

P-51 MUSTANG 46

(A055S)



0.46 cu. in. displacement 2-stroke

Requires: 5-channel radio w/ 5 standard servos

Specifications

Wing Span	57.5 in / 1460 mm
Wing Area	585 sq in / 37.4 sq dm
Flying Weight	6 lbs / 2.7 kg
Fuselage Length	49.6 in / 1260 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

P-51 MUSTANG 46

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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



Ensure smooth non-binding
movement while assembling.



Assemble left and right
sides the same way.



Cut off shaded portion.



Peel off shaded portion
covering film.



Must be purchased separately !



Drill holes with the specified
diameter (here: 3mm) .



Pierce the shaded portion
covering film.



Pay close attention here!



Warning!

Do not overlook this symbol !



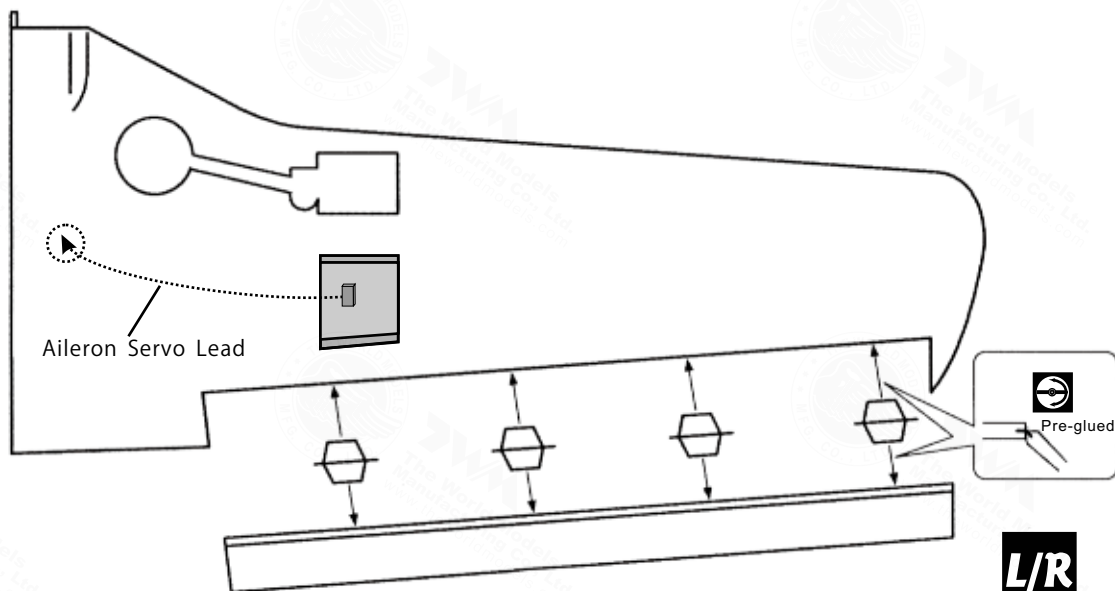
Parts List

1. MAIN WING -- 1 pair
2. MEDIUM ELECTRIC RETRACT LG4400002 -- 1 pair
180mm Y-CORD KW0021800 -- 1 pc.
3. MAIN LANDING GEAR COVER -- 1 set
4. WING JOINER 9x32.8x95mm -- 1 pc.
5. SCREW PWA2.3x8mm -- 8 pcs
BALSA 8x18x21mm (For Aileron Servo) -- 4 pcs
PLYWOOD 2x55x85mm (For Aileron Servo) -- 1 pc.
6. SCREW PB2x14mm -- 4 pcs
SCREW PB2x10mm -- 2 pcs
FUEL TUBE Ø6x5mm -- 4 pcs
TRI-HORN M3x14mm (S) PL4111221 -- 2 sets
STRAPER PL4112102 -- 2 pcs
CLEVIS PL4112103 -- 2 pcs
PUSHROD Ø1.8x90mm w/ Threads (For Aileron Servo) -- 2 pcs
7. STABILIZER & ELEVATOR -- 1 set
FUSELAGE -- 1 pc.
8. VERTICAL FIN & RUDDER -- 1 set
9. TAIL LANDING GEAR PL7100001 -- 1 set
WHEEL Ø25mm -- 1 pc.
COLLAR Ø2.1mm w/ set screw -- 1 set
SCREW PA3x12mm -- 2 pcs
SCREW PM2x10mm -- 1 pc.
ALUMINUM PLATE 0.5mm -- 1 pc.
M2 NUT -- 1 pc.
10. FUEL TANK 320cc PL1111320 -- 1 set
DOUBLE-SIDED TAPE 40x100mm - 1pc.
CABLE TIE (FOR FUEL TANK) 1.5x5x400mm - 1 pc.
11. ENGINE MOUNT PL5111050 -- 1 set
SOCKET HEAD SCREW M4x25mm -- 4 pcs
WASHER d4xD9mm -- 4 pcs
12. SCREW PM3.5x30mm -- 4 pcs
WASHER d3.5xD8mm -- 8 pcs
M3.5 NUT -- 8 pcs
SPINNER Ø82mm -- 1 set
13. COWLING -- 1 pc.
TRANSPARENT 3D TEMPLATE -- 1 pc.
SCREW PWA2.6x12mm -- 4 pcs
SILICON GROMMET d1.5xD6.5mm -- 4 pcs
14. LINKAGE CONNECTOR Ø2.1mm w/ set screw -- 1 set
15. FUEL TUBE Ø6x5mm -- 1 pc.
STRAPER PL4112102 -- 1 pc.
THROTTLE PUSHWIRE Ø1.2x430mm -- 1 pc.
PLASTIC TUBE d2xD3x300mm -- 1 pc.
17. SPONGE 60x70x97mm -- 1 pc.
PUSHROD CONNECTOR 4x9x20mm (For Elevator) -- 1 set
18. SCREW PB2x14mm -- 4 pcs
SCREW PB2x12mm -- 5 pcs
FUEL TUBE Ø6x5mm -- 3 pcs
CLEVIS PL4112103 -- 3 pcs
TRI-HORN M3x14mm (L) PL4111185 -- 3 sets
PUSHROD Ø1.8x505mm w/ Threads (For Elevator Servo) -- 2 pcs
PUSHROD Ø1.8x657mm w/ Threads (For Rudder Servo) -- 1 pc.
PUSHROD Ø1.8x100mm (For Elevator) -- 1 pc.
19. CANOPY -- 1 pc.
SCREW PWA2.3x8mm -- 4 pcs
SILICON GROMMET d1.5xD6.5mm -- 4 pcs
PILOT (PC001063A/ PC001063B) -- 1 pc.
DOUBLE-SIDED TAPE 8x800mm -- 1 pc.
20. SCREW HM4x30mm -- 2 pcs
WASHER d4xD15mm -- 2 pcs
21. ARI SCOOP -- 1 pc.
SCREW PM3x13mm -- 1 pc.
WASHER d3xD7mm -- 1 pc.
23. DECALS: A055DEC -- 1 set

● COVERING:--

TOUGHLON STL 251 SKY BLUE
TOUGHLON STL312 BRIGHT RED
TOUGHLON STL100 WHITE
TOUGHLON STL 201 BLACK
TOUGHLON STL 330 CADMIUM YELLOW
TOUGHLON STL 370 SILVER
TOUGHLON STL250 BLUE

1 Aileron



● Bottom View

2 Landing Gear

KA 3x14mm Screw



● 4.8V - 6.0V operation only,
higher voltage will burn
out the retract motor.

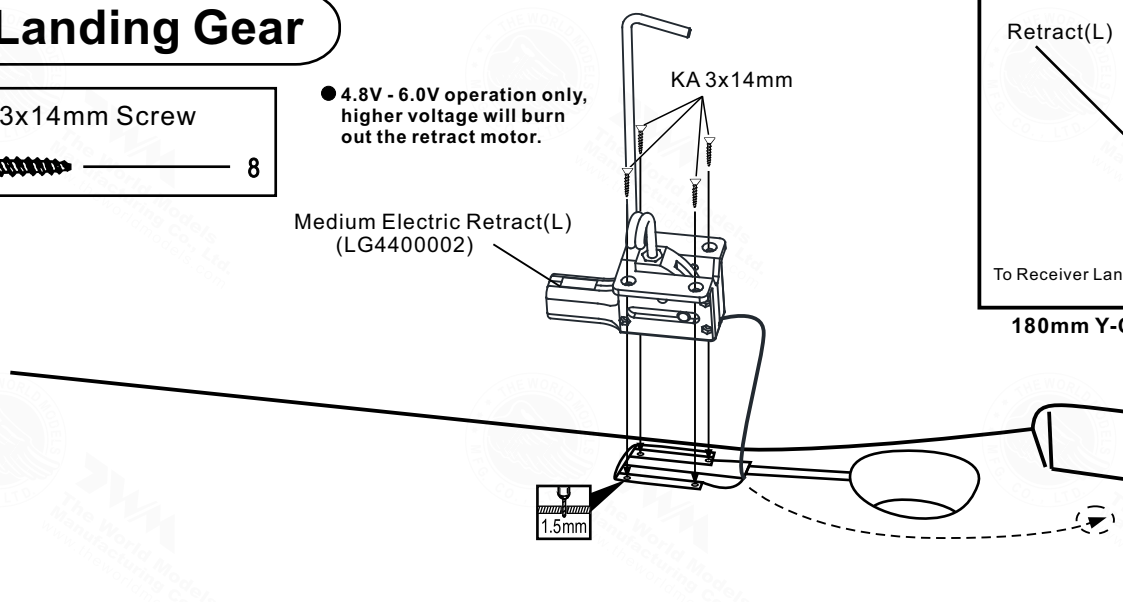
Medium Electric Retract(L)
(LG4400002)

KA 3x14mm

Retract(L) Retract(R)

To Receiver Landing Gear Channel

180mm Y-Cord Setting



● Factory Installed

3 Landing Gear

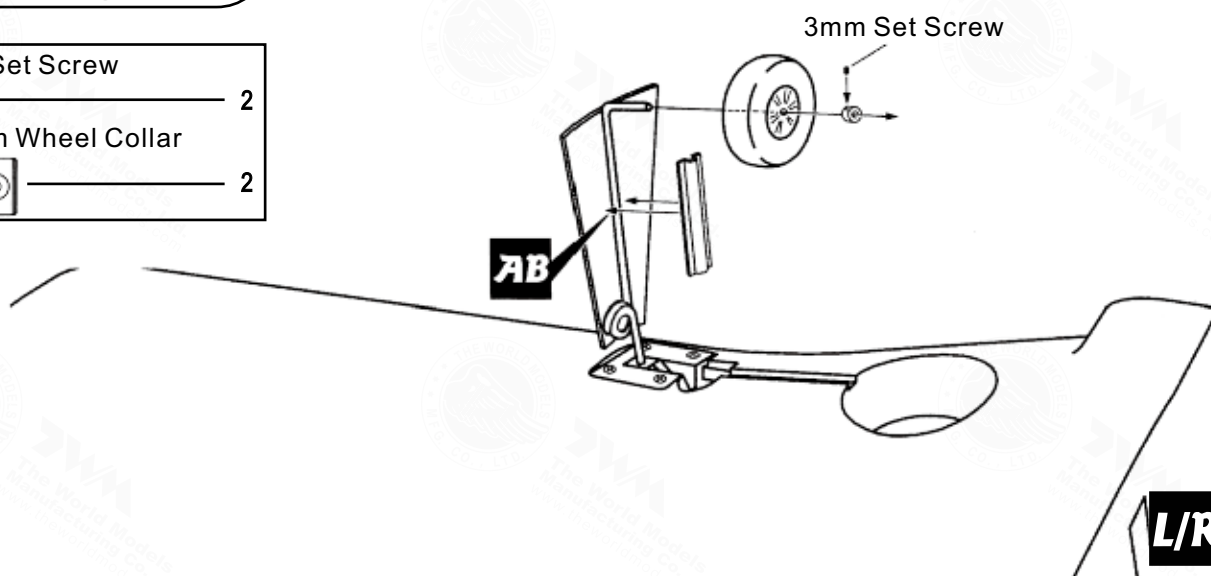
3mm Set Screw



4.1mm Wheel Collar

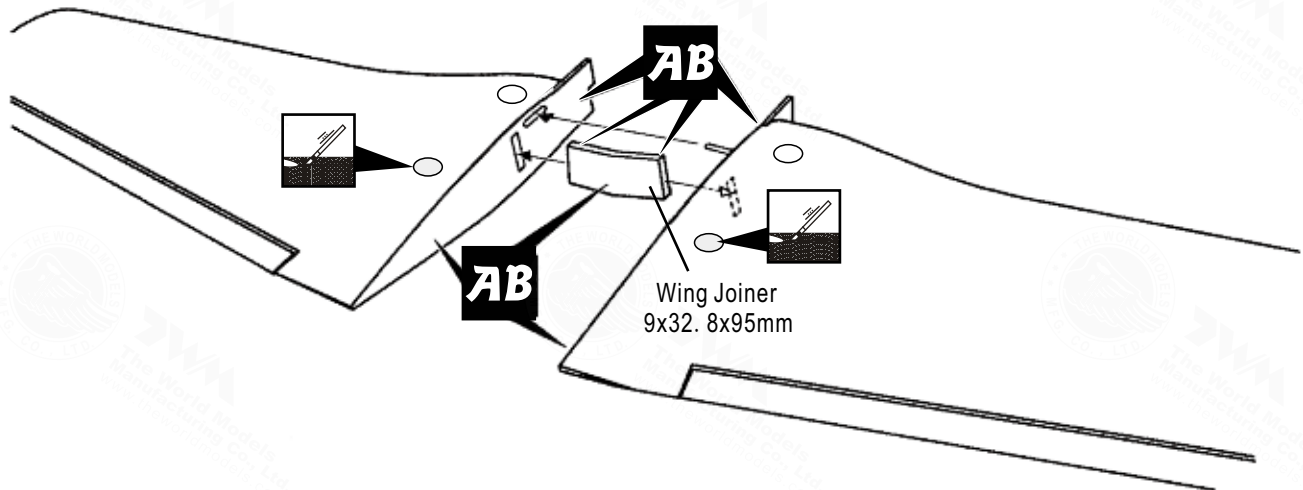


3mm Set Screw



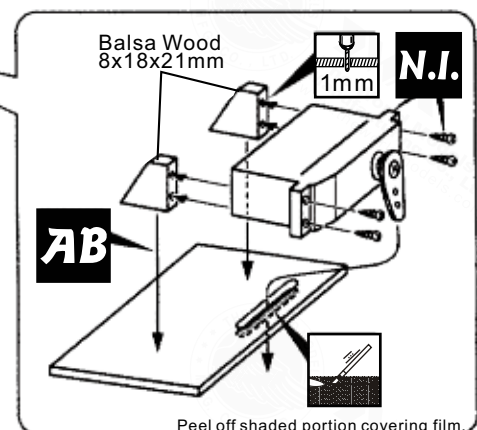
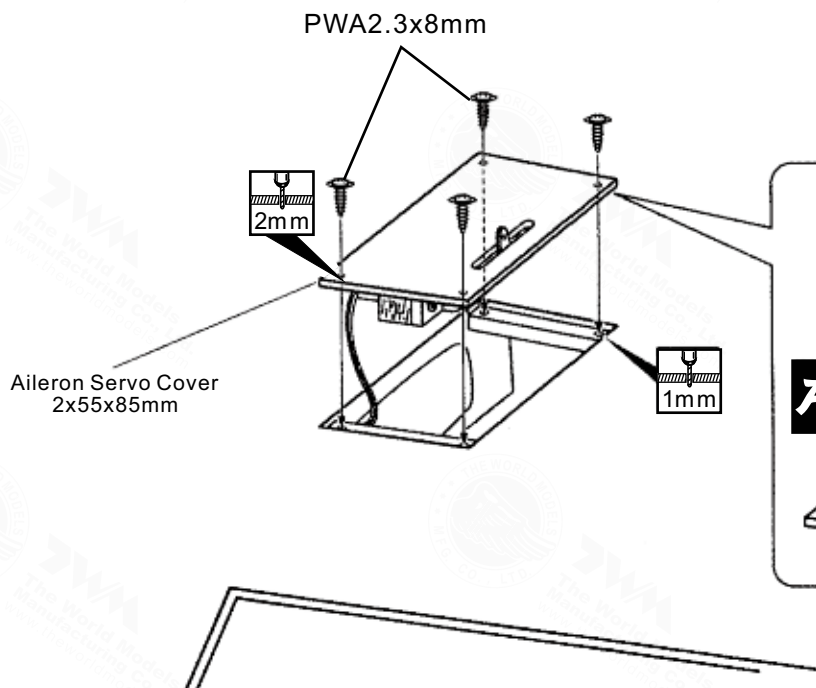
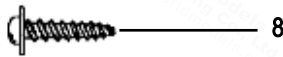
4 Main Wing

- 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.



5 Aileron Servo

PWA2.3x8mm Screw



L/R

6 Aileron Linkage

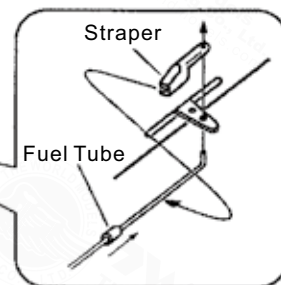
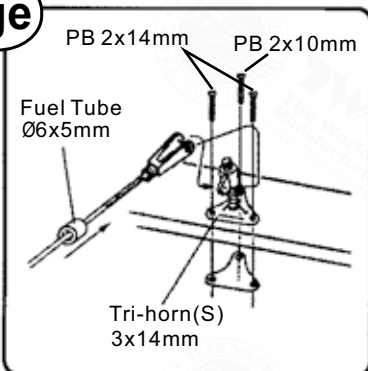
PB 2x14mm Screw

2

PB 2x10mm Screw

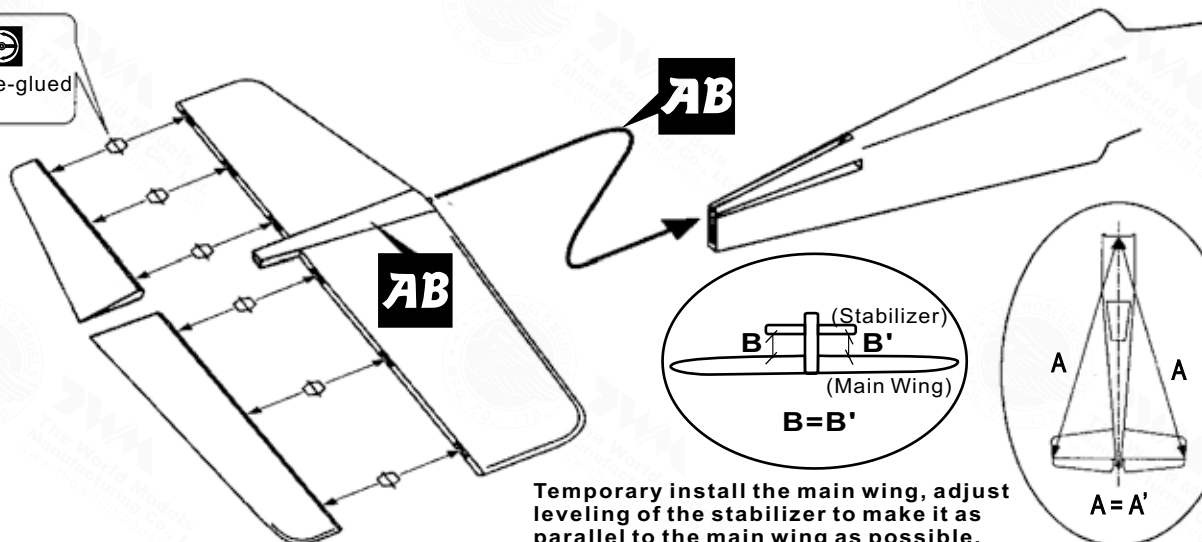
4

- \varnothing 1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.

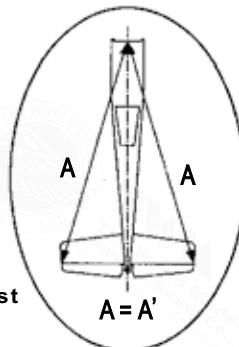


L/R

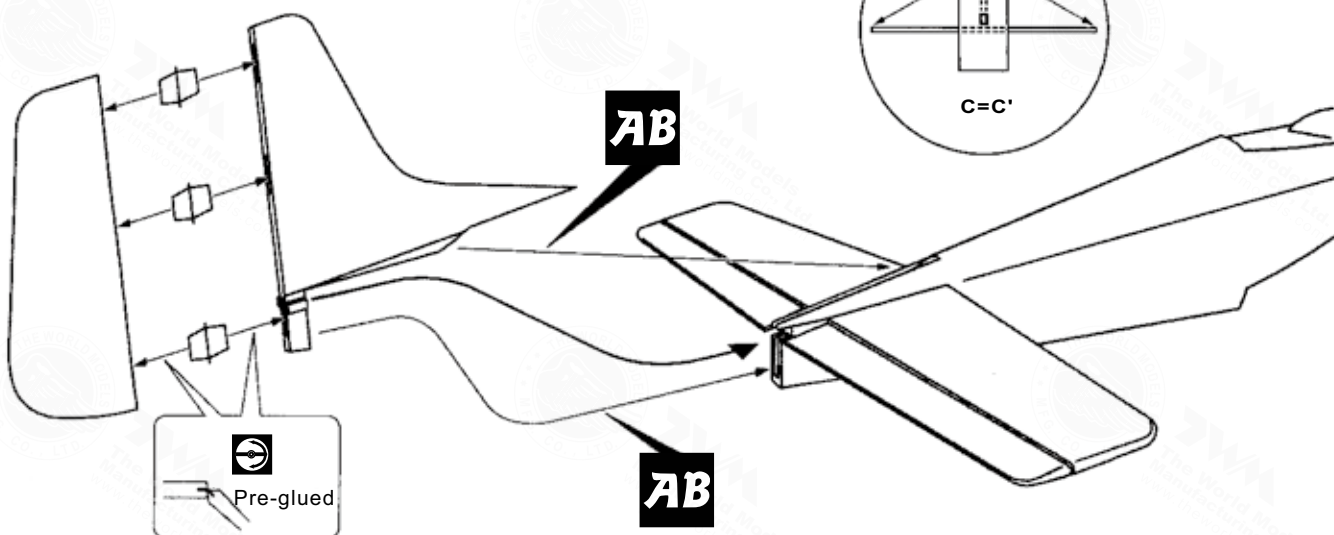
7 Stabilizer & Elevator



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

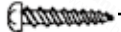


8 Vertical Fin & Rudder



9 Tail Landing Gear

PA 3x12mm Screw



2

PM 2x10mm Screw



1

2mm Nut



1

2. 1mm Collar



4

3mm set screw

2. 1mm Collar

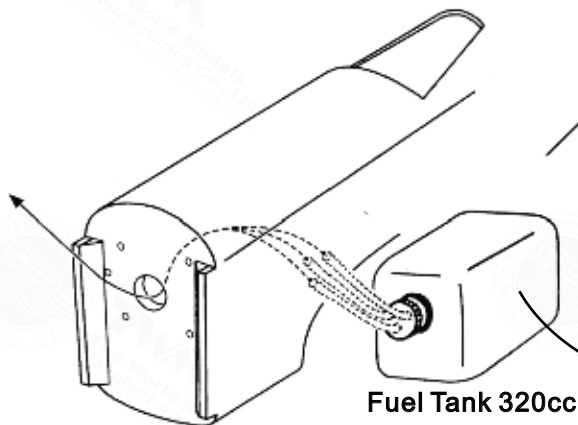
PA 3x12mm

M2mm NUT

PM 2x10mm



10 Fuel Tank



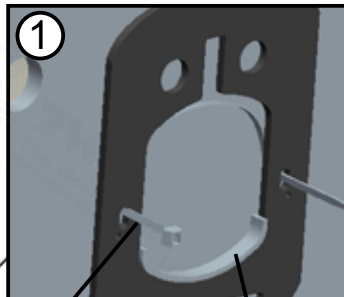
Fuel Tank 320cc

CableTie
1.5x5x400mm

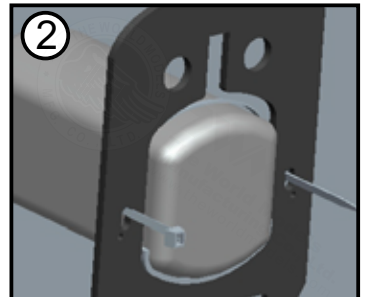
Double-sided Tape
4x100mm

Up

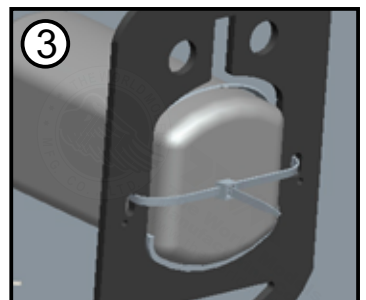
①



②



③



11 Engine Mount

M4x25mm Socket Head Screw



4

d4xD9mm Washer



4

Engine Mount
PL5111050

M4x25mm Socket Head Screw

d4xD9mm Washer

● Apply thread locker to screws.

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

12 Engine

PM 3.5x30mm Screw

4

3.5mm Washer

8

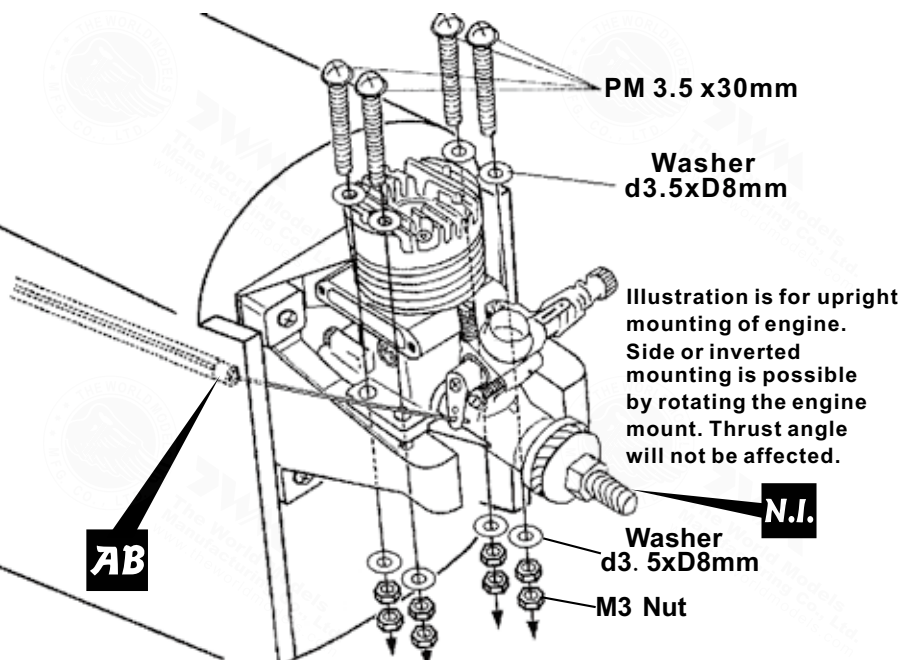
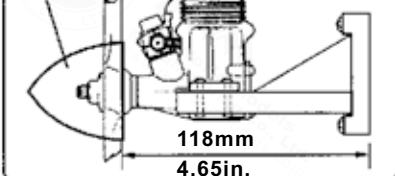
3.5mm Nut

8

Install Engine position

Spinner

Ø82mm



13 Cowling

PWA2.6x12mm Screw

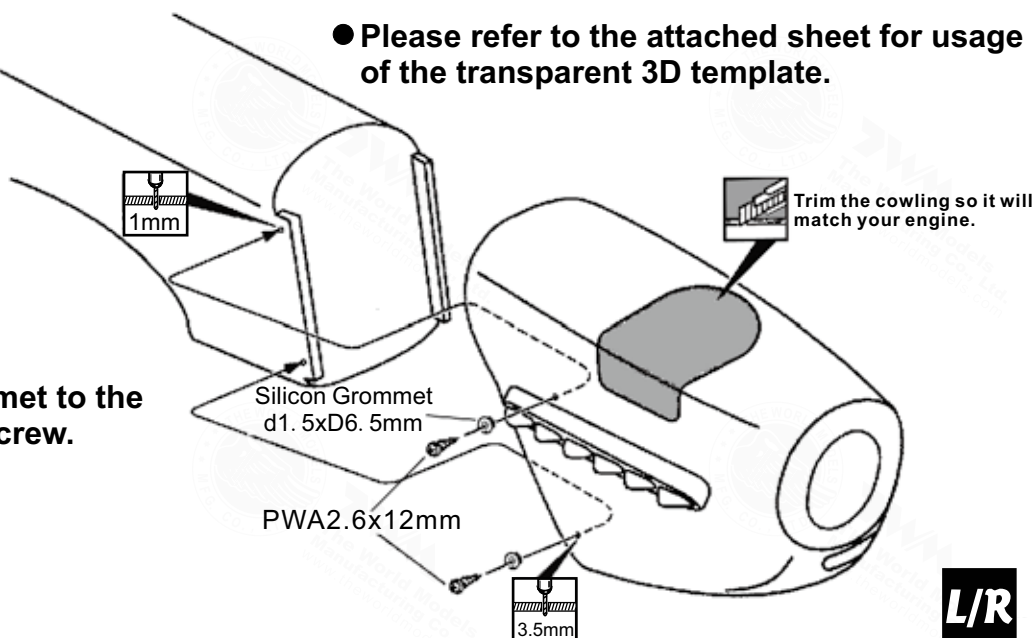
4

d1.5xD6.5mm Silicon Grommet

4

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

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



14 Servo Set

3x3mm Set Screw

1

Linkage Connector

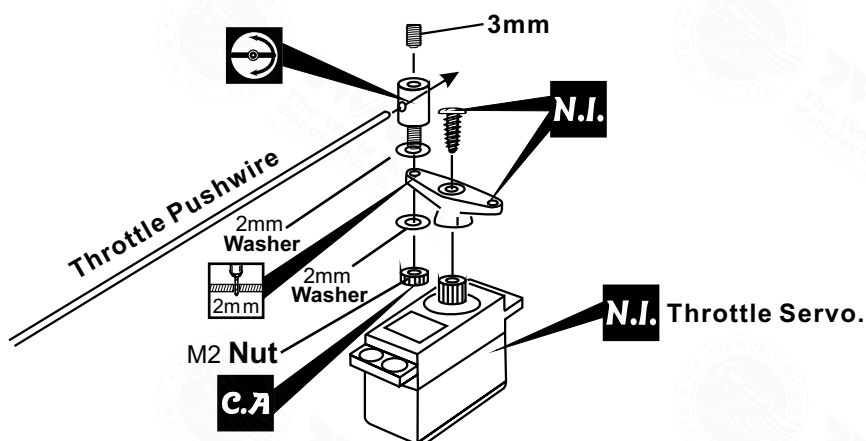
1

M2 Nut

1

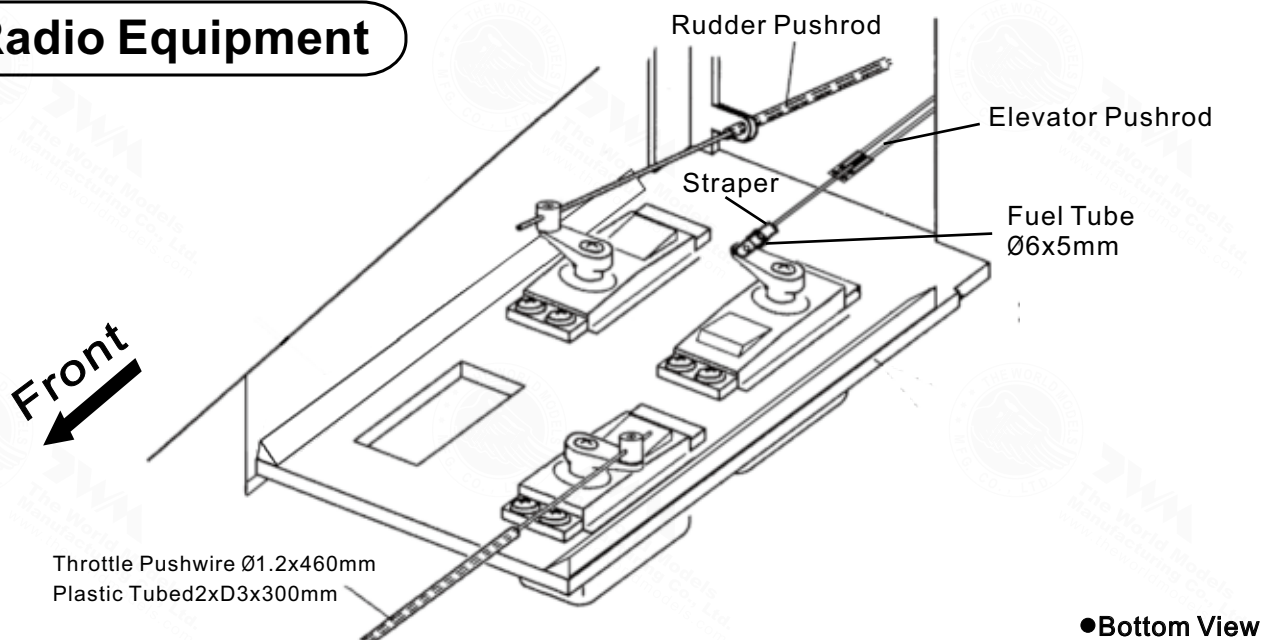
2mm Washer

2



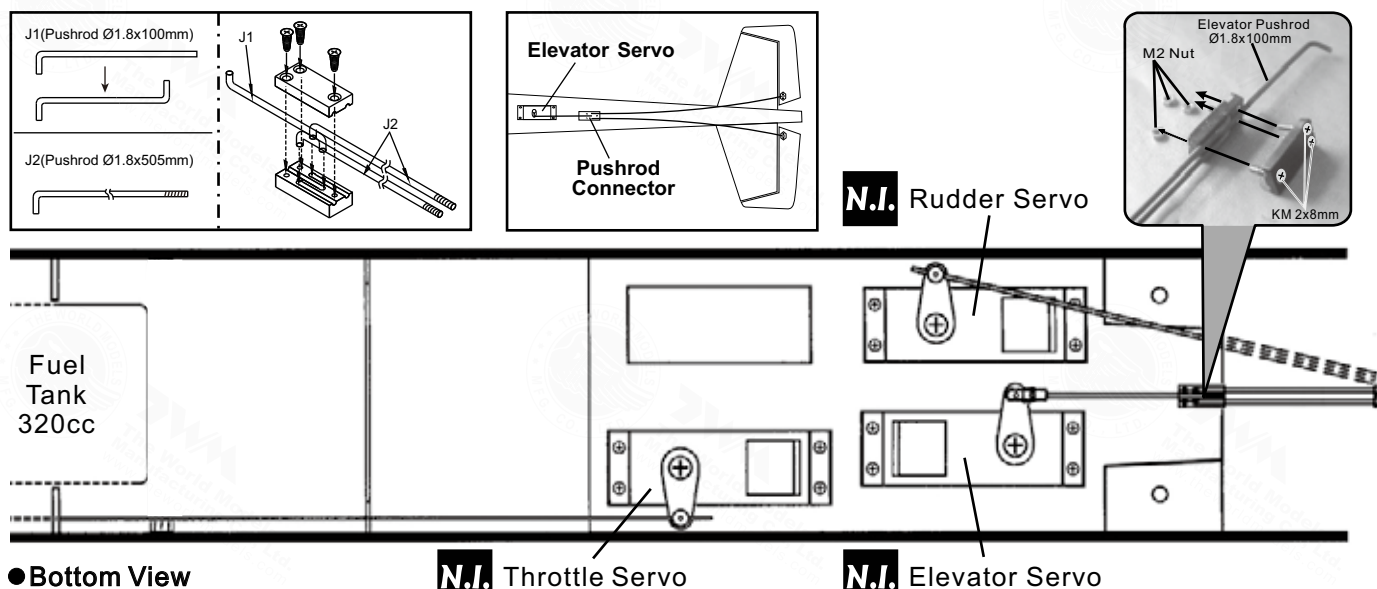
Please refer to the attached sheet for linkage connector installation.

15 Radio Equipment



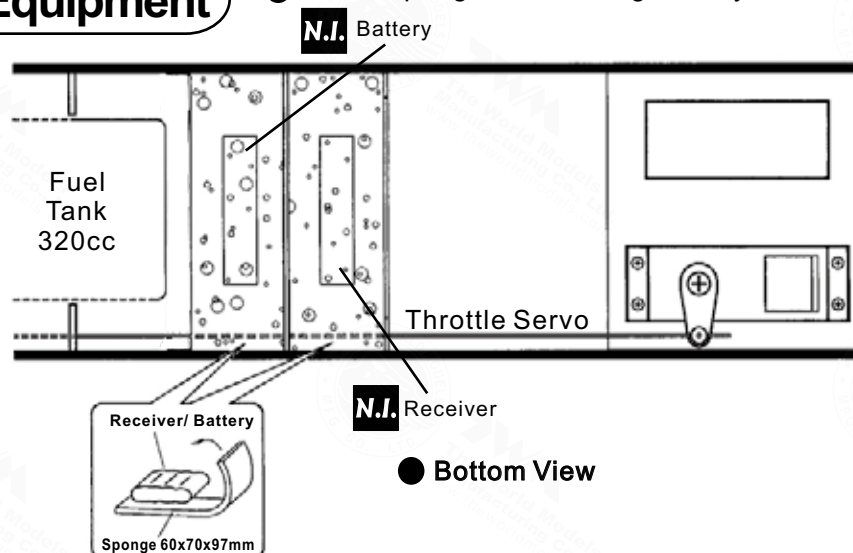
16 Radio Equipment

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



17 Radio Equipment

- Install Sponge for inserting Battery and Receiver.



18 Linkage

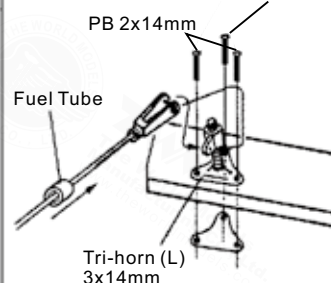
PB 2x12mm Screw



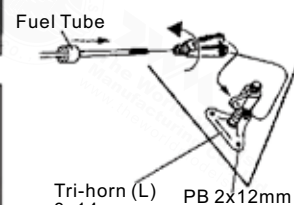
PB 2x14mm Screw



Elevator Tri-horn



Rudder Tri-horn



● Ø 1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.

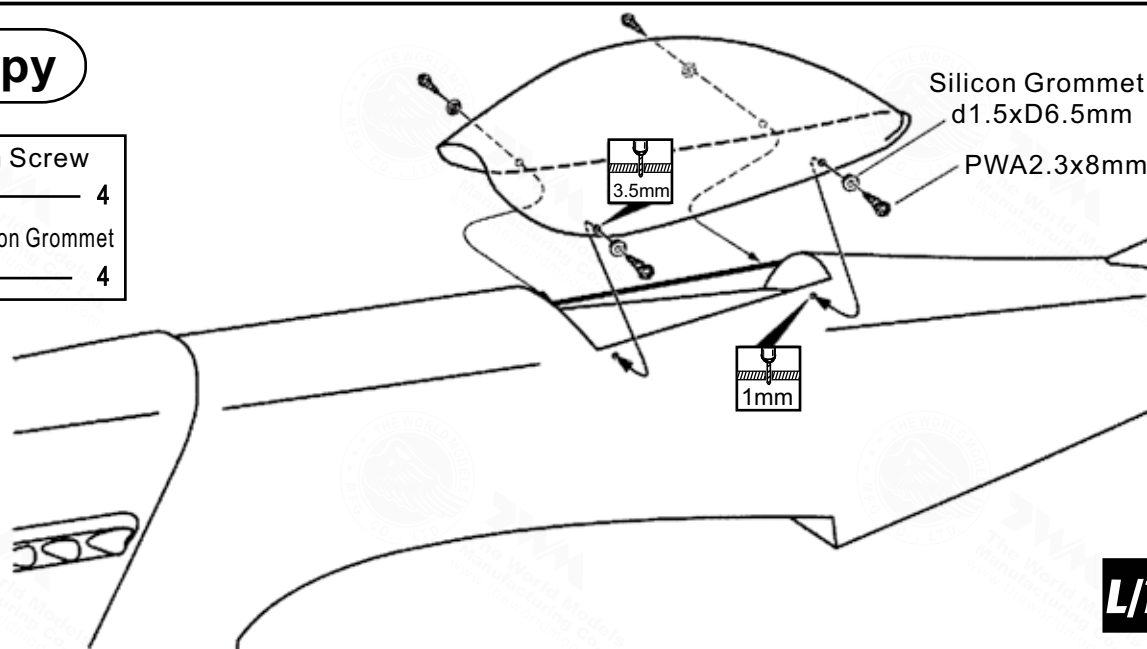
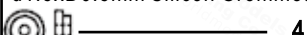
● Bottom View

19 Canopy

PWA2.3x8mm Screw



d1.5xD6.5mm Silicon Grommet

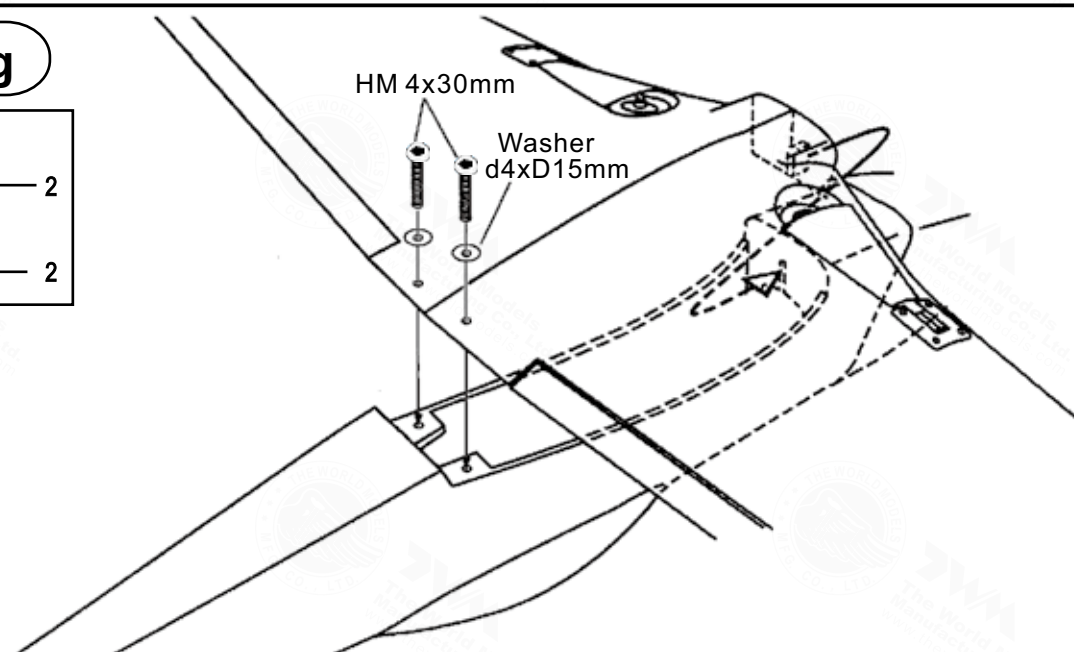


20 Main Wing

HM 4x30mm Screw



d4xD15mm Washer



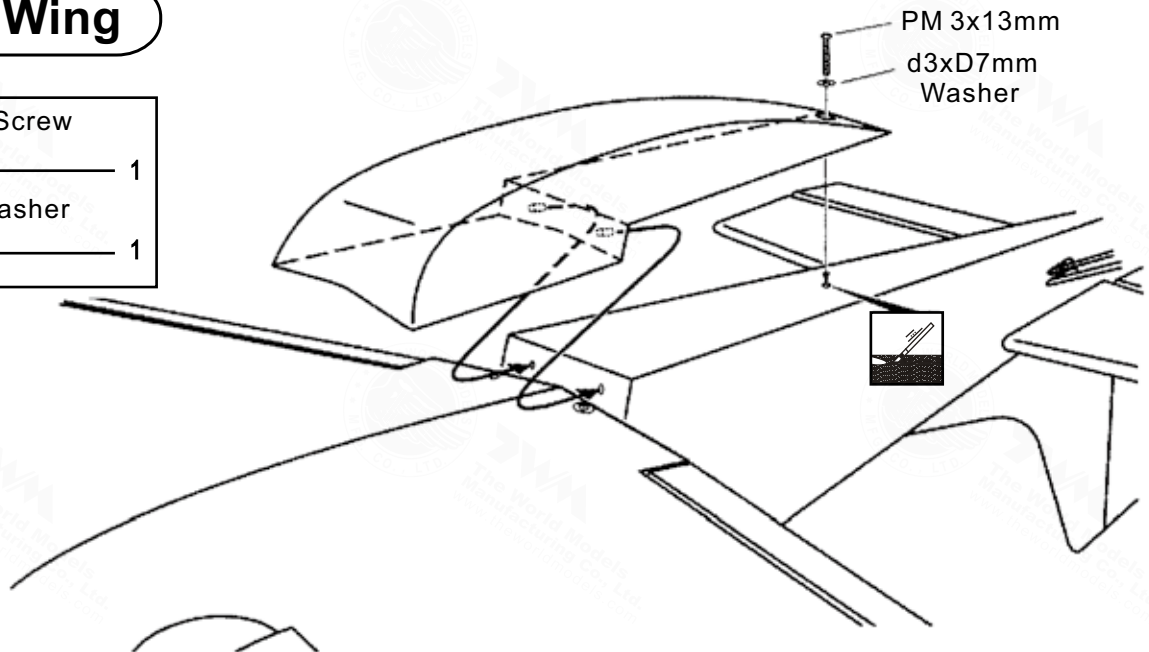
21 Main Wing

PM 3x13 mm Screw

1

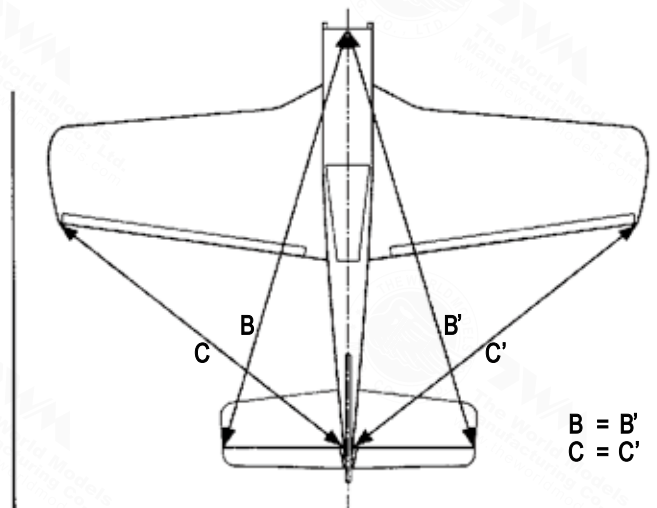
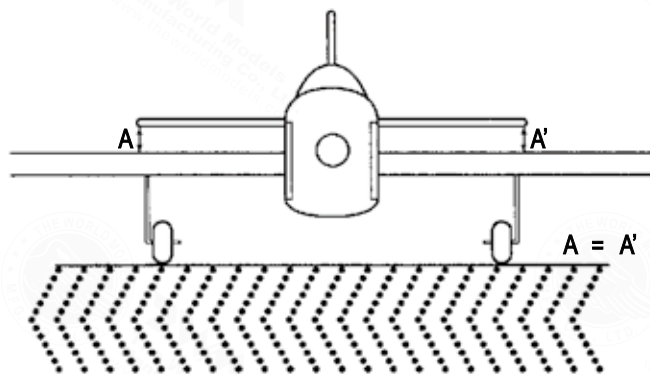
d3xD7mm Washer

1



22 Wing Setting

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

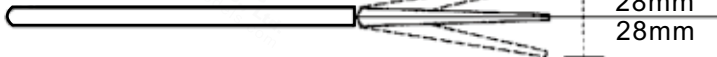


23 Control Throws

Elevator



Rudder



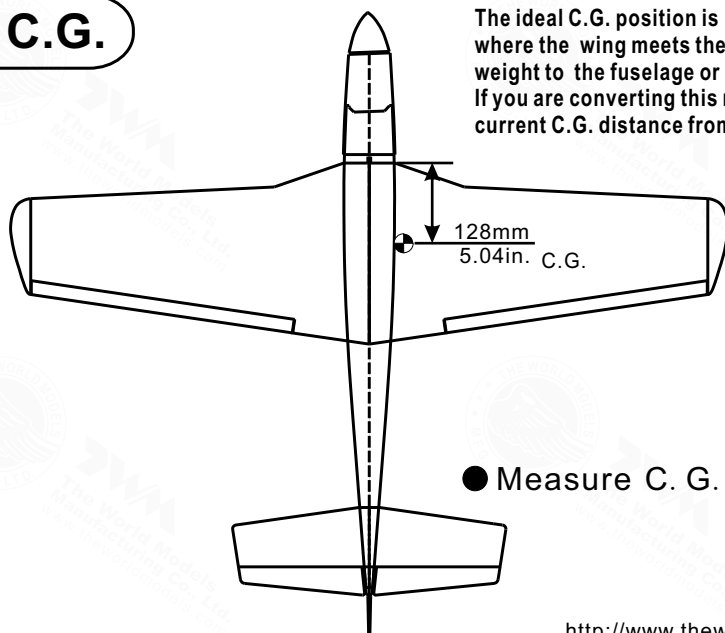
Aileron



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

24 C.G.

The ideal C.G. position is 128mm (5.04 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. 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.



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

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

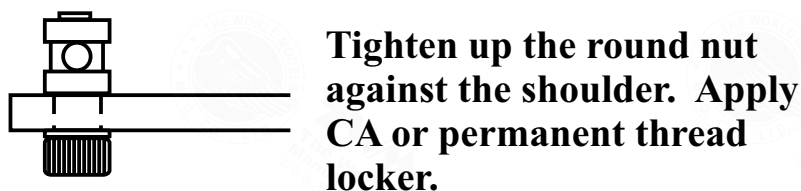
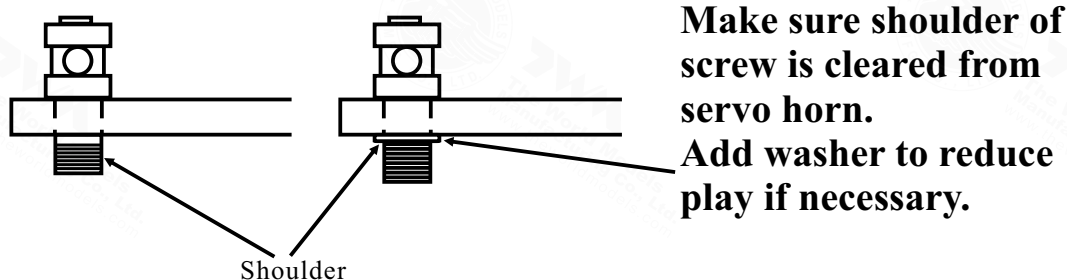
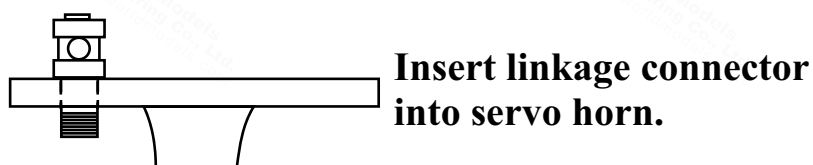
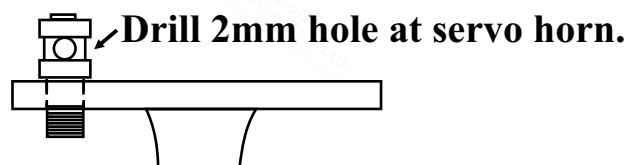
! Warning!

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.
- # **P-51 MUSTANG 46** is specially designed to be powered by **2C 0.46** engine, using a more powerful engine does not mean better performance. In fact, over powered engine may cause severe damage and injuries.
- # Make sure the air field is spacious, never fly the plane too close to people and never get too close to a running propeller.
- # If you find wrinkles on the covering as a result of weather changes, you can use hot iron to remove the wrinkles. Please begin with lower temperature setting and gradually raise the temperature until the wrinkles are gone. Too hot an iron may damage the covering. Don't use hot iron near the seams or edges, hot iron will melt the glue and shrink the covering at the same time, causing the seams to pull away.
- # Check and re-tighten up all factory assembled screws, use thread locker if necessary.

LINKAGE CONNECTOR

HW7111050 & HW7111060



After fastening the round nut, make sure that the linkage connector can rotate freely.

Product Registration Form (US Customers)

We would like to share with you any relevant information regarding your model, including product news and free upgrade parts when applicable. Please fill in the following and send to AirBorne Models, 4749-K, Bennett Drive, Livermore, CA 94551 USA.

1. Name: _____

2. Address: _____

3. Phone #: _____ e-mail: _____

4. Model: _____

Wing QC# _____ Fuselage QC# _____
(QC numbers are stamped on wing and fuselage)

5. Date of Purchase: _____

6. Store Name: _____

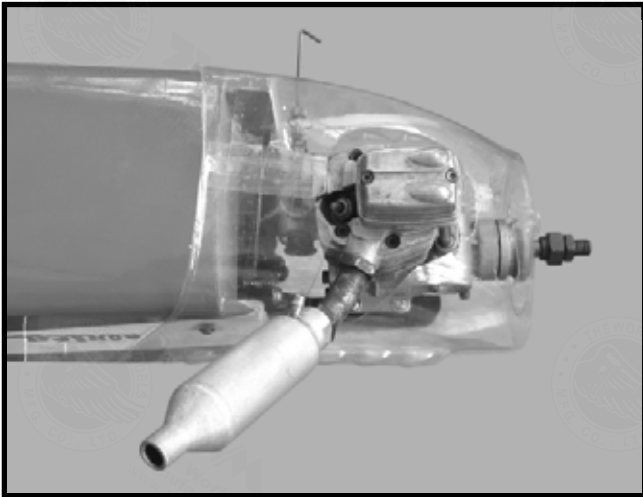
Please call AirBorne Models at 925 371 0922 for any assistance in filling this form. Thank you very much for purchasing our product.

Usage of the transparent 3D template

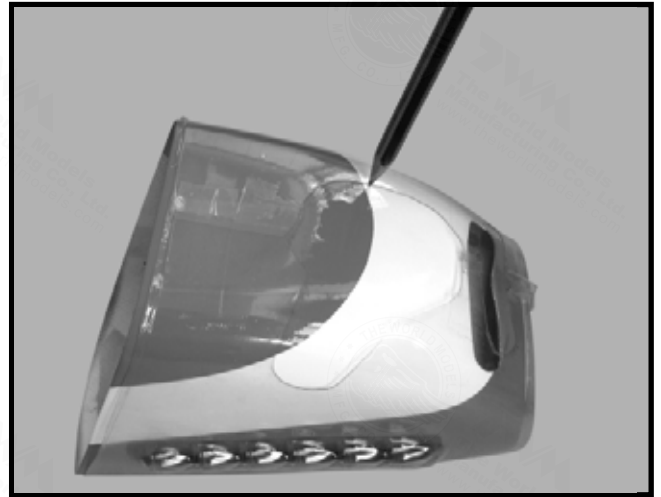


This transparent 3D template is used for position guidance of the actual cutting of the pre-painted cowling.

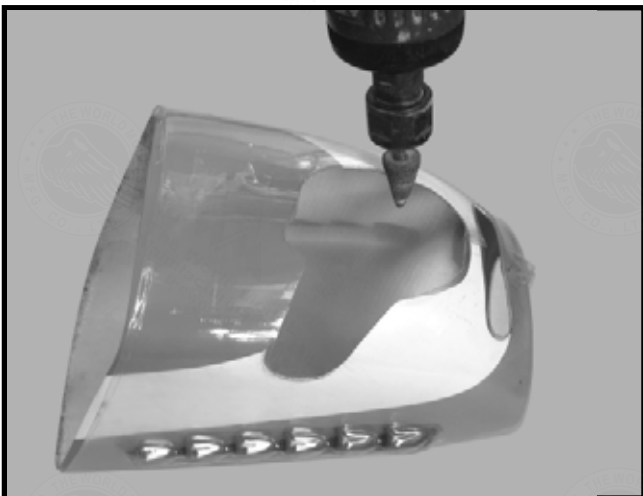
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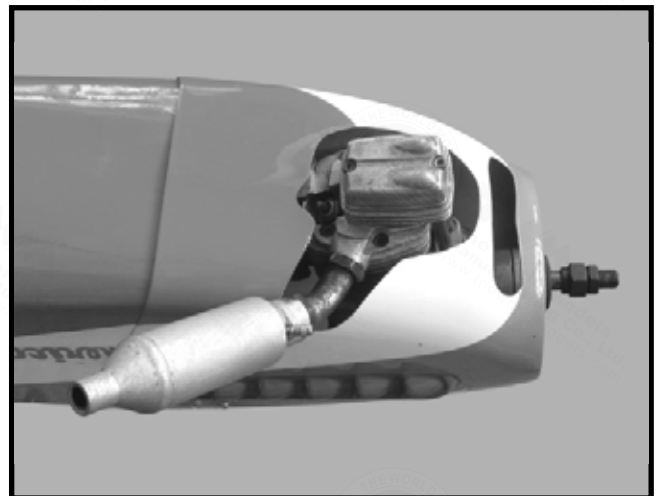
2



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.

Optional Parts

(ACCESSORIES)

180mm Extension

Code No.	Size	Package
----------	------	---------

KW0011800 180mm 1 set



180mm Y-Cord

Code No.	Size	Package
----------	------	---------

KW0021800 180mm 1 pc



Charge Receptacles

Code No.	Size	Package
----------	------	---------

KP0041300



Field Stand

Code No.	Size	Package
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MS9111430 600 x 240 x 310mm 1 pc



Fuel Filler

Code No.	Size	Package
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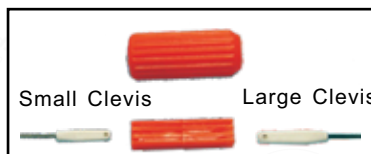
PL8110030 15 x 22 x 49mm 1 x 1 pc



Clevis Wrench

Code No.	Size	Package
----------	------	---------

PL8210010 1 set



Small Clevis Large Clevis

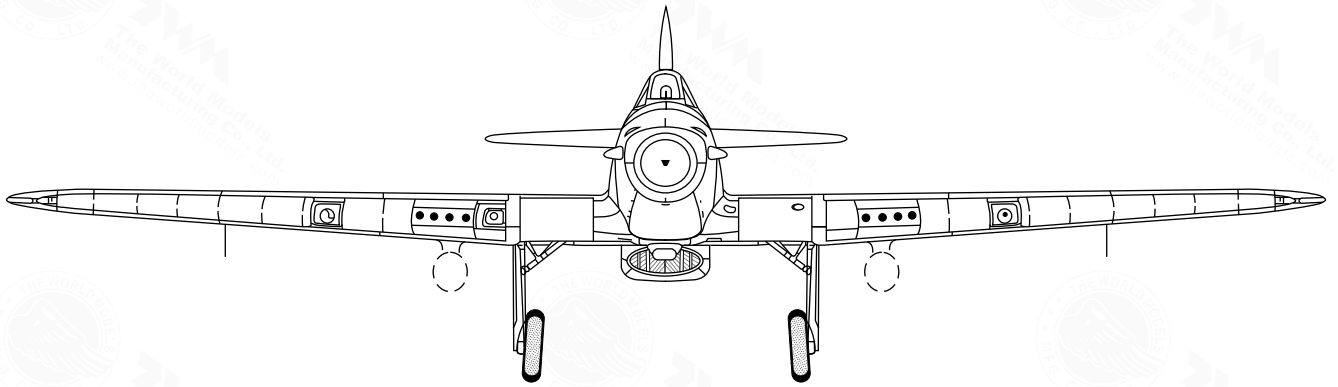
Special tool for clevis installation.
Suitable for standard and small (EP) clevis.

Standard Servo

Code No



Speed : 0.17 sec / 60° @4.8V
0.14 sec / 60° @6.0V
Torque : 3.2kg.cm / 44.8 oz - in @4.8V
4.1kg.cm / 57.4 oz - in @6.0V
Size : 40.6 x 20 x 37mm /
1.60 x 0.79 x 1.46 in
Weight : 39.4 g / 1.39 oz



Ducted Fan

Pattern

Warbirds

Funfly

Scale

Electric

Sports

Glider

Trainer

Boat

Accessories

Covering

(Lightex / Toughlon)



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