

Zen 120 禪



0.91 cu.in. displacement 2-cycle
1.20 cu.in. displacement 4-cycle
Radio required : 5 channels, 6 servos airplane radio

Specifications

Wing Span	71.0 in / 1800mm
Wing Area	955 sq in / 61.6 sq dm
Flying Weight	10.0 lbs / 4500g
Fuselage Length	71.5 in / 1820mm

* 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.



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Zen 120 禅

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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 be difficult to extend to the good parts that are good before gluing to defective parts during assembly.
- 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!



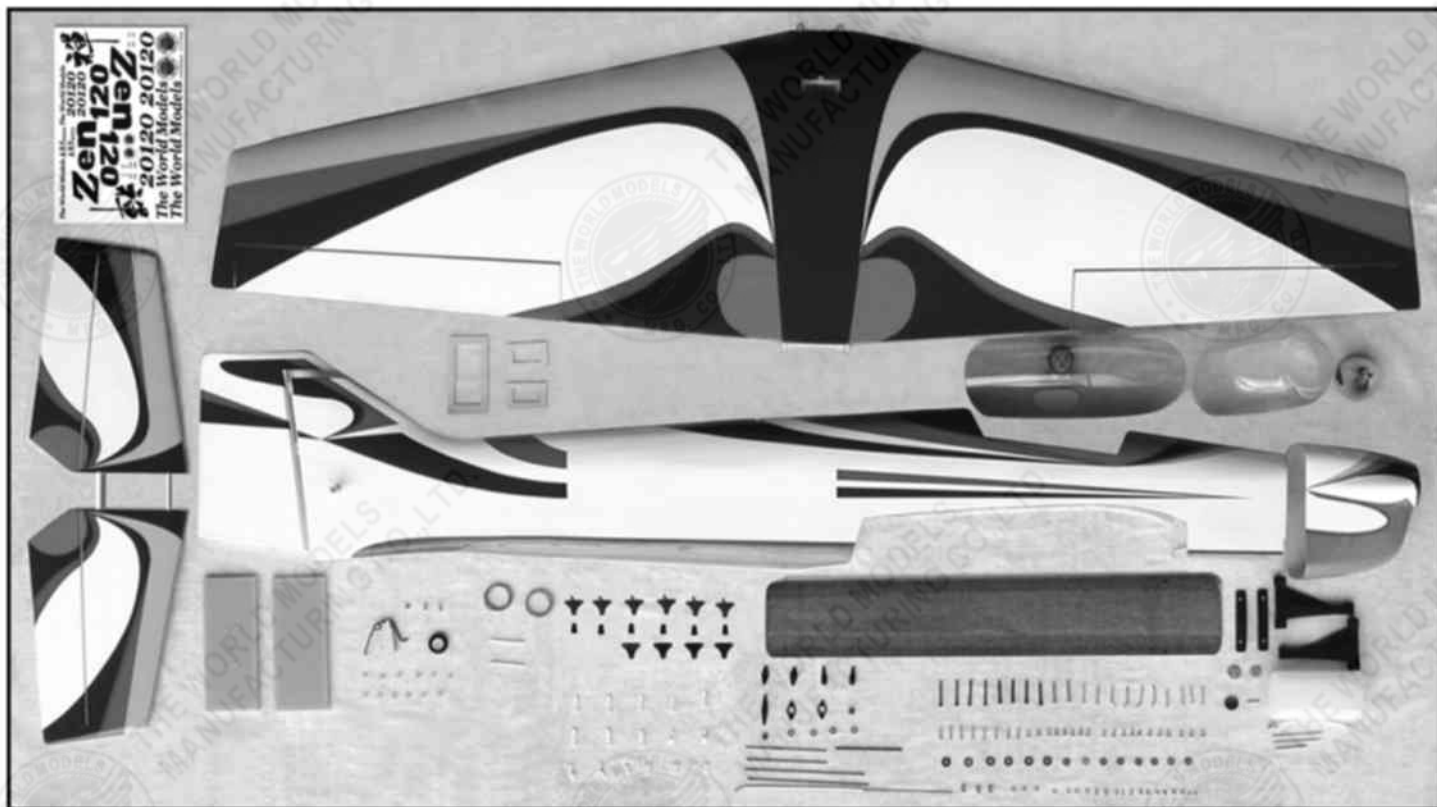
Pay close attention here!



Do not overlook this symbol!



Pierce the shaded portion
covering film.

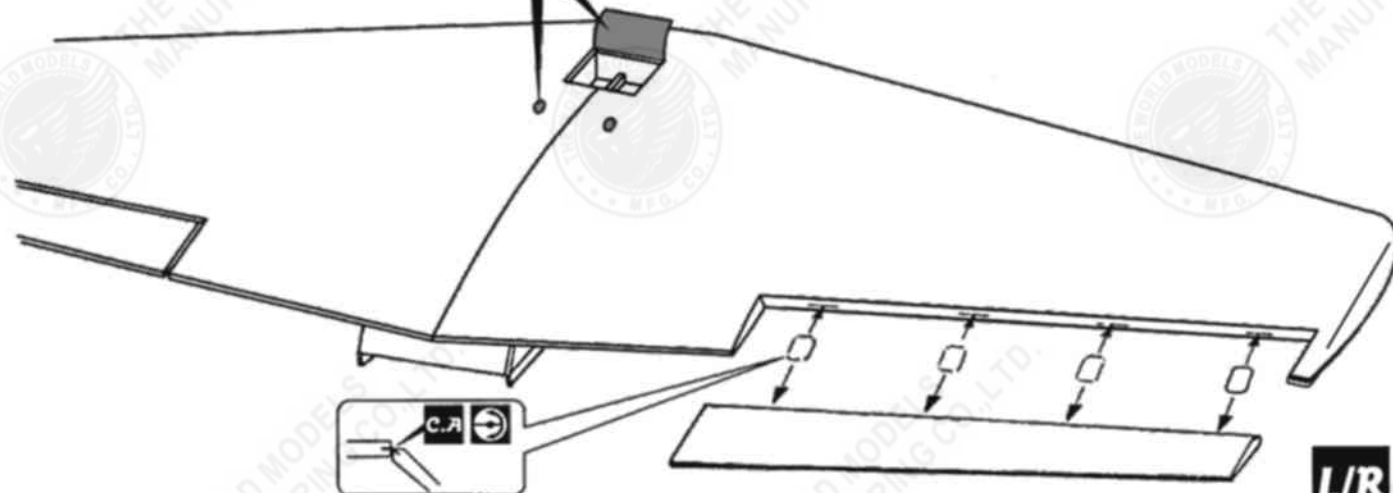


Parts List

1. FUSELAGE & BELLY PAN – 1 set.
2. MAIN WING – 1 pc.
3. STABILIZER & ELEVATOR – 1 set
4. RUDDER – 1 pc.
5. CANOPY – 1 set
6. COWLING – 1pc.
TRANSPARENT 3D TEMPLATE – 1 pc.
7. PILOT (#PC001063A) – 1 pc.
8. ALUMINUM SPINNER Ø70mm – 1 pc.
9. ENGINE MOUNT PL 5911-120 – 1 set
10. ANTI-VIBRATION MOUNT 4C-120 – 1set
11. FUEL TANK 450cc – 1 set
12. SPONGE 10 x 80 x 200mm (For Radio Equipment) – 2 pcs
13. TAIL LANDING GEAR – 1 set
14. MAIN WHEEL Ø55mm – 2 pcs
15. TAIL WHEEL Ø30mm – 1 pc.
16. ELEVATOR LINKAGE – 1set
17. PUSHROD & PULLWIRE :-
COPPER TUBE d2.0 x D2.4 x 8mm
(For Rudder & Elevator) --8 pcs
METAL ROD Ø1.8 x 27mm (For Rudder & Elevator) --4 pcs
METAL ROD Ø1.8 x 27mm w/Threads
(For Rudder & Elevator) --4 pcs
METAL ROD Ø1.8 x 130mm w/Threads (For Aileron) --2 pcs
METAL ROD Ø1.8 x 115mm w/Threads (For Elevator) --1 pcs.
WIRE Ø0.8 x 1000mm (For Rudder) --2 pcs
WIRE Ø0.8 x 910mm (For Elevator) --2 pcs
18. THROTTLE PUSHWIRE Ø1.2 x 320mm
w/Plastic tube d2 x D3 x 180mm --1 set
19. WOODEN PARTS :-
BALSA 14 X 10 X 111mm (For Fixing Fuel Tank) --1 pc.
PLYWOOD 12 X 3 X 107mm (For Throttle Servo) --1 pc.
PLYWOOD 12 X 3 X 108mm (For Throttle Servo) --1 pc.
PLYWOOD 36 X 2 X 60 mm (For Elevator Servo) --2 pc.
PLYWOOD 65 X 3 X 114mm (For Throttle Servo) --1 pc.
20. PLASTIC PARTS :-
CLEVIS – 8 pcs
SILICON GROMMET d1.5 x D6.5mm
(For Cowling & Canopy) – 11 pcs
TRI-HORN M3 x 14mm(L) – 4 sets
TRI-HORN M3 x 14mm(L) (Non-Base For Rudder) --2 sets
STRAPER – 4 pcs
21. METAL PARTS :-
LINKAGE CONNECTOR 2.1mm --3 sets
COLLAR 2.6mm w/set screw --1 set
STABILIZER JOINER Ø3 X 96mm --1 pc.
STABILIZER JOINER Ø9.6 X 294 mm --1 pc.
NUT 2mm --3 pcs
NYLON INSERT LOCK NUT 3mm --4 pcs.
SCREW PA3 x 12mm --4 pcs
SCREW PM2 x 25mm --12 pcs
SCREW PM2 x 30mm --3 pcs
SCREW PM 4 x 30mm --2 pcs
SCREW PWA2 x 12mm --6 pcs
SCREW PWA2.3 x 8mm --6 pcs
SCREW PWA2.6 x 12mm --5 pcs
SOCKET HEAD SCREW M3x 35mm --4 pcs
SOCKET HEAD SCREW M6x 30mm --4 pcs
WASHER d3 x D12mm --8 pcs
WASHER d4 x D15mm --2 pcs
WASHER d6 x D18mm --4 pcs
22. FUEL TUBE Ø6 x 5mm --12 pcs
23. DECALS : ST200 040 --1 set

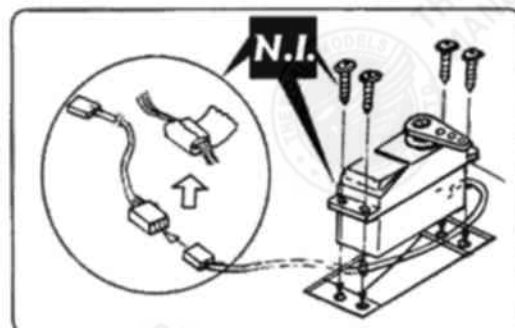
1 Main Wing

Peel off shaded portion covering film.



2 Aileron Servo

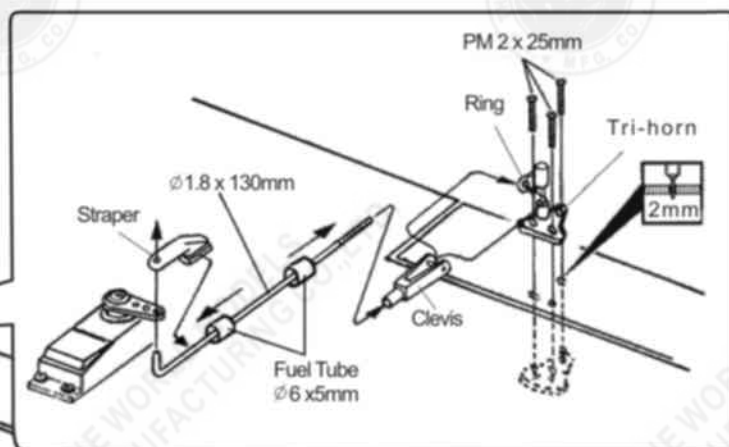
Peel off shaded portion covering film.



3 Aileron Servo

PM 2 x 25mm Screw

6

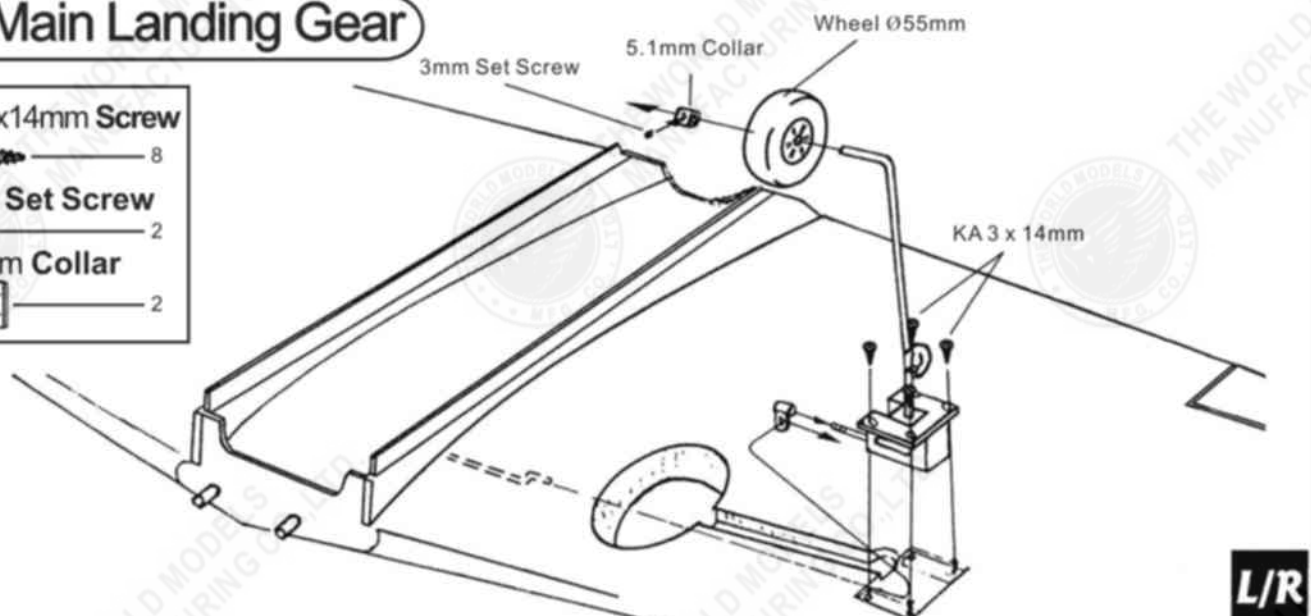


4 Main Landing Gear

KA 3 x14mm **Screw**

8

3mm Set Screw



5.1mm Collar

Wheel Ø55mm

KA 3 x 14mm

L/R

5 Retract Servo

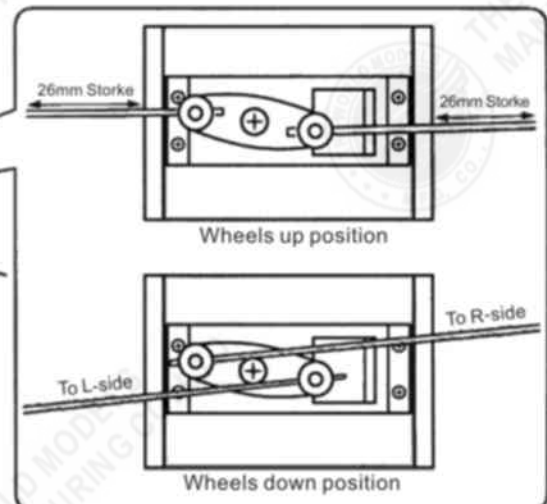
LINKAGE CONNECTOR

3 x 3mm Set Screw

Linkage Connector

2mm Nut

2mm Washer



Wheels up position

To L-side

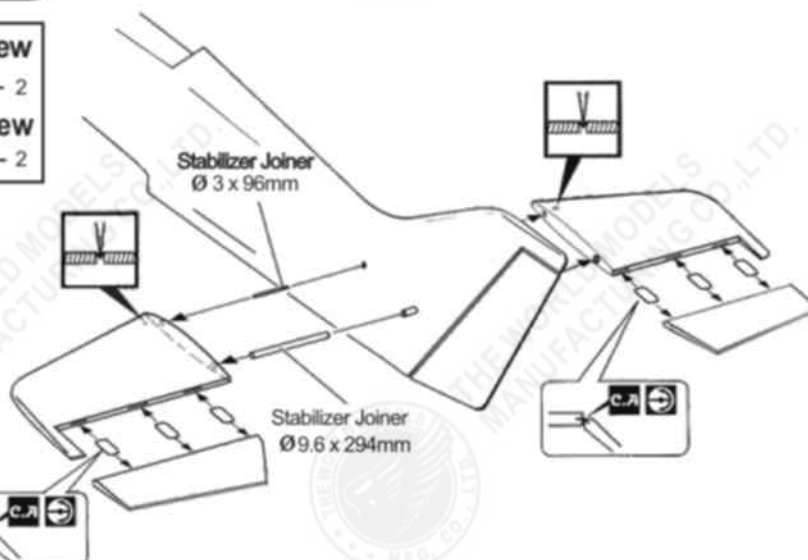
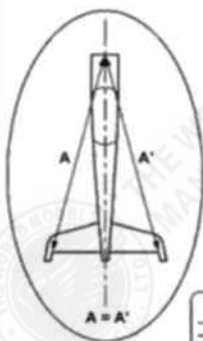
To R-side

Wheels down position

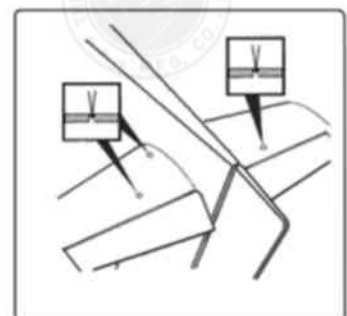
6 Stabilizer

PA 3 x 12mm Screw

3 x 8mm **Set Screw**



Stabilizer Joiner
Ø9.6 x 294mm



- Adjust the stabilizer up or down.

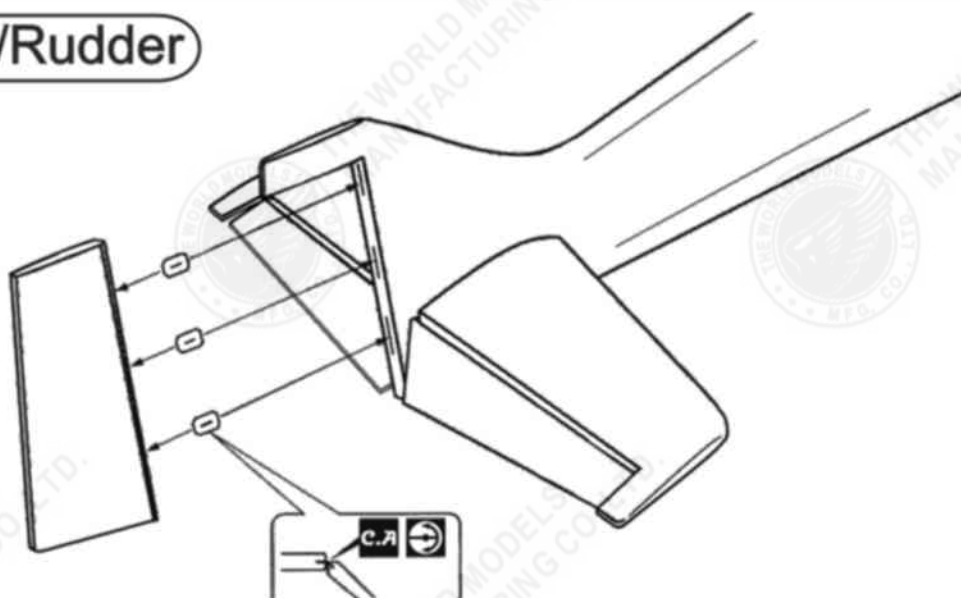
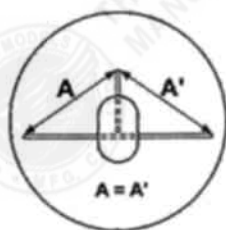
3 x 8mm.
Set Screw

3 x 8mm

PA 3 x 12mm

L/R

7 Vertical Fin /Rudder



8 Tail Landing Gear

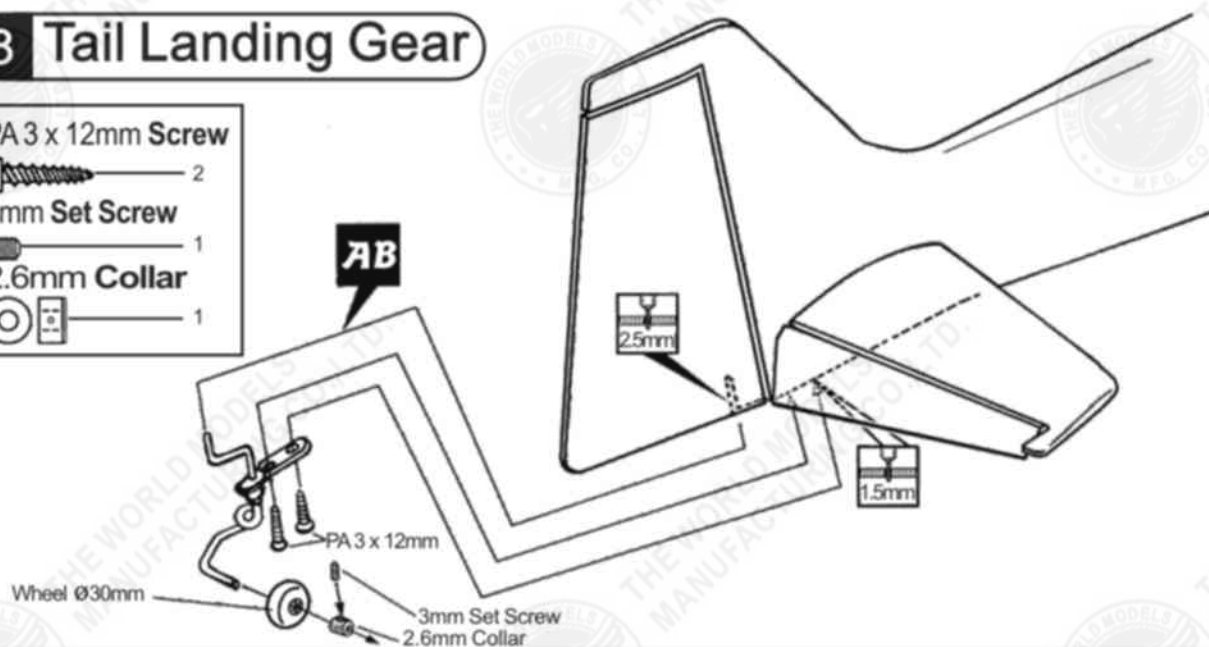
PA 3 x 12mm Screw



3mm Set Screw



2.6mm Collar



9 Engine Mount

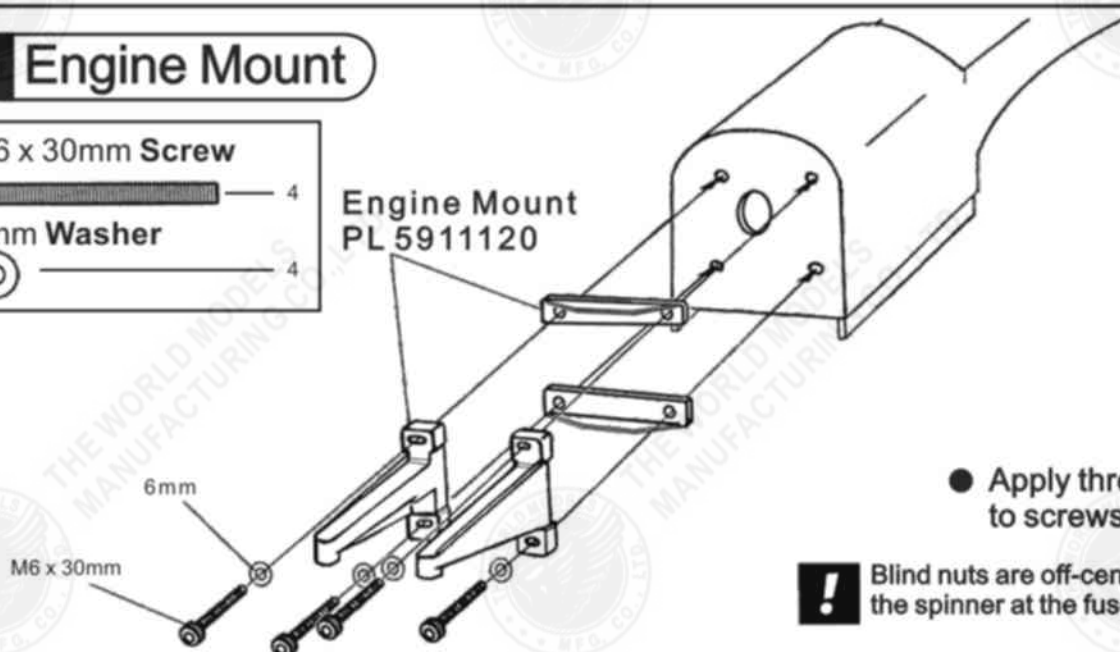
M6 x 30mm Screw



6mm Washer



Engine Mount
PL 5911120

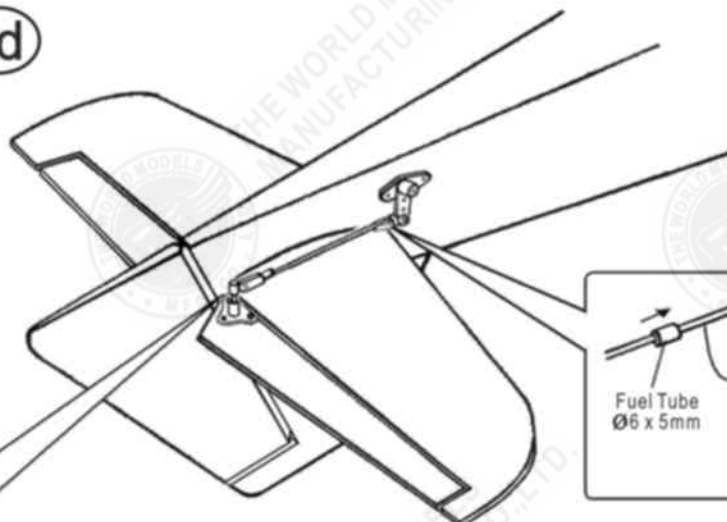
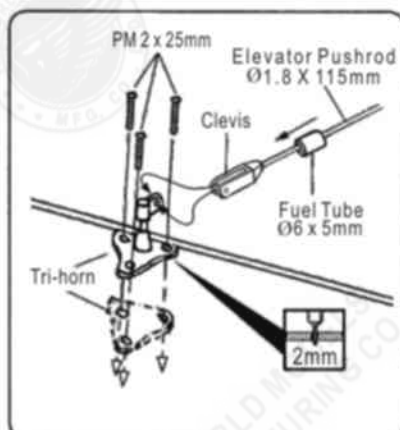


● Apply thread locker to screws.

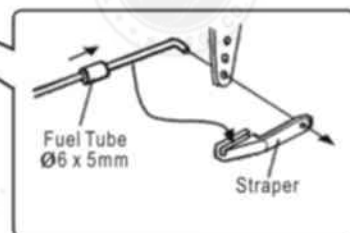
! Blind nuts are off-centered to keep the spinner at the fuselage axis.

13 Elevator Pushrod

PM 2 x 25mm Screw



● Bottom View



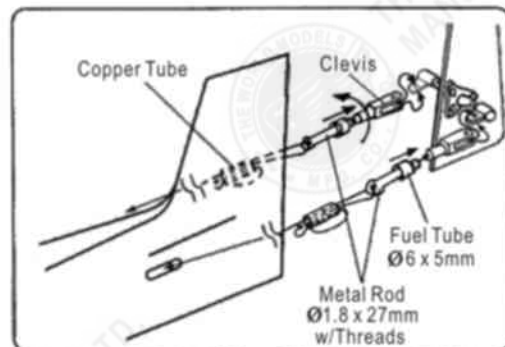
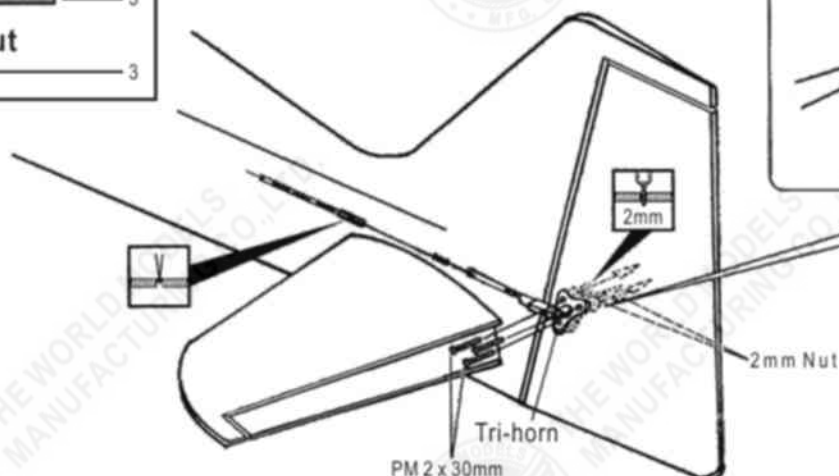
L/R

14 Rudder Pullwire

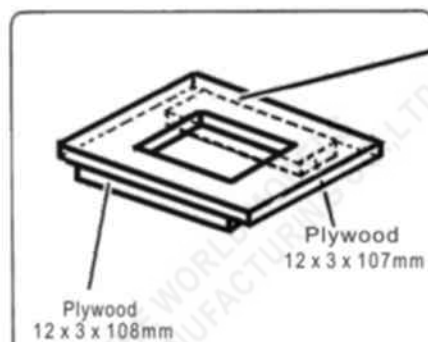
PM 2 x 30mm Screw



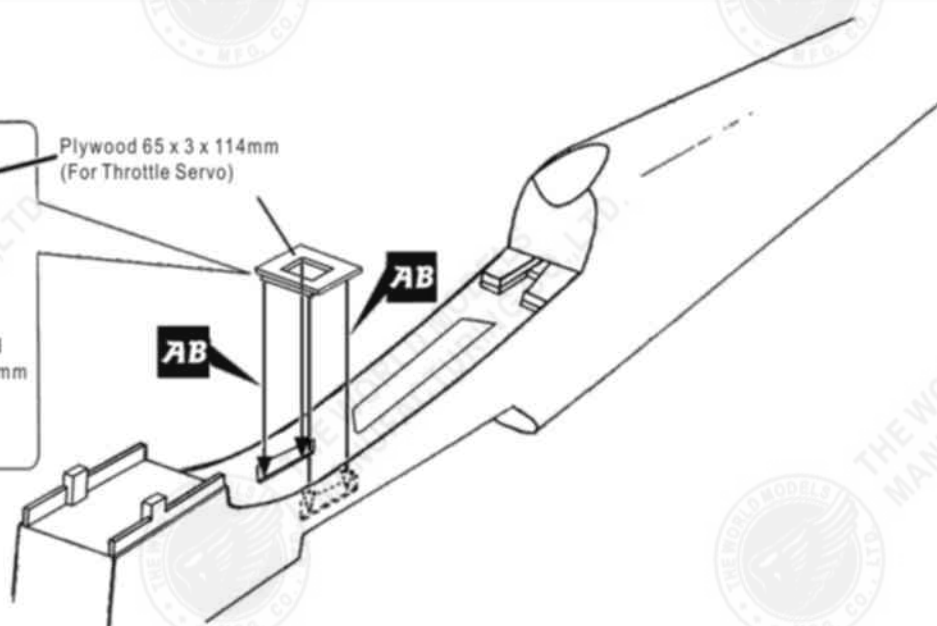
2mm Nut



15 Fuselage



Plywood 65 x 3 x 114mm
(For Throttle Servo)



16 Servo Set

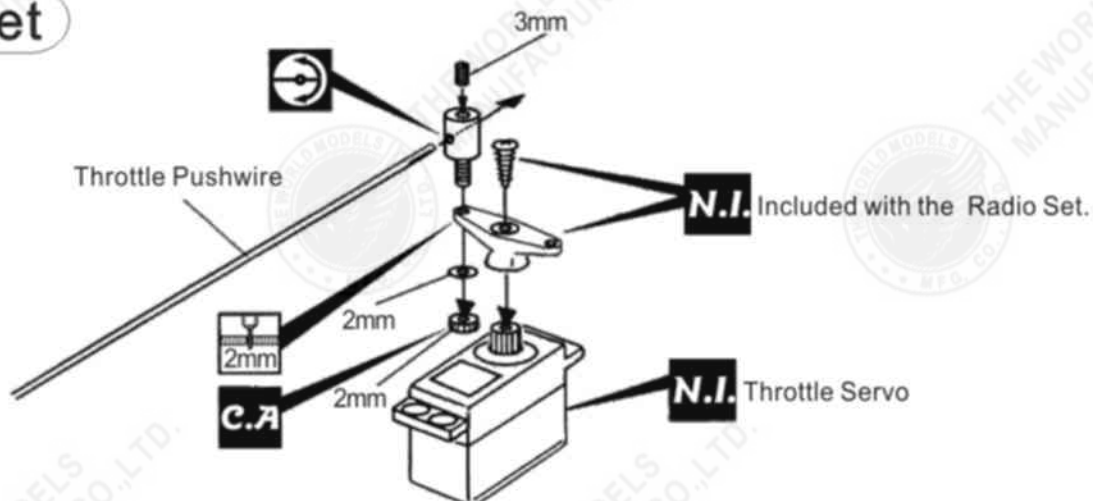
LINKAGE CONNECTOR

3 x 3mm Set Screw 1

Linkage Connector 1

2mm Nut 1

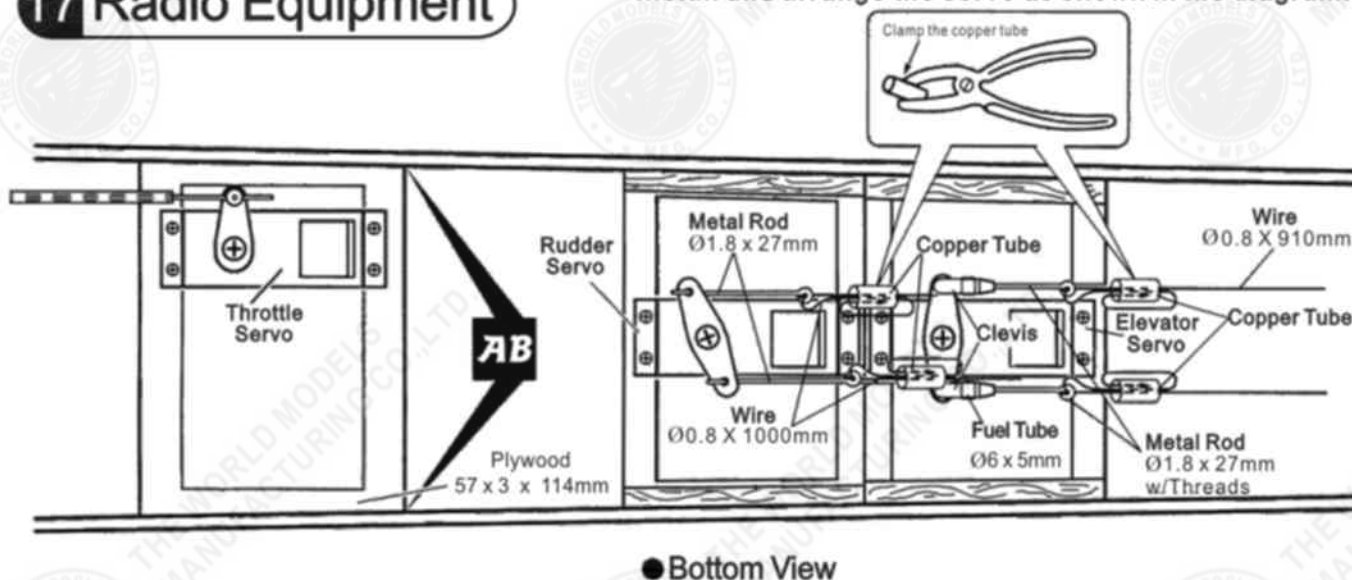
2mm Washer 1



! Please refer to attached sheet for linkage connector installation.

17 Radio Equipment

Install and arrange the servo as shown in the diagram.

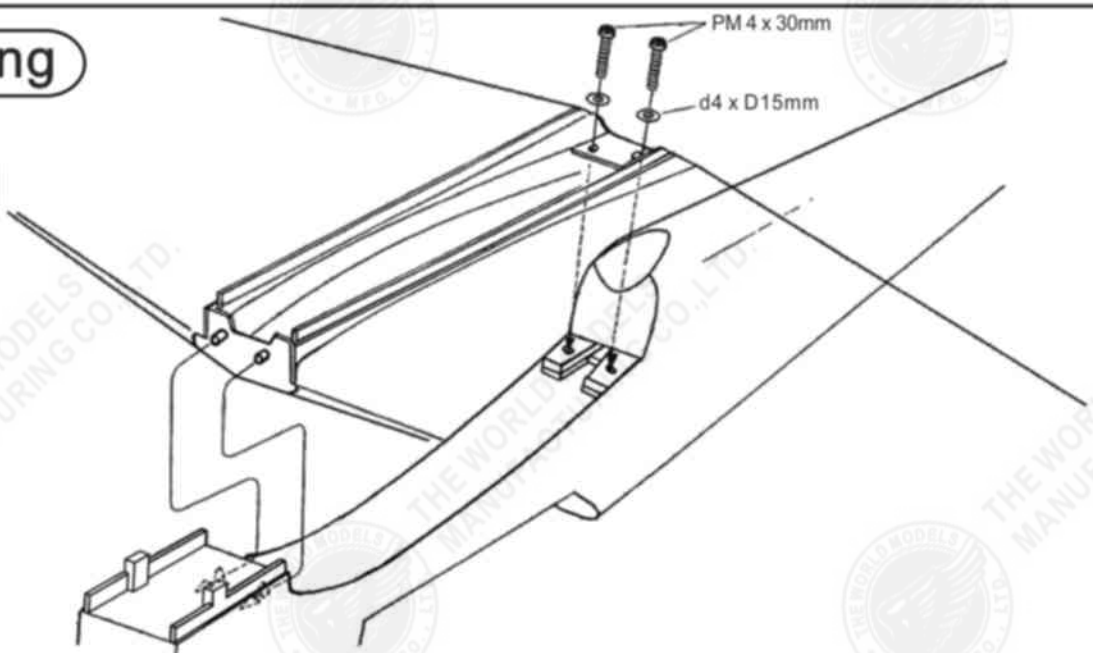


● Bottom View

18 Main Wing

PM 4 x 30mm Screw 2

d4 x D15mm Washer 2



19 Cowling

PWA2.6 x 12mm Screw



d1.5 x D6.5mm Silicon Grommet



Silicon Grommet
d1.5 x D6.5mm

PWA2.6 x 12mm



20 Belly Pan

● Bottom View

20 Canopy

PWA2.3 x 8mm Screw



d1.5 x D6.5mm Silicon Grommet



Apply double-sided tape

Silicon Grommet
d1.5 x 6.5mm

PWA2.3 x 8mm

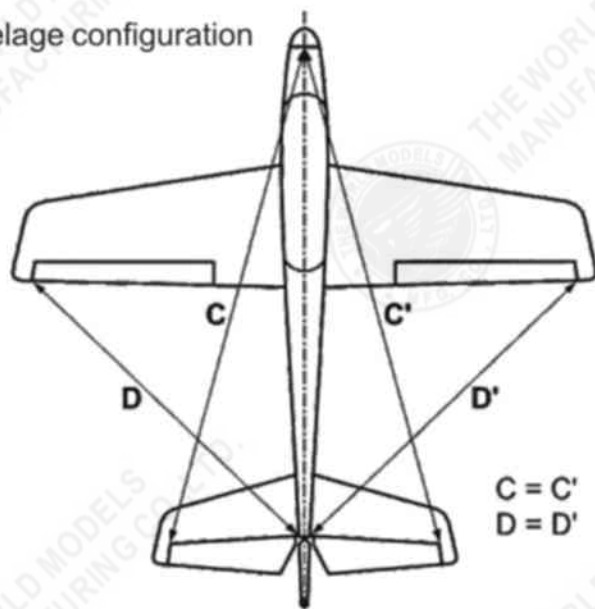
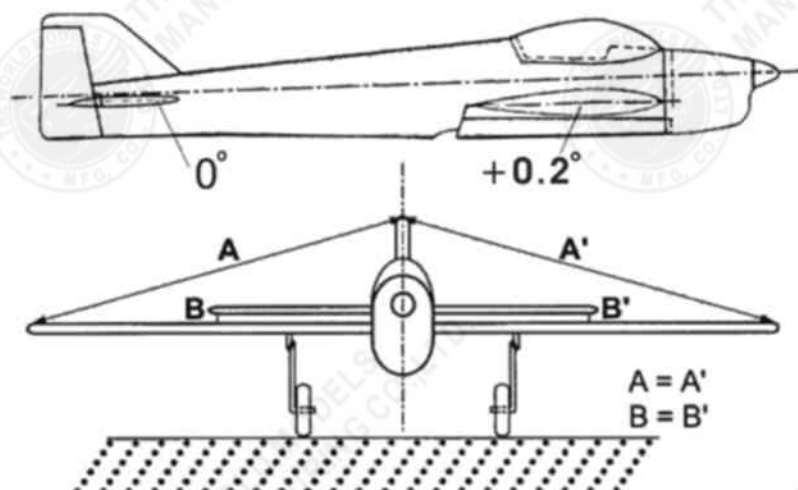
Pilot



L/R

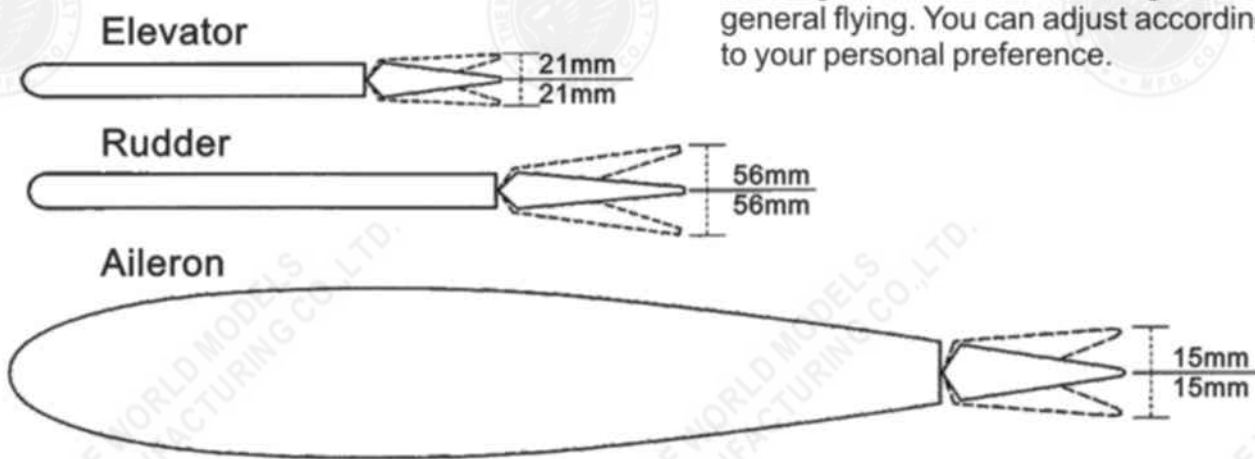
22 Wing Setting

Adjust the wing and fuselage configuration as in the diagrams.



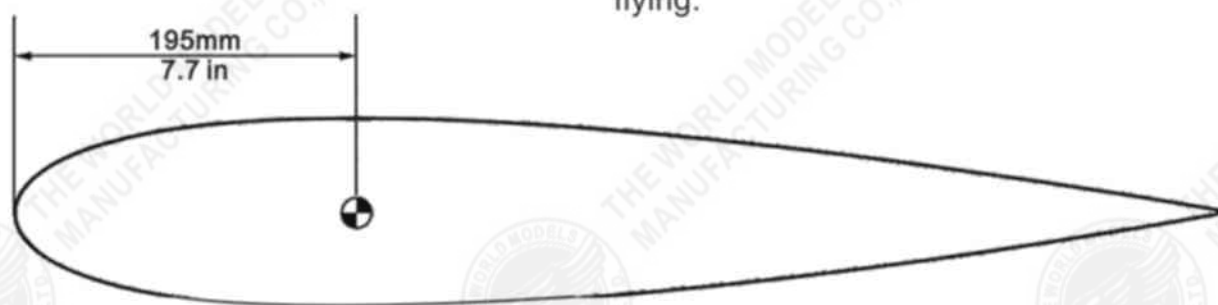
23 Control Throws

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 **195mm (7.7 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.



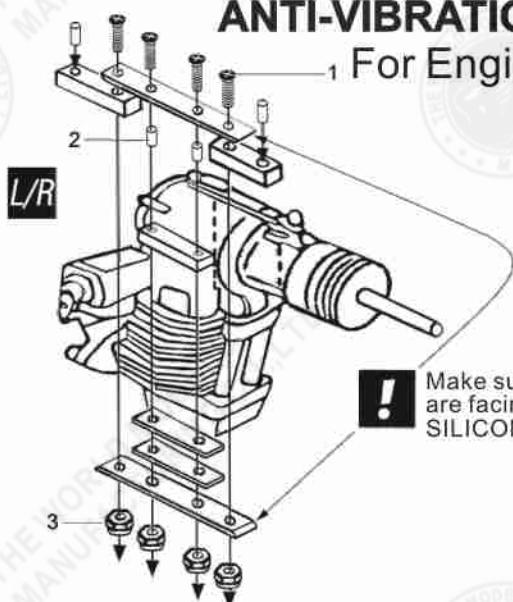
! Warning!

Important Safety Precautions

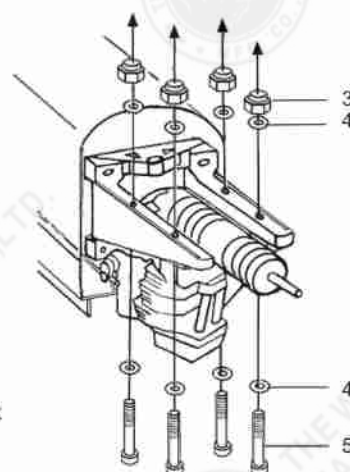
- # First time flyer should never fly by himself / herself. Assistance from experienced flyer is absolutely necessary.
- # Pre-flight adjustment must be done before flying, it is very dangerous to fly a badly pre-adjusted aircraft.
- # **Zen 120** is specially designed to be powered by **2C 0.91** or **4C 1.20** 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.

ANTI-VIBRATION MOUNT INSTALLATION

1 For Engine Mount (PL5911120)



- 1 — KM 3 x 18mm Screw
- 2 — Copper Tube
- 3 — 3mm Nylon Insert Lock Nut
- 4 — 3mm Washer
- 5 — PM 3 x 35mm Screw



Landing gear

Should you need to bend the landing gear wire, use the radio control to open or close the gear to 25% from fully retracted position and switch off the receiver. It is safe to bend the wire in this position. Bending the wire in fully open position may damage the supporting structure.

