

# 1/5 CLIPPED WING CUB



**0.60 cu.in. displacement 2-cycle**  
**0.70 cu.in. displacement 4-cycle**

**Radio required : 4-channel radio w/ 5 servos**

## Specifications

<b>Wing Span</b>	<b>73 in / 1860 mm</b>
<b>Wing Area</b>	<b>818 sq in / 52.8 sq dm</b>
<b>Flying Weight</b>	<b>8 lbs / 3660 g</b>
<b>Fuselage Length</b>	<b>53 in / 1350 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

# 1/5 CLIPPED WING CUB

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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!



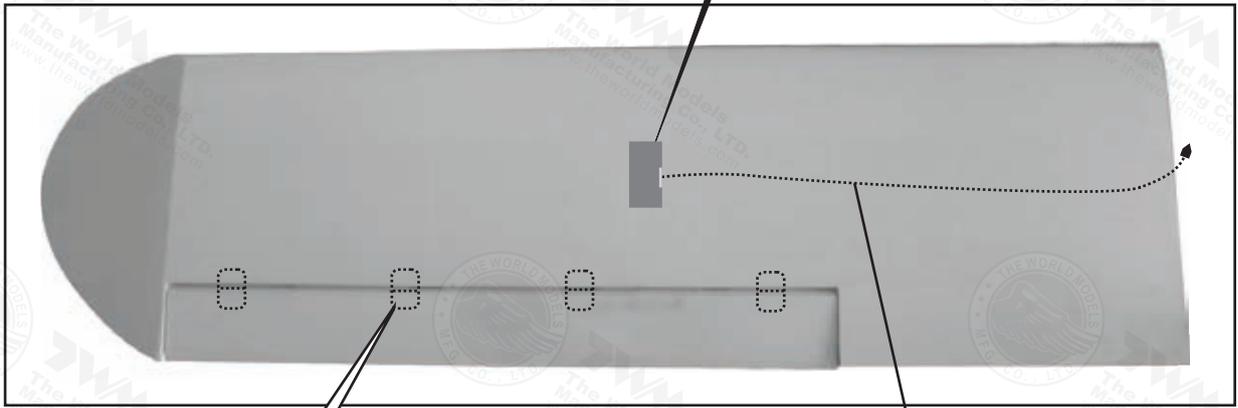
Pierce the shaded portion  
covering film.



## Parts List

1. MAIN WING -- 1 pair
  2. SCREW PM2x25mm -- 6 pcs  
TRI-HORN M3x14mm(L) -- 2 sets  
PUSHROD Ø1.8x90mm w/ Threads(For Aileron)-- 2 pcs  
STRAPER -- 2 pcs  
CLEVIS -- 2 pcs  
FUEL TUBE Ø6x5mm -- 4 pcs
  3. SCREW PM3x16mm -- 4 pcs  
WASHER d3xD7mm -- 4 pcs  
MAIN WING STRUTS -- 1 pair
  4. STABILIZER & ELEVATOR -- 1 set  
FUSELAGE -- 1 pc.
  5. VERTICAL FIN & RUDDER -- 1 set
  6. TAIL LANDING GEAR Ø2.5mm -- 1 set  
SCREW PA3x10mm -- 1 pc.  
SCREW PA3x14mm -- 1 pc.  
COLLAR Ø2.6mm w/ set screw -- 1 set  
COPPER PLATE 1x10x34mm (For Flying Wire) -- 1 pc.  
TAIL WHEEL Ø25mm -- 1 pc.
  7. ENGINE MOUNT PL5111050 -- 1 set  
SCREW PM4x22mm -- 4 pcs  
WASHER d4xD9mm -- 4 pcs
  8. FUEL TANK 380cc -- 1 set  
BALSA 8x8x118mm (For Fixing Fuel Tank) -- 1 pc.
  9. SCREW PM4x30mm -- 4 pcs  
M4 NUT -- 8 pcs  
WASHER d4xD9mm -- 8 pcs  
THROTTLE PUSHWIRE Ø1.2x410mm -- 1 pc.  
w/ Plastic Tube d2XD3x300mm -- 1 pc.
  10. COWLING -- 1 pc.  
TRANSPARENT DUMMY COWLING -- 1 pc.  
DUMMY ENGINE COVER -- 1 pair  
SCREW PWA2.6x12mm -- 4 pcs  
SILICON GROMMET d1.5xD6.5mm -- 4 pcs  
SPINNER NUT Ø25mm(HW2340001) -- 1 set
  11. MAIN LANDING GEAR -- 1 set  
MOUNTING PLATE 2x12x20mm(PL4114020) -- 6 pcs  
SCREW PA3x12mm -- 14 pcs  
SCREW PM3x12mm -- 2 pcs  
WASHER d3xD7mm -- 4 pcs  
ALU.PLATE 2mm (For Stays on Fuselage Bottom) -- 2 pcs
  12. SCREW PA1.7x8mm -- 6 pcs  
SCREW PM3x12mm -- 8 pcs  
M3 NUT -- 8 pcs  
WASHER d3xD7mm -- 16 pcs  
COPPER PLATE 0.5x8x13mm (For main landing gear cover) -- 8 pcs  
PLYWOOD 2mm (main landing gear cover) -- 2 pcs  
MAIN WHEEL Ø80mm -- 2 pcs  
COLLAR Ø4.1mm w/ set screw -- 4 sets
  13. LINKAGE CONNECTOR Ø2.1mm --1 set
  14. PUSHROD Ø1.8x130mm (For Elevator) -- 1 pc.  
CLEVIS -- 2 pcs  
FUEL TUBE Ø6x5mm -- 2 pcs  
PUSHROD CONNECTOR 8x9x20mm -- 1 set  
SPONGE 60x70x122mm (For Radio Equipment) -- 1 pc.
  15. SCREW PM2x14mm -- 6 pcs  
CLEVIS -- 2 pcs  
FUEL TUBE Ø6x5mm -- 2 pcs  
TRI-HORN M3x14mm(L) -- 2 sets  
PUSHROD Ø1.8x730mm w/ Threads(For Elevator) -- 2 pcs
  16. SCREW PM2x14mm -- 3 pcs  
CLEVIS -- 1 pc.  
FUEL TUBE Ø6x5mm -- 1 pc.  
TRI-HORN M3x14mm(L) -- 1 set  
PUSHROD Ø1.8x860mm w/ threads (For Rudder) -- 1 pc.
  17. FLYING WIRE Ø1x1480mm -- 1 pc.  
FLYING WIRE BRACKET -- 6 pcs  
FLYING WIRE BRACKET CLEVIS -- 4 pcs  
EYE SCREW M1.8X8x19.5mm -- 4 pcs  
SCREW PM2x12mm -- 6 pcs  
SCREW PA2x8mm -- 4 pcs  
M2 NUT -- 6 pcs  
COPPER TUBE d2.5xD3.2x8mm -- 8 pcs
  18. WIND SHIELD & SIDE WINDOWS -- 1 set
  19. SCREW PWA2x8mm -- 4 pcs  
BALSA 8x116x171mm (For pilot stand) -- 2 pcs  
PILOT PC001085A/B -- 1 pc.
  20. WIND-SHIELD -- 1 pc.  
SCREW PWA2.3x12mm -- 10 pcs  
SILICON GROMMET d1.5xD6.5mm -- 4 pcs
  21. SCREW PM3x18mm -- 2 pcs  
SCREW PA3x18mm -- 2 pcs  
WASHER d3xD7mm -- 4 pcs  
WING TUBE Ø14.5x427mm -- 2 pcs
  22. SCREW PM3x12mm -- 2 pcs  
WASHER d3xD7mm -- 4 pcs  
M3 NUT -- 2 pcs
  23. DECALS -- 1 set
- **COVERING:--**  
**(CUB YELLOW WITH THUNDER BOLT)**  
**TOUGHLON STL 201 BLACK**  
**TOUGHLON STL 331 CUB YELLOW**  
**(BLUE / WHITE SUNBURST)**  
**TOUGHLON STL 100 WHITE**  
**TOUGHLON STL 251 SKY BLUE**  
**(RED / WHITE SUNBURST)**  
**TOUGHLON STL 100 WHITE**  
**TOUGHLON STL 312 BRIGHT RED**

# 1 Main Wing



Peel off shaded portion covering film.



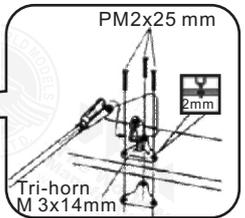
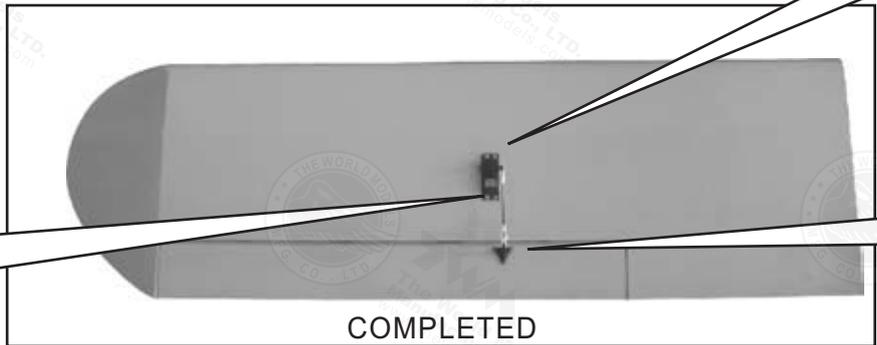
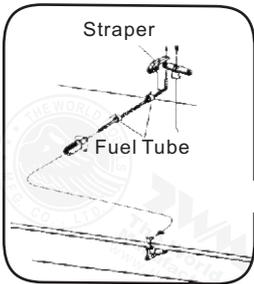
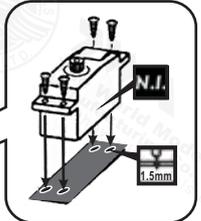
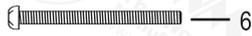
Aileron servo lead

L/R

# 2 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.

PM2x25mm Screw



L/R

# 3 Wing Struts

PM3x8mm Screw



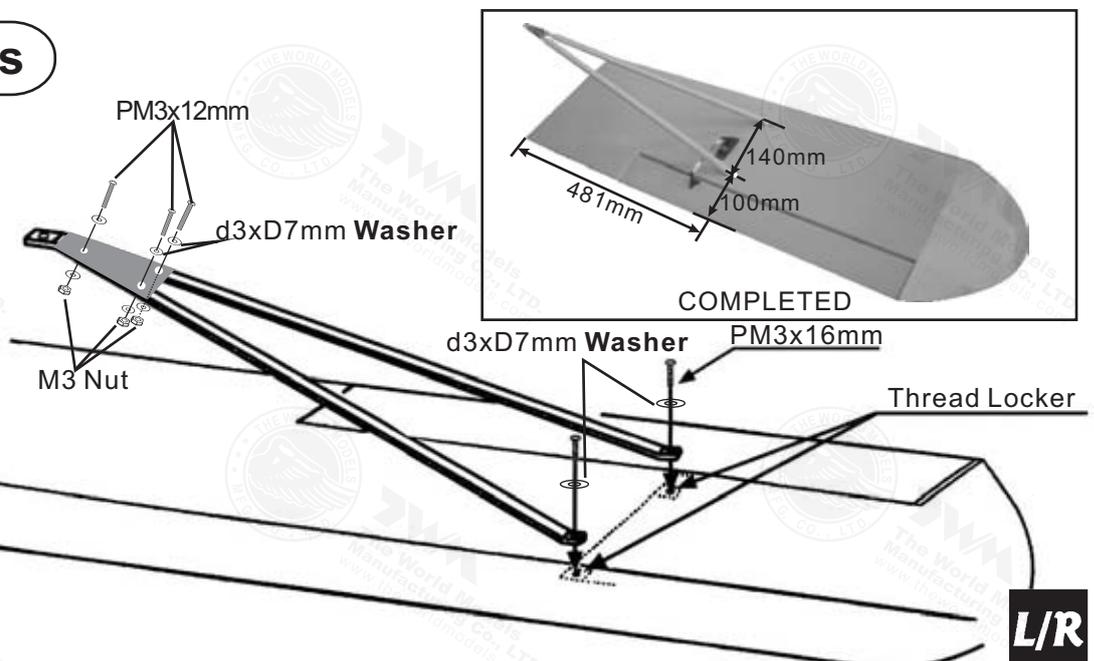
PM3x16mm Screw



d3xD7mm Washer

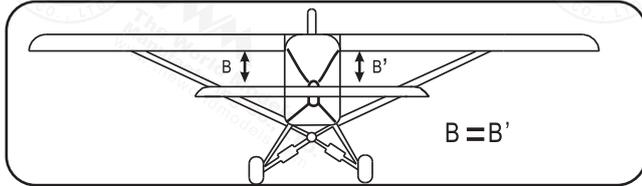
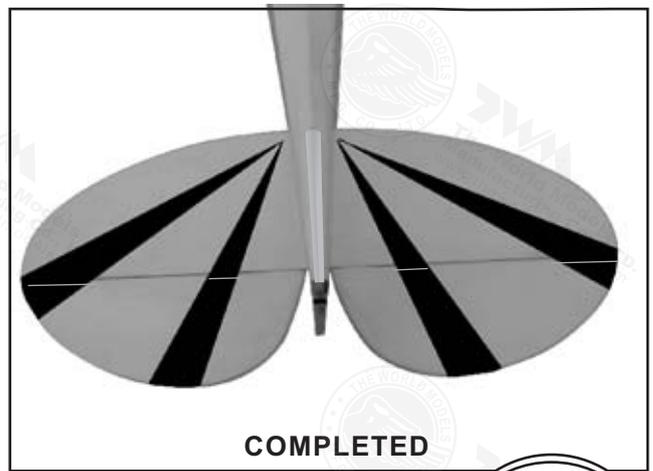
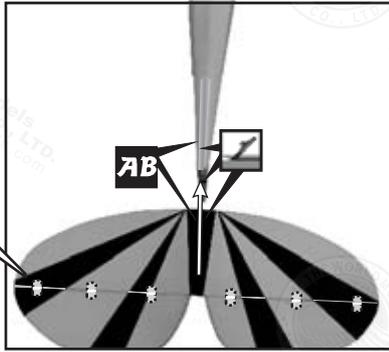


M3 NUT

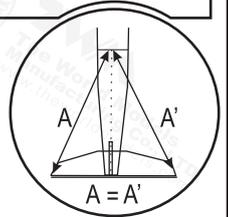


L/R

## 4 Stabilizer / Elevator

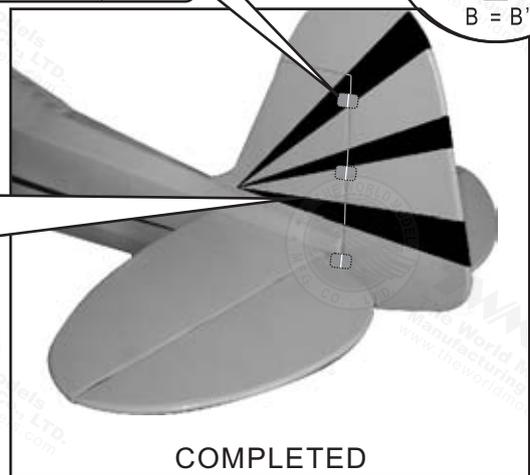
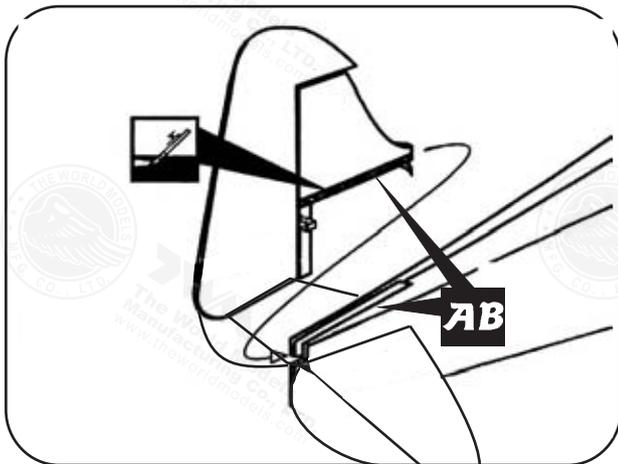
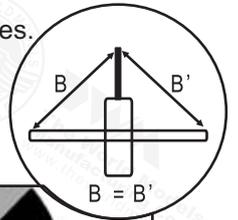


Temporary install the main wing, adjust leveling of the stabilizer to make it as parallel to the main wing as possible.



## 5 Vertical Fin / Rudder

Make sure vertical fin and stabilizer are at right angles.



## 6 Tail Landing Gear

PA3x10mm Screw

1

PA3x14mm Screw

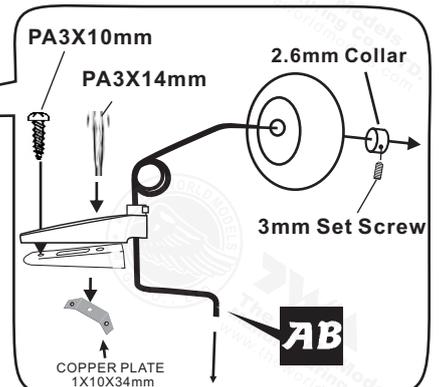
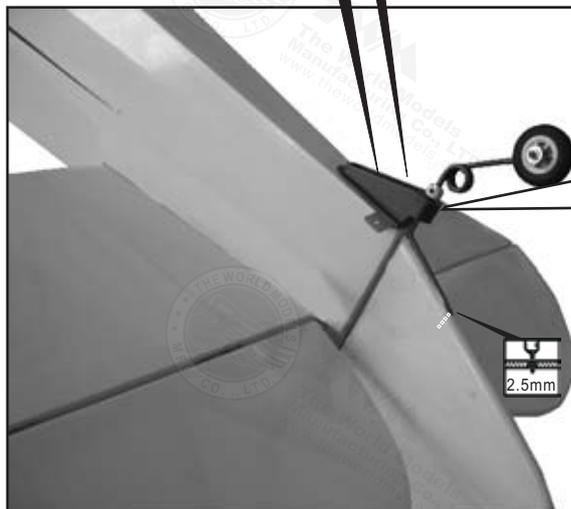
1

3mm Set Screw

1

2.6mm Collar

2



## 7 Engine Mount

PM4x22mm Screw



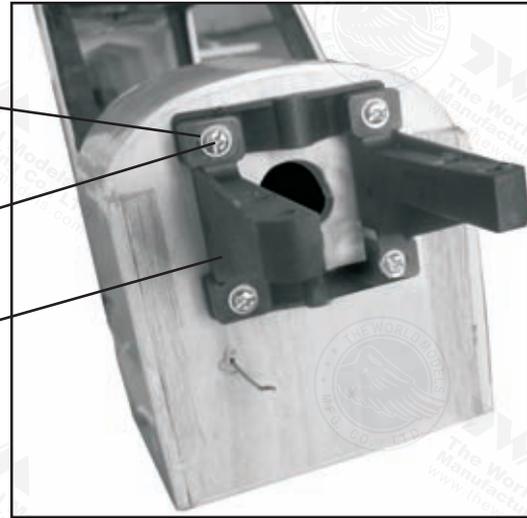
d9xD4mm Washer



d9xD4mm Washer

PM4x22mm

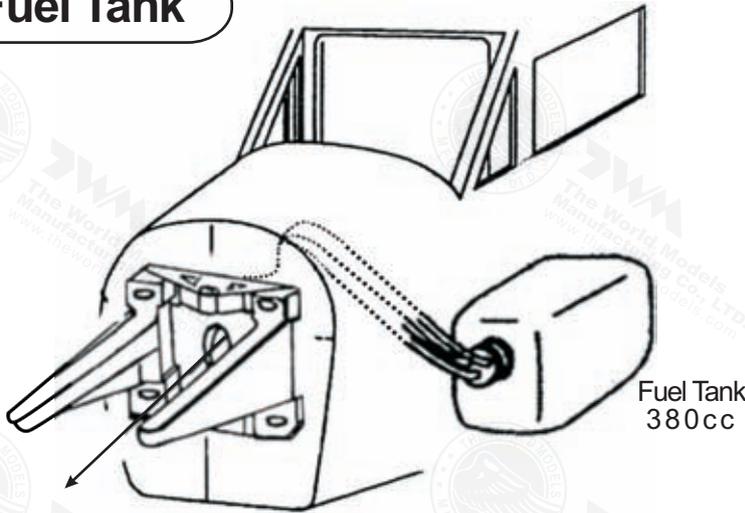
Engine Mount  
PL5111-050



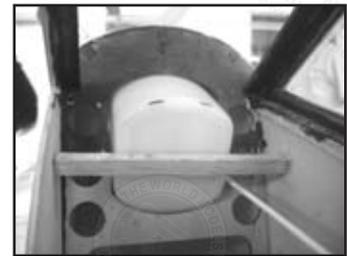
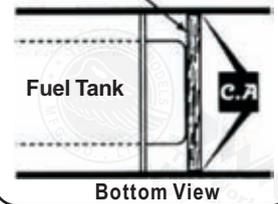
- Apply thread locker to screws.

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

## 8 Fuel Tank



Install Balsa 8x8x118mm  
(For fixing fuel tank)



COMPLETED

## 9 Engine

PM4x30mm Screw



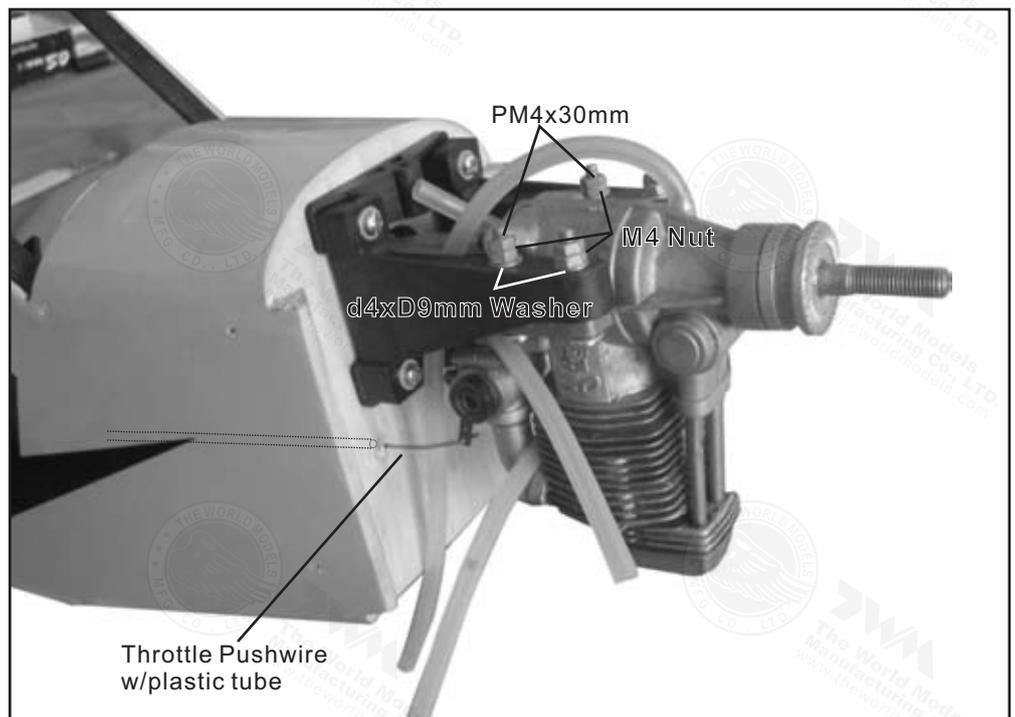
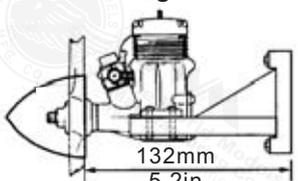
d4xD9mm Washer



M4 Nut



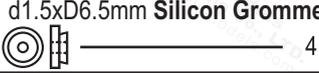
- Install Engine Position



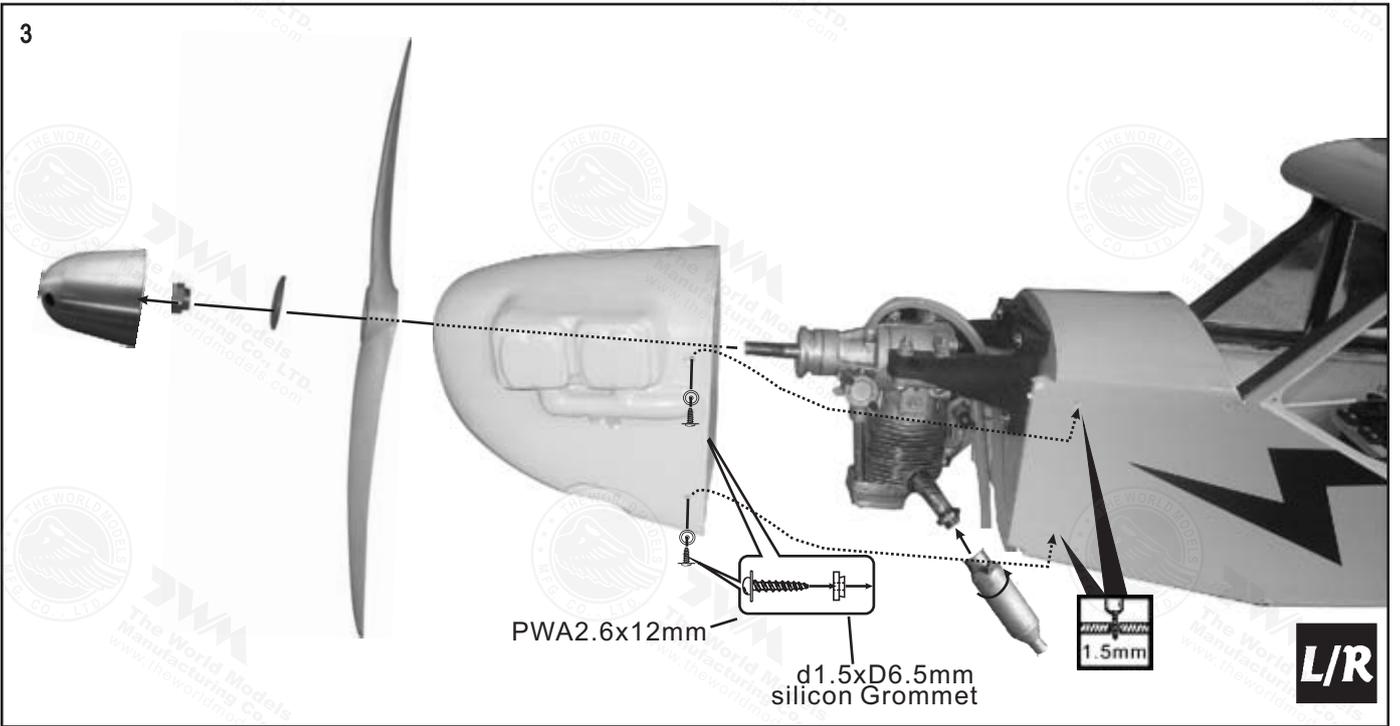
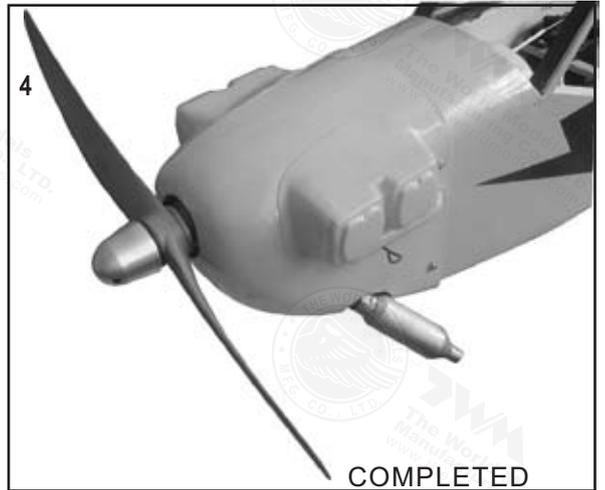
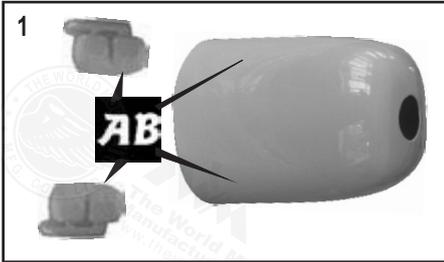
# 10 Cowling

PWA2.6x12mm Screw

d1.5xD6.5mm Silicon Grommet



Cut appropriate openings at the cowling for engine cooling

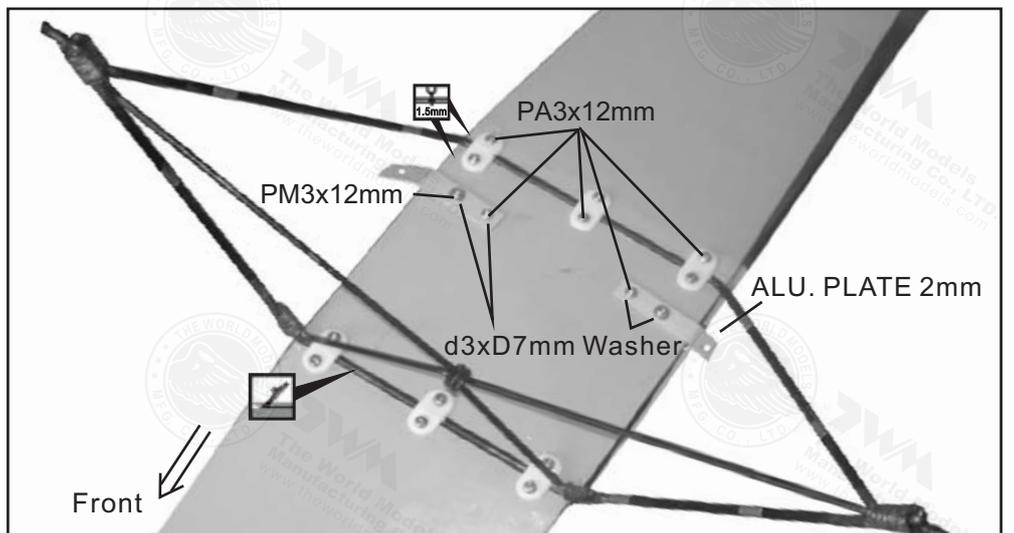


# 11 Main Landing Gear

PA3x12mm Screw

PM3x12mm Screw

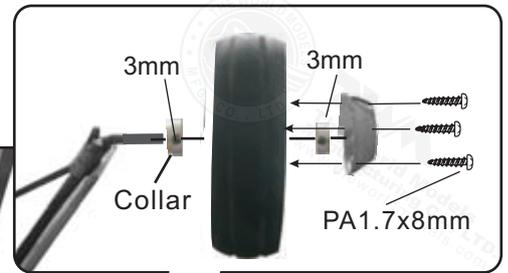
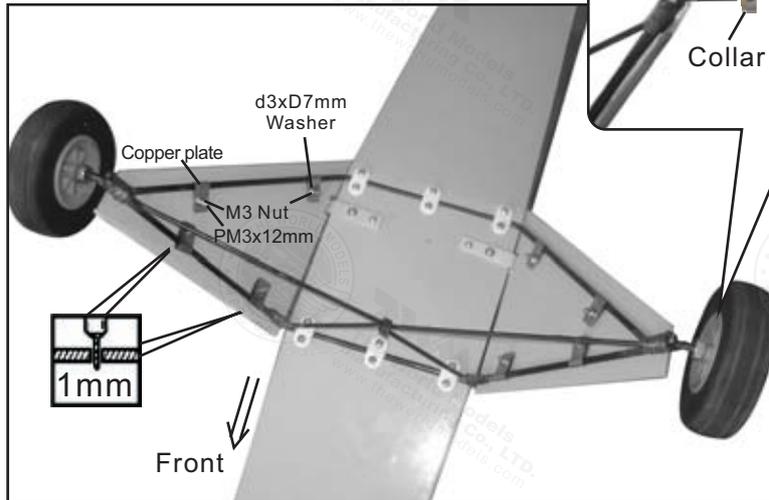
d3xD7mm Washer



L/R

## 12 Landing Gear

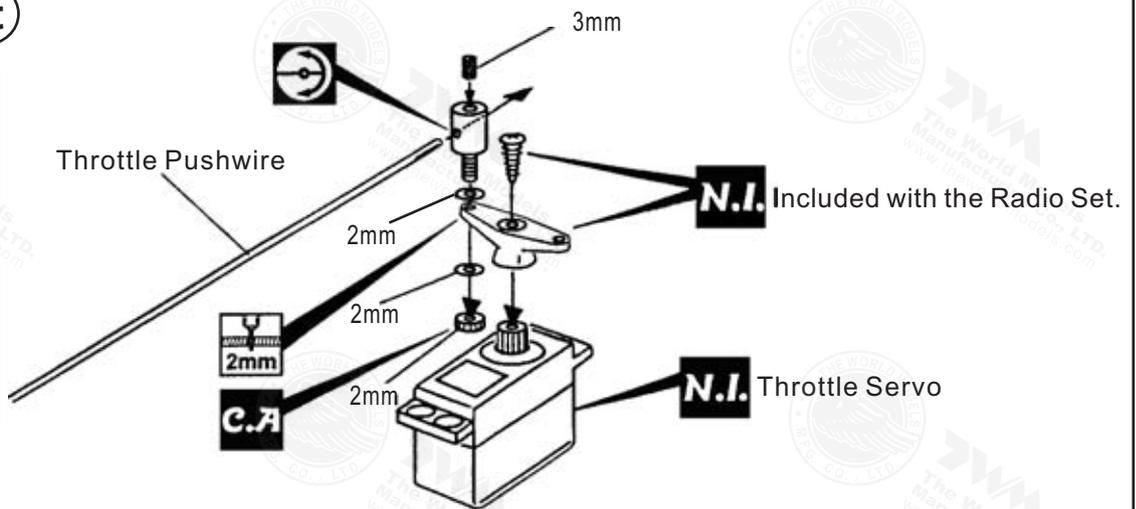
3mm Set Screw	4
PA1.7x8mm Screw	6
4.1mm Collar	4
PM3x12mm Screw	8
d3xD7mm Washer	16
M3 Nut	8



L/R

## 13 Servo Set

LINKAGE CONNECTOR	
3x3mm Set Screw	1
Linkage Connector	1
M2 Nut	1
2mm Washer	2

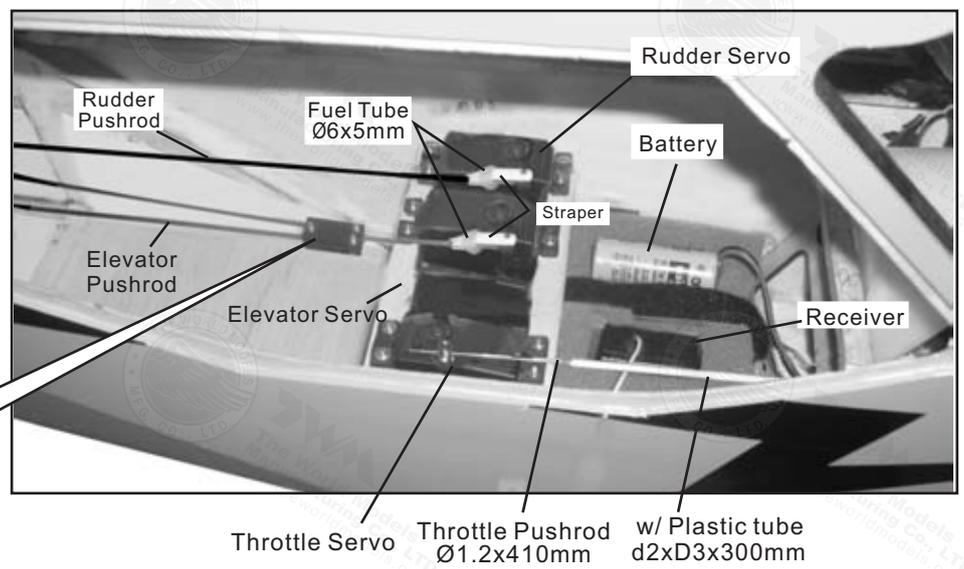
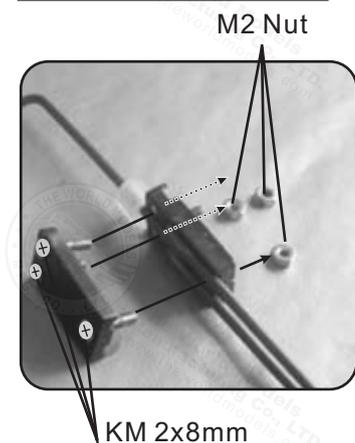


Please refer to attached sheet for linkage connector installation.

## 14 Radio Equipment

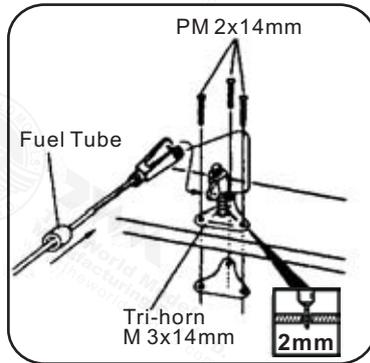
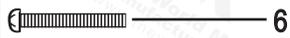
● Install and arrange the servo as shown in the diagram.

KM2x8mm Screw	3
M2 Nut	3

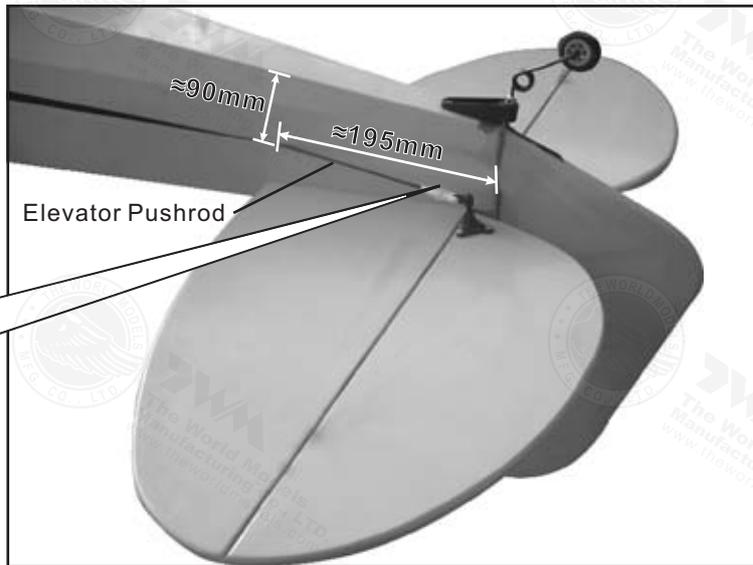


# 15 Elevator Pushrod

PM2x14mm Screw



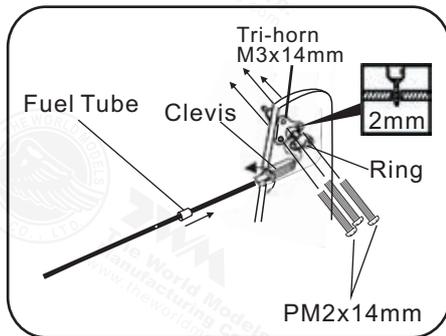
- Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.



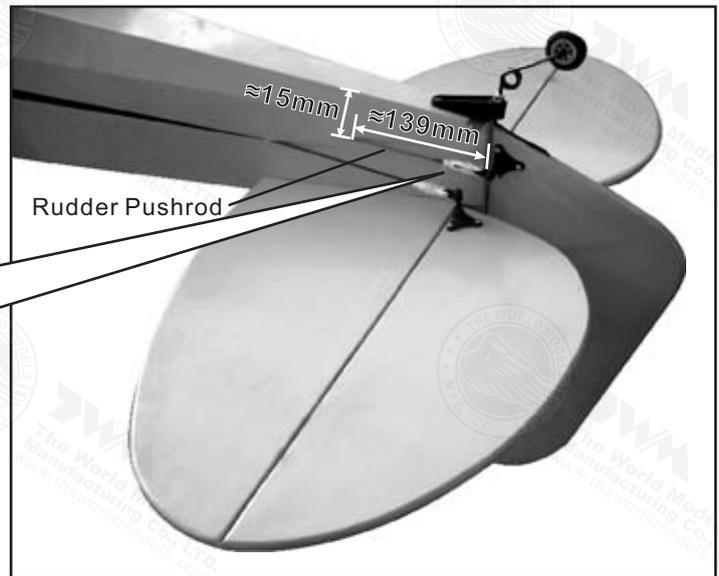
L/R

# 16 Rudder Pushrod

PM2x14mm Screw



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



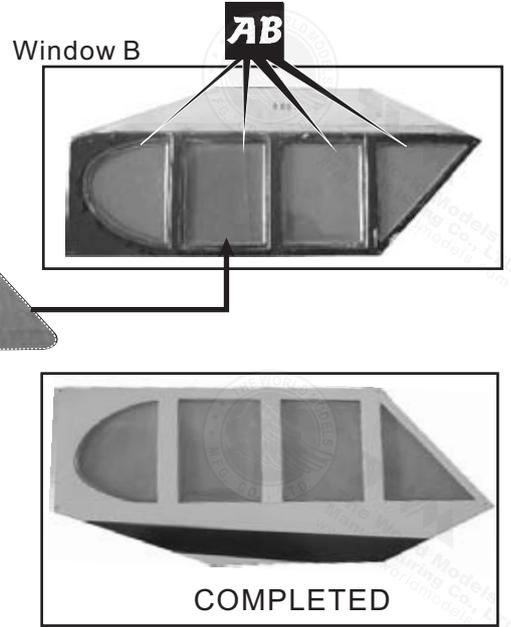
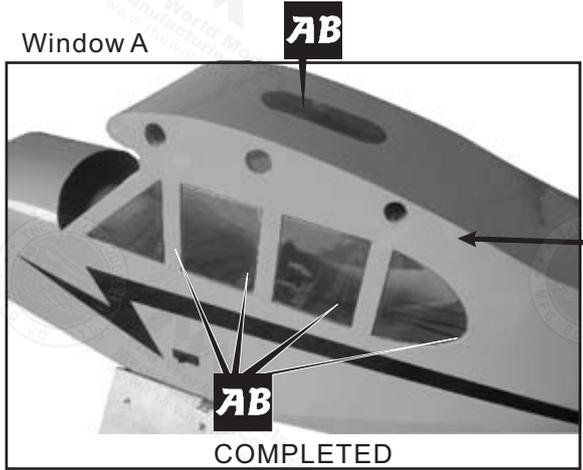
# 17 Flying Wire

PM2x12mm Screw

PA2x8mm Screw

M2 Nut

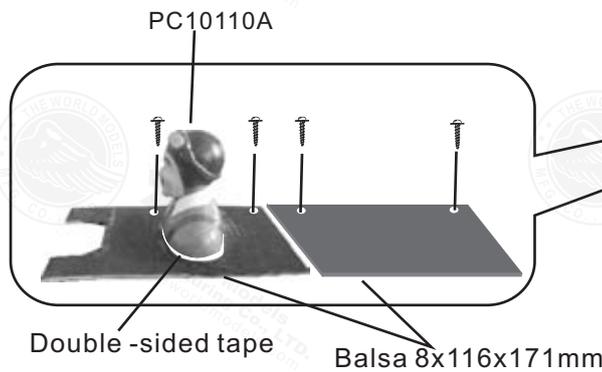
# 18 Windows



Securely glue the windows to the fuselage.

# 19 Pilot

PWA2x8mm Screw  
 4

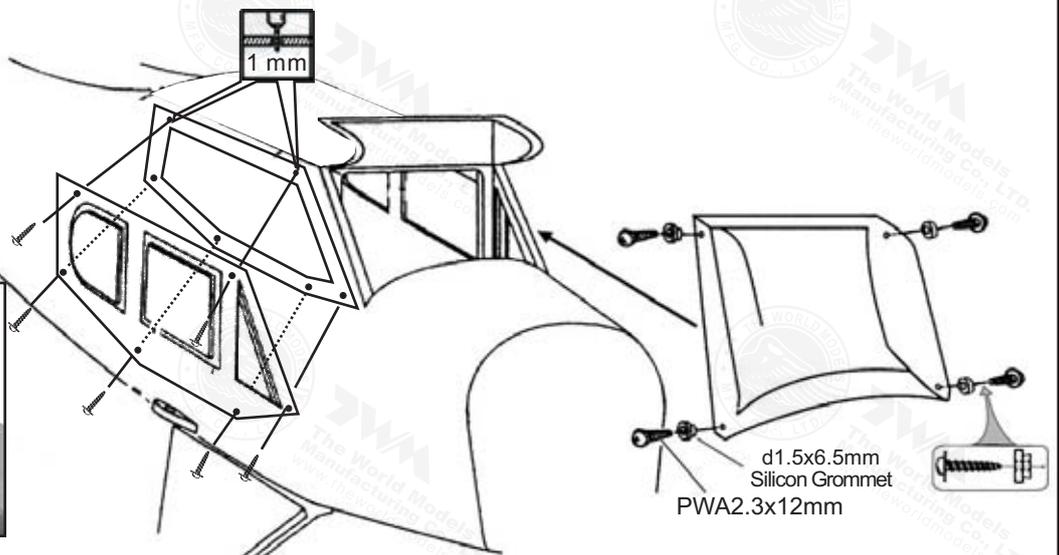


# 20 Wind-Shield

PWA2.3x12mm Screw 10  
 d1.5x6.5mm Silicon Grommet 4



COMPLETED



## 21 Main Wing

PM3x18mm Screw



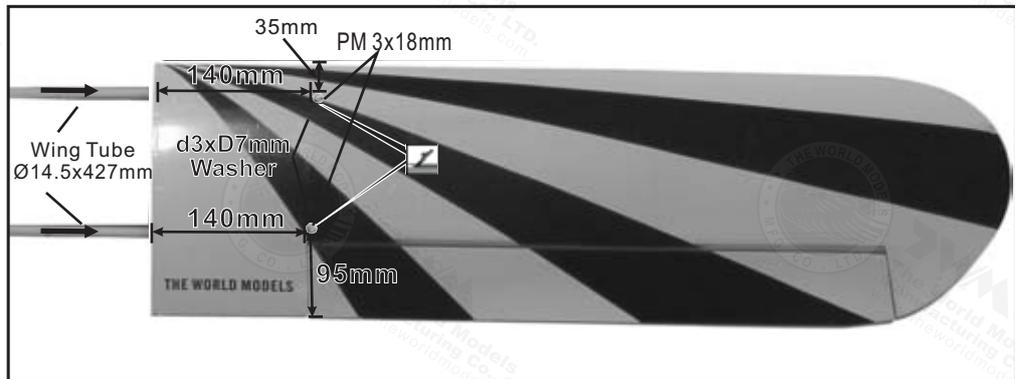
PA3x18mm Screw



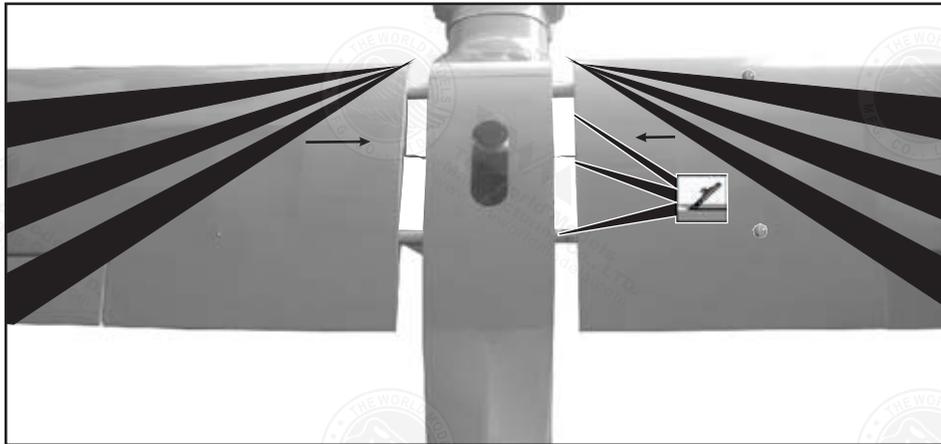
d3xD7mm Washer



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 PM3x18mm 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 PM3x18mm 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



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 PA3x18mm 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.

## 22 Wing Setting

d3xD7mm Washer



4

PM3x12mm Screw

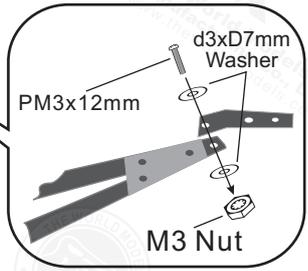


2

M3 Nut



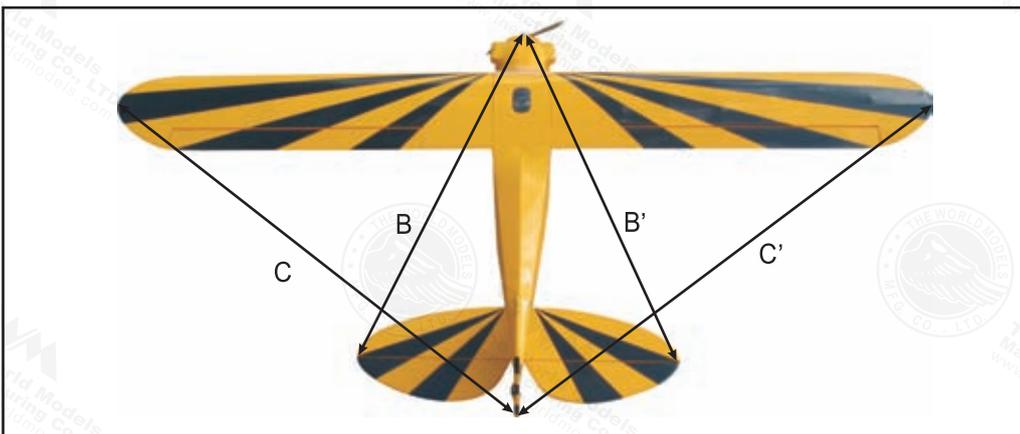
2



L/R

## 23 Wing Setting

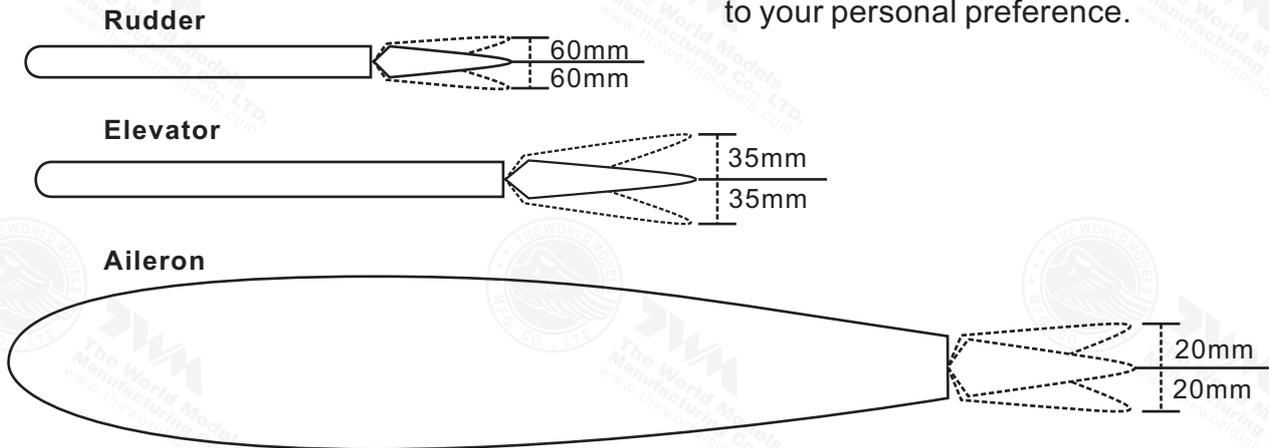
- Adjust the wing and fuselage configuration as shown in the diagrams.



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

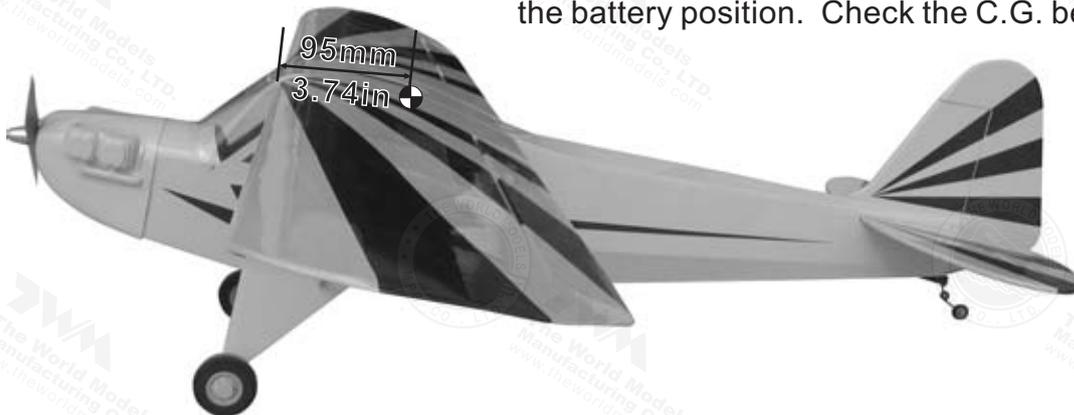
## 24 Control Throws

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



## 25 C.G.

The ideal C.G. position is **95mm (3.74 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.
- #**1/5 CLIPPED WING CUB** is specially designed to be powered by 2C 0.60 or 4C 0.70 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

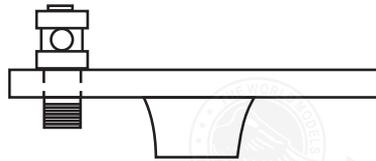
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## HW71110530 & HW7111060

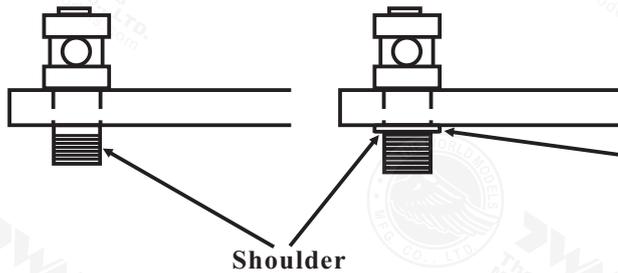
Drill 2mm hole at servo horn.



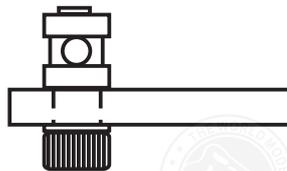
Insert linkage connector into servo horn.



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



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.

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## 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: \_\_\_\_\_

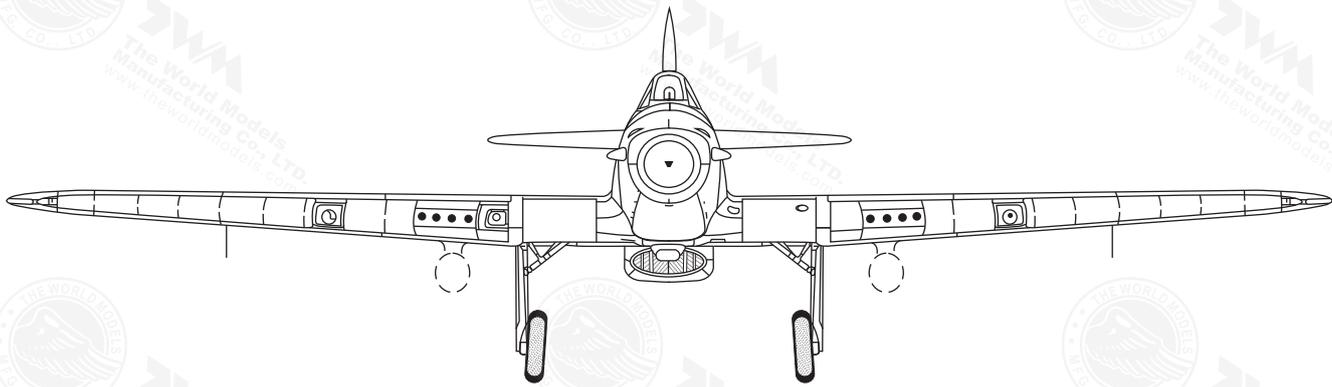
4. Model: \_\_\_\_\_

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)



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