

CAP 232-46S



0.46 cu.in. displacement 2-stroke
0.70 cu.in. displacement 4-stroke
Requires : 4 - channels radio w/ 5 standard servos

Specifications

Wing Span	56.5 in / 1440mm
Wing Area	496 sq in / 32 sq dm
Flying Weight	5.5 lb / 2500g
Fuselage Length	50 in / 1270mm

* 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.**
 FACTORY PRE-FABRICATED
 ALMOST-READY-TO-FLY (ARF) SERIES
 MADE IN CHINA
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CAP 232-46S

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BEFORE YOU BEGIN

- 1** Read through the manual before you begin, so that you can 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 : -

AB

Apply epoxy glue.

C.AApply instant glue
(C.A.glue, super glue.)

Apply thread locker

N.I.

Must be purchased separately!

L/RAssemble left and right
sides the same way.Ensure smooth non-binding
movement while assembling.Peel off shaded portion
covering film.

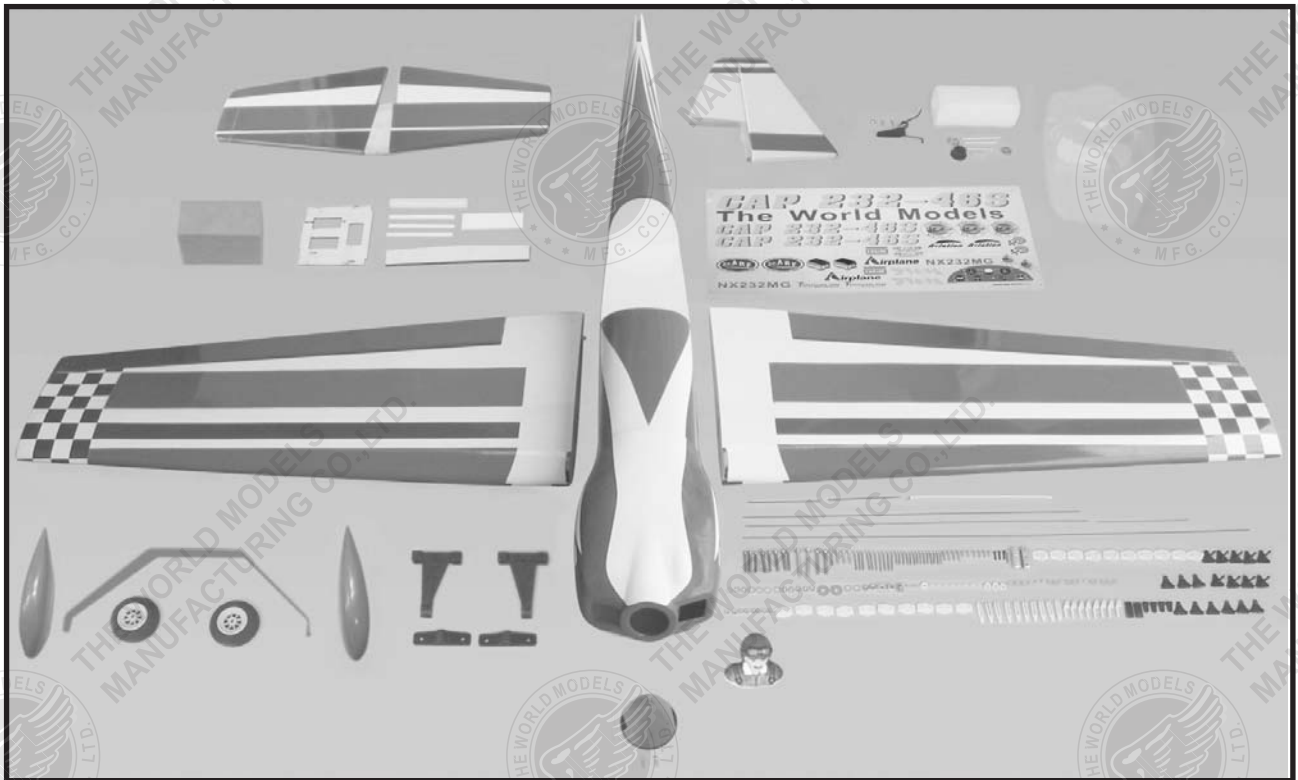
Cut off shaded portion.

Drill holes with the specified
diameter (here: 3mm).Pierce the shaded portion
covering film.

Pay close attention here!

**Warning!**

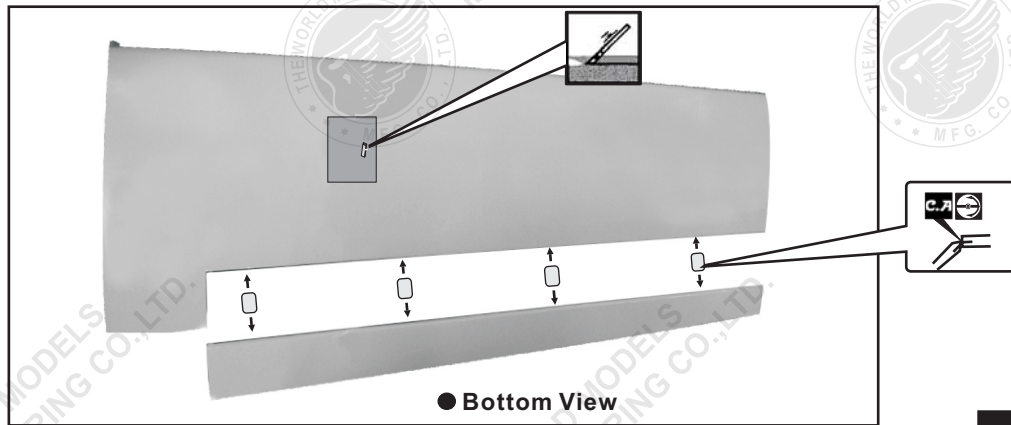
Do not overlook this symbol!



Parts List

1. MAIN WING--1 pair
 2. WING JOINER 6x30x203mm--1 pc.
 3. SCREW PM2x25mm--6 pcs
SCREW PWA2x8mm--8 pcs
CLEVIS--2 pcs
STRAPER--2 pcs
FUEL TUBE Ø6x5mm--4 pcs
TRI-HORN M3x14mm (S)--2 sets
PUSHROD Ø1. 8x105mm w/ Threads (For Aileron)--2 pcs
SERVO MOUNTING PANEL--1 pair
 4. STABILIZER & ELEVATOR--1 set
FUSELAGE--1 pc.
 5. VERTICAL FIN & RUDDER--1 set
 6. TAIL LANDING GEAR--1 set
SCREW PA3x12mm--2 pcs
COLLAR 2. 1mm w/ set screw--1 set
TAIL WHEEL Ø23mm--1 pc.
 7. PUSHROD Ø1. 8mmx720mm w/ Threads (For Rudder)--2 pcs
SCREW PM2x16mm--3 pcs
CLEVIS--1 pc.
FUEL TUBE Ø6x5mm--1 pc.
TRI-HORN M3x14mm (S)--1 set
 8. PUSHROD Ø1. 8x485mm w/ Threads (For Elevator)--2 pcs
SCREW PM2x16mm--6 pcs
CLEVIS--2 pcs
FUEL TUBE Ø6x5mm--2 pcs
TRI-HORN M3x14mm (S)--2 sets
 9. MAIN LANDING GEAR--1 pc.
COLLAR 4. 1mm w/ set screw--4 sets
SCREW PA2. 6x6mm--4 pcs
SOCKET HEAD SCREW M3x16mm--3 pcs
SCREW PM4x35mm--2 pcs
WASHER d4xD9mm--4 pcs
WASHER d3xD7mm--4 pcs
M4 NUT--2 pcs
MAIN WHEEL Ø58mm--2 pcs
PLATE 1mm --- 1 pair
WHEEL PANTS--1 pair
 10. FUEL TANK 260cc--1 set
BALSA 10x10x114mm (For Fuel Tank Position Fixing)--1 pc.
 11. ENGINE MOUNT PL5111050--1 set
SOCKET HEAD SCREW M4x25mm -- 4 pcs
WASHER d4xD9mm--4 pcs
 12. LINKAGE CONNECTOR Ø2. 1mm--1 set
 13. SCREW PM3x25mm--4 pcs
M3 NUT--8 pcs
WASHER d3xD7mm--8 pcs
THROTTLE PUSHROD Ø1. 2x312mm--1 pc.
PLASTIC TUBE d2xD3xD160mm--1 pc.
 14. BALSA 6x6x95. 5mm (For Fuselage Servo)--1 pc.
PUSHROD Ø1. 8x145mm (For Elevator)--1 pc.
FUEL TUBE Ø6x5mm--2 pcs
STRAPER--2 pcs
PUSHROD CONNECTOR--1 set
PLYWOOD 3x100. 5x110. 1mm (For Fuselage Servo)--1 pc.
SPONGE (For Radio Equipment)--1 pc.
 15. SCREW PM4x30mm--2 pcs
WASHER d4xD15mm--2 pcs
PLYWOOD 2x30x88mm (Wing Protection)--1 pc.
 16. COWLING--1pc.
TRANSPARENT 3D TEMPLATE--1 pc.
SCREW PWA2. 6x12mm--4 pcs
SILICON GROMMET d1. 5xD6. 5mm--4 pcs
SPINNER Ø62mm--1 pc.
 17. CANOPY--1 pc.
SCREW PWA2. 3x8mm--4 pcs
SILICON GROMMET d1. 5xD6. 5mm--4 pcs
PILOT (PC001085C)--1 pc.
 18. DECALS--1 pc.
- **COVERING:--**
- TOUGHLON STL 100 WHITE**
TOUGHLON STL 240 GREEN
TOUGHLON STL 312 BRIGHT RED
TOUGHLON STL 204 CREAM
TOUGHLON STL 412 CHECKER (RED/WHT)

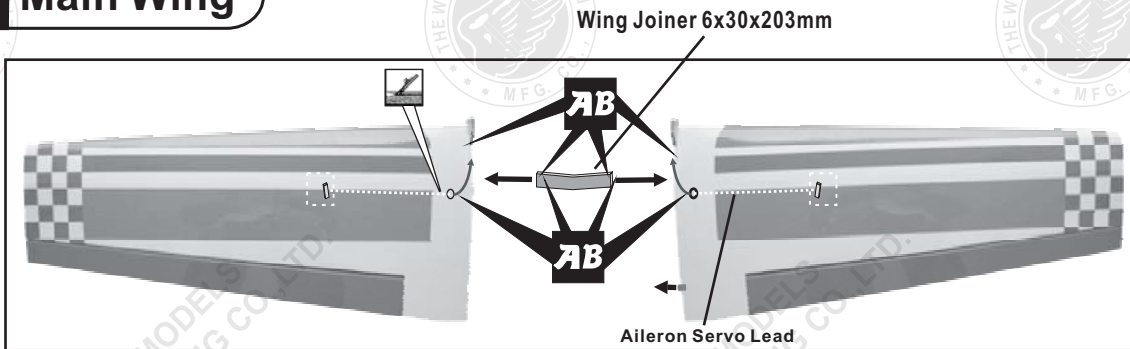
1 Main Wing



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

L/R

2 Main Wing



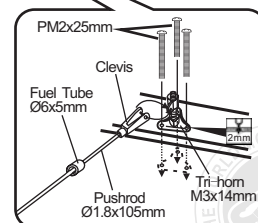
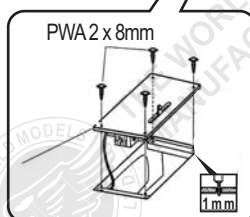
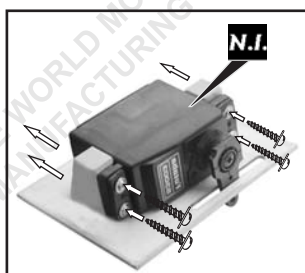
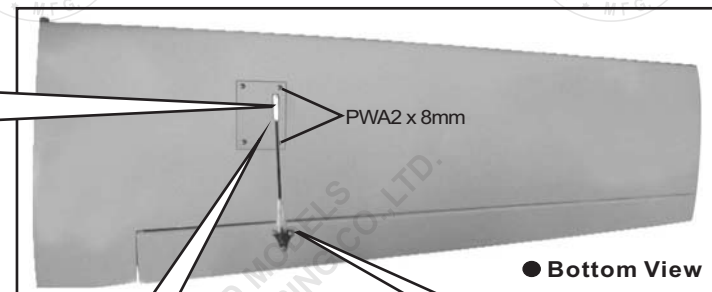
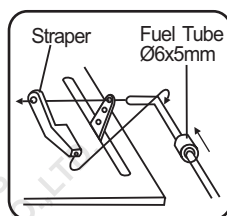
● Please dry fit wing joiner into left and right wing to make sure they fit with the proper dihedral angle, mark the wing joiner if necessary. Apply epoxy glue to both sides of all surfaces in contact. Use a stick to apply the glue to inner side of wing joiner sleeve, and apply the glue to wing joiner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

L/R

3 Aileron Servo

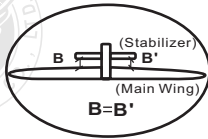
● Ø1mm pilot holes for The World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.

- PM2 x 25mm Screw 6
- PWA2 x 8mm Screw 8



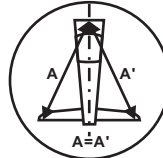
L/R

4 Stabilizer / Elevator

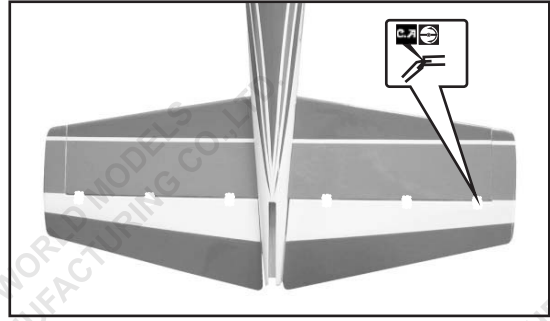
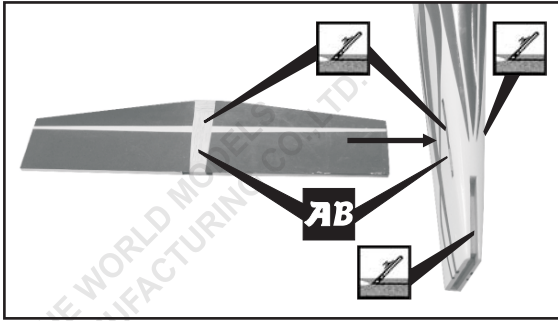


Temporary install the main wing, adjust leveling of the stabilizer to make it as parallel to the main wing as possible.

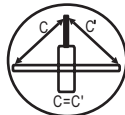
*Also refer to step 18 Wing Setting



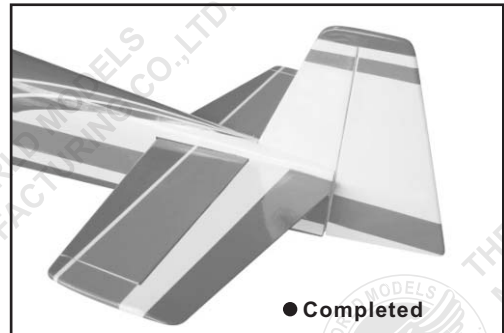
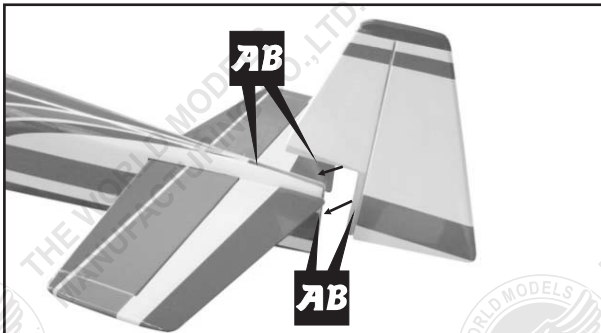
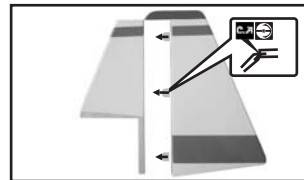
● Apply instant type CA glue to both sides of each hinge.



5 Vertical Fin & Rudder



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



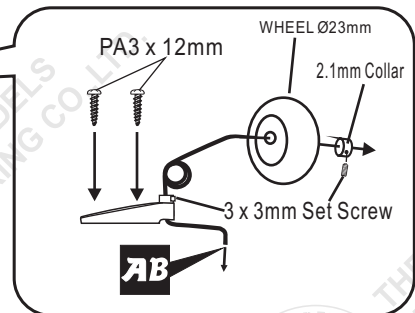
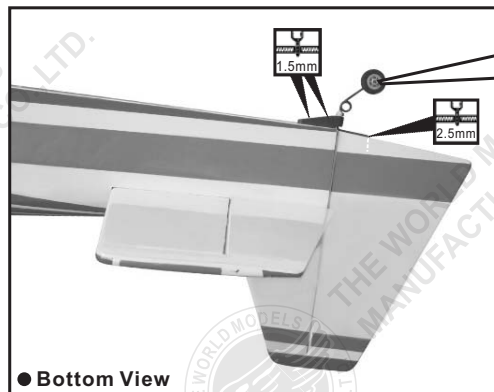
6 Tail Landing Gear

PA3 x 12mm Screw

2

2.1mm Collar

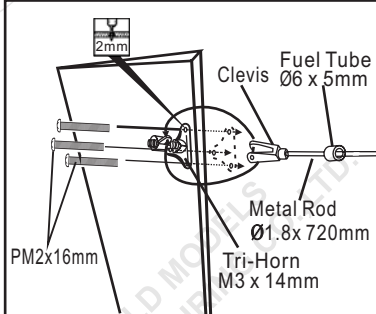
1



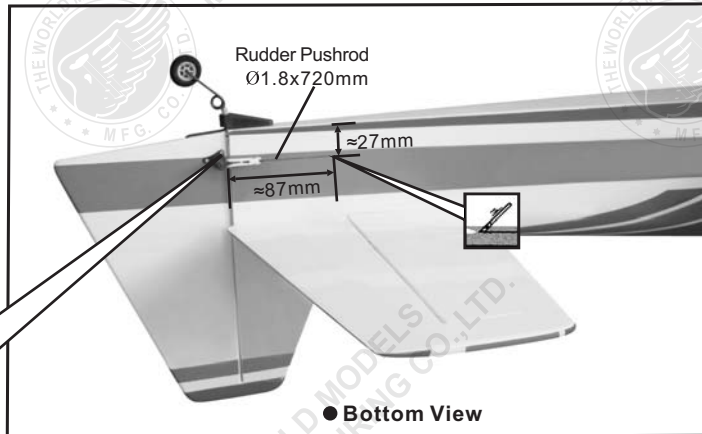
7 Rudder Pushrod

PM2x16mm Screw

3



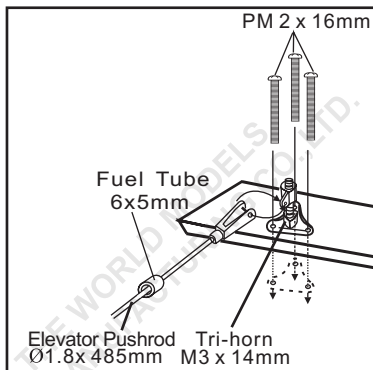
- Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at side of control surfaces.



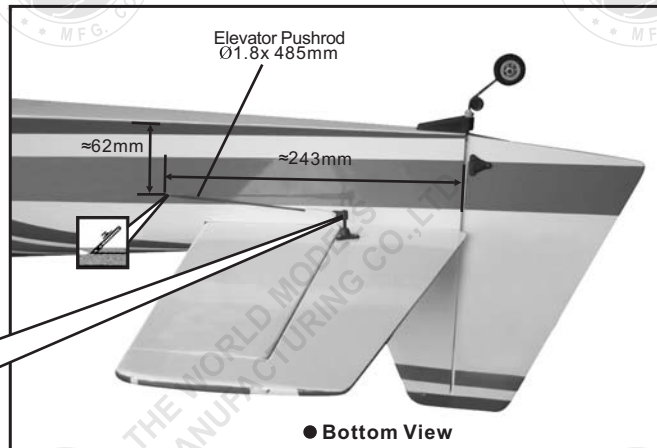
8 Elevator Pushrod

PM 2 x 16mm Screw

6



- 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

9 Main Landing Gear

M3x16mm Socket Head Screw

3

PM4x35mm Screw

2

PA2. 6x6mm Screw

4

d3xD7mm Washer

4

d4xD9mm Washer

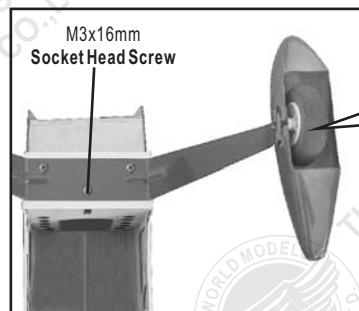
4

M4 Nut

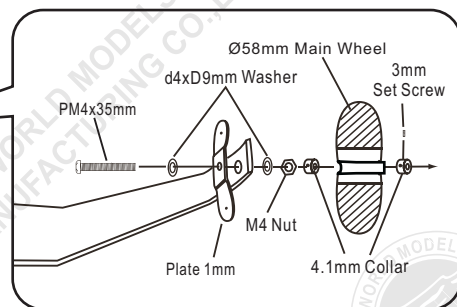
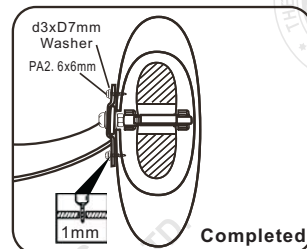
2

4.1mm Collar

4

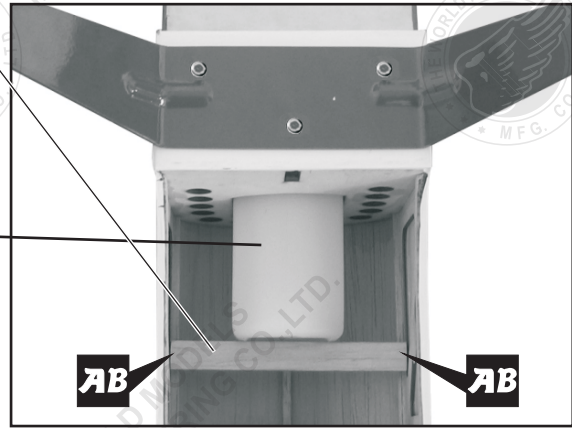
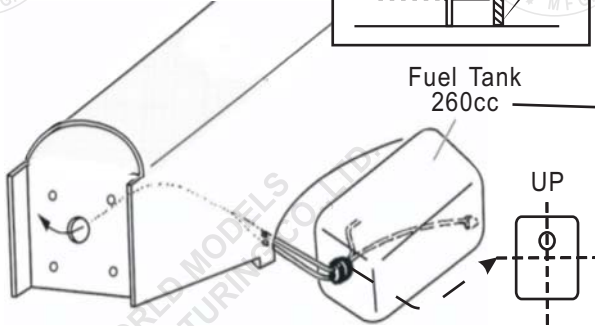
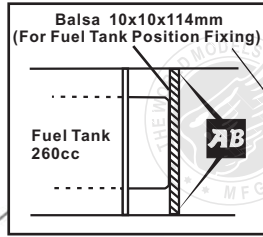


● Bottom View



L/R

10 Fuel Tank



● Bottom View

11 Engine Mount

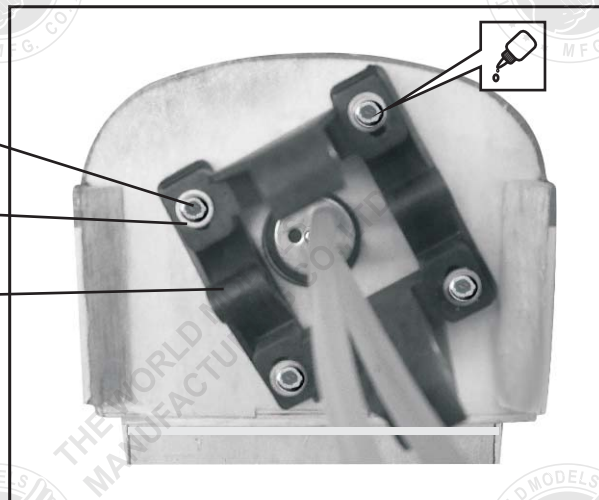
M4x25mm Socket Head Screw	4
d4xD9mm Washer	4

● Apply thread locker to screws.

M4x25mm Socket Head Screw

d4xD9mm Washer

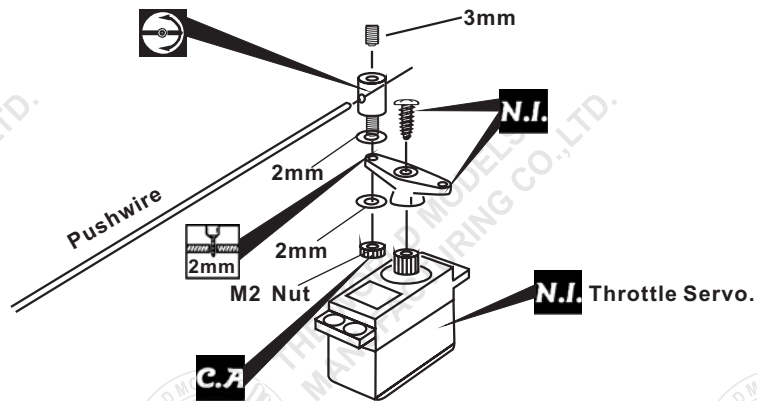
Engine Mount PL5111050



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

12 Servo Set

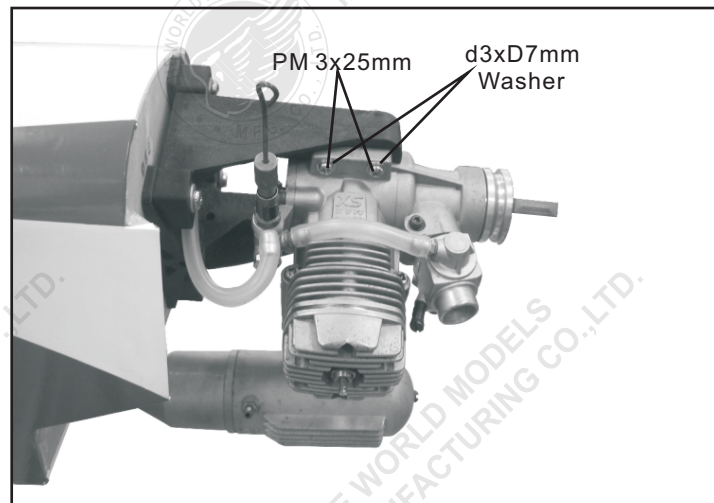
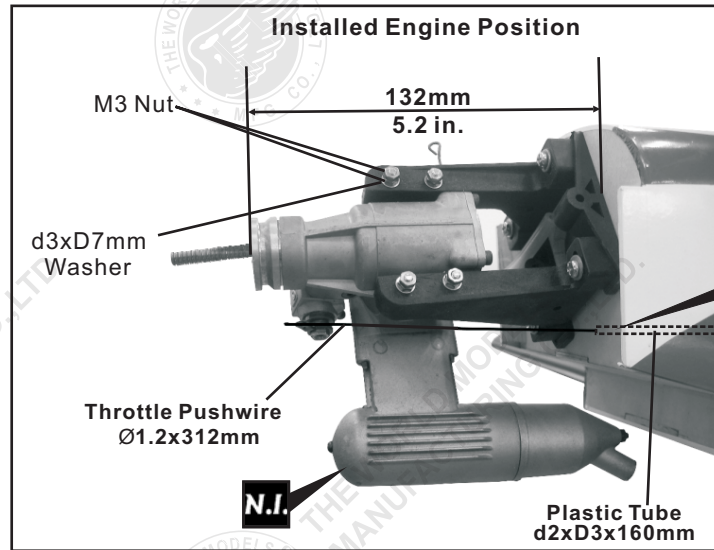
3 x 3mm Set Screw	1
Linkage Connector	1
M2 Nut	1
2mm Washer	2



! Please refer to attached sheet for linkage connector installation.

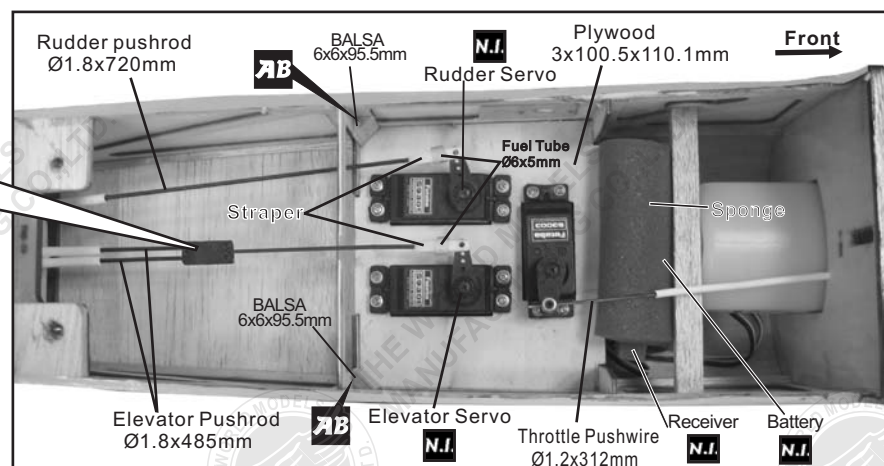
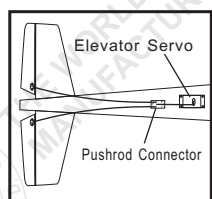
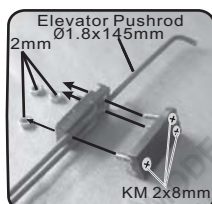
13 Engine

- PM 3x25mm Screw — 4
- M3 Nut — 8
- d3xD7mm Washer — 8



14 Radio Equipment

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

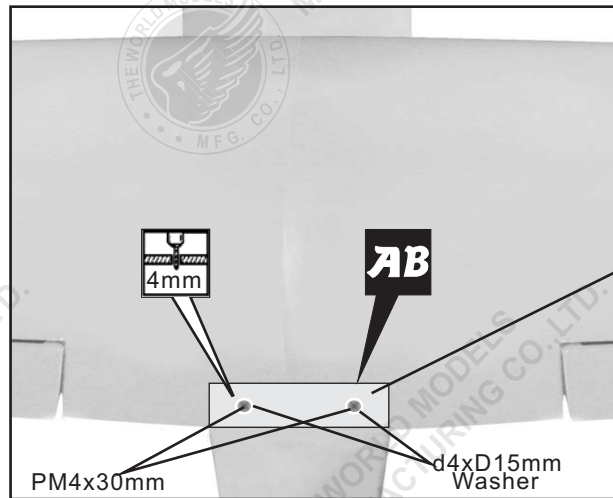


15 Main Wing

PM 4x30mm Screw



d4xD15mm Washer



Wing Protection
2x30x88mm

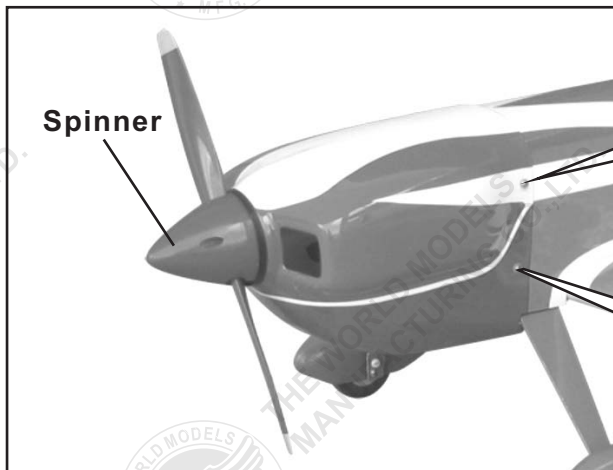
16 Cowling

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

PWA2.6x12mm Screw



d1.5 x D6.5 mm Silicon Grommet



Spinner

1mm

d1.5 x D6.5 mm
Silicon Grommet

PWA2.6 x 12mm

L/R

17 Canopy

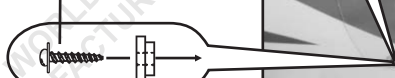
PWA2.3 x 8mm Screw



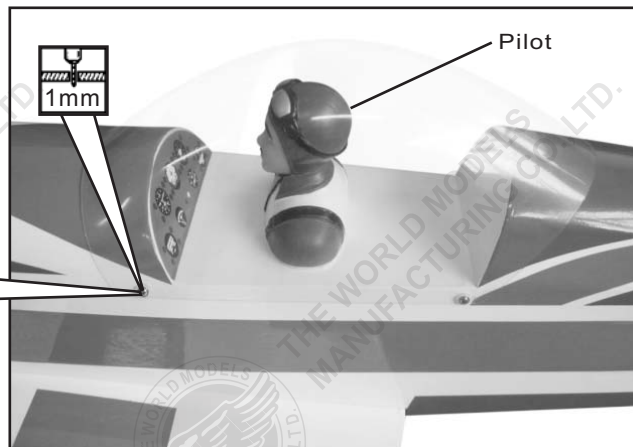
d1.5 x D6.5 mm Silicon Grommet



PWA2.3 x 8mm



d1.5 x D6.5 mm
Silicon Grommet



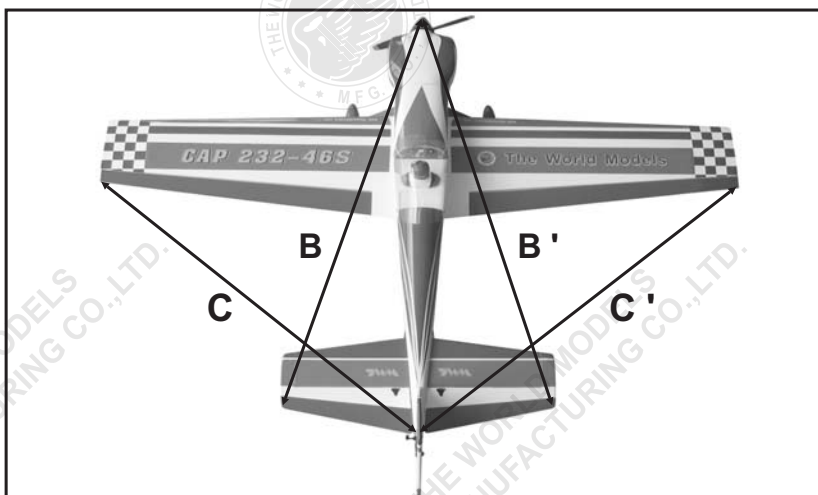
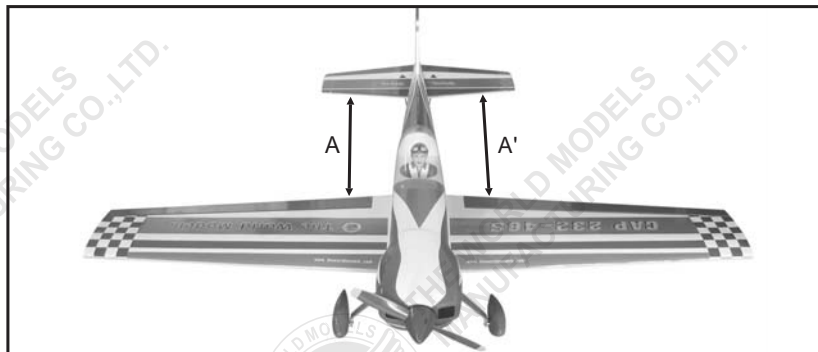
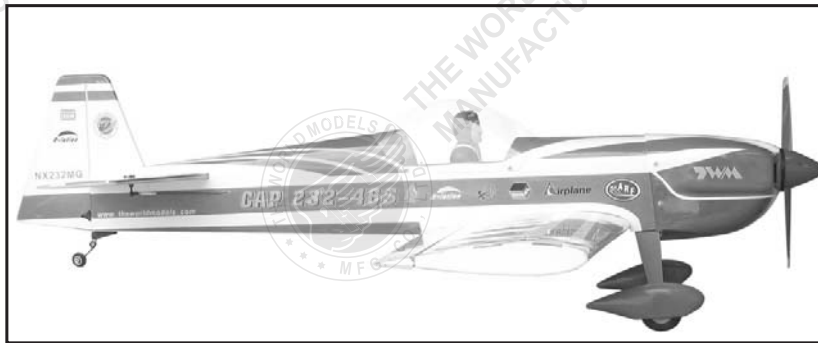
Pilot

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

L/R

18 Wing Setting

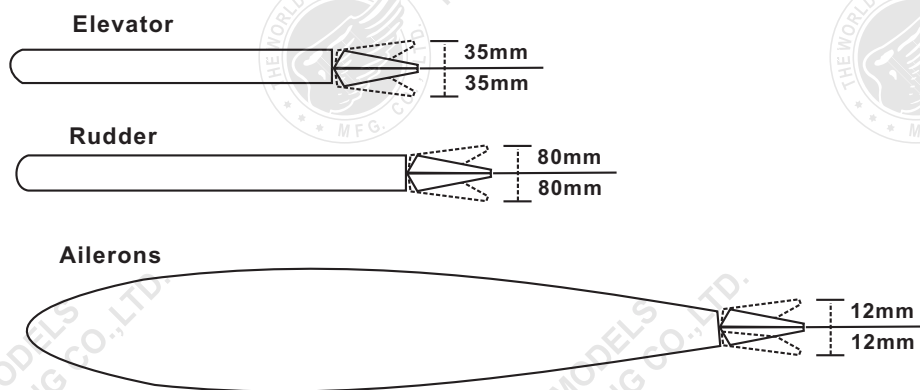
- Adjust the wing and fuselage configuration as shown in the diagrams.



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

19 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.



20 C.G.

The ideal C.G. position is 83mm (3.26 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!

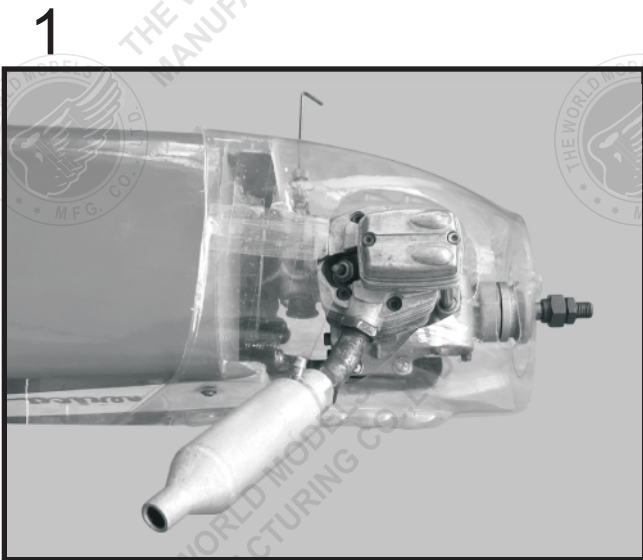
Important Safety Precautions

- # 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.
- # **CAP 232-46S** is specially designed to be powered by 2c 0.46 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 necessary.

Usage of the transparent 3D template



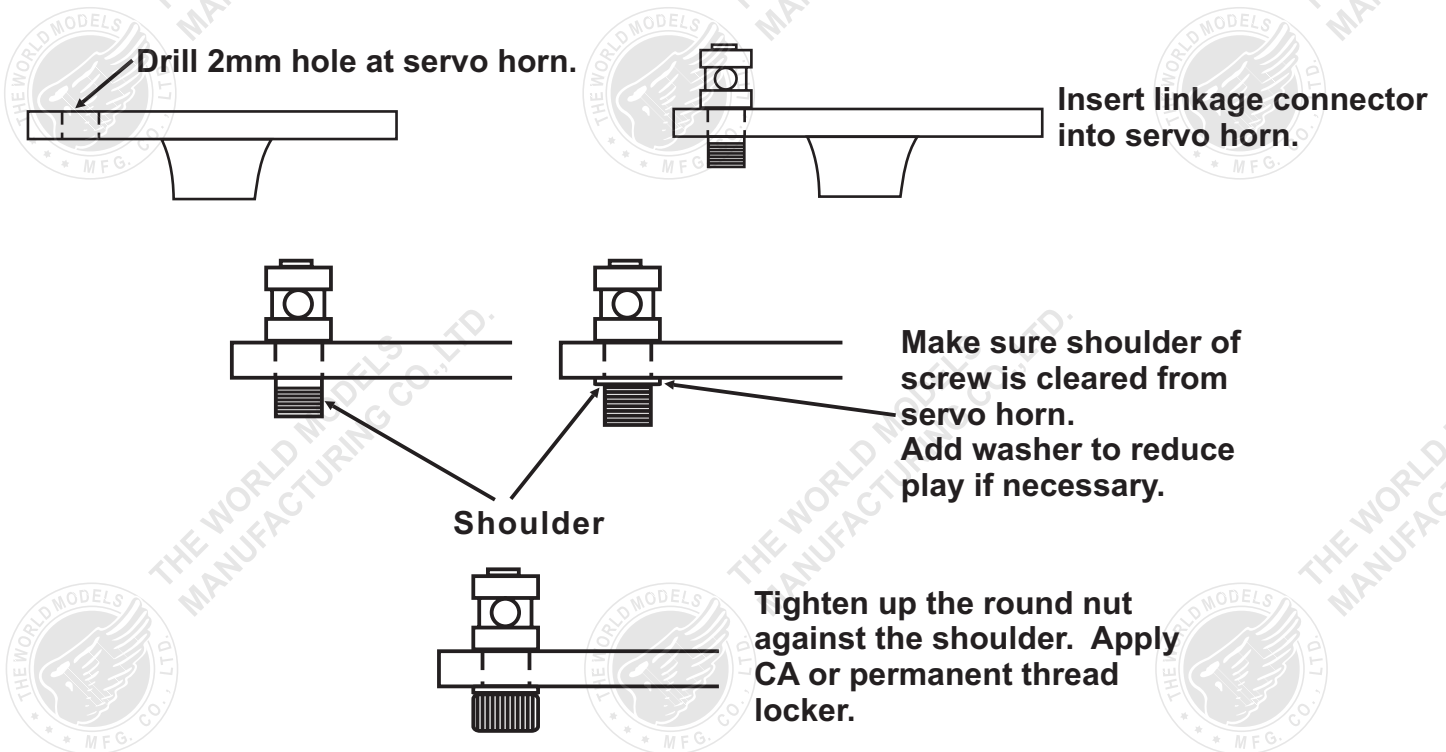
This transparent 3D template is used for position guidance of the actual cutting of the pre-painted cowling.



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.

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, 2403 Research Drive, Livermore, CA 94550 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.



The World Models



Ducted Fan

Pattern

Warbirds

Funfly

Scale

Electric

Sports

Glider

Trainer

Boat

Accessories

Covering

(Lightex / Toughlon)



<http://www.theworldmodels.com>
