

# Super Sports Senior- 90



**0.91 cubic inch displacement 4-stroke (glow)**

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

## Specifications

<b>Wing Span</b>	<b>81 in / 2050mm</b>
<b>Wing Area</b>	<b>1020 sq in / 65.8 sq dm</b>
<b>Flying Length</b>	<b>9 lbs / 4100 g</b>
<b>Fuselage Length</b>	<b>61 in / 1560mm</b>

\* Specifications are subject to change without notice. \*

**Warning ! This model is not a toy.**

It is designed for precision model. Please seek advice if one familiar 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.



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

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

# Super Sports Senior - 90

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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.

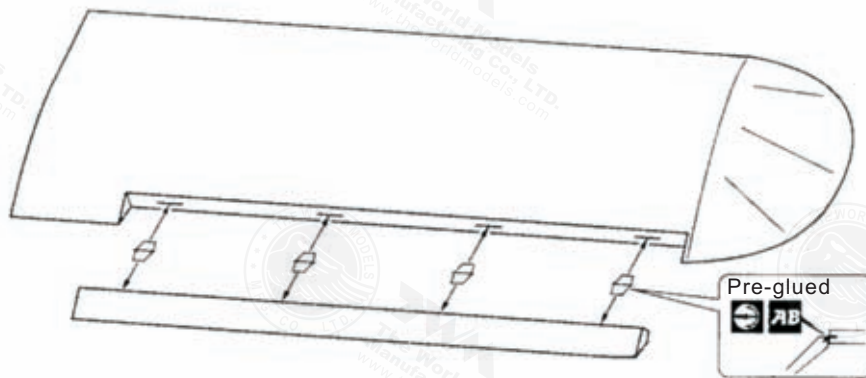


## Parts List

1. MAIN WING -- 1 pair
2. SCREW PM2 X 20mm -- 2 pcs  
SCREW PM2 X 25mm -- 4 pcs  
PUSHER ROD Ø1.8 x 106mm w/ Threads (For Aileron) -- 2 sets  
TRI-HORN M3 X 14mm (L) -- 2 sets  
CLEVIS -- 2 pcs  
STRAPER -- 2 pcs  
FUEL TUBE Ø6 X 5mm -- 4 pcs
3. MAIN LANDING GEAR -- 1 pair  
MAIN LANDING GEAR COVER -- 1 set  
MOUNTING PLATE 12 X 20mm -- 4 pcs  
SCREW PA3 X 14mm -- 8 pcs  
SCREW PM2 X 8mm -- 8 pcs  
WASHER d2 X D5mm -- 16 pcs  
M2 NUT -- 8 pcs
4. SCREW PA3 X 12mm -- 4 pcs  
COLLAR Ø5.1mm w/ Set screw -- 4 sets  
MAIN WHEEL Ø90mm -- 2 pcs  
WHEEL PANTS -- 1 pair  
MOUNTING PLATE 12 X 20mm -- 2pcs
5. WING TUBER Ø18 X 701mm -- 1 pc.
6. STABILIZER & ELEVATOR -- 1 set  
SCREW PM3 X 25mm -- 1 pc.  
WASHER d3 X D7mm -- 1 pc.  
FUSELAGE -- 1 pc.
7. VERTICAL FIN & RUDDER -- 1 set
8. TAIL LANDING GEAR -- 1 set  
TAIL WHEEL Ø25mm -- 1 pc.  
SCREW PA3 X 12mm -- 2 pcs  
COLLAR Ø2.1mm w/ Set screw -- 1 set  
SCREW PM2 X 14mm -- 1 pc.  
WASHER d2 X D5mm -- 2 pcs  
M2 NUT -- 1 pc.  
ALUMINUM PLATE 0.3mm -- 1 pc.
9. FUEL TANK 450CC -- 1 set  
BALSA 8 x 10 x 116mm (For fixing fuel tank) -- 1 pc.
10. ENGINE MOUNT (PL5911120) -- 1 set  
SOCKET HEAD SCREW M6 X 30mm -- 4 pcs  
WASHER d6 X D15mm -- 4 pcs
11. THROTTLE PUSHWIRE Ø1.2 x 340mm  
w/Plastic tube d2 x D3 x 185mm -- 1 set  
ALUMINUM PLATE (For Engine Mount) -- 1pc.  
ANTI - VIBRATION MOUNT -- 1 set  
INCLUDE: SCREW M4 X 35mm -- 4 pcs  
SCREW KM3 X 20mm -- 8 pcs  
WASHER d4 X D12mm -- 8 pcs  
M3 NYLON INSERT LOCK NUT -- 8 pcs  
M4 NYLON INSERT LOCK NUT -- 4 pcs
12. COWLING -- 1 set  
TRANSPARENT DUMMY COWLING -- 1 set  
PWA2.6 X 12mm -- 5 pcs  
SILICON GROMMET d1.5 X D6.5mm -- 5 pcs  
SPINNER Ø70mm -- 1 set
13. WIRE Ø1 x 900mm (For Rudder) -- 2 pcs  
COPPER TUBE d2.5 X D3.2 X 8mm -- 2 pcs  
RIGGING COUPLER Ø1.8 X 27mm w/ Threads (For Rudder) -- 2 pcs  
SCREW PM2 X 16mm -- 3 pcs  
M2 NUT -- 3 pcs  
TRI-HORN M3 X 14mm (L) (w/ o - Base For Rudder) -- 2 sets  
FUEL TUBE Ø6 X 5mm -- 2 pcs  
CLEVIS -- 2 pcs
14. PUSHROD Ø1.8 x 660mm w/ Threads (For Elevator) -- 2 pcs  
TRI-HORN M3 X 4mm (L) -- 2 sets  
SCREW PM2 X 16mm -- 6 pcs  
CLEVIS -- 2 pcs  
FUEL TUBE Ø6 X 5mm -- 2 pcs
15. LINKAGE CONNECTOR Ø2.1mm -- 1 set
16. SPONGE 60 X 70 X 115mm -- 1 pc.  
RIGGING Z BEND Ø1.8 x 27mm (For Rudder) -- 2 pcs  
PUSHROD Ø1.8 x 170mm (For Elevator) -- 1 pc.  
COPPER TUBE d2.5 X d3.2 X 8mm -- 2 pcs  
STRAPER -- 1 pc.  
FUEL TUBE Ø6 X 5mm -- 1 pc.  
PLYWOOD 120 X 35 X 6mm (For Throttle Servo) -- 1 pc.  
BALSA 6 x 6 x 35 (For Throttle Servo Stand) -- 2 pcs  
PUSHROD CONNECTOR 8 X 9 X 20mm -- 1 set
17. CANOPY -- 1 set  
SCREW PWA2.3 X 8mm -- 8 pcs  
SILICON GROMMET d1.5 X 6.5mm -- 8 pcs  
PILOT PL001085A/B -- 1 pc.
18. SCREW PM4 X 35mm -- 2 pcs  
WASHER d4 X D15mm -- 2 pcs  
PLYWOOD 2 x 30 x 120mm (Wing Protection) -- 1 pc.
19. DECALS -- 1 set
- COVERING:  
RED COLOR SCHEME:  
TOUGHLON STL 312 BRIGHT RED  
TOUGHLON STL 320 ORANGE  
TOUGHLON STL 330 CADMIUM YELLOW  
TOUGHLON STL 351 DARK BLUE  
TOUGHLON STL 100 WHITE  
PURPLE COLOR SCHEME:  
TOUGHLON STL 351 DARK BLUE  
TOUGHLON STL 360 VIOLET  
TOUGHLON STL 361 PURPLE  
TOUGHLON STL 241 TURQUOISE  
TOUGHLON STL 100 WHITE



## 1 Main Wing



L/R

## 2 Aileron Servo

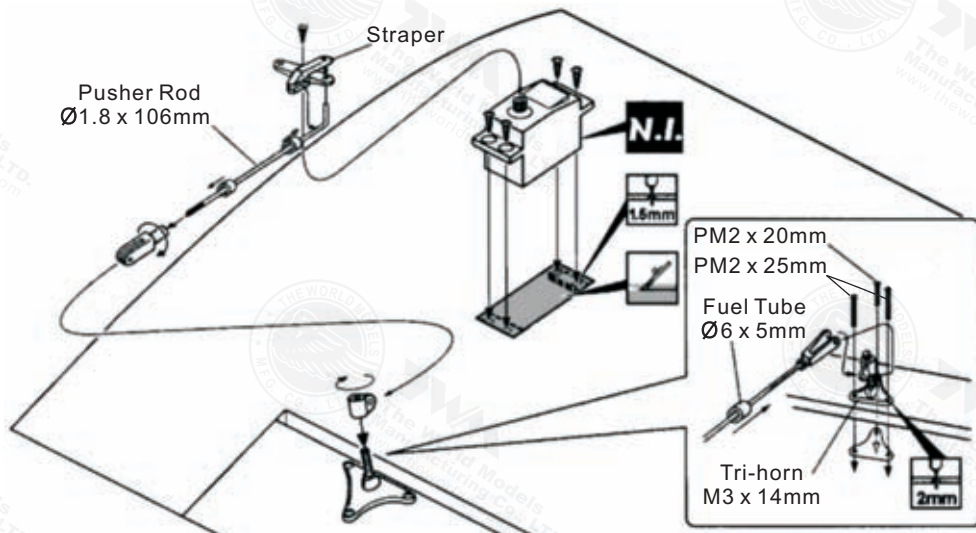
PM2 x 20mm Screw

PM2 x 25mm Screw

PM2 x 25mm Screw

PM2 x 25mm Screw

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



• Bottom View

L/R

## 3 Main Landing Gear

PA3 x 14mm Screw

PM2 x 8mm Screw

PM2 x 8mm Screw

d2 x 5mm Washer

d2 x 5mm Washer

d2 x 5mm Washer

d2 x 5mm Washer

d2 x 5mm Washer

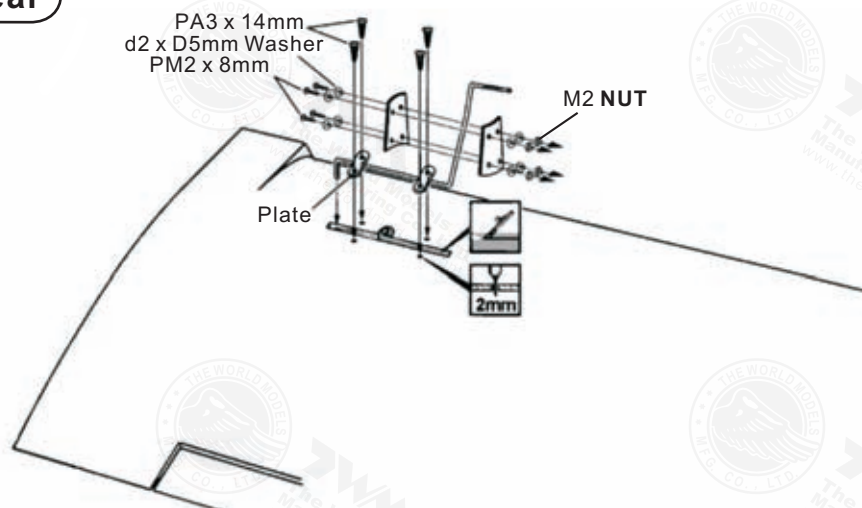
d2 x 5mm Washer

d2 x 5mm Washer

PA3 x 14mm  
d2 x D5mm Washer  
PM2 x 8mm

M2 NUT

Plate

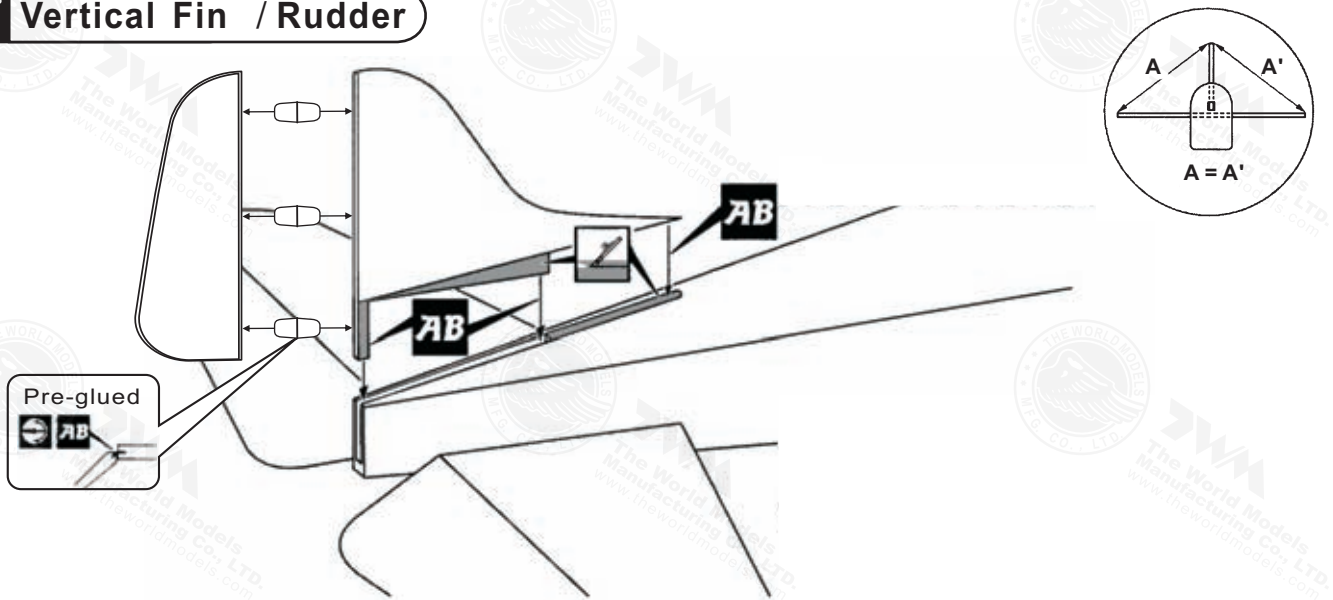


• Bottom View

L/R

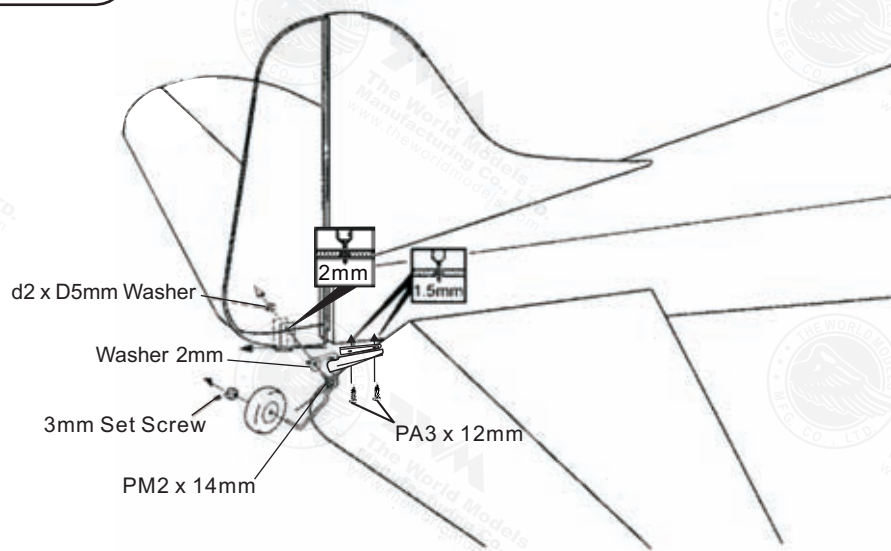


## 7 Vertical Fin / Rudder

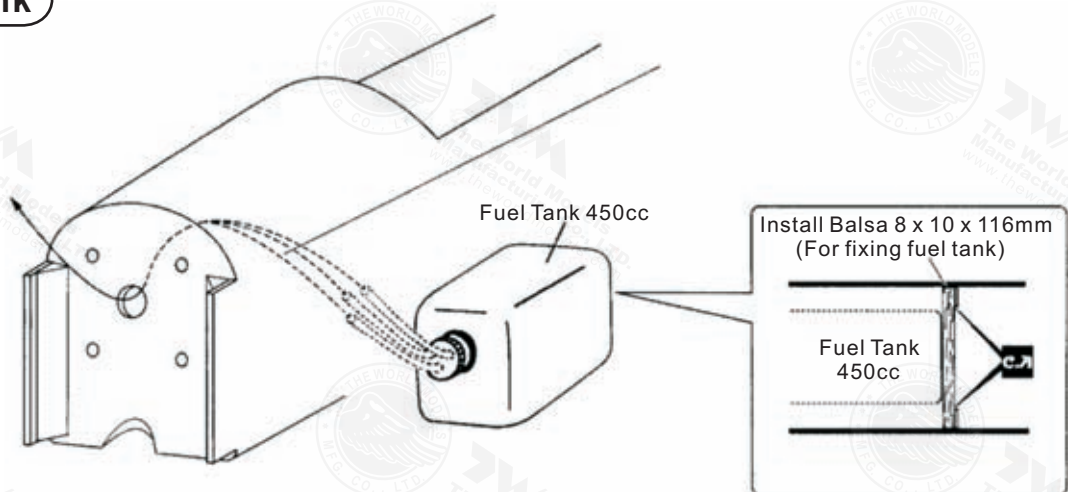


## 8 Tail Landing Gear

PA 3 x 12mm Screw	2
3mm Set Screw	1
2.1mm Wheel Collar	1
PM2 x 14mm Screw	1
d2 x D5mm Washer	2
M2 Nut	1



## 9 Fuel Tank





## 10 Engine Mount

M6 x 30mm Socket Head Screw

-4

d6 x D15mm Washer

4

Engine Mount  
PI5911120

d6 x D15mm

M6 x 30mm

● Apply thread locker to screws.

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

## 11 Engine

M4x35mm SOCKET HEAD SCREW

4

KM3x20mm Screw

8

M4 Nylon Insert Lock Nut

4

M3 Nylon Insert Lock Nut

8

d4 x D12mm Washer

8

Plastic Tube  
d2 x D3 x 185mm

Throttle Push wire  
1.2 x 340mm

M4 Nylon  
Insert Lock Nut

d4 x D12mm  
Washer

d4 x D12mm  
Washer

M4x35mm  
SOCKET HEAD SCREW

! Make sure the rounded edges are facing the shock absorbing SILICON PAD.

3mm

L/R

! Illustration is for inverted mounting. You can mount the engine upright or sideways simply by rotation the engine mount. Thrust angles will not be affected.

Install Engine position

Spinner  
Ø70mm

142mm  
5.6in.

## 12 Cowling

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

PWA2.6 x 12mm Screw



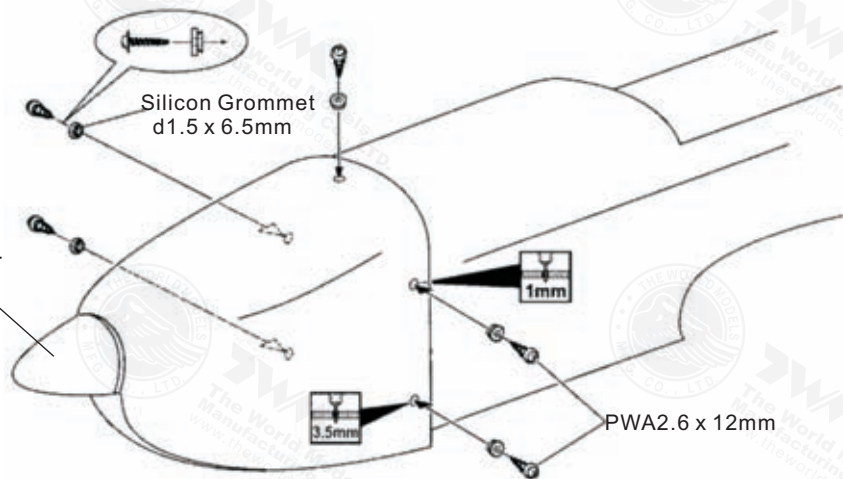
5

d1.5 x D6.5mm Silicon Grommet



5

Spinner



PWA2.6 x 12mm

## 13 Rudder Pullwire

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

PM2 x 16mm Screw



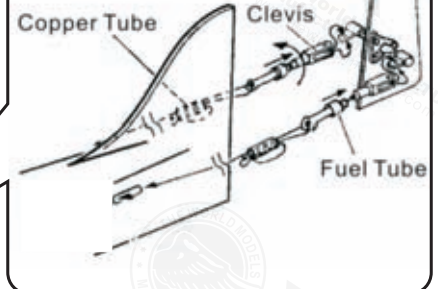
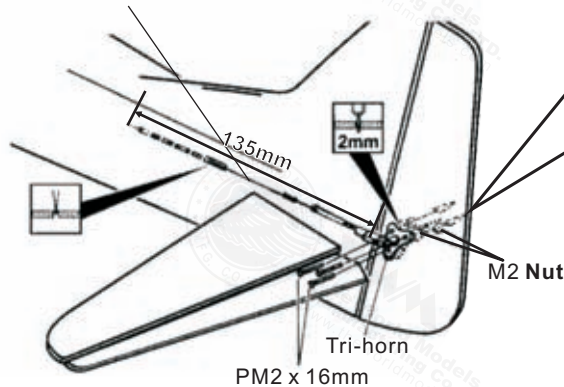
3

M2 Nut



3

Wire Ø1 X 900mm



Copper Tube

Clevis

Fuel Tube

M2 Nut

Tri-horn

PM2 x 16mm

## 14 Elevator Pushrod

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

PM2 X 16mm Screw

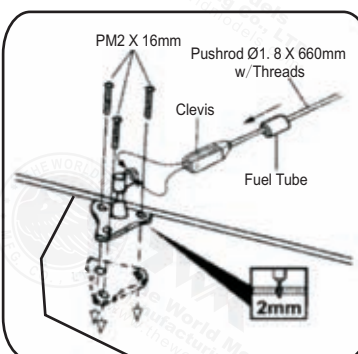


6

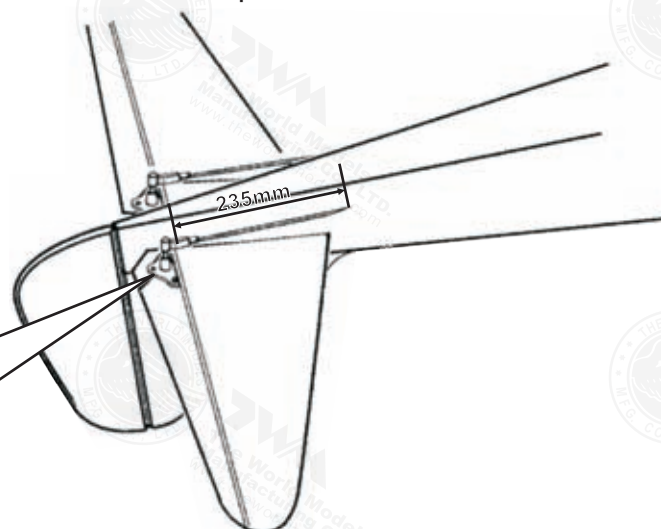
PM2 X 16mm Pushrod Ø1.8 X 660mm w/Threads

Clevis

Fuel Tube



2mm



L/R



## 15 Servo Set

### LINKAGE CONNECTOR

3 x 3mm Set Screw

1

Linkage Connector

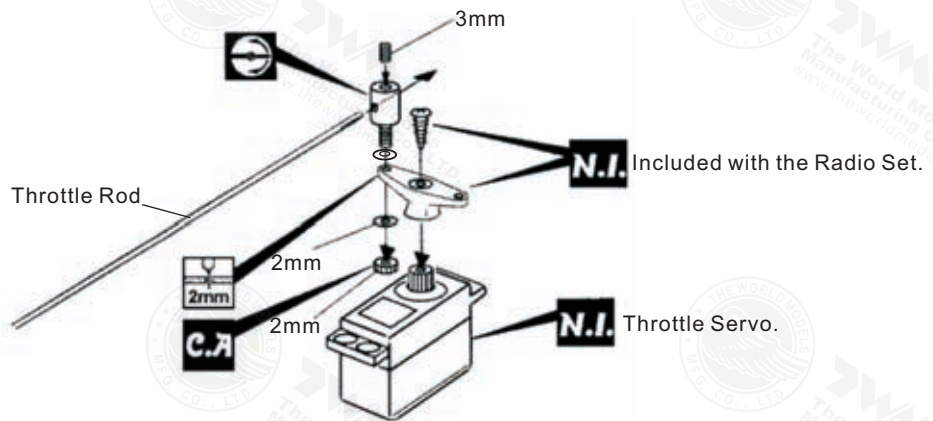
1

2mm Nut

1

2mm Washer

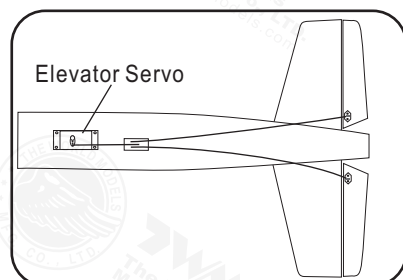
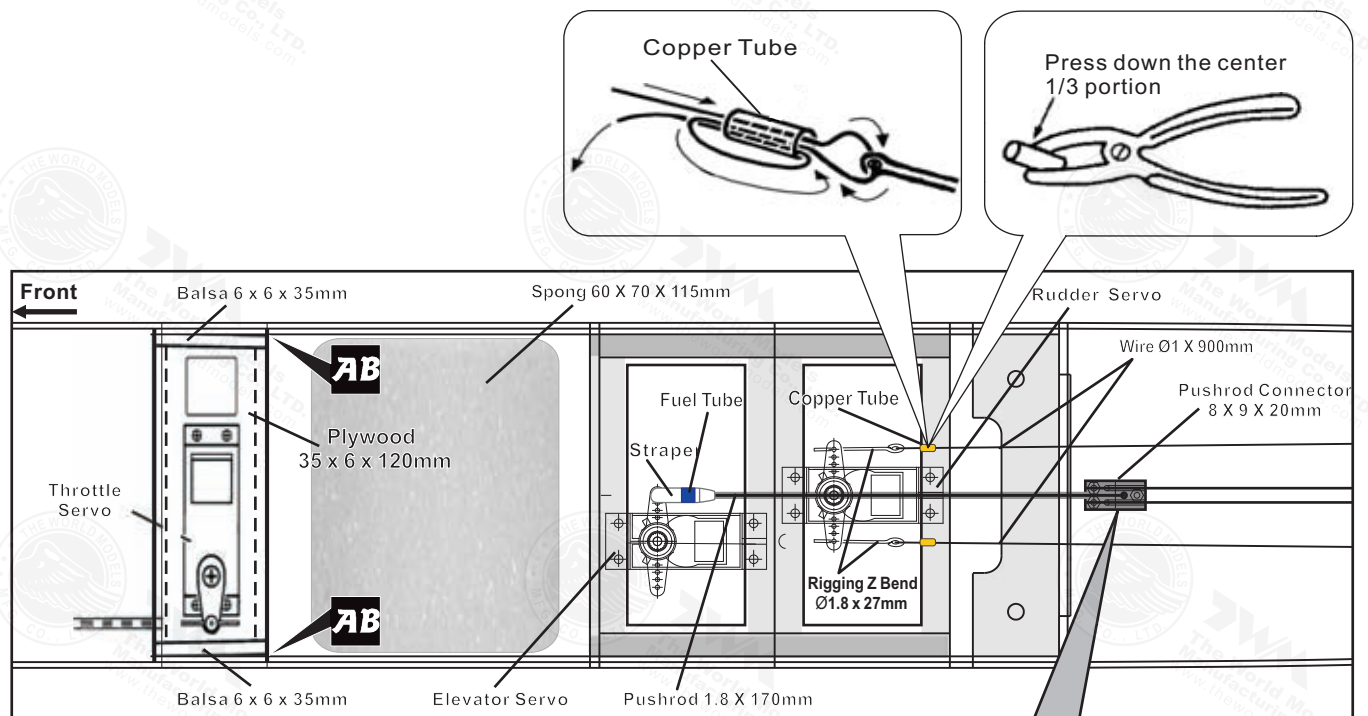
2



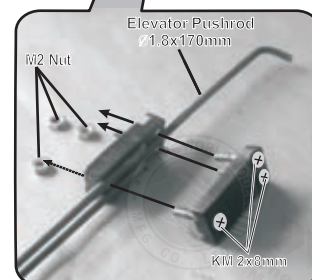
**!** Please refer to attached sheet for linkage connector installation.

## 16 Radio Equipment

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



● Bottom View



## 17 Canopy

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

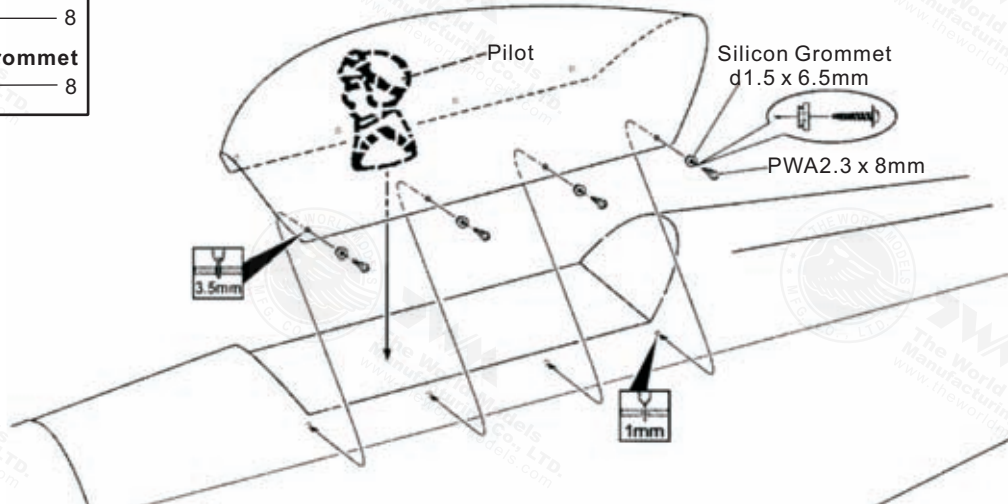
PWA2.3 x 8mm Screw

d1.5 x D6.5mm Silicon Grommet

8

8

L/R



## 18 Main Wing

PM4 x 35mm Screw

d4 x D15mm Washer

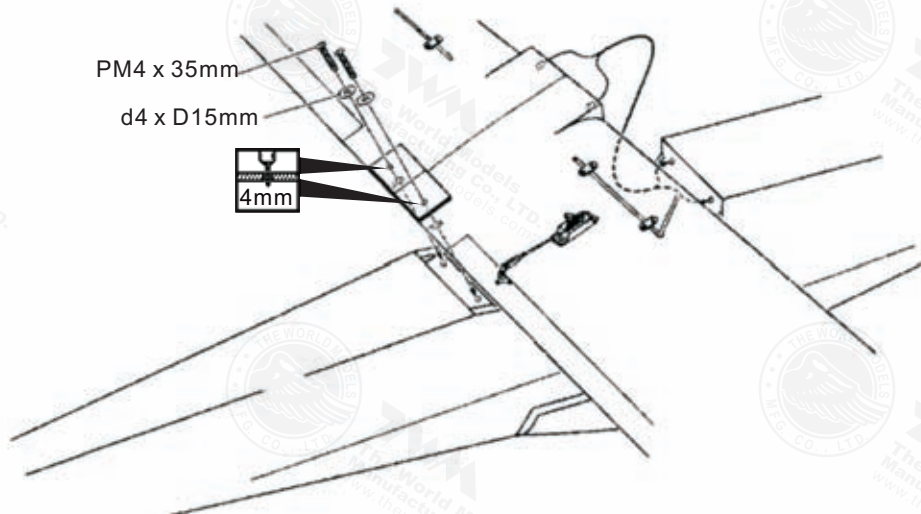
2

2

PM4 x 35mm

d4 x D15mm

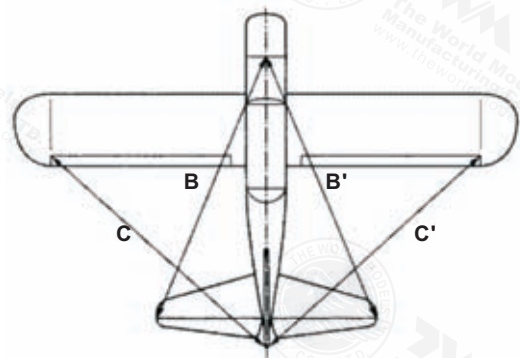
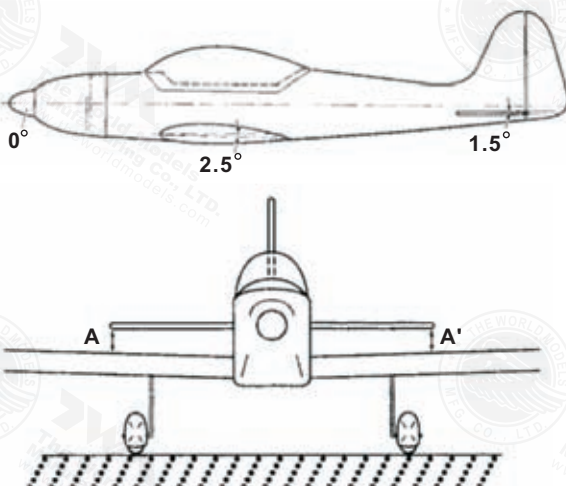
4mm



● Bottom View

## 19 Wing Setting

Adjust the wing and fuselage configuration as in the diagrams.



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

## 20 Control Throws

Elevator



Rudder

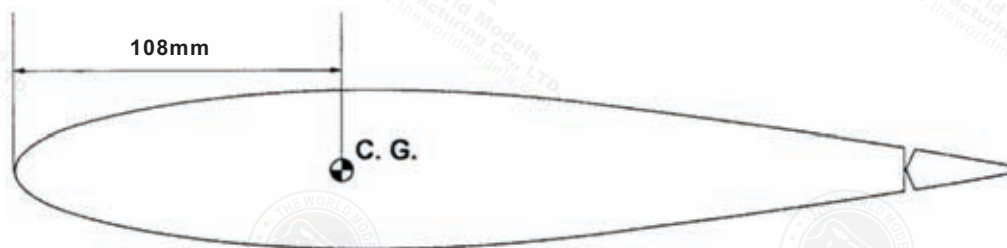


Aileron



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

## 21 C. G.



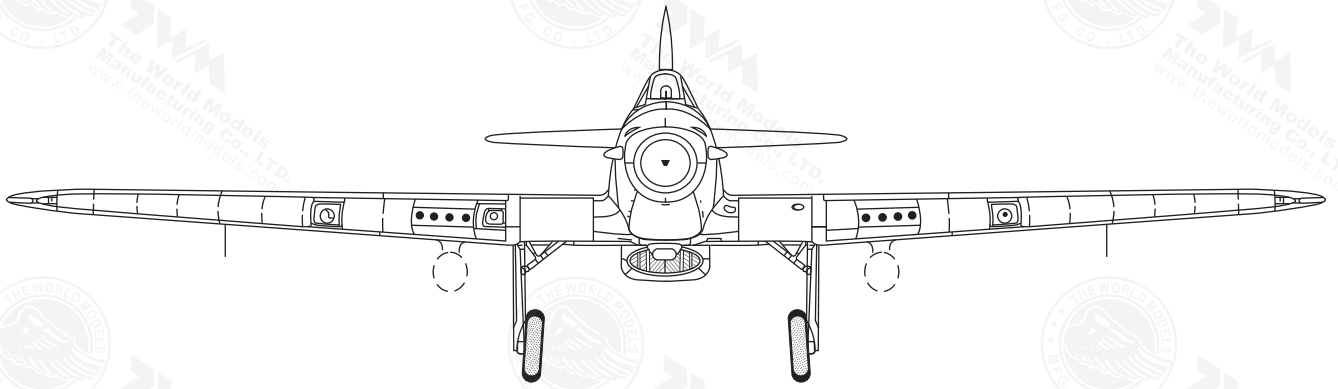
The ideal C.G. Position is 108mm (4.25 in) behind the leading edge measured at where the wing meets the fuselage. In order to obtain the C.G. specified, add weight to the fuselage or move the battery position. Check the C.G. before flying.

## ! 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.
- # **Super Sports Senior - 90** is specially designed to be powered by 0.91 4 stroke glow 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.





Ducted Fan

Pattern

Warbirds

Funfly

Scale

Electric

Sports

Glider

Trainer Boat

Accessories

Covering

(Lightex /oughlon)



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