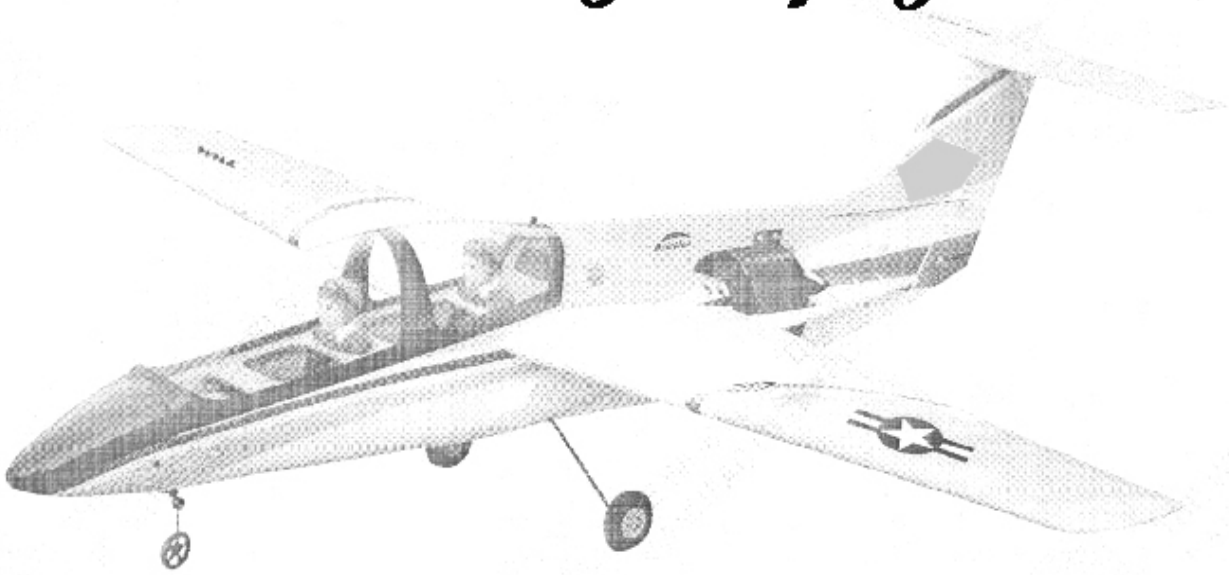
Dragonfly



Requires : 4-channel radio w/ 4 micro servos, Ducted Fan Propulsion Unit PL6800010 and Outrunner Motor KM0283110 30A (burst 35A) brushless ESC, 3 cells 11.1V 15C discharge 2100 mAh Li - Po battery & charger.

Specifications

Wing Span	36 in / 920 mm
Wing Area	225 sq in / 14.5 sq dm
Flying Weight	28 oz / 790 g
Fuselage Length	32.5 in / 830 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 electric 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.

Dragonfly

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PARTS LIST ---------- P.2

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SAFETY PRECAUTIONS ---------- P.10

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.

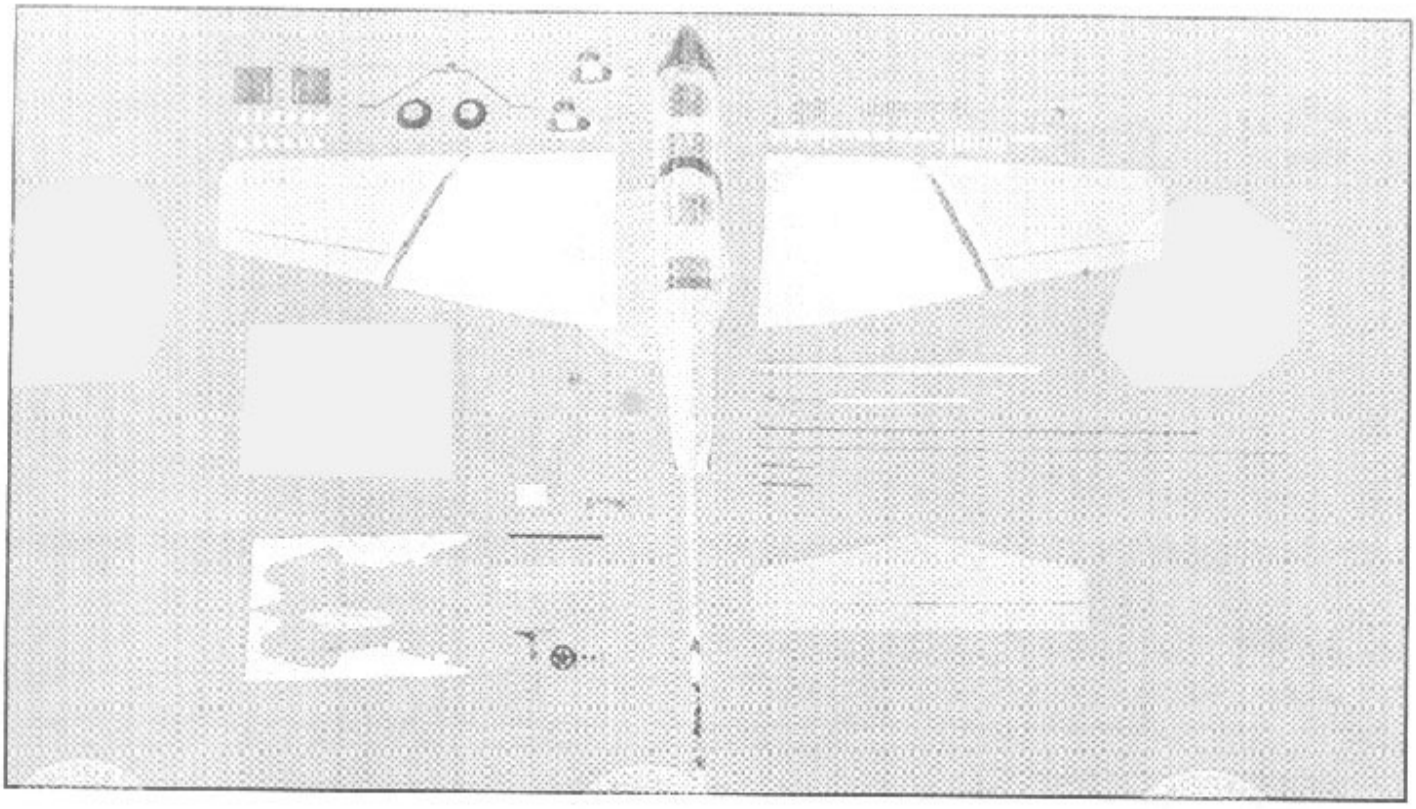
Cut off shaded portion.

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 -- 1 pair
   PUSHROD Ø1.4x50mm w/ Threads (For Aileron Servo) -- 2 pcs
   STRAPER -- 2 pcs
   FUEL TUBE d2xD4x4mm -- 4 pcs
   CLEVIS -- 2 pcs
   HORN -- 2 sets
   SCREW PM2x16mm -- 4 pcs
   SCREW PA1.7x8mm -- 8 pcs

3. PLYWOOD 3x67.8x217.8mm -- 1 pair
   CABLE TIE -- 4 pcs
   SCREW PM3x12mm -- 4 pcs
   SCREW PWA2.3x8mm -- 4 pcs
   WASHER d3xD7mm -- 4 pcs
   M3 NUT -- 4 pcs

4. RUDDER -- 1 pc.
   FUSELAGE -- 1 pc.

5. STABILIZER & ELEVATOR -- 1 set

6. MAIN LANDING GEAR -- 1 set
   LANDING WIRE STRAPS (PL4114030) -- 2 pcs
   MAIN WHEEL Ø40mm -- 2 pcs
   COLLAR Ø2.6mm w/ set screw -- 4 sets
   SCREW PA2x8mm -- 4 pcs

7. FRONT LANDING GEAR -- 1 set
   PLASTIC COLLAR d1.1xD5x2mm -- 2 pcs
   FRONT WHEEL Ø23mm -- 1 pc.
   SCREW PA2x8mm -- 2 pcs

8. PUSHROD Ø1.2x440mm w/ Threads (For Rudder Servo) -- 1 pc.
   HORN -- 1 set.
   SCREW PM2x12mm -- 2 pcs

9. PUSHROD Ø1.2x533mm w/ Threads (For Elevator Servo) -- 1 pc.
   HORN -- 1 set
   SCREW PM2x8mm -- 2 pcs
   SCREW PA2x5mm -- 3 pcs
   PVC COVER 0.5mm -- 1 pc.

10. PUSHROD Ø0.8x206mm (For Front Landing Gear) -- 1 pc.
    PLASTIC TUBE d2xD3x140mm -- 1 pc.
    CLEVIS (d1.2mm) -- 2 pcs
    FUEL TUBE d2XD4x4mm -- 2 pcs
    PLYWOOD 2x9.4x15mm -- 1 pc.
    BATTERY TIE 200mm -- 1 pc.
    SPONGE 10x50x150mm -- 1 pc.

11. EYE SCREW PA2.5x10x23mm -- 2 pcs
    WING TUBE d9.6x284mm -- 1 pc.
    RUBBER BAND D30x1mm -- 2 pcs

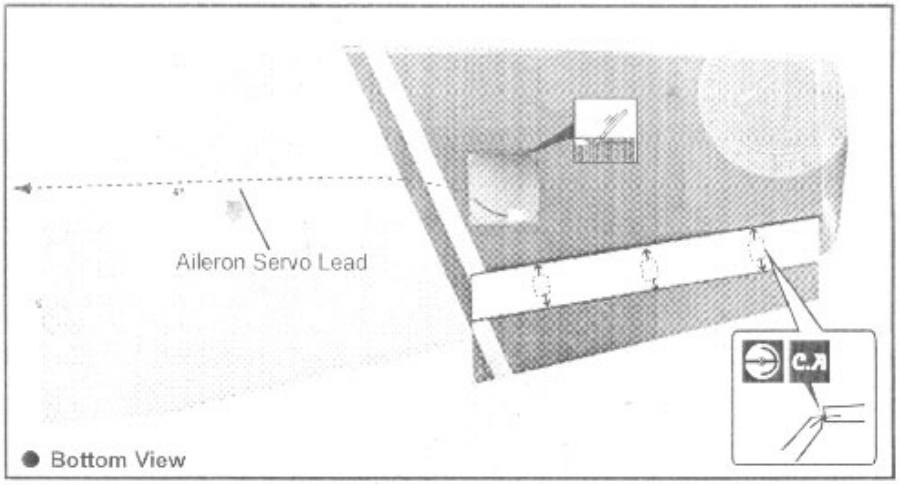
12. COCKPIT -- 1 pc.
    PILOT (PC101042A) -- 2 pcs

13. DECAL -- 1 set

- COVERING --
  LIGHTEX SGX 540 PEARL GREEN
  LIGHTEX SGX 331 CUB YELLOW
  LIGHTEX SGX 100 WHITE

1 Main Wing

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



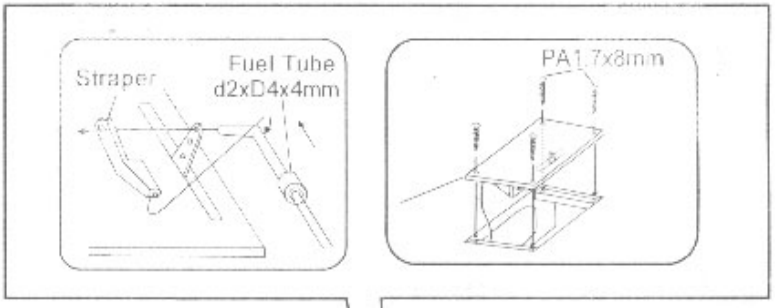
● Bottom View

L/R

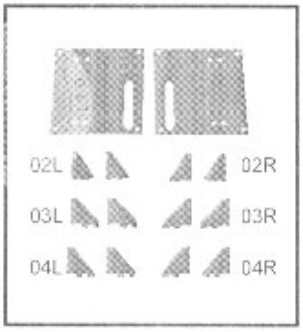
2 Aileron Servo

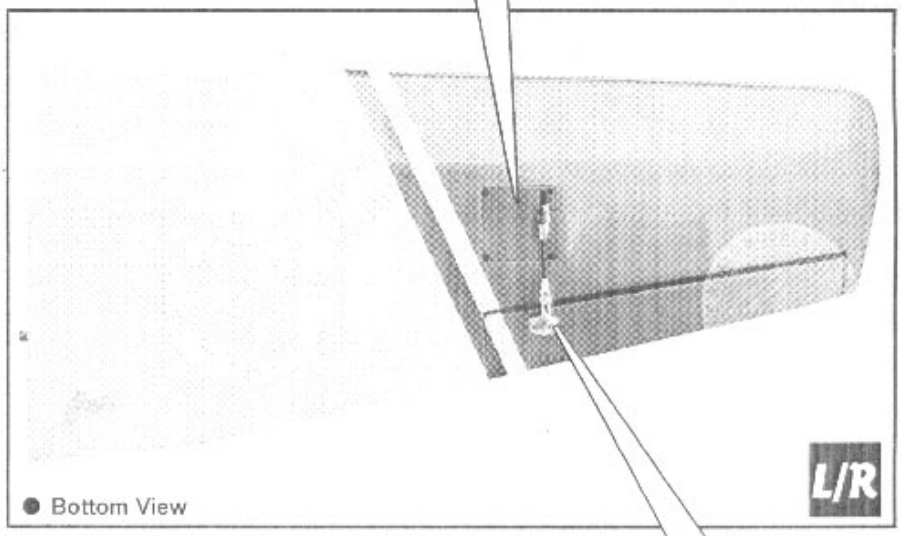
PM2x16mm **Screw** — 4

PA1.7x8mm **Screw** — 8



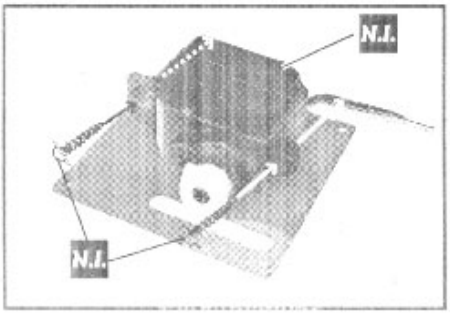
● Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.

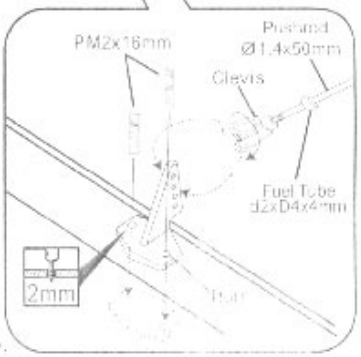




● Bottom View

L/R



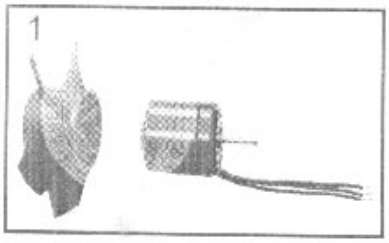


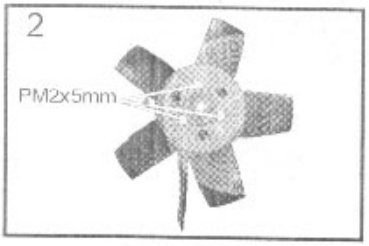
● Please choose either 02L & 02R or 03L & 03R or 04L & 04R that suits your servo.

3 Ducted Fan Propulsion Unit with 28/31 Motor

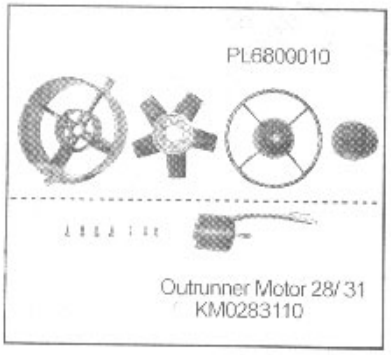
KG0300220

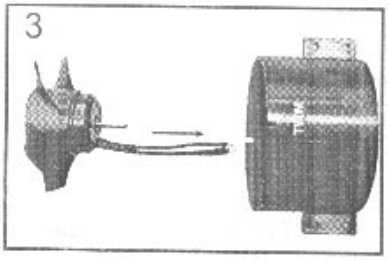
PM3x12mm **Screw** — 4
d3xD7mm **Washer** — 4
M3 **Nut** — 4
PWA2.3x8mm **Screw** — 4

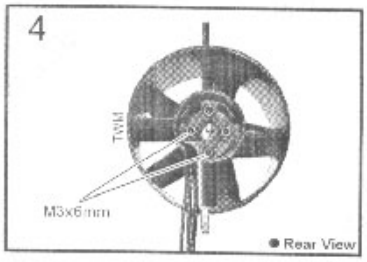




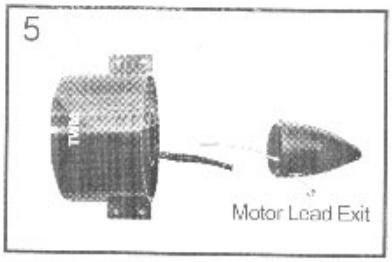
N.I. Optional Parts

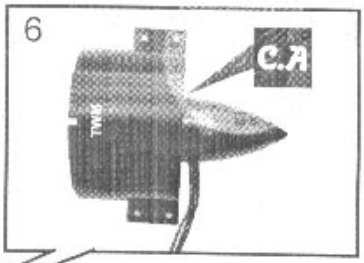


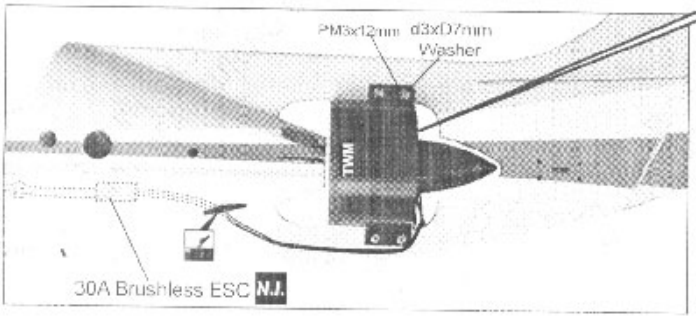


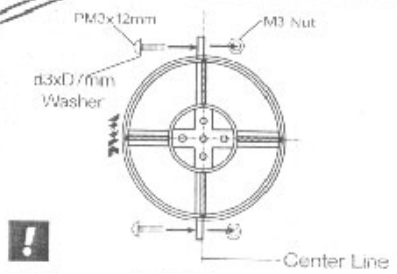


! Make sure rotating motor casing is not in contact with wiring or anything.



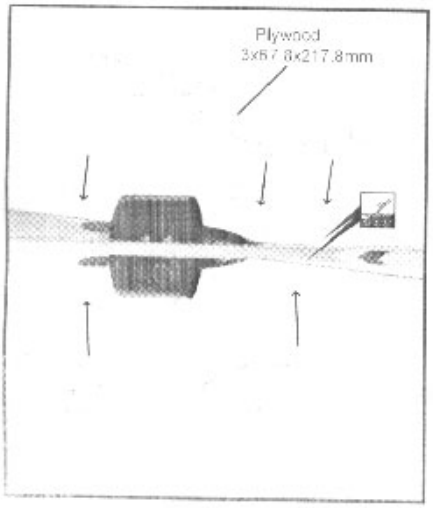


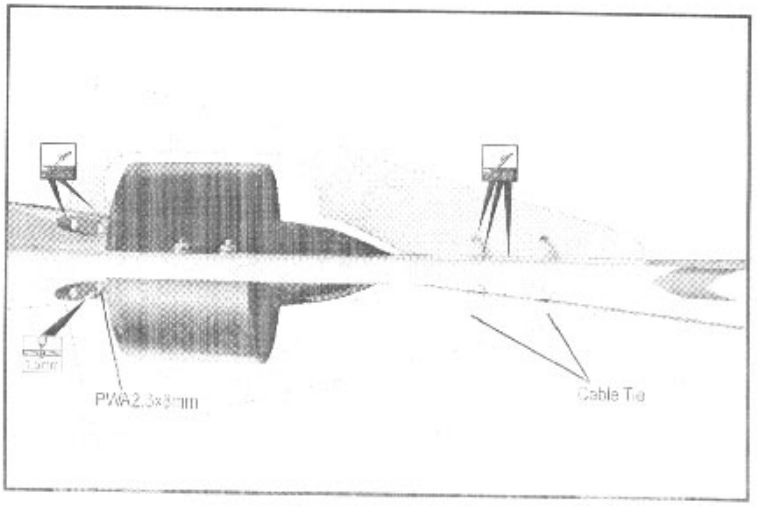




!

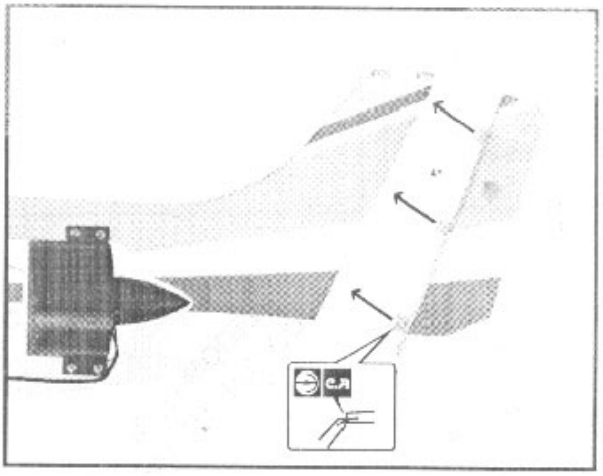
● Make sure TWM logo on ducted fan stay on left side of fuselage.

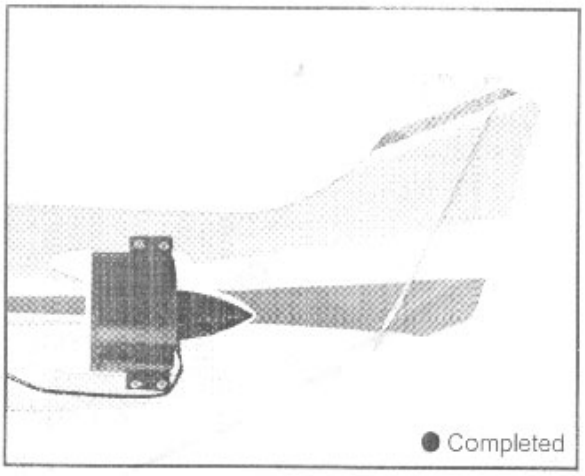




4 Rudder

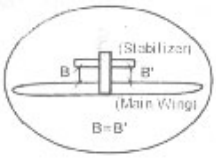
● Apply instant type CA glue to both sides of each hinge.



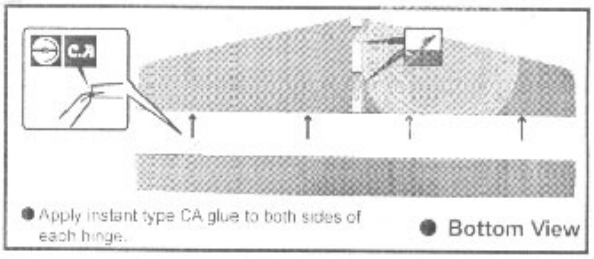


● Completed

5 Stabilizer & Elevator

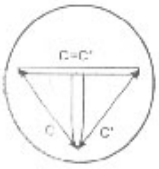


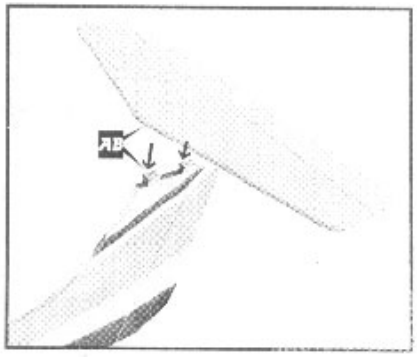
Temporary install the main wing, adjust leveling of the stabilizer to make it as parallel to the main wing as possible.

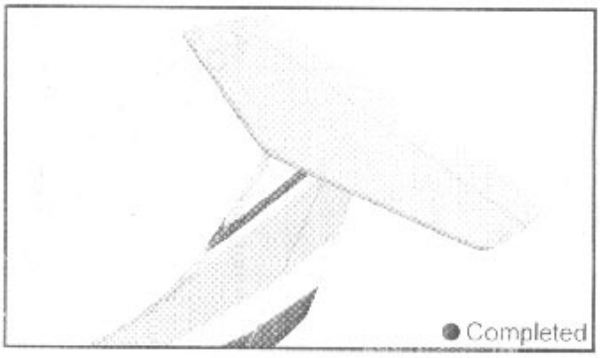


● Apply instant type CA glue to both sides of each hinge.

● Bottom View



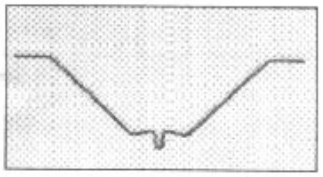


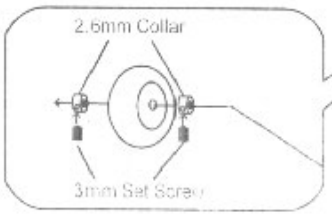


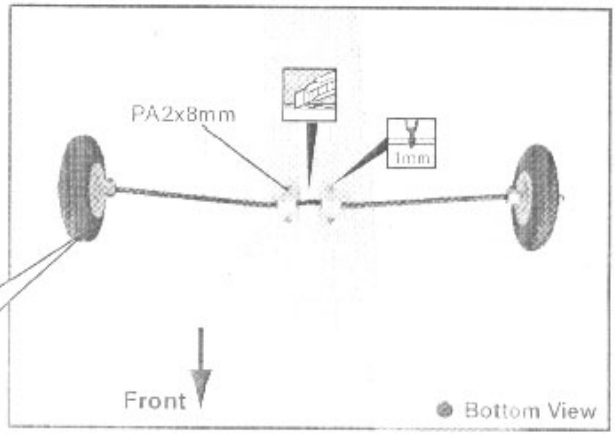
● Completed

6 Main Landing Gear

PA2x8mm **Screw**	4
2.6mm **Collar**	4







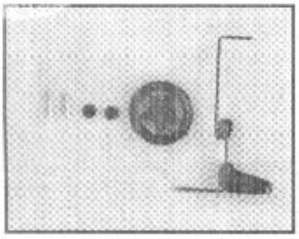
● Bottom View

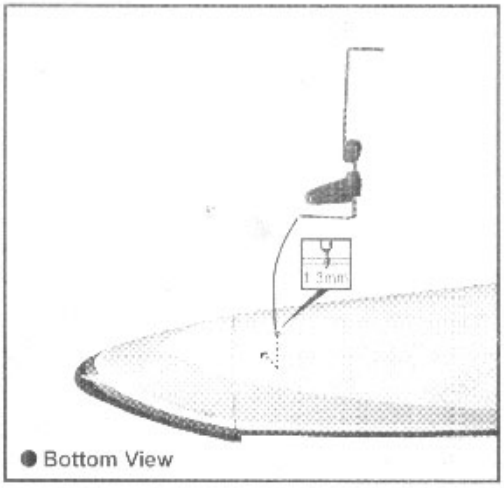
L/R

7 Front Landing Gear

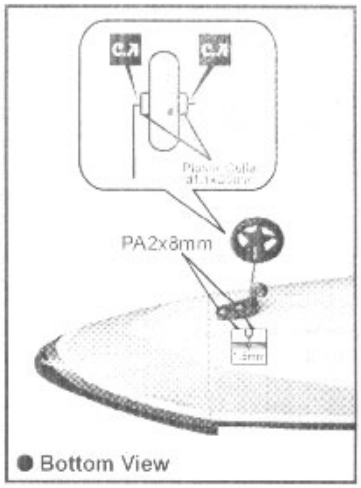
● Ø1mm pilot hole is pre-drilled. Please look for pin-hole marks at under side of fuselage.

PA2x8mm Screw — 2





● Bottom View

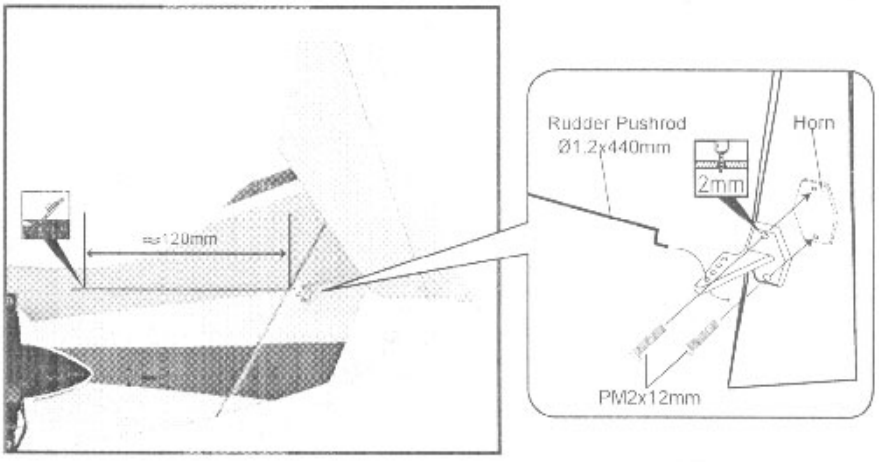


● Bottom View

8 Rudder Pushrod

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

PM2x12mm Screw — 2

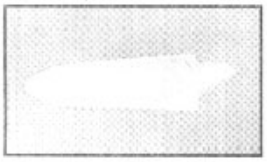


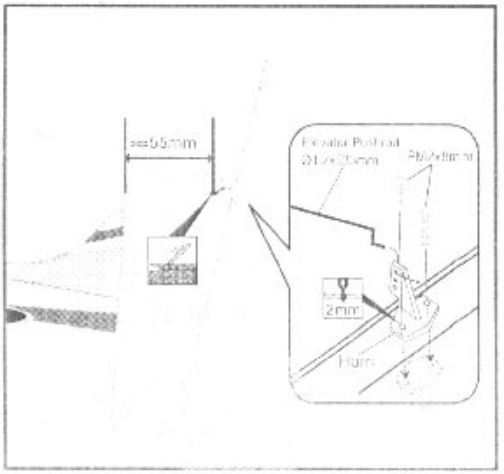
9 Elevator Pushrod

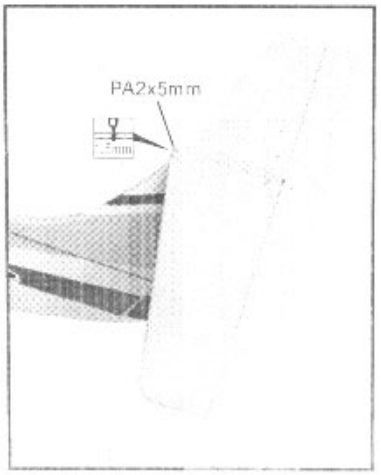
● Ø1mm pilot holes for World Models horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.

PM2x8mm Screw — 2

PA2x5mm Screw — 3

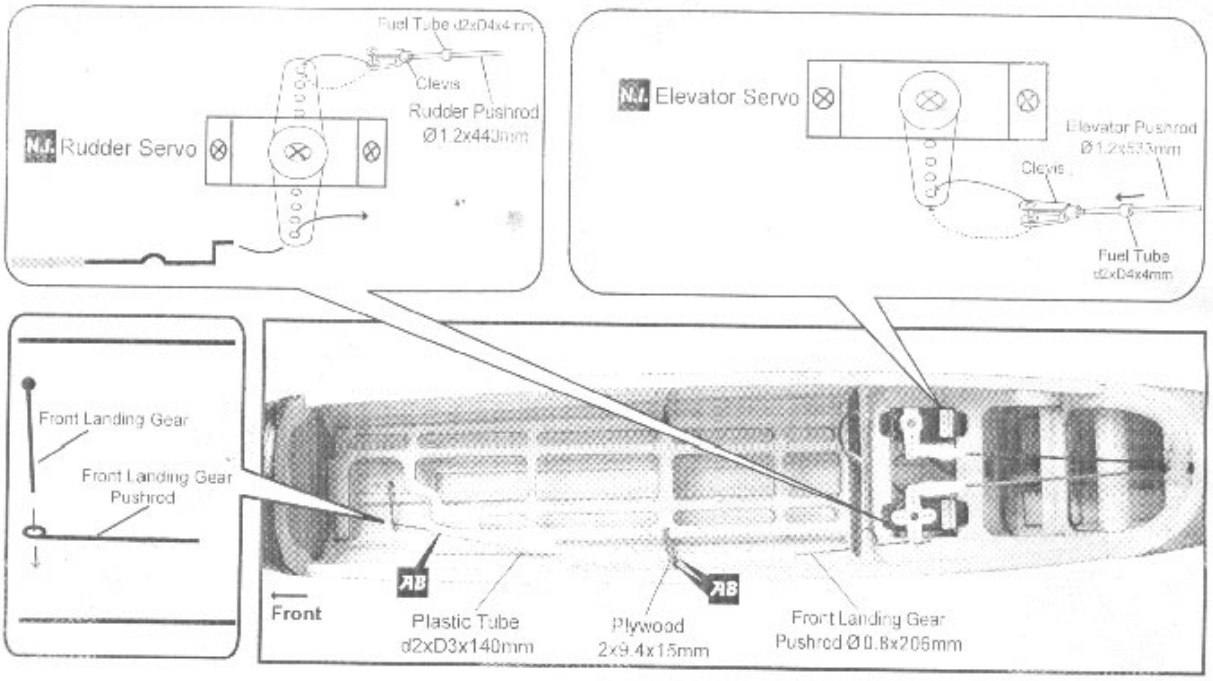


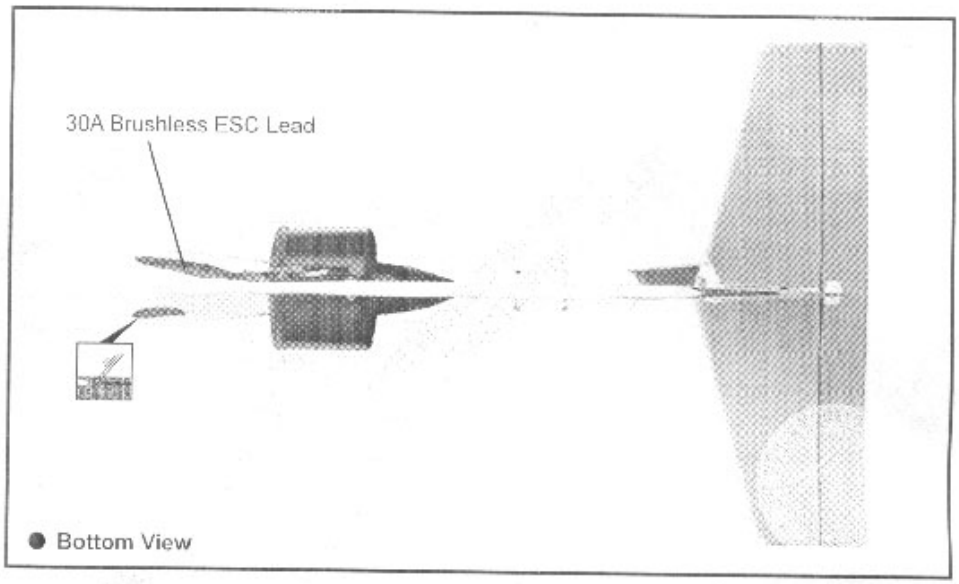


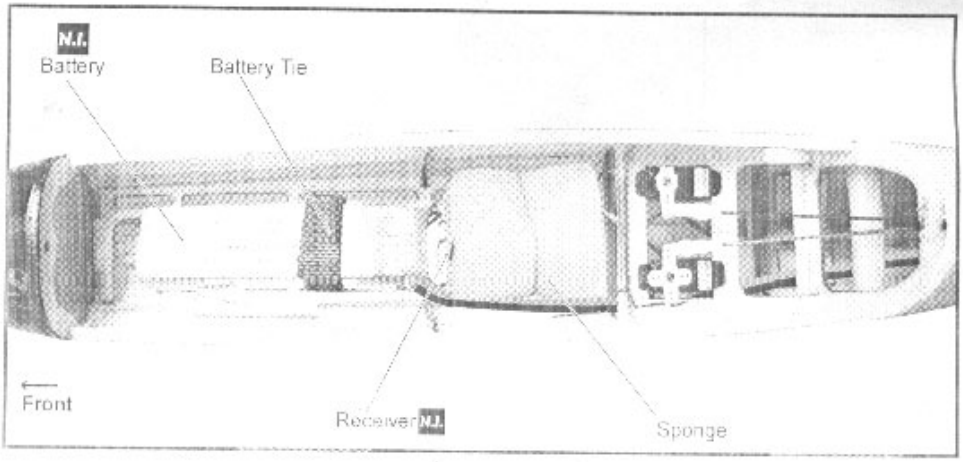


10 Radio Equipment

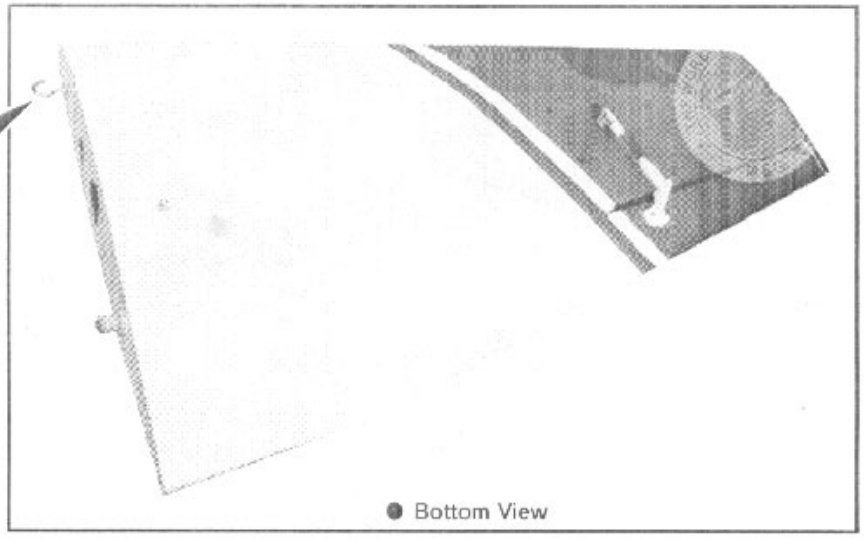
- Install and arrange the equipment as shown in the diagrams.



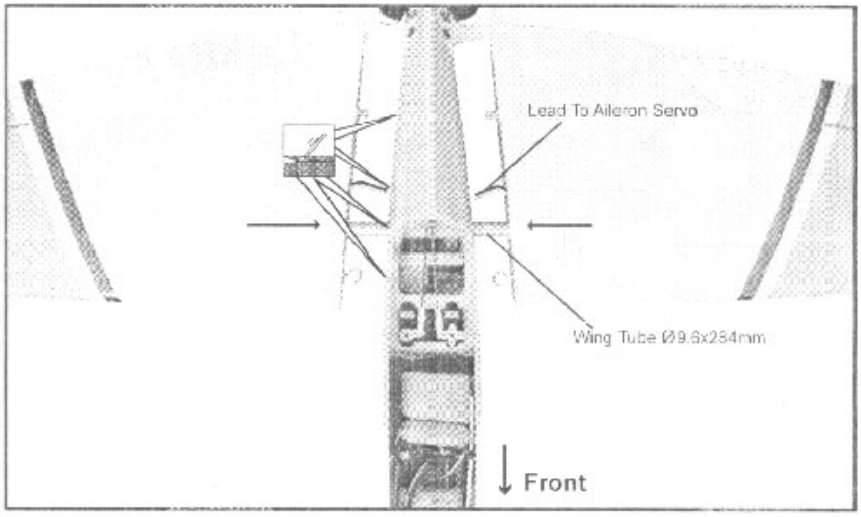


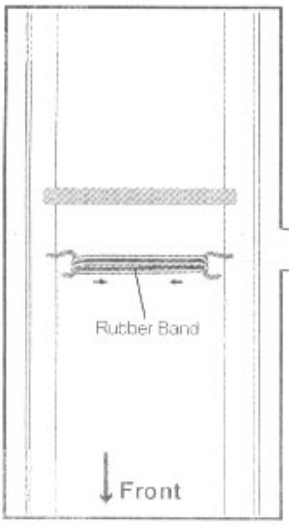


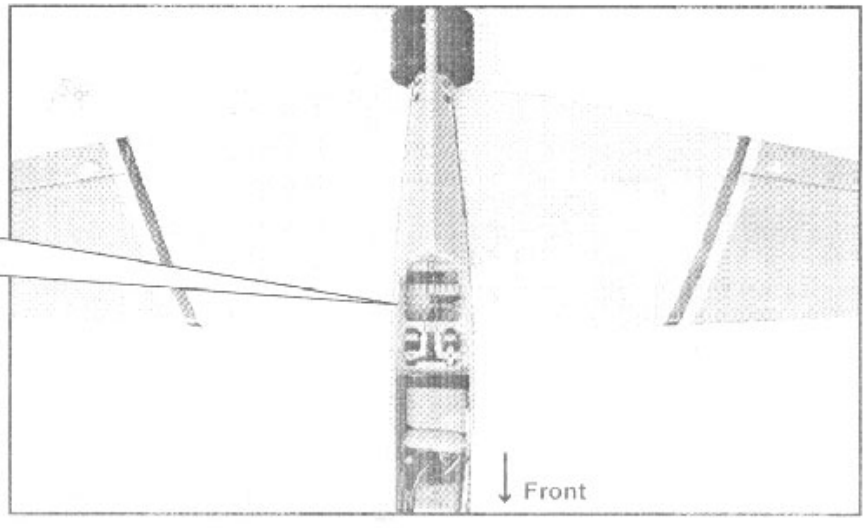
11 Main Wing



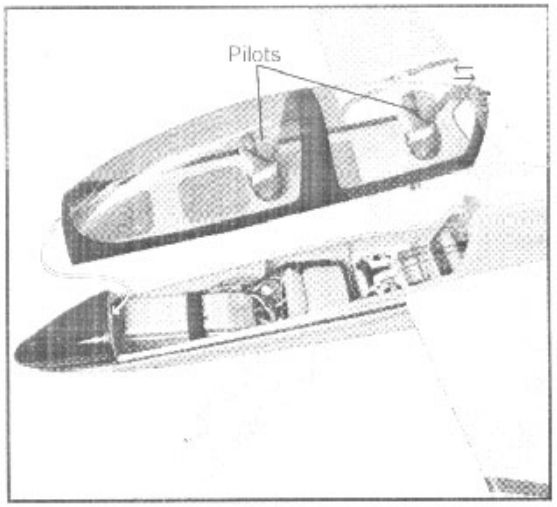
L/R

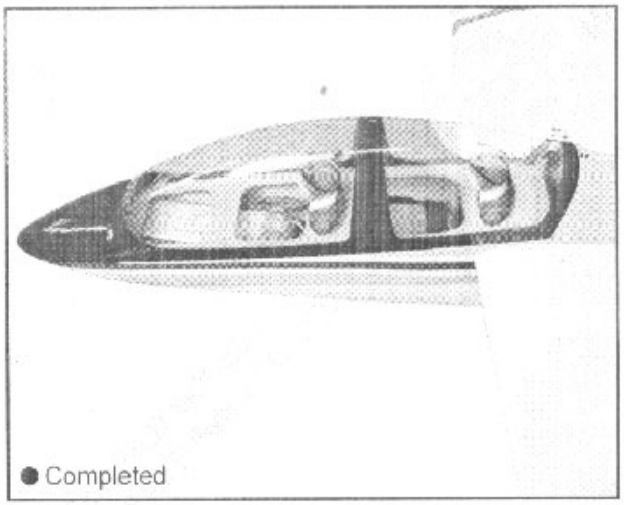






12 Cockpit

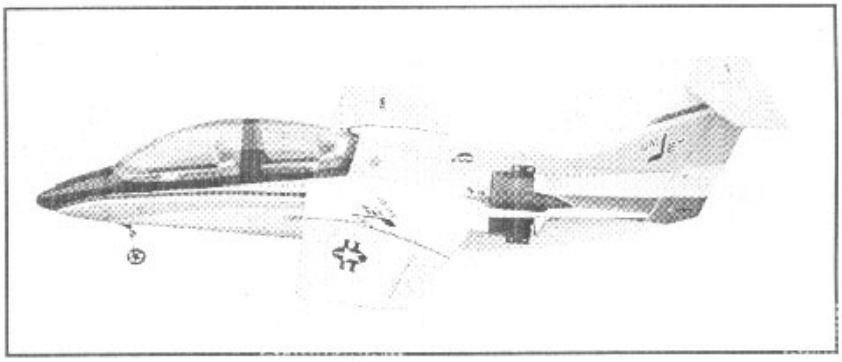


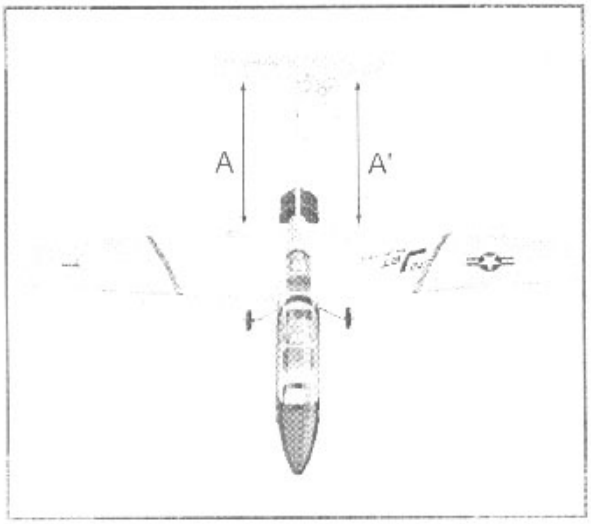


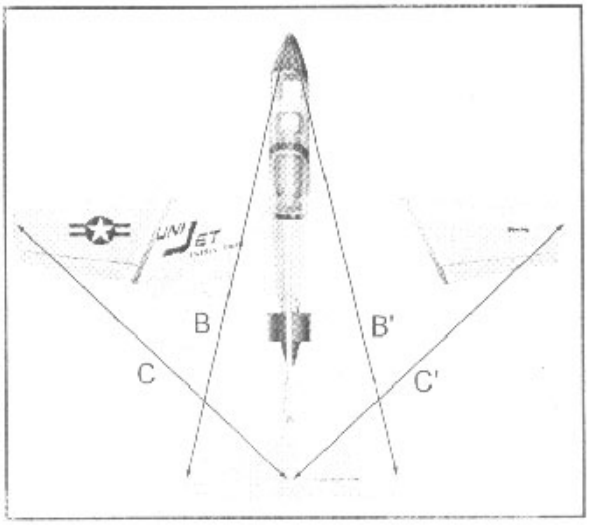
● Completed

13 Wing Setting

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



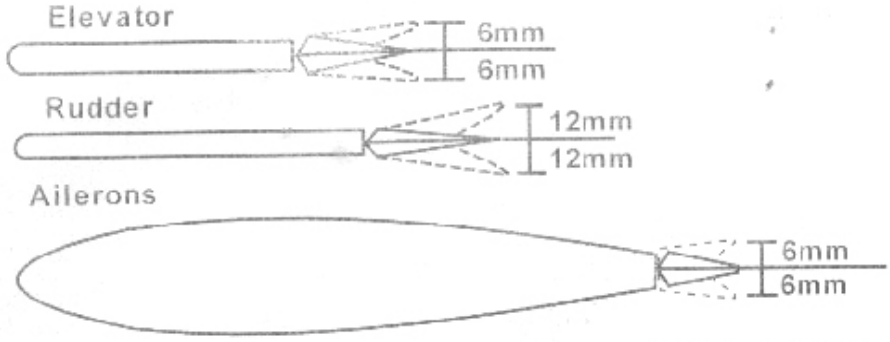




A=A'　　B=B'　　C=C'

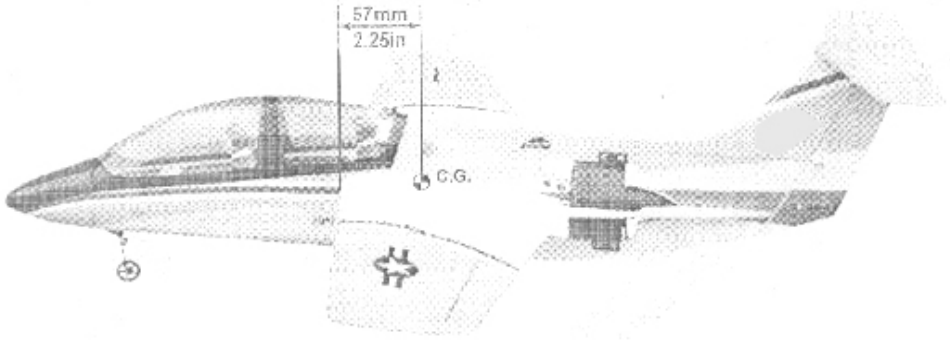
14 Control Throws

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



15 C.G.

- The ideal C.G. position is **57mm (2.25in)** 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.

Dragonfly is designed for high speed flying. Too low an air speed during take off or landing may cause tip stall. Point the **Dragonfly** towards the wind, use full throttle and let the **Dragonfly** gain enough ground speed before pulling the elevator gently for take off. For landing, approach against the wind, maintain power to the ducted fan to keep enough air speed before touch down.

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.