

# Super Frontier-40



**0.40-0.50 cu.in. displacement 2-cycle**  
**0.48-0.52 cu.in. displacement 4-cycle**  
**Radio required : 4 channels, 4 servos airplane radio**

## Specifications

Wing Span	64.0 in / 1630 mm
Wing Area	704 sq in / 45.4 sq dm
Flying Weight	5.5-6.2 lbs / 2500-2800 g
Fuselage Length	48.0 in / 1220 mm

\* Specifications are subject to change without notice.\*

### Warning !This model is not a toy.

It is designed for maximum performance. Please seek advice if one is not familiar with this kind of engine powered precision model. Operating this model without prior preparation may cause injuries. Remember, safety is the most important thing. Always keep this instruction manual at hand for quick reference.



**THE WORLD MODELS  
MANUFACTURING CO., LTD.**  
 FACTORY PRE-FABRICATED  
 ALMOST-READY-TO-FLY (ARF) SERIES  
 MADE IN CHINA  
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# Super Frontier-40

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### BEFORE YOU BEGIN

- 1** Read through the manual before you begin, so you will have an overall idea of what to do.
- 2** Check all parts. If you find any defective or missing parts contact your local dealer. Please DRY FIT and check for defects for all parts that will require CA or Epoxy for final assembly. Any parts you find to be defective after the gluing process may be difficult to remove for warranty replacement. The manufacturer will replace any defective parts. but will be difficult to extend to the good parts that are good before gluing to defective parts during assembly.
- 3** Symbols used throughout this instruction manual comprise of the following :-



Apply epoxy glue.



Apply instant glue  
(C.A.glue, super glue.)



Assemble left and right  
sides the same way.



Ensure smooth non-binding  
movement while assembling.



Peel off shaded portion  
covering film.



Cut off shaded portion.



Drill holes with the specified  
diameter (here: 3mm).



Must be purchased separately!



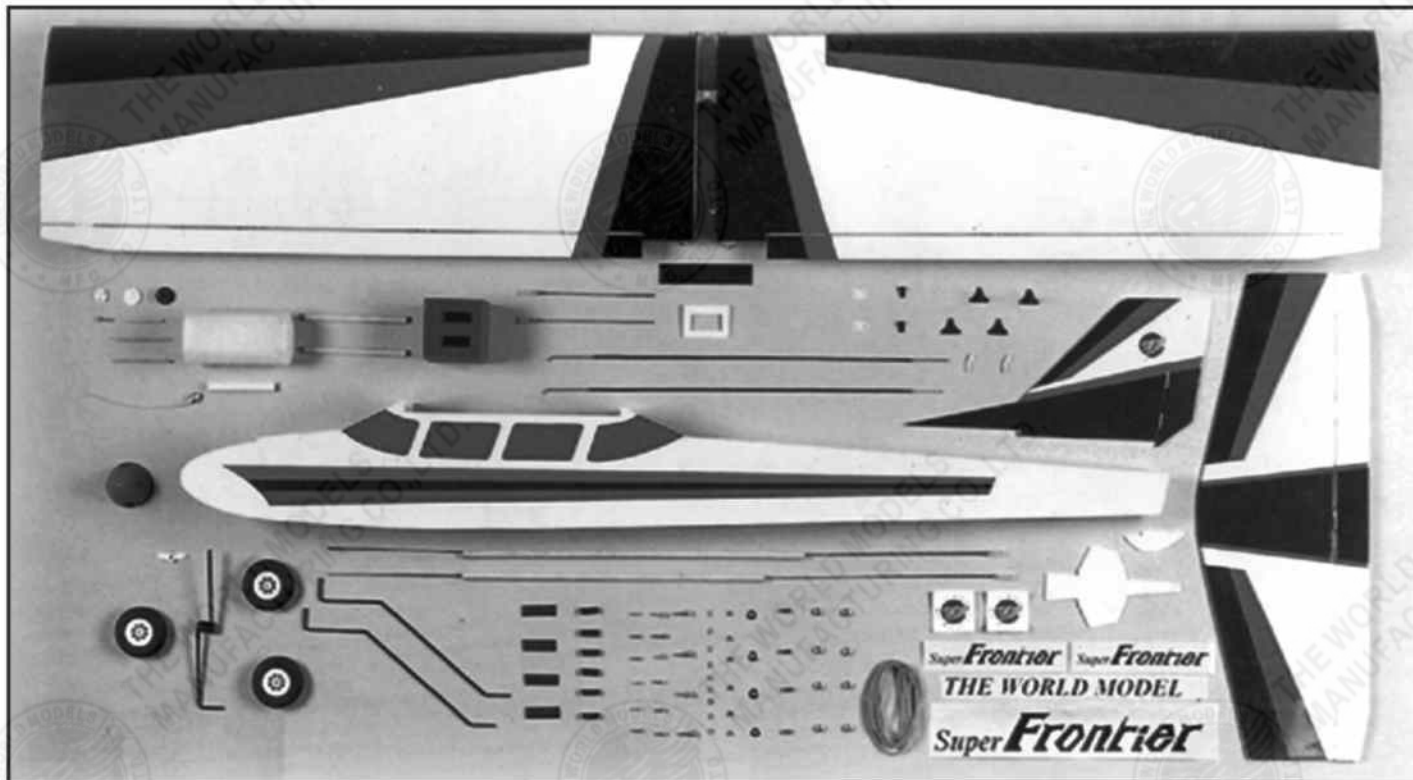
Pay close attention here!



Do not overlook this symbol!



Pierce the shaded portion  
covering film.



## Parts List

1. FUSELAGE -- 1 pc.
2. MAIN WING (w/Wing Joiner) -- 1pair
3. STABILIZER & ELEVATOR -- 1 set
4. VERTICAL FIN & RUDDER -- 1 set
5. SPINNER Ø57mm -- 1 set
6. ENGINE MOUNT PL5111-030 -- 1 set
7. FUEL TANK 380cc -- 1 pc
8. SPONGE (For Radio Equipment) -- 2 pcs
9. FRONT LANDING GEAR -- 1 pc
10. MAIN LANDING GEAR -- 1 pair
11. WHEEL Ø65mm -- 3 pcs

### 12. PUSHROD:--

- WOODEN ROD Ø8x380mm (For Rudder Servo) -- 1 pc
- WOODEN ROD Ø8x430mm (For Elevator Servo) -- 1 pc
- METAL ROD Ø1.8x130mm w/Threads (For Aileron Servo) -- 2 pcs
- METAL ROD Ø1.8x145mm (For Elevator Servo) -- 2 pcs
- METAL ROD Ø1.8x155mm (For Rudder Servo) -- 2 pcs
- METAL ROD Ø1.8x290mm w/Threads (For Rudder Servo) -- 1 pc
- METAL ROD Ø1.8x230mm w/Threads (For Elevator Servo) -- 1 pc

### 13. PUSHWIRE:--

- FRONT WHEEL PUSHWIRE Ø1.2x420mm -- 1 pc
- THROTTLE PUSHWIRE Ø1.2x460mm (w/Plastic Tube) -- 1 set

### 14. WOODEN PARTS:--

- BALSA 10x10x84mm (For Fixing Fuel Tank) -- 1 pc
- WOOD 6x6x18mm (For Front Landing Gear) -- 1 pc
- PLYWOOD 1.5x25x115mm (Wing Protection) -- 1 pc
- PLYWOOD 3x8x21mm (For Aileron Servo) -- 2 pcs
- PLYWOOD 3x47x57mm (Aileron Servo Box) -- 1 pc
- WING JOINER 9x23.7x200mm -- 1 pc
- WOODEN ROD Ø8x130mm (For Fixing Main Wing) -- 2 pcs

### 15. PLASTIC PARTS:--

- CLEVIS -- 4 pcs
- PLATE -- 2 pcs
- RING Ø2.6mm -- 2 pcs
- STEERING ARM -- 1 pc
- STRAPER -- 3 pcs
- HORN -- 2 sets

### 16. METAL PARTS:--

- LINKAGE CONNECTOR 2.1mm -- 3 SETS
- COLLAR 4.1mm w/set screw -- 8 sets
- NUT 3mm -- 8 pcs
- SCREW PA3x12mm -- 4 pcs
- SCREW PM2x12mm -- 4 pcs
- SCREW PM3x50mm -- 1 pc
- SCREW PM3x22mm -- 4 pcs
- SCREW PM3x25mm -- 4 pcs
- SCREW PM3x45mm -- 1 pc
- WASHER 3mm -- 12 pcs
- WASHER d3xD12mm -- 2 pcs

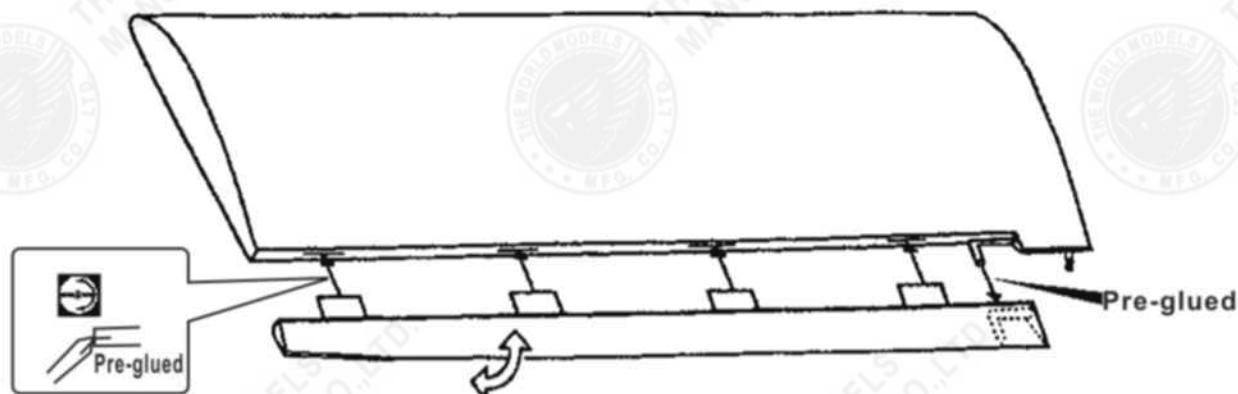
### 17. FUEL TUBE Ø6x5mm -- 7 pcs

- HEAT-SHRINK TUBE Ø8x40mm -- 4 pcs

### 18. RUBBER BAND 60x6mm -- 8 pcs

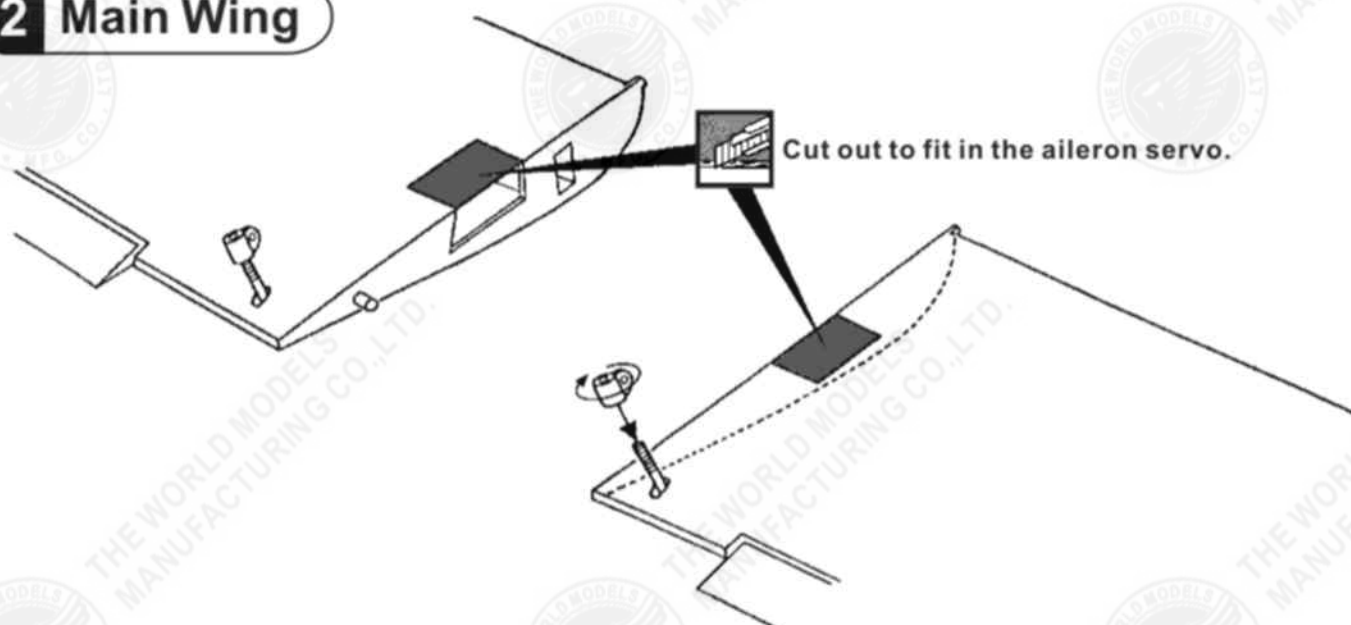
### 19. DECALS -- 1 set

# 1 Main Wing

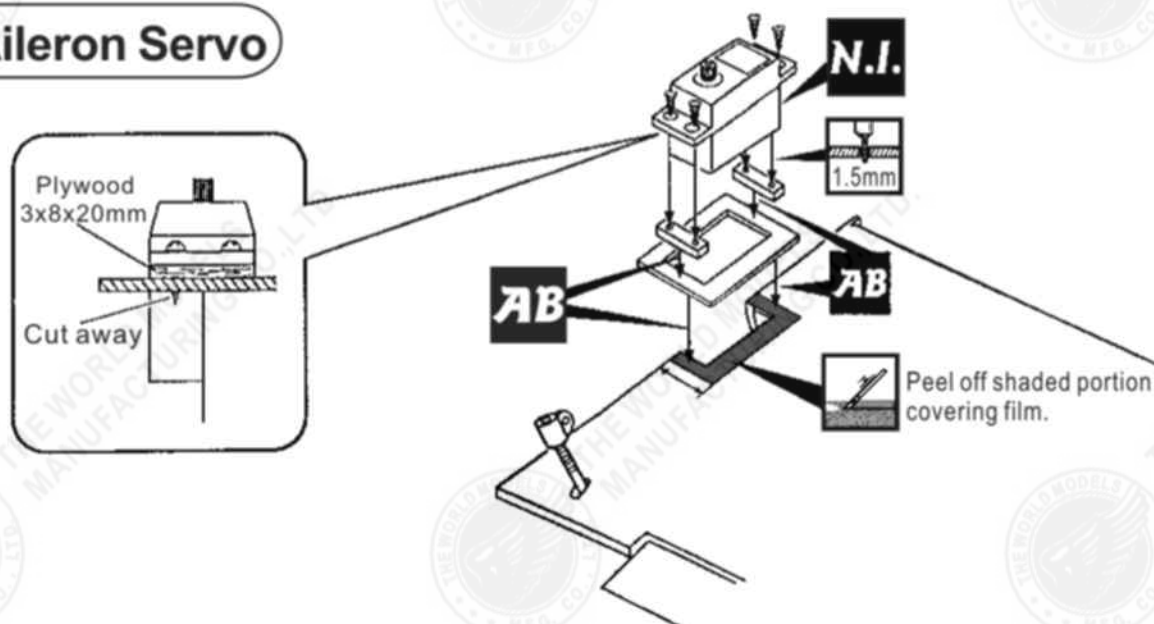


L/R

# 2 Main Wing

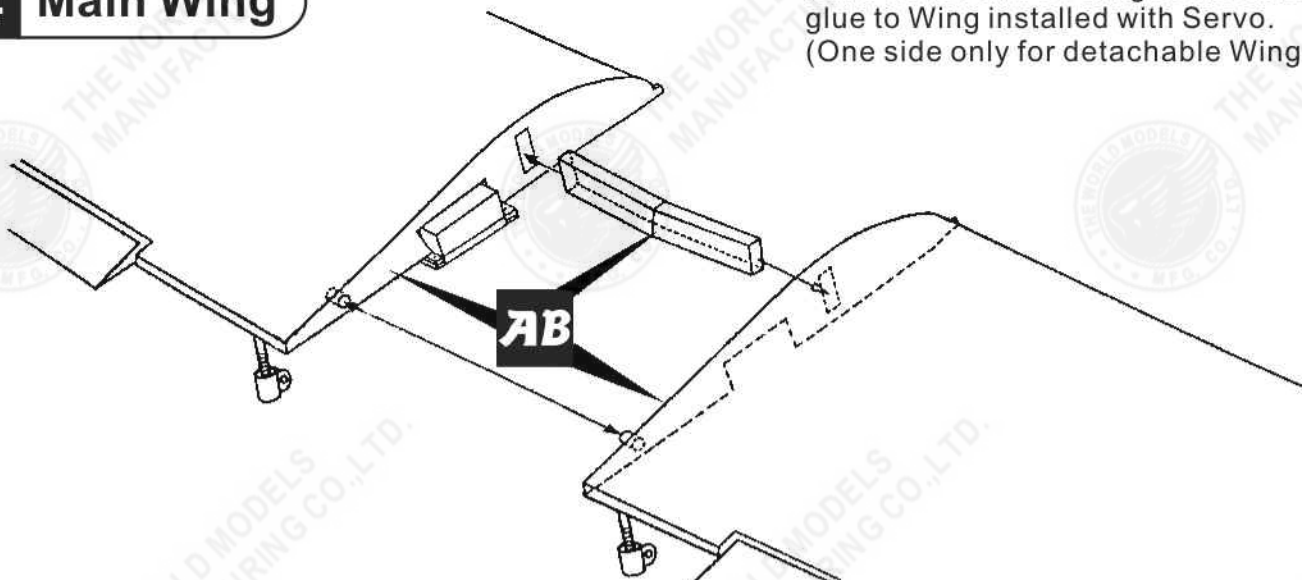


# 3 Aileron Servo

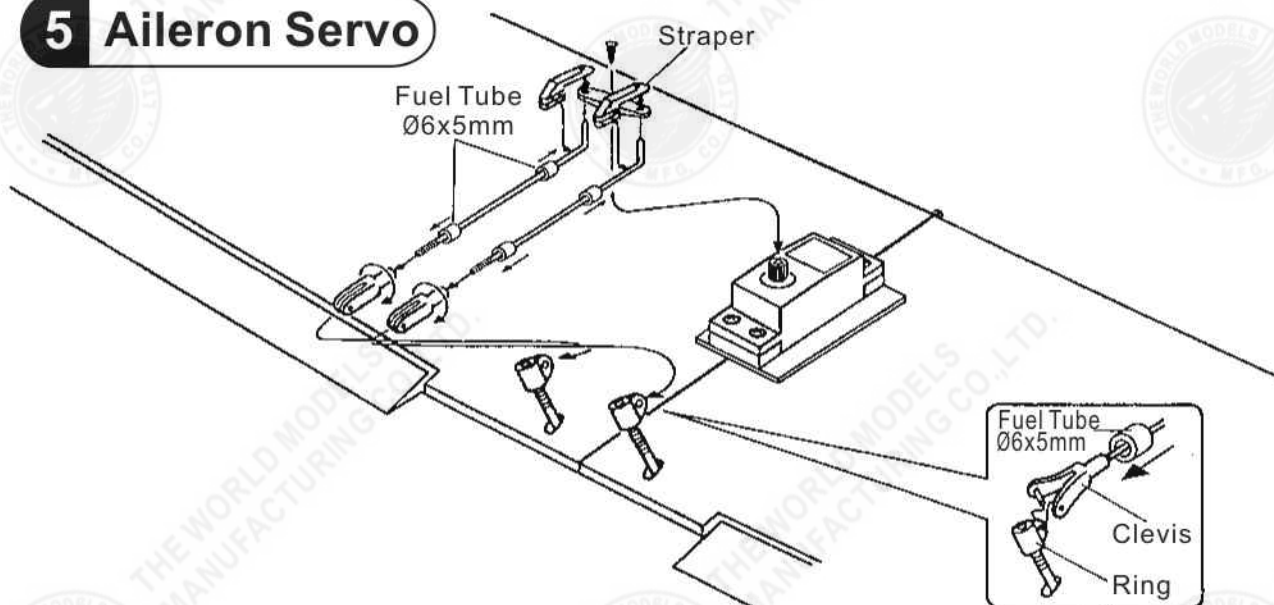


## 4 Main Wing

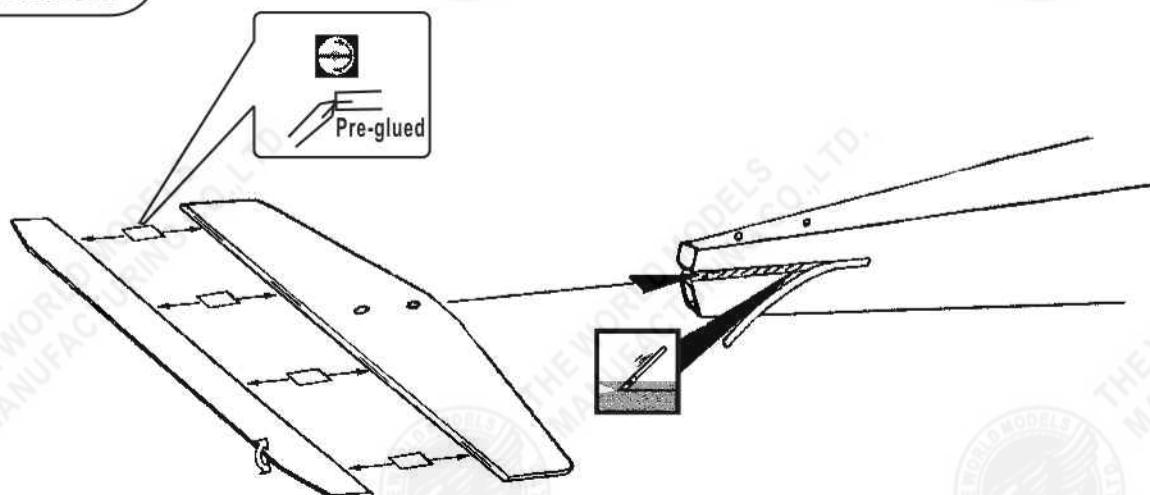
Mark center line of Wing Joiner and glue to Wing installed with Servo.  
(One side only for detachable Wing.)



## 5 Aileron Servo



## 6 Stabilizer



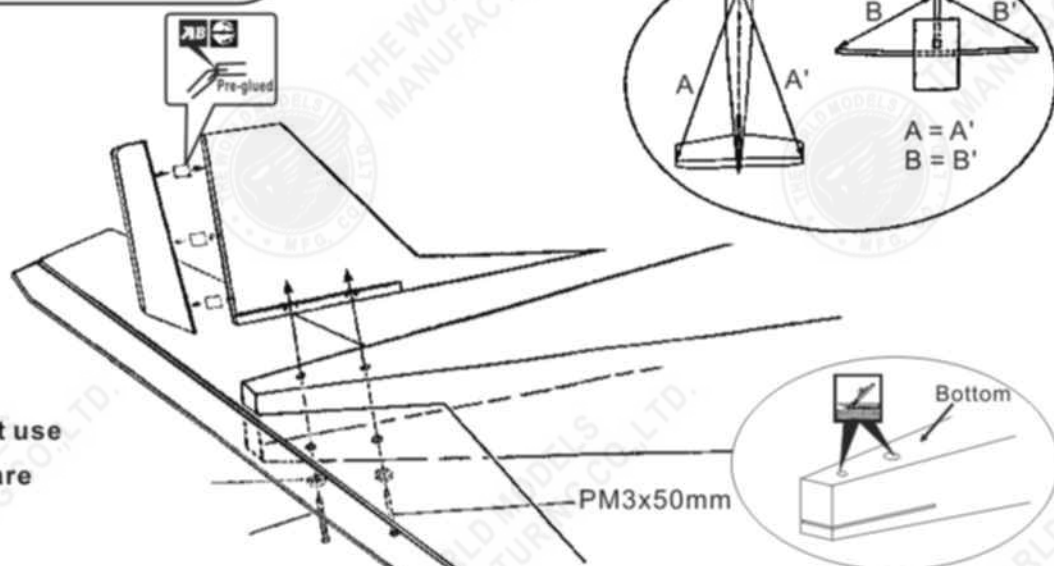
## 7 Vertical Fin / Stabilizer

PM3x 45mm **Screw**

d3 x D12mm **Washer**

PM3x 50mm **Screw**

**Use thread locker when tightening screws. Don't use excessive force as you are dealing with balsa.**



## 8 Engine Mount / Fuel Tank

PM3x 22mm **Screw**

3mm Washer

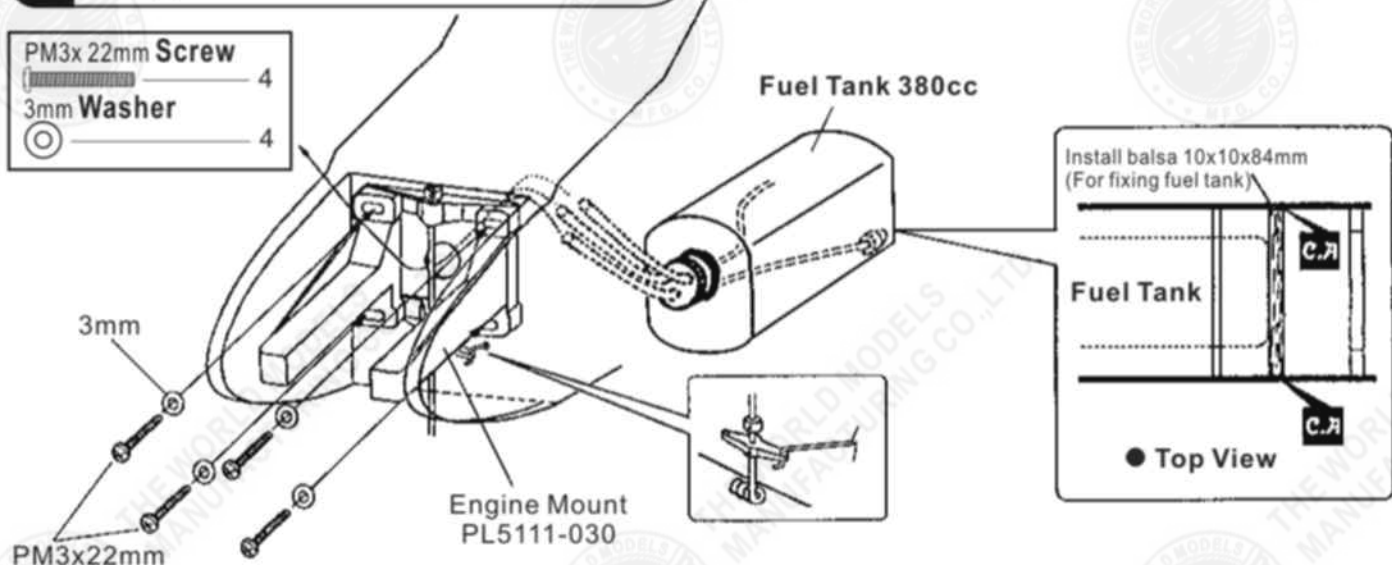
**Fuel Tank 380cc**

Install balsa 10x10x84mm  
(For fixing fuel tank) \

### Fuel Tank

● Top View

Engine Mount  
PL5111-030



## 9 Front Wheel

3mm **Set Screw**

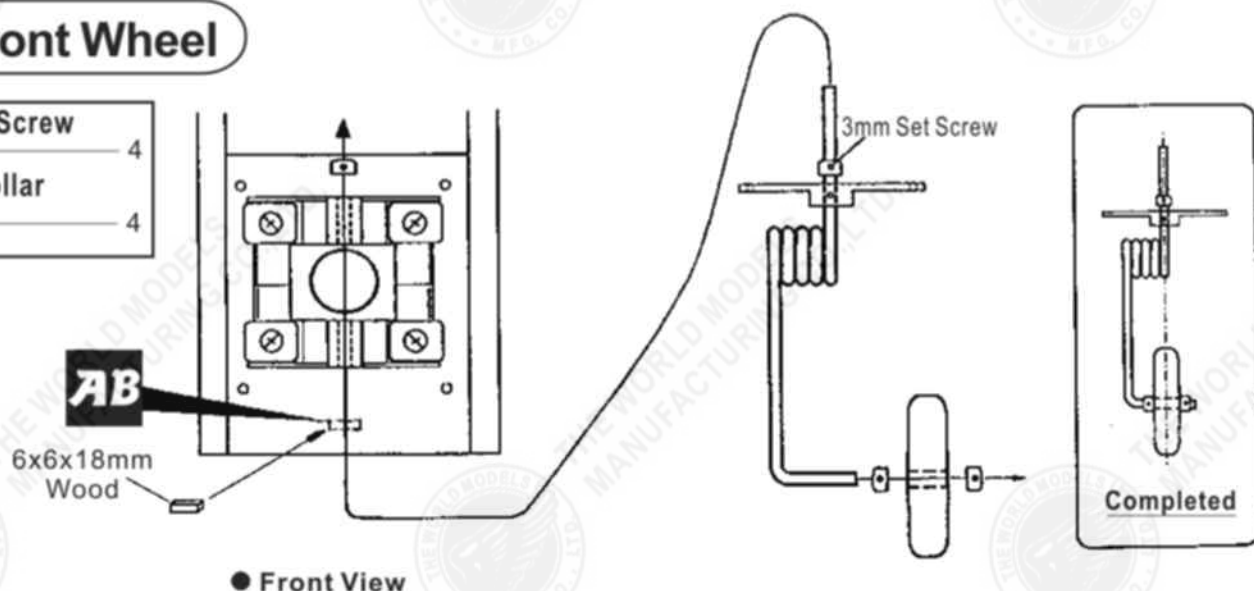
4.1mm Collar

6x6x18mm  
Wood \

3mm Set Screw

**Completed**

● **Front View**

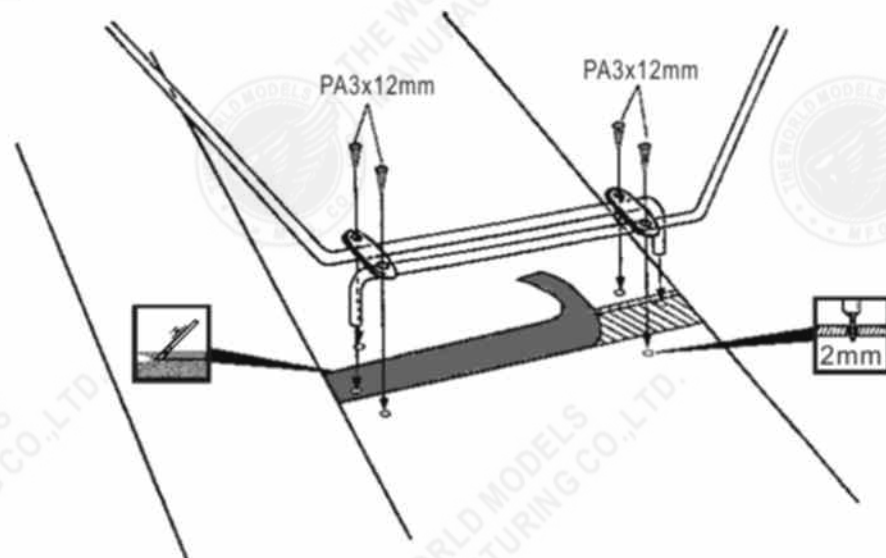




## 10 Landing Gear

PA3 x 12mm Screw

4



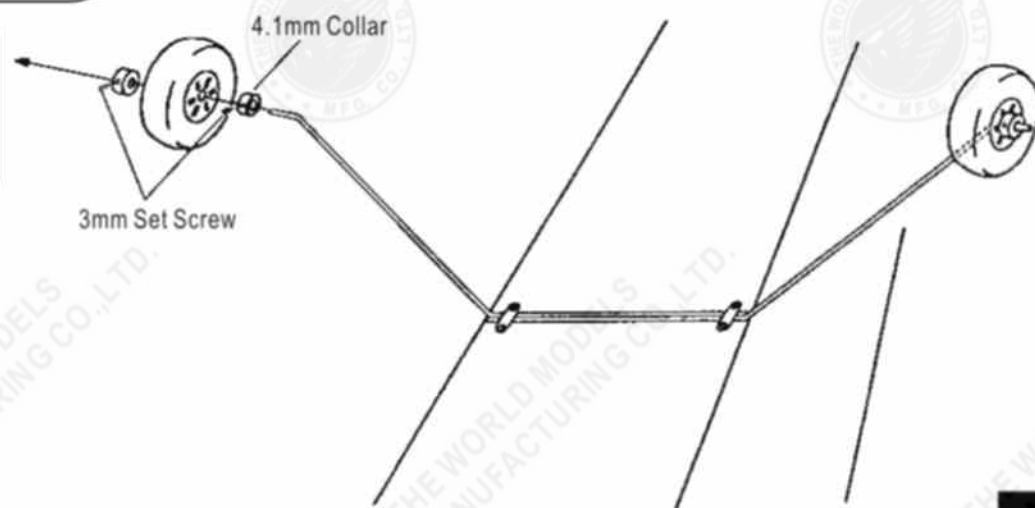
## 11 Landing Gear

3mm Set Screw

4

4.1mm Collar

4



L/R

## 12 Engine

PM3x 25mm Screw

4

3mm Washer

8

3mm Nut

8

Throttle Pushwire w/plastic tube

PM3x 25mm

3mm

3mm

3mm

3.2mm

Install Engine position

Spinner  
Ø57mm

104mm

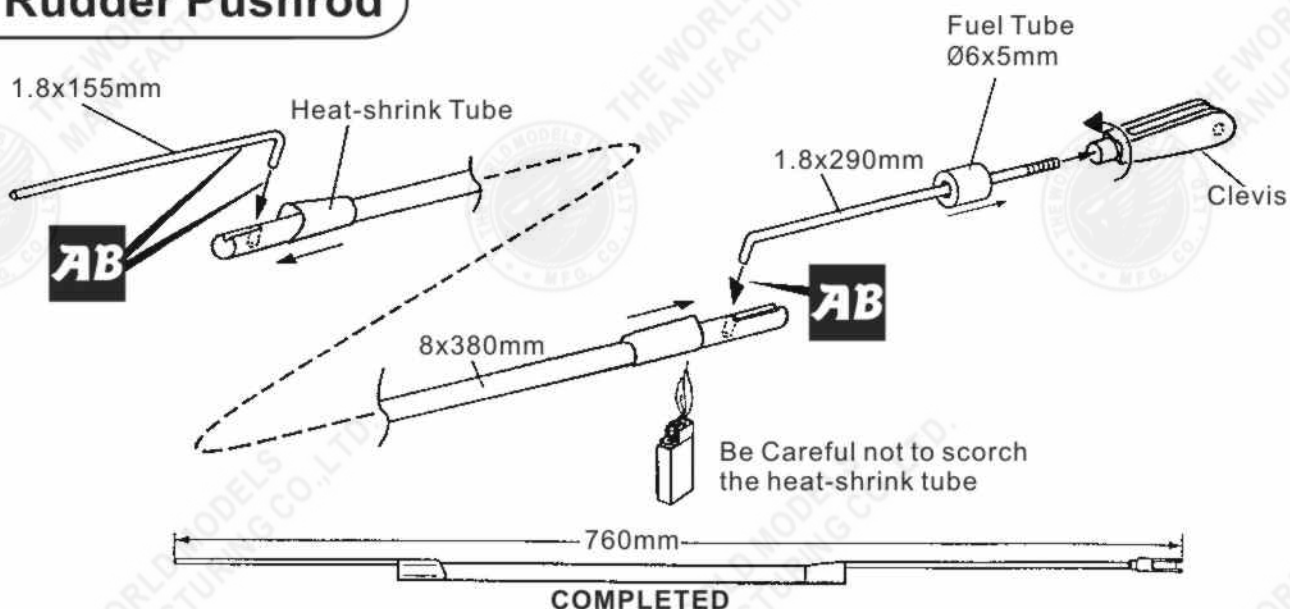
4.1 in.

If the engine throttle control is on the opposite side, install the throttle pushwire accordingly.

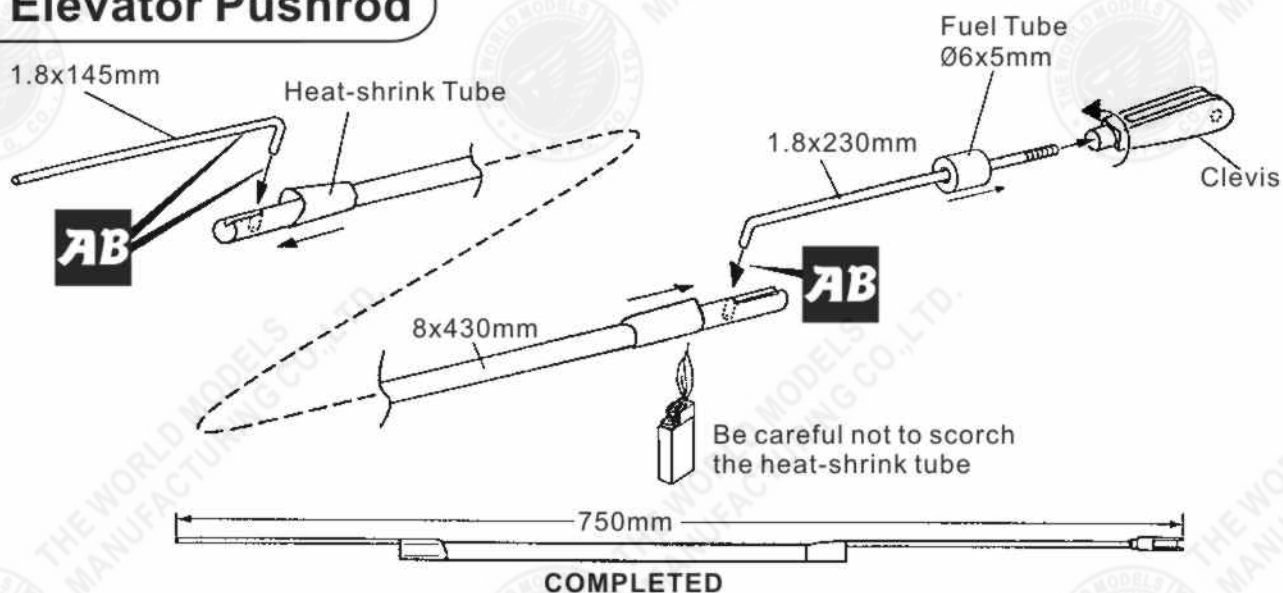
Install the throttle servo with the drive pinion on the same side of throttle pushwire.

Raise throttle servo is necessary to provide clearance between throttle and front wheel pushwires.

## 13 Rudder Pushrod



## 14 Elevator Pushrod



## 15 Servo Set

### LINKAGE CONNECTOR

3 x 3mm **Set Screw**

**Linkage Connector**

2mm **Nut**

2mm **Washer**

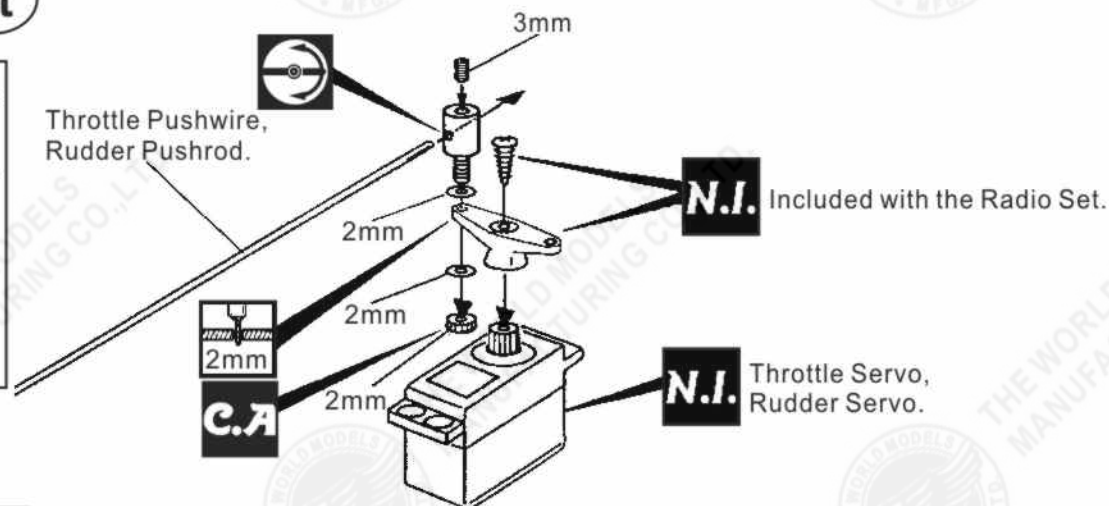
3

3

3

6

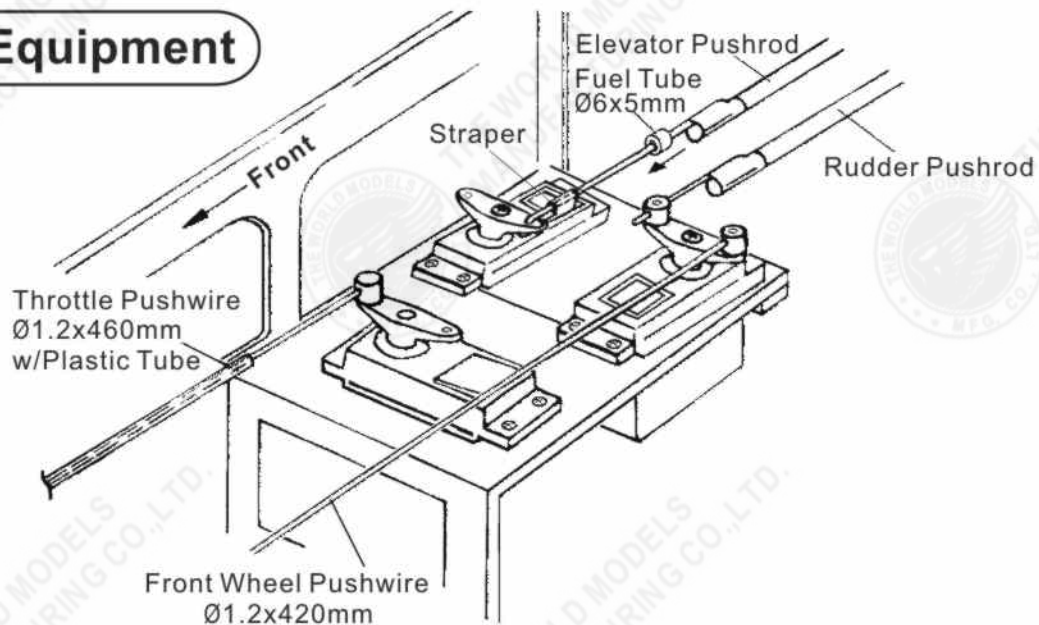
Throttle Pushwire,  
Rudder Pushrod.



Please refer to attached sheet for linkage connector installation.

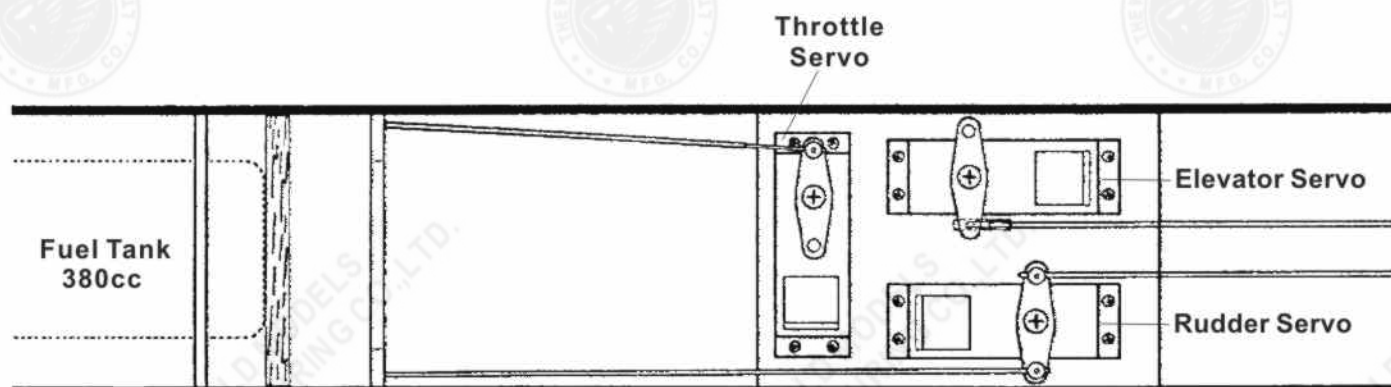


## 16 Radio Equipment



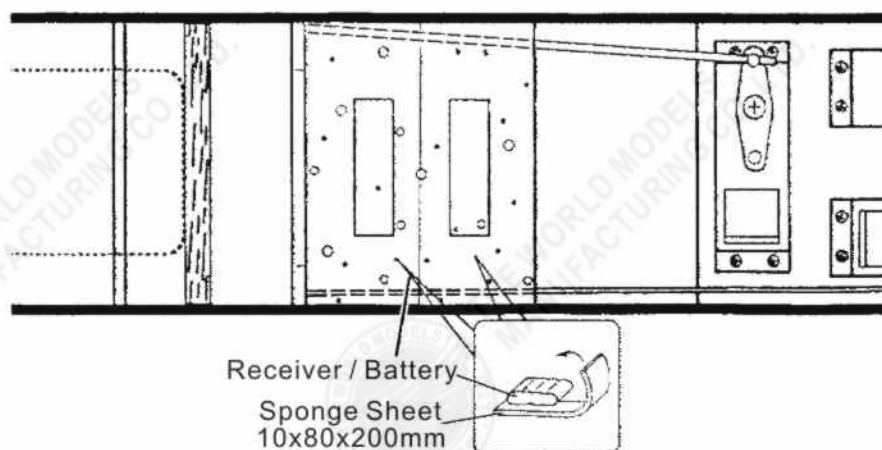
## 17 Radio Equipment

- Install and arrange the servo as shown in the diagram.



## 18 Radio Equipment

- Install Sponge for inserting Battery and Receiver.



## 19 Rudder Pushrod

PM2x 12mm Screw

2

Rudder Pushrod

PM2x 12mm

Rudder  
horn

Line up the holes  
of the horn to the  
edge of the rudder.  
See diagram.

Clevis

Fuel Tube  
Ø6x5mm

Horn

## 20 Elevator Pushrod

PM2x 12mm Screw

2

Elevator Pushrod

● Bottom View

Elevator  
horn

Line up the holes  
of the horn to the  
edge of the elevator.  
See diagram.

Clevis

Fuel Tube  
Ø6x5mm

Horn

## 21 Main Wing

Wooden Rod  
Ø8x130mm

Equal length on both  
side, then apply CA  
glue.

A A'  
A = A'

## 22 Main Wing

Plywood  
1.5x25x115mm

**!** Before every take-off  
put this plywood here  
to protect th wings.

**AB**



## 23 Main Wing

60x6mm Rudder Band



8

Rubber Band



Mount the rubber bands following step  
one to step four and repeat once.  
In total, eight rubber bands are used  
for mounting

Step 1

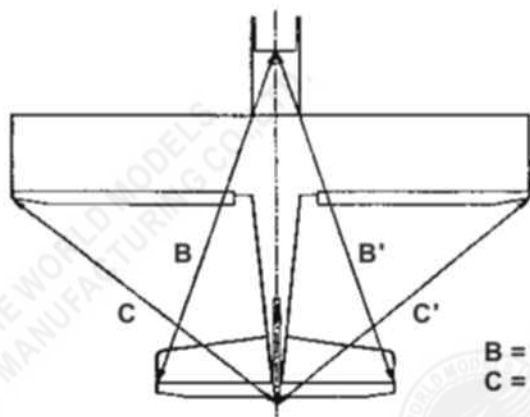
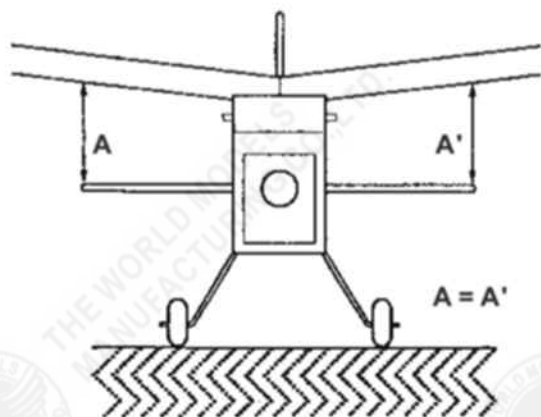
Step 4

Step 3

Step 2

## 24 Wing Setting

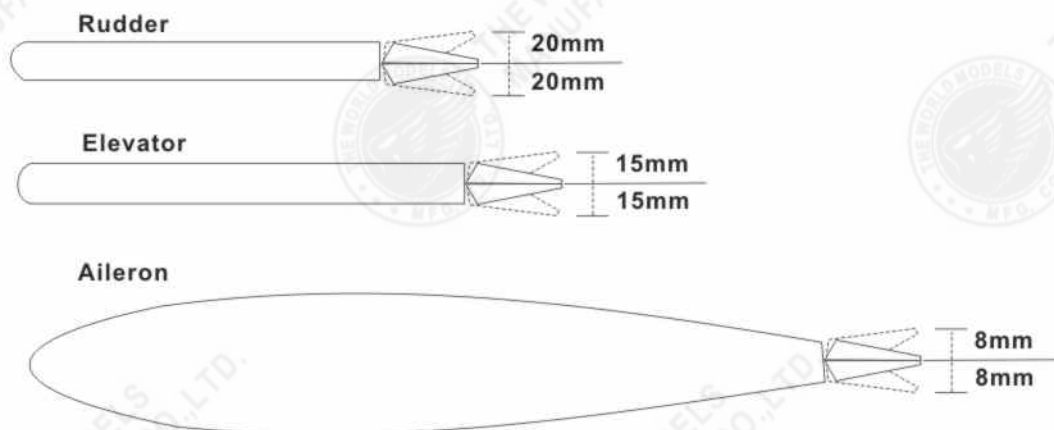
Adjust the wing and fuselage configuration  
as in the diagrams.



$B = B'$   
 $C = C'$

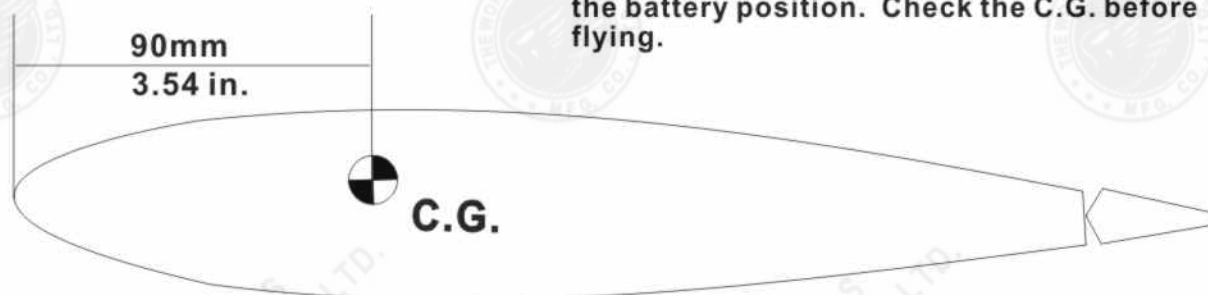
## 25 Control Throws

Adjust the control throws as shown in the diagram. These throws are good for general flying. You can adjust according to your personal preference.



## 26 C.G.

The ideal C.G. position is 90mm (3.54 in.) behind the leading edge measured at where the wing meets the fuselage. In order to obtain the C.G. specified, add weight to the fuselage or move the battery position. Check the C.G. before flying.



## ! Warning!

### Important Safety Precautions

- #First time flyer should never fly by himself / herself. Assistance from experienced flyer is absolutely necessary.
- #Pre-flight adjustment must be done before flying, it is very dangerous to fly a badly pre-adjusted aircraft.
- #*Super Frontier-40* is specially designed to be powered by 2C 0.40-0.50 or 4c 0.48-0.52 engine, using a more powerful engine does not mean better performance. In fact, over powered engine may cause severe damage and injuries.
- #Make sure the air field is spacious, never fly the plane too close to people and never get too close to a running propeller.
- #If you find wrinkles on the covering as a result of weather changes, you can use hot iron to remove the wrinkles. Please begin with lower temperature setting and gradually raise the temperature until the wrinkles are gone. Too hot an iron may damage the covering.
- #Check and re-tighten up all factory assembled screws, use thread locker if applicable.