

28% EXTRA 330 L



60cc gasoline engine

Requires: 4-channel radio w/ 6 high torque servos

Specifications

Wing Span	90.0 in / 2290 mm
Wing Area	1482 sq in / 95.6 sq dm
Flying Weight	18.5 lbs / 8400 g
Fuselage Length	79.5 in / 2020 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.



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

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

28% EXTRA 330 L

INDEX

BEFORE YOU BEGIN	P. 1
PARTS LIST	P. 2
ASSEMBLY	P. 3- 11
SAFETY PRECAUTIONS	P. 11

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 :-

AB

Apply epoxy glue.

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

Apply thread locker

N.I.

Must be purchased separately!

L/RAssemble left and right
sides the same way.Ensure smooth non-binding
movement while assembling.Peel off shaded portion
covering film.

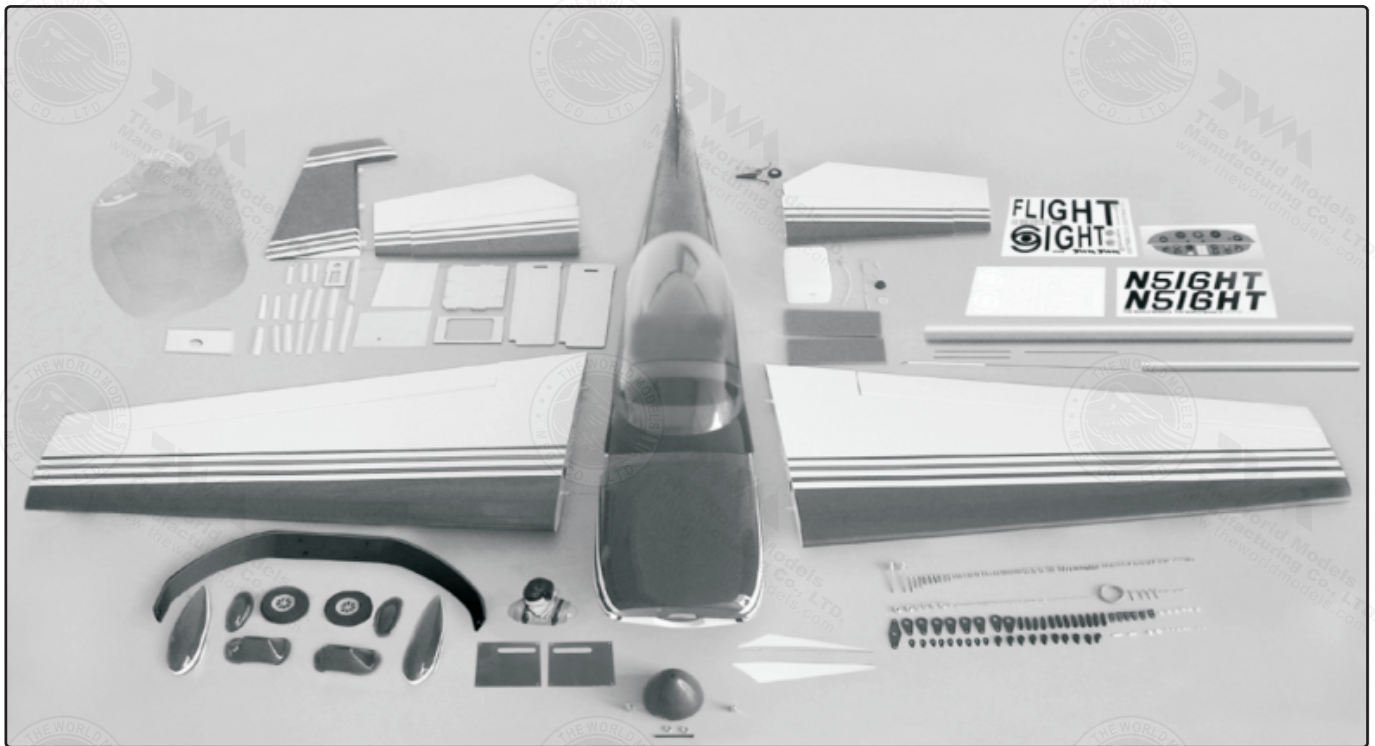
Cut off shaded portion.

Drill holes with the specified
diameter (here: 3mm).Pierce the shaded portion
covering film.

Pay close attention here!

**Warning!**

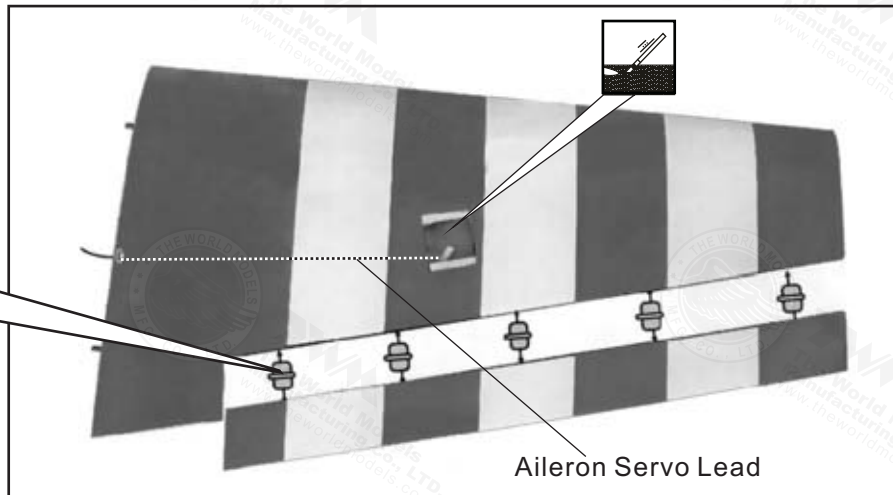
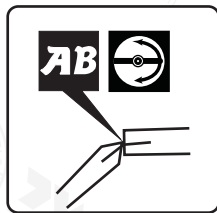
Do not overlook this symbol!



Parts List

1. MAIN WING -- 1 pair
METAL HINGES -- 10 pcs
2. SCREW PM4x60mm -- 2 pcs
M4 NYLON INSERT LOCK NUT -- 2 pcs
SCREW PWA2x8mm -- 8 pcs
PUSHROD 2.5x95mm w/Threads (For Aileron) -- 2 pcs
HEAVY DUTY SERVO HORN PL4120250 -- 2 sets
HEAVY DUTY HORN BRACKET -- 2 sets
HEAVY DUTY CLEVIS PL4112200 -- 4 sets
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 2 sets
SERVO MOUNTING PANEL (For Aileron Servos) -- 1 pair
3. FUSELAGE -- 1 pc.
STABILIZER & ELEVATOR -- 1 set
SCREW PA3x16mm -- 2 pcs
WASHER d3xD7mm -- 2 pcs
STABILIZER TUBE 16x321mm -- 1 pc.
METAL HINGES -- 6 pcs
4. VERTICAL FIN & RUDDER -- 1 set
METAL HINGES -- 3 pcs
5. TAIL LANDING GEAR -- 1 set
SCREW PA3x12mm -- 2 pcs
RUDDER WHEEL 30mm -- 1 pc.
COLLAR 2.6mm w/set screw -- 1 set
6. SCREW M4x80mm -- 1 pc.
M4 NYLON INSERT LOCK NUT -- 2 pcs
EYE SCREW M2.5x8x25mm w/Threads (For Rudder) -- 2 pcs
WIRE 1x1000mm (For Rudder) -- 2 pcs
COPPER TUBE d2.5xD3.2x8mm (For Rudder) -- 2 pcs
HEAVY DUTY CLEVIS PL4112200 -- 2 sets
HEAVY DUTY HORN BRACKET -- 2 sets
SWIVEL CLEVIS HORN FAIRING (Pull-Pull System) PL4610020 -- 1 set
7. PUSHROD 2.5x132mm w/Threads (For Elevator) -- 2 pcs
SCREW PM4x50mm -- 2 pcs
M4 NYLON INSERT LOCK NUT -- 2 pcs
HEAVY DUTY CLEVIS PL4112200 -- 4 sets
HEAVY DUTY HORN BRACKET -- 2 sets
HEAVY DUTY SERVO HORN PL4120250 -- 2 sets
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 2 sets
8. MAIN LANDING GEAR -- 1 set
MAIN LANDING GEAR COVER -- 1 pair
AXLE SHAFT 4x60mm (For Main Wheel) -- 2 pcs
SOCKET HEAD SCREW M4x16mm -- 4 pcs
SCREW PWA2.3x8mm -- 16 pcs
M8 NYLON INSERT LOCK NUT -- 2 pcs
WHEEL 90mm -- 2 pcs
COLLAR 4.1mm w/ screw -- 4 sets
WHEEL PANTS -- 1 pair
ALUMINUM PLATE 1mm -- 1 pair
WHEEL PANT DECORATIVE COVER -- 1 pair
PLASTIC WHEEL COLLAR 4.1mm -- 2 pcs
9. FIREWALL 10x131x153mm(Plywood)(F1) -- 1 pc.
ENGINE BOX SIDE PLATE 5x99x280mm (F20 & F21A) -- 2 pcs
UPPER PLATE 2x120.1x153mm (F21A) -- 1 pc.
LOWER PLATE 2x125.2x153mm (F21) -- 1 pc.
FUEL TANK HOLDER(Front)(F45) 3x69x143mm -- 1 pc.
FUEL TANK HOLDER(Back)(F47) 3x88x143mm -- 1 pc.
BALSA 10x10x153mm (F21B) -- 1 pc.
BALSA 10x10x106mm (F22) -- 2 pcs
BALSA 10x10x87mm (F23) -- 4 pcs
BALSA 8x8x101mm (F22A) -- 2 pcs
BALSA 12x12x99mm (F24) -- 1 pc.
BALSA 12x12x99mm (F24A) -- 1 pc.
BALSA 10x10x88mm (F48) -- 2 pcs
BALSA 10x10x69mm (F46) -- 2 pcs
10. FUEL TANK 800cc (Gasoline Fuel) -- 1 set
PLYWOOD 10x10x144mm (For Fixing Fuel Tank)(F49) -- 1 pc.
12. HEAVY DUTY SERVO HORN PL4120600 -- 1 set
EYE SCREW M2.5x8x25mm w/Threads (For Rudder) -- 2 pcs
COPPER TUBE d2.5xD3.2x8mm (For Rudder) -- 2 pcs
LINKAGE CONNECTOR 2.1mm -- 1 set
HEAVY DUTY CLEVIS PL4112200 -- 2 sets
SPONGE 60x70x233mm -- 1 pc.
THROTTLE PUSH WIRE 1.2x460mm -- 1 pc.
PLASTIC TUBE d2xD3x170mm -- 1 pc.
PLYWOOD 3x49x94mm (For Throttle Servo)(F30) -- 1 pc.
BALSA 8x8x61mm (For Throttle Servo Stand)(F30A) -- 1 pc.
PLYWOOD 3x65x206.7mm (For Rudder Servo)(F31) -- 1 pc.
PLYWOOD 6x11x196.2mm (For Rudder Servo Stand)(F32) -- 1 pc.
PLYWOOD 6x11x202.7mm (For Rudder Servo Stand)(F33) -- 1 pc.
BALSA 8x8x65mm (For Rudder Servo Stand)(F25) -- 2 pcs
13. SCREW PM3x35mm -- 1 pc.
SCREW PA3x35mm -- 1 pc.
WASHER d3xD7mm -- 2 pcs
WING TUBE Ø32x925mm -- 1 pc.
WING FAIRING -- 1 pair
14. SCREW PA3x12mm -- 6 pcs
WASHER d3xD7mm -- 6 pcs
SILICON GROMMET (PL1285035) d2.5xD8.5mm -- 6 pcs
SPINNER (w/alu.back plate) 102mm -- 1 set
COWLING -- 1 pc.
TRANSPARENT 3D TEMPLATE-- 1 pc.
15. PILOT PC101110A -- 1 set
SCREW PWA 2.3x8mm -- 8 pcs
SCREW PM3x25mm -- 2 pcs
WASHER d3xD7mm -- 2 pcs
CANOPY -- 1 pc.
SILICON GROMMET (PL1265035) d1.5xD6.5mm -- 8 pcs
16. DECALS A162DEC -- 1 set
17. COVERING:
TOUGHLON STL100 WHITE
TOUGHLON STL201 BLACK
TOUGHLON STL241 TURQUOISE
TOUGHLON STL311 FERRARI RED
TOUGHLON STL351 DARK BLUE
TOUGHLON STL360 VIOLET

1 Main Wing



Aileron Servo Lead

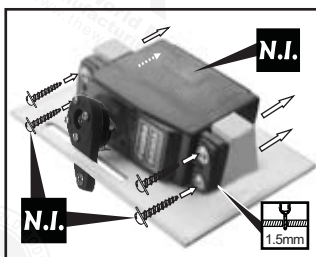
● Bottom View

L/R

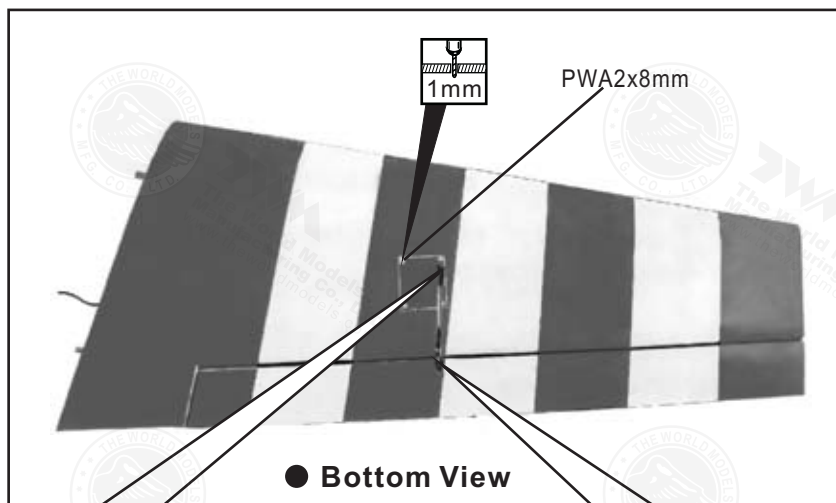
● Replace CA hinges by metal hinges. Glue the metal hinges to wing and aileron by epoxy.

2 Aileron Servos

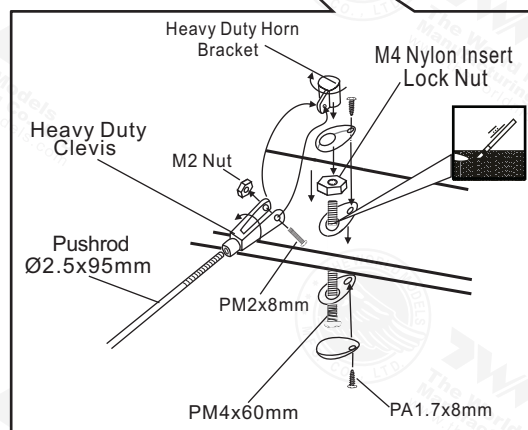
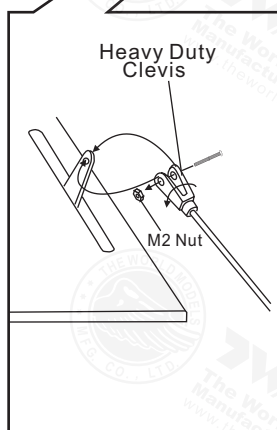
- PM4x60mm Screw — 2
- M4 Nylon Insert Lock Nut — 2
- PWA2x8mm Screw — 8



L/R



● Bottom View

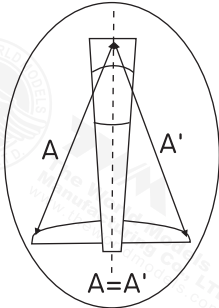


3 Stabilizer & Elevator

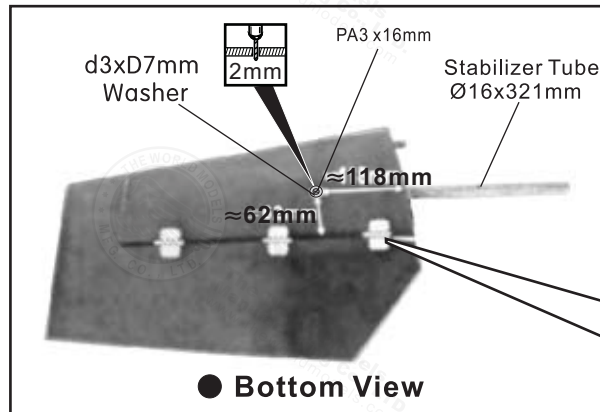
PA3 x16mm Screw

d3xD7mm Washer

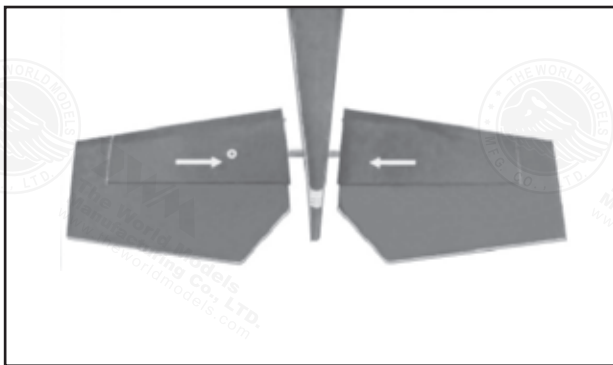
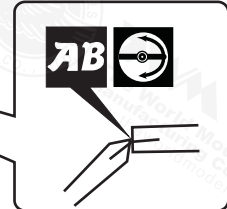
2
2



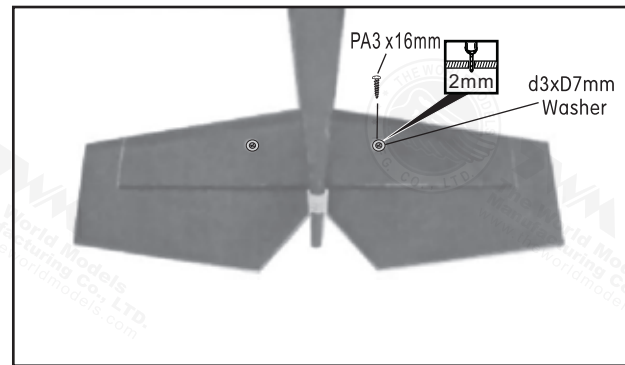
- Replace CA hinges by metal hinges. Glue the metal hinges to stabilizer and elevator by epoxy.



● Bottom View



● Bottom View

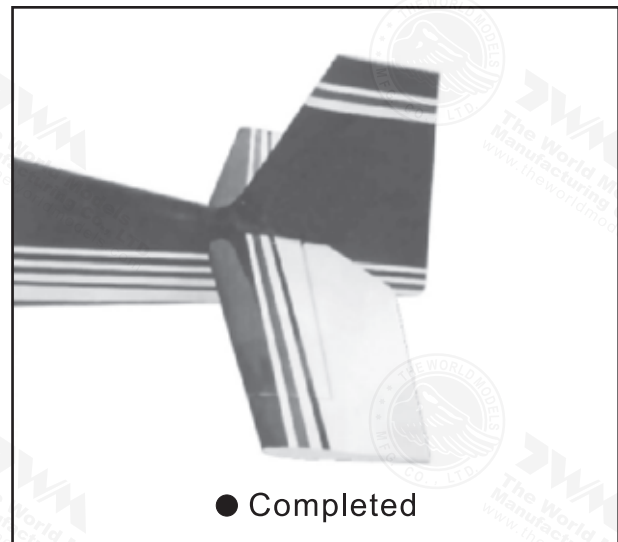
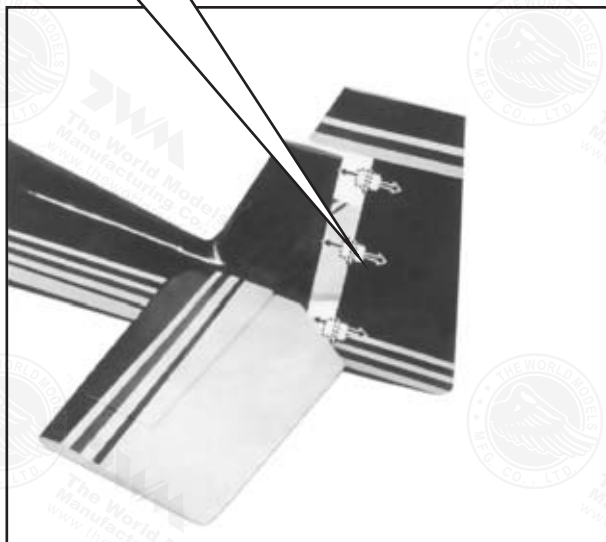
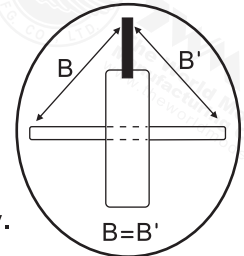


● Bottom View

4 Vertical Fin & Rudder



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



● Completed

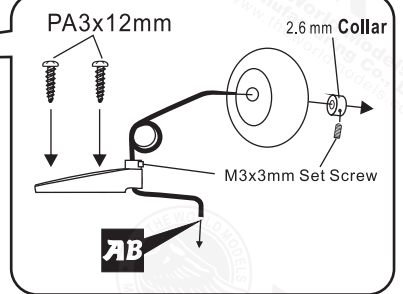
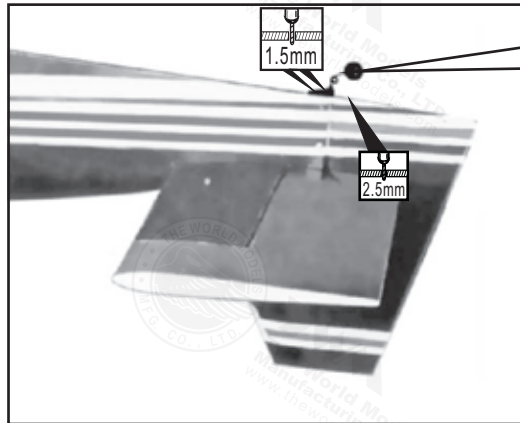
5 Tail Landing Gear

PA3x12mm Screw

2

2.6 mm Collar

1



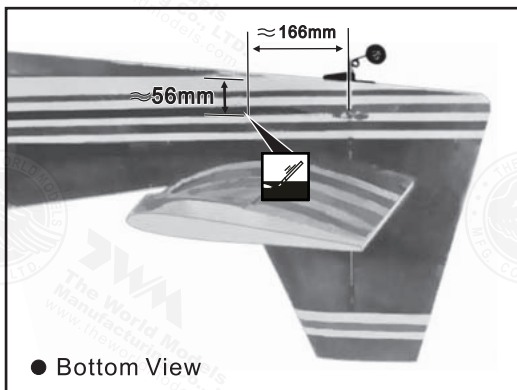
6 Rudder Pullwire

M4x80mm Screw

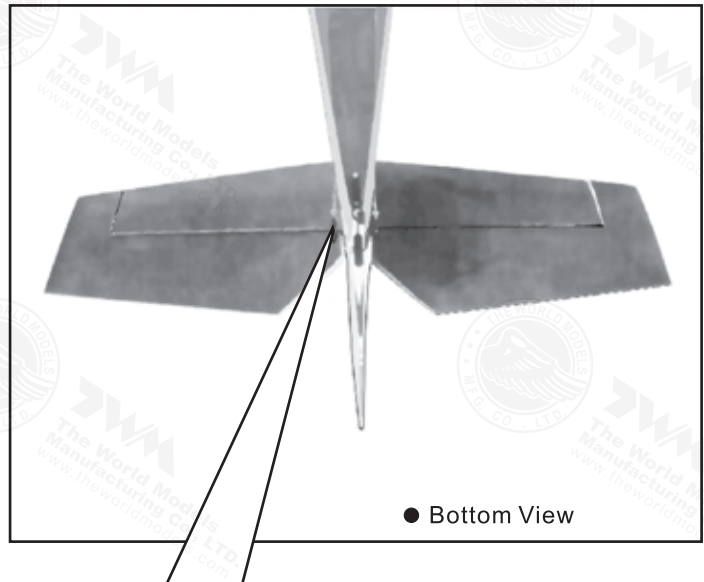
1

M4 Nylon Inert Lock Nut

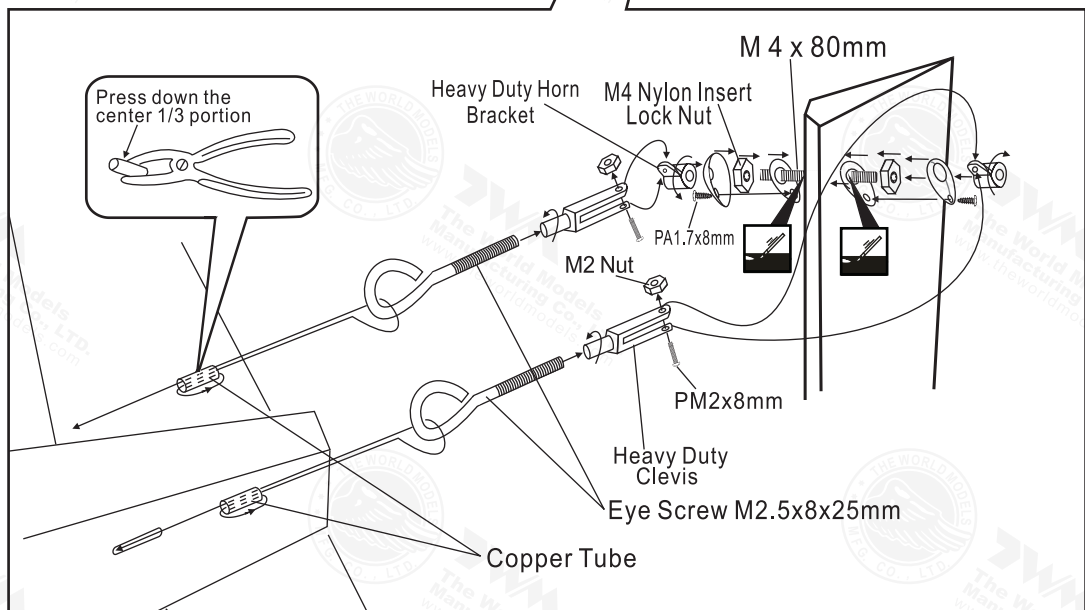
2



● Bottom View



● Bottom View



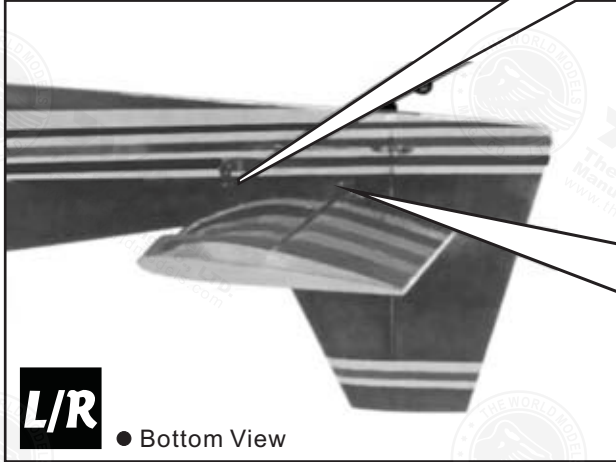
L/R

7 Elevator Pushrod

PM 4 x 50 mm Screw

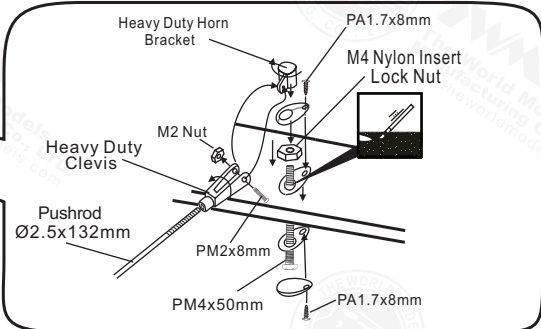
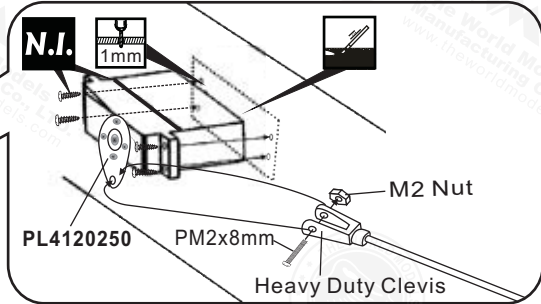


M4 Nylon Inert Lock Nut



L/R

● Bottom View



8 Main Landing Gear



M4x16mm Socket Head Screw



PWA2.3x8mm Screw



PWA2.6x8mm Screw



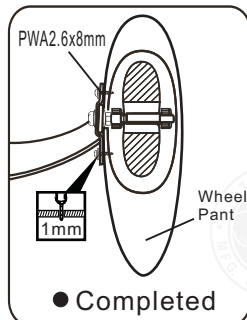
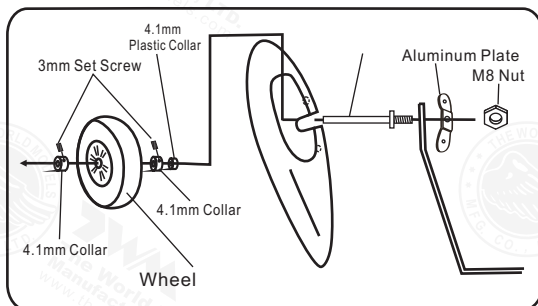
4.1mm Collar



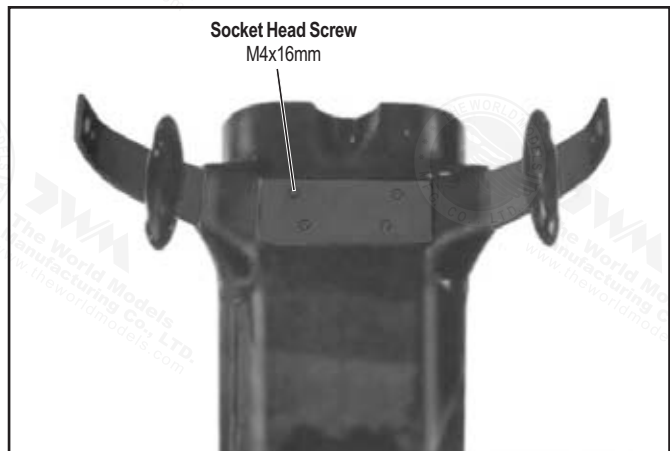
4.1mm Plastic Collar



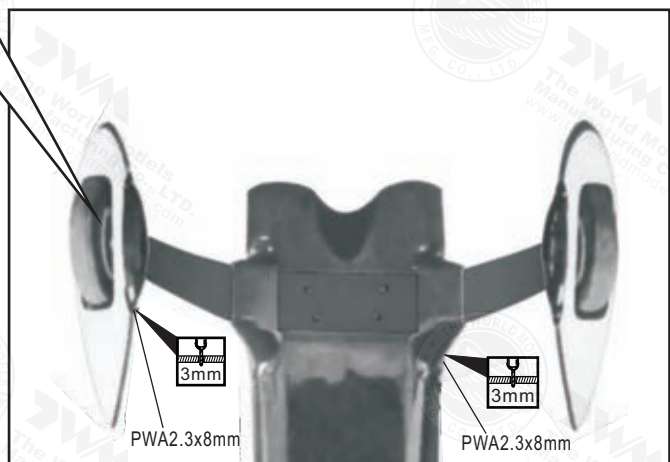
M8 Nylon Inert Lock Nut



● Completed



● Bottom View

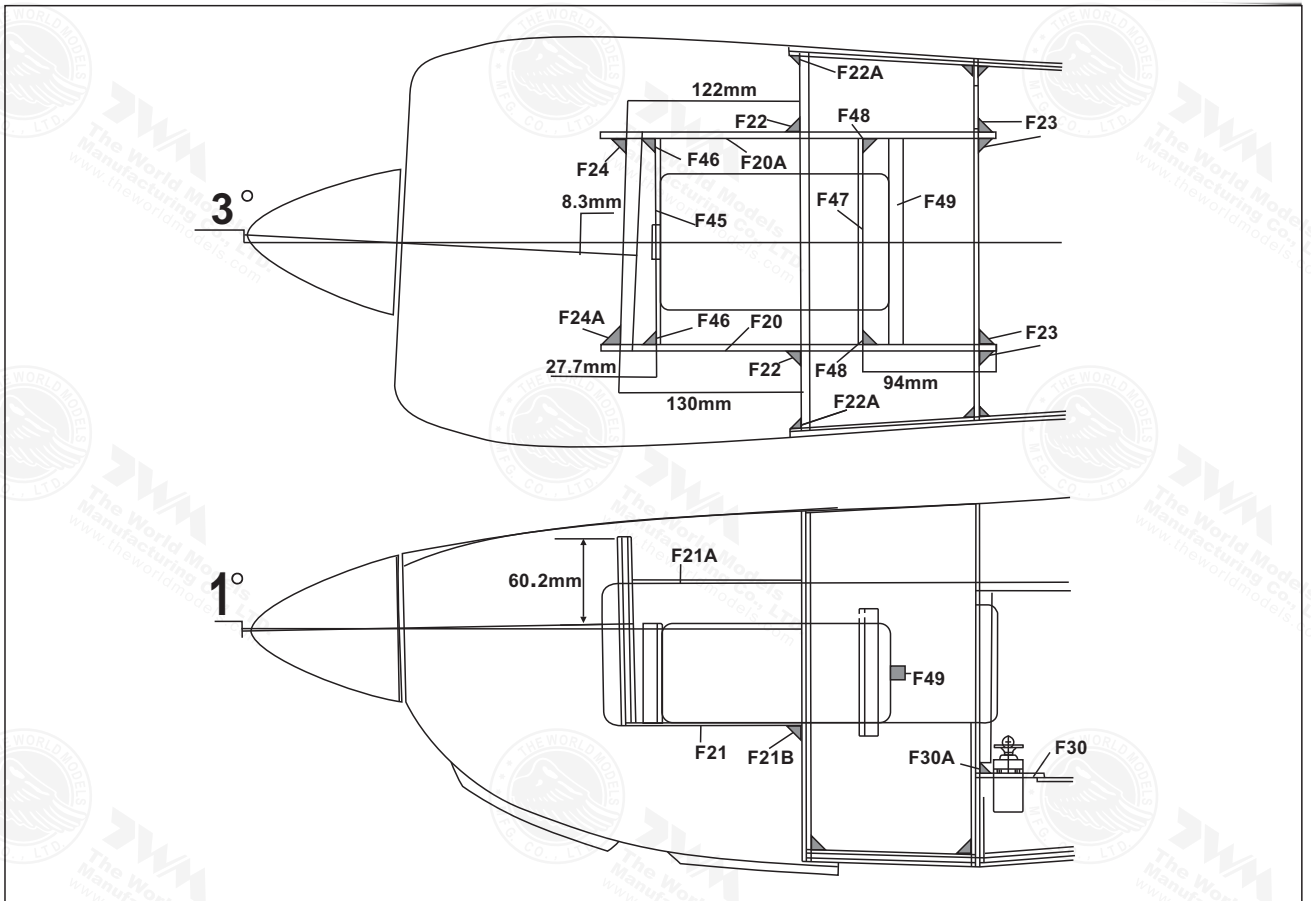
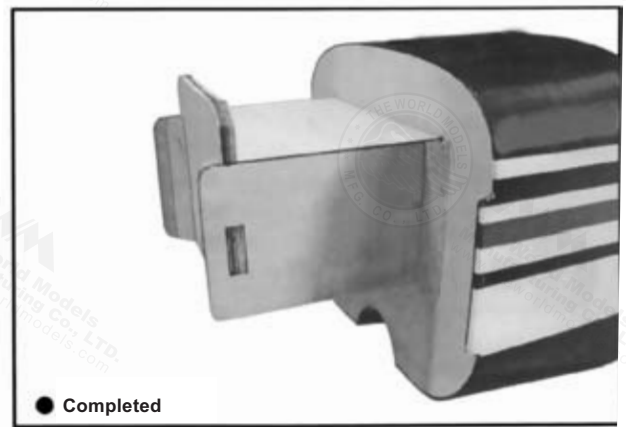
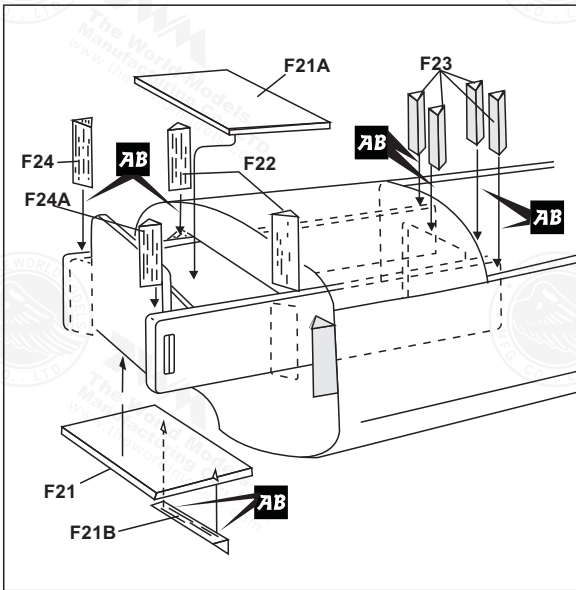
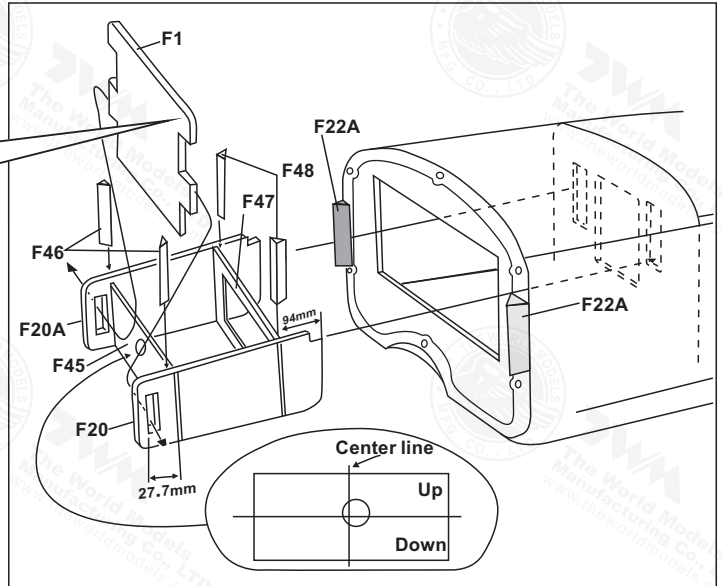
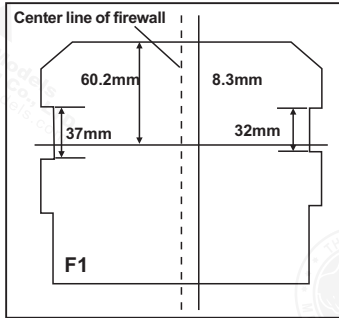


● Bottom View

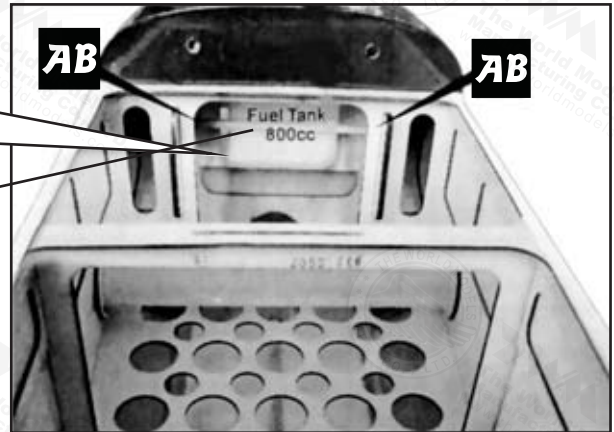
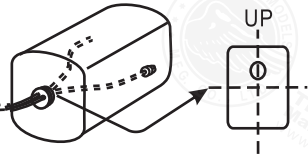
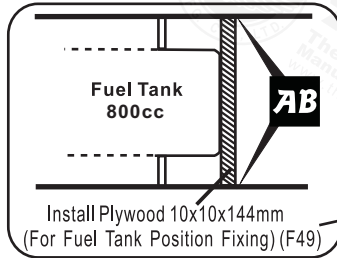
L/R

9 Engine Box

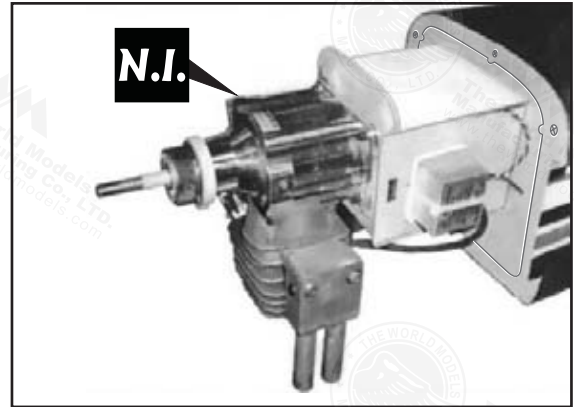
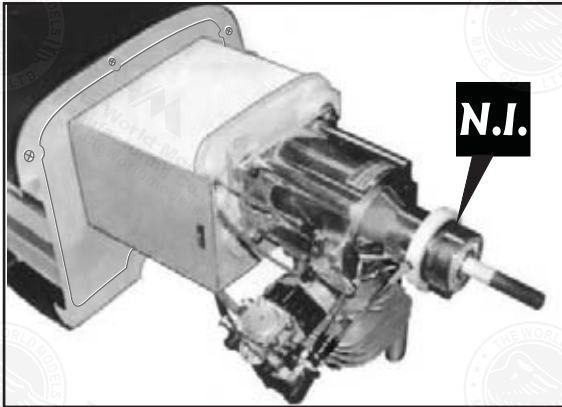
● Use epoxy to glue all parts together.



10 Fuel Tank

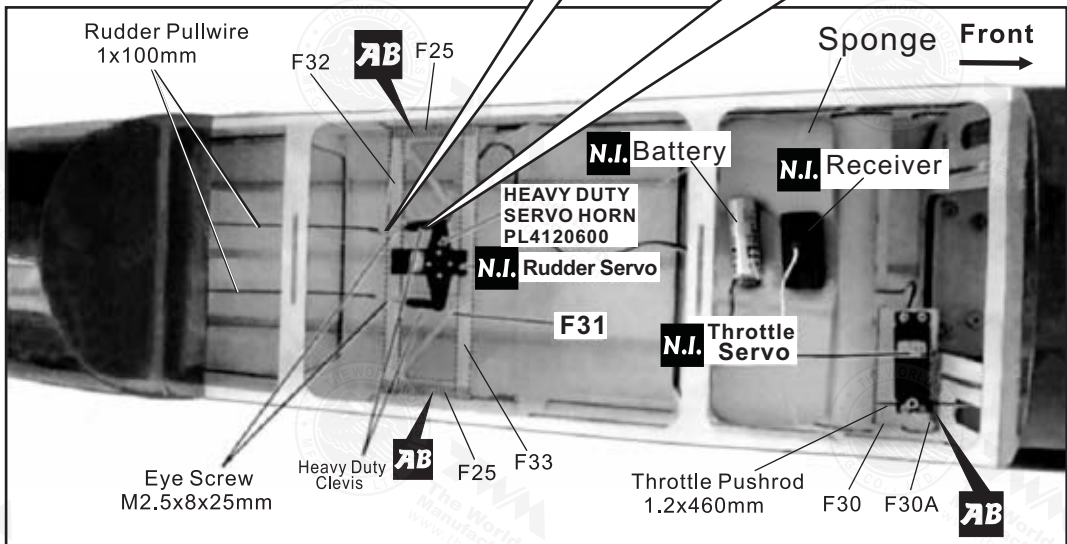
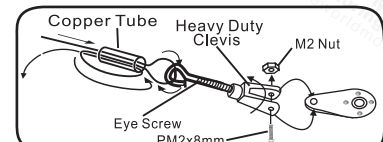
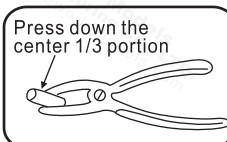


11 Engine



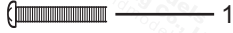
12 Radio Equipment

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



13 Main Wing

PM3x35mm Screw



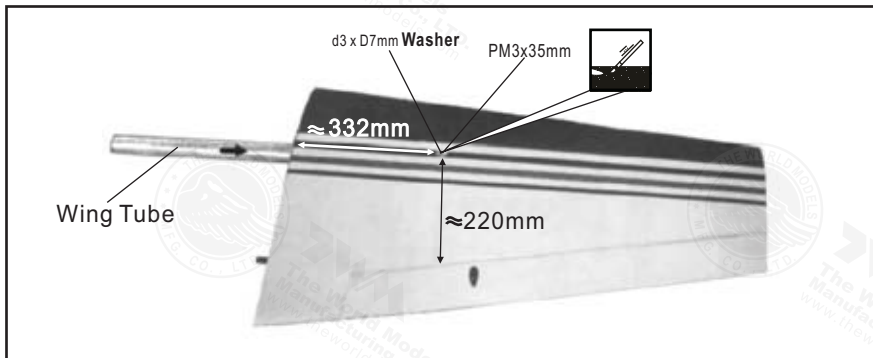
PA3x35mm Screw



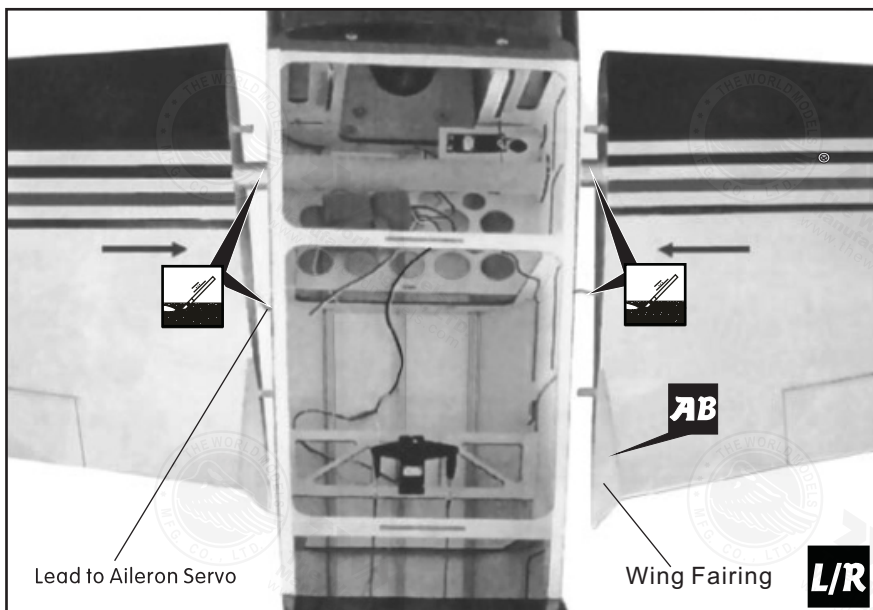
d3 x D7mm Washer



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 PM3x35mm 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.

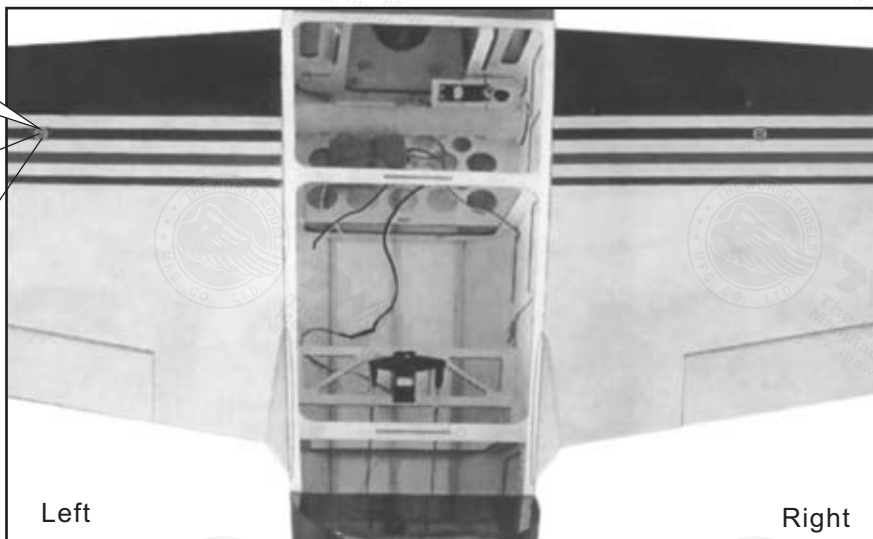


● Top View



PA3x35mm

d3x D7mm Washer

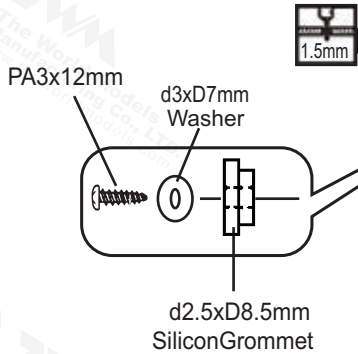
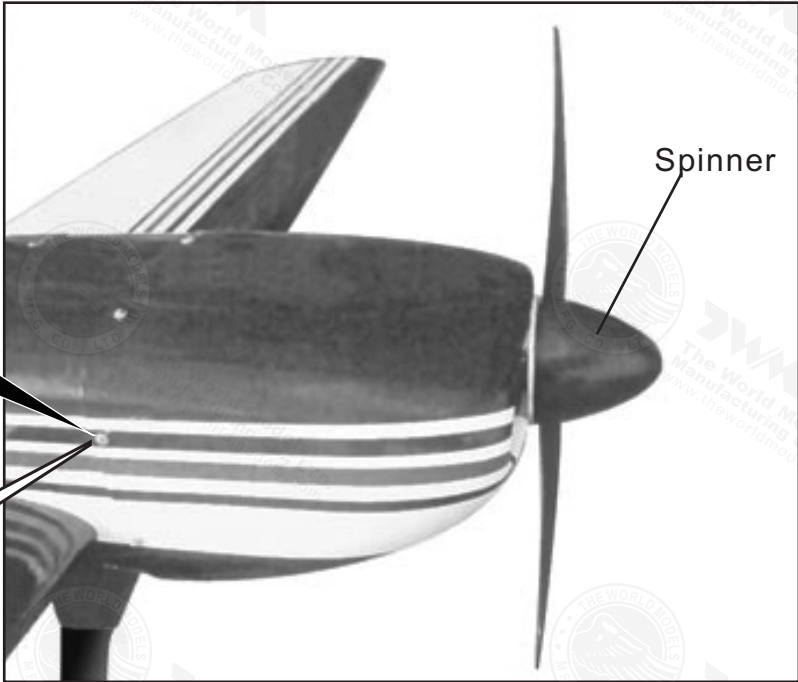


Step 3. Make sure the wings are resting against the fuselage tightly. Locate the pre-drilled 2.5mm hole at top of left wing, and drill along with 2.5mm drill bit until it passes through the wing tube. Apply the PA3x35mm self-tapping screw.

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 Cowling

- PA3x12mm Screw — 6
- d3xD7mm Washer — 6
- d2.5xD8.5mm SiliconGrommet — 6

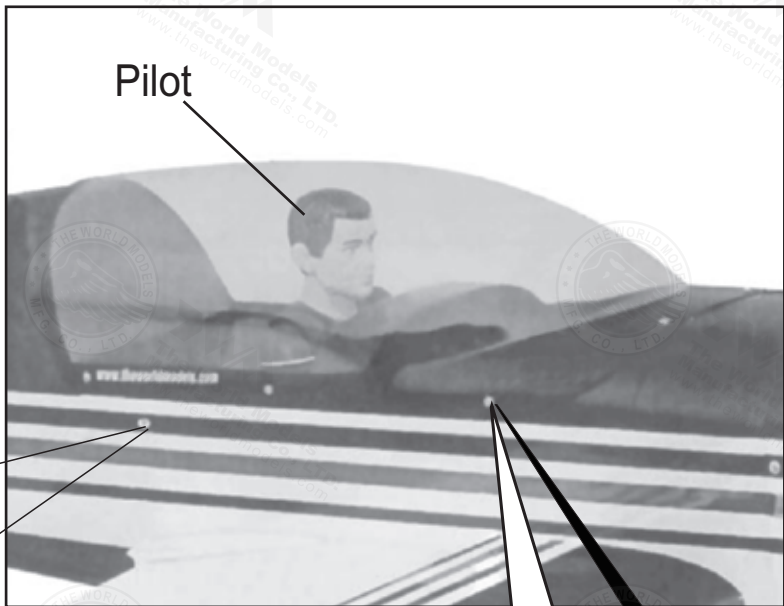


- Please refer to the attached sheet for usage of the transparent 3D template.
- First insert the grommet to the cowling then apply screw.

15 Canopy

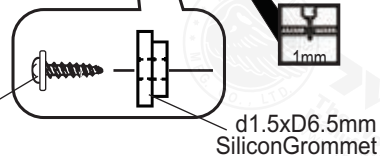
- PWA2.3x8mm Screw — 8
- PM3x25mm Screw — 2
- d3xD7mm Washer — 2
- d1.5xD6.5mm SiliconGrommet — 8

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



d3xD7mm Washer

PM3x25mm

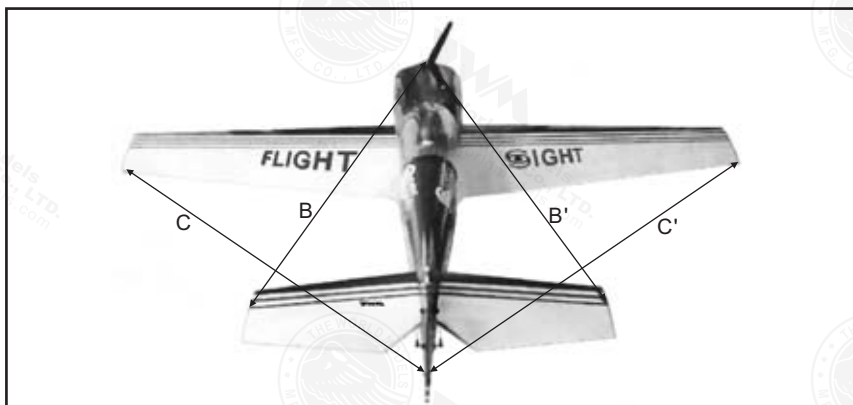
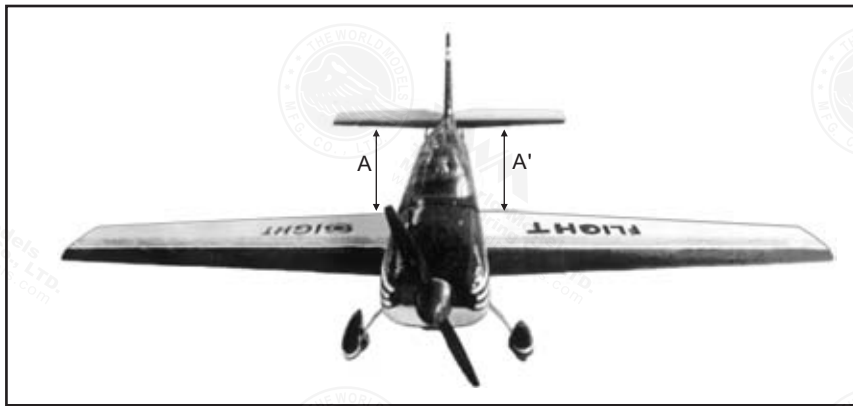


PWA2.3x8mm

d1.5xD6.5mm SiliconGrommet

16 Wing Setting

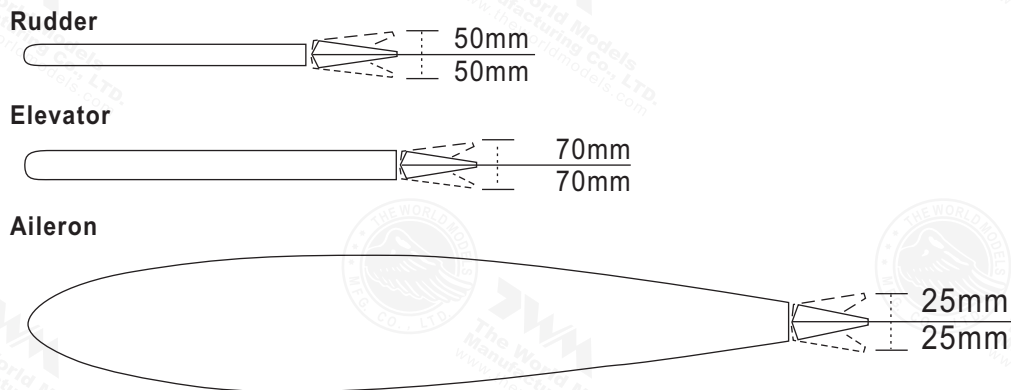
- Adjust the wing and fuselage configuration as shown in the diagrams.



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

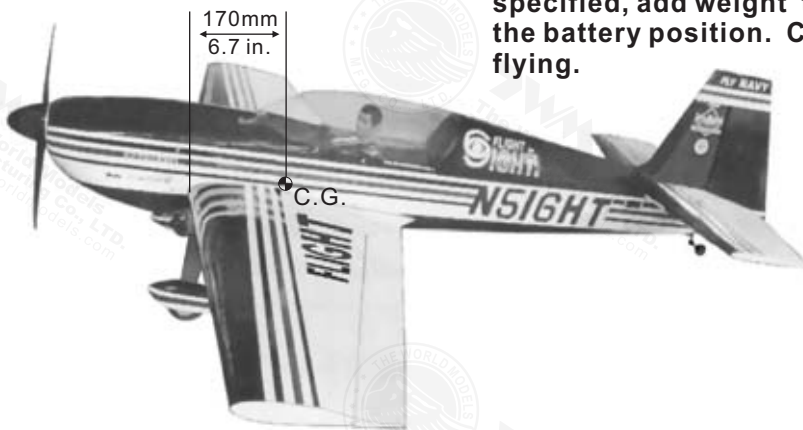
17 Control Throws

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 170mm (6.7 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.



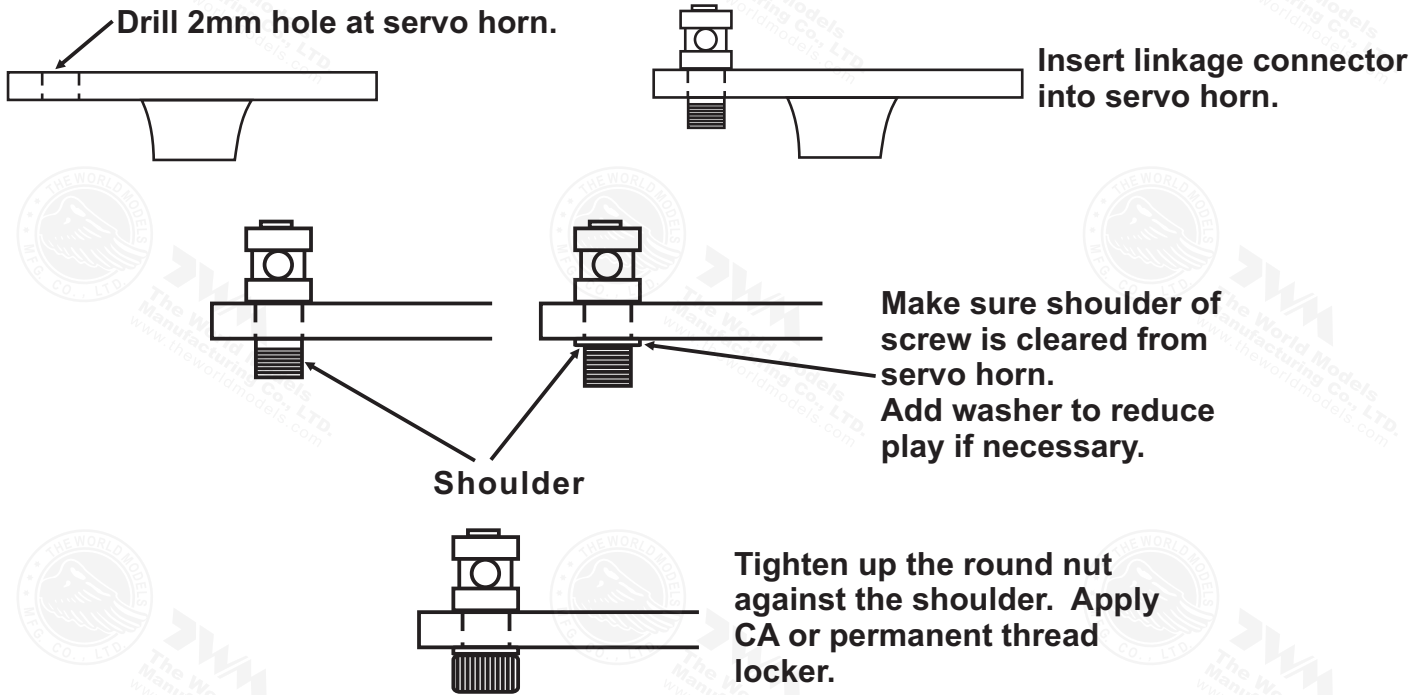
! Warning!

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.
- # **28%EXTRA 330L** is specially designed to be powered by 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. Don't use hot iron near the seams or edges, hot iron will melt the glue and shrink the covering at the same time, causing the seams to pull away.
- # Check and re-tighten up all factory assembled screws, use thread locker if necessary.

LINKAGE CONNECTOR

HW7111050 & HW7111060



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: _____

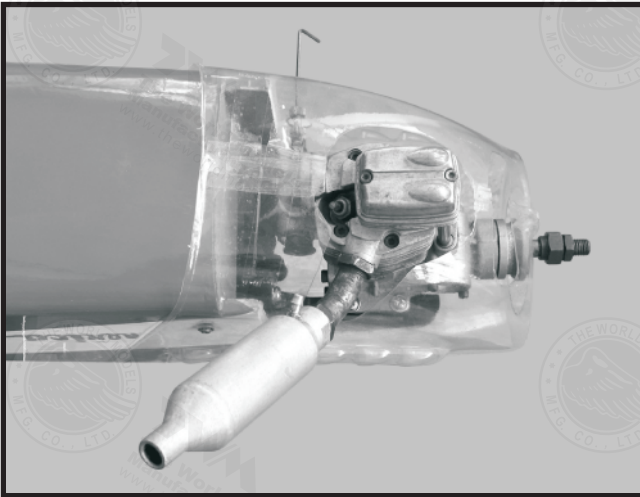
Please call AirBorne Models at 925 371 0922 for any assistance in filling this form. Thank you very much for purchasing our product.

Usage of the transparent 3D template

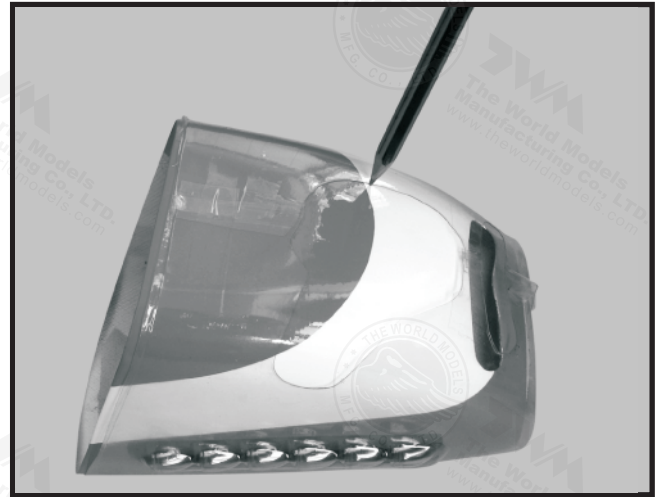


This transparent 3D template is used for position guidance of the actual cutting of the pre-painted cowling.

1



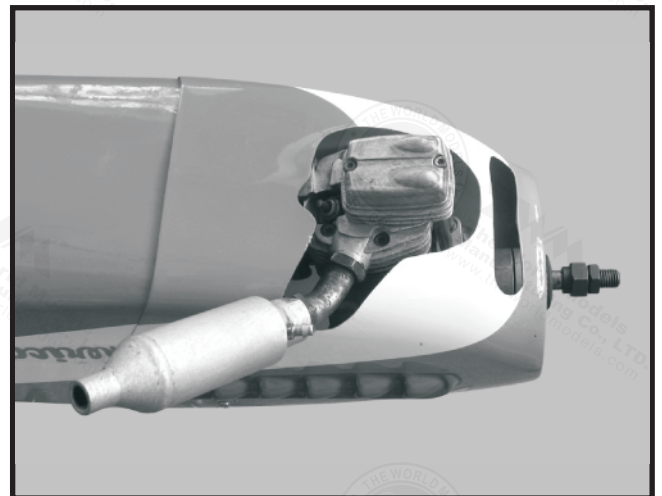
2



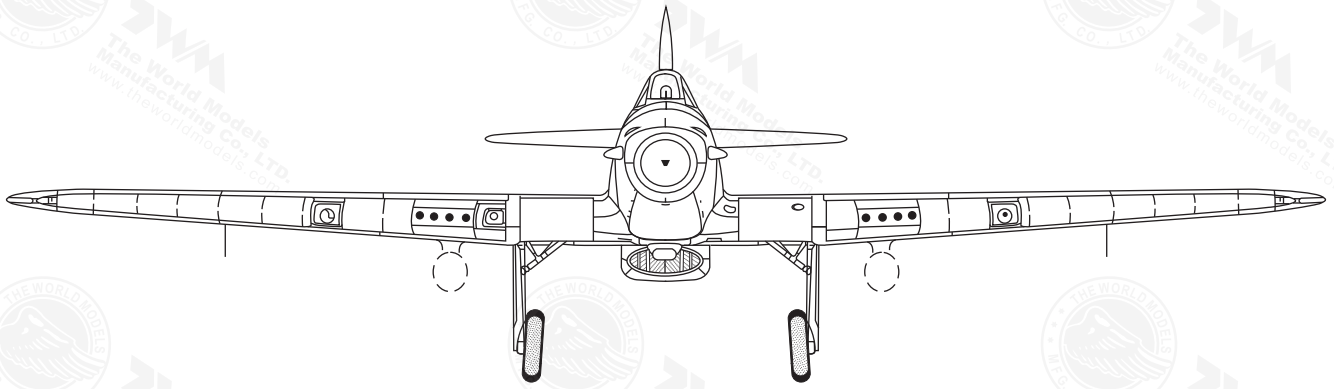
3



4



Simply cut the transparent 3D template to fit your engine and exhaust pipe, then slide onto the actual cowling and use as template to mark the openings required for final cutting.



Ducted Fan

Pattern

Warbirds

Funfly

Scale

Electric

Sports

Glider

Trainer Boat

Accessories

Covering

(Lightex /oughlon)



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