

# TUCANO 60



**0.61 cubic inch displacement 2-stroke**  
**0.91 cubic inch displacement 4-stroke**  
**Requires : 7-channel radio w/ 6 standard servos**  
**and 2 low profile retract servos.**

## Specifications

<b>Wing Span</b>	<b>63 in / 1600 mm</b>
<b>Wing Area</b>	<b>627.8 sq in / 40.5 sq dm</b>
<b>Flying Weight</b>	<b>7.2 ~ 7.6 lbs / 3290 ~ 3440 g</b>
<b>Fuselage Length</b>	<b>54 in / 1370 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.



The World Models  
Manufacturing Co., Ltd.  
www.theworldmodels.com

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

# TUCANO 60

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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.)



Apply thread locker



Must be purchased separately!



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).



Pierce the shaded portion  
covering film.



Pay close attention here!



**Warning!**

Do not overlook this symbol!



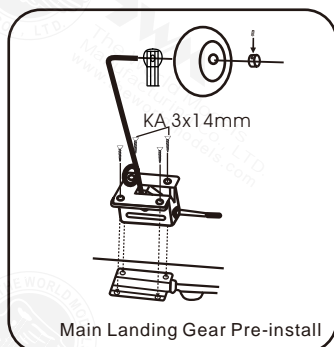
## Parts List

1. MAIN WING -- 1 pair
  2. RETRACTABLE LANDING GEAR -- 1 pair  
RETRACTABLE LANDING GEAR COVER -- 1 pair  
SCREW PM2x6mm -- 8 pcs  
M2 NUT -- 8 pcs  
WASHER d2xD5mm -- 16 pcs
  3. SERVO MOUNTING PANEL 2x68x78mm PL5310000 -- 1 pair  
SCREW PB2x18mm -- 2 pcs  
SCREW PB2x20mm -- 4 pcs  
SCREW PWA2x8mm -- 8 pcs  
TRI-HORN M3x14mm (S) PL4111221 -- 2 sets  
PUSHROD Ø1.8x85mm (For Aileron Servos) -- 2 pcs  
STRAPER PL4112102 -- 2 pcs  
CLEVIS PL4112103 -- 2 pcs  
FUEL TUBE Ø6x5mm -- 4 pcs
  4. WING JOINER 8x23.6x280mm (Wood) -- 1 pc.
  5. PUSHROD Ø1.8x77mm w/ Threads (For Flap Servo) -- 1 pc.  
LINKAGE CONNECTOR 2.1mm HW7111060 -- 2 sets  
CLEVIS PL4112103 -- 2 pcs  
STRAPER PL4112102 -- 1 pc.  
FUEL TUBE Ø6x5mm -- 3 pcs  
RING Ø2.6mm PL4112026 -- 2 pcs  
PLYWOOD 3x28x62mm -- 1 pc.
  6. FUSELAGE -- 1 pc.  
STABILIZER & ELEVATOR -- 1 set  
BALSA 8x25x105.6mm (For Stabilizer) -- 2 pcs
  7. VERTICAL FIN & RUDDER -- 1 set  
VERTICAL WING'S FIN 3x40x60mm -- 1 pc.
  8. SCREW PB2x14mm -- 6 pcs  
PUSHROD Ø1.8x610mm w/ Threads (For Elevator Servo) -- 2 pcs  
TRI-HORN M3x14mm (S) PL4111221 -- 2 sets  
CLEVIS PL4112103 -- 2 pcs  
FUEL TUBE Ø6x5mm -- 2 pcs
  9. SCREW PB2x12mm -- 3 pcs  
PUSHROD Ø1.8x705mm w/ Threads (For Rudder Servo) -- 1 pc.  
TRI-HORN M3x14mm (S) PL4111221 -- 1 set  
CLEVIS PL4112103 -- 1 pc.  
FUEL TUBE Ø6x5mm -- 1 pc.
  10. MECHANICAL NOSE RETRACT -- 1 set  
PUSHROD Ø1.8x370mm w/ Threads -- 1 pc.  
PUSHROD Ø1.8x295mm w/ Threads -- 1 pc.  
PLASTIC TUBE d3.5xD5.2x240mm -- 1 pc.  
COLLAR Ø4.1mm w/ Set Screw -- 1 set  
SCREW KA3x14mm -- 4 pcs  
CLEVIS PL4112103 -- 2 pcs  
FUEL TUBE Ø6x5mm -- 2 pcs  
NOSE WHEEL Ø50mm -- 1 pc.  
RIGHT ANGLE WHEEL SPACER PL4121040 -- 1 set
  11. SOCKET HEAD SCREW M4x30mm -- 4 pcs
  - WASHER d4xD9mm -- 4 pcs  
ENGINE MOUNT PL5111070 -- 1 set  
WOOD 7x16x76mm (For Engine Mount) -- 2 pcs
  12. FUEL TANK 380cc PL1111380 -- 1 set  
CABLE TIE (For Fuel Tank) 1.5x5x400mm -- 1 pc.  
DOUBLE-SIDED TAPE 40x100mm -- 1 pc.
  13. THROTTLE PUSHWIRE Ø1.2x435mm -- 1 pc.  
PLASTIC TUBE d2xD3x230mm -- 1 pc.  
SOCKET HEAD SCREW M4x30mm -- 4 pcs  
WASHER d4xD9mm -- 8 pcs  
M4 NUT -- 8 pcs
  14. COWLING -- 1 pc.  
EXHAUST -- 2 pcs  
TRANSPARENT 3D TEMPLATE -- 1 pc.  
SCREW PWA2.6x10mm -- 4 pcs  
SILICON GROMMET d1.5xD6.5mm -- 4 pcs  
SPINNER Ø62mm PL2111062 -- 1 set
  15. CANOPY -- 1 pc.  
SCREW PWA2.3x8mm -- 6 pcs  
SILICON GROMMET d1.5xD6.5mm -- 6 pcs  
PILOT PC001063A/B -- 2 pcs  
FRONT INSTRUMENT PANEL -- 1 pc.  
SEAT -- 2 pcs
  16. LINKAGE CONNECTOR 2.1mm HW7111060 -- 3 sets
  17. FUEL TUBE Ø6x5mm -- 2 pcs  
STRAPER PL4112102 -- 2 pcs  
SPONGE 10x80x200mm -- 2 pcs  
PUSHROD Ø1.8x80mm (For Elevator) -- 1 pc.  
PUSHROD CONNECTOR PL4410010 -- 1 set  
PLYWOOD 2x58.9x132.6mm -- 1 pc.  
BALSA 10x10x58.9mm -- 2 pcs  
PLYWOOD 3x20x32mm -- 1 pc.  
PLYWOOD 3x28x62mm -- 1 pc.
  18. SCREW HM4x40mm -- 2 pcs  
SCREW PWA2x8mm -- 4 pcs  
WASHER d4xD15mm -- 2 pcs  
PLATE 1x40x110mm (Wing Protection) -- 1 pc.  
BALSA 2x55x92mm -- 1 pc.  
PLYWOOD 3x9x54mm -- 1 pc.  
PLYWOOD 3x8x47.8mm -- 1 pc.  
PLYWOOD 3x20x60mm -- 1 pc.
  19. DECALS A274DEC -- 1 set
- COVERING:--
- 1) TUCANO AFA:  
TOUGHLON STL 322 DARK ORANGE  
TOUGHLON STL 100 WHITE  
LIGHTEX SGX 322 DARK ORANGE  
LIGHTEX SGX 201 BLACK
  - 2) TUCANO SMOKE SQUADRON:  
TOUGHLON STL 250 BLUE  
TOUGHLON STL 330 CADMIUM YELLOW  
LIGHTEX SGX 250 BLUE  
LIGHTEX SGX 330 CADMIUM YELLOW  
LIGHTEX SGX 240 GREEN  
LIGHTEX SGX 201 BLACK  
LIGHTEX SGX 100 WHITE

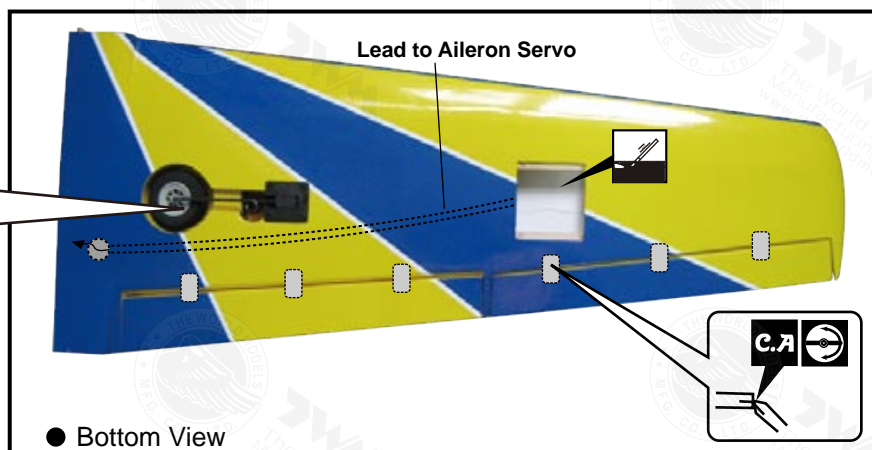


# 1 Main Wing

- Apply instant type CA glue to both sides of each hinge.

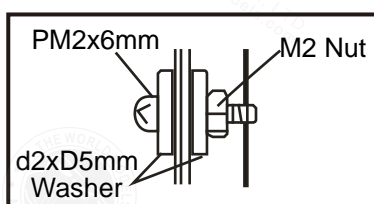


L/R



# 2 Retractable Landing Gear Cover

- PM2x6mm Screw — 8
- M2 Nut — 8
- d2xD5mm Washer — 16



L/R



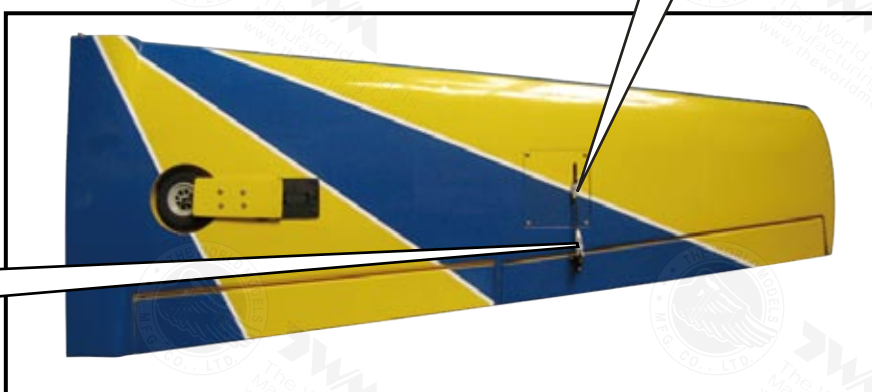
# 3 Aileron Servo

- Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.

- PB2x20mm Screw — 4
- PB2x18mm Screw — 2
- PWA 2x8mm Screw — 8



L/R

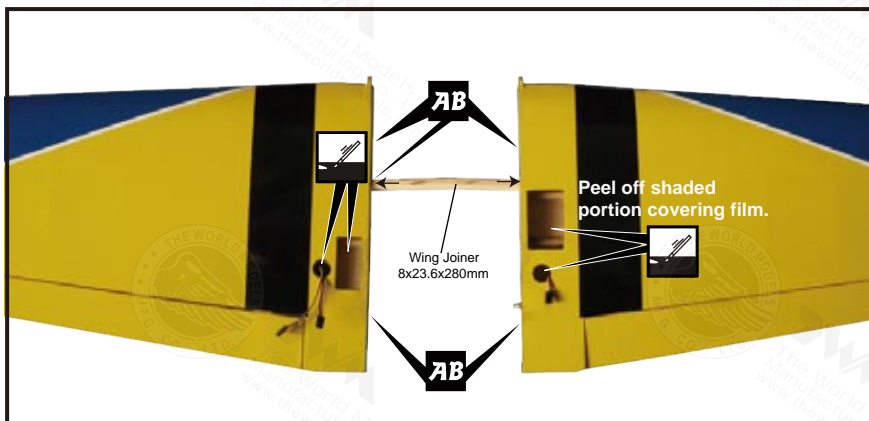


## 4 Main Wing

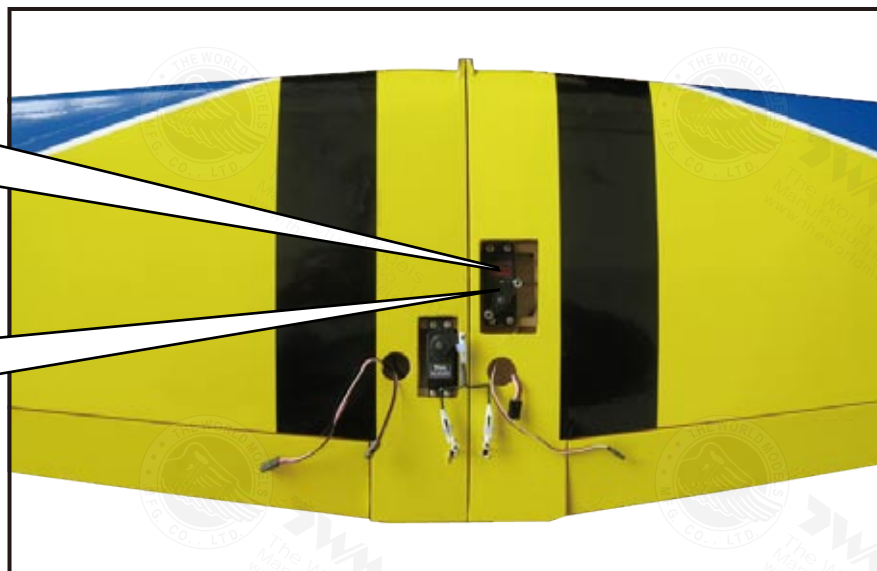
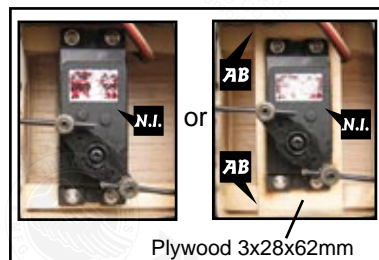
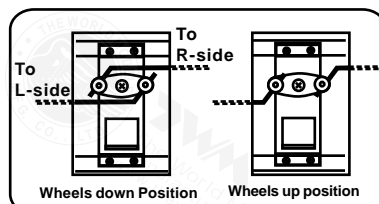
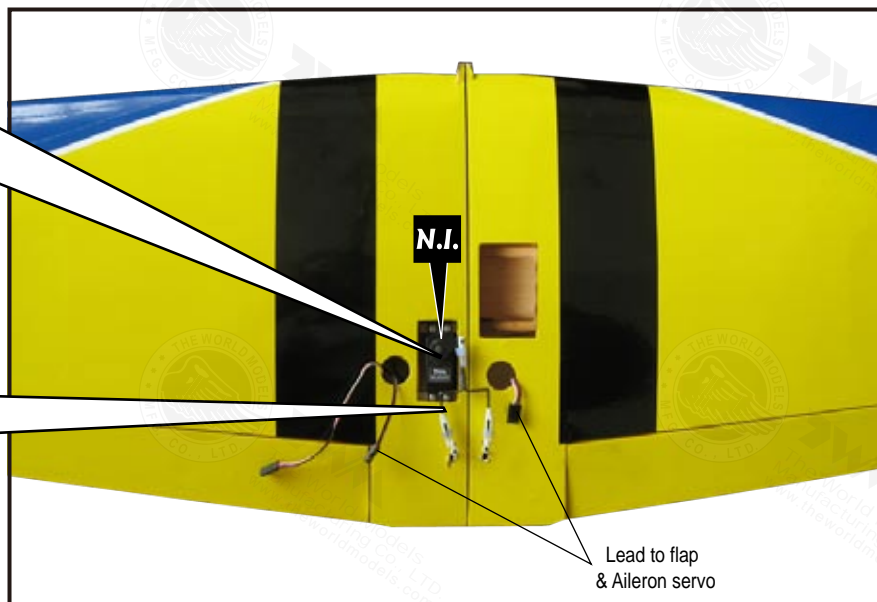
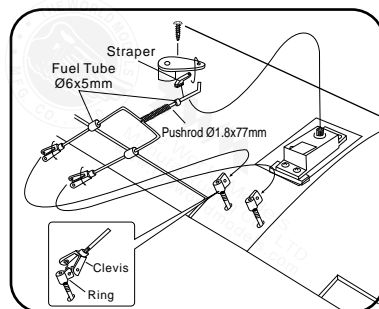
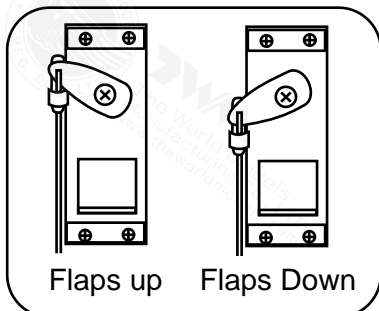
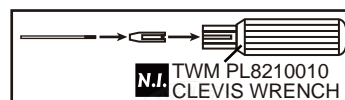
- Please dry fit wing joiner into left and right wing to make sure they fit with the proper dihedral angle, mark the wing joiner if necessary. Apply epoxy glue to both sides of all surfaces in contact. Use a stick to apply the glue to inner side of wing joiner sleeve, and apply the glue to wing joiner before putting them together. Wing joiner not glued properly will lead to wing failure and plane crash.



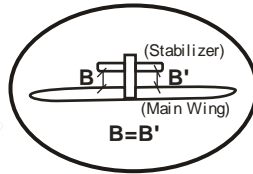
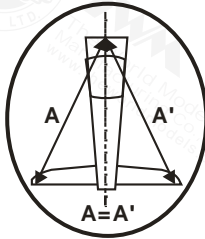
**L/R**



## 5 Flap and Retract Servo

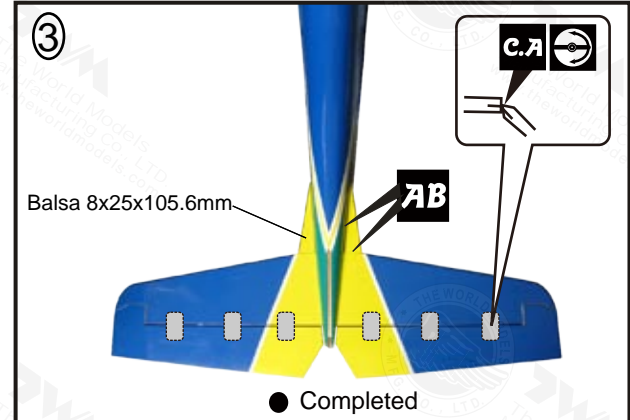
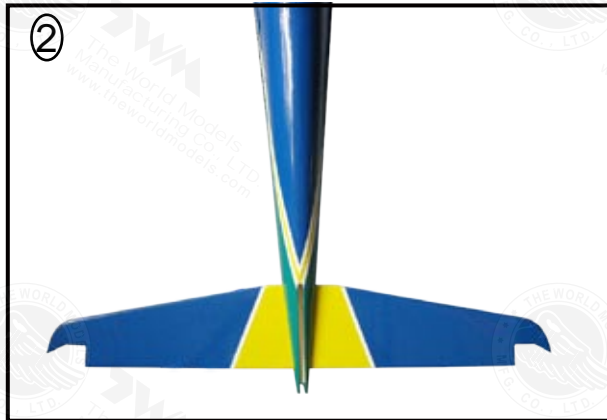
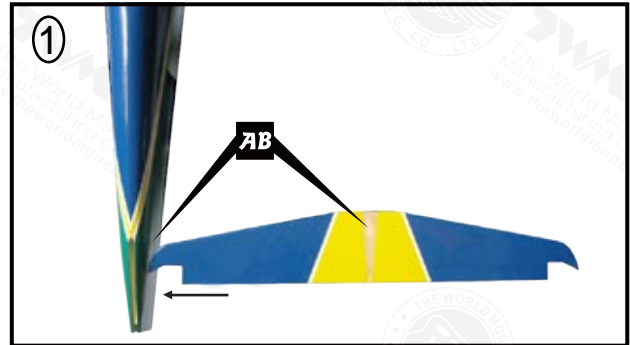


## 6 Stabilizer & Elevator

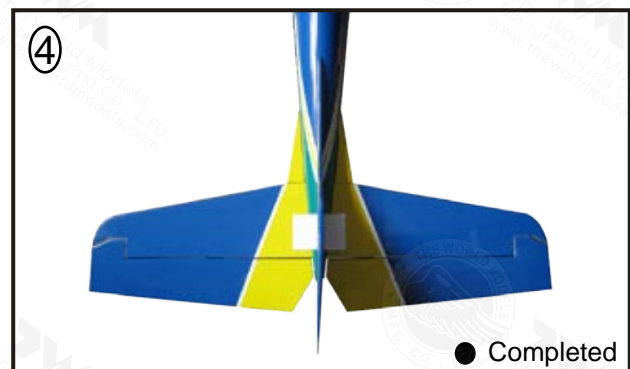
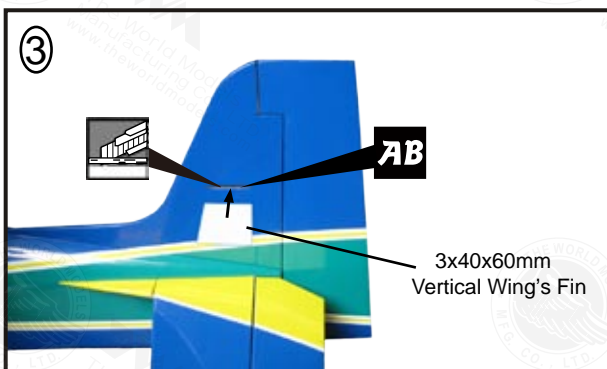
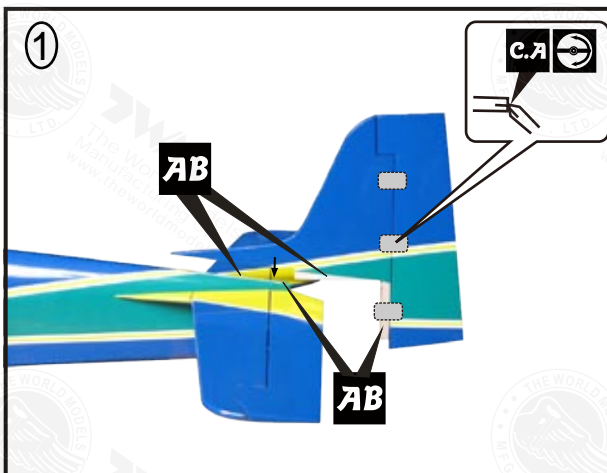
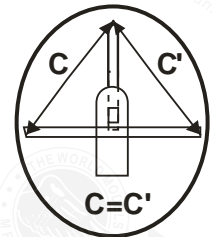


Temporary install the main wing, adjust leveling of the stabilizer to make it as parallel to the main wing as possible

- Apply instant type CA glue to both sides of each hinge.



## 7 Vertical Fin & Rudder

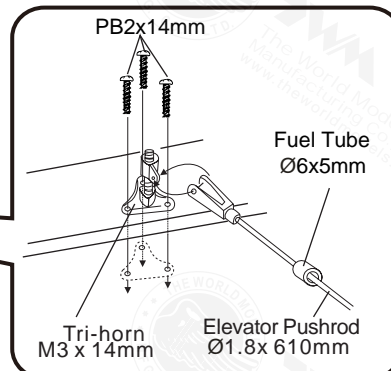
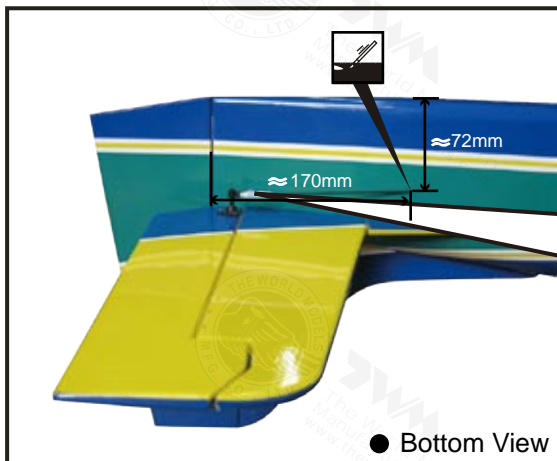
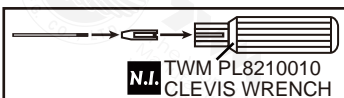




## 8 Elevator Pushrod

- Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.

PB2x14mm Screw 6

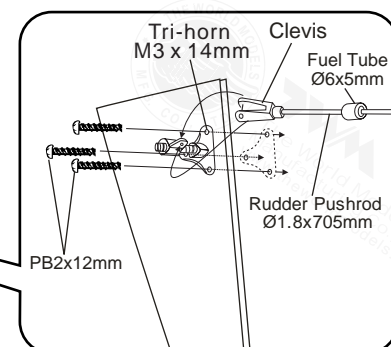
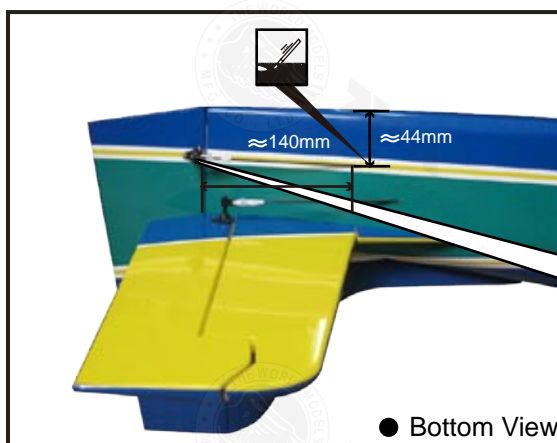
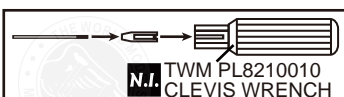


L/R

## 9 Rudder Pushrod

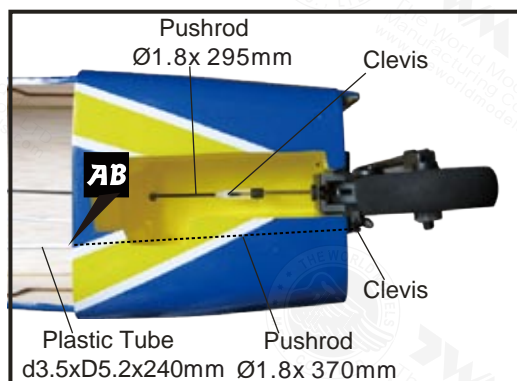
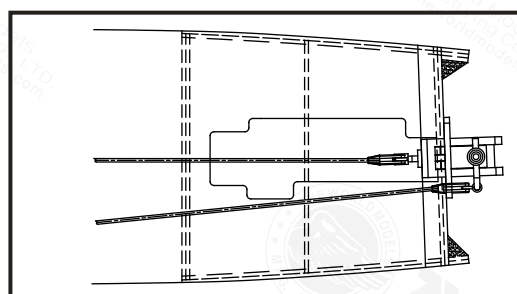
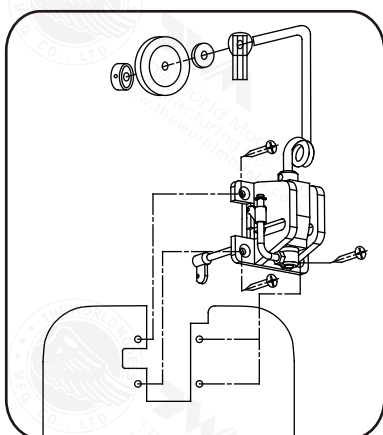
- Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.

PB2x12mm Screw 3



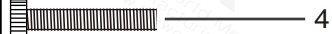
## 10 Mechanical Nose Retract

KA3x14mm 4  
4.1 Collar 4



## 11 Engine Mount

M4x30mm **Socket Head Screw**



4

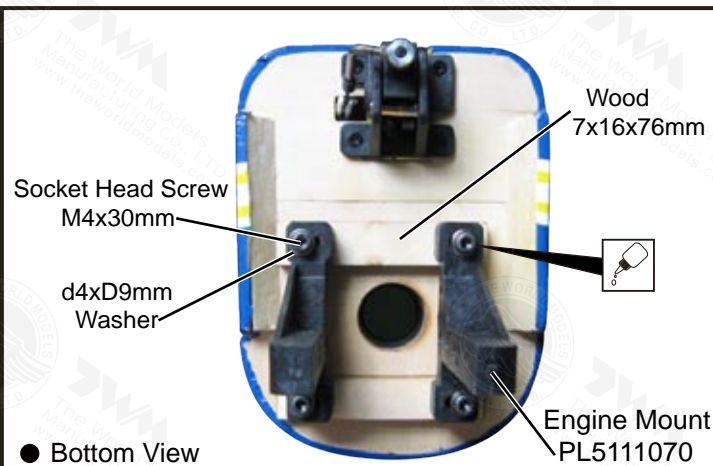
d4xD9mm **Washer**



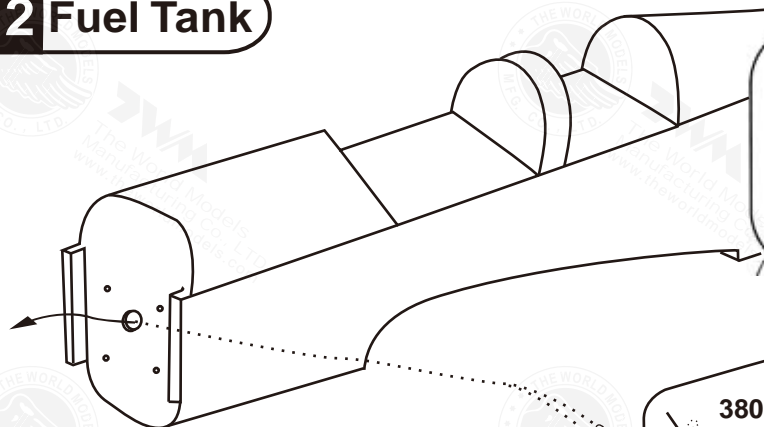
4

**!** Blind nuts are off-centered to keep the spinner at the fuselage axis.

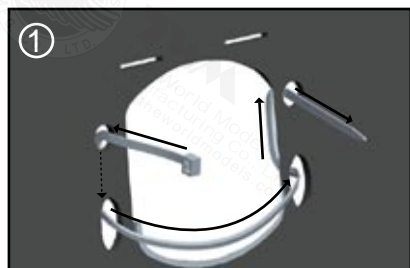
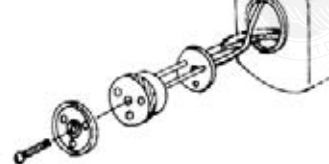
● Apply thread locker to screws



## 12 Fuel Tank

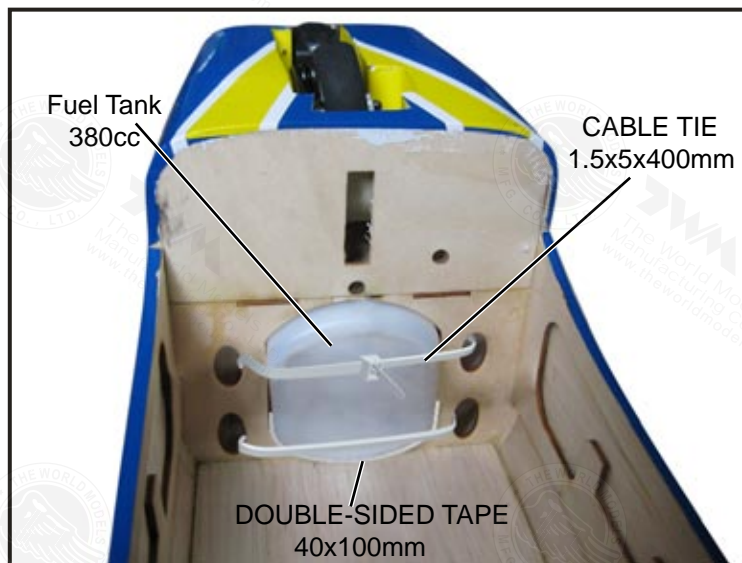


Fuel Tank Setup



380cc

UP



● Bottom View



## 13 Engine

M4x30mm **Socket Head Screw**



4

d4xD9mm **Washer**



8

M4 **Nut**

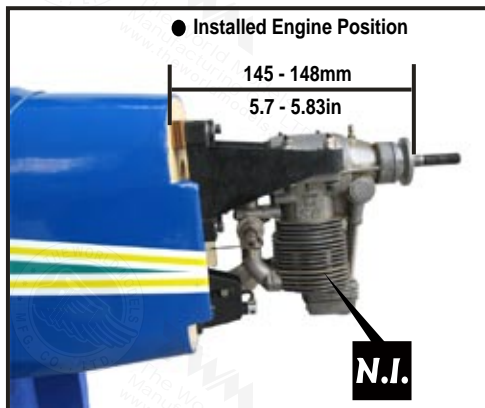


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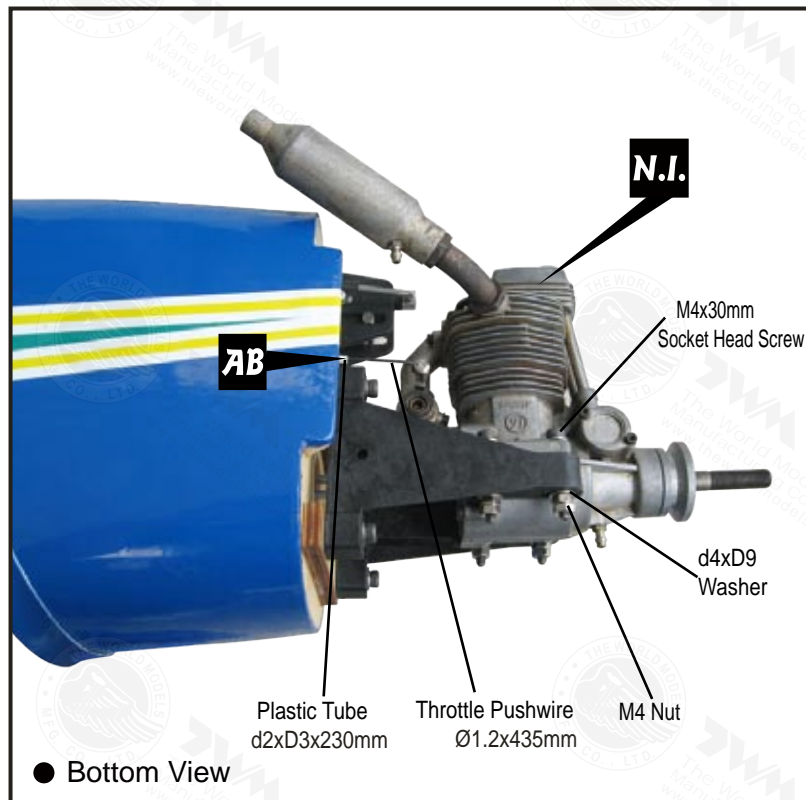
● **Installed Engine Position**

145 - 148mm

5.7 - 5.83in



**N.I.**



● **Bottom View**

## 14 Cowling

PWA2.6x10mm **Screw**

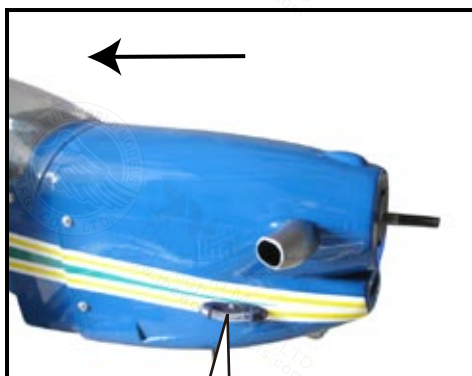


4

d1.5xD6.5mm **Silicon Grommet**



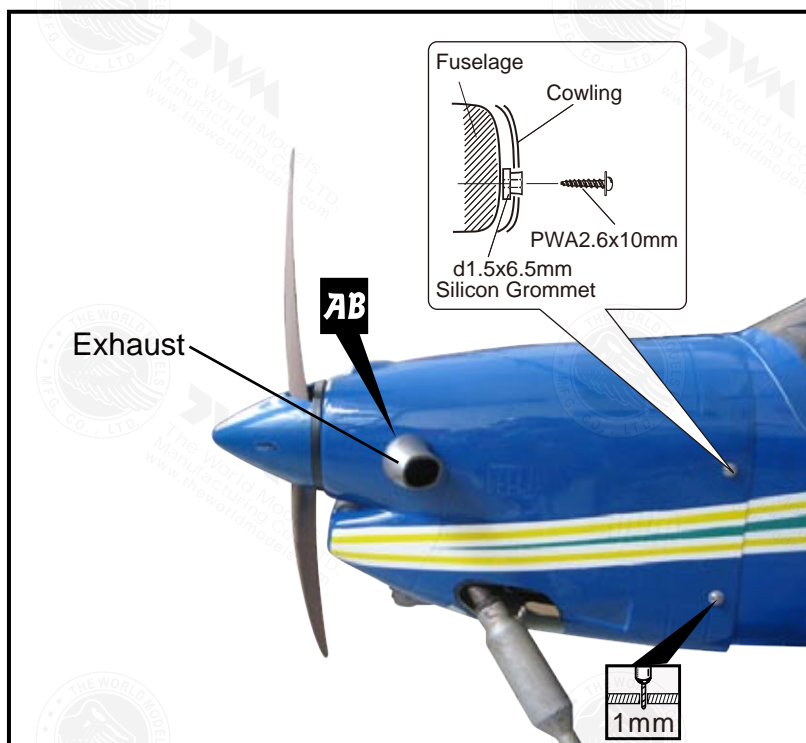
4



**N.I.** Fuel Filler  
PL8110030

**L/R**

- 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



6

d1.5xD6.5mm Silicon Grommet



6

Front Instrument Panel

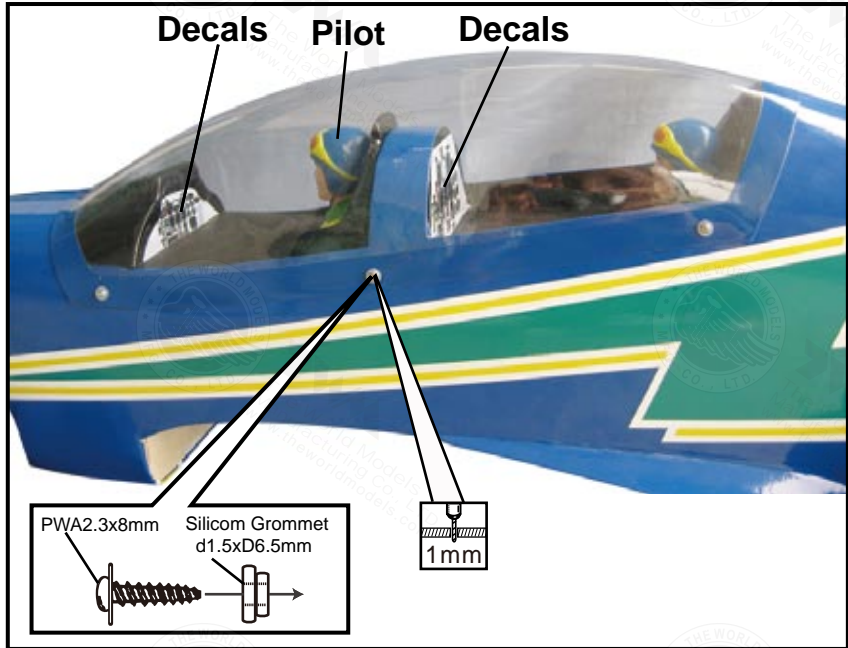
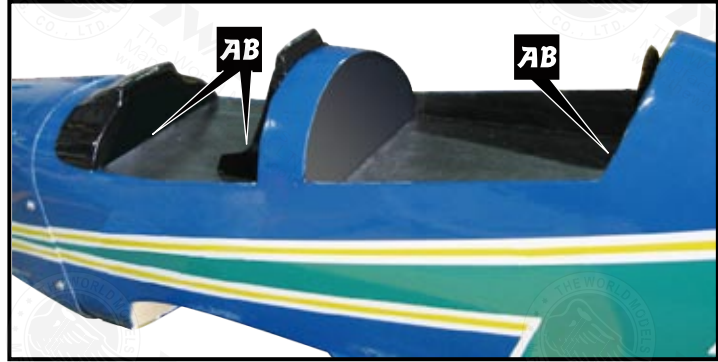


Seat



L/R

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



## 16 Servo Set

3x3mm Set Screw



3

Linkage Connector



3

M2 Nut

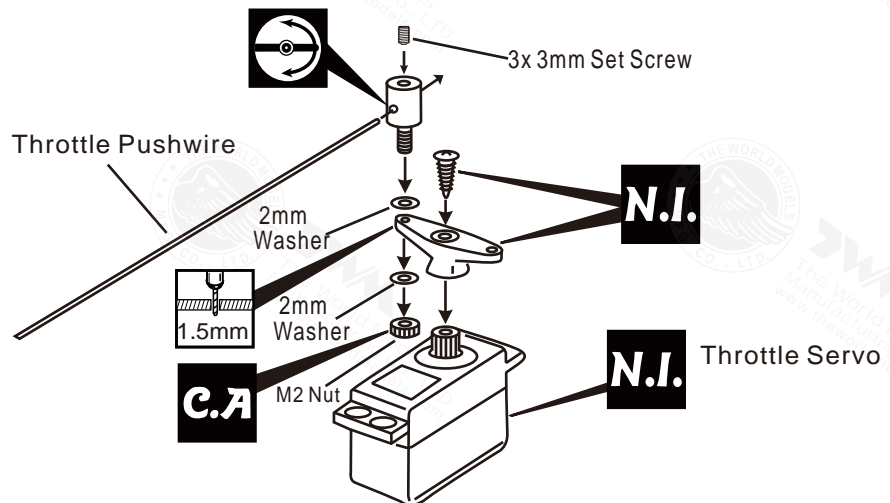


3

2mm Washer



6

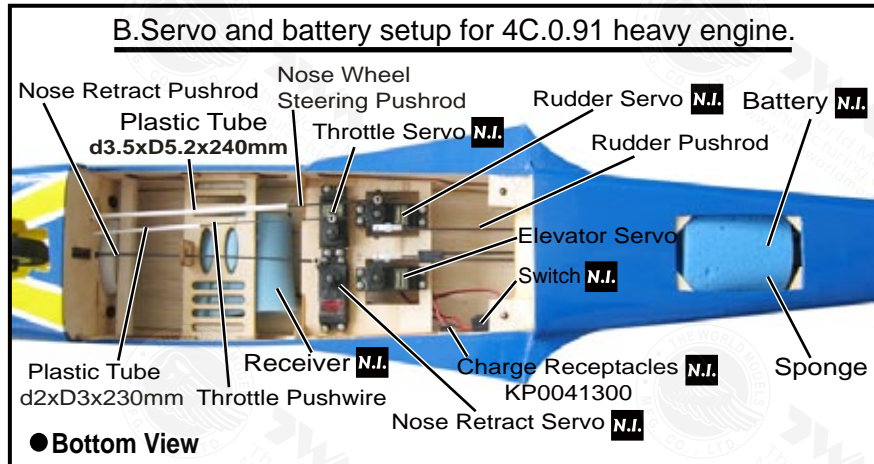
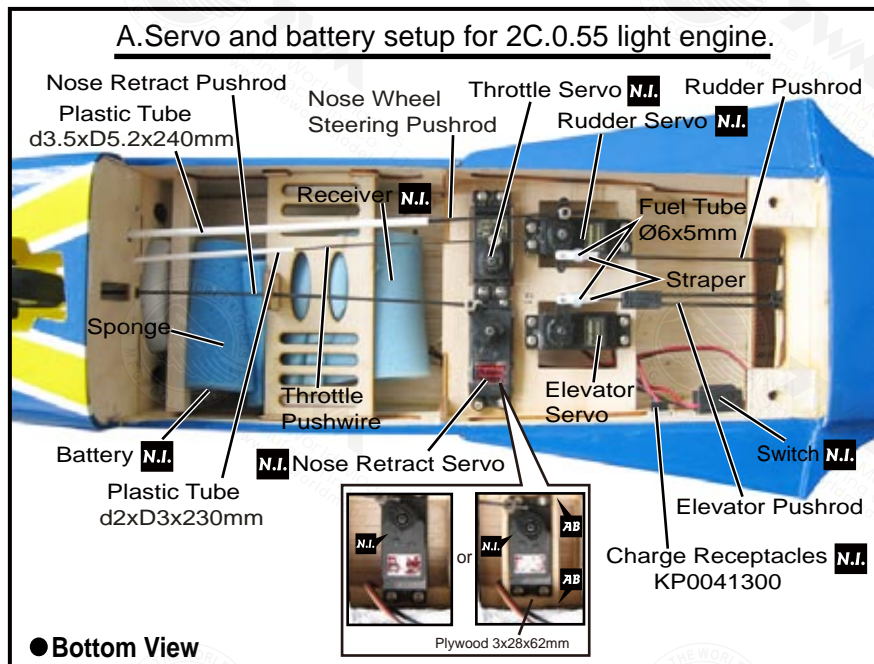
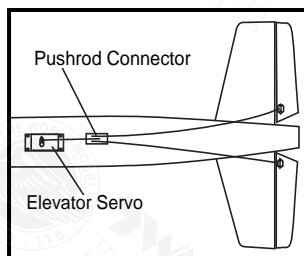
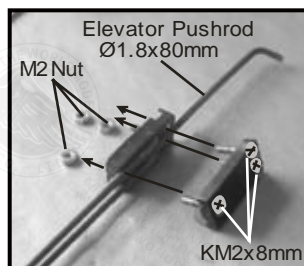
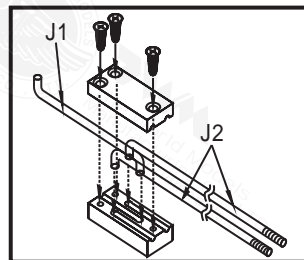
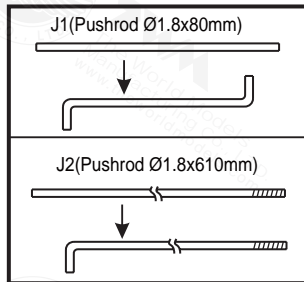


Please refer to the attached sheet for linkage connector installation.

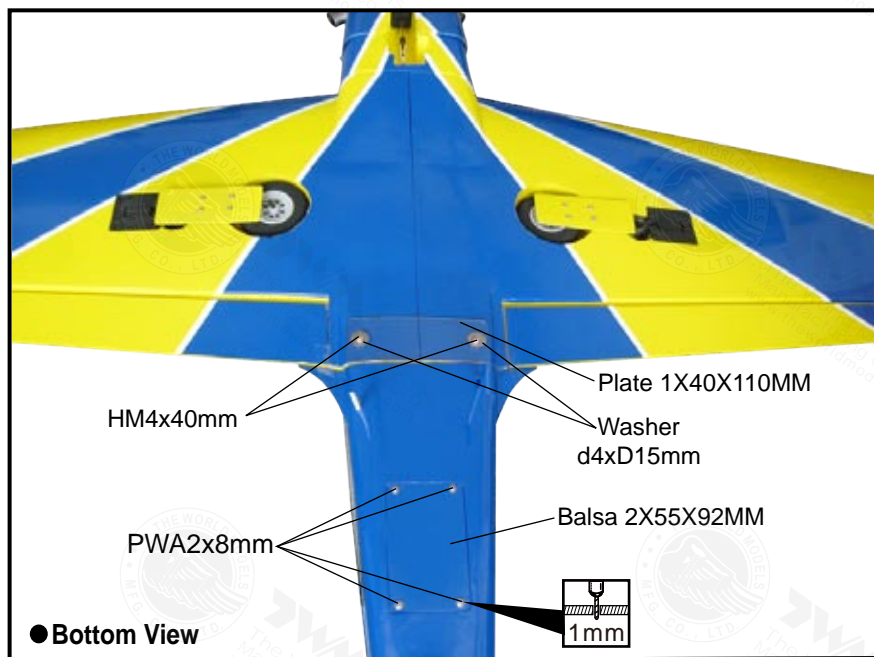
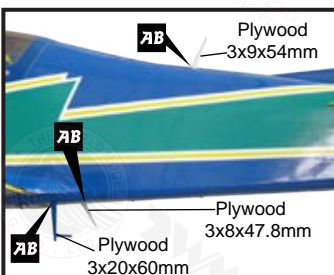
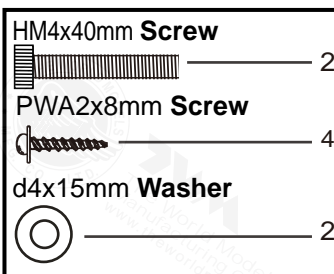


## 17 Radio Equipment

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



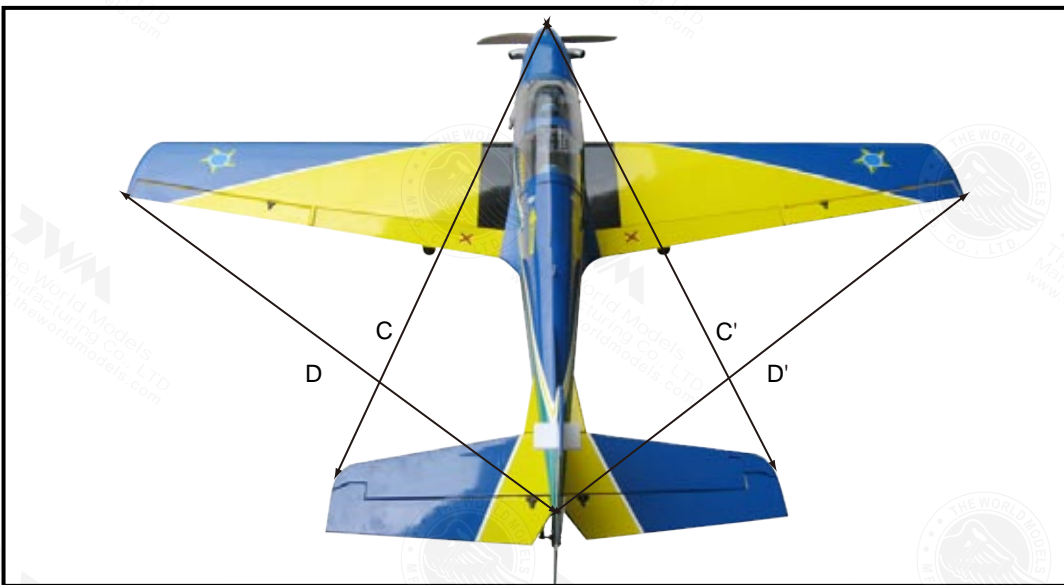
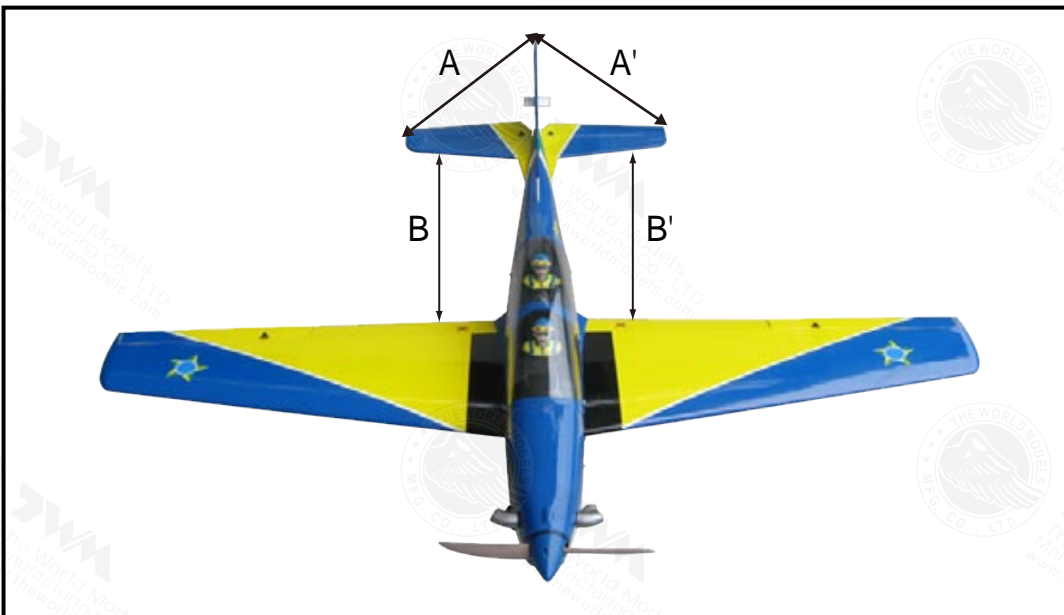
## 18 Main Wing





## 19 Wing Setting

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

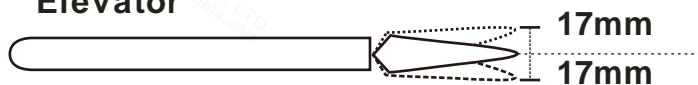


A=A' B=B' C=C' D=D'

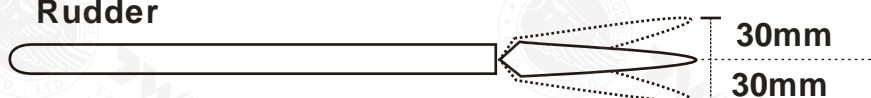
## 20 Control Throws

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



### Flaps (near fuselage)

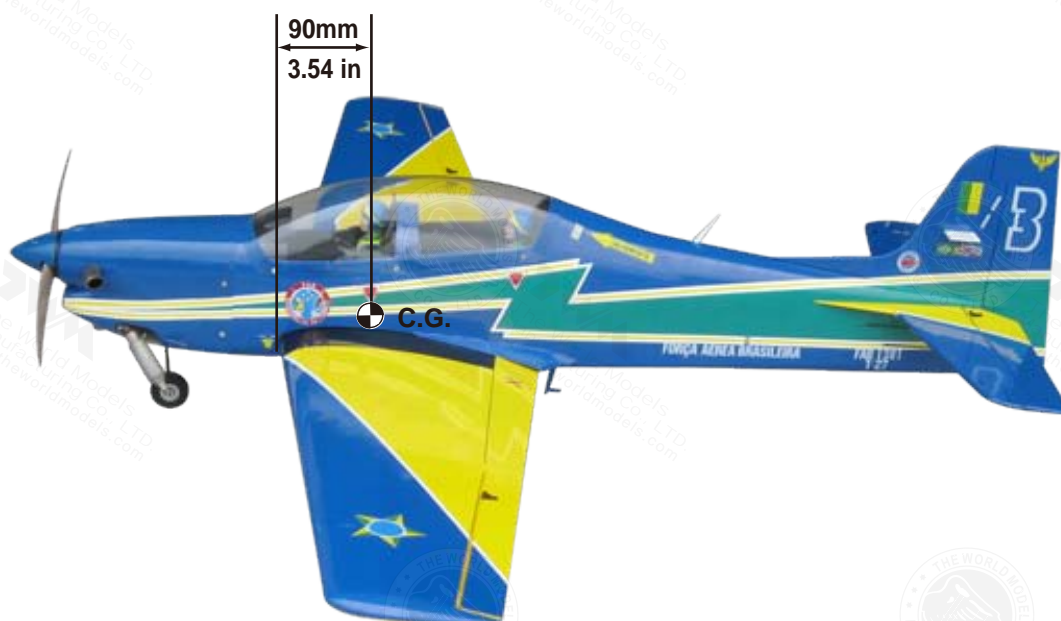


### Aileron



## 21 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.



- Measure C.G. with the wheels in retracted position

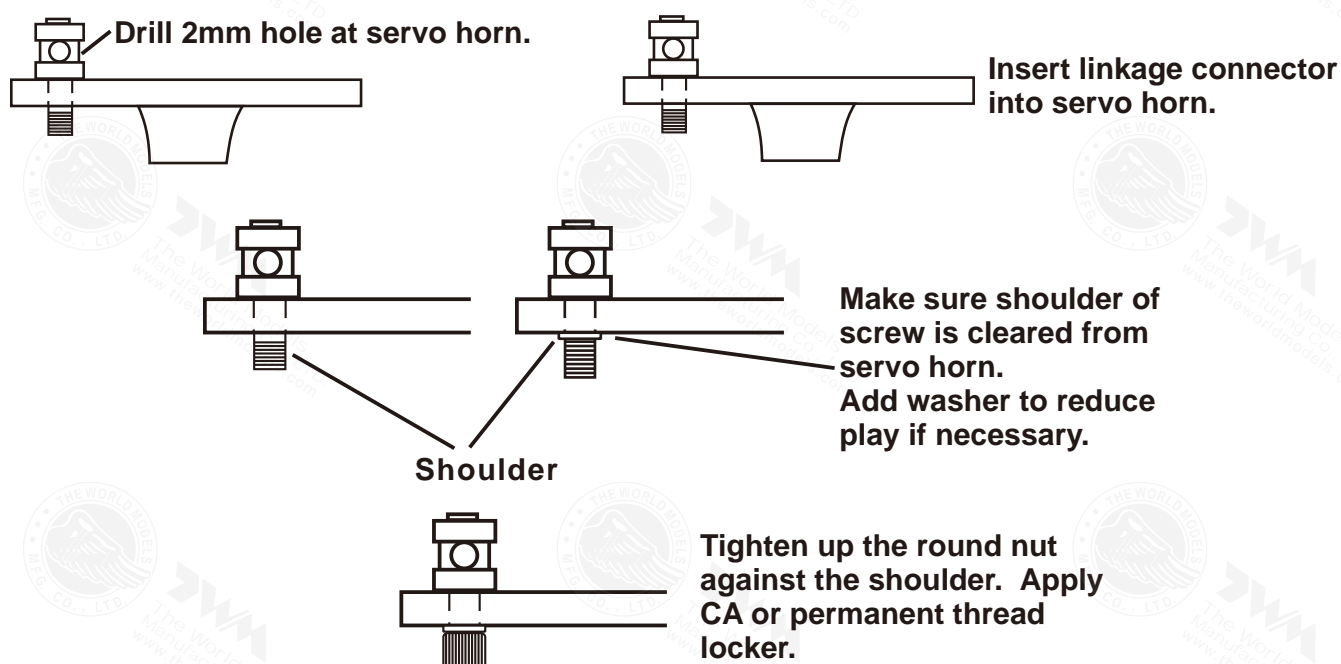
## **! Warning!**

### **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.
- # **TUCANO 60** is specially designed to be powered by 2C 0.61 or 4C 0.91 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.**

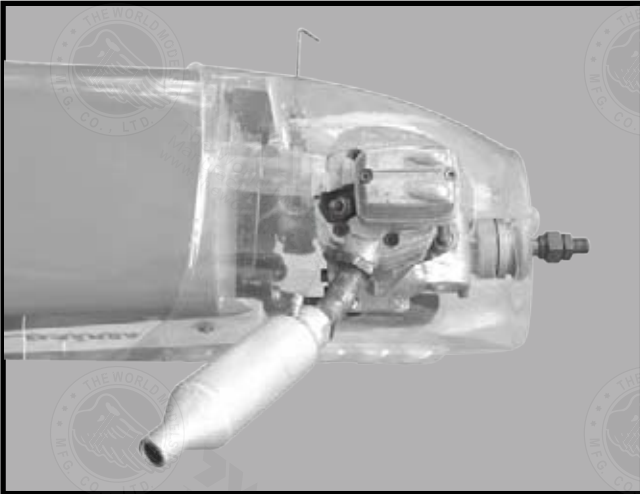


# Usage of the transparent 3D template

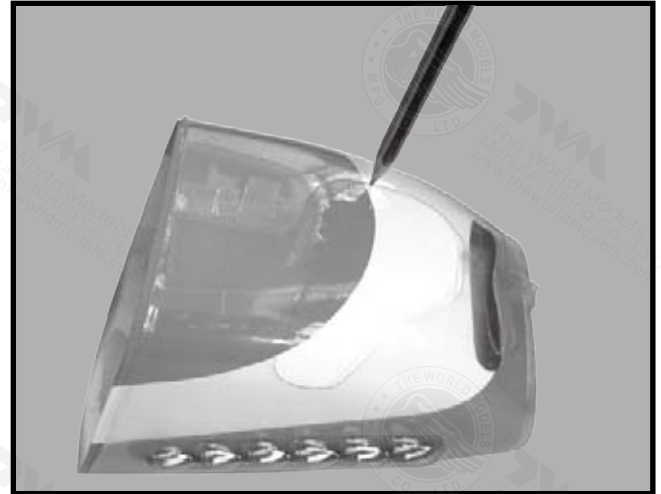


This transparent 3D template is used for position guidance of the actual cutting of the pre-painted cowling.

1



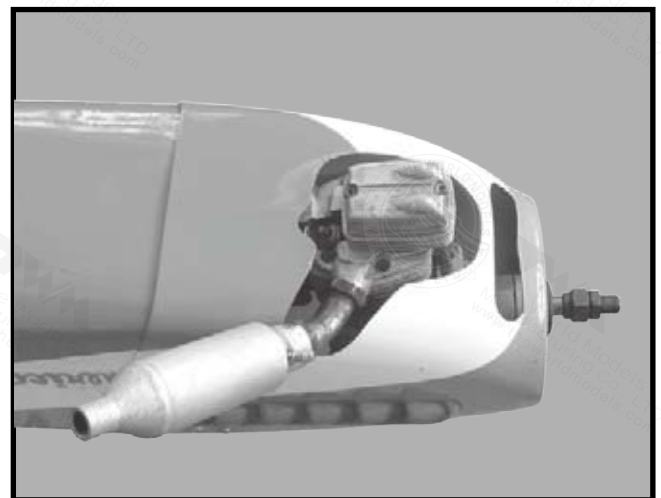
2



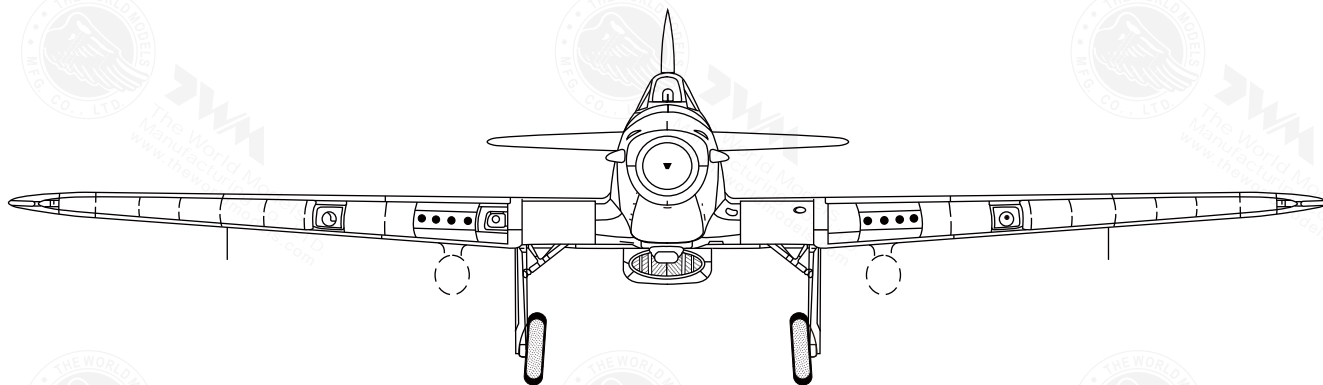
3



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 / Toughlon)



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