

# 36% Katana



**Requires :100 c.c. engine, 6-channel radio  
w/ 9 high torque servos.**

## Specifications

<b>Wing Span</b>	<b>106 in / 2690 mm</b>
<b>Wing Area</b>	<b>2100 sq in / 135.5 sq dm</b>
<b>Flying Weight</b>	<b>26-28 lbs / 11800-12710 g</b>
<b>Fuselage Length</b>	<b>93 in / 2360 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.



**TWM**  
**The World Models**  
**Manufacturing Co., LTD.**  
www.theworldmodels.com

FACTORY PRE-FABRICATED  
ALMOST-READY-TO-FLY (ARF) SERIES  
MADE IN CHINA

# 36% Katana

## INDEX

BEFORE YOU BEGIN .....	P. 1
PARTS LIST .....	P. 2
ASSEMBLY .....	P.3-P.12
SAFETY PRECAUTIONS .....	P. 12

## 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 not extend to the parts that are good before gluing to defective parts during assembly. Warranty will not cover any parts modified by customer.
- 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!



**Warning!**

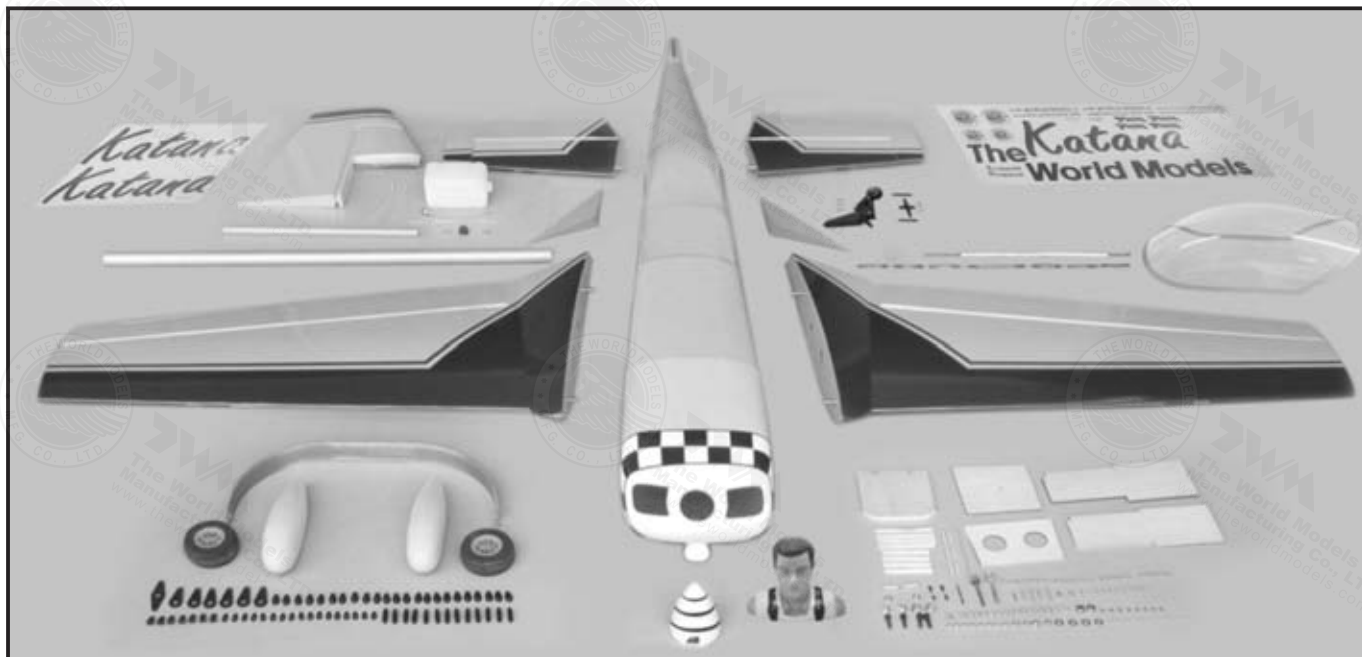
Do not overlook this symbol!



Pierce the shaded portion  
covering film.



Apply thread locker



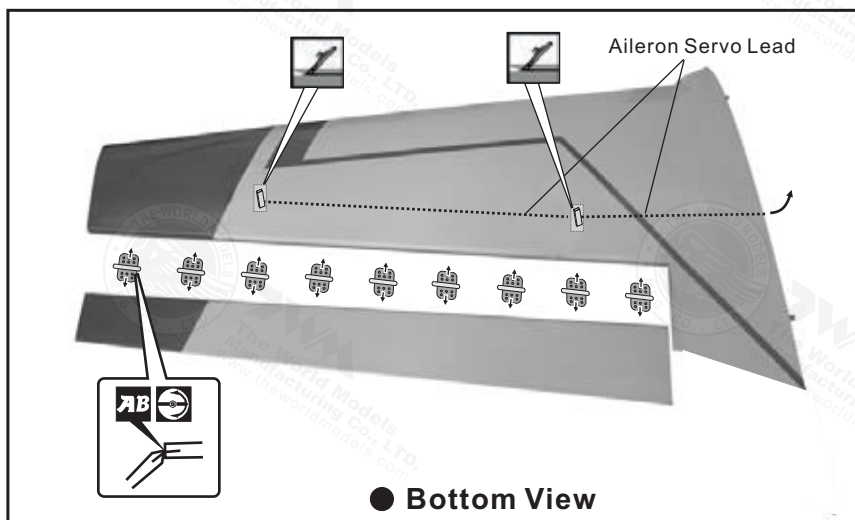
## Parts List

1. MAIN WING -- 1 pair  
METAL HINGES -- 18 pcs
  2. HEAVY DUTY SERVO HORN PL4120300 -- 4 sets  
SCREW PM4x85mm -- 2 pcs  
SCREW PM4x75mm -- 2 pcs  
M4 NYLON INSERT LOCK NUT -- 4 pcs  
HEAVY DUTY HORN BRACKET PL4112400 -- 4 sets  
HEAVY DUTY CLEVIS PL4112200 -- 8 sets  
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 4 sets  
PUSHROD Ø2.5x80mm w/ Threads (For Aileron) -- 4 pcs
  3. STABILIZER & ELEVATOR -- 1 set  
METAL HINGES -- 12 pcs  
PUSHROD M3x35mm w/ Threads (For Elevator) -- 2 pcs  
HEAVY DUTY HORN BRACKET PL4112400 -- 2 sets  
HEAVY DUTY CLEVIS PL4112200 -- 4 sets  
HEAVY DUTY SERVO HORN PL4120300 -- 2 sets  
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 2 sets  
SCREW PM4x65mm -- 2 pcs  
M4 NYLON INSERT LOCK NUT -- 2 pcs
  4. STABILIZER TUBE Ø22x615mm -- 1 pc.  
SCREW PA3x14mm -- 2 pcs  
WASHER d3xD7mm -- 2 pcs  
FUSELAGE -- 1 pc.
  5. VERTICAL FIN & RUDDER -- 1 set  
METAL HINGES -- 5 pcs
  6. TAIL GEAR ASSEMBLY 20-28LBS PL3410020 -- 1 set
  7. FIRE WALL 12x125x164.2mm (F12) -- 1 pc.  
ENGINE BOX SIDE PLATE 6x98x330mm (F10) -- 1 pc.  
ENGINE BOX SIDE PLATE 6x98x321.7mm (F11) -- 1 pc.  
LOWER PLATE 3x159x165mm (F13) -- 1 pc.  
BALSA 10x10x98mm (F23) -- 1 pc.  
BALSA 10x10x98mm (F24) -- 1 pc.  
BALSA 10x10x153mm (F25) -- 1 pc.  
BALSA 10x10x98mm (F23A) -- 1 pc.  
BALSA 10x10x98mm (F24A) -- 1 pc.  
BALSA 10x10x153mm (F2A) -- 1 pc.  
WOOD 10x10x98mm (F26) -- 6 pcs
  8. MAIN LANDING GEAR -- 1 pc.  
MAIN WHEEL Ø102mm -- 2 pcs  
AXLE SHAFT Ø5x54mm -- 2 pcs  
M8 NYLON INSERT LOCK NUT -- 2 pcs  
SCREW PA3x14mm -- 4 pcs  
SOCKET HEAD SCREW M6x20mm -- 4 pcs  
COLLAR Ø5.2mm w/ set screw -- 4 pcs  
WHEEL PANTS -- 1 pair
  9. EYE SCREW M2.5x8x25mm w/ Threads (For Rudder) -- 2 pcs  
HEAVY DUTY CLEVIS PL4112200 -- 2 sets  
HEAVY DUTY HORN BRACKET PL4112400 -- 2 sets  
SWIVEL CLEVIS HORN FAIRING PL4610020 -- 1 set  
SCREW M4x130mm -- 1 pc.  
M4 NYLON INSERT LOCK NUT -- 2 pcs  
SWIVEL CLEVIS HORN SUPPORT PL4610120 -- 1 set  
SCREW PM2.5x35mm -- 1 pc.  
M2.5 NYLON INSERT LOCK NUT -- 1 pc.  
WIRE Ø1x1100mm (For Rudder) -- 2 pcs  
COPPER TUBE d2.5xD3.2x8mm (For Rudder) -- 2 pcs
  10. FUEL TANK 1100cc PL112110G (Gasoline Fuel) -- 1 set  
CABLE TIE (Fuel Tank) -- 2 pcs
  11. PLYWOOD 3x108x190mm -- 1 pc.  
SCREW PWA2.6x12mm -- 4 pcs  
M6 BLIND NUT -- 4 pcs  
SOCKET HEAD SCREW M6x50mm -- 4 pcs  
WASHER d6xD15mm -- 4 pcs
  12. EYE SCREW M2.5x8x25mm w/ Threads (For Rudder) -- 2 pcs  
PUSHROD M3x35mm w/ Threads (For Rudder) -- 2 pcs  
HEAVY DUTY SERVO HORN PL4120600 -- 2 sets  
HEAVY DUTY CLEVIS PL4112200 -- 6 sets  
COPPER TUBE d2.5xD3.2x8mm (For Rudder) -- 2 pcs  
THROTTLE PUSHWIRE Ø1.2x580mm -- 1 pc.  
w/ Plastic tube d2xD3x350mm -- 1 pc.  
SPONGE -- 2 pcs  
LINKAGE CONNECTOR 2.1mm -- 1 set
  13. WING TUBE Ø38x1150 -- 1 pc.  
SCREW PM3x30mm -- 1 pc.  
SCREW PA3x30mm -- 1 pc.  
WASHER d3xD7mm -- 2 pcs  
WING FAIRING 67x120x330mm -- 1 pair
  14. COCKPIT -- 1 pc.  
CANOPY -- 1 pc.  
PILOT (PC101110F) -- 1 pc.  
SCREW PWA2.3x12mm -- 6 pcs  
SCREW PM3x20mm -- 2 pcs  
SILICON GROMMET d1.5xD6.5mm -- 6 pcs  
WASHER d3xD7mm -- 2 pcs
  15. COWLING -- 1 pc.  
TRANSPARENT 3D TEMPLATE -- 1 pc.  
SPINNER Ø102mm (w/ alu. back plate) -- 1 set  
SCREW PA3x12mm -- 6 pcs  
SILICON GROMMET d2.5xD8.5mm -- 6 pcs  
WASHER d3xD7mm -- 6 pcs
  16. DECALS -- 1 set
- **COVERING:**  
**TOUGHLON STL 330 CADMIUM YELLOW**  
**TOUGHLON STL 550 PEARL BLUE**  
**TOUGHLON STL 511 PEARL FERRARI RED**

## 1 Main Wing

- Replace CA hinges by metal hinges. Glue the metal hinges to wing and aileron by epoxy.

L/R



## 2 Aileron Servos

- Locate pre-threaded hard wood blocks installed in the ailerons.

PM4x85mm Screw

PM4x75mm Screw

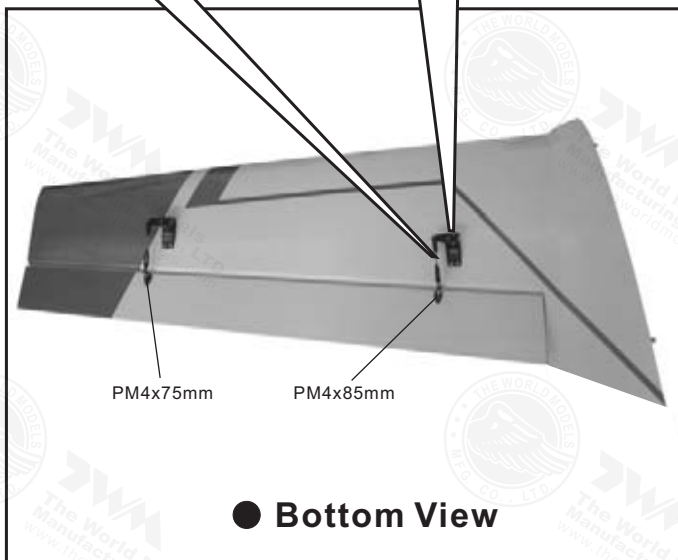
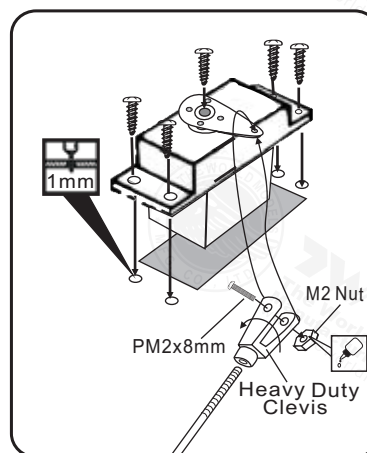
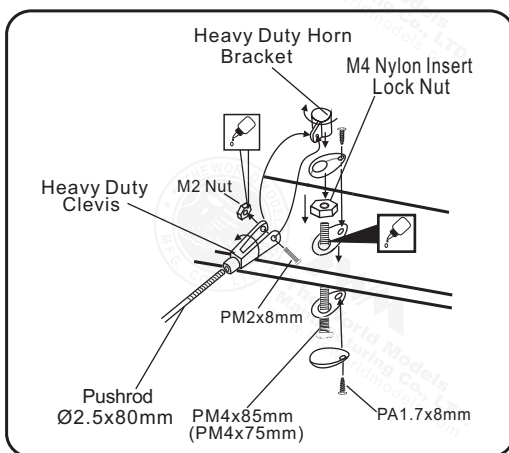
M4 Nylon Insert Lock Nut

PM 2x12 mm PL4120300

M2 Nut



L/R





### 3 Stabilizer & Elevator Pushrod

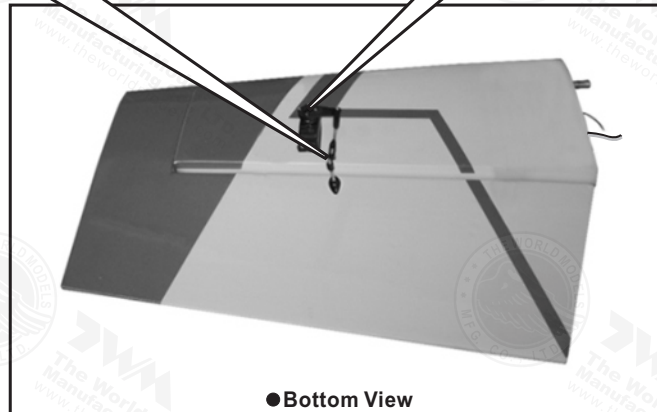
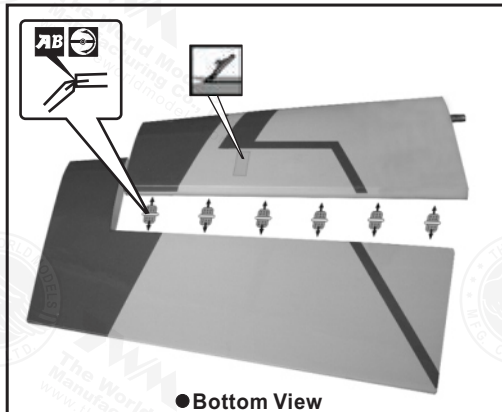
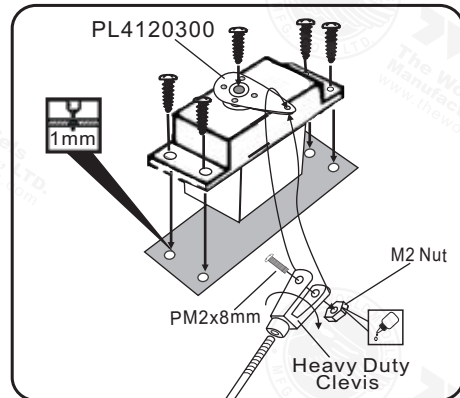
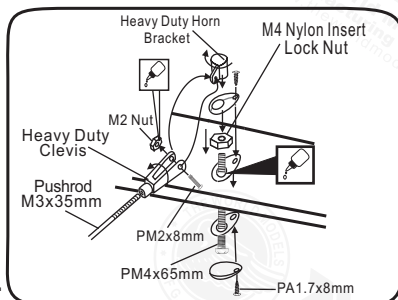
PM4x65mm Screw

2

M4 Nylon Insert Lock Nut

2

- Locate pre-threaded hard wood blocks installed in the elevators.



- Replace CA hinges by metal hinges. Glue the metal hinges to stabilizer and elevator by epoxy.

L/R

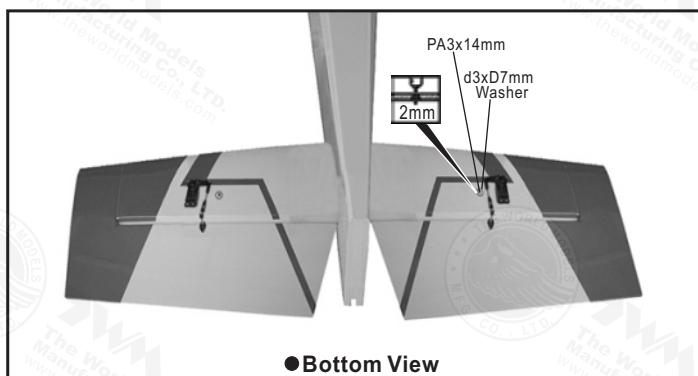
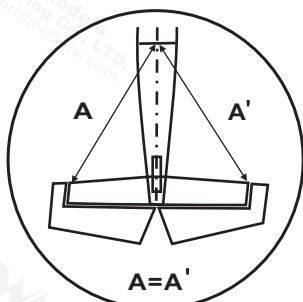
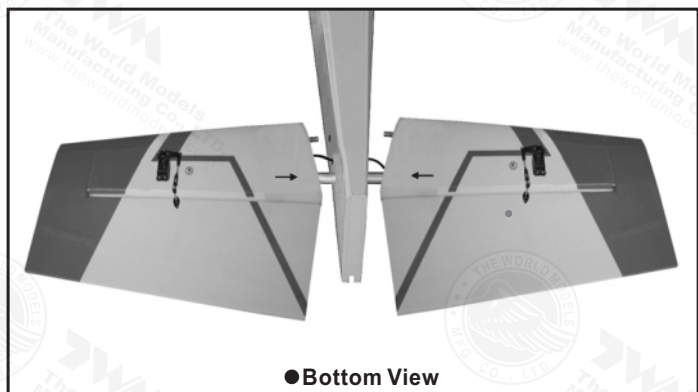
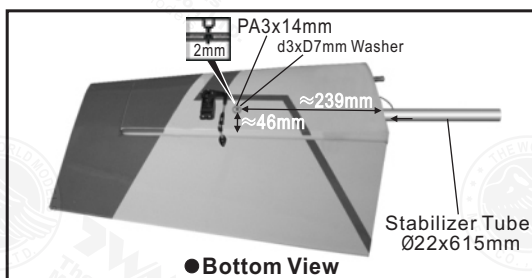
### 4 Stabilizer & Elevator

PA3x14mm Screw

2

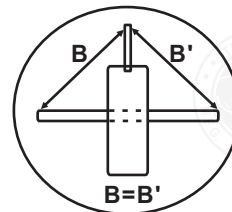
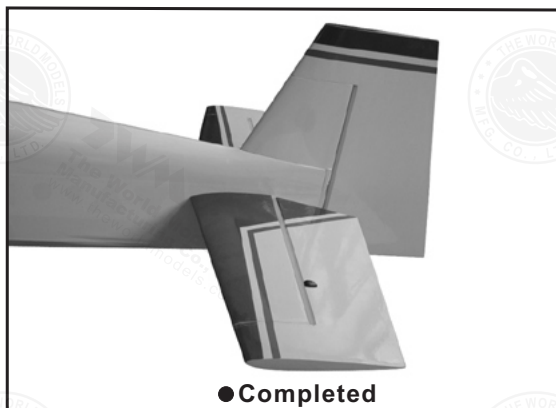
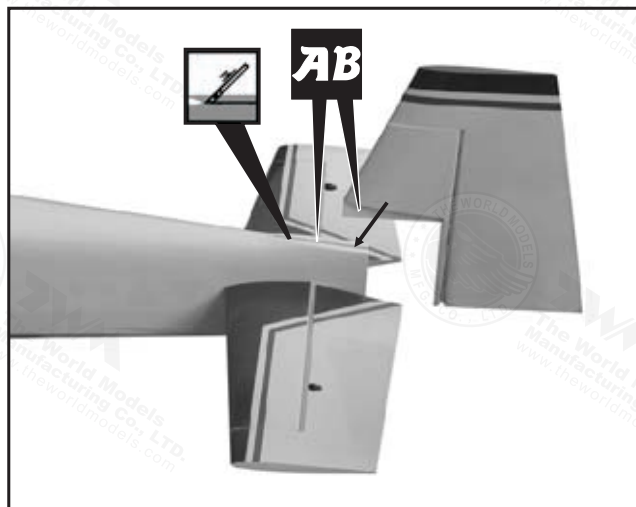
d3xD7mm Washer

2



L/R

## 5 Vertical Fin & Rudder



- Replace CA hinges by metal hinges. Glue the metal hinges to vertical and rudder by epoxy.

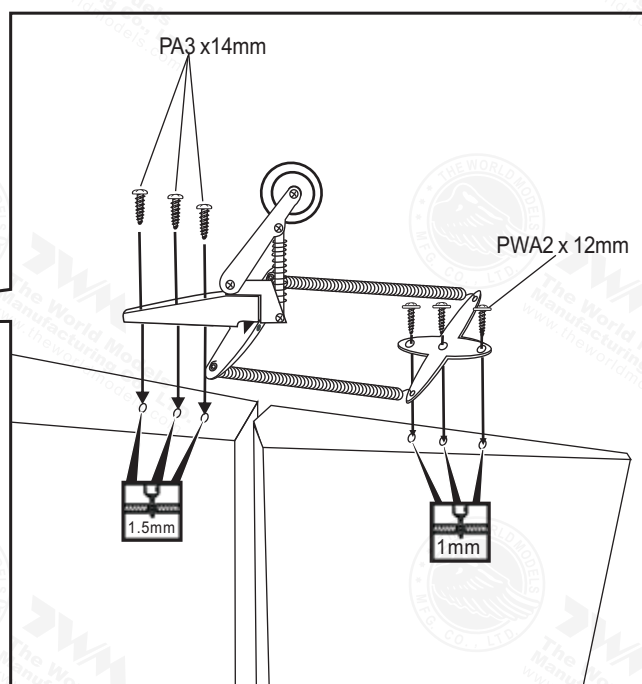
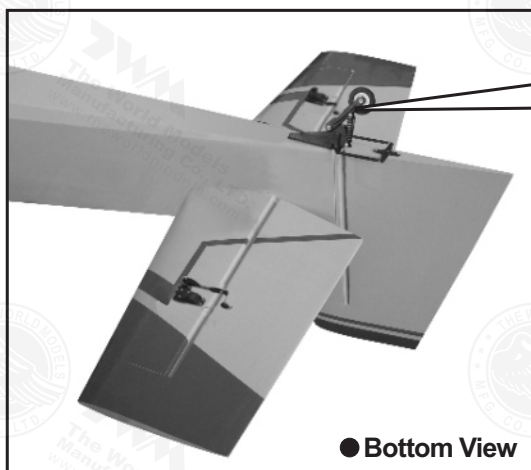
## 6 Tail Landing Gear

PA3x14mm Screw

3

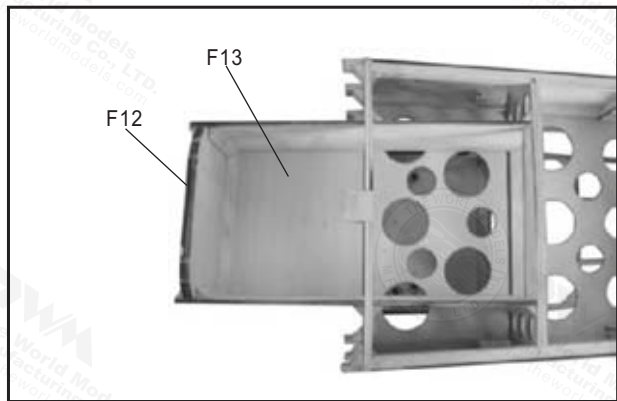
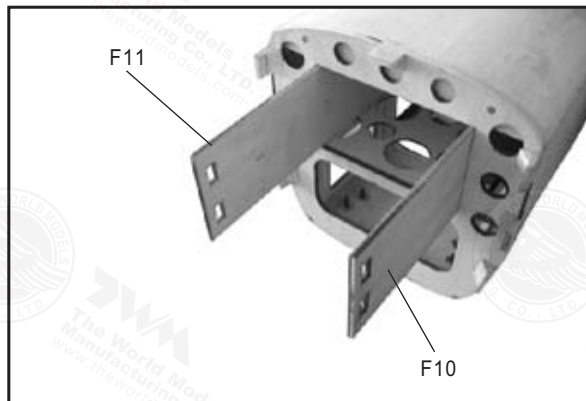
PWA2x12mm Screw

3

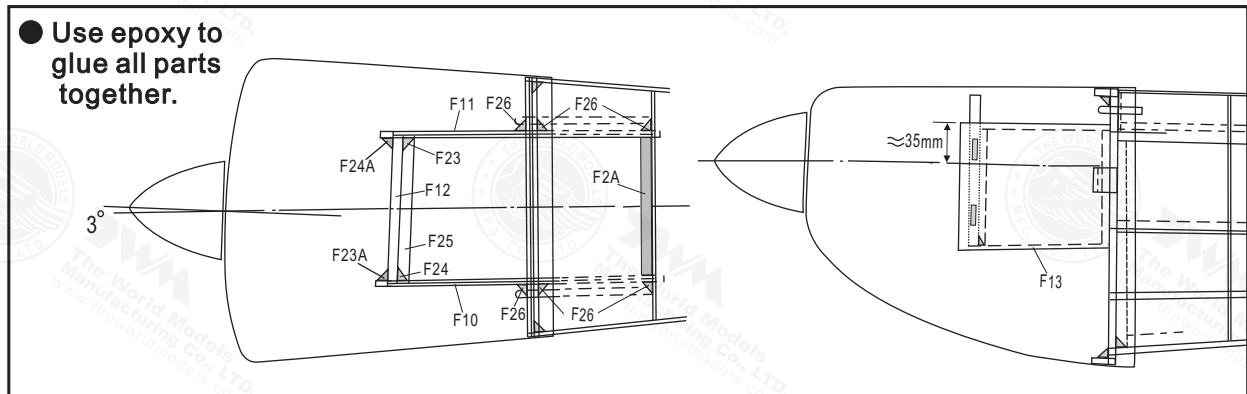


## 7 Engine Box

**!** Please note right thrust angle of firewall.



● Use epoxy to glue all parts together.



## 8 Main Landing Gear

Ø5x54mm **Axle Shaft**

M6x20mm **Socket Head Screw**

PA3x14mm **Screw**

5.2mm **Collar**

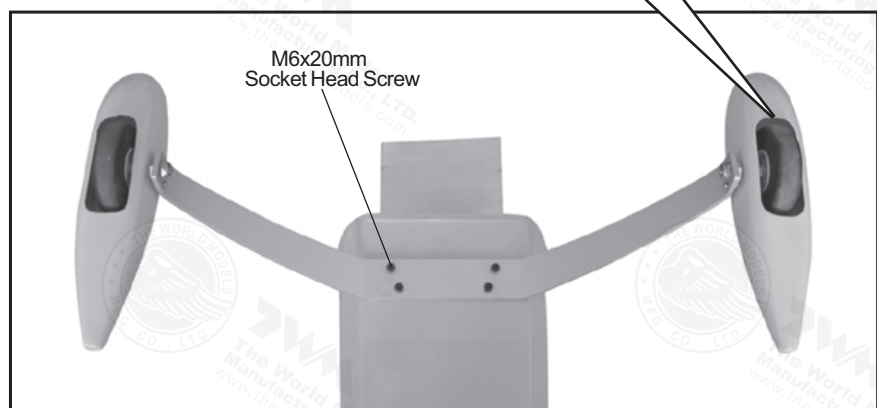
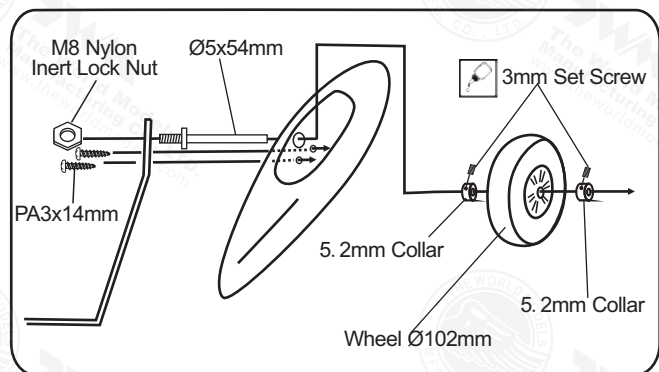
M8 Nylon Inert Lock Nut

3mm **Set Screw**

5.2mm **Collar**

Wheel Ø102mm

M6x20mm **Socket Head Screw**



**L/R**

## 9 Rudder Pushrod

● Locate pre-threaded hard wood block installed in the rudder.

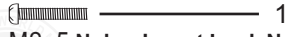
M4x130mm Screw



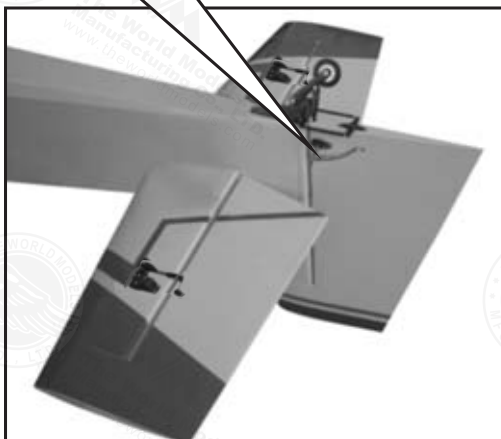
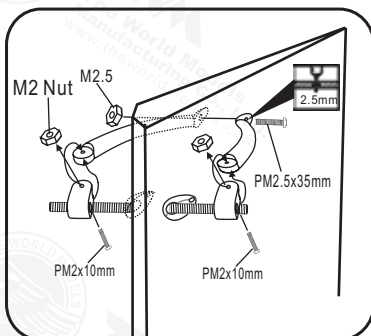
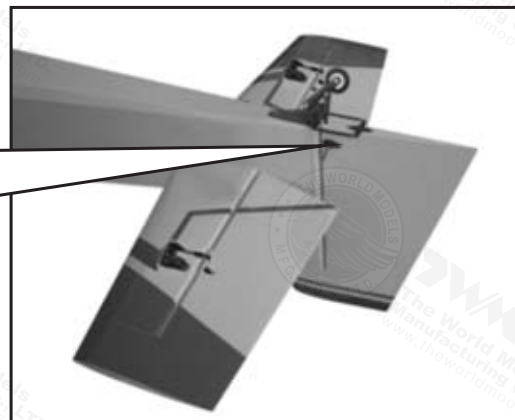
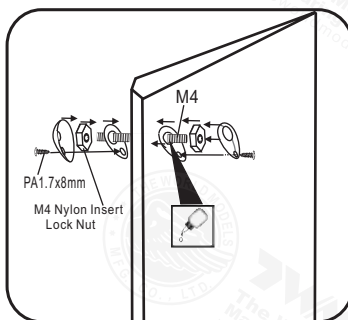
M4 Nylon Insert Lock Nut



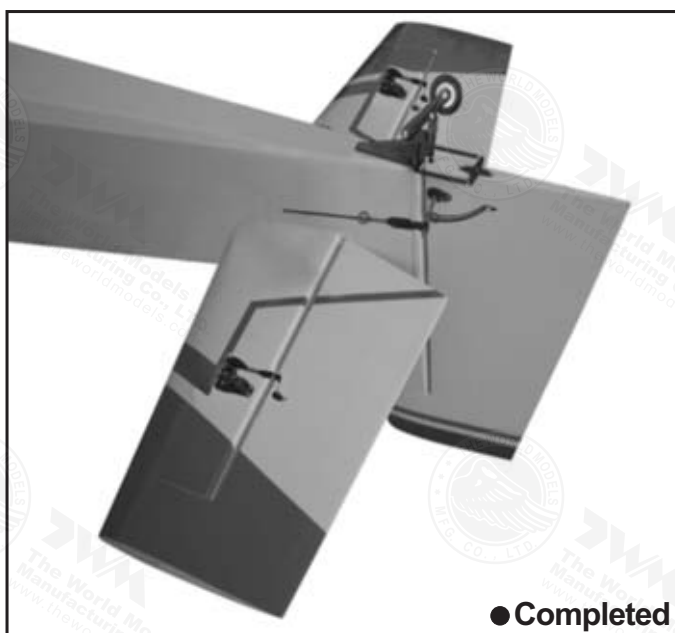
PM2.5x35mm Screw



M2.5 Nylon Insert Lock Nut



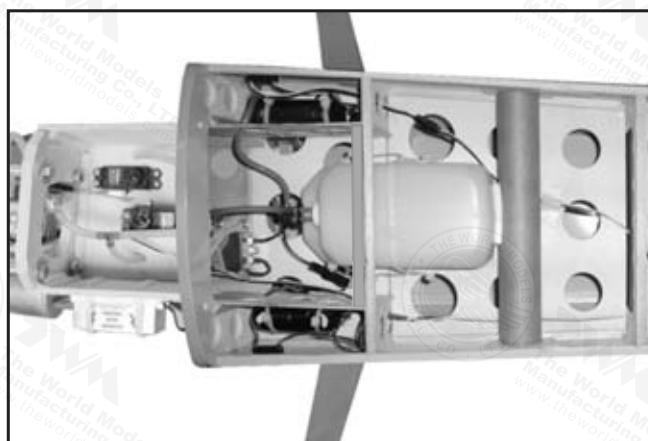
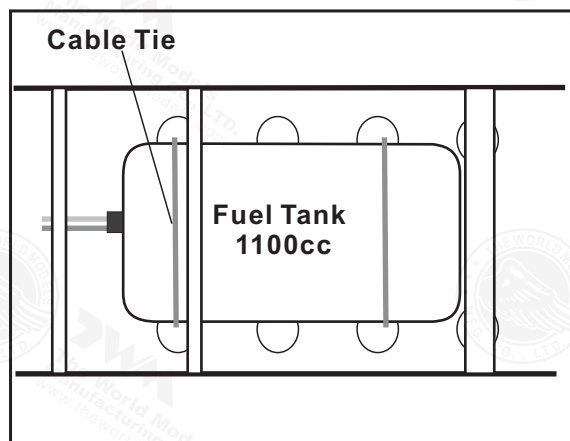
L/R



● Completed

## 10 Fuel Tank

Tank installation  
Tank is sitting on  
high-density foam  
with nylon ties to  
hold to floor





## 11 Engine

PWA2.6x12mm **Screw**



4

M6 **Blind Nut**



4

M6x50mm **SOCKET HEAD SCREW**



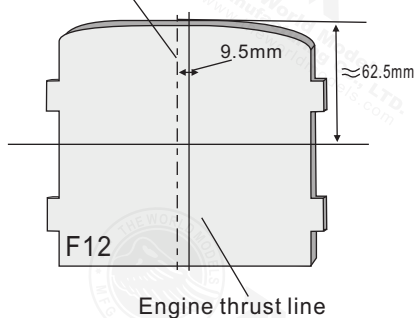
4

d6xD15mm **Washer**

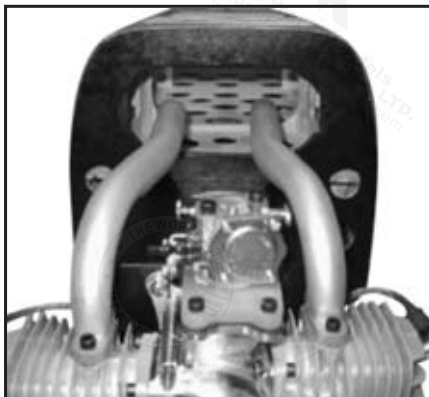
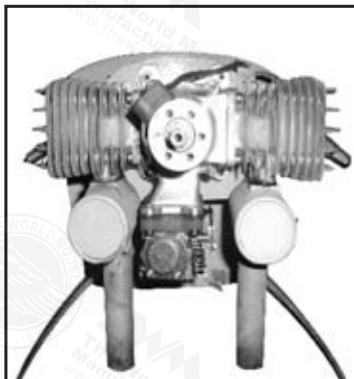
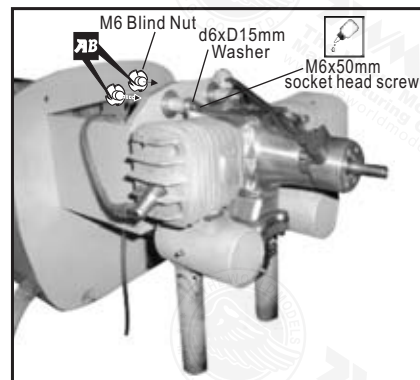


4

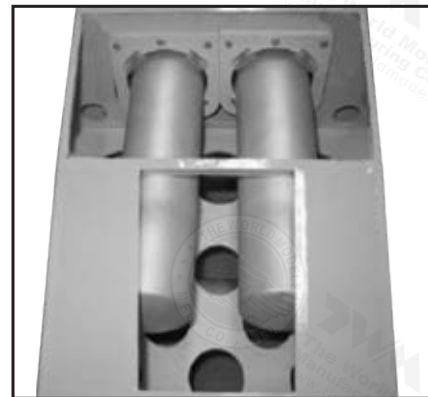
Center line of firewall



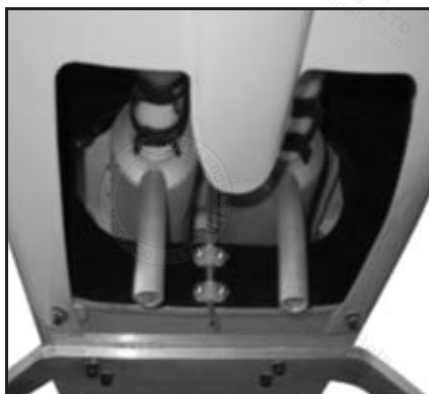
Engine thrust line



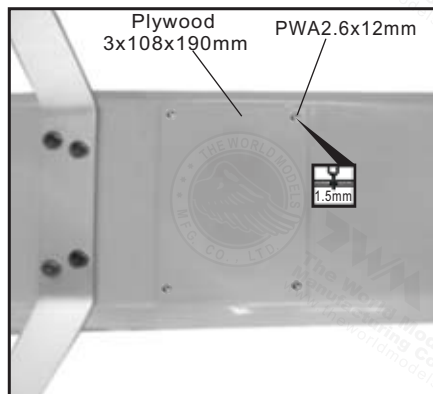
● Bottom View



● Bottom View

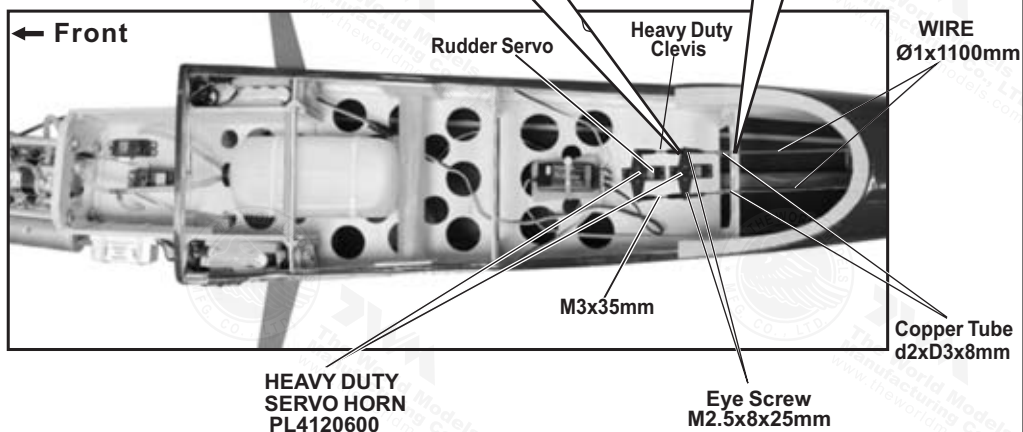
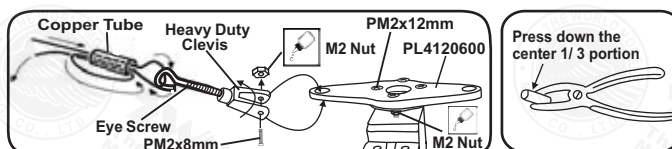


● Bottom View



● Bottom View

## 12 Radio Equipment

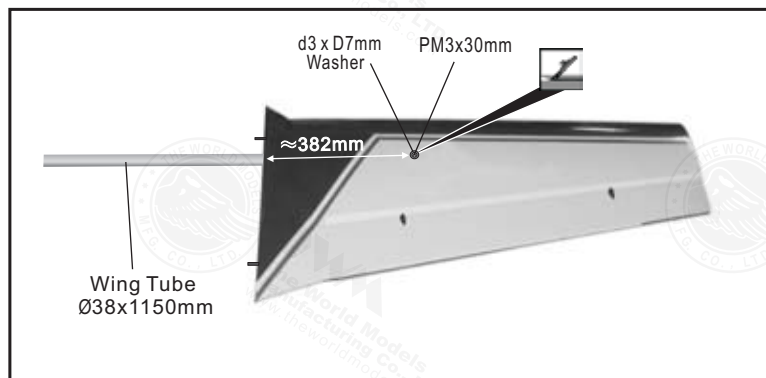


● Install and arrange the servo as shown in the diagram.

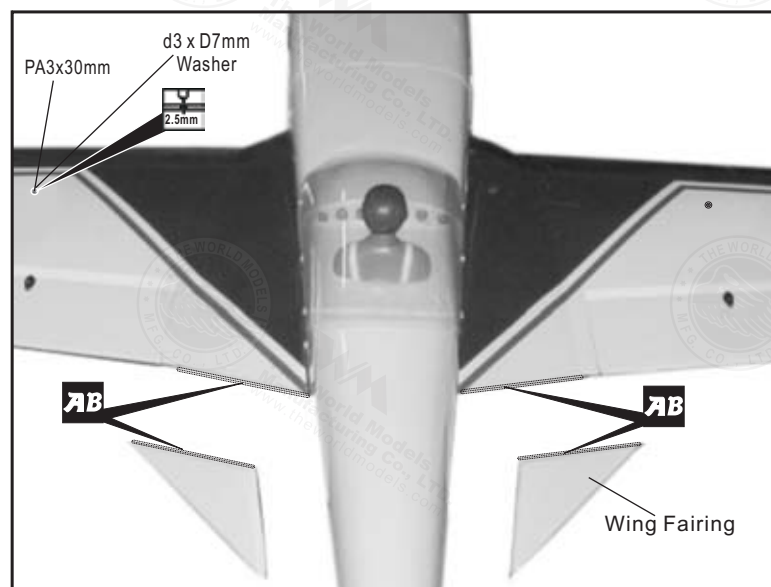
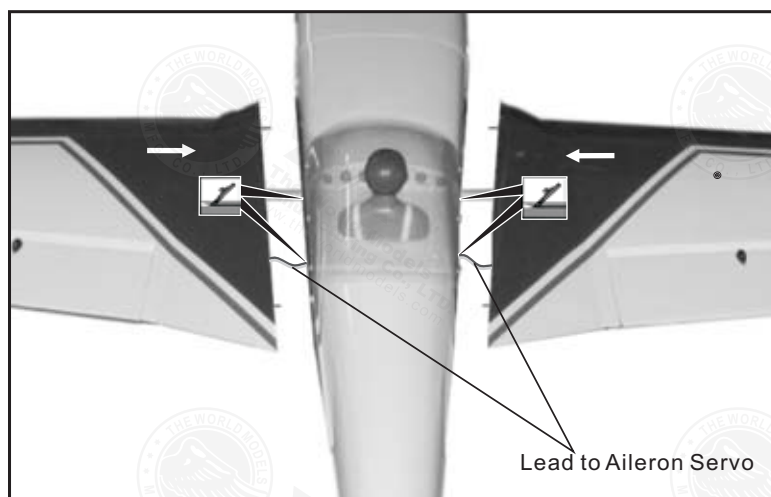
## 13 Main Wing

PM3x30mm Screw	1
PA3x30mm Screw	1
d3 x D7mm Washer	2

**Step 1.** Insert the aluminum wing tube with the pre-drilled hole end into the right wing. Align the lines marked at the wing root and wing tube, then apply the PM3x30mm machine screw through the pre-drilled hole on top of the wing. ( please confirm the alignment of the hole by putting a 2.5mm diameter rod through the pre-drilled wing hole before applying the screw ) The hole on the wing tube is pre-threaded, do not over tighten the PM3 screw, the set up is for future removal of the wing.



**Step 2.** Install the right wing to the fuselage by inserting the wing tube (now attached to the right wing) through the fuselage, then install the left wing.



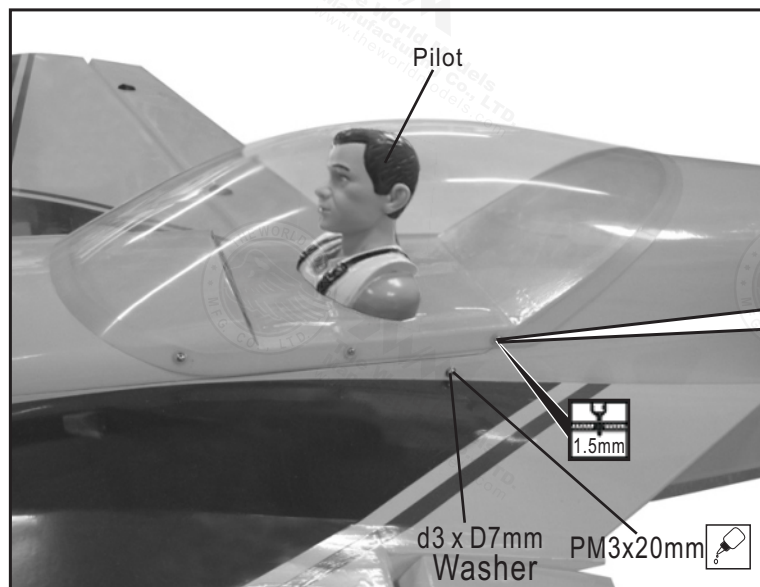
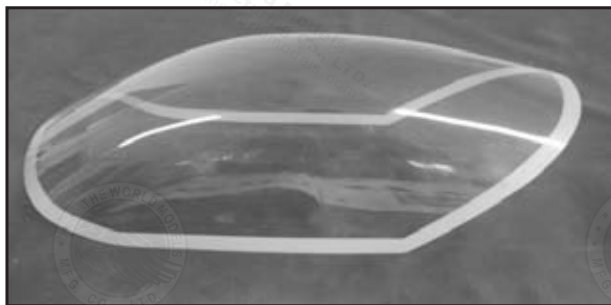
**Step 3.** Make sure the wings are resting against the fuselage tightly. Locate the pre-drilled 2.5mm hole at top of left wing, and drill along with 2.5mm drill bit until it passes through the wing tube. Apply the PA3x30mm self-tapping screw.

**Note :** It is recommended that the wing tube stays with the left wing. Removal of the wings could be achieved by removing the right wing machine screw, the right wing then the left wing with wing tube. If removal of wing tube from left wing is also required, it is recommended that instead of applying self-tapping screw in step 3, you pre-tap with M3 thread cutter and apply M3 machine screw.

## 14 Canopy

- First insert the grommet to the canopy then apply screw.

PWA2.3x12mm Screw	6
PM3x20mm Screw	2
d3 x D7mm Washer	2
d1.5 x D6.5mm Silicon Grommet	6



d1.5xD6.5mm  
Silicon Grommet

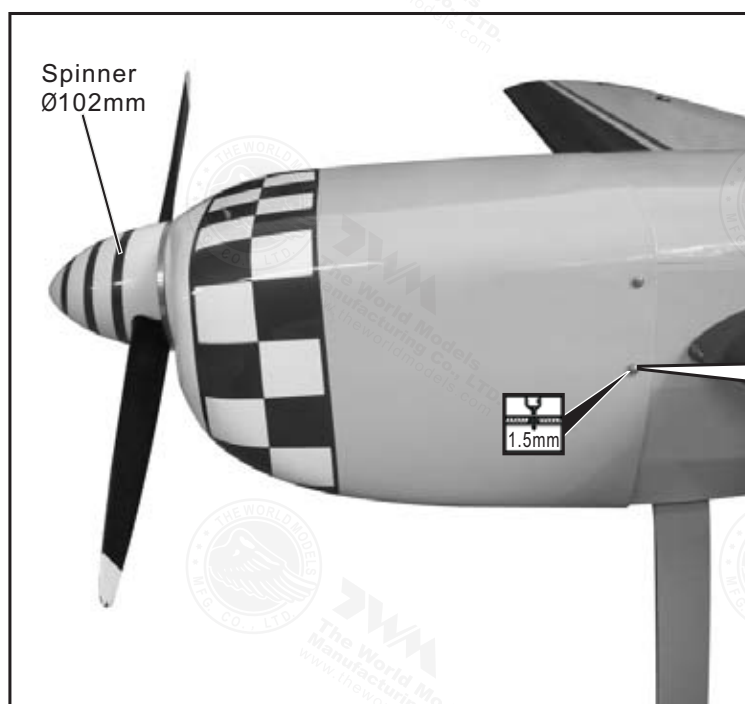
PWA2.3x12mm

**L/R**

## 15 Cowling & Spinner

- First insert the grommet to the cowling then apply screw.

PA3x12mm Screw	6
d3 x D7mm Washer	6
d2.5 x D8.5mm Silicon Grommet	6



D1.5xD8.5mm  
Silicon Grommet

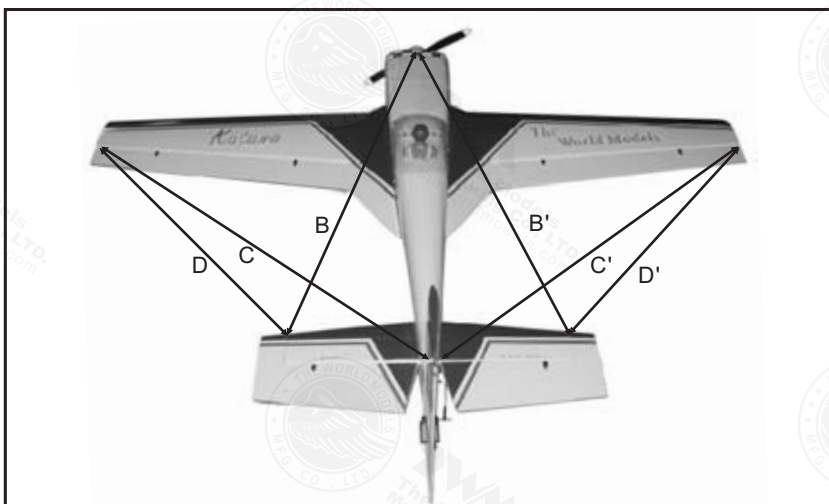
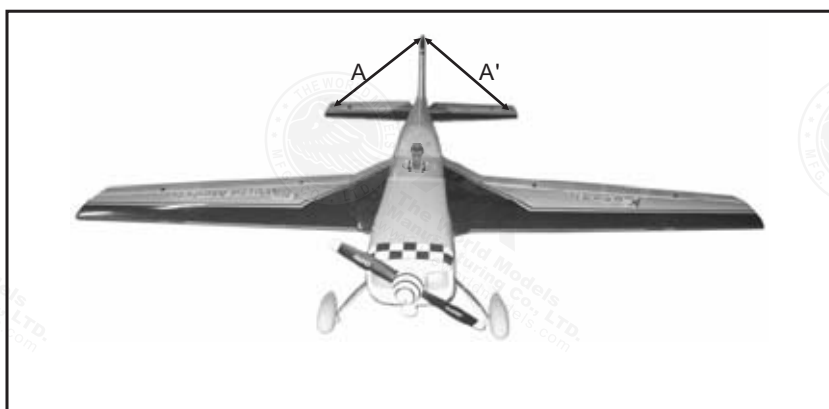
d3 x D7mm  
Washer

PA3x12mm

**L/R**

## 16 Wing Setting

- Adjust the wing and fuselage configuration as shown in the diagrams.

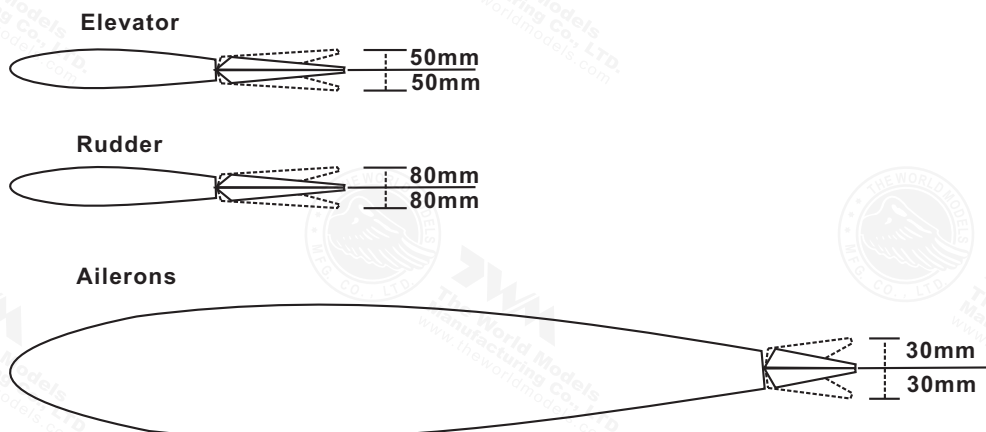


$A=A'$   $B=B'$   $C=C'$   $D=D'$



## 17 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.



## 18 C.G.

The ideal C.G. position is **216mm (8.50in.)** 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.



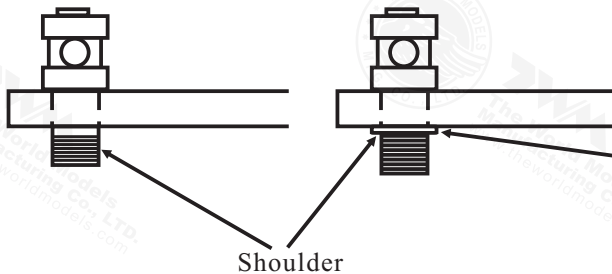
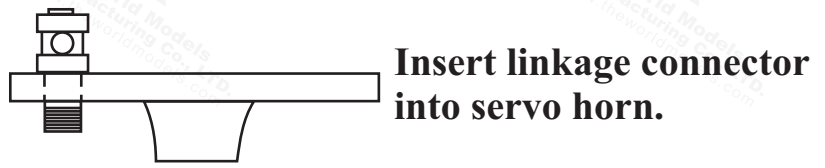
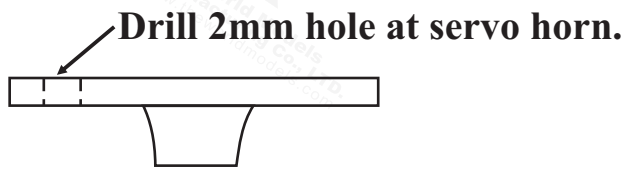
## ! Warning!

### Important Safety Precautions

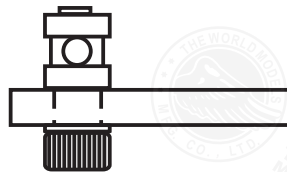
- # First time flyer should never fly by himself / herself. Assistance from experienced flyer is absolutely necessary.
- # Pre-flight adjustment must be done before flying, it is very dangerous to fly a badly pre-adjusted aircraft.
- # **36% Katana** is specially designed to be powered by **100cc** gasoline 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.

# LINKAGE CONNECTOR

## HW7111050 & HW7111060



Make sure shoulder of screw is cleared from servo horn.  
Add washer to reduce play if necessary.



After fastening the round nut, make sure that the linkage connector can rotate freely.

### Product Registration Form (US Customers)

We would like to share with you any relevant information regarding your model, including product news and free upgrade parts when applicable. Please fill in the following and send to AirBorne Models, 4749-K, Bennett Drive, Livermore, CA 94551 USA.

1.Name: \_\_\_\_\_

2.Address: \_\_\_\_\_

3.Phone #: \_\_\_\_\_ e-mail: \_\_\_\_\_

4.Model: \_\_\_\_\_

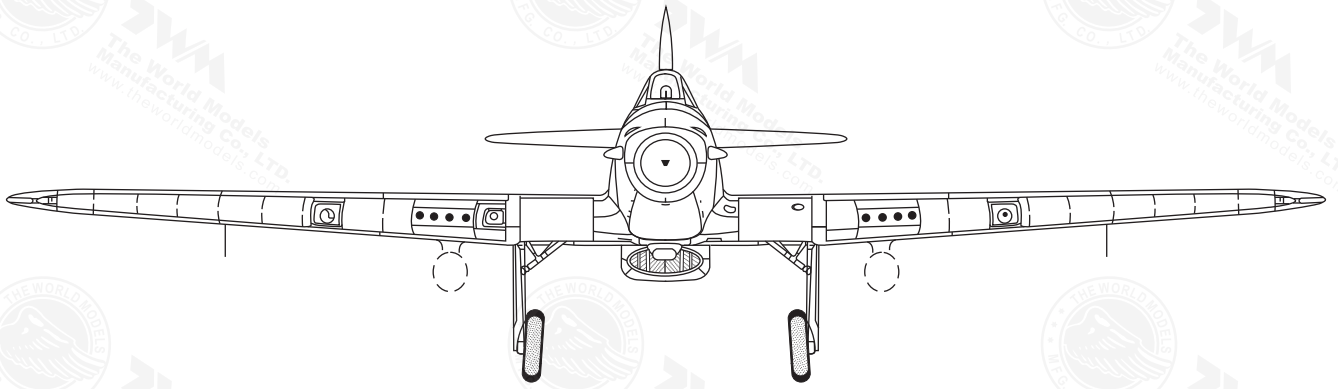
Wing QC# \_\_\_\_\_ Fuselage QC# \_\_\_\_\_

(QC numbers are stamped on wing and fuselage)

5.Date of Purchase: \_\_\_\_\_

6.Store Name: \_\_\_\_\_

Please call AirBorne Models at 925 371 0922 for any assistance in filling this form.  
Thank you very much for purchasing our product.



Ducted Fan

Pattern

Warbirds

Funfly

Scale

Electric

Sports

Glider

Trainer Boat

Accessories

Covering

(Lightex /oughlon)



The World Models  
Manufacturing Co., LTD.  
[www.theworldmodels.com](http://www.theworldmodels.com)