

# 1/3 PIPER J-3 CUB



**Requires: 80cc gasoline engine,  
4-channel radio w/ 6 high torque servos.**

## **Specifications**

<b>Wing Span</b>	<b>141 in / 3580 mm</b>
<b>Wing Area</b>	<b>2821 sq in / 182 sq dm</b>
<b>Flying Weight</b>	<b>28.5 lbs / 13000 g</b>
<b>Fuselage Length</b>	<b>91 in / 2310 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

# 1/3 PIPER J-3 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.)



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!



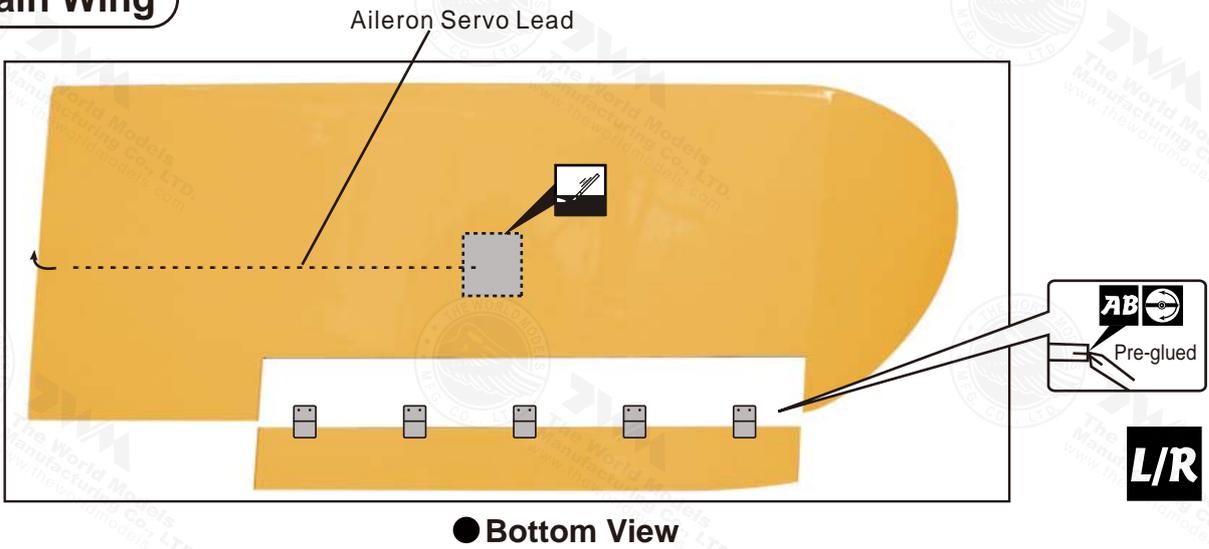
Do not overlook this symbol !



## Parts List

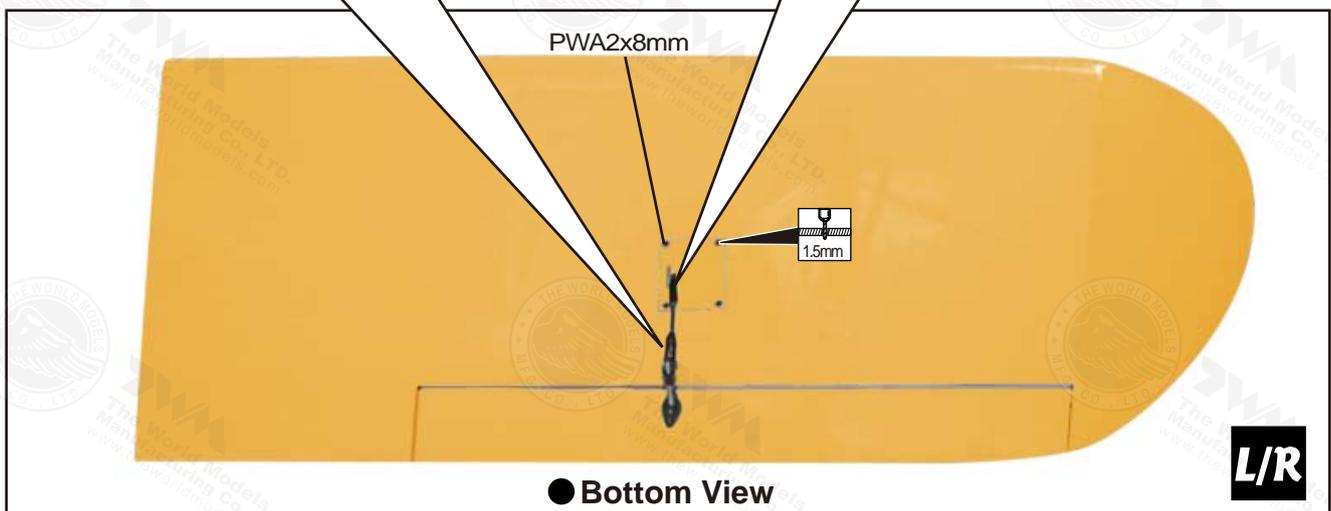
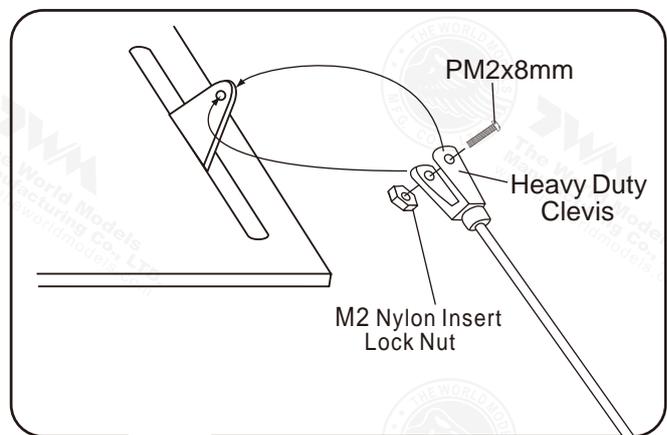
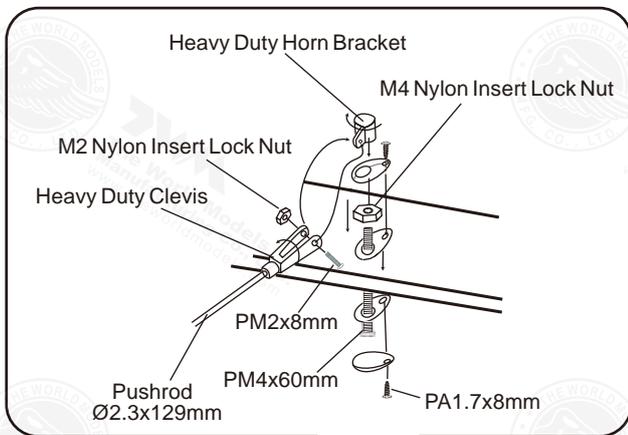
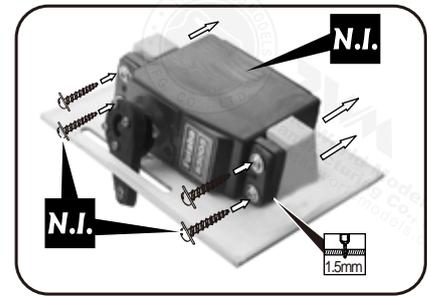
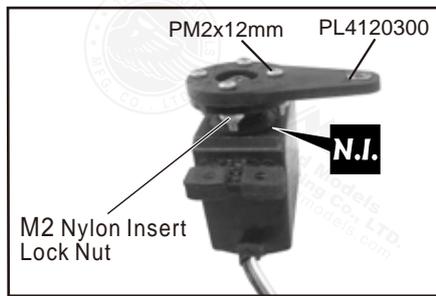
1. MAIN WING -- 1 pair
  2. SERVO MOUNTING PANEL (For Aileron) -- 1 pair  
HEAVY DUTY CLEVIS PL4112200 -- 4 sets  
SCREW PM4x60mm -- 2 pcs  
SCREW PWA2x8mm -- 8 pcs  
M4 NYLON INSERT LOCK NUT -- 2 pcs  
HEAVY DUTY HORN BRACKET PL4112400 -- 2 sets  
HEAVY DUTY SERVO HORN PL4120300 -- 2 sets  
PUSHROD Ø2.3x129mm w/ Threads (For Aileron) -- 2 pcs  
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 2 sets
  3. SCREW PM4x20mm -- 12 pcs  
COPPER CLIPPER 0.5mm -- 8 pcs  
MAIN WING STRUTS -- 1 pair  
WING STRUT WIRE D4mm -- 2 pcs  
M4 NYLON INSERT LOCK NUT -- 4 pcs  
WASHER d4xD9mm -- 4 pcs  
WASHER d4xD12mm -- 4 pcs
  4. FUSELAGE -- 1 pc.  
STABILIZER & ELEVATOR -- 1 set  
SCREW PWM2.5x12mm -- 2 pcs  
STABILIZER WIRE Ø4x200mm -- 2 pcs
  5. VERTICAL FIN & RUDDER -- 1 set
  6. TAIL GEAR ASSEMBLY (PL3410022) -- 1 set  
COPPER PLATE (For Stays on Tail Fueslage Bottom) 1.5x10x60mm -- 1 pc.  
SCREW PA3.5x16mm -- 3 pcs  
SCREW PWA2.5x12mm -- 3 pcs
  7. MAIN LANDING GEAR -- 1 set  
SCREW PM4x30mm -- 2 pcs  
SCREW PA3x14mm -- 12 pcs  
SCREW PA4x25mm -- 2 pcs  
WASHER d4xD12mm -- 2 pcs  
WASHER d4xD9mm -- 2 pcs  
MOUNTING PLATE 12x20mm -- 6 pcs  
ALUMINUM PLATE 3x15x77mm -- 2 pcs
  8. SCREW PA1.7x8mm -- 6 pcs  
SCREW PM3x12mm -- 8 pcs  
WASHER d3xD7mm -- 16 pcs  
M3 NUT -- 8 pcs  
COLLAR Ø6.1mm w/ set screw -- 4 sets  
LARGE SCALE CAPTIVE AIR WHEELS Ø140mm -- 2 sets  
PLYWOOD 2x211.5x193.5mm (Main Langing Gear Cover) -- 1 pair  
COPPER CLIPPER 0.5x12x20mm -- 8 pcs
  9. BLIND NUT M6 -- 4 pcs  
WASHER d6xD15mm -- 4 pcs  
SOCKET HEAD SCREW M6x30mm -- 4 pcs
  10. COWLING -- 1 pc.  
TRANSPARENT 3D TEMPLATE -- 1 pc.  
SCREW PA3x12mm -- 4 pcs  
WASHER d3xD7mm -- 4 pcs  
SILICON GROMMET d2.5xD8.5mm -- 4 pcs  
DUMMY ENGINE COVER -- 1 pair
  11. FUEL TANK 1500cc (PL1121500G-gasoline) -- 1 set  
WOOD 12x12x197mm (For Fuel Tank Position Fixing) -- 1 pc.
  12. PUSHROD Ø2.3x215mm w/ Threads (For Elevator) -- 2 pcs  
SCREW PM4x40mm -- 2 pcs  
M4 NYLON INSERT LOCK NUT -- 2 pcs  
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 2 sets  
HEAVY DUTY HORN BRACKET PL4112400 -- 2 sets  
HEAVY DUTY SERVO HORN PL4120300 -- 2 sets  
HEAVY DUTY CLEVIS PL4112200 -- 4 sets
  13. PUSHROD Ø2.3x170mm w/ Threads (For Rudder) -- 1 pc.  
SCREW PM4x60mm -- 1 pc.  
M4 NYLON INSERT LOCK NUT -- 1 pc.  
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 1 set  
HEAVY DUTY HORN BRACKET PL4112400 -- 1 set  
HEAVY DUTY SERVO HORN PL4120300 -- 1 set  
HEAVY DUTY CLEVIS PL4112200 -- 2 set
  14. SCREW PM2x18mm -- 12 pcs  
WASHER d2xD5mm -- 24 pcs  
M2 NYLON INSERT LOCK NUT -- 12 pcs  
CLEVIS -- 12 pcs  
WIRE Ø1.5x4200mm -- 1 pc.  
FLYING WIRE BRACKET -- 12 pcs  
CLIP PIN -- 12 pcs  
EYE SCREW -- 6 pcs  
COPPER TUBE d5xD6.4x10mm (For Rudder) -- 16 pcs
  15. SIDE WINDOWS -- 1 pair
  16. LINKAGE CONNECTOR Ø2.1mm w/ set screw -- 1 set
  17. PLYWOOD 3x196x304mm (For Fuselage Servos) -- 1 pc.  
PLYWOOD 3x10x160mm (For Fuselage Servo Stand) -- 2 pcs  
BALSA 10x10x288mm (For Fuselage Servo Stand) -- 2 pcs  
SPONGE 10x80x200mm -- 2 pcs  
THROTTLE PUSHWIRE Ø1.2x480mm -- 1 pc.  
PLASTIC TUBE d2xD3xD300mm -- 1 pc.
  18. PILOT PC101110A -- 1 set  
SCREW PWA2x12mm -- 4 pcs  
COCKPIT BASE PANEL 3x196x444mm -- 1 pc.  
WOOD 10x10x443mm (For Cockpit Base Panel) -- 2 pcs
  19. WIND SHIELD -- 1 pc.  
SCREW PWA2.3x12mm -- 4 pcs  
SILICON GROMMET d1.5x6.5mm (For Wind Shield) -- 4 pcs  
M2 NYLON INSERT LOCK NUT -- 2 pcs  
DOUBLE-SIDED TAPE 8x1000mm -- 1 pc.  
SCREW PM2x14mm -- 2 pcs  
WASHER d2xD5mm -- 4 pcs  
MOUNTING PLATE 5x15mm -- 2 pcs
  20. WING TUBE Ø22x931mm -- 2 pcs  
SCREW PM3x30mm -- 2 pcs  
SCREW PA3x30mm -- 2 pcs  
WASHER d3xD7mm -- 4 pcs
  21. SCREW PM4x16mm -- 2 pcs  
WASHER d4xD12mm -- 2 pcs  
M4 NYLON INSERT LOCK NUT -- 2 pcs
  22. DECALS A186RDEC -- 1 set
- **COVERING:**  
**TOUGHLON STL 331 CUB YELLOW**  
**LIGHTEX SGX 201 BLACK**

# 1 Main Wing



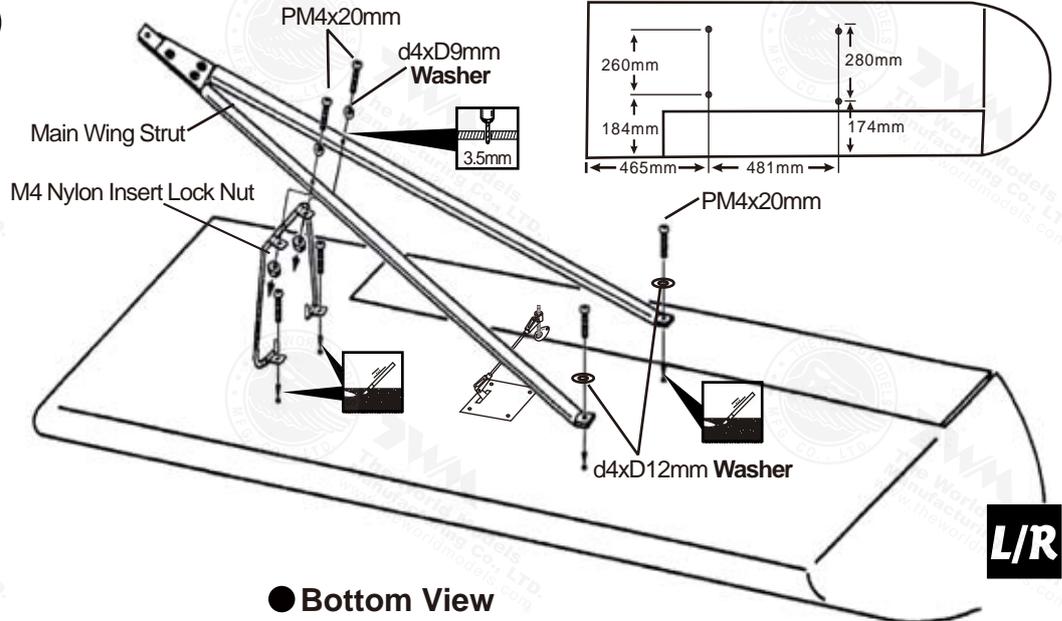
# 2 Aileron servo

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



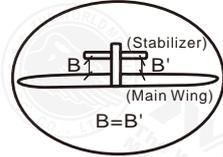
### 3 Wing Struts

- PM4x20mm Screw — 12
- d4xD12mm Washer — 4
- d4xD9mm Washer — 4
- M4 Nylon Insert Lock Nut — 4

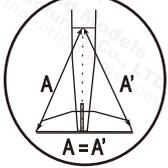
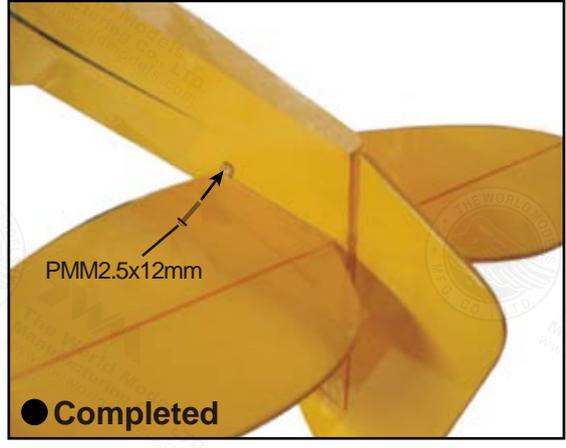
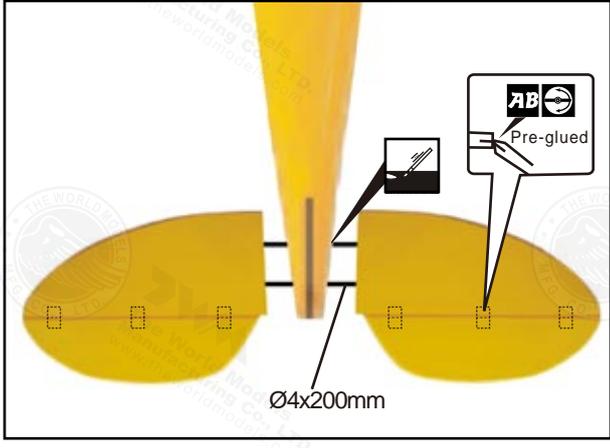


### 4 Stabilizer & Elevator

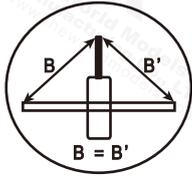
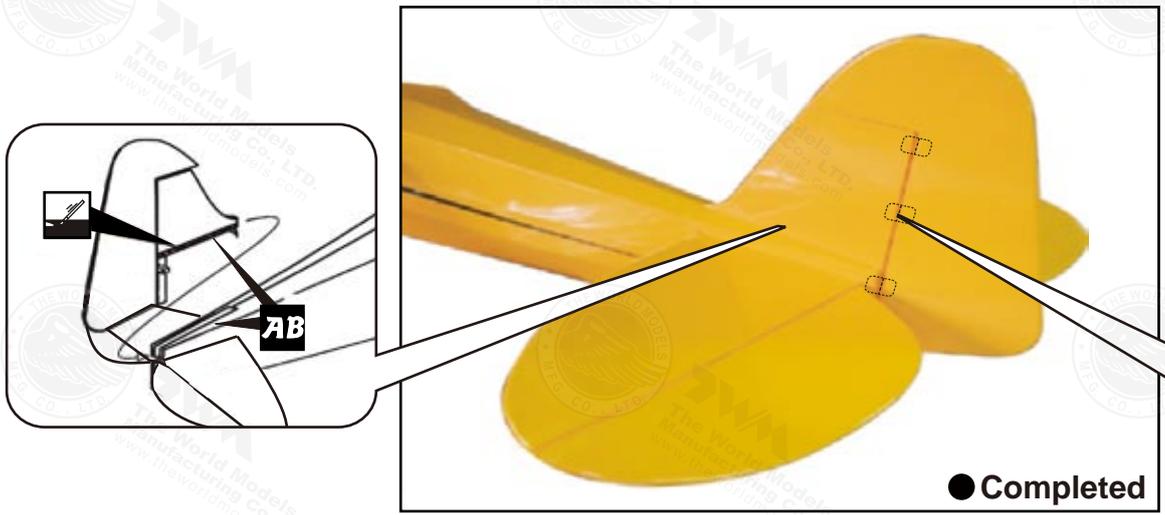
- PMM2.5x12mm Screw — 2



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

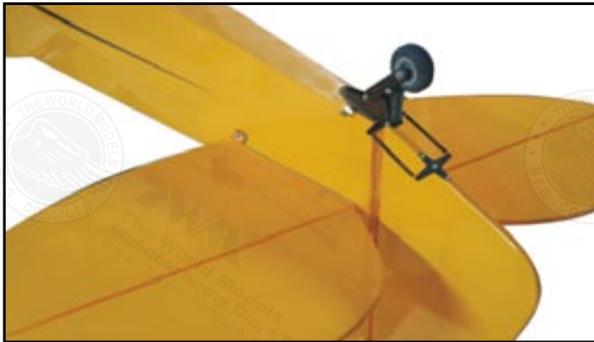


### 5 Vertical Fin & Rudder

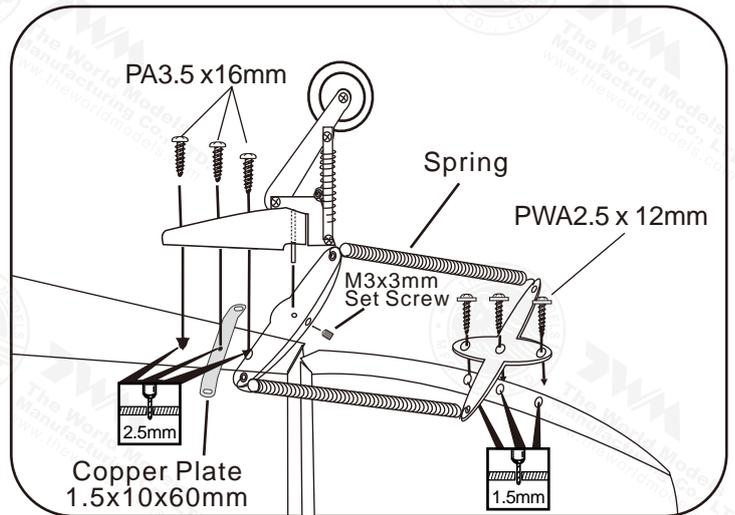


## 6 Tail Landing Gear

- PA3.5x16mm Screw — 3
- PWA2.5x12mm Screw — 3

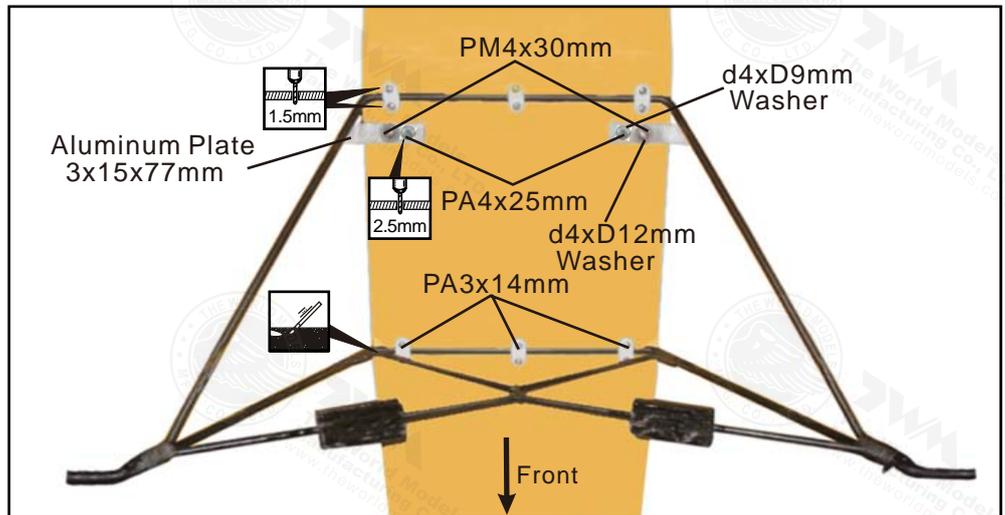


● Bottom View



## 7 Main Landing Gear

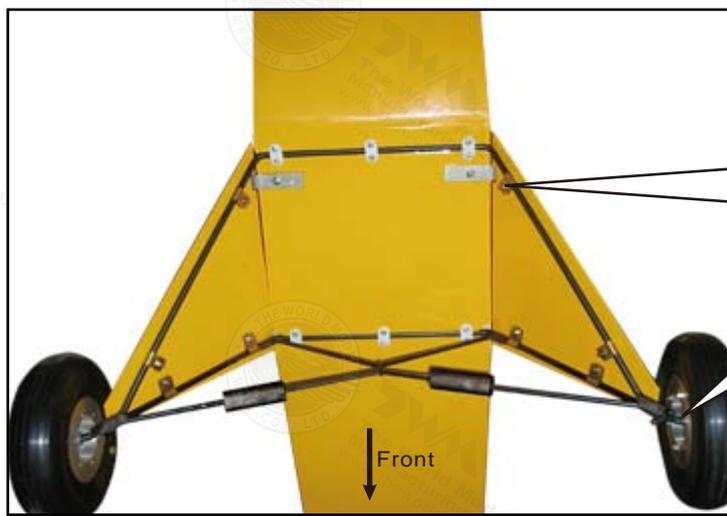
- PM4x30mm Screw — 2
- PA 3x14mm Screw — 12
- PA 4x25mm Screw — 2
- d4 x D12mm Washer — 2
- d4 x D9mm Washer — 2



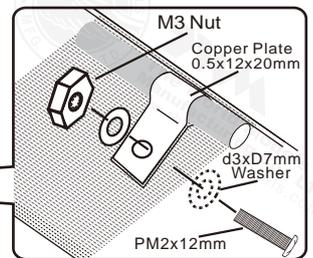
● Bottom View

## 8 Landing Gear

- 3mm Set Screw — 4
- PA1.7x8mm Screw — 6
- D6.1mm Collar — 4
- PM3x12mm Screw — 8
- d3xD7mm Washer — 16
- M3 Nut — 8

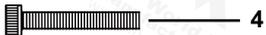


● Bottom View

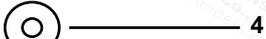


## 9 Engine

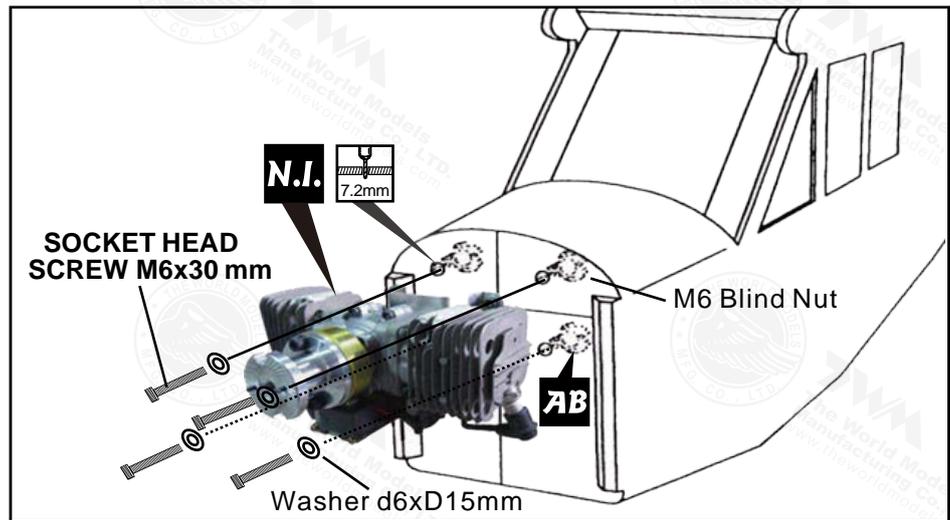
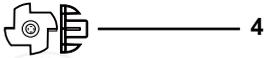
M6x30 SOCKET HEAD SCREW



d6xD15mm Washer



M6 Blind Nut



## 10 Cowling

PA3x12mm Screw

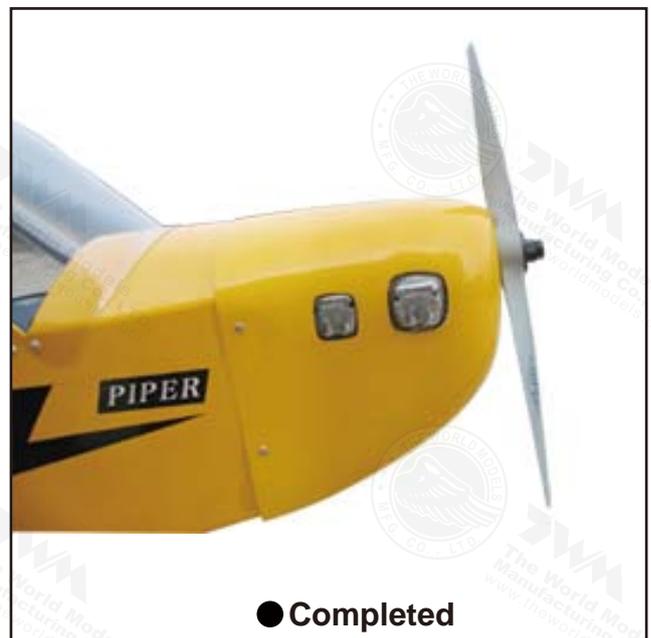
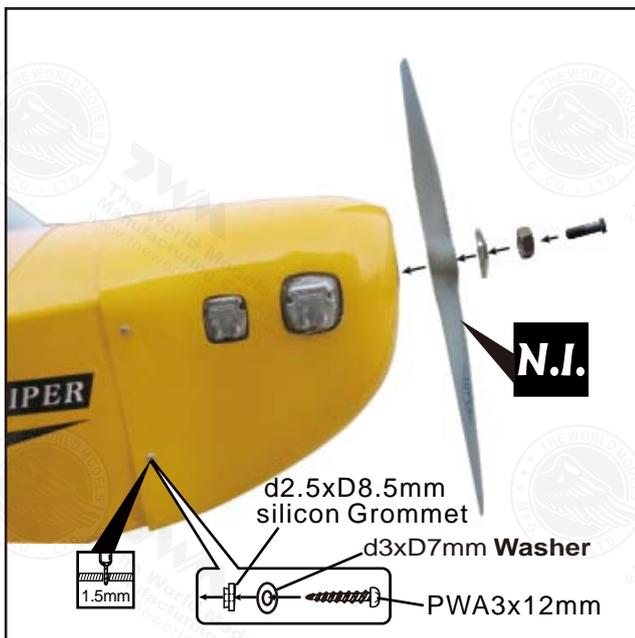
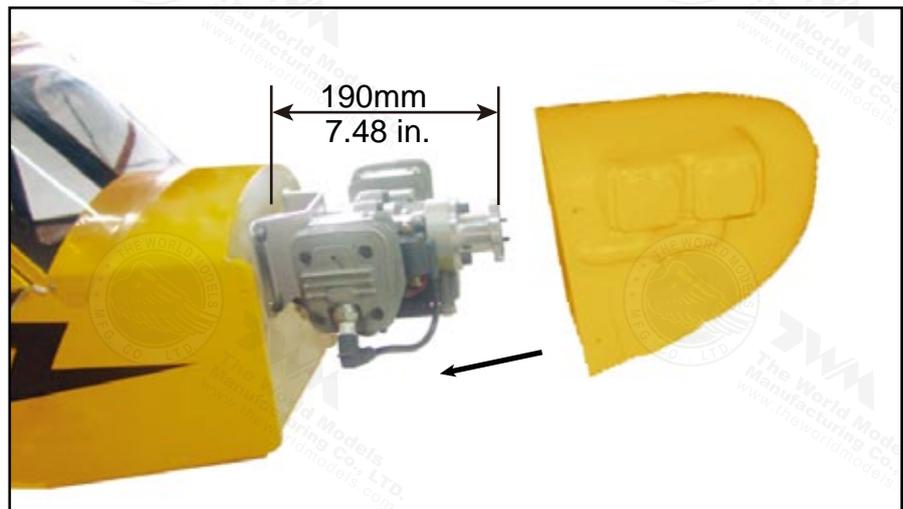
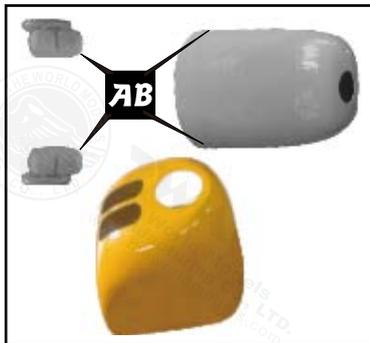
d2.5x8.5mm Silicon Grommet

d3xD7mm Washer

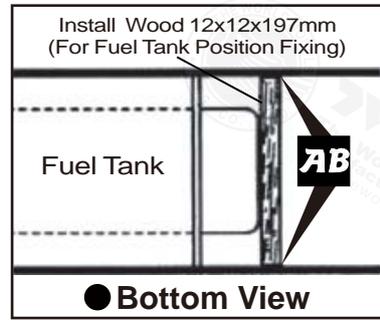
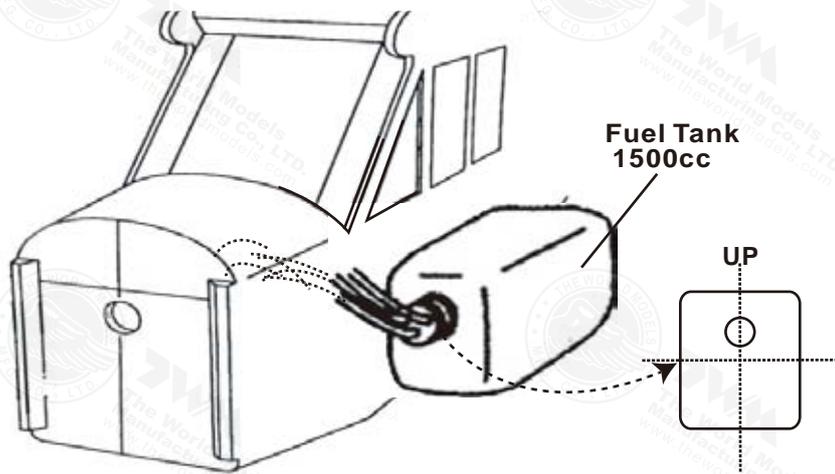
16

● Please refer to the attached sheet for usage of the transparent 3D template.

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

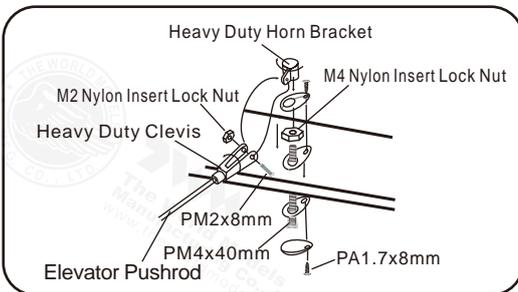
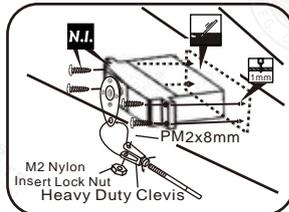


# 11 Fuel Tank



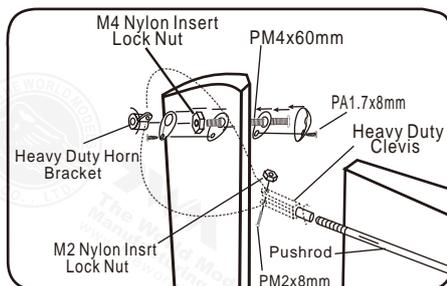
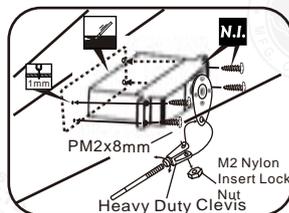
# 12 Elevator Pushrod

- PM4x40mm Screw — 2
- M4 NYLON INSERT LOCK NUT — 2



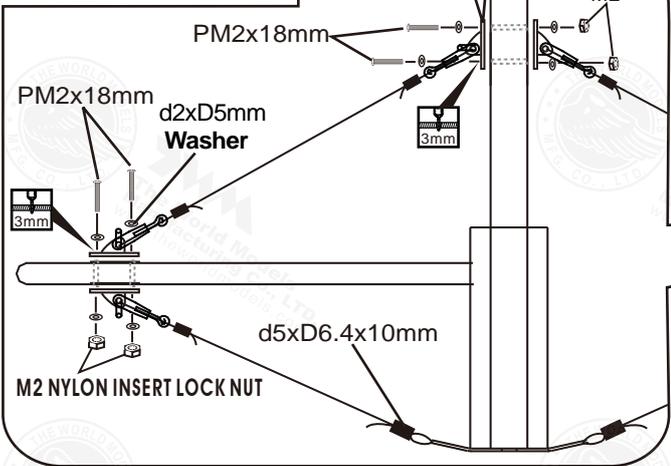
# 13 Rudder Pushrod

- PM4x60mm Screw — 1
- M4 NYLON INSERT LOCK NUT — 1



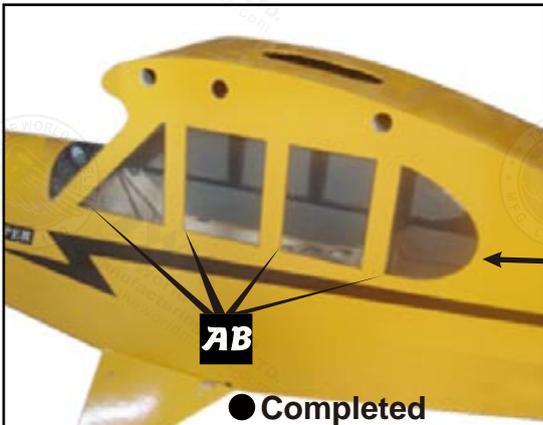
## 14 Flying Wire

- PM2x18mm Screw — 12
- M2 NYLON INSERT LOCK NUT — 12
- d2xD5mm Washer — 24



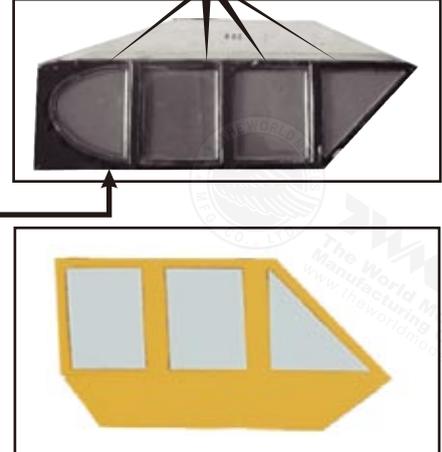
## 15 Windows

Window A



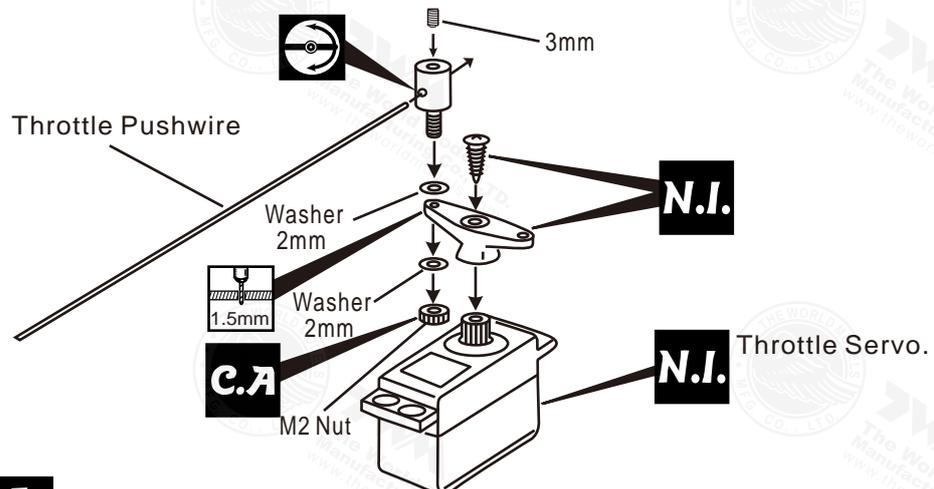
Securely glue the windows to the fuselage.

Window B



## 16 Servo Set

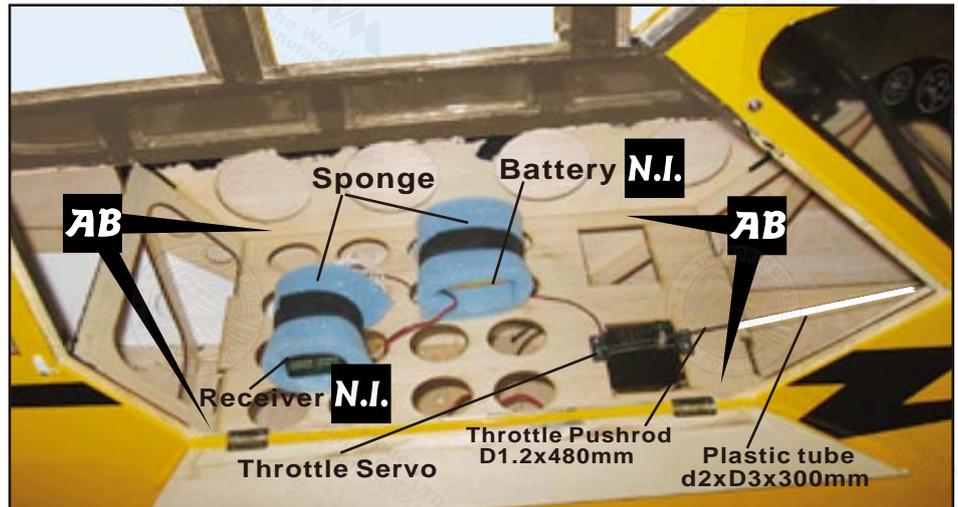
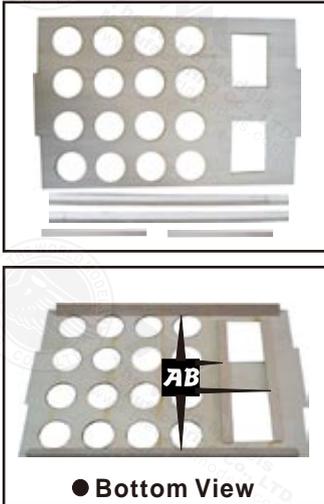
- 3x3mm Set Screw — 1
- Linkage Connector — 1
- M2 Nut — 1
- 2mm Washer — 1
- 1.5mm Washer — 2



**!** Please refer to the attached sheet for linkage connector installation.

## 17 Radio Equipment

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

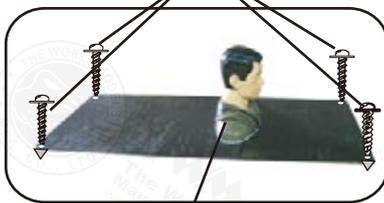


## 18 Pilot

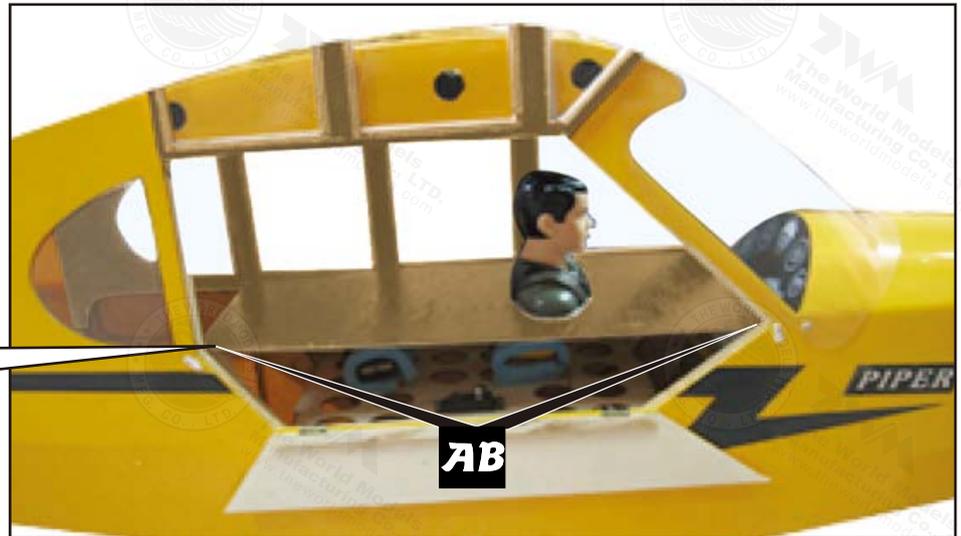
PWA 2x12mm Screw



PWA2x12mm Screw



PC101110A



## 19 Wind Shield

PWA2.3x12mm Screw



d1.5x6.5mm Silicon Grommet



M2 NYLON INSERT LOCK NUT



PM2x14mm Screw



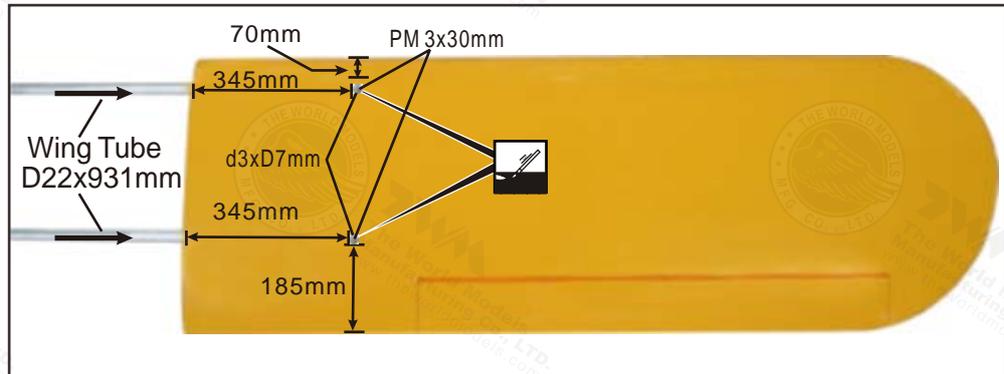
d2 x D5mm Washer



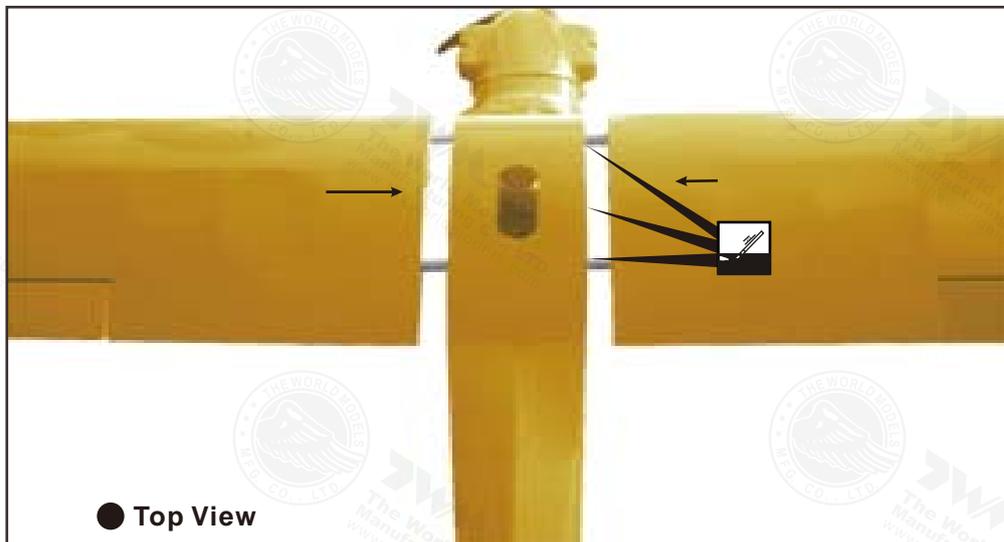
## 20 Main Wing

PM3x30mm Screw	—	2
PA3x30mm Screw	—	2
d3 x D7mm Washer	—	4

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 and apply the PM3x30mm machine screw through the pre-drilled hole on top of the wing. ( please confirm the alignment of the hole by putting a 2.5mm diameter rod through the pre-drilled wing hole before applying the screw ) The hole on the wing tube is pre-threaded, do not over tighten the PM 3mm screw, the set up is for future removal of the wing.



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

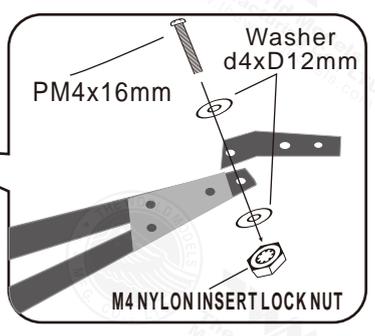


Step 3. Make sure the wings are resting against the fuselage tightly. Locate the pre-drilled 2.5mm hole at top of left wing, and drill along with 2.5mm drill bit until it passes through the wing tube. Apply the PA3x30mm self-tapping screw.

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

## 21 Wing Struts

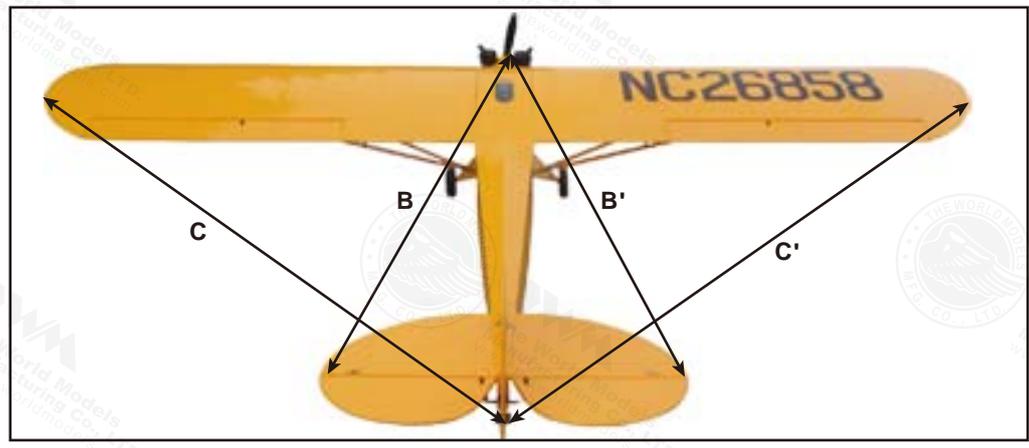
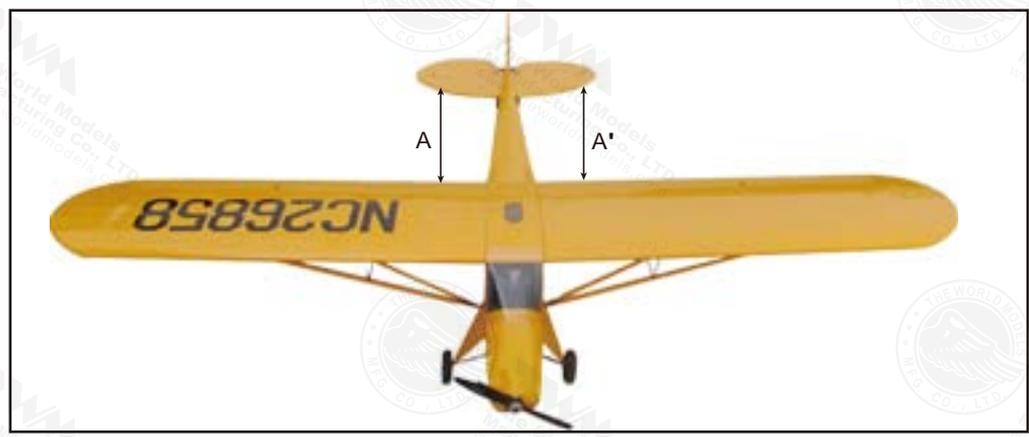
- PM4x16mm Screw — 2
- d4x D12mm Washer — 2
- M4 NYLON INSERT LOCK NUT — 2



L/R

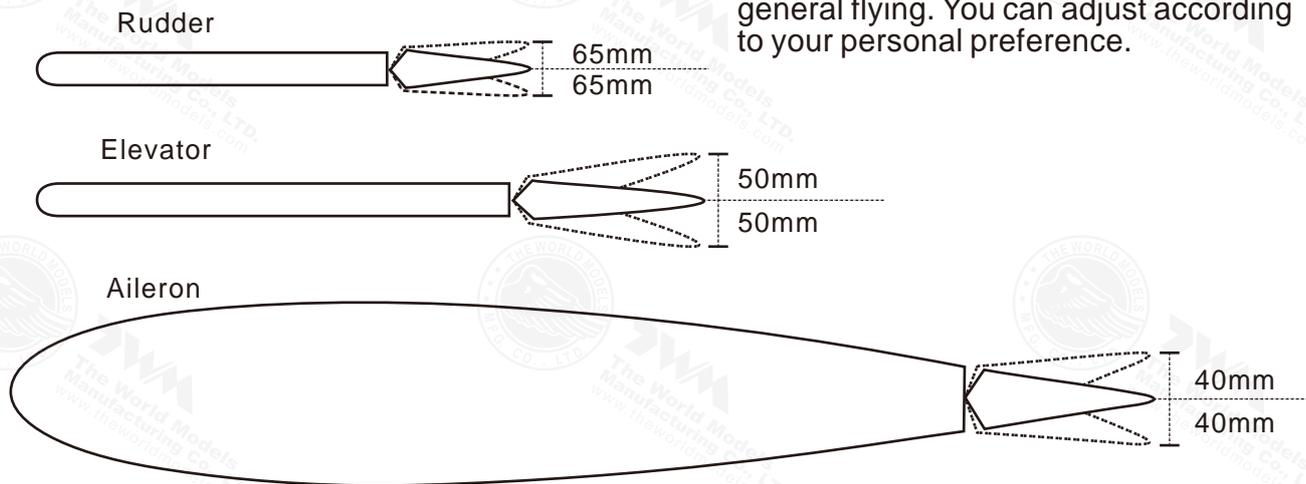
## 22 Wing Setting

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



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

## 23 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.

## 24 C.G.

The ideal C.G. position is **150mm (5.9in)** 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.



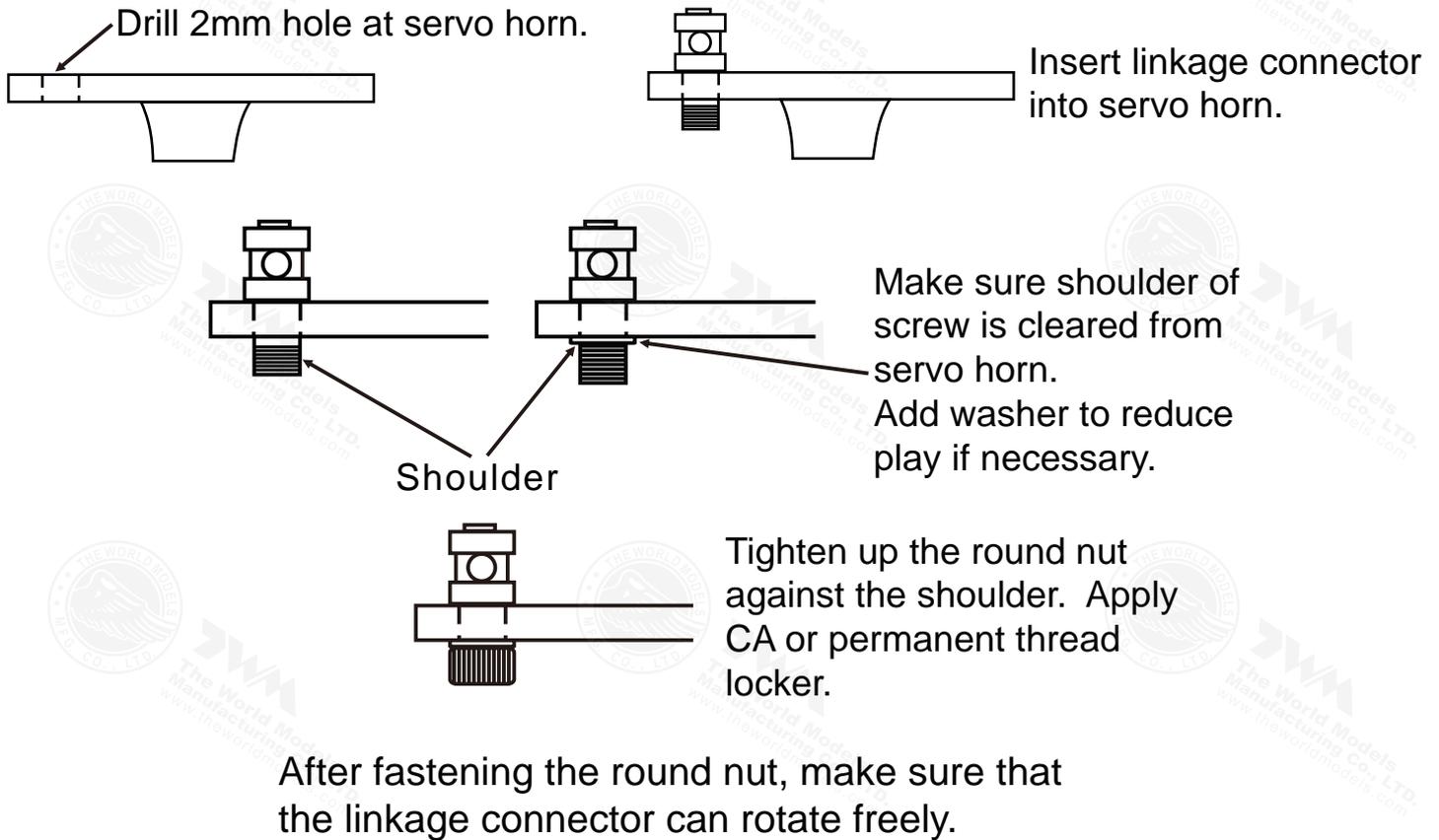
## ! Warning!

### 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.
- # 1/3 PIPER J-3 CUB is specially designed to be powered by **80c.c.** engine, using a more powerful engine does not mean better performance. In fact, over powered engine may cause structural 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



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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: \_\_\_\_\_

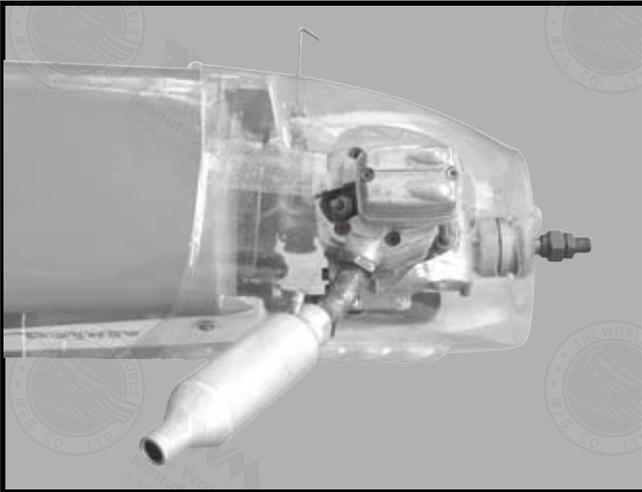
Please call AirBorne Models at 925 371 0922 for any assistance in filling this form. Thank you very much for purchasing our product.

# 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



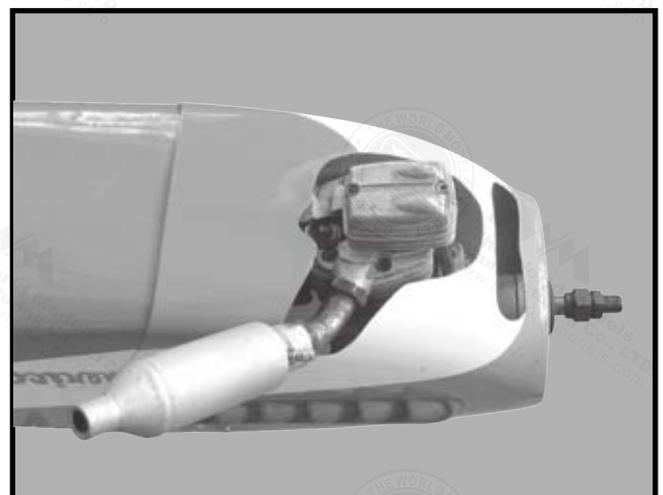
2



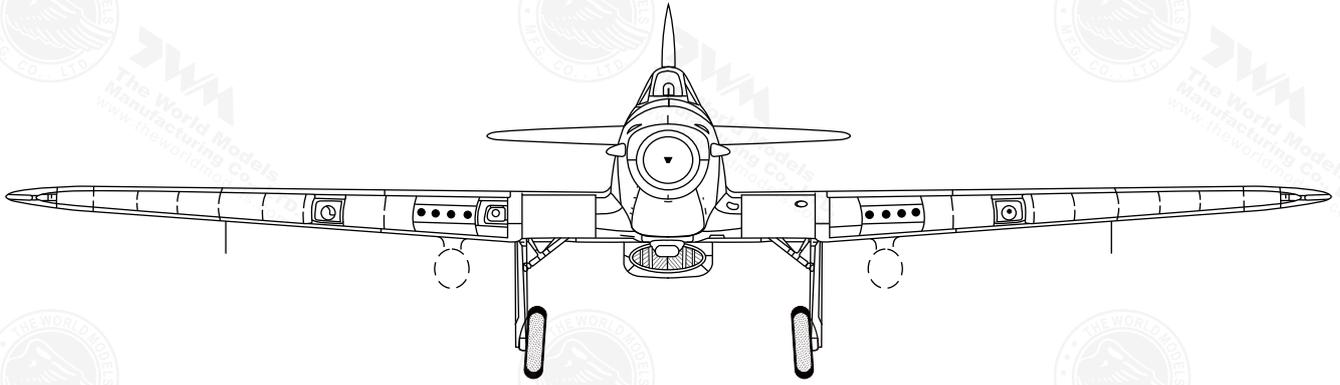
3



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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