

# ULTIMATE - 30

## INSTRUCTION MANUAL



**0.25 - 0.40 cu. in. displacement 2-cycle**  
**0.40 - 0.52 cu. in. displacement 4-cycle**

**Radio required : 4 channels, 4 servos airplane radio**

### Specifications

<b>Wing Span</b>	<b>42.0 in / 1060 mm</b>
<b>Wing Area</b>	<b>578 sq in / 37.3 sq dm</b>
<b>Flying Weight</b>	<b>4.4 - 4.6 lb / 2000 - 2100 g</b>
<b>Fuselage Length</b>	<b>39.0 in / 990 mm</b>

\* 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.



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# ULTIMATE - 30

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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 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 epoxy 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: 3 mm ).



Must be purchased separately!



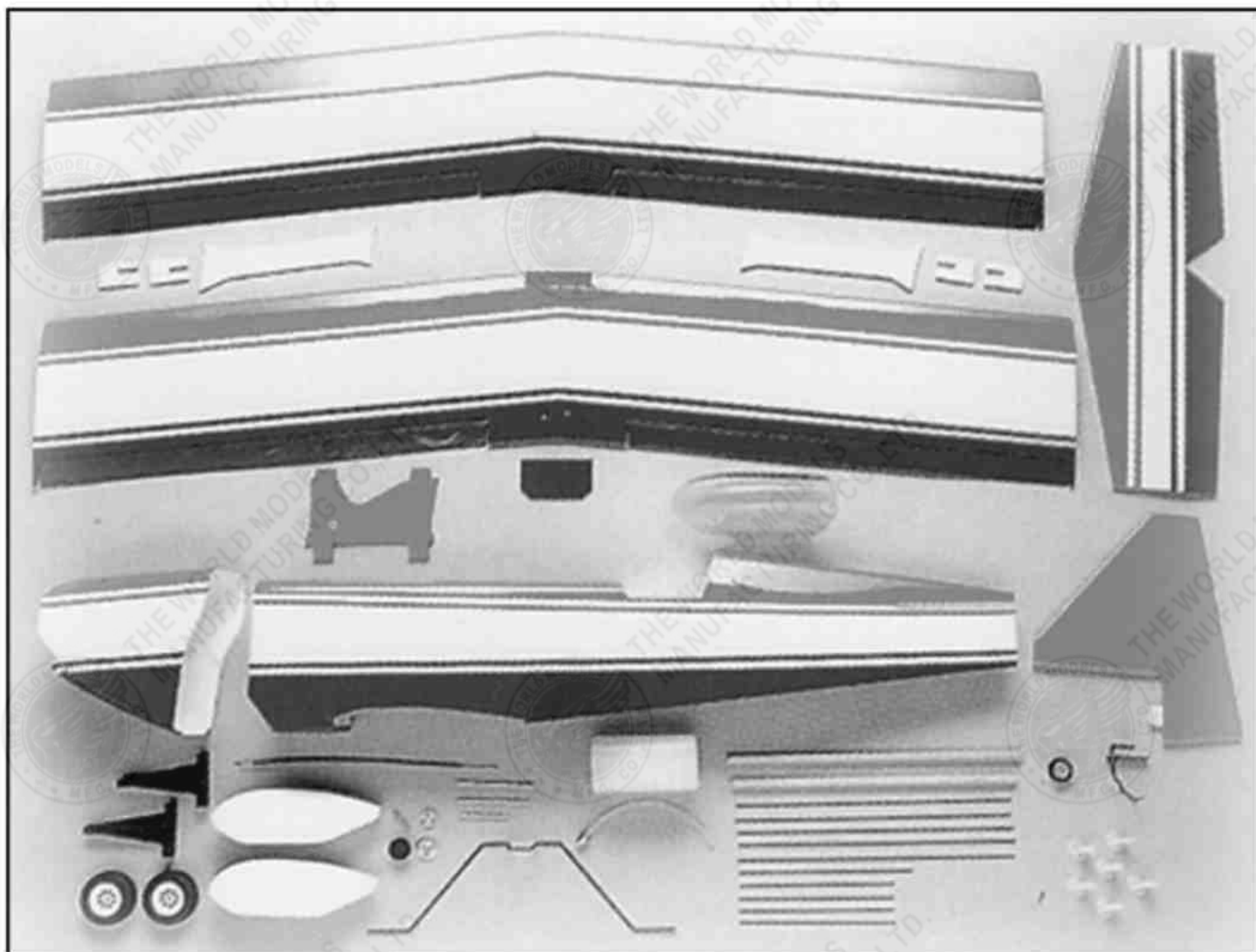
Pay close attention here!



Do not overlook this symbol!



Pierce the shaded portion  
covering film.

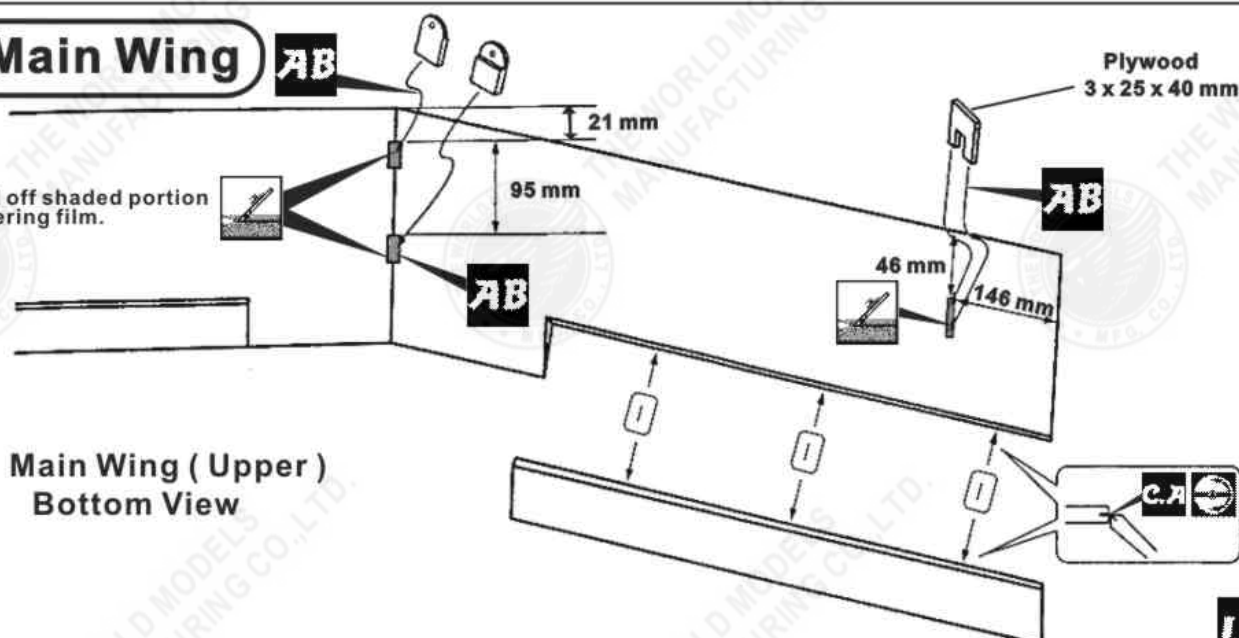


## Parts List

1. FUSELAGE -- 1 pc.
2. MAIN WING -- 2 pairs
3. MAIN WING BRACE -- 1 set ( 3pcs )
4. STABILIZER & ELEVATOR -- 1 set
5. VERTICAL FIN & RUDDER -- 1 set
6. CANOPY -- 1 pc.
7. COWLING -- 1 pc.
8. SPINNER Ø 52mm -- 1 pc.
9. ENGINE MOUNT PL5111-030 -- 1 set
10. FUEL TANK 260cc -- 1 set
11. MAIN LANDING GEAR -- 1 pair
12. TAIL LANDING GEAR -- 1 set
13. MAIN WHEEL COVER -- 1 pair
14. MAIN WHEEL Ø 50mm -- 2 pcs
15. TAIL WHEEL Ø 23mm -- 1 pc.
16. PUSH ROD:--  
WOODEN ROD Ø 8 x 280mm ( For Rudder Servo ) -- 1 pc.  
WOODEN ROD Ø 8 x 290mm ( For Elevator Servo ) -- 1 pc.  
METAL ROD Ø 1.8 x 120mm ( For Elevator & Rudder Servo ) -- 2 pcs  
METAL ROD Ø 1.8 x 70mm w/Threads ( For Aileron Servo ) -- 2 pcs  
METAL ROD Ø 1.8 x 165mm w/Threads ( For Aileron to Aileron ) -- 2 pcs  
METAL ROD Ø 1.8 x 200mm w/Threads ( For Rudder Servo ) -- 1 pc.  
METAL ROD Ø 1.8 x 180mm w/Threads ( For Rudder Servo ) -- 1 pc.  
METAL ROD Ø 1.8 x 185mm w/Threads ( For Elevator Servo ) -- 1 pc.
17. THROTTLE PUSHWIRE Ø 1.2 x 320mm  
w/Plastic tube d2 x D3 x 200mm -- 1 set
18. WOODEN PARTS : --  
BALSA 7 x 10 x 22 mm ( For Aileron Servo ) -- 1 pc.  
BALSA 10 x 10 x 22 mm ( For Aileron Servo ) -- 1 pc.  
BALSA 10 x 10 x 74 mm ( For Fixing Fuel Tank ) -- 1 pc.  
BALSA 5 x 5 x 81 mm ( For Servos Stand ) -- 2 pcs  
PLYWOOD 2 x 40 x 72 mm ( Wing Protection ) -- 1 pc.  
PLYWOOD 3 x 25 x 40 mm ( Stylobate: Wing to Wing ) -- 4 pcs  
PLYWOOD 6 x 20 x 20 mm ( Stylobate: Fuselage to Wing ) -- 1 pc.  
PLYWOOD 6 x 24 x 20 mm ( Stylobate: Fuselage to Wing ) -- 1 pc.  
PLYWOOD 3mm -- 2 pcs  
PLYWOOD 6mm -- 1 pc.  
PLYWOOD 3 x 66 x 87mm ( Servos Stand ) -- 1 pc.
19. PLASTIC PARTS : --  
CLEVIS -- 9 pcs  
COLLAR Ø 3.6mm -- 4 pcs  
PLATE -- 5 pcs  
RING Ø 2.3mm -- 2 pcs  
STRAPER -- 3 pcs  
HORN -- 7 sets  
PILOT ( PC0001063A ) -- 1 pc.  
SILICON GROMMET d1.5 x D6.5mm ( For Canopy & Cowling ) -- 9 pcs
20. METAL PARTS : --  
LINKAGE CONNECTOR 2.1mm -- 2 sets  
COLLAR 2.1mm w/set screw -- 1 set  
COLLAR 3.6mm w/set screw -- 2 sets  
NUT 3mm -- 8 pcs  
NYLON INSERT LOCK NUT 3mm -- 6 pcs  
SCREW PA2 x 8mm -- 4 pcs  
SCREW PA3 x 12mm -- 8 pcs  
SCREW PM2 x 12mm -- 14 pcs  
SCREW PM3 x 12mm -- 6 pcs  
SCREW PM3 x 20mm -- 4 pcs  
SCREW PM3 x 25mm -- 4 pcs  
SCREW PM4 x 30mm -- 1 pc.  
SCREW PWA2.3 x 8mm -- 5 pcs  
SCREW PWA2.6 x 12mm -- 4 pcs  
WASHER 3mm -- 24 pcs  
WASHER 4mm -- 1 pc.
21. FUEL TUBE Ø 6 x 5mm -- 12 pcs  
HEAT-SHRINK TUBE Ø 8 x 40mm -- 4 pcs
22. DECALS : -- 1 set

# 1 Main Wing

Peel off shaded portion covering film.

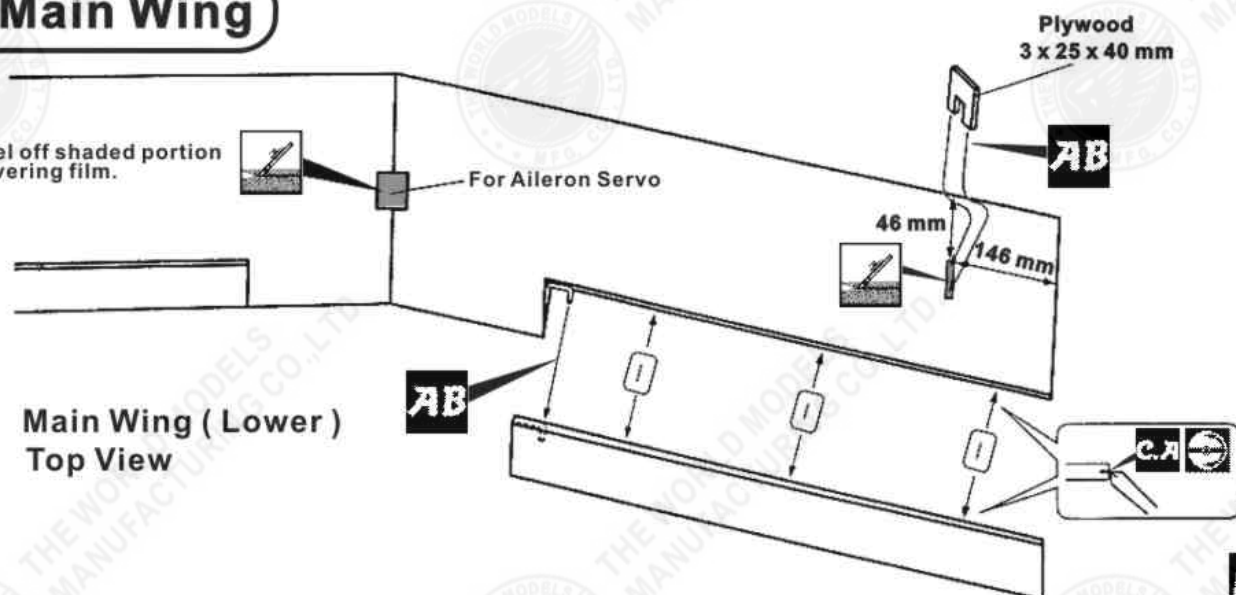


Main Wing ( Upper )  
Bottom View

L/R

# 2 Main Wing

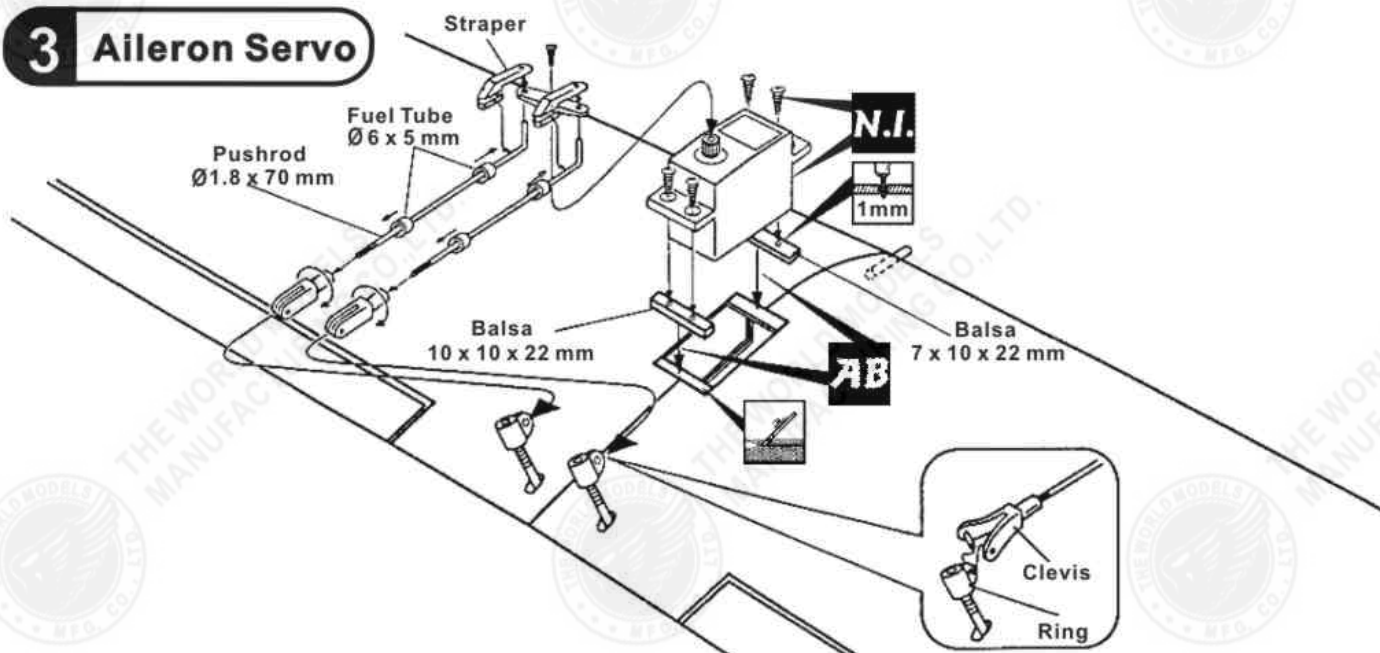
Peel off shaded portion covering film.



Main Wing ( Lower )  
Top View

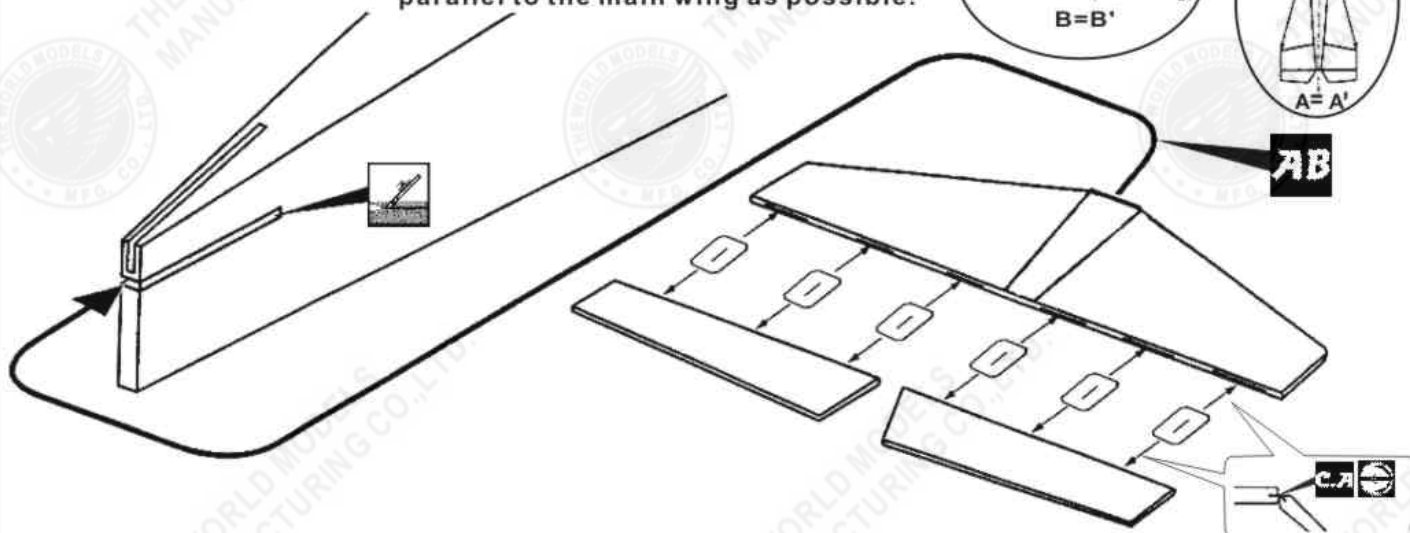
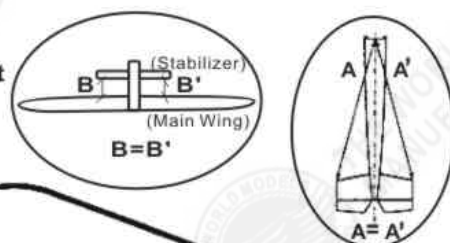
L/R

# 3 Aileron Servo



## 4 Stabilizer

Temporary install the main wing, adjust leveling of the stabilizer to make it as parallel to the main wing as possible.



## 5 Vertical Fin/Rudder

PA3 x 12 mm Screw

3mm Set Screw

2.1mm Collar

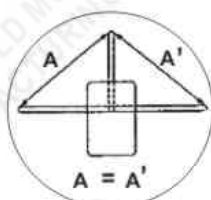
1mm

PA3 x 12 mm

2.1mm Collar

3mm Set Screw

Tail Wheel Ø2.3mm



1mm

PA3 x 12 mm

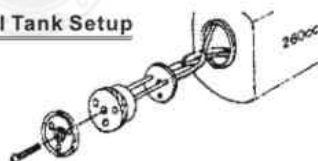
2.1mm Collar

3mm Set Screw

Tail Wheel Ø2.3mm

## 6 Fuel Tank

Fuel Tank Setup



Fuel Tank 260 cc

Install Balsa 10 x 10 x 74 mm  
(For fixing fuel tank)

Fuel Tank

● Bottom View



## 7 Engine Mount

PM3 x 20mm Screw



4

3 mm Washer



4

Engine Mount  
PL5111-030

PM3 x 20 mm

3mm

## 8 Engine

PM 3 x 25mm Screw



4

3mm Washer



8

3mm Nut



8

PM 3 x 25mm

AB

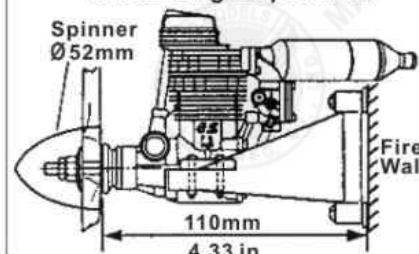
3mm

3mm

3mm

Install Engine position

Spinner  
Ø52mm



110mm

4.33 in

Illustration is for side mount.  
You can mount your engine  
upright or inverted simply by  
rotating the engine mount.  
Thrust angles will not be  
affected.

## 9 Cowling

PWA2.6 x 12 mm Screw



4

d1.5 x D6.5 mm Silicon Grommet



4

PWA 2.6 x 12mm

Silicon Grommet  
d1.5 x 6.5mm

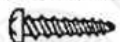
3.5mm

1mm

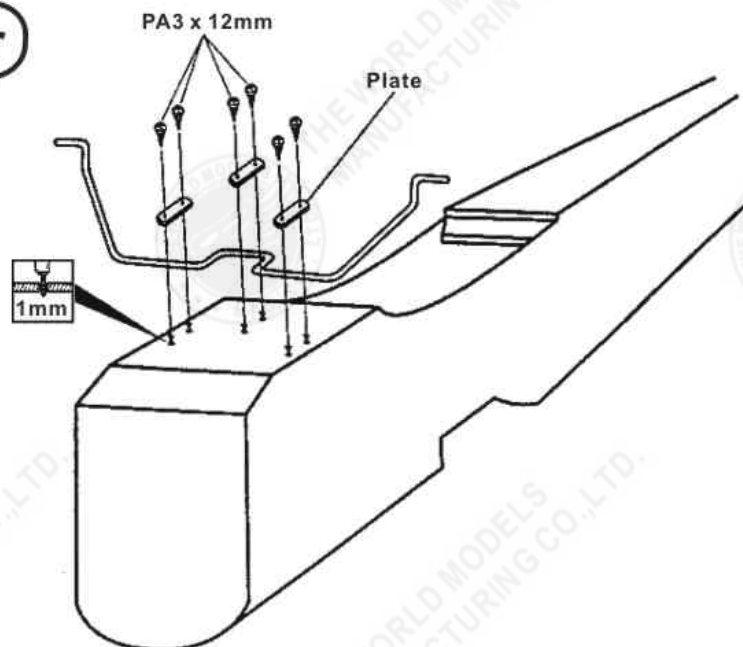
PWA 2.6 x 12mm

## 10 Landing Gear

PA3 x 12 mm Screw



6



## 11 Landing Gear

PA2 x 8mm Screw



4

3mm Set Screw



2

3.6mm Collar



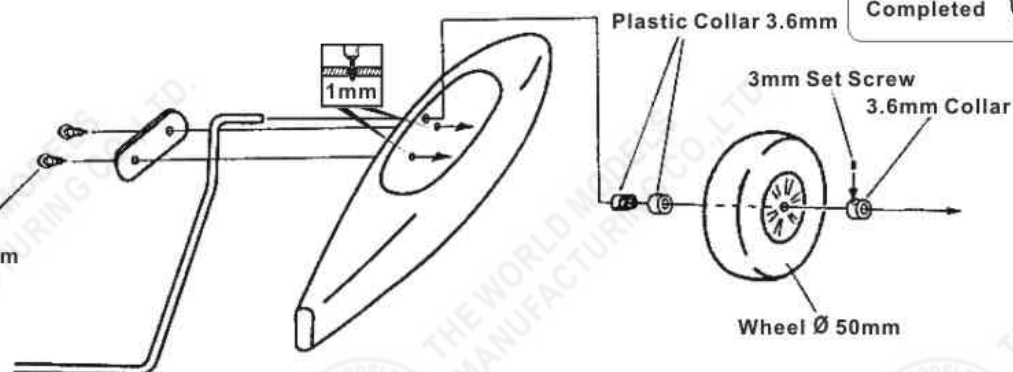
2

3.6mm Plastic Collar



4

PA2 x 8mm



Completed

L/R

## 12 Servo Set

LINKAGE CONNECTOR

3mm Set Screw



2

Linkage Connector



2

2mm Nut

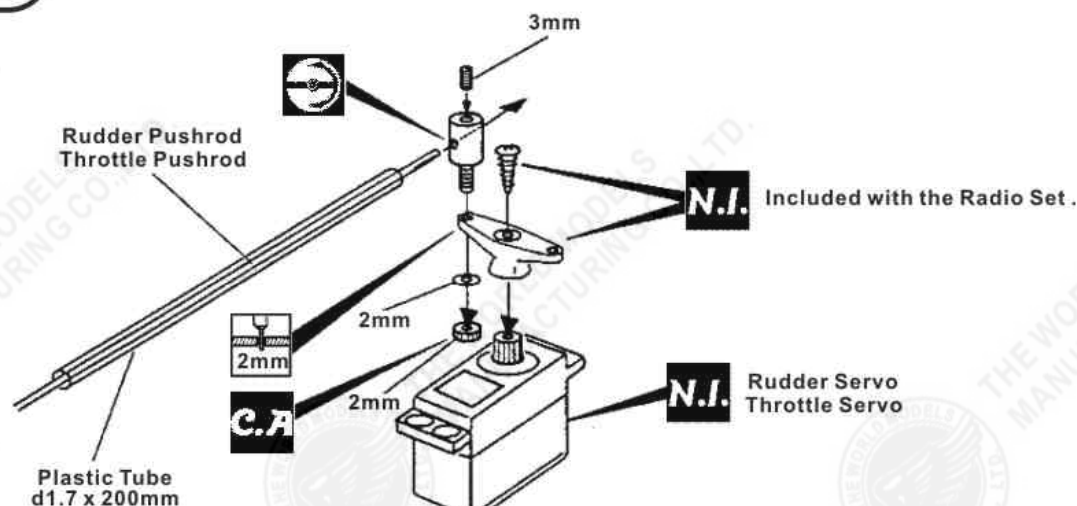


2

2mm Washer

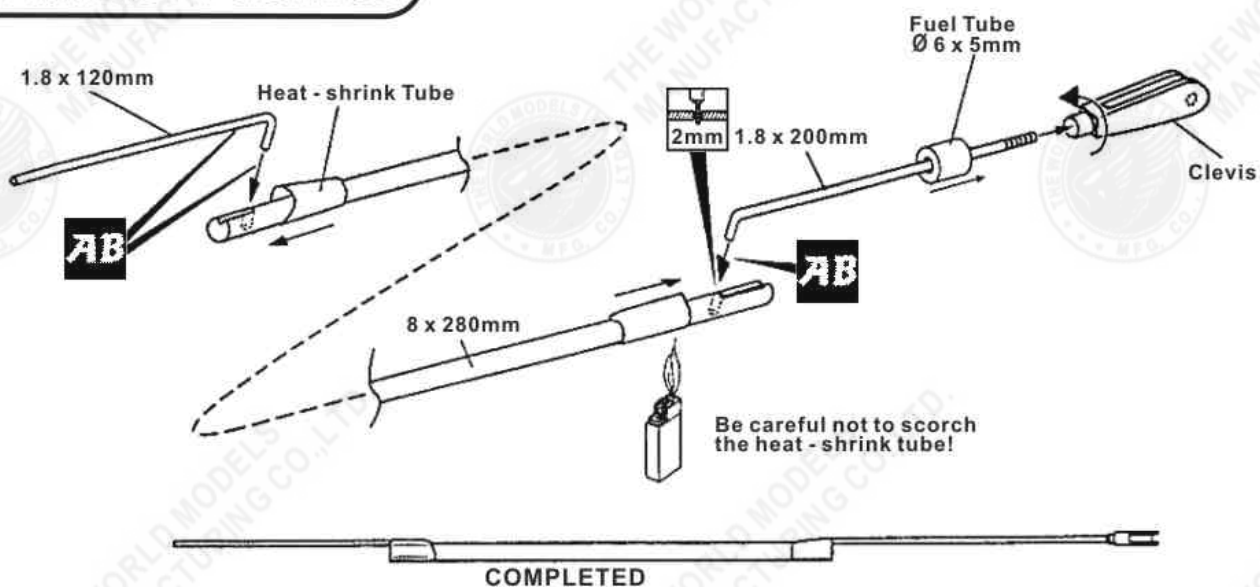


2

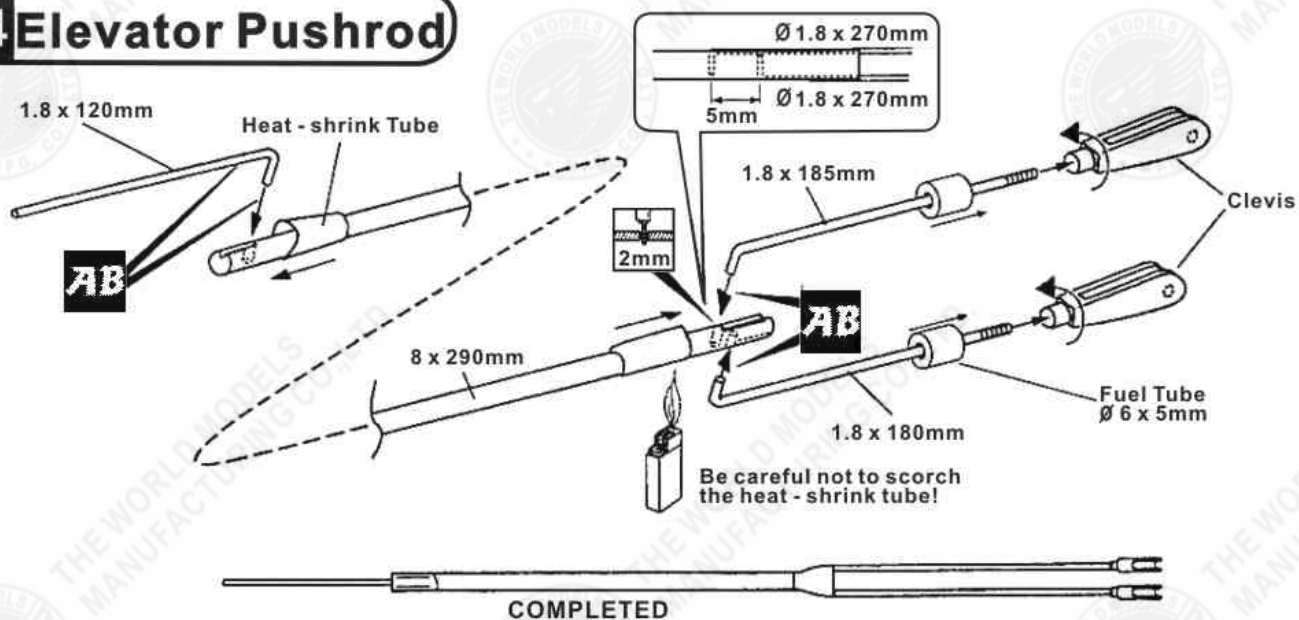


Please refer to attached sheet for linkage connector installation.

## 13 Rudder Pushrod

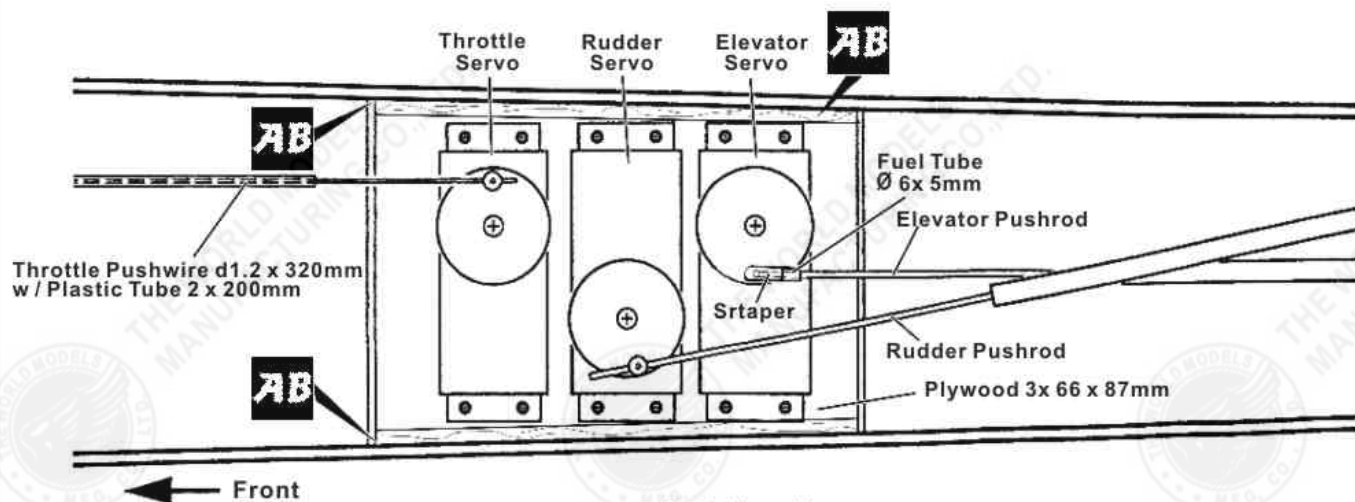


## 14 Elevator Pushrod



## 15 Radio Equipment

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

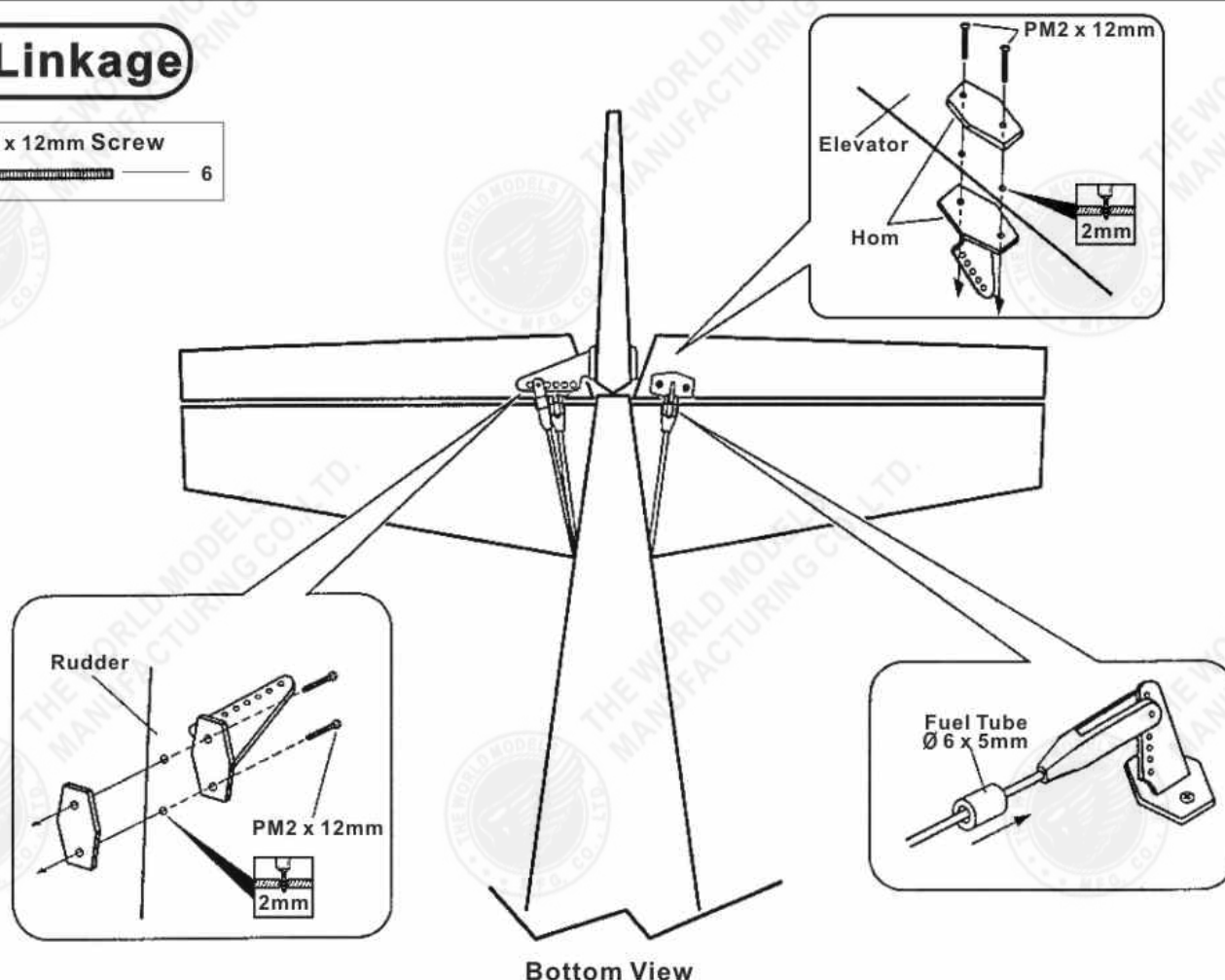




## 16 Linkage

PM2 x 12mm Screw

6



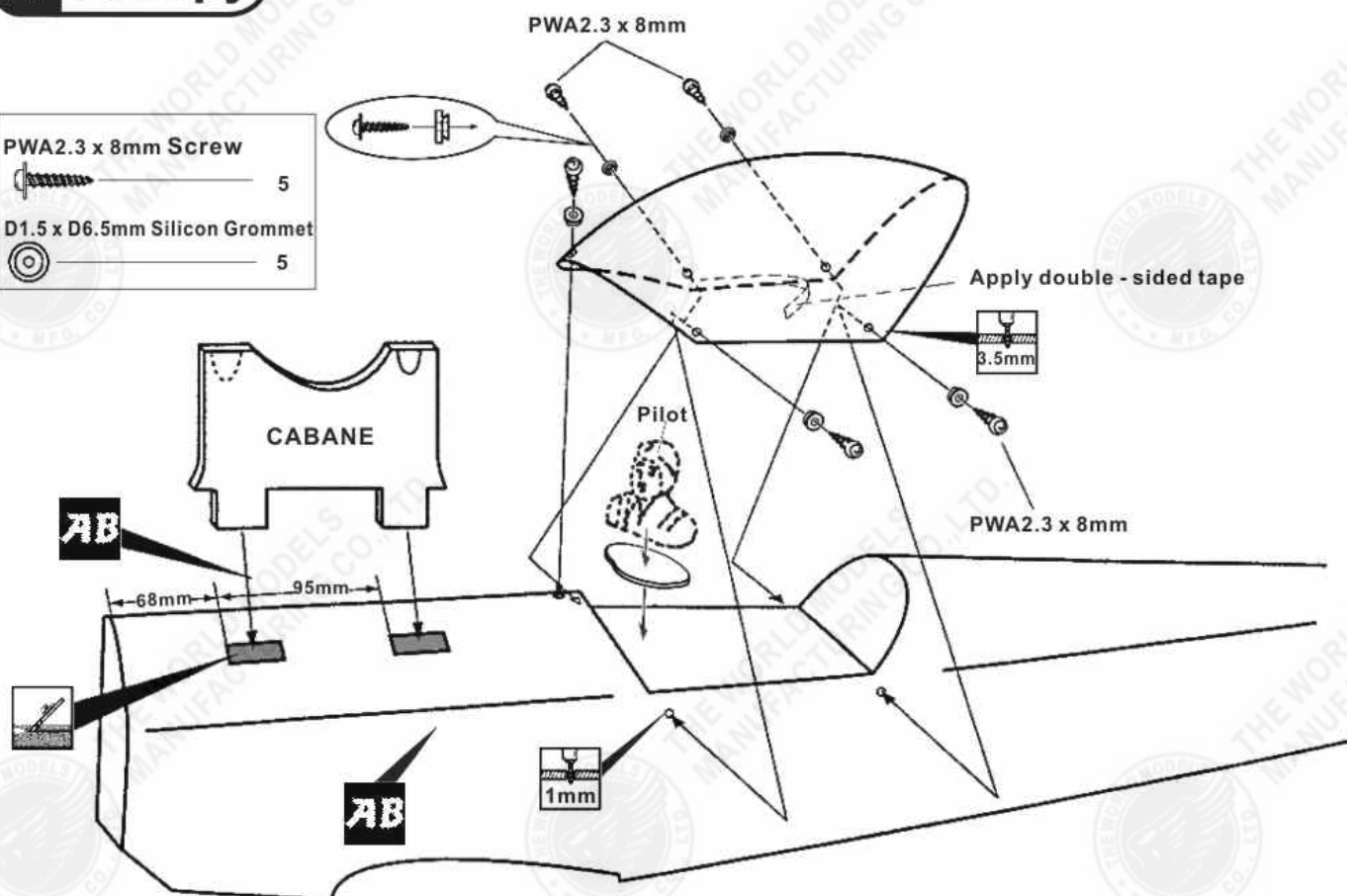
## 17 Canopy

PWA2.3 x 8mm Screw

5

D1.5 x D6.5mm Silicon Grommet

5



## 18 Main Wing

Pm4 x 30mm Screw

4mm Washer

4.1mm

Pm4 x 30mm  
4mm

Wing Protection  
2 x 72 x 40mm

AB

Main Wing  
(Lower)

• Bottom View

## 19 Main Wing

Pm3 x 12mm Screw

3mm Washer

3mm Nylon Insert Lock Nut

PM3 x 12mm

3mm

PM3 x 12mm

3mm

PM3 x 12mm

3mm

Cabane

Main Wing  
BRACE

3mm

3mm

PM3 x 12mm

Fasten the upper and lower wing to the fuselage,  
the mark and drill the Ø 3mm holes on the cabane  
through which the PM3 holding bolts pass through.

## 20 Main Wing

PM2 x 12mm Screw

8

Main Wing ( Upper )

PM2 x 12mm

Pushrod w / Threads  
Ø1.8x 185mm

Fuel Tube  
Ø6 x 5mm

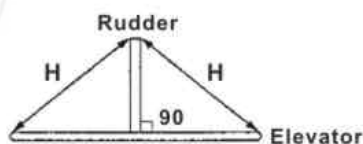
Clevis

Horn

Main Wing ( Lower )

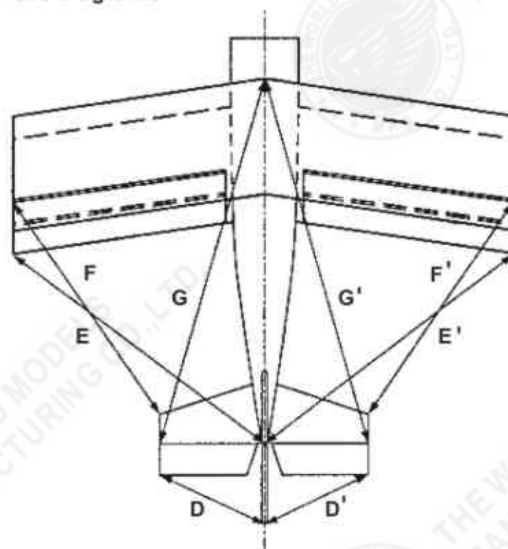
L/R

## 21 Wing Setting



A = A'  
B = B'  
C = C'  
D = D'  
E = E'  
F = F'  
G = G'  
H = H'

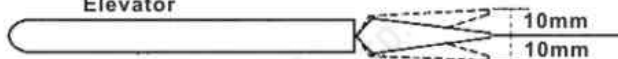
Adjust the wing and fuselage configuration as in the diagrams.



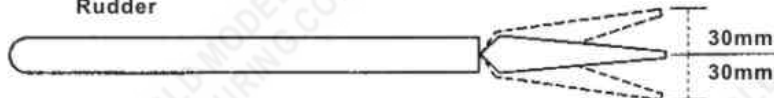
## 22 Control Throws

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

Elevator



Rudder



Aileron



## **! 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.
- # **ULTIMATE 30** is designed to be powered by **2C 0.25 - 0.40** or **2C 0.40 - 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.

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