

50CC PIPER CUB (A037)



**Requires: 50cc gasoline engine,
4-channel radio w/ 6 high torque servos.**

Specifications

Wing Span	118 in / 3000 mm
Wing Area	1990 sq in / 128 sq dm
Flying Weight	18.5 lbs / 8450 g
Fuselage Length	75 in / 1900 mm

* Specifications are subject to change without notice. *

Warning! This model is not a toy.

It is designed for maximum performance. Please seek advice if one is not familiar with this kind of engine powered precision model. Operating this model without prior preparation may cause injuries. Remember, safety is the most important thing. Always keep this instruction manual at hand for quick reference.



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

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

50CC PIPER CUB

INDEX

BEFORE YOU BEGIN.....	P.1
PARTS LIST.....	P.2
ASSEMBLY.....	P.3-P.13
SAFETY PRECAUTIONS.....	P.13

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!



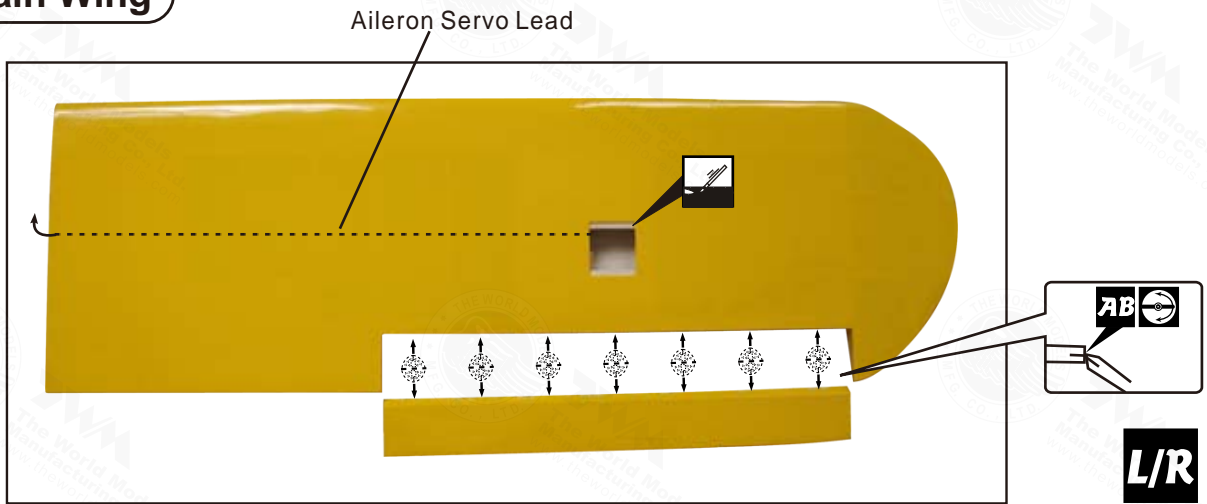
Do not overlook this symbol !



Parts List

1. MAIN WING -- 1 pair
 2. SERVO MOUNTING PANEL (For Aileron) PL5310010 -- 1 pair
HEAVY DUTY CLEVIS PL4112200 -- 4 sets
SOCKET HEAD SCREW M4x60mm -- 2 pcs
SCREW PWA2.3x8mm -- 8 pcs
M4 NYLON INSERT LOCK NUT -- 2 pcs
HEAVY DUTY HORN BRACKET PL4112400 -- 2 sets
HEAVY DUTY SERVO HORN PL4120250 -- 2 sets
PUSHROD M3xD5x113mm w/ Threads (For Aileron) -- 2 pcs
SWIVEL CLEVIS HORN FAIRING PL4610010 -- 2 sets
 3. SOCKET HEAD SCREW M3x18mm -- 8 pcs
SOCKET HEAD SCREW M4x18mm -- 2 pcs
WIRE BRACKET PL5330030Y -- 8 pcs
MAIN WING STRUTS -- 1 pair
WING STRUT WIRE D3mm -- 2 pcs
M3 NYLON INSERT LOCK NUT -- 4 pcs
WASHER d3xD7mm -- 12 pcs
WASHER d4.5xD9mm -- 4 pcs
 4. FUSELAGE -- 1 pc.
COVERING 30x550mm -- 1 pc.
 5. STABILIZER & ELEVATOR -- 1 set
SCREW PWM2.5x12mm -- 2 pcs
STABILIZER WIRE Ø4x170mm -- 2 pcs
 6. VERTICAL FIN & RUDDER -- 1 set
 7. TAIL GEAR ASSEMBLY (PL3410033) -- 1 set
COPPER PLATE (For Stays on Tail Fueslage Bottom) 1.5x12x60mm -- 1 pc.
SCREW PA3x18mm -- 3 pcs
SCREW PWA2.5x12mm -- 2 pcs
SPRING Ø5x50mm -- 2 pcs
 8. MAIN LANDING GEAR -- 1 set
SCREW HM4x20mm -- 2 pcs
SCREW PA3x18mm -- 12 pcs
SCREW PA4x20mm -- 2 pcs
WASHER d4xD9mm -- 4 pcs
MOUNTING PLATE 12x20mm PL4114020 -- 6 pcs
ALUMINUM PLATE 3mm -- 2 pcs
 9. LARGE SCALE TREADED INFLATABLE WHEELS Ø118mm -- 2 sets
SCREW PA1.7x8mm -- 6 pcs
SCREW PM3x12mm -- 8 pcs
WASHER d3xD7mm -- 16 pcs
M3 NUT -- 8 pcs
COLLAR Ø5.1mm w/ set screw -- 4 sets
WIRE BRACKET PL5330050Y -- 8 pcs
PLYWOOD 2x178x186.4mm (Main Langing Gear Cover) -- 1 pair
 10. BLIND NUT M5 -- 4 pcs
WASHER d5xD12mm -- 4 pcs
SOCKET HEAD SCREW M5x50mm -- 4 pcs
THROTTLE PUSHROD Ø1.8x430mm -- 1 pc.
PLASTIC TUBE d2.5xD4x300mm -- 1 pc.
 11. 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
 12. FUEL TANK 800cc PL1111810G -- 1 set
CABLE TIE 1.5x8x500mm -- 1 pc.
DOUBLE-SIDED TAPE 40x160mm -- 1 pc.
 13. PUSHROD M3xD5x170mm w/ Threads (For Elevator) -- 2 pcs
SOCKET HEAD SCREW M4x50mm -- 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 PL4120250 -- 2 sets
HEAVY DUTY CLEVIS PL4112200 -- 4 sets
 14. PUSHROD M3xD5x126mm w/ Threads (For Rudder) -- 1 pc.
SOCKET HEAD SCREW M4x50mm -- 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 PL4120250 -- 1 set
HEAVY DUTY CLEVIS PL4112200 -- 2 set
 15. SCREW PM2x16mm -- 6 pcs
WASHER d2xD5mm -- 12 pcs
M2 NUT -- 6 pcs
FLYING WIRE CLEVIS -- 6 pcs
SCREW PM2x8mm -- 6 pcs
WIRE Ø1x1700mm -- 1 pc.
FLYING WIRE BRACKET -- 6 pcs
EYE SCREW -- 6 pcs
COPPER TUBE d2.5xD3.2x8mm (For Rudder) -- 8 pcs
 16. WIND SHIELD & SIDE WINDOWS -- 1 set
BALSA ROD Ø6x190mm -- 2 pcs
 17. LINKAGE CONNECTOR Ø2.1mm w/ set screw -- 1 set
 18. PLYWOOD 3x161.5x252mm (For Fuselage Servos) -- 1 set
BALSA 10x10x240.5mm (For Fuselage Servo Stand) -- 2 pcs
SPONGE 10x80x200mm -- 2 pcs
 19. PILOT PC101110A -- 1 set
SCREW PWA2x12mm -- 4 pcs
COCKPIT BASE PANEL 3x161x373mm -- 1 set
 20. M2 NYLON INSERT LOCK NUT -- 2 pcs
SCREW PM2x14mm -- 2 pcs
WASHER d2xD5mm -- 4 pcs
MOUNTING PLATE 5x15mm PL4114015 -- 2 pcs
 21. WING TUBE Ø22x825mm -- 2 pcs
SELF-TIGHTENING LATCHING PIN PL9120010 -- 4 pcs
WIRE Ø0.8mm -- 2 pair
M3x8mm SET SCREW -- 4 pcs
 22. SCREW HM4x12mm -- 2 pcs
WASHER d4xD12mm -- 2 pcs
M4 NYLON INSERT LOCK NUT -- 2 pcs
 23. DECALS: A037DEC -- 1 set
- **COVERING:**
TOUGHLON STL 331 CUB YELLOW
LIGHTEX SGX 201 BLACK

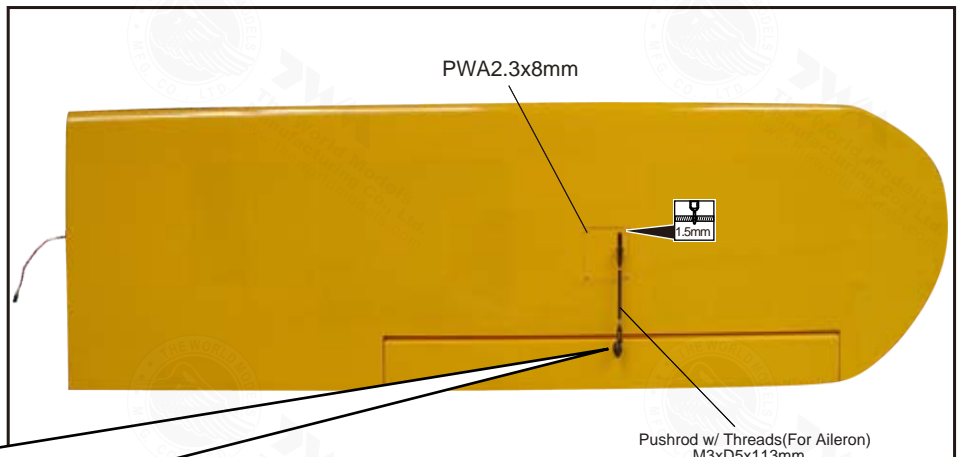
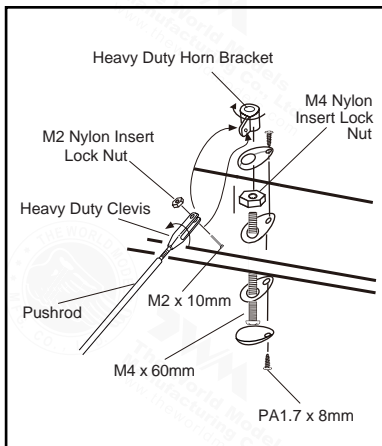
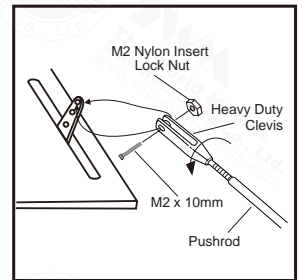
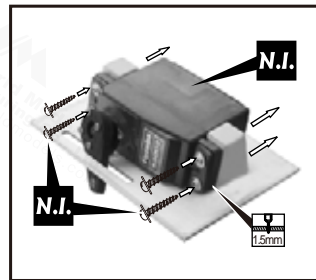
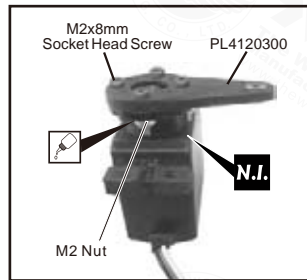
1 Main Wing



● Bottom View

2 Aileron Servos

- M4x60mm Socket Head Screw — 2
- PWA2.3x8mm Screw — 8
- M4 Nylon Insert Lock Nut — 2



● Bottom View



● Bottom View

● Completed

3 Wing Struts

M3x18mm Socket Head Screw



8

M4x18mm Socket Head Screw



4

d4.5xD9mm Washer



4

d3xD7mm Washer

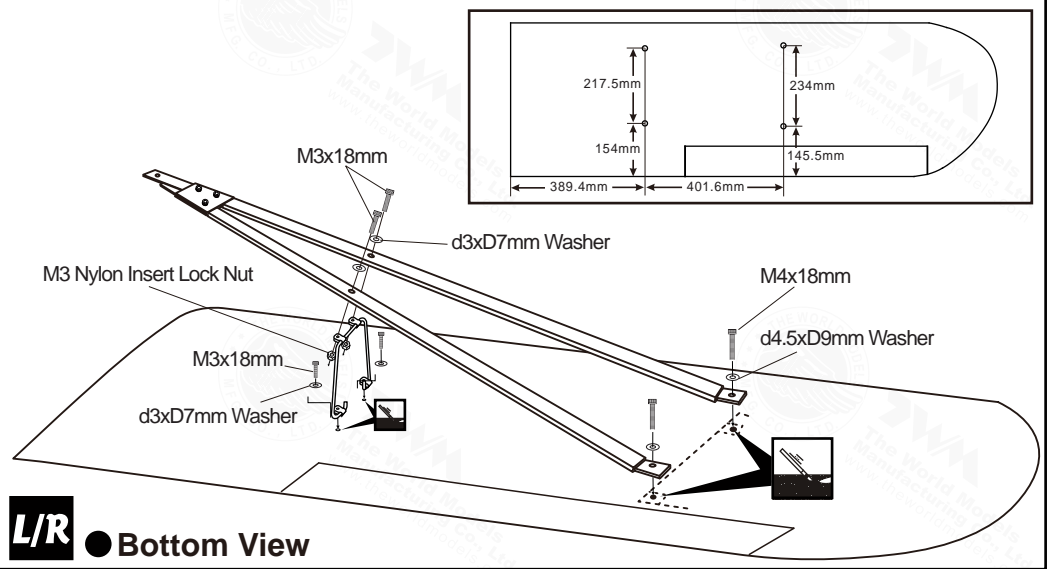


12

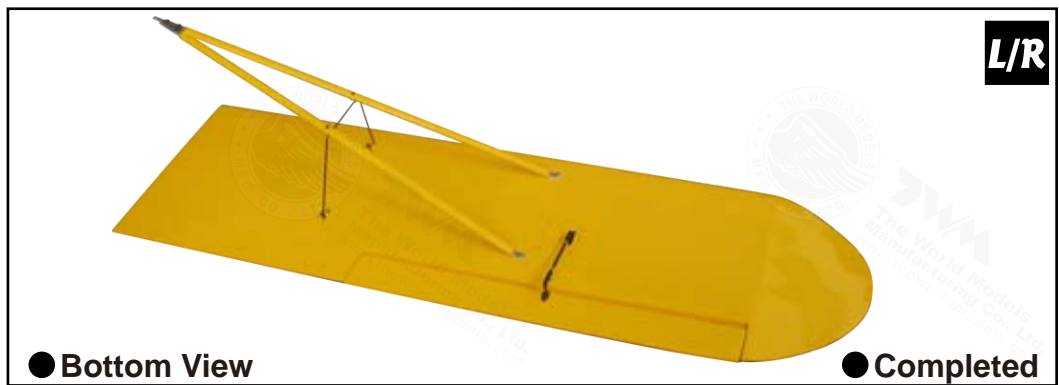
M3 Nylon Insert Lock Nut



4



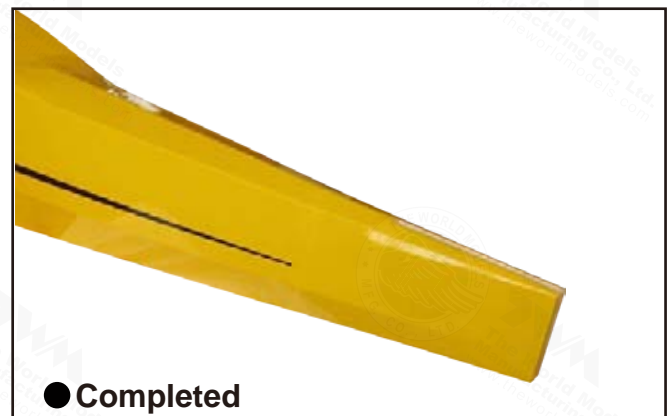
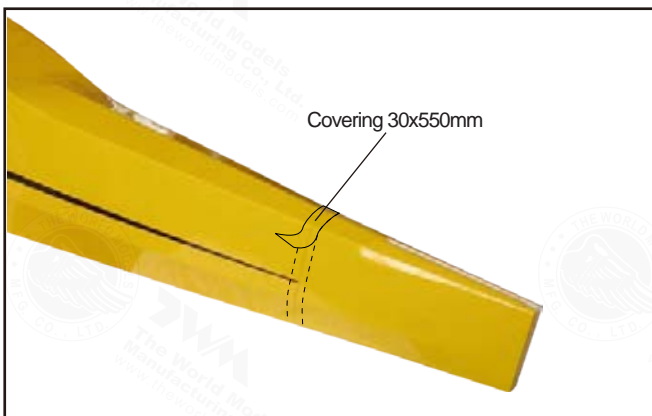
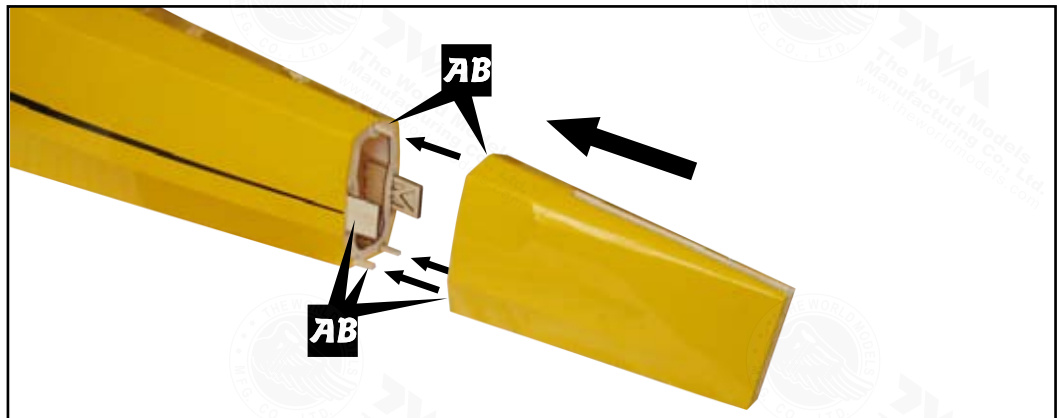
L/R ● Bottom View



● Bottom View

● Completed

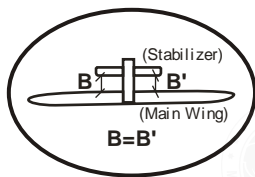
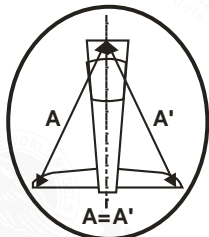
4 Fuselage



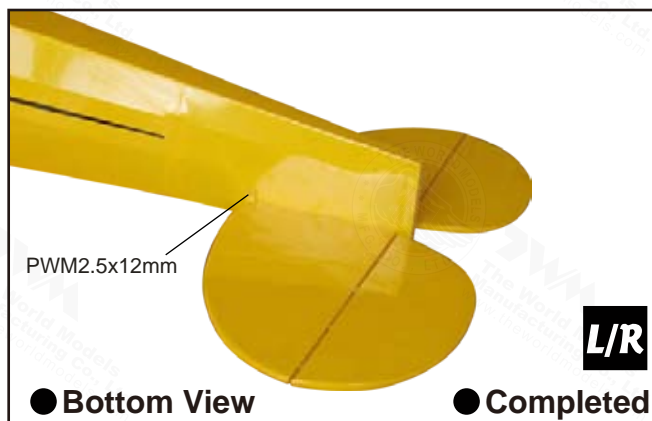
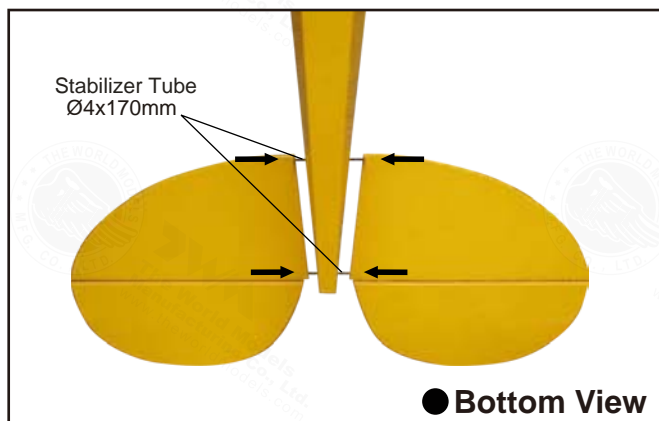
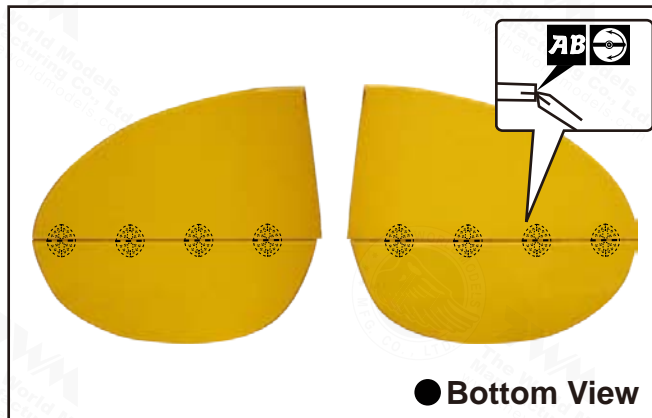
● Completed

5 Stabilizer & Elevator

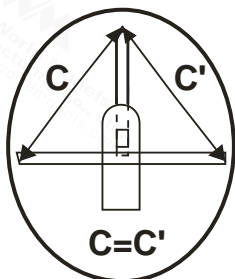
PWM2.5x12mm Screw 2



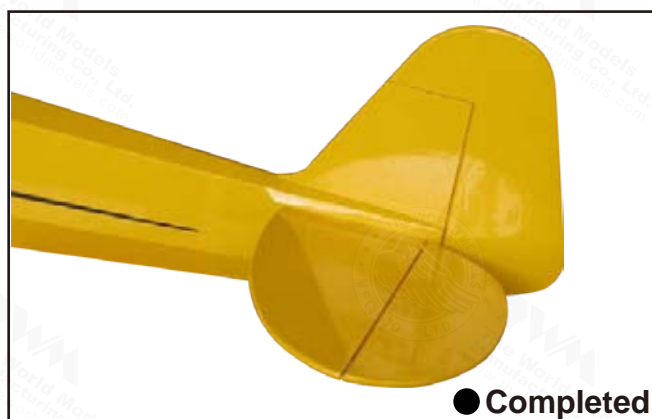
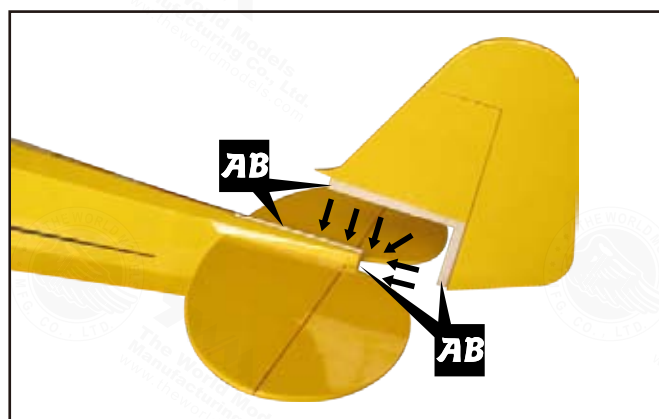
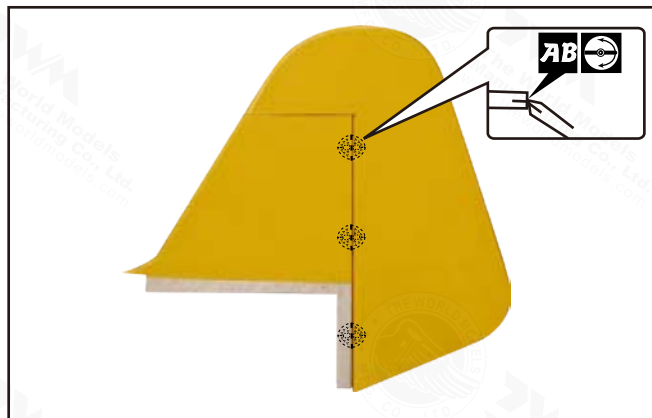
Temporary install the main wing, adjust leveling of the stabilizer to make it as parallel to the main wing as possible



6 Vertical Fin & Rudder

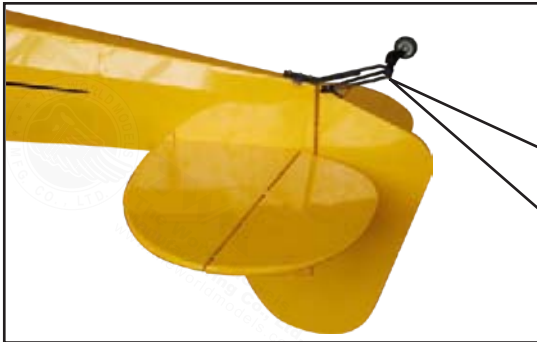


● Remove coverings for all surfaces in contact before applying A/B epoxy glue.

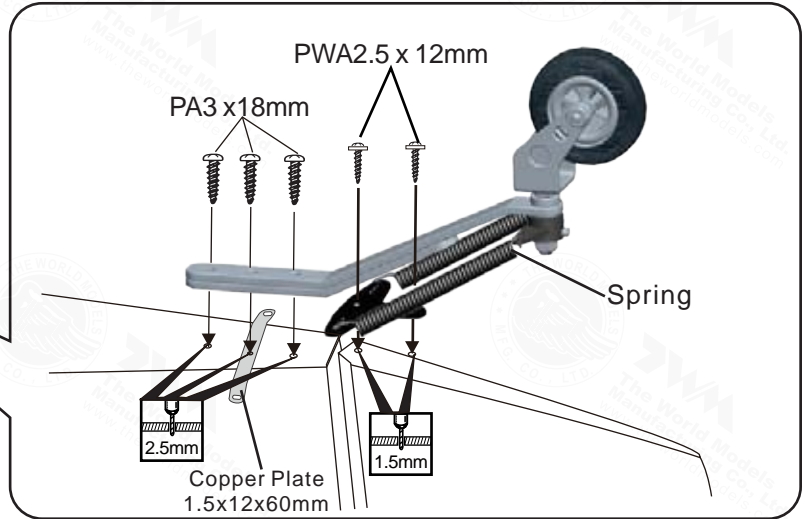


7 Tail Landing Gear

PA3x18mm	Screw	3
PWA2.5x12mm	Screw	2

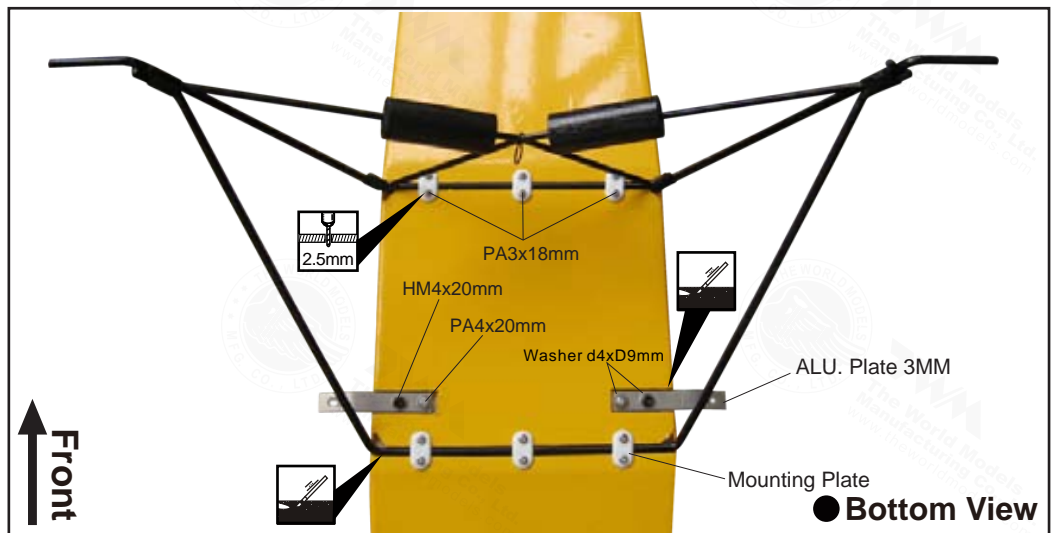


● Bottom View



8 Main Landing Gear

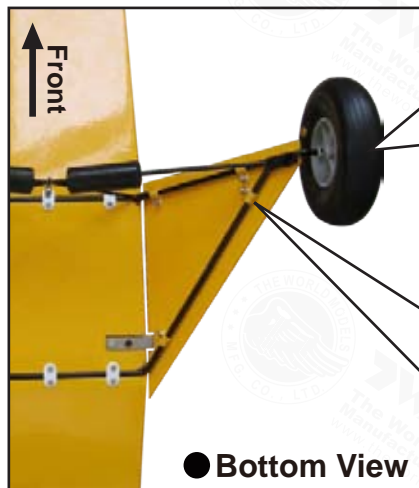
PA4x20mm	Screw	2
PA3x18mm	Screw	12
HM4x20mm	Screw	2
d4xD9mm	Washer	4



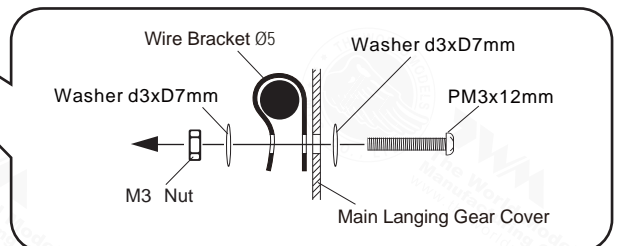
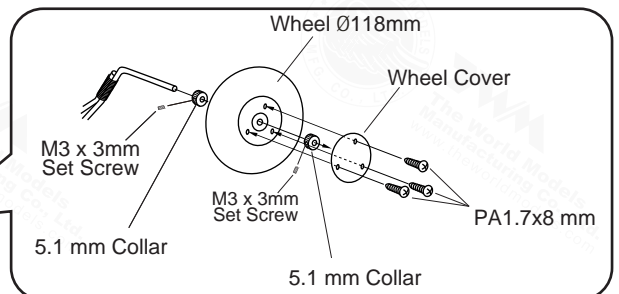
● Bottom View

9 Main Wheel

PA1.7x8mm	Screw	6
D5.1mm	Collar	4
PM3x12mm	Screw	8
M3	Nut	8
d3xD7mm	Washer	16



● Bottom View

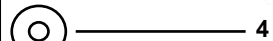


10 Engine

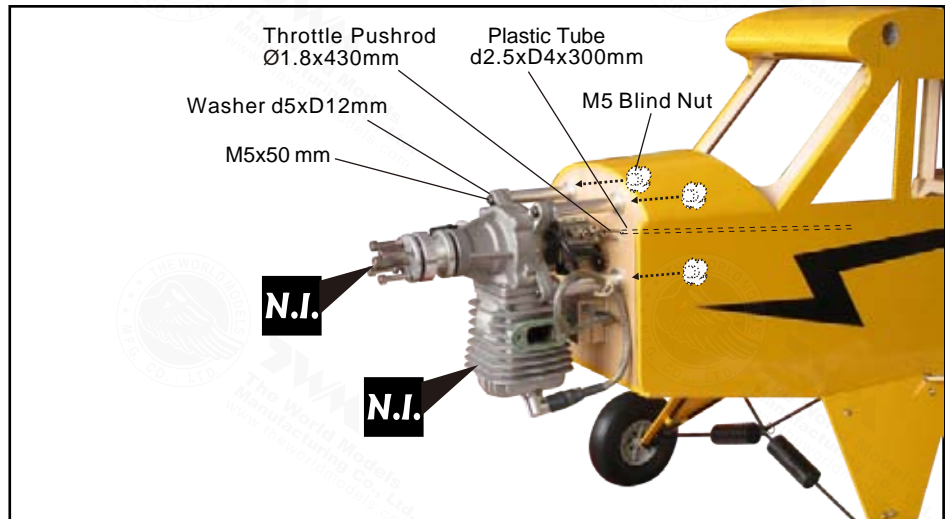
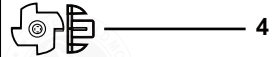
M5x50 **SOCKET HEAD SCREW**



d5xD12mm **Washer**



M5 **Blind Nut**

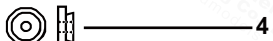


11 Cowling

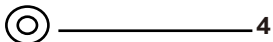
PA3x12mm **Screw**



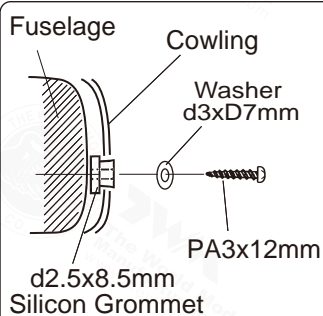
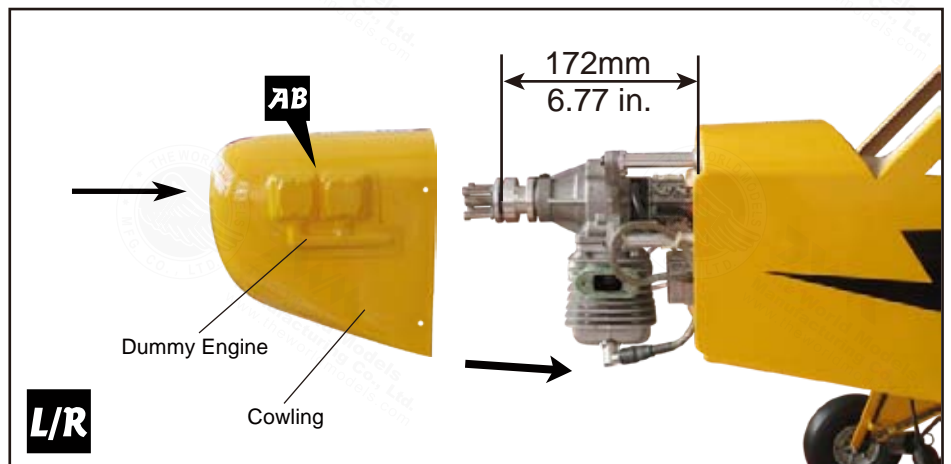
d2.5x8.5mm **Silicon Grommet**



d3xD7mm **Washer**



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



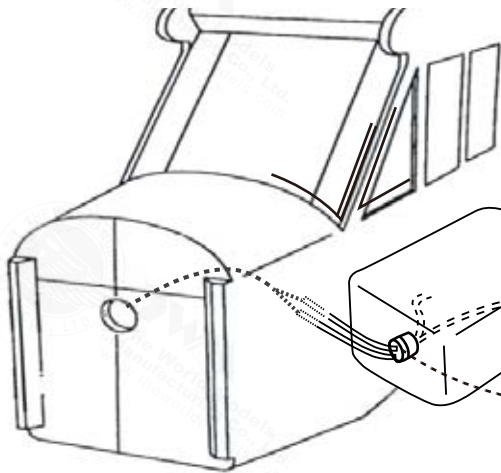
● **Completed**

12 Fuel Tank

Cable Tie
1.5x8x500mm



Double-sided Tape 40x160mm



Fuel Tank 800cc

UP



● Completed

13 Elevator Pushrod

M4x50 SOCKET HEAD SCREW



2

M4 NYLON INSERT LOCK NUT



2

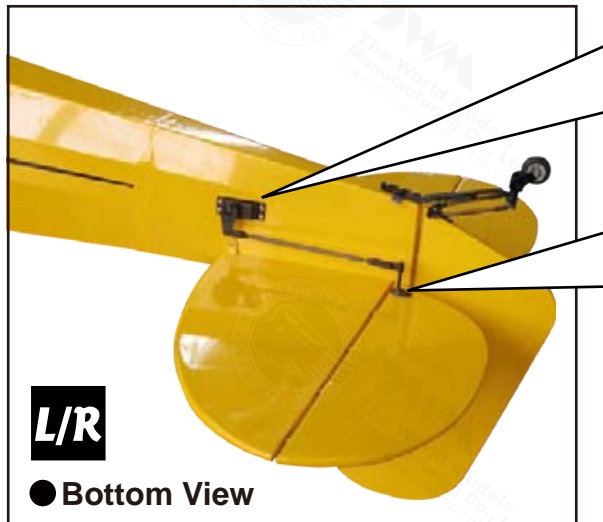
M2x8mm Socket Head Screw



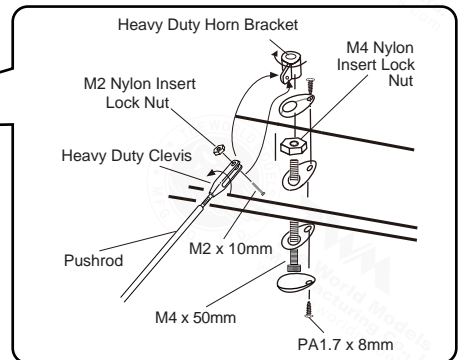
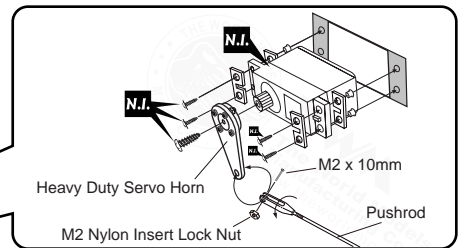
PL4120300

N.I.

M2 Nut



● Bottom View



14 Rudder Pushrod

M4x50 SOCKET HEAD SCREW



1

M4 NYLON INSERT LOCK NUT



1

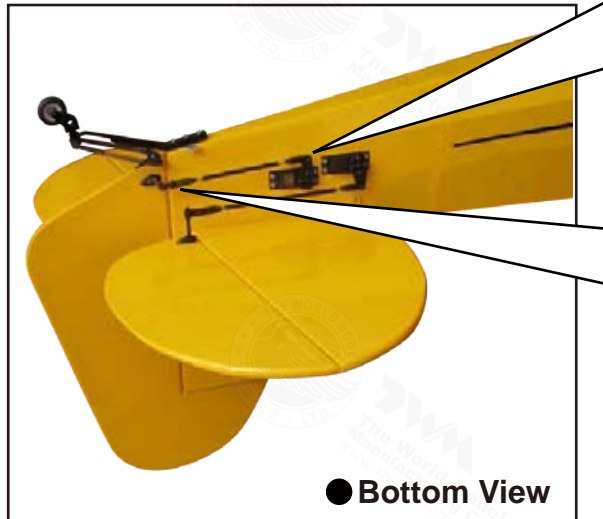
M2x8mm Socket Head Screw



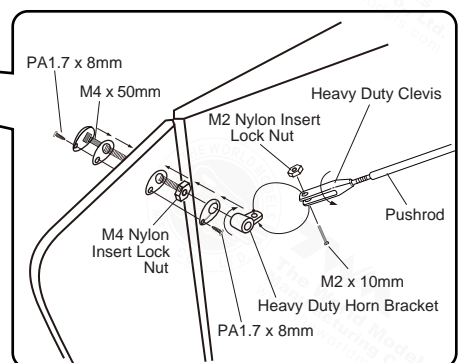
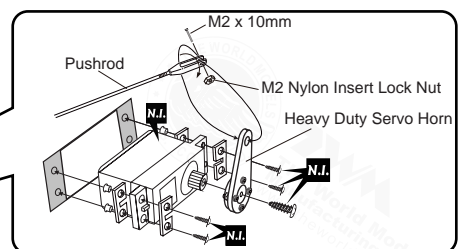
PL4120300

N.I.

M2 Nut

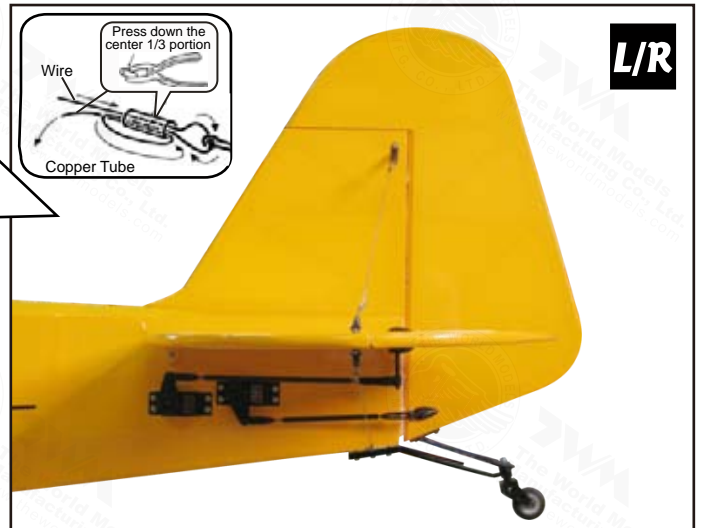
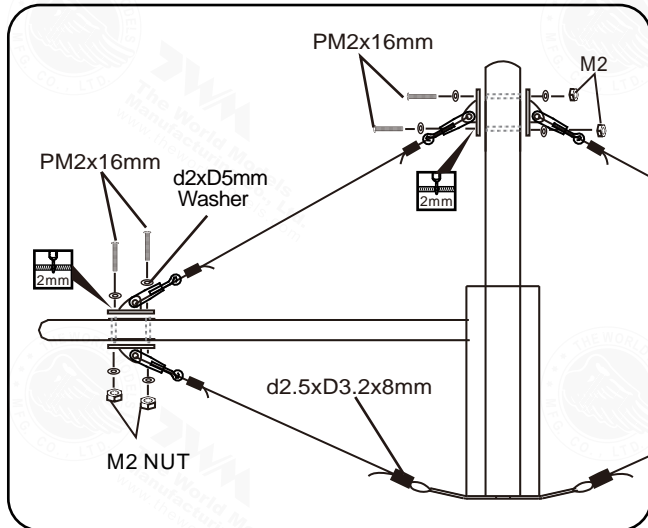


● Bottom View



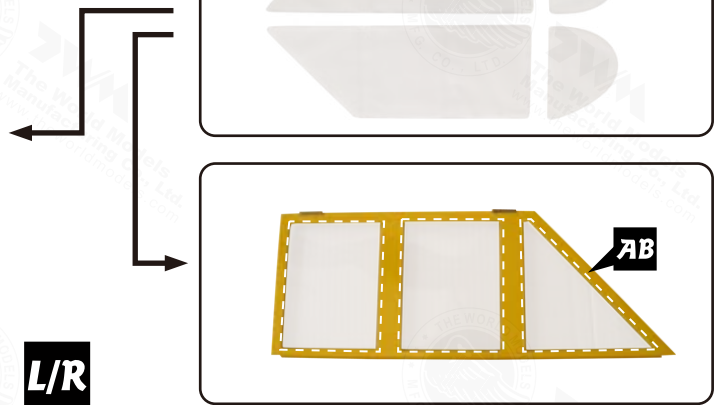
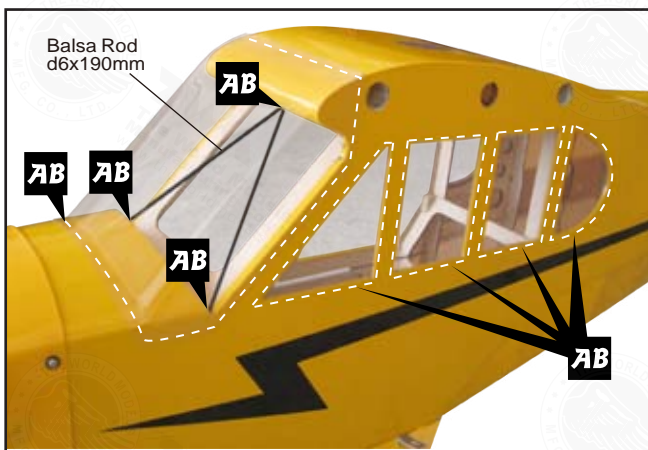
15 Flying Wire

PM2x16mm	Screw	6
PM2x8mm	Screw	6
M2	Nut	6
d2xD5mm	Washer	12



16 Windows

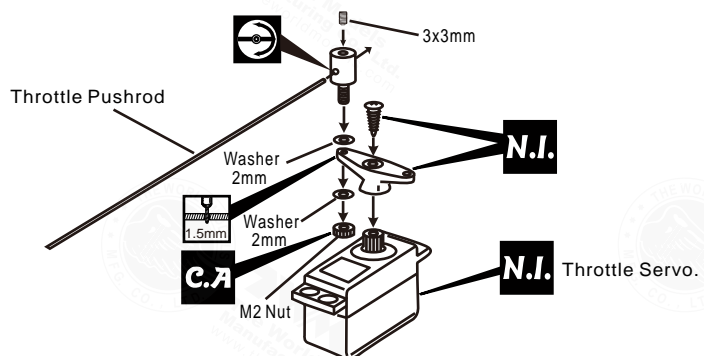
Securely glue the windows to the fuselage.



L/R

17 Servo Set

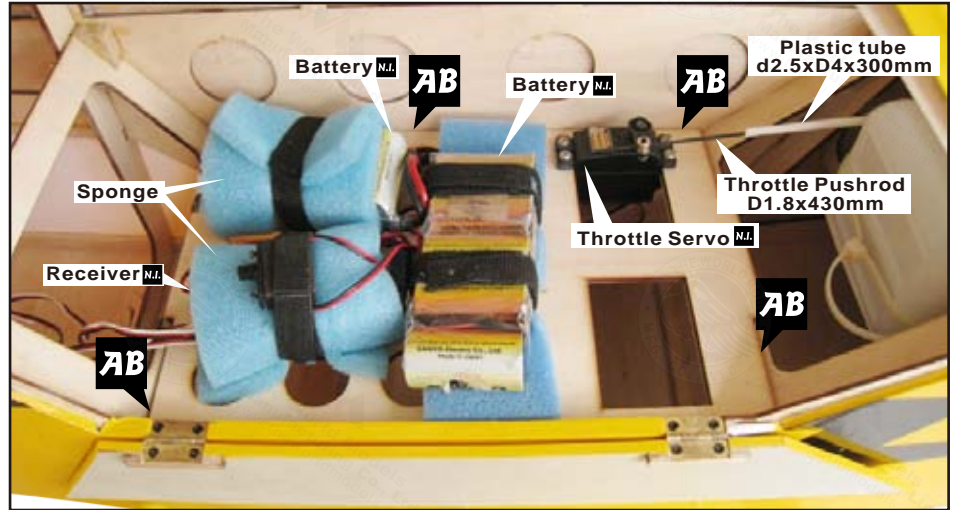
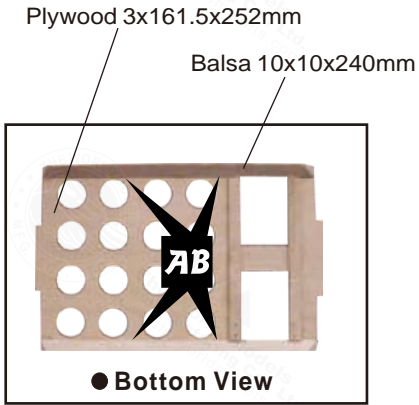
3x3mm	Set Screw	1
Linkage Connector		1
M2	Nut	1
2mm	Washer	2



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

18 Radio Equipment

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



19 Pilot

PWA 2x12mm Screw



PWA2x12mm Screw

PC101110A



20 Wind Shield

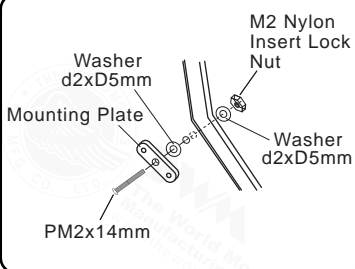
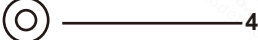
PM2x14mm Screw



M2 Nylon Insert Lock Nut



d2 x D5mm Washer



21 Main Wing

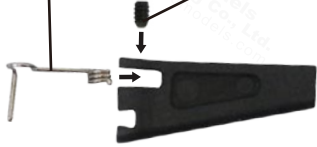
M3 x 8mm **Set Screw**



L/R

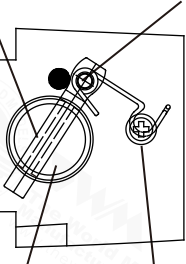
Wire Ø0.8mm

Set Screw
M3x8mm



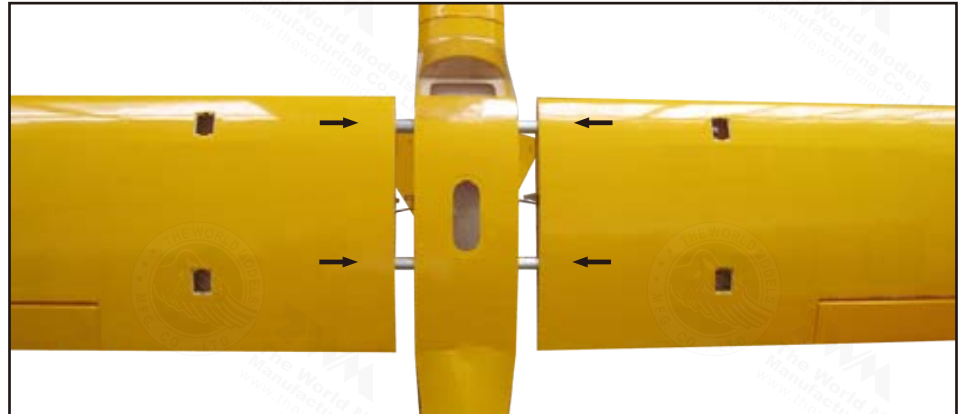
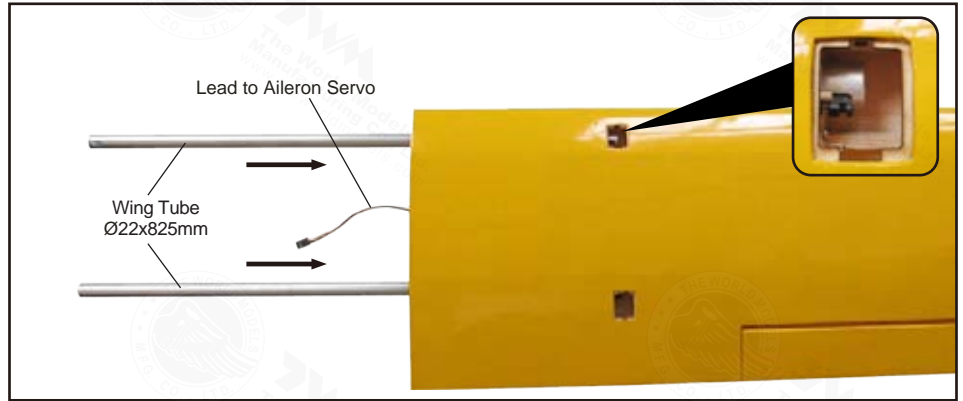
Self Tightening
Wing Latch

Set Screw
M3X8mm



Wing Tube

PWA2x8mm



● **Completed**

22 Wing Struts

PM4x12mm **Screw**



d4x D12mm **Washer**



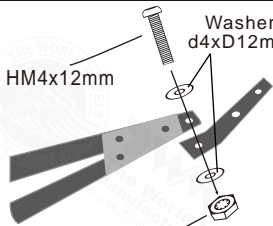
M4 NYLON INSERT LOCK NUT



L/R

HM4x12mm

Washer
d4xD12mm



M4 NYLON INSERT LOCK NUT

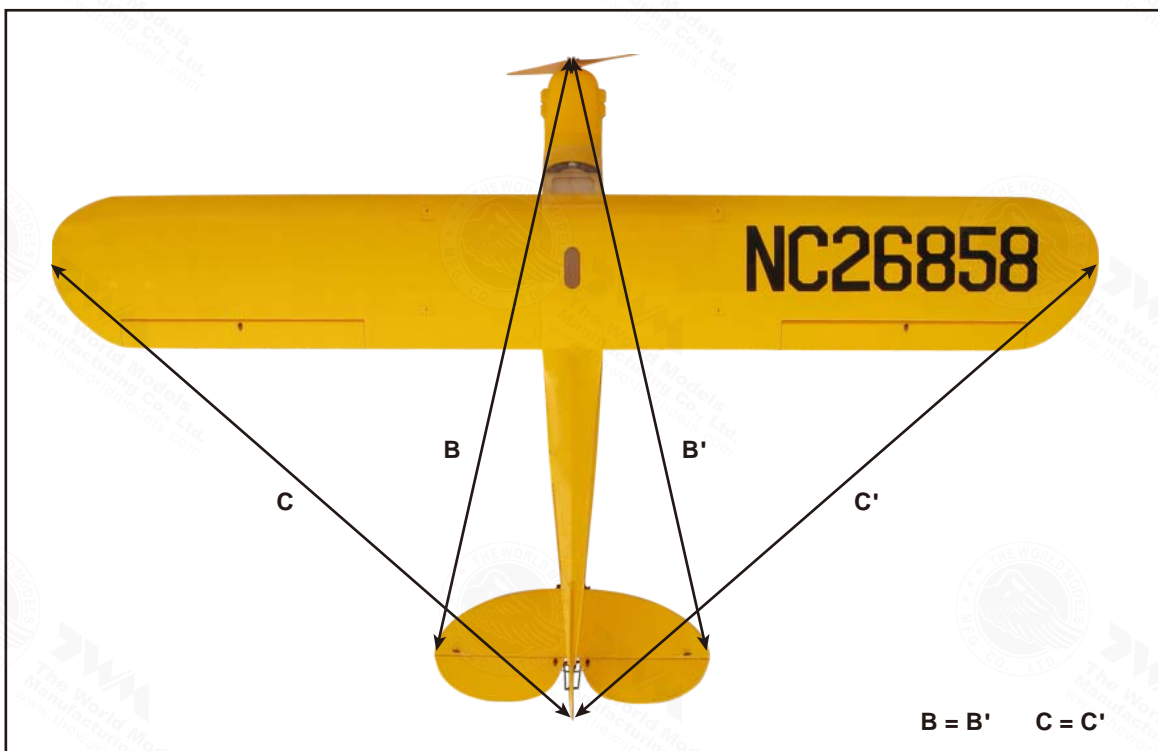


23 Wing Setting

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



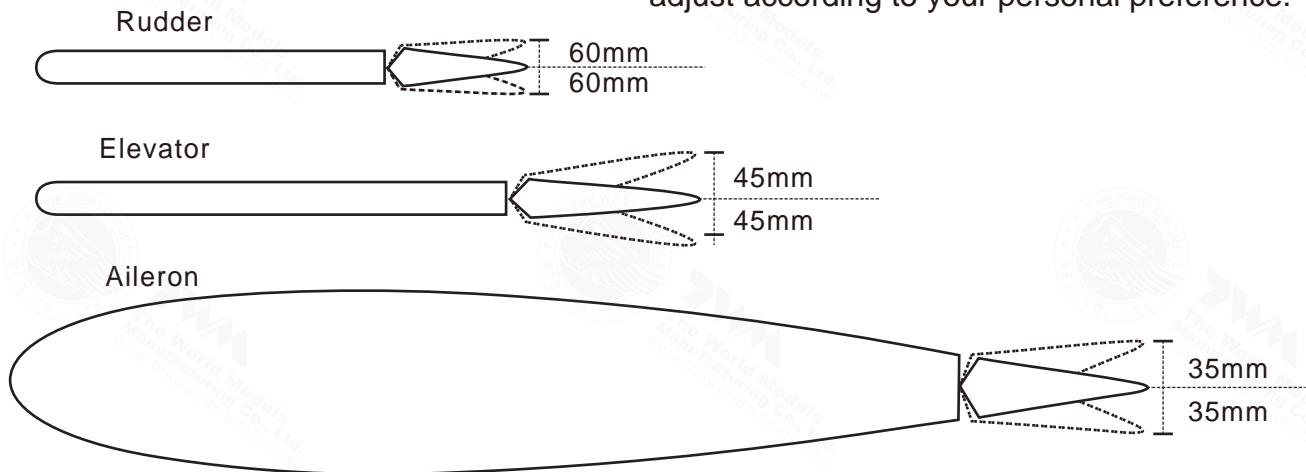
$$A = A'$$



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

24 Control Throws

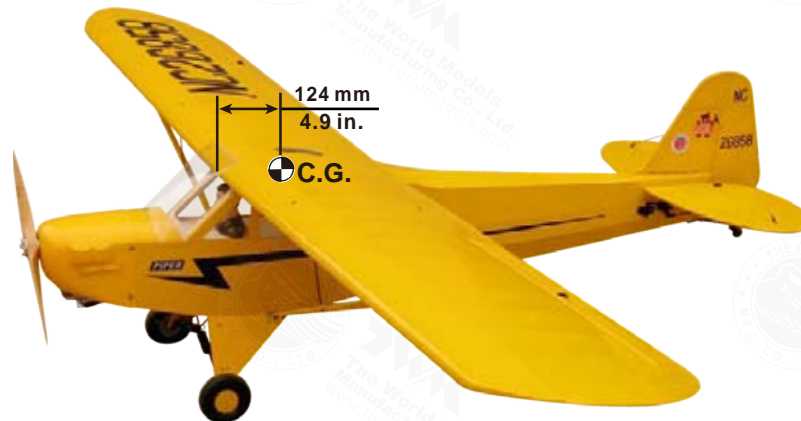
Adjust the control throws as shown in the diagram. These throws are good for general flying. You can adjust according to your personal preference.



25 C.G.

The ideal C.G. position is 124mm (4.9in.) 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.

If you are converting this model to electric, please move the C.G. forward 10% of current C.G. distance from leading edge to compensate for weight of fuel.



<http://www.theworldmodels.com/para/instruction/instructionManuals.php>

! Warning!

Important Safety Precautions

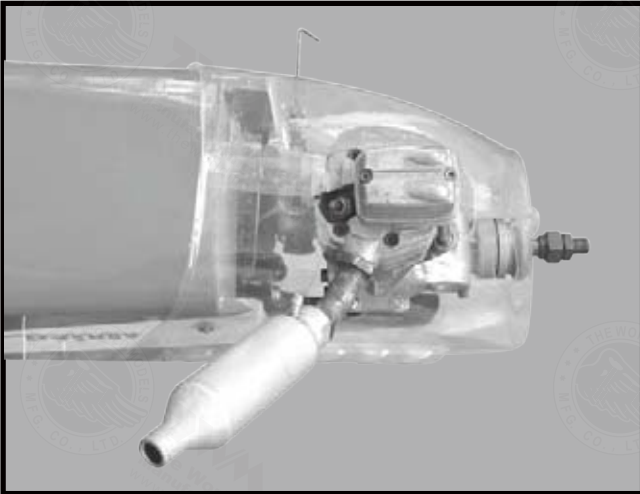
- # First time flyer should never fly by himself / herself. Assistance from experienced flyer is absolutely necessary.
- # Pre-flight adjustment must be done before flying, it is very dangerous to fly a badly pre-adjusted aircraft.
- # **50CC PIPER CUB** is specially designed to be powered by **50c.c. gasoline** 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.

Usage of the transparent 3D template

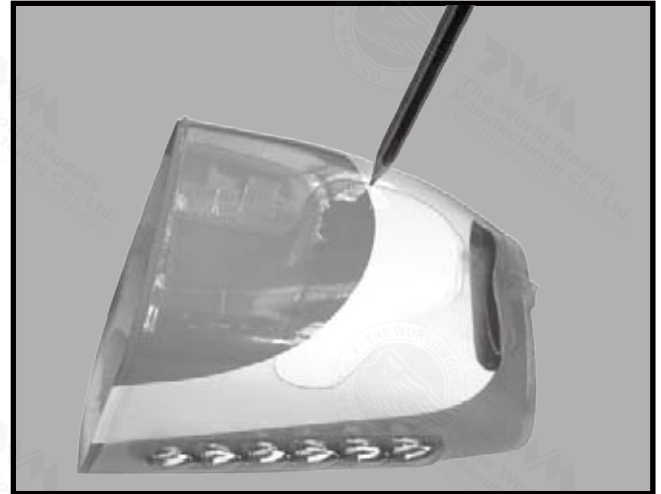


This transparent 3D template is used for position guidance of the actual cutting of the pre-painted cowling.

1



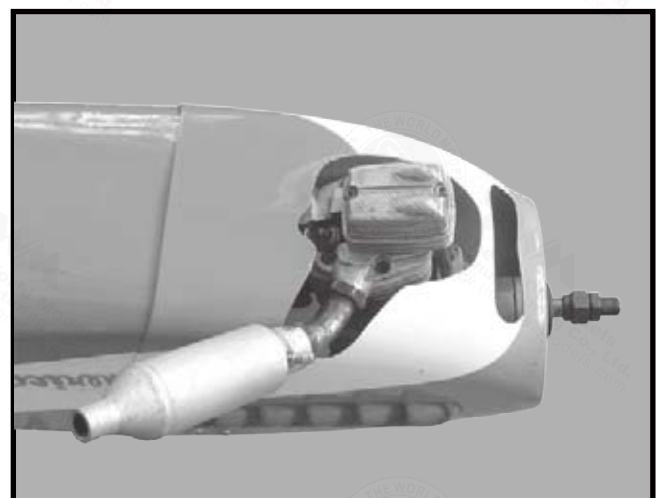
2



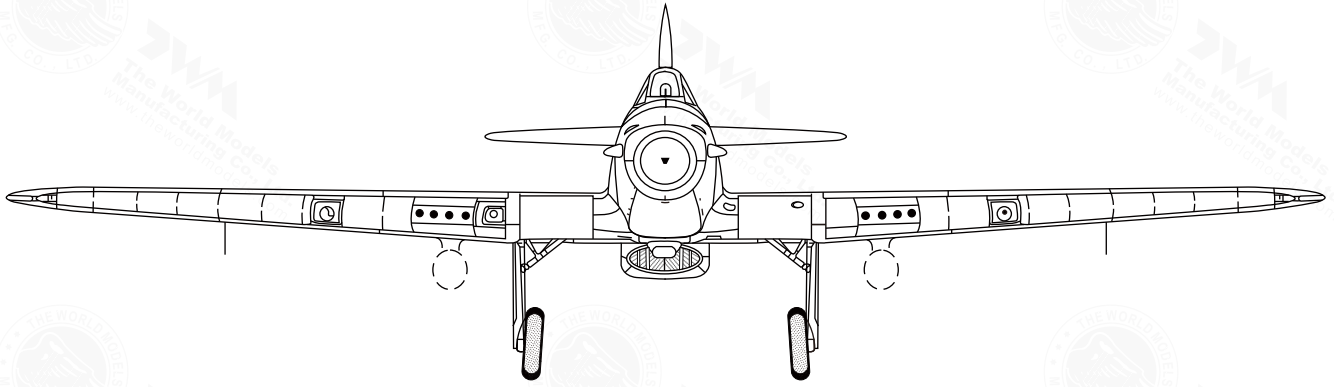
3



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)



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