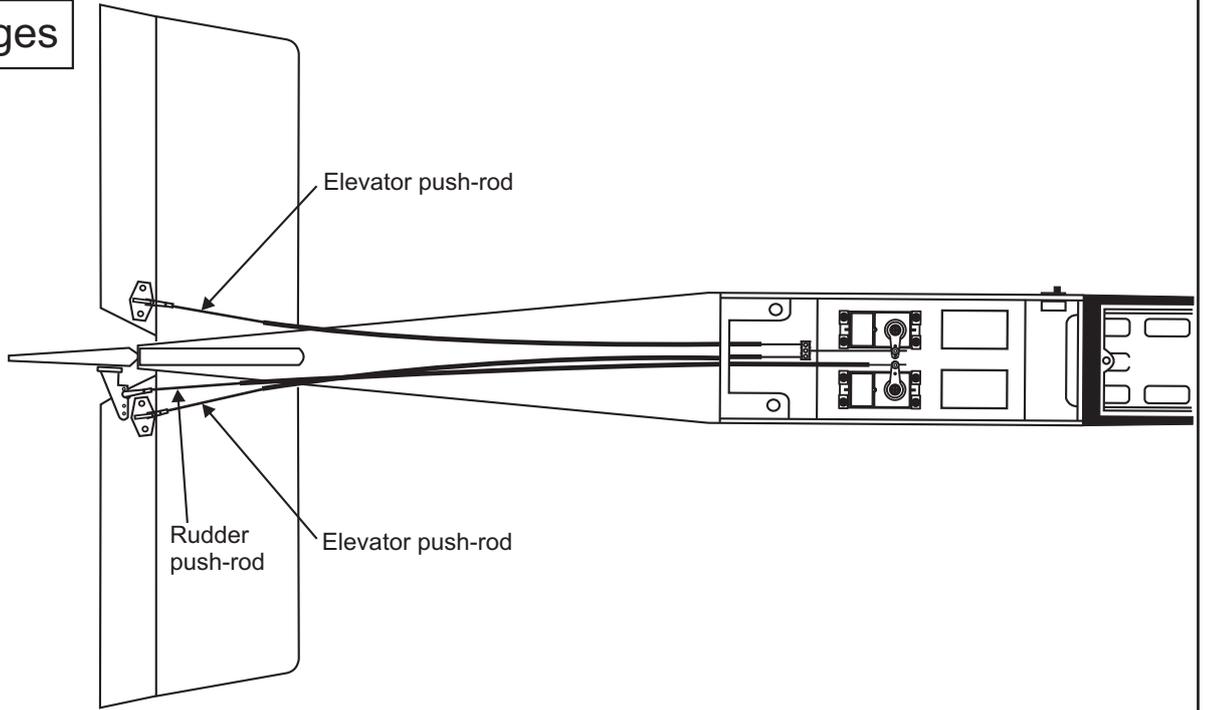
# 16-Servo

IN CASE OF BRUSLESS MOTOR

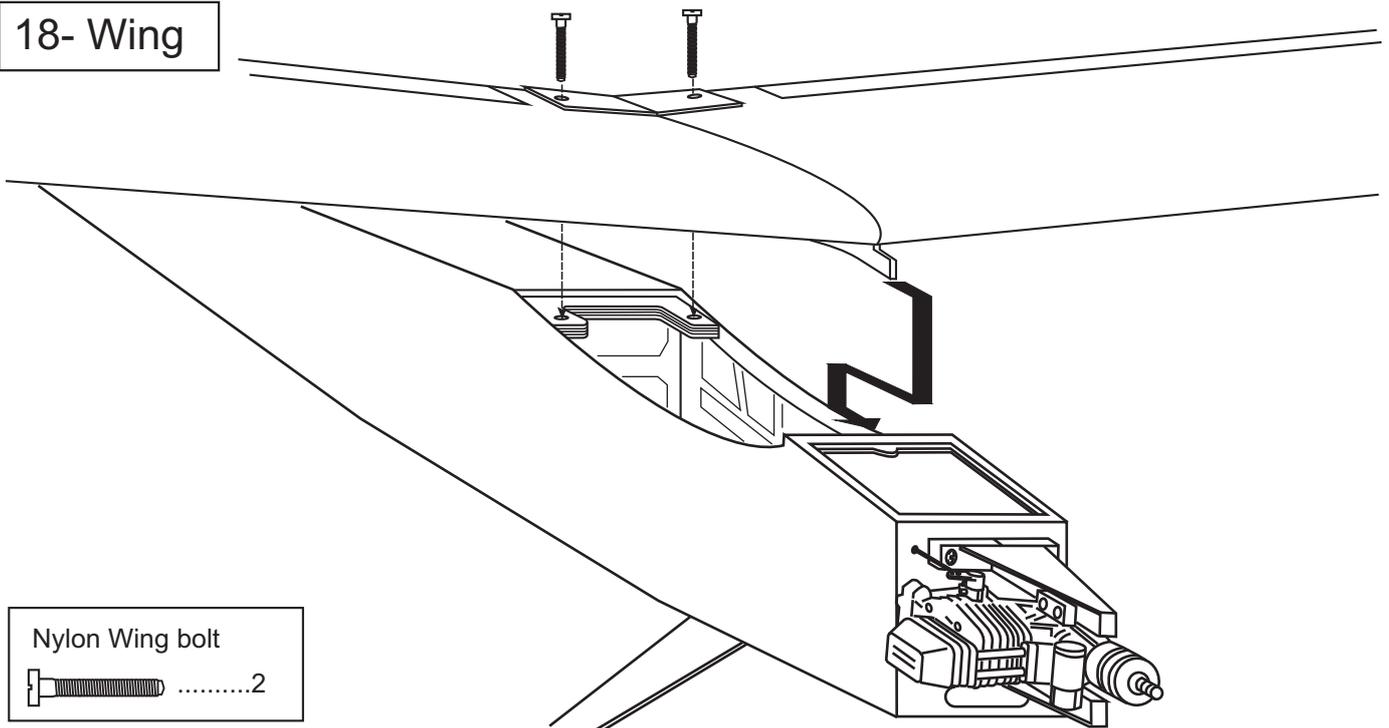


FUSELAGE - TOP VIEW

# 17- Linkages



# 18- Wing



Nylon Wing bolt

 .....2

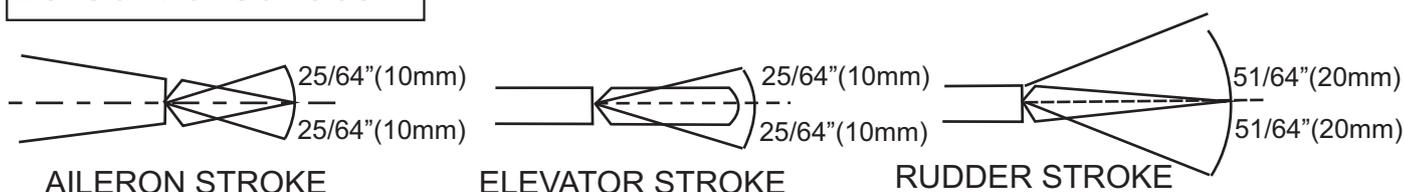
## 19- Balance

The recommended C.G (Center of Gravity) location for the Stick is 89 ~ 91mm  
Adjust the location of the battery pack as required to achieve this C.G location.  
If necessary , add weight to either the tail or nose until the correct balance is achieve.



**WARNING !** Securely install the receiver and power pack, ensuring they will not come loose or rattle during flight. Never fly before checking the Cg's required position.

## 20-Control Surface

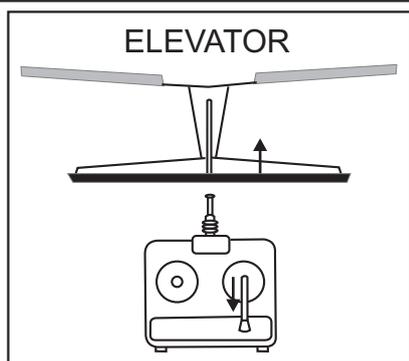


AILERON STROKE

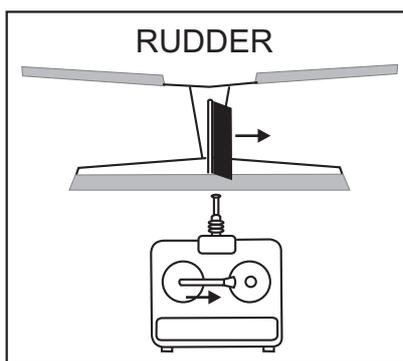
ELEVATOR STROKE

RUDDER STROKE

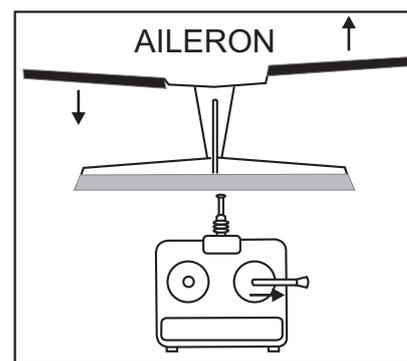
## 21-Pre-Flight check



ELEVATOR



RUDDER



AILERON

**IMPORTANT:** Please do not clean your model with strong solvent or pure alcohol, only use liquid soap with water or use class cleaner to clean on surface of your model to keep the colour not fade.

### **RANGE TEST YOUR RADIO**

Turn on the radio in your plane. With your plane on the ground, you should be able to walk 30 paces away from your plane and still have complete control of all functions. If not, do NOT attempt to fly.

Be sure that your batteries are fully charged per the instructions included with your radio.

### **BEFORE FLYING**

- 1-Fully extend the transmitter antenna.
- 2-Switch ON the transmitter.
- 3-Switch ON the receiver.
- 4-By moving the throttle control stick, ensure the carburetor opens and closes without effort.

### **FLYING**

- 1-Take-off your airplane INTO THE WIND.
- 2-Do not fly your airplane above people standing around.

### **AFTER FLYING**

- 1-Always land your airplane INTO THE WIND.
- 2-Switch OFF the receiver.
- 3-Switch OFF the transmitter.