

29% Katana



**Requires: 50 - 60 c.c. engine,
4 - channel radio w/ 8 high torque servos.**

Specifications

Wing Span	84 in / 2130 mm
Wing Area	1131 sq in / 73 sq dm
Flying Weight	16-18 lbs / 7264-8172 g
Fuselage Length	75.5 in / 1920 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.
www.theworldmodels.com

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

29% Katana

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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 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!



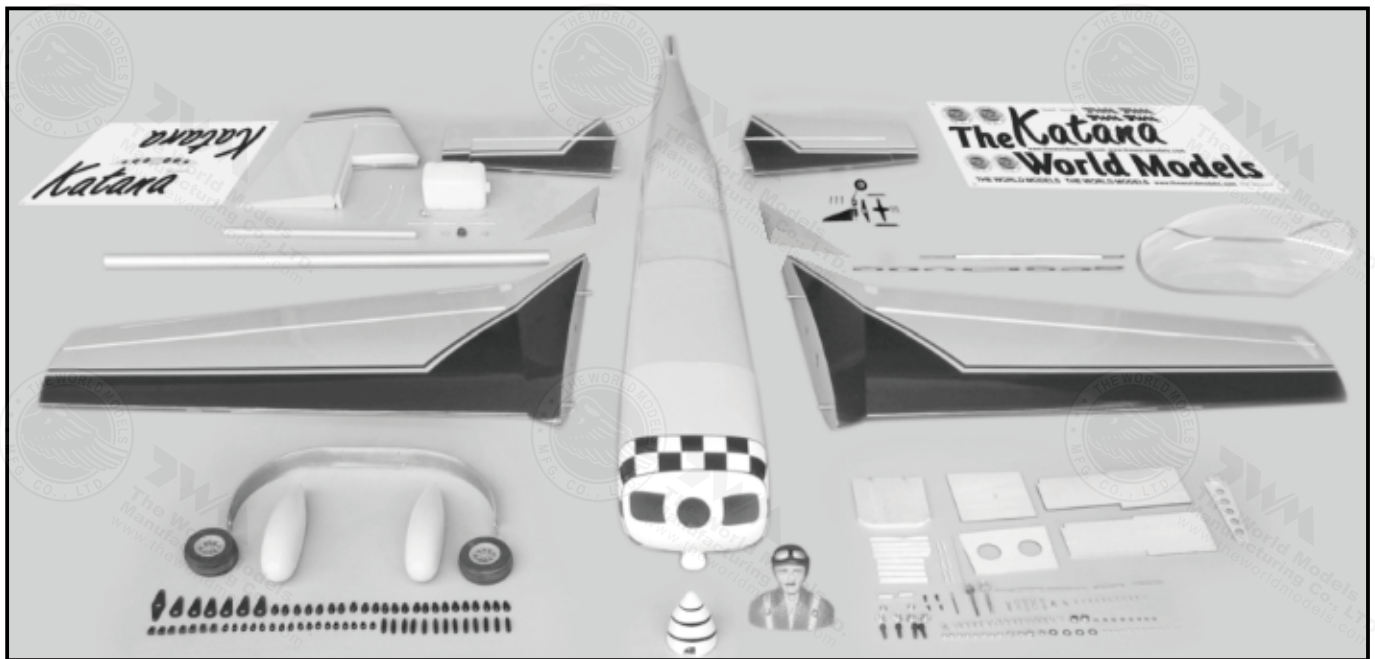
Do not overlook this symbol!



Pierce the shaded portion
covering film.



Apply thread locker



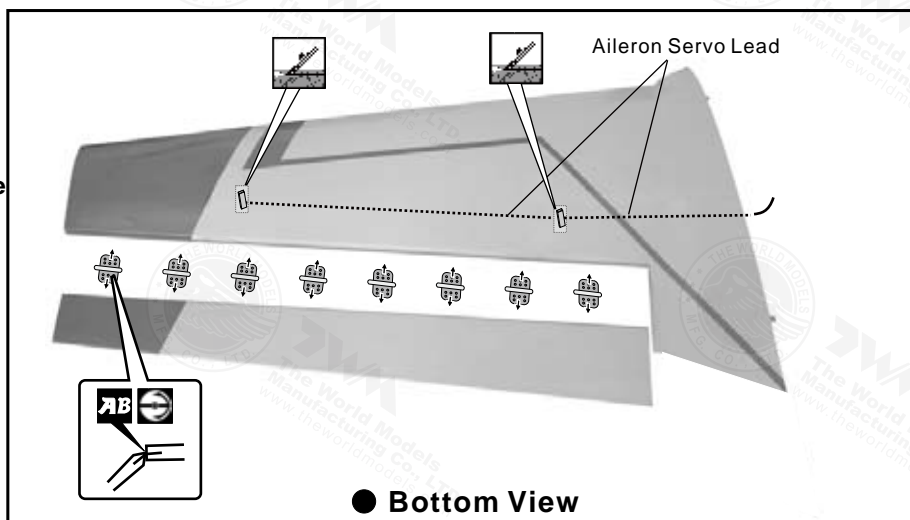
Parts List

1. MAIN WING -- 1 pair
METAL HINGES -- 16 pcs
 2. HEAVY DUTY SERVO HORN PL4120300 -- 4 sets
SCREW PM4x75mm -- 2 pcs
SCREW PM4x65 -- 2 pcs
M4 NYLON INSERT LOCK NUT -- 4 pcs
HEAVY DUTY HORN BRACKET PL4112400 -- 4 pcs
HEAVY DUTY CLEVIS PL4112200 -- 8 sets
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 4 sets
PUSHROD 2.5x57mm w/ Threads (For Aileron) -- 4 pcs
 3. STABILIZER & ELEVATOR -- 1 set
METAL HINGES -- 10 pcs
PUSHROD 2.5x66mm w/ Threads (For Elevator) -- 2 pcs
HEAVY DUTY HORN BRACKET PL4112400 -- 2 pcs
HEAVY DUTY SERVO HORN PL4120300 -- 2 sets
HEAVY DUTY CLEVIS PL4112200 -- 4 sets
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 2 sets
SCREW PM4x65mm -- 2 pcs
M4 NYLON INSERT LOCK NUT -- 2 pcs
WOOD 6x10x22mm (For Elevator Servo) -- 4 pcs
 4. STABILIZER TUBE 16x403mm -- 1 pc.
SCREW PWA3x12mm -- 2 pcs
 5. VERTICAL FIN & RUDDER -- 1 set
METAL HINGES -- 5 pcs
 6. TAIL GEAR ASSEMBLY 13-22LBS PL3410021 -- 1 set
 7. FIRE WALL 9x120x132.2mm (F12) -- 1 pc.
ENGINE BOX SIDE PLATE 5x97x266.5mm (F10) -- 1 pc.
ENGINE BOX SIDE PLATE 5x97x259.6mm (F11) -- 1 pc.
LOWER PLATE 3x126x131mm (F13) -- 1 pc.
BALSA 7x7x97mm (F23) -- 1 pc.
BALSA 7x7x97mm (F24) -- 1 pc.
BALSA 7x7x121mm (F25) -- 1 pc.
BALSA 7x7x97mm (F26) -- 2 pcs
BALSA 7x7x78mm (F26D) -- 4 pcs
BALSA 10x10x97mm (F23A) -- 1 pc.
BALSA 10x10x97mm (F24A) -- 1 pc.
BALSA 10x10x121mm (F2A) -- 1 pc.
 8. MAIN LANDING GEAR -- 1 pc.
MAIN WHEEL 76mm -- 2 pcs
AXLE SHAFT 4.5x54mm -- 2 pcs
M8 NYLON INSERT LOCK NUT -- 2 pcs
SCREW PA3x14mm -- 4 pcs
SOCKET HEAD SCREW M5x16mm -- 4 pcs
COLLAR 4.6mm w/ set screw -- 4 pcs
WHEEL PANTS -- 1 pair
 9. EYE SCREW M2.5x8x35mm w/ Theads (For Rudder) -- 2 pcs
WIRE 1x900mm (For Rudder) -- 2 pcs
 - COPPER TUBE d2.5x3.2x8mm (For Rudder) -- 2 pcs
HEAVY DUTY CLEVIS PL4112200 -- 2 pcs
HEAVY DUTY HORN BRACKET PL4112400 -- 2 pcs
SWIVEL CLEVIS HORN FAIRING PL4610020 -- 1 set
SCREW M4x100mm -- 1 pc.
M4 NYLON INSERT LOCK NUT -- 2 pcs
SCREW PWA2.6x12mm -- 1 pc.
PLYWOOD 3x42.5x153.5mm -- 1 pc.
 10. FUEL TANK 650cc PL1111650G (Gasoline Fuel) -- 1 set
CABLE TIE (For Fuel Tank) -- 2 pcs
 11. PLYWOOD 3x100x150mm -- 1 pc.
SCREW PWA2.6x12mm -- 4 pcs
M6 BLIND NUT -- 4 pcs
SOCKET HEAD SCREW M6x50mm -- 4 pcs
WASHER d6x15mm -- 4 pcs
 12. EYE SCREW M2.5x8x35mm w/ Theads (For Rudder) -- 2 pcs
THROTTLE PUSHWIRE 1.2x500mm -- 1 pc.
w/ Plastic Tube d2xD3x300mm -- 1 pc.
SPONGE -- 2 pcs
LINKAGE CONNECTOR 2.1mm -- 1 set
HEAVY DUTY SERVO HORN PL4120600 -- 1 set
HEAVY DUTY CLEVIS PL4112200 -- 2 pcs
COPPER TUBE d2.5x3.2x8mm (For Rudder) -- 2 pcs
 13. WING TUBE 25.5x914mm -- 1 pc.
SCREW PM3x25mm -- 1 pc.
SCREW PA3x25mm -- 1 pc.
WASHER d3xD7mm -- 2 pcs
WING FAIRING -- 1 pair
 14. COCKPIT -- 1 pc.
CANOPY -- 1 pc.
PILOT (PC001102B) -- 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.
SPINNER 89mm (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
 17. HAND TAP M4 -- 1 pc.
- **COVERING:**
TOUGHLON STL 330 CADMIUM YELLOW
TOUGHLON STL 550 PEARL BLUE
TOUGHLON STL 511 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

PM4x75mm Screw

PM4x65mm Screw

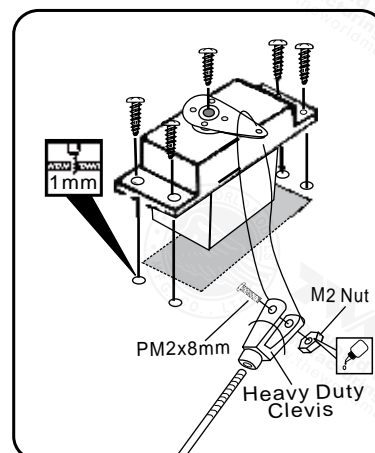
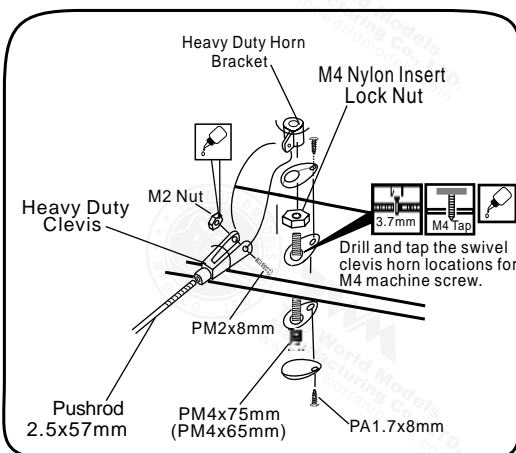
M4 Nylon Insert Lock Nut

M2 Nut

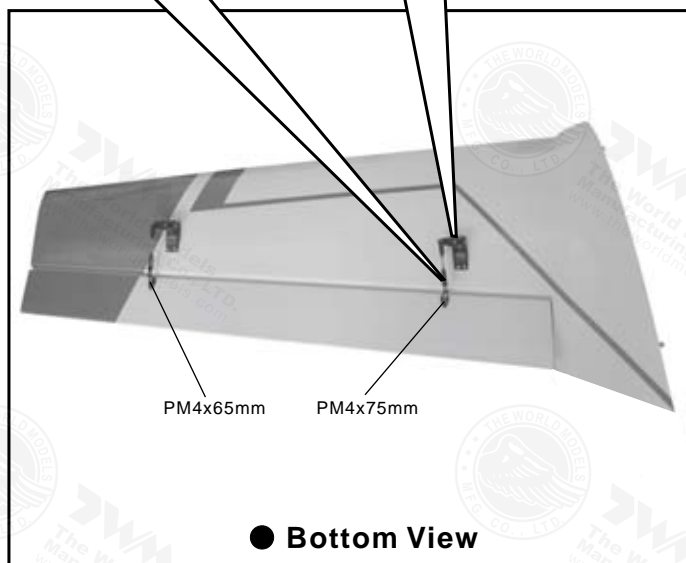
PM 2x12 mm PL4120300



- Locate hardwood blocks pre-installed in the ailerons.



L/R



3 Stabilizer & Elevator Pushrod

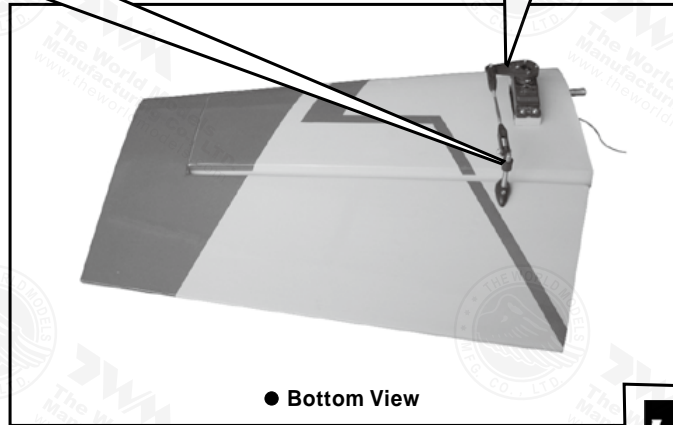
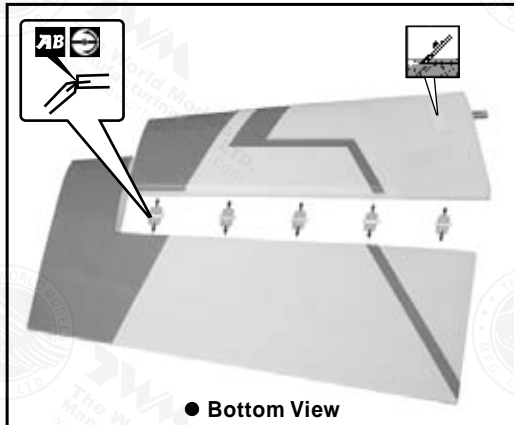
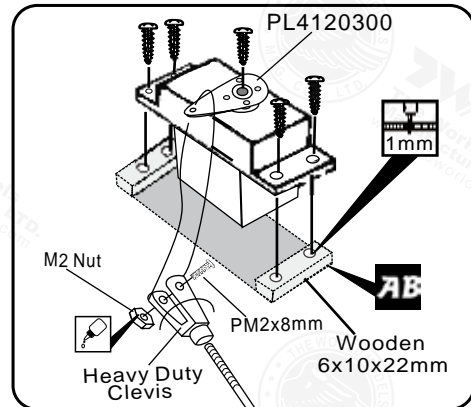
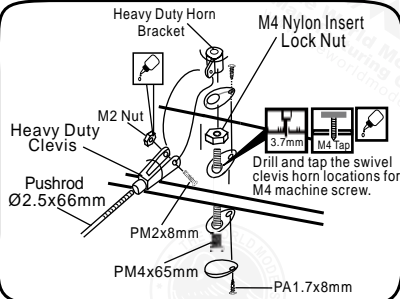
PM4x65mm **Screw**

2

M4 Nylon Insert Lock Nut

2

- Locate hardwood blocks pre-installed in the elevator.



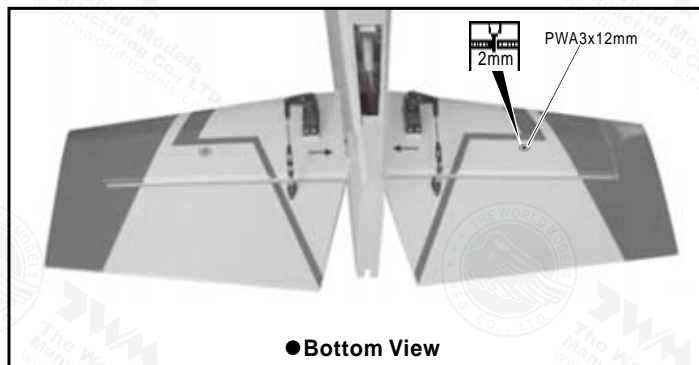
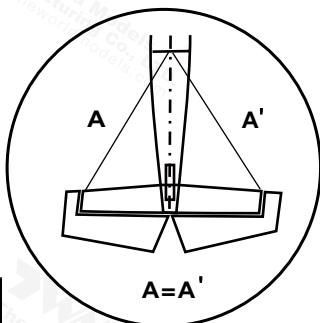
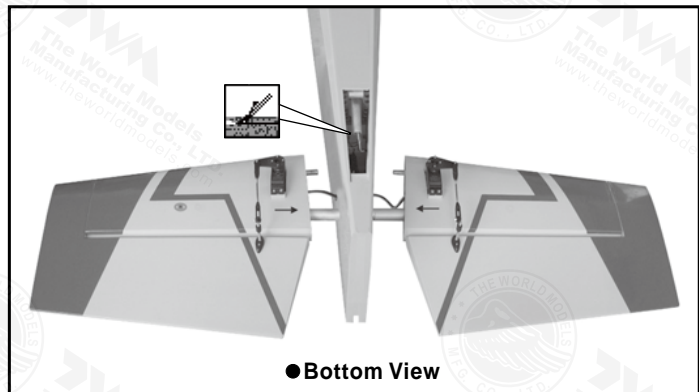
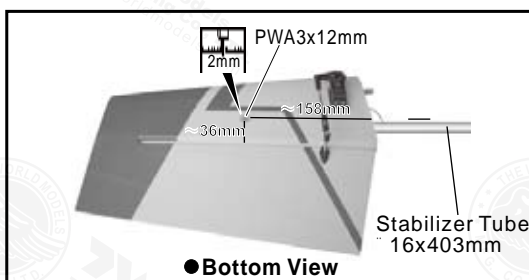
- Replace CA hinges by metal hinges. Glue the metal hinges to stabilizer and elevator by epoxy.

L/R

4 Stabilizer & Elevator

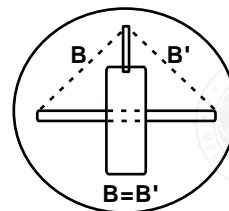
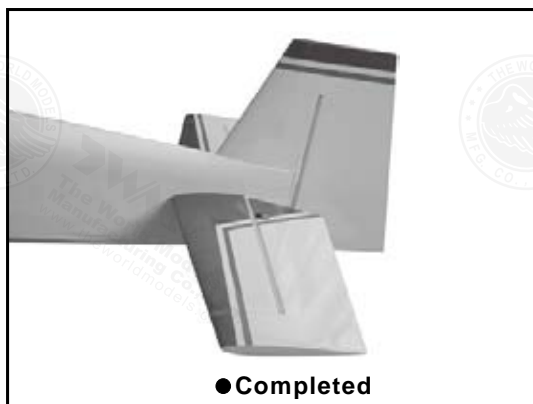
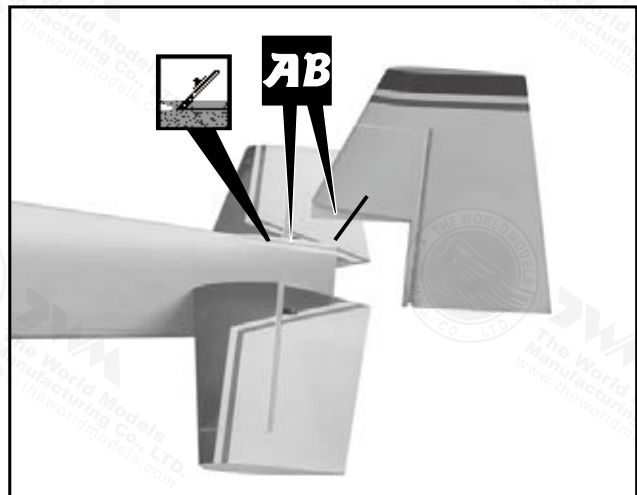
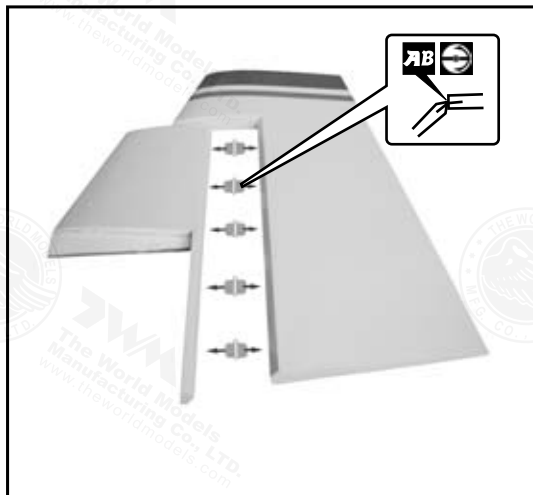
PWA3 x 12mm **Screw**

2



L/R

5 Vertical Fin & Rudder



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

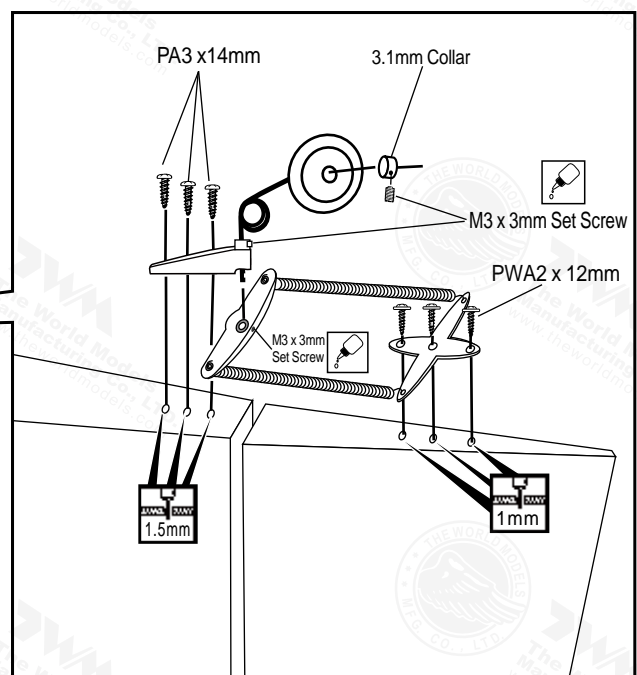
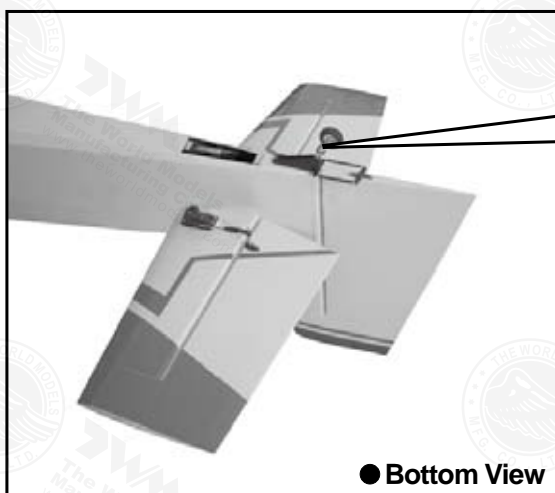
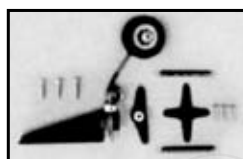
6 Tail Landing Gear

PA3x14mm Screw

3

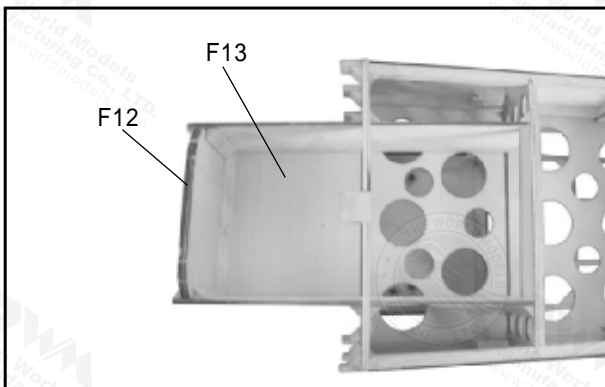
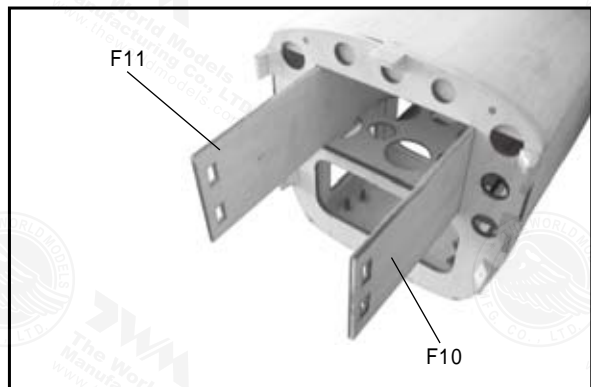
PWA2x12mm Screw

3

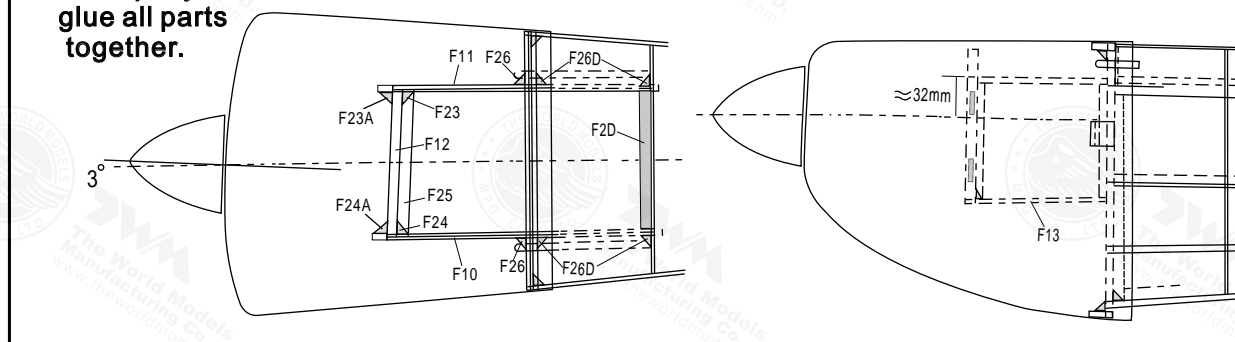


7 Engine Box

! Please note right thrust angle of firewall.



● Use epoxy to glue all parts together.



8 Main Landing Gear

4.5x54mm **Axle Shaft**

M5x16mm **SOCKET HEAD SCREW**

PA3x14mm **Screw**

4.6mm **Collar**

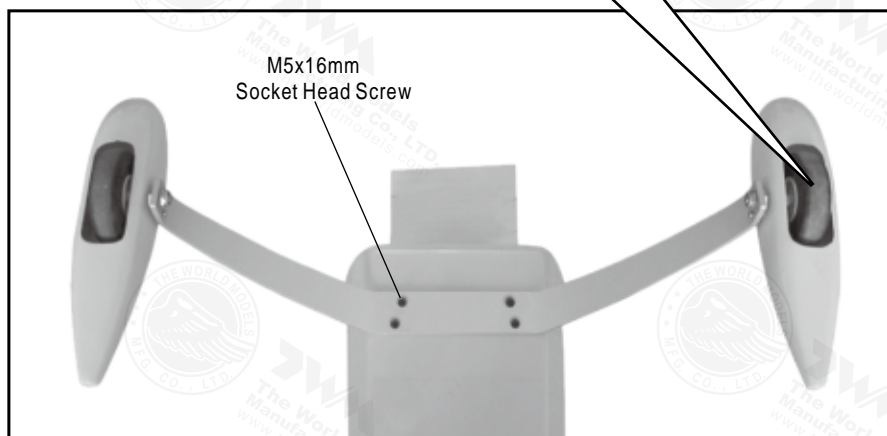
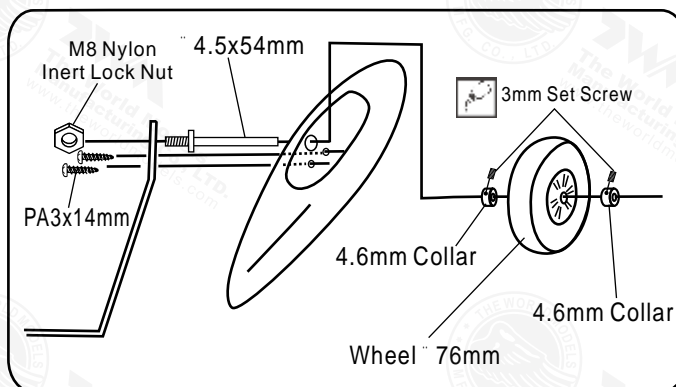
M8 **Nylon Inert Lock Nut**

3mm **Set Screw**

4.6mm **Collar**

4.6mm **Collar**

Wheel 76mm



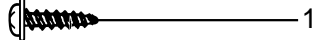
L/R

9 Rudder Pushrod

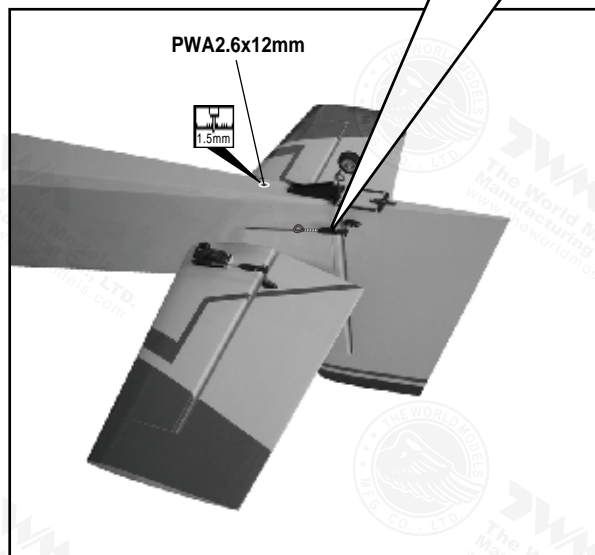
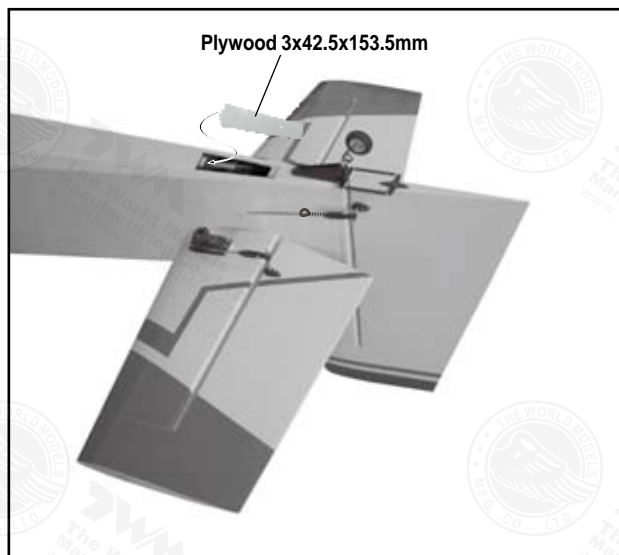
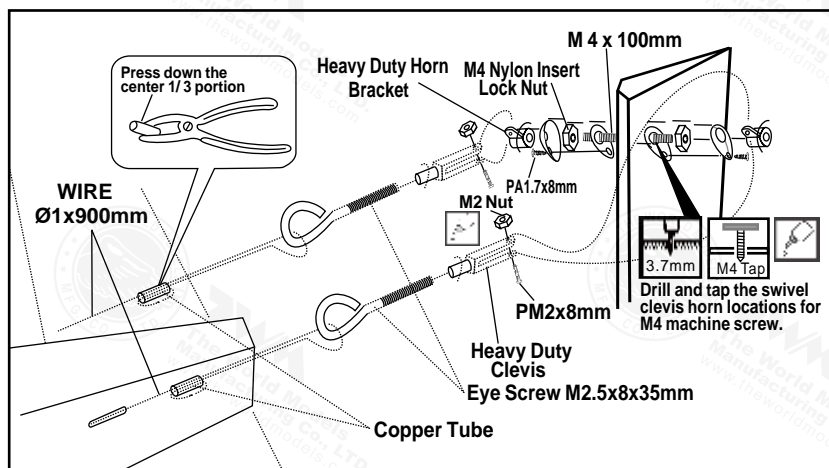
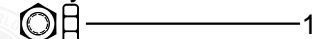
PM4x65mm **Screw**



PWA2.6x12mm **Screw**

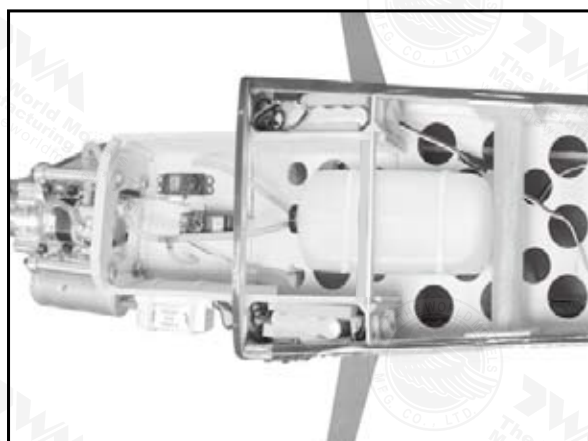
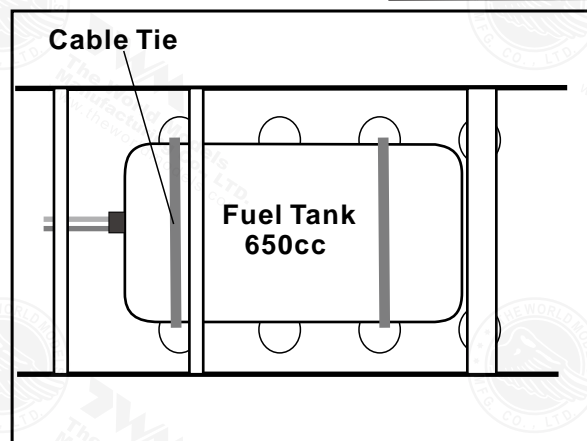


M4 Nylon Insert Lock Nut



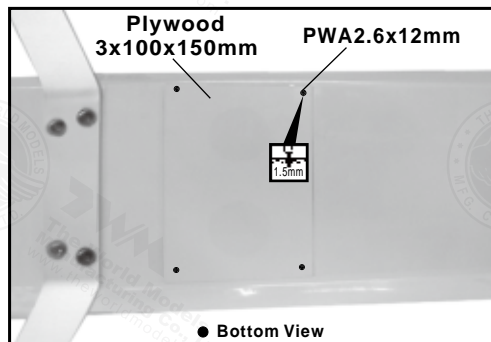
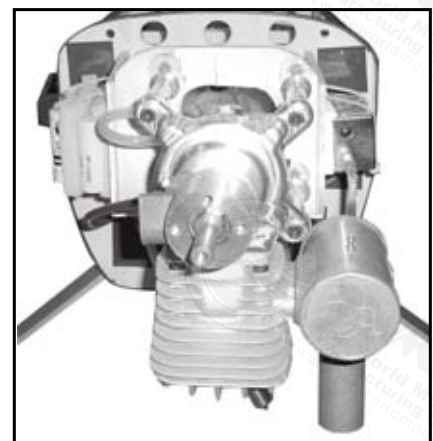
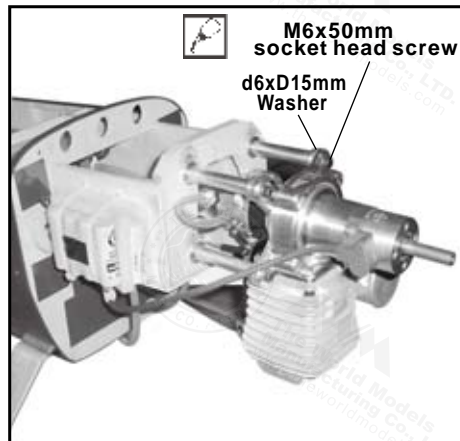
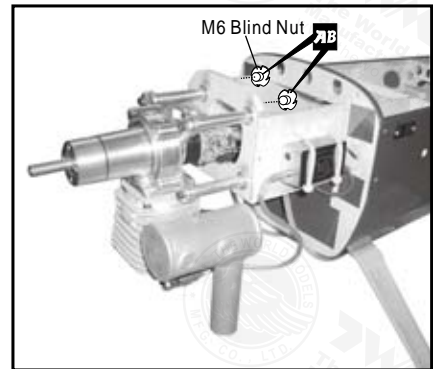
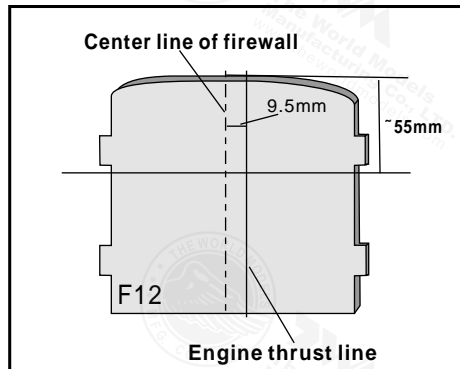
10 Fuel Tank

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



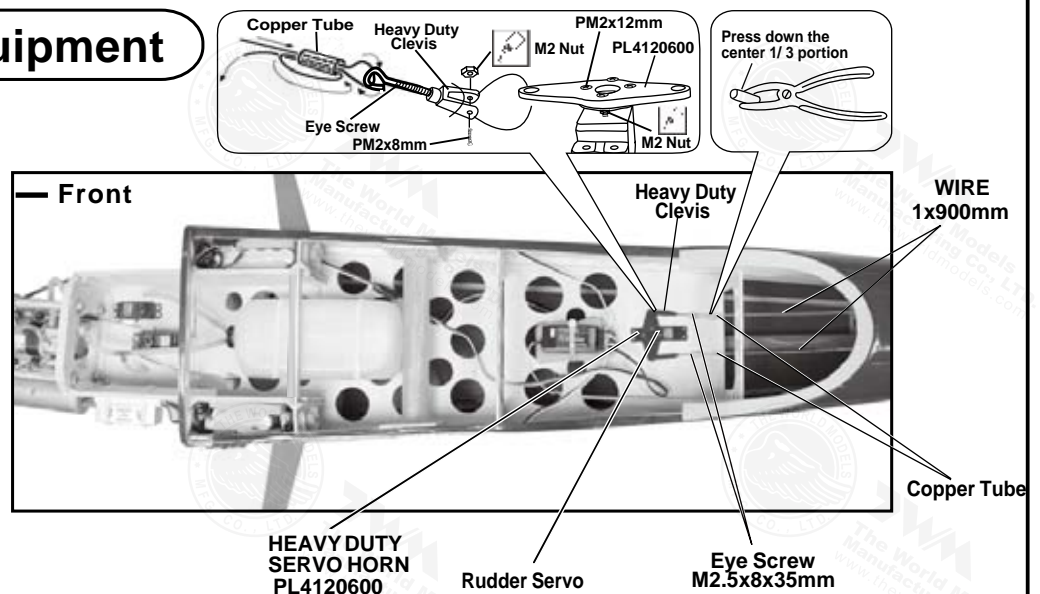
11 Engine

- PWA2.6x12mm **Screw** — 4
- M6 **Blind Nut** — 4
- M6x50mm **SOCKET HEAD SCREW** — 4
- d6xD15mm **Washer** — 4



12 Radio Equipment

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



13 Main Wing

PM3x25mm Screw

1

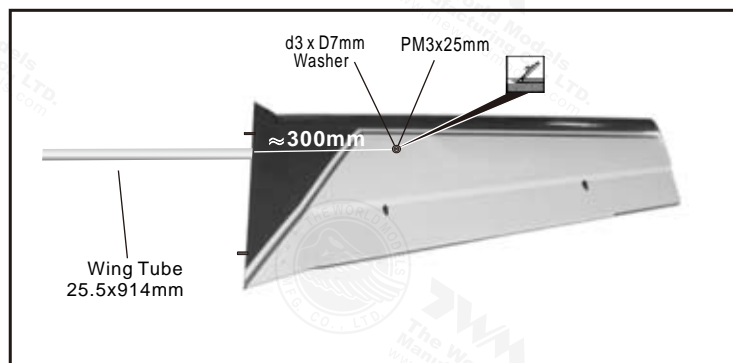
PA3x25mm Screw

1

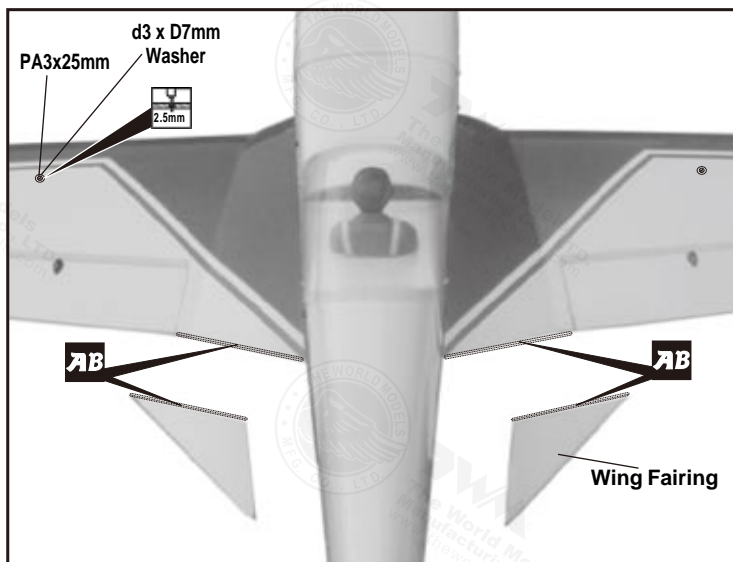
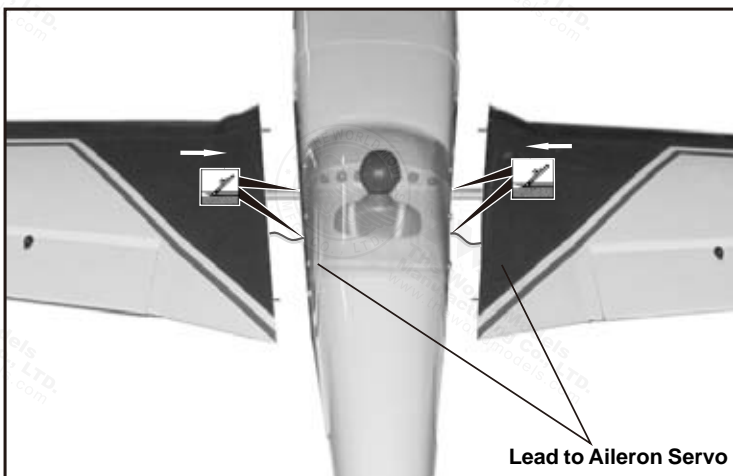
d3 x D7mm Washer

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 PM3X25mm 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.



L/R

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 PA3 X25mm 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



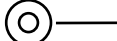
6

PM3x20mm Screw



2

d3 x D7mm Washer

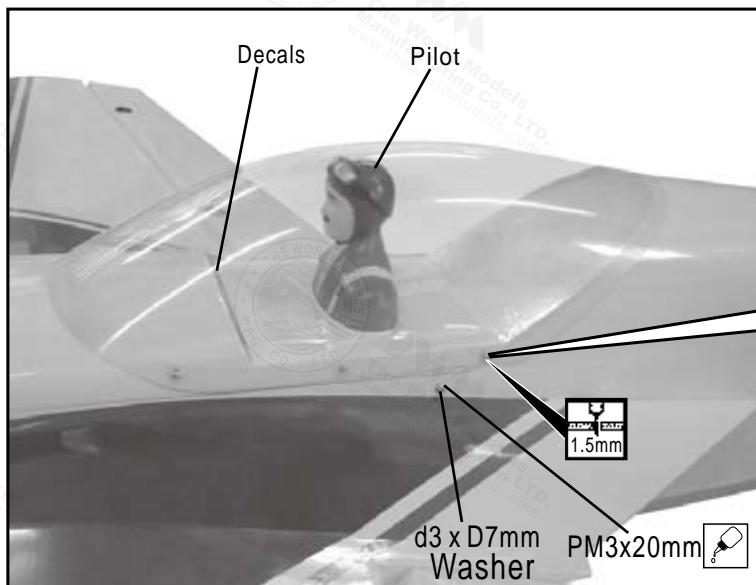
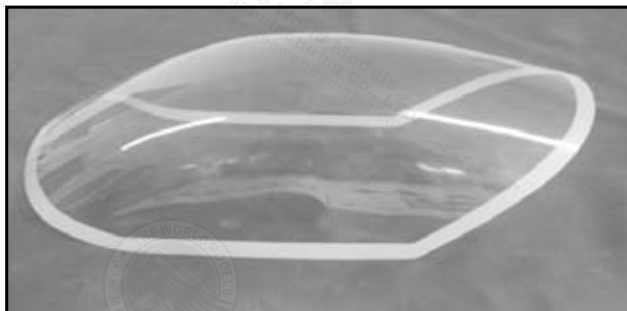


2

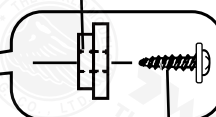
d1.5 x D6.5mm Silicon Grommet



6



d1.5xD6.5mm
Silicon Grommet



PWA2.3x12mm

L/R

15 Cowling & Spinner

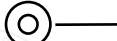
● First insert the grommet to the cowling then apply screw.

PA3x12mm Screw



6

d3 x D7mm Washer

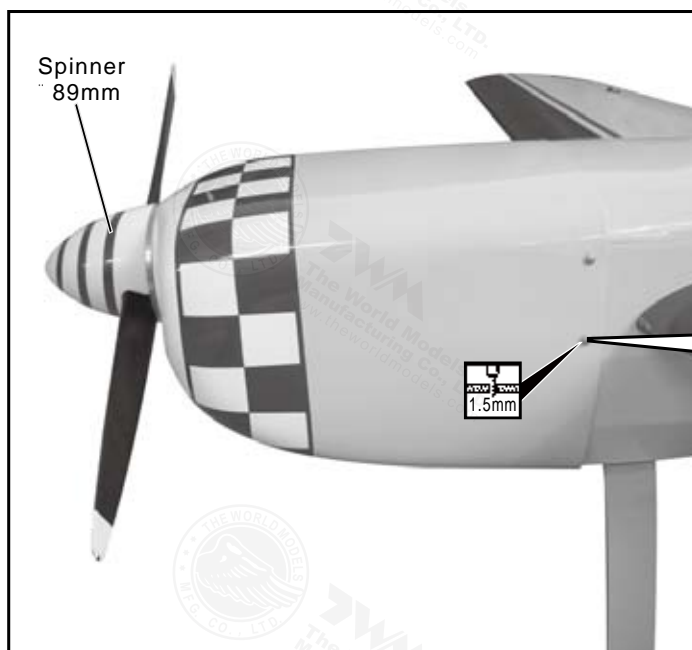


6

d2.5 x D8.5mm Silicon Grommet

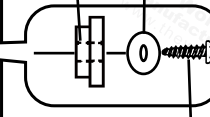


6



d2.5xD8.5mm
Silicon Grommet

d3 x D7mm
Washer

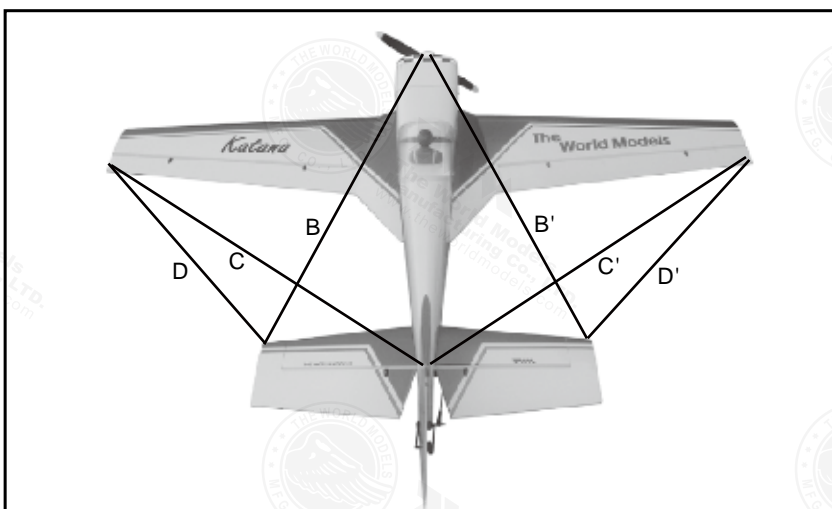
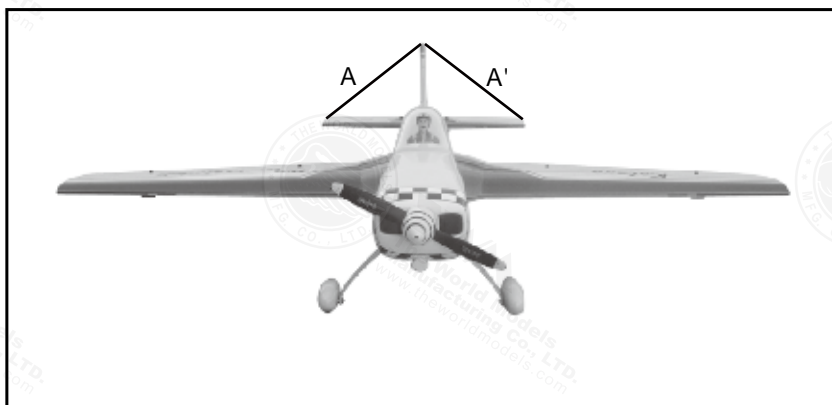


PA3x12mm

L/R

16 Wing Setting

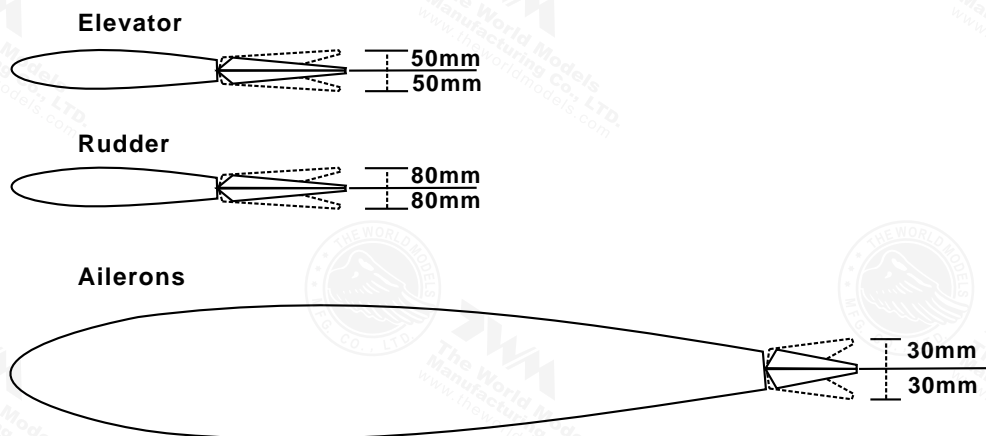
- Adjust the wing and fuselage configuration as shown in the diagrams.



$$A=A' \quad B=B' \quad C=C' \quad D=D'$$

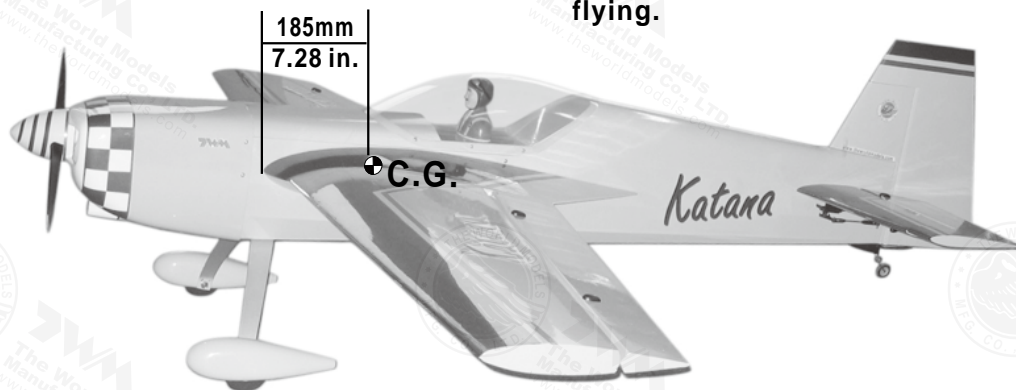
17 Control Throws

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 185mm (7.28in.) 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!

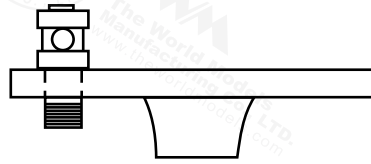
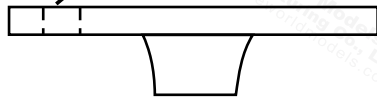
Important Safety Precautions

- # 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.
- # **29% Katana** is specially designed to be powered by **50-60cc** 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.

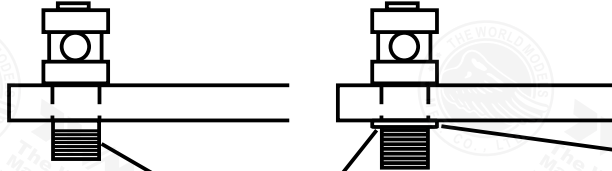
LINKAGE CONNECTOR

HW7111050 & HW7111060

Drill 2mm hole at servo horn.

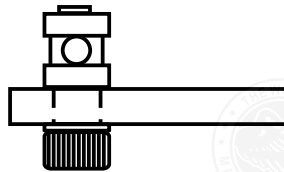


Insert linkage connector into servo horn.



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

Shoulder



Tighten up the round nut against the shoulder. Apply CA or permanent thread locker.

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: _____

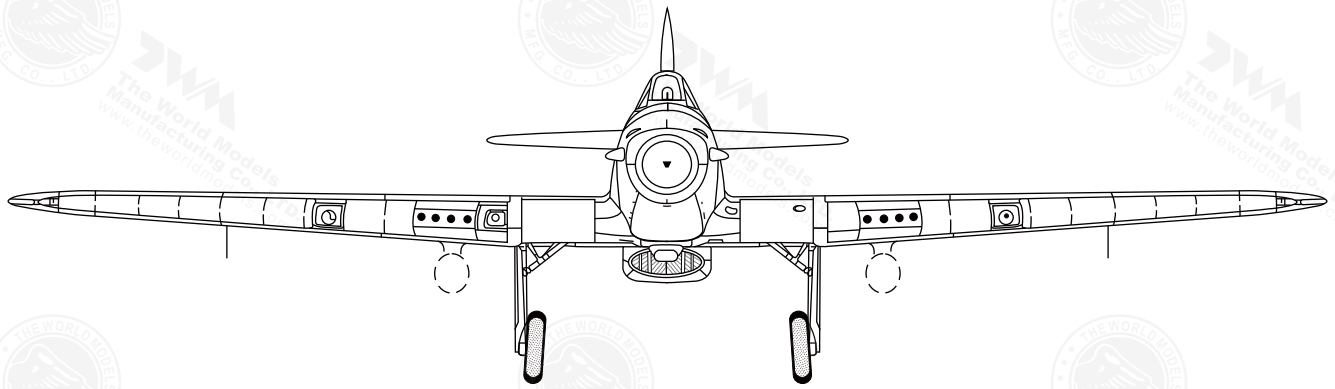
4.Model: _____

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.



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