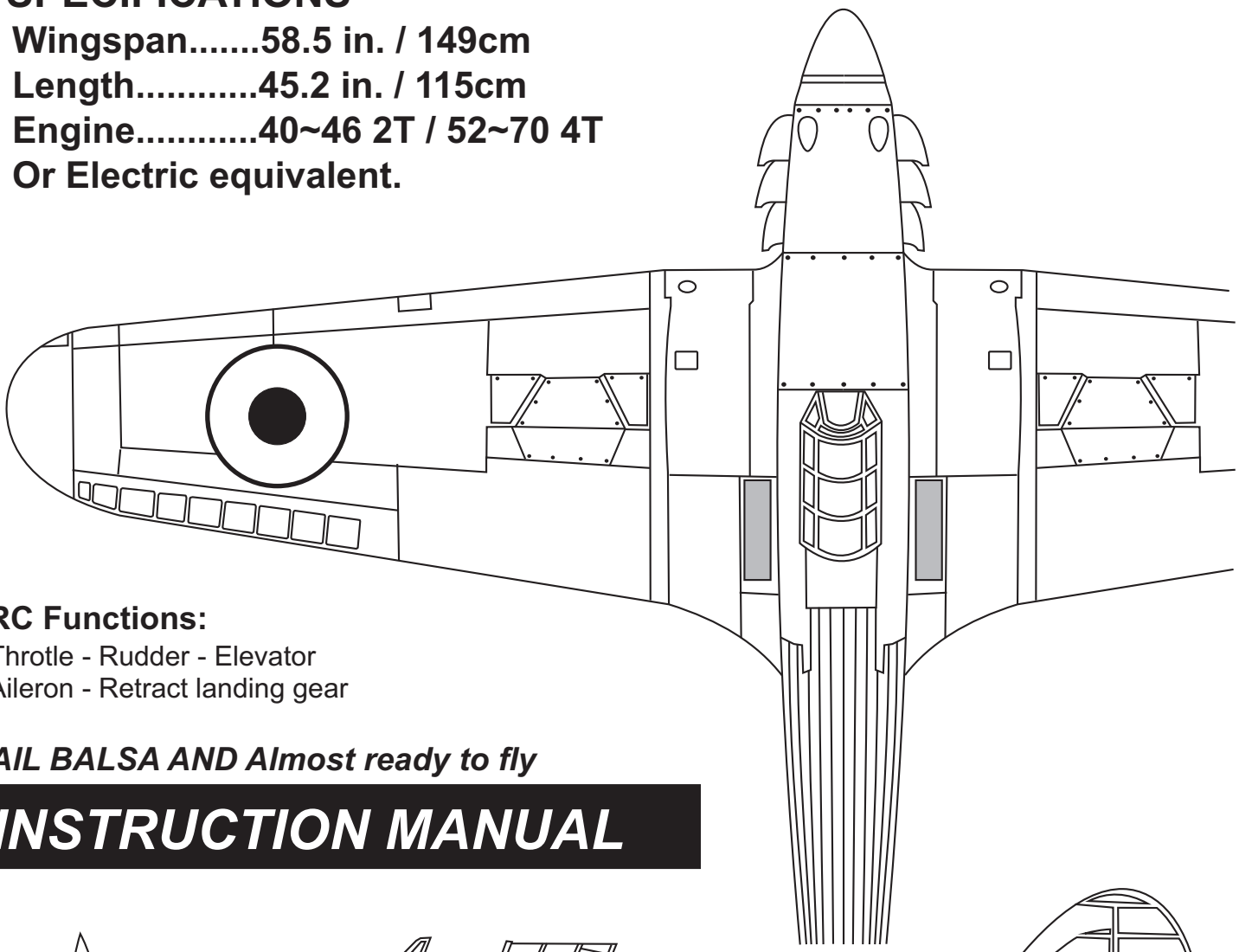
VQAO41G
VQA041B

RADIO CONTROL MODEL

HURRICANE

SPECIFICATIONS

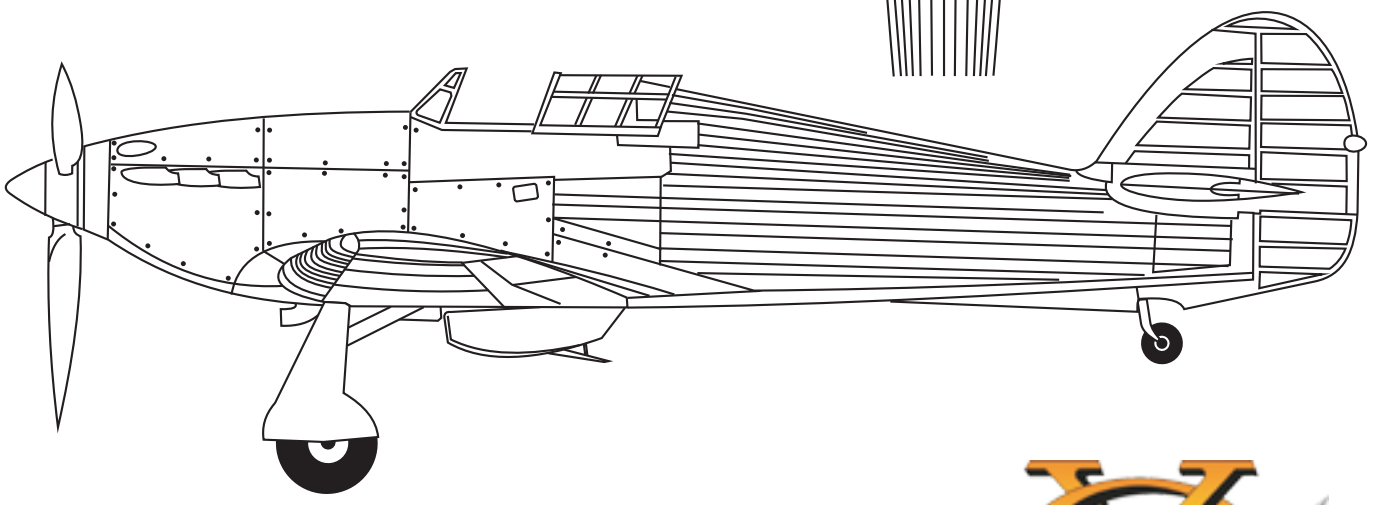
Wingspan.....58.5 in. / 149cm
Length.....45.2 in. / 115cm
Engine.....40~46 2T / 52~70 4T
Or Electric equivalent.



RC Functions:
Throttle - Rudder - Elevator
Aileron - Retract landing gear

AIL BALSA AND Almost ready to fly

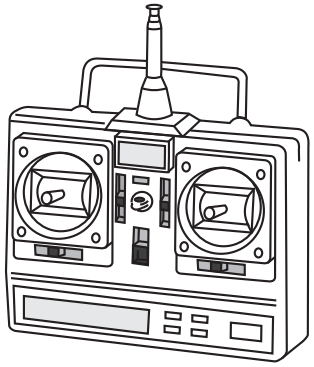
INSTRUCTION MANUAL

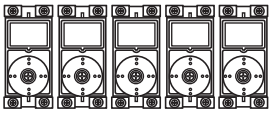


WARNING!

This radio control model is not a toy. If modified or flow carelessly it could go out of control and cause serious bodily injury or property damage.
Before flying your airplane, ensure the air field is spacious enough.
Always fly it outdoors in safe areas with no debris or obstacles.

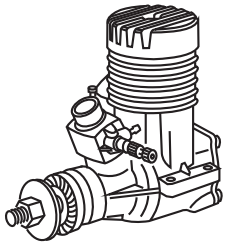
REQUIRED FOR OPERATION (Purchase separately)



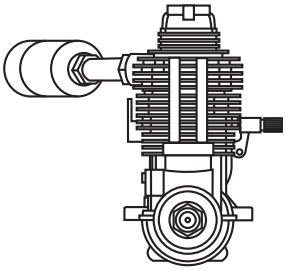


Minimum 5 channel radio
for airplane with 5 servos
.Motor control x1 .Aileron x2
.Elevator x1 .Rudder x1

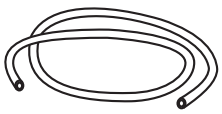
10.5x6 for .40 - 2 cycle engine
11x6 for .46 - 2 cycle engine
12x6 for .60 - 4 cycle engine
12x7 for .70 - 4 cycle engine
13x8 - Brushless Motor



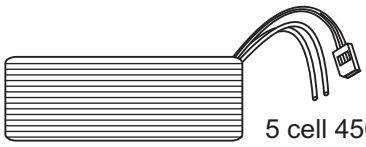
.46 ~ .50 - 2 cycle



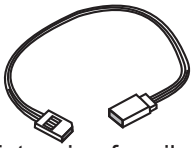
.60 ~.70 - 4 cycle



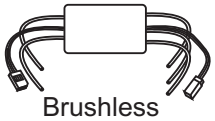
Silicone tube



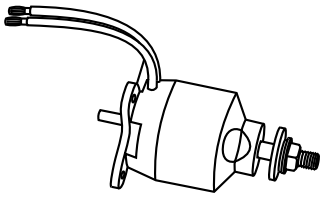
5 cell 4500mAh.



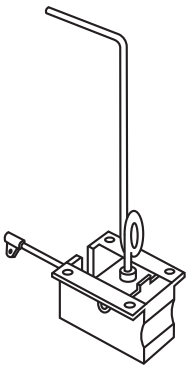
Extension for aileron servo, retract servo.



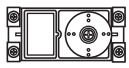
Brushless Motor Control



G-46 HP Brushless Motor or equivalent.



Retract landing gear VQAR05



Retract servo x1

Linkage Stopper x2
(for retract servo)

GLUE (Purchase separately)

Silicon sealer

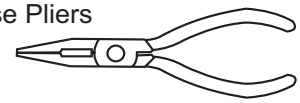
Cyanoacrylate Glue

Epoxy Glue (5 minute type)
Epoxy Glue (30 minute type)

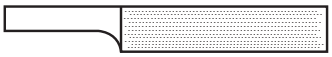
TOLLS REQUIRED (Purchase separately)

Hobby knife

Needle nose Pliers

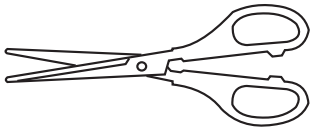


Sander



Phillip screw driver

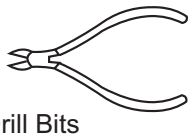
Scissors



Hex Wrench

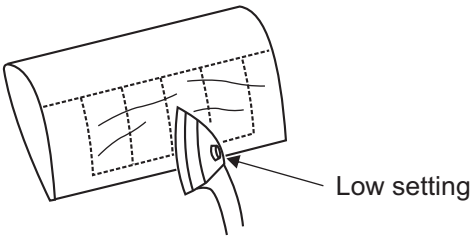
Awl

Wire Cutters



Masking tape - Straight Edged Ruler - Pen or pencil - Rubbing alcohol - Drill and Assorted Drill Bits

The pre-covered film on ARF kit may wrinkle due to variations of temperature. Smooth out as explained right.
* Use an iron or heat gun. Start as low setting. Increase the setting if necsessary. If it is too high, you may damage the film



Symbols used throughout this instruction manual, comprise:

Drill holes using the stated size of drill (in this case 1.5 mm Ø)

Take particular care here

Hatched-in areas: remove covering film carefully

Check during assembly that these parts move freely, without binding

Use epoxy glue

Apply cyano glue

Assemble left and right sides the same way.

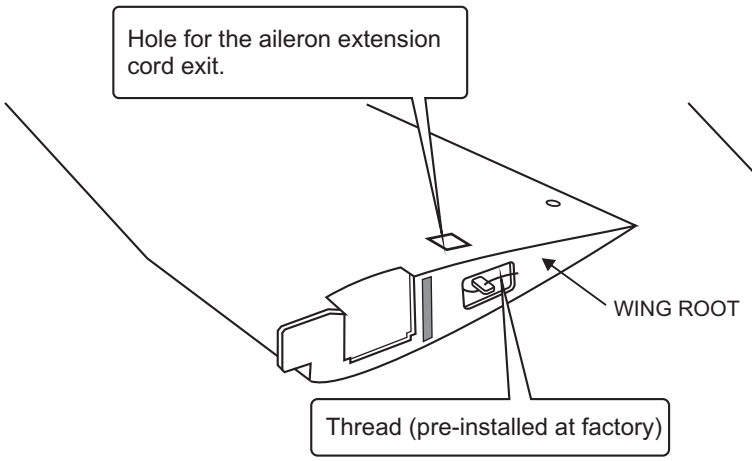
Not included.
These parts must be purchased separately

Read through the manual before you begin, so you will have an overall idea of what to do.

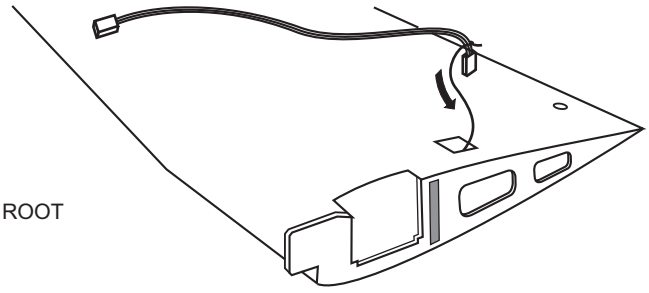
CONVERSION TABLE

1.0mm = 3/64”	3.0mm = 1/8”	10mm = 13/32”	25mm = 1”
1.5mm = 1/16”	4.0mm = 5/32”	12mm = 15/32”	30mm = 1-3/16”
2.0mm = 5/64”	5.0mm = 13/64”	15mm = 19/32”	45mm = 1-51/64”
2.5mm = 3/32”	6.0mm = 15/64”	20mm = 51/64”	

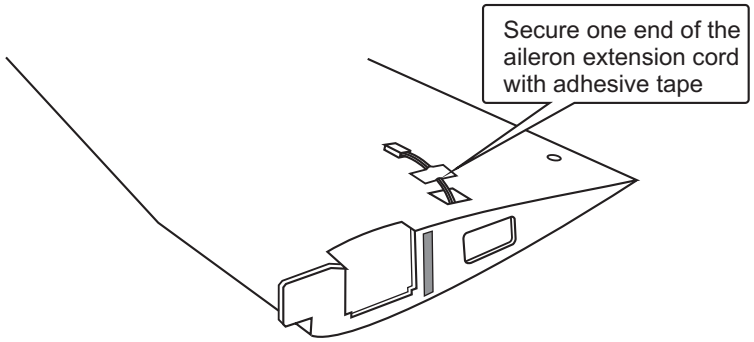
1- Joining the wing



WING - TOP VIEW



Using the thread (pre-installed at factory) to slide the aileron extension cord into the wing half.



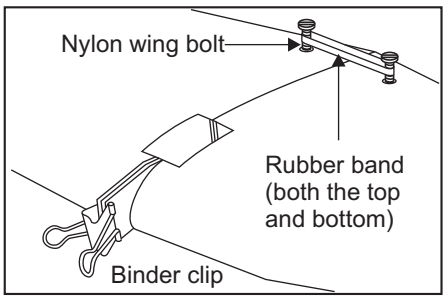
Do the same way with other wing half.

2- Joining the wing

Note: The two wing halves roots must fit together perfectly.

! Make sure to glue securely, If not properly glued, a failure in flight may occur.

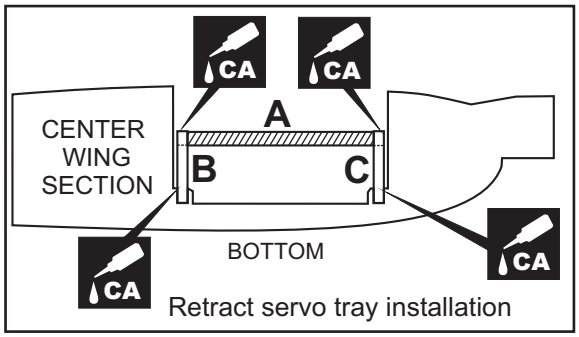
Hold the wing halves together with binder clip and rubber band (not include)



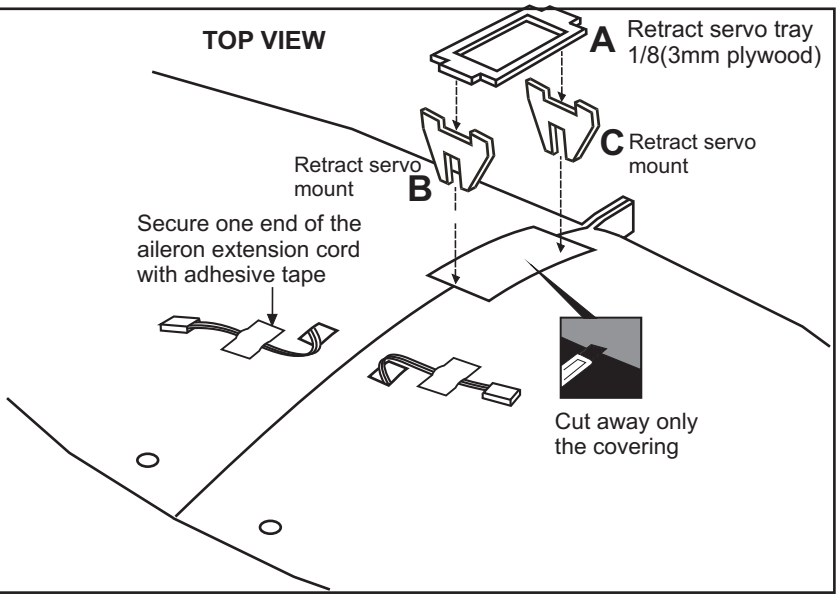
1- Using a pencil, mark the center of the brace.
2- Trial fit the wing joiner into one of the wing panels. It should insert smoothly up to the center line marked above.
3- Slide the other wing half onto the dihedral brace until the wing panel meet. If the fit is over tight, it may be necessary to lightly sand the dihedral brace.
4- Check for the correct dihedral angle.
5- Mix up some 30 minute epoxy and apply a generous amount of epoxy into the wing joiner cavity of one wing half.
6- Coat one half of the dihedral brace with epoxy up to the center line. Install the epoxy-coated side of the dihedral brace into the wing joiner cavity up to the center line, marking sure that the “V” of the dihedral brace is positioned correctly
7- Do the same way with the other wing half.
8- Carefully slide the wing halves together, ensuring that they are accurately aligned. Firmly press the two halves together, allowing the excess epoxy to run out. Clean off the excess epoxy.

IMPORTANT: Please do not clean off the excess epoxy on the wing with strong solvent or pure alcohol, only use kerosene to keep the colour of your model not fade.

3- Retract servo tray

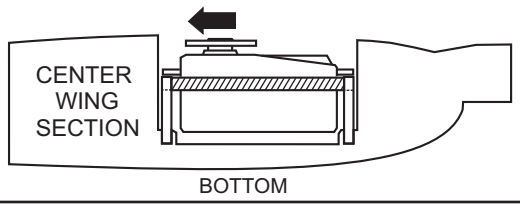


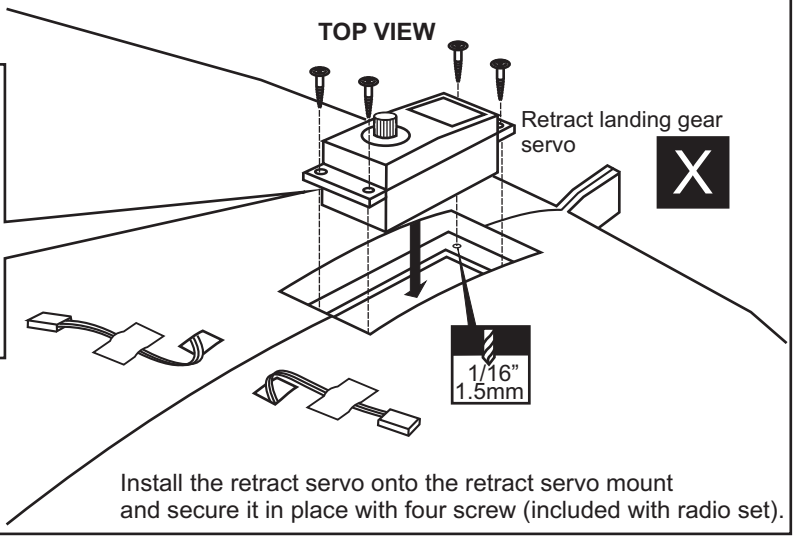
Retract servo tray installation



4- Servo Installation

RETRACT SERVO INSTALLATION
Note: The head of servo should be positioned toward the rear of the wing.



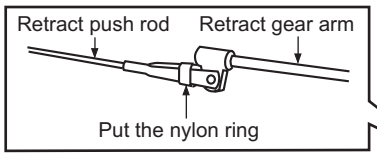


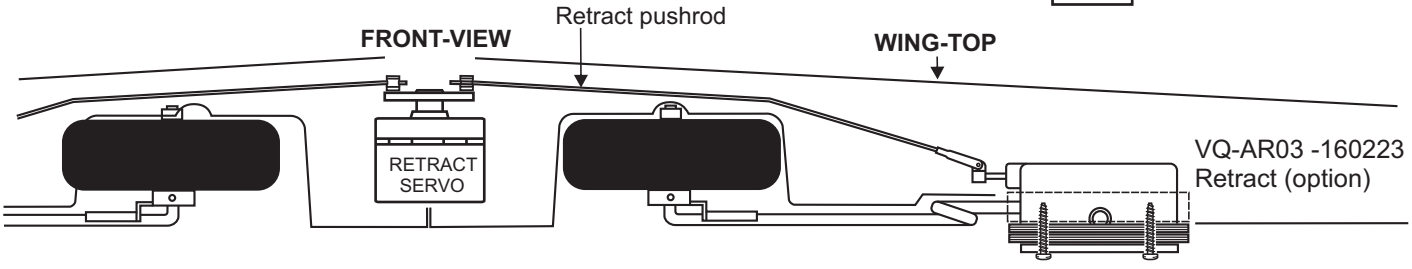
Install the retract servo onto the retract servo mount and secure it in place with four screw (included with radio set).

5- Retract landing gear installation

Trial fit the push rod into the wing. Join the pushrod to the retract gear arm and trial fit the retract into the wing.

After checking that the retract works smoothly, fix the retract on the wing with 3x20mm self tapping screws. Do the same way with other half wing.





6- Fixed gear

3x12mm screw 8

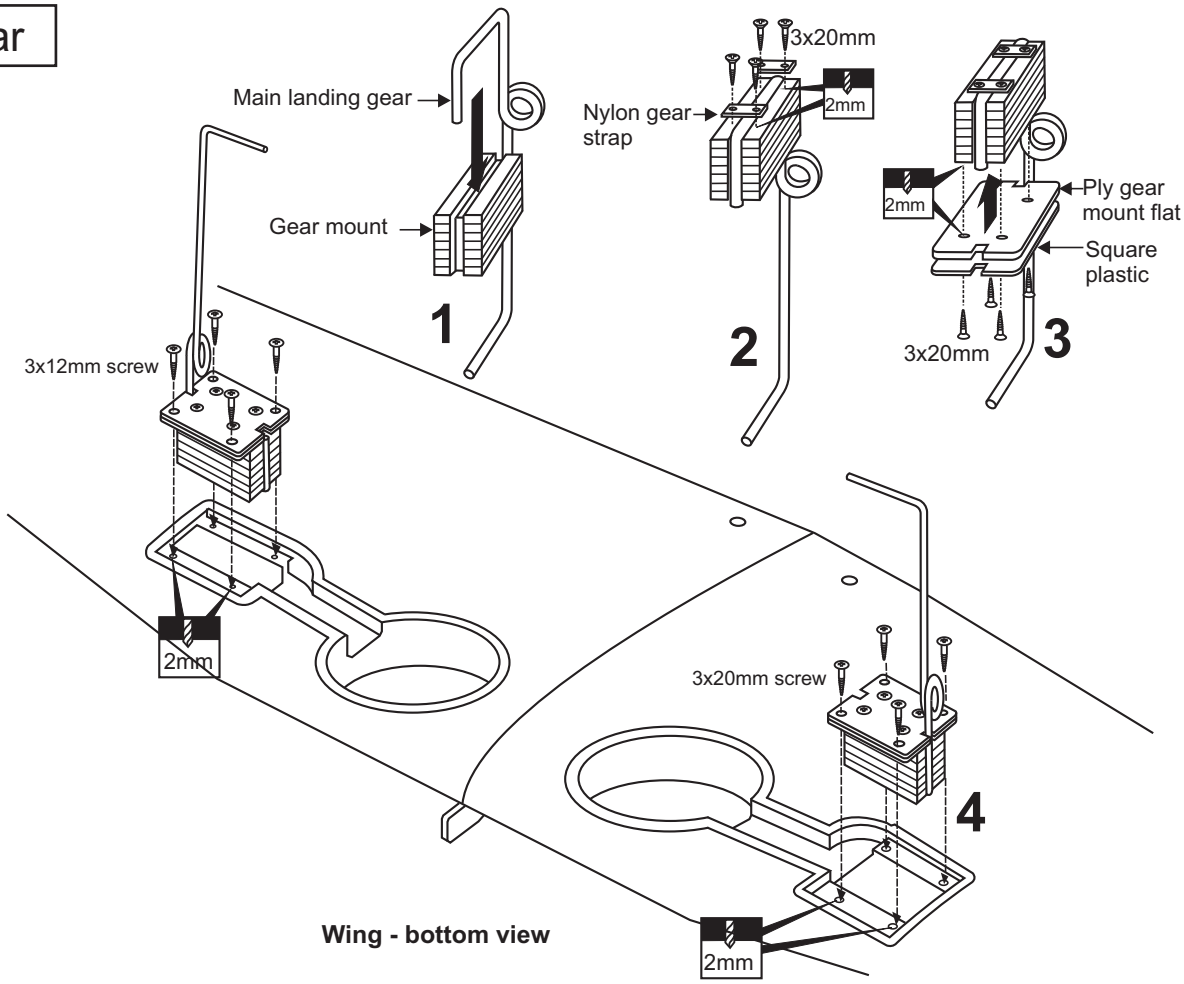
3x20mm screw 16

Nylon gear strap 4

Gear mount x 2

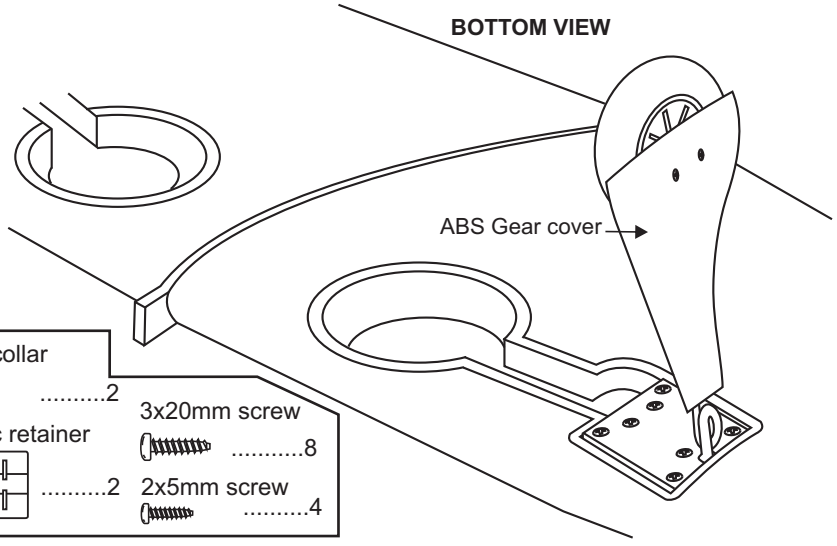
Ply gear mount plate x 2

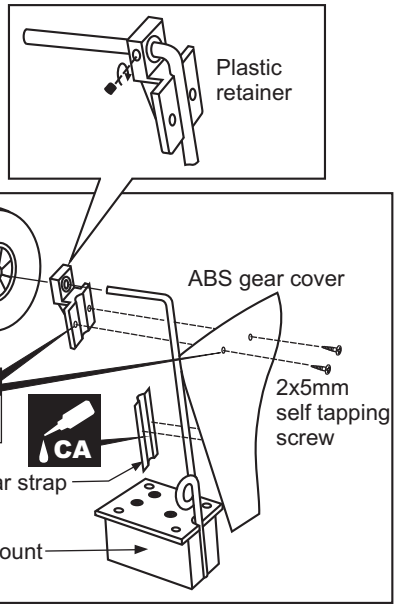
Square plastic x 2



Wing - bottom view

7- Fix gear installation





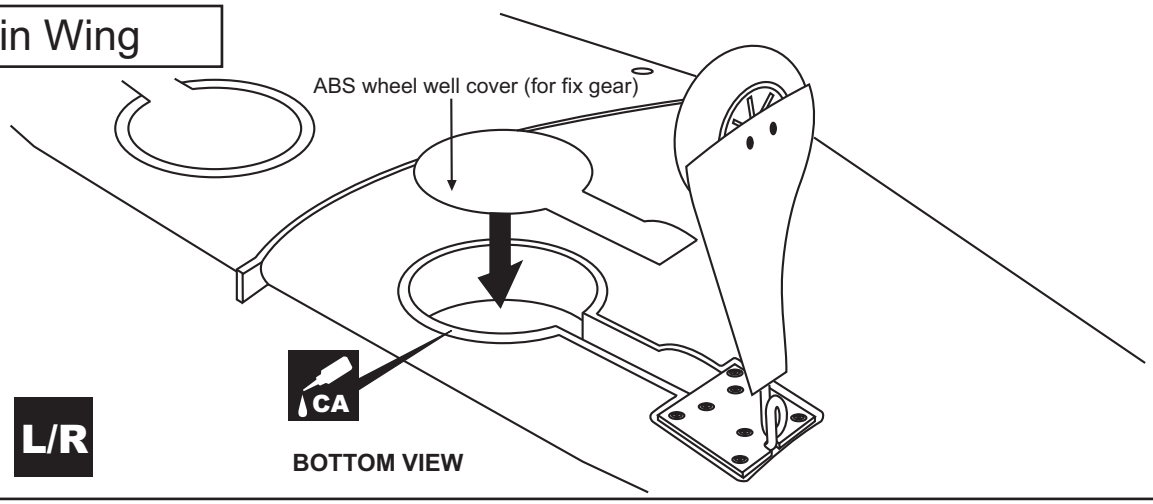
4mm collar 2

Plastic retainer 2

3x20mm screw 8

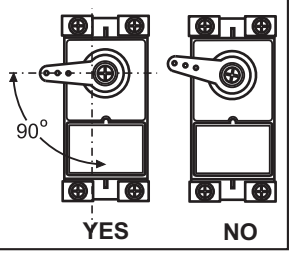
2x5mm screw 4

8- Main Wing



9- Aileron servo

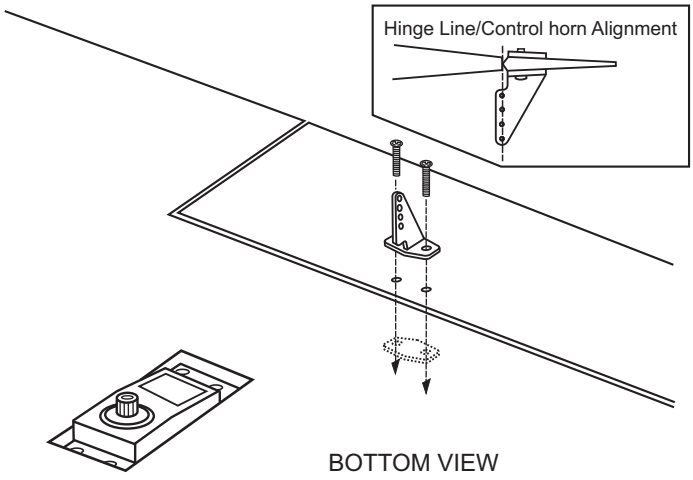
-Switch on the radio (trims centered) then mount the ailerons servo horn in neutral position.
-The servo horn should be perpendicular to the servo.



BOTTOM VIEW

Connect the aileron extension cord to the aileron servo and secure with adhesive tape before install the aileron servo on to the wing.
Do the same way with second aileron servo.

10- Aileron linkage



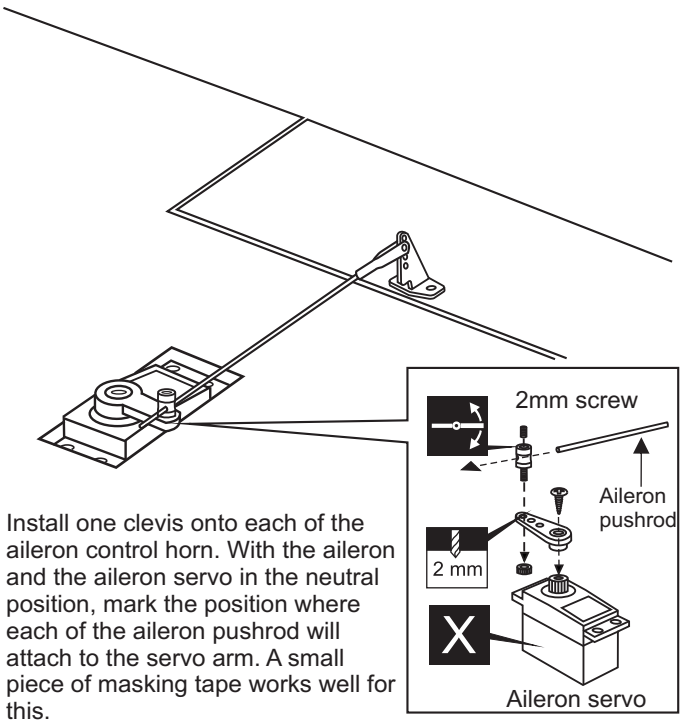
BOTTOM VIEW

Depending on the position of the linkage, determine the location of aileron control horn.
The horn holes must be perfectly aligned with the axis of articulation.
Mark the position of the “foot” of the horn on the aileron. Then, with the drill, make the 2 holes.
Install the aileron control horn as shown.

Do the same way with second aileron servo.

Plastic control horn 2

2x20mm screw 4



Install one clevis onto each of the aileron control horn. With the aileron and the aileron servo in the neutral position, mark the position where each of the aileron pushrod will attach to the servo arm. A small piece of masking tape works well for this.
Cut off the excess length of each rod.

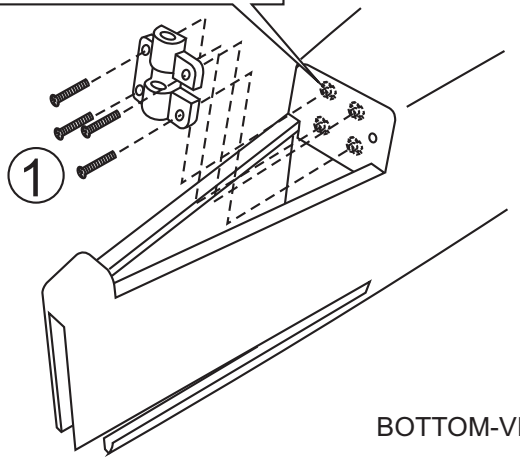
Connector 2

.....2

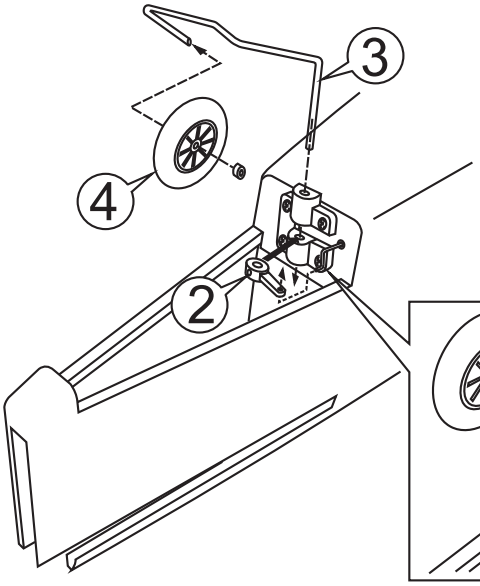
Aileron push rod ..2

11- Tail wheel

Pre-installed at factory.



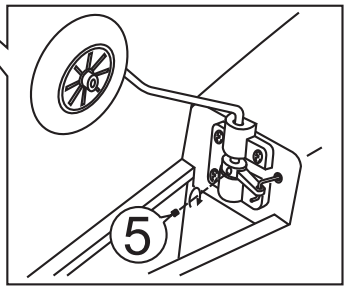
BOTTOM-VIEW



2mm tail gear horn 1

Tail gear mount 1

3x15mm screw 4



NOTE: Insert the Z bend of the tail gear pushrod into the hole on the tail gear horn before insert the tail gear horn on to the tail gear mount. (2)

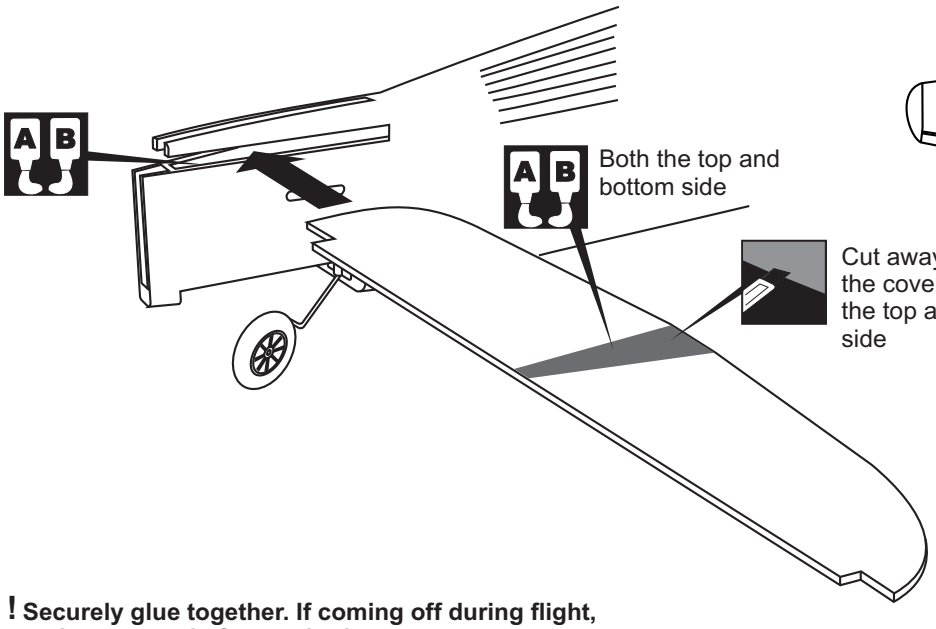
12- Horizontal stabilizer

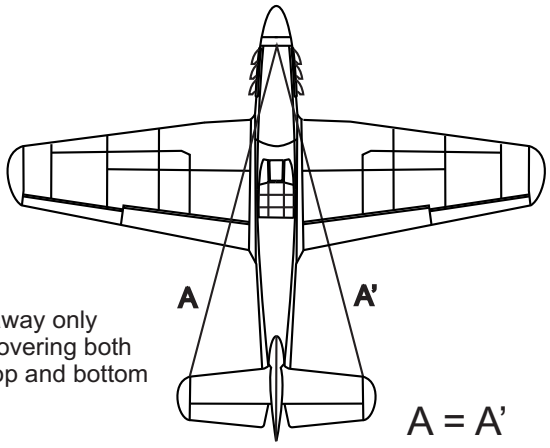
1-Trial fit the horizontal stabilizer in place . Check the alignment of the horizontal stabilizer. When you are satisfied with the alignment, use a pencil to trace around the top and bottom of the stabilizer where it meets the fuselage.

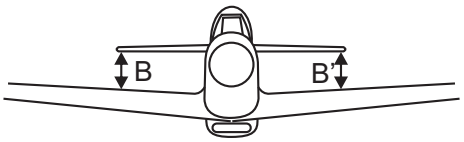
2-Remove the horizontal stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering inside the lines which were marked above.

3-Spread epoxy (30 minute) onto the top and bottom of the horizontal stabilizer along the area where the covering was removed and to the fuselage where the horizontal stabilizer mounts.

4-Install the horizontal stabilizer into the fuselage and adust the alignment as described in steep 1.



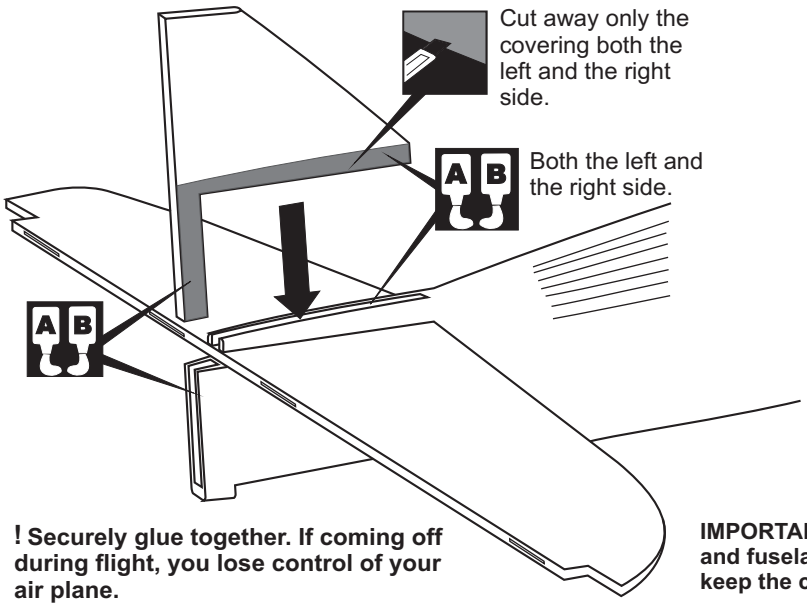




! Securely glue together. If coming off during flight, you lose control of your air plane.

IMPORTANT: Please do not clean off the excess epoxy on the wing with strong solvent or pure alcohol, only use kerosene to keep the colour of your model not fade.

13- Vertical Stabilizer



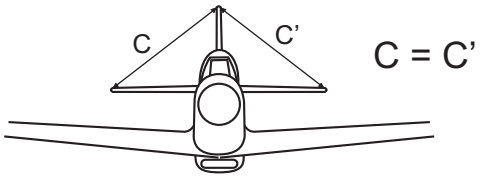
! Securely glue together. If coming off during flight, you lose control of your air plane.

1-Trial fit the vertical stabilizer in place . Check the alignment of the vertical stabilizer. When you are satisfied with the alignment, use a pencil to trace around the right and left of the stabilizer where it meets the fuselage.

2-Remove the vertical stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering inside the lines which were marked above.

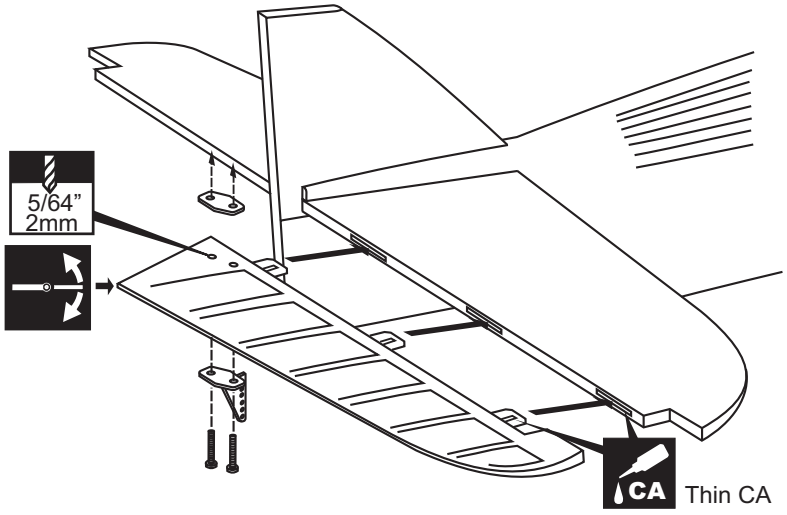
3-Spread epoxy (30 minute) onto the right and left and bottom of the vertical stabilizer along the area where the covering was removed and to the fuselage where the vertical stabilizer mounts.

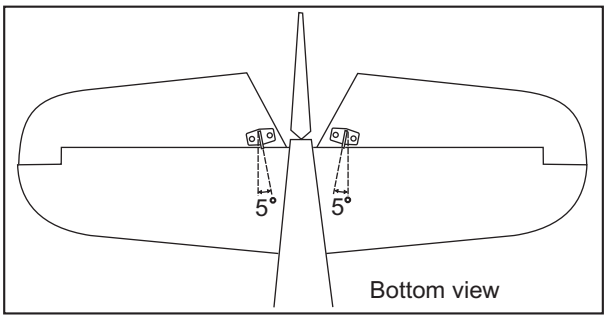
4-Install the vertical stabilizer into the fuselage and adust the alignment as described in steep 1.

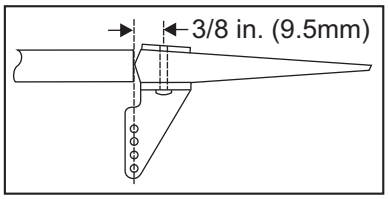


IMPORTANT: Please do not clean off the excess epoxy on the stabilizer and fuselage with strong solvent or pure alcohol, only use kerosene to keep the colour of your model not fade.

14- Elevator and control horn



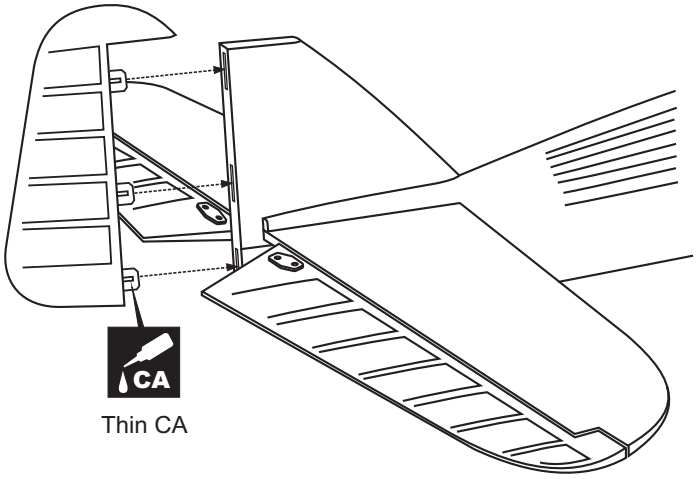


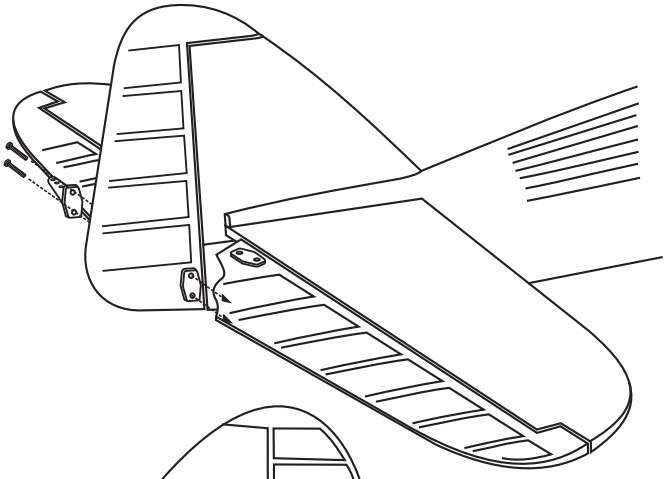


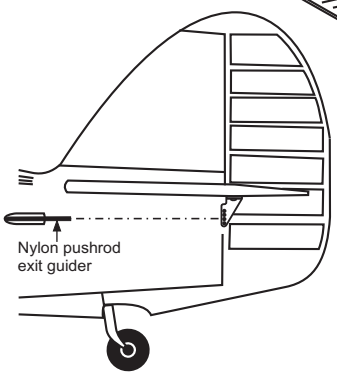
Plastic control horn 2

2x12mm screw 4

15- Rudder and control horn





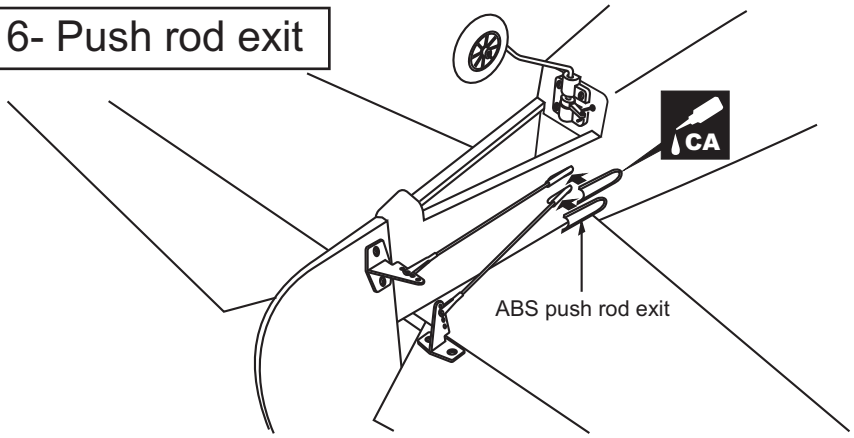


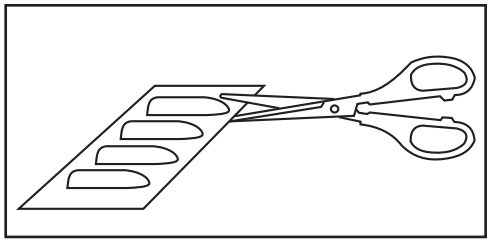
Plastic control horn 1

2x12mm screw 2

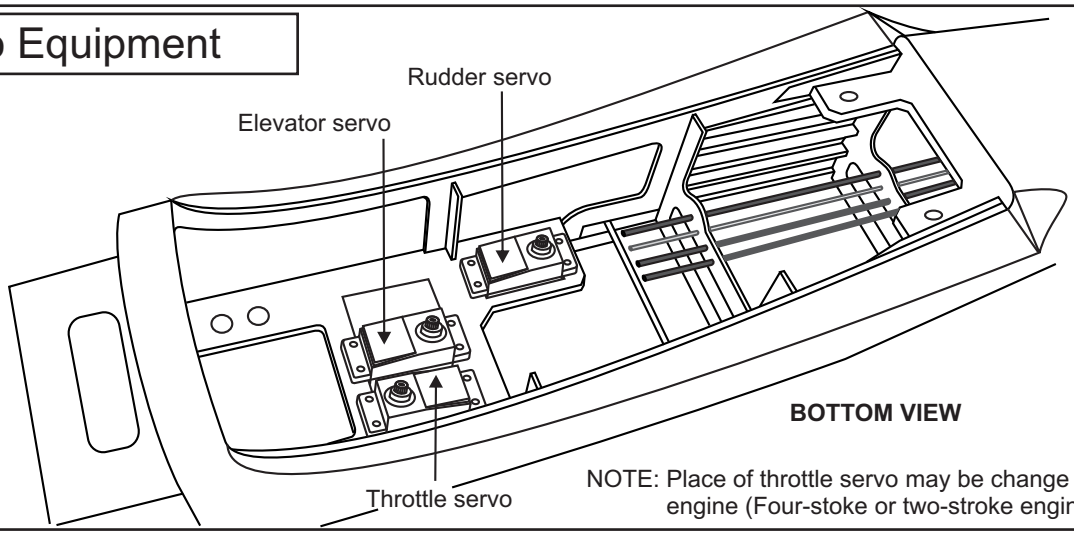
Trial fit the elevator control horn in place and , mark the mounting holes positions with a pencil. Drill 5/64"(2mm) through the rudder and each elevator. Attach the control horns using 2x12mm screws.

16- Push rod exit



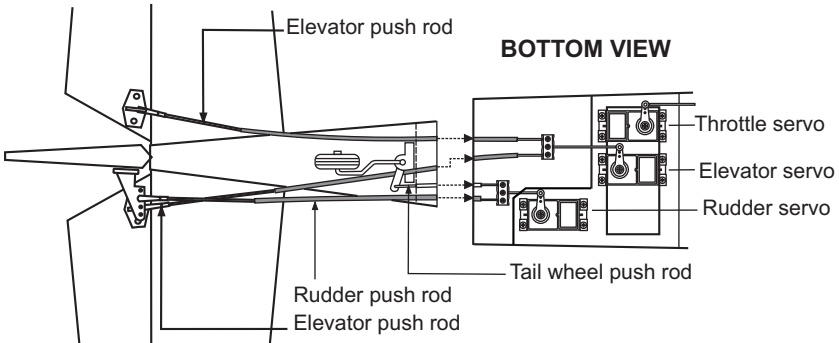


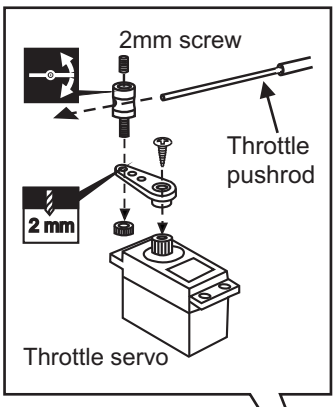
17- Radio Equipment



NOTE: Place of throttle servo may be change depend of engine (Four-stoke or two-stroke engine)

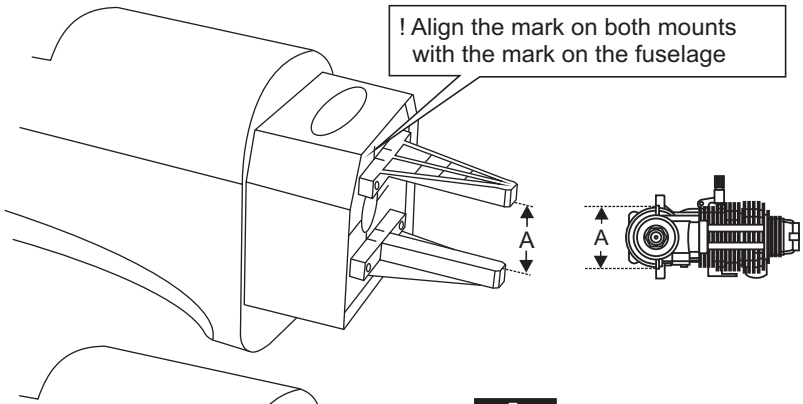
18- Linkages

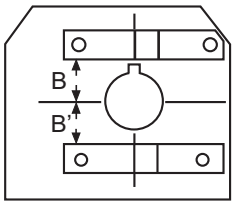




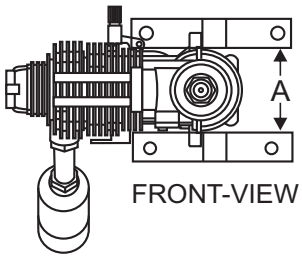
19- Engine mount - engine

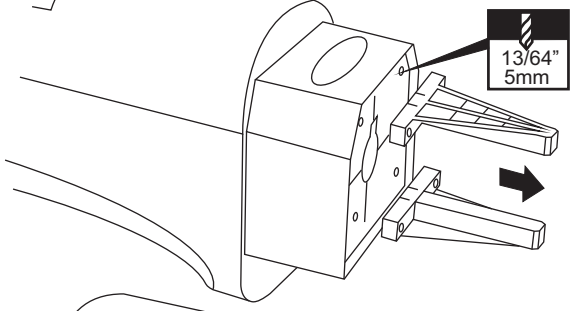
5/32x1" 4x25mm screw ...4	1/8x5-1/64" 3x20mm screw ...4
Blind-nut 4	1/8"(3mm) nut 4





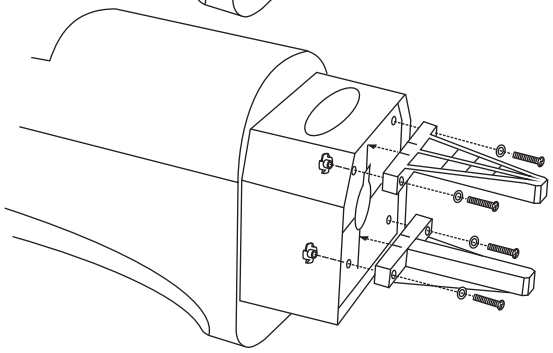
B=B'



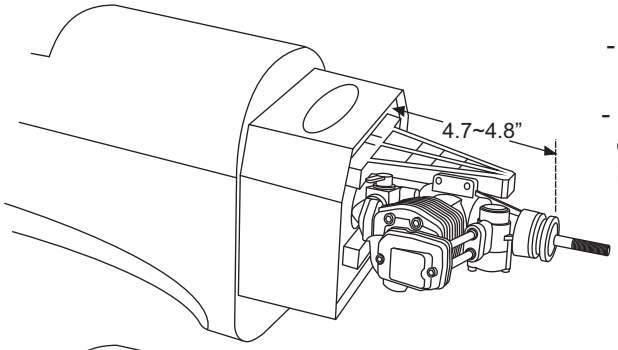


- Using a pencil or felt tipped pen, mark the fire wall where the four holes are to be drilled

- Remove the engine mount and drill a 13/64"(5mm) hole through the fire-wall at each of the four marks marked.

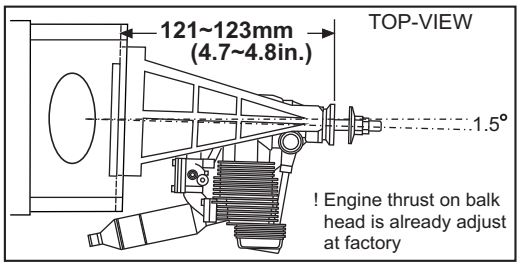


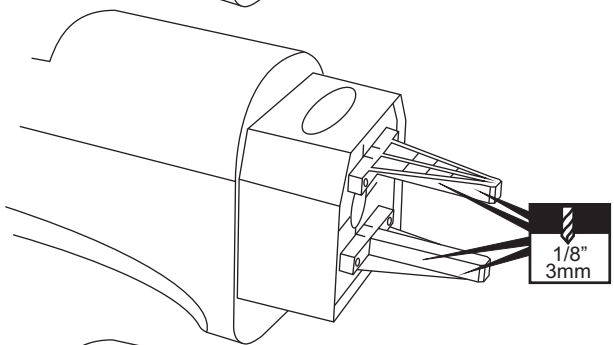
- Reposition the engine mounts on to the fire-wall. Attach the four blind-nut to the fire-wall as show. Secure them with four 4x25mm screw.



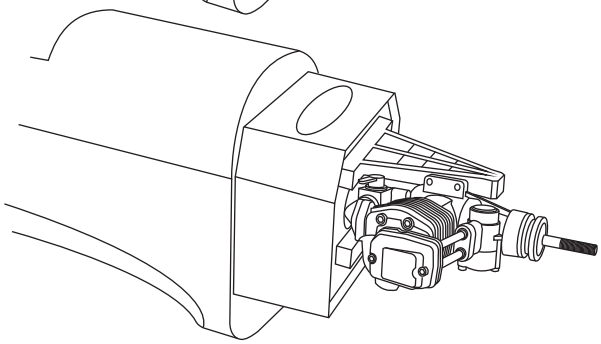
- Position the engine on to the engine mounts so the distance from the prop hub to the fire wall is 121 ~ 123mm (4.7~4.8 in.)

- Mark the engine mounting plate where the four holes are to be drilled.
Note: Mark the mounting plate through the engine mounting flanges.





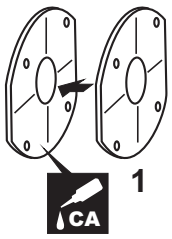
Remove the engine and drill a 1/8"(3mm) holes through the beam at each of the four marks made above.

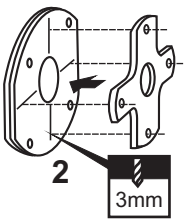


- Reposition the engine on the engine mount beams, aligning it with the holes. Secure the engine to the engine mount using four 1/8x51/64"(3x25mm) screws.

Note: Apply Silicon sealer to each of the 1/8x51/64" screw.

20- Electric motor

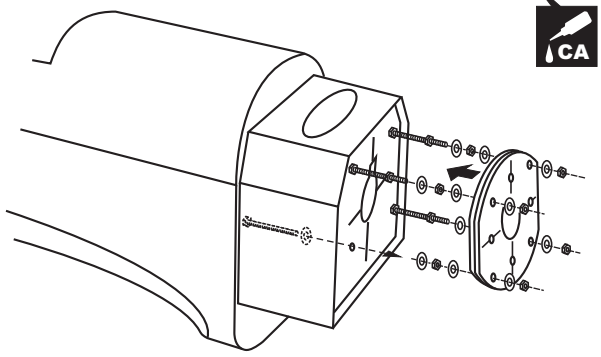


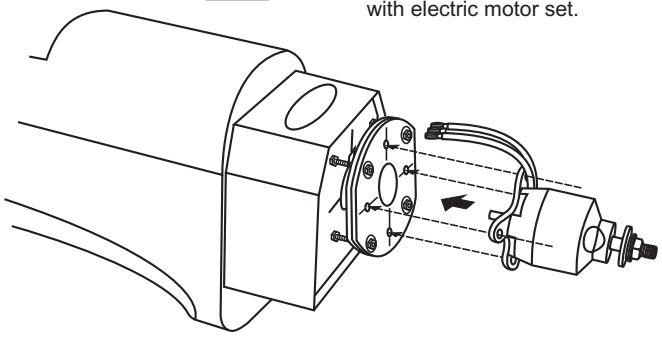


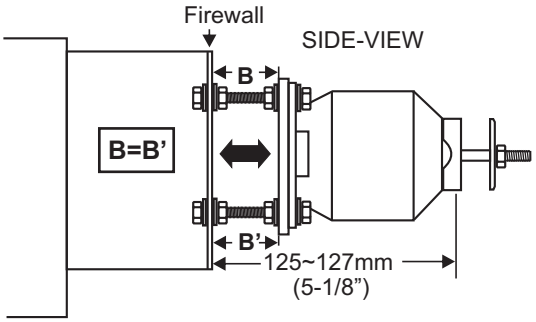
Using a aluminum motor mounting plate as a template, mark the plywood motor mounting plate where the four holes are to be drilled (2).

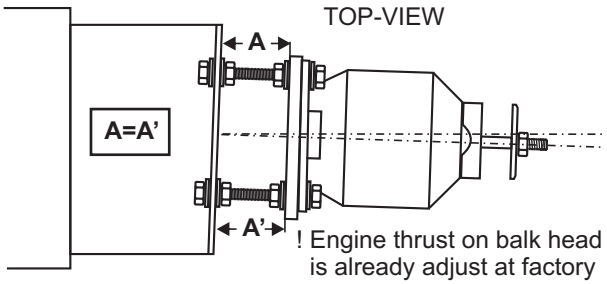
Remove the aluminum motor mounting plate and drill a 1/8”(3mm) hole through the plywood at each of the four marks marked .

Note: The aluminum motor mounting included with electric motor set.



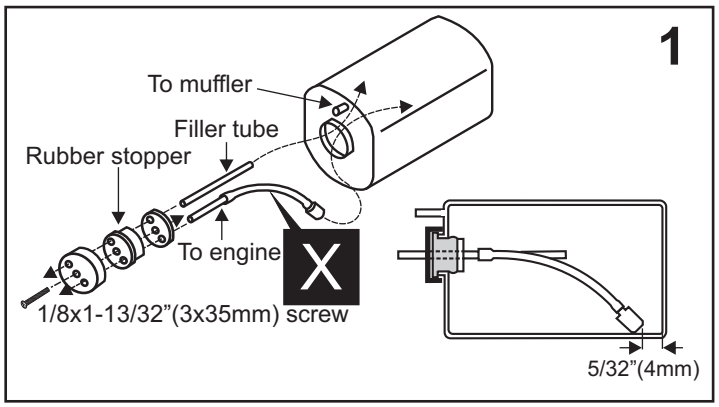






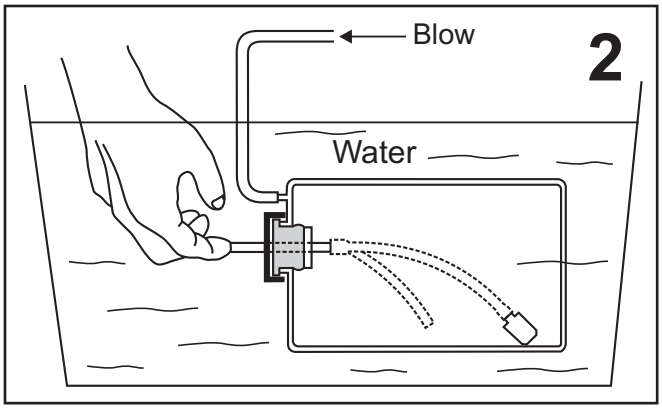
! Engine thrust on balk head is already adjust at factory

21- Fuel tank installation

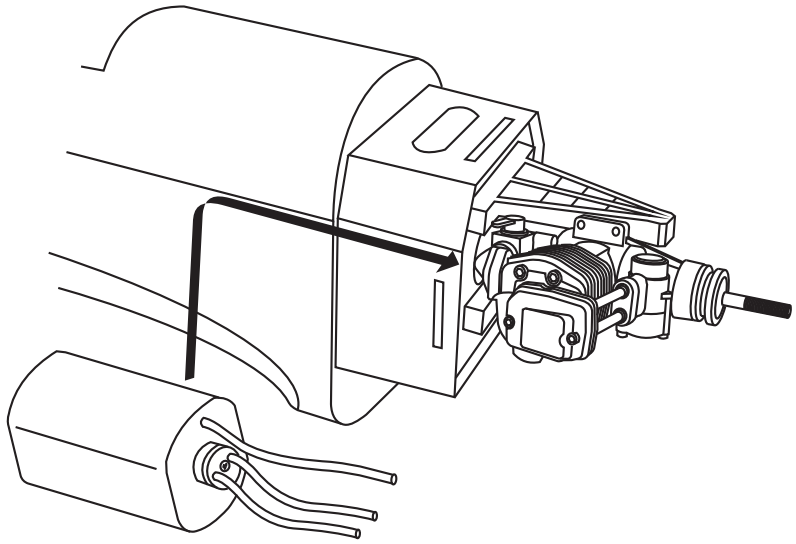


After confirming the direction . Insert this assembly, clunk end first, into the fuel tank and tighten and screw the fuel tank cap on firmly.

Ensure that the fuel tank clunk does not touch the rear of the fuel tank.

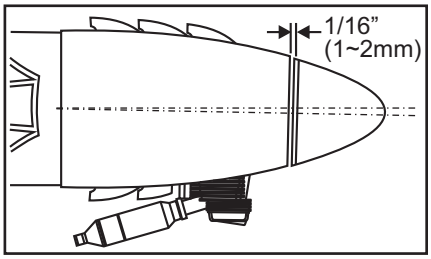


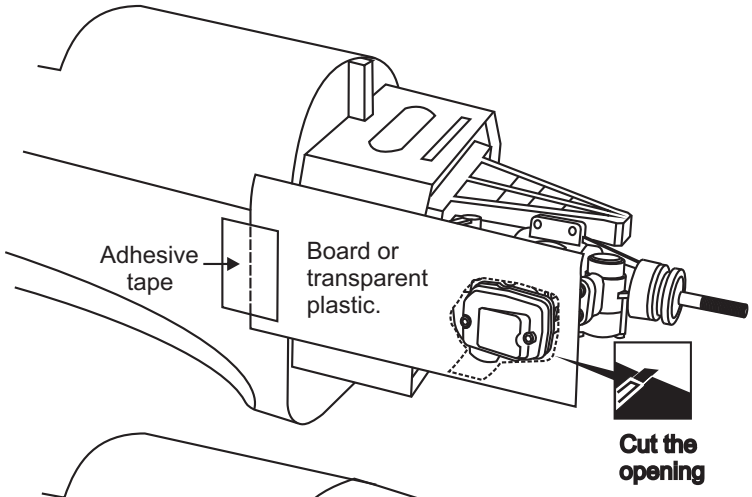
Checking for leaks - block the vents and blow into the feed - if in doubt submersing the tank in a blow of water will show up any problems.



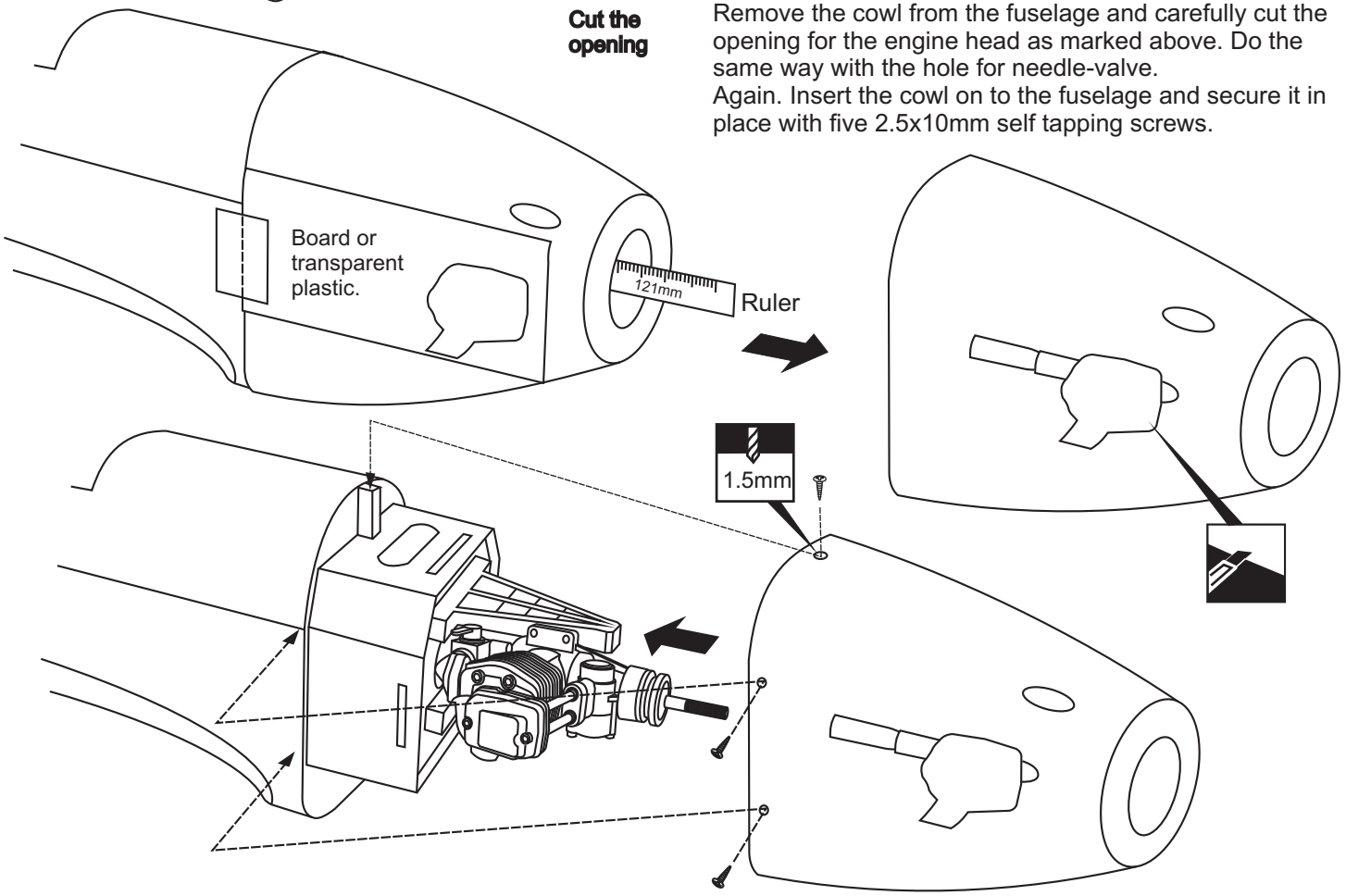
22- Cowling

2.5x10mm.....5



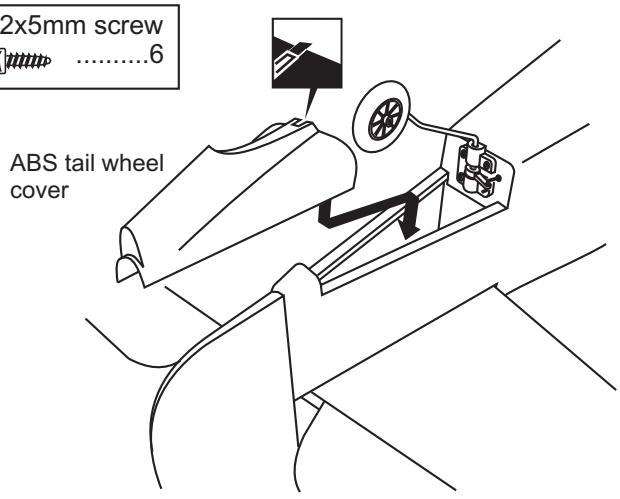


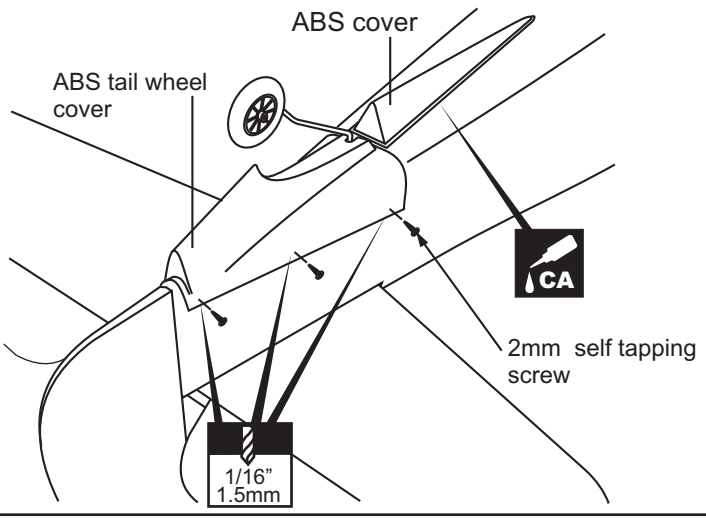
Attach the board or transparent plastic on the side of the fuselage with the adhesive tape as show.
Using a pencil or felt tipped pen trace around the engine head where it meet the cowl. Cut the opening the board or transparent plastic for the engine head as marked before.
Remove the engine and insert the cowl on to the fuselage so the distance from the fire wall to the front of the cowl is 4-23/32" to 4-55/64"(120 to 122mm).
Remove the cowl from the fuselage and carefully cut the opening for the engine head as marked above. Do the same way with the hole for needle-valve.
Again. Insert the cowl on to the fuselage and secure it in place with five 2.5x10mm self tapping screws.



23- Tail wheel cover

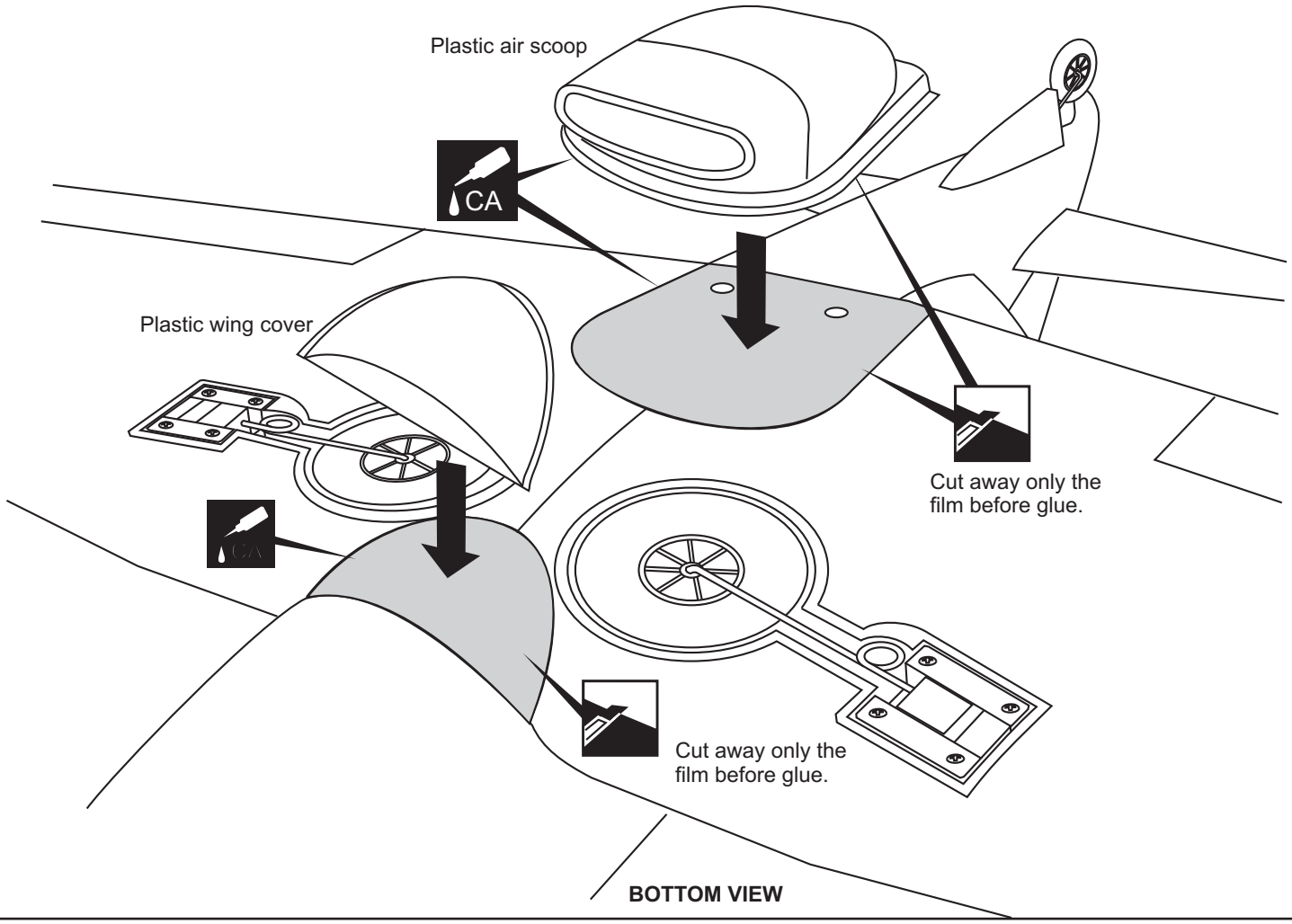
2x5mm screw 6





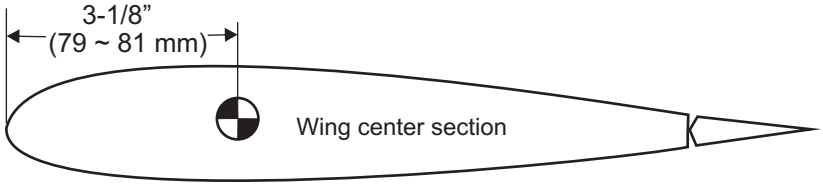
24- Plastic parts

1-Using the Plastic air scoop as a template, trace around the outside edge of the air-scoop, and then remove it.
2-Using a sharp hobby knife, cut away the covering inside the lines. Not to cut into the wood.
3-Apply the air-scoop in place and secure with CA glue.
Do the same way with the Plastic wing cover.



25- Balance

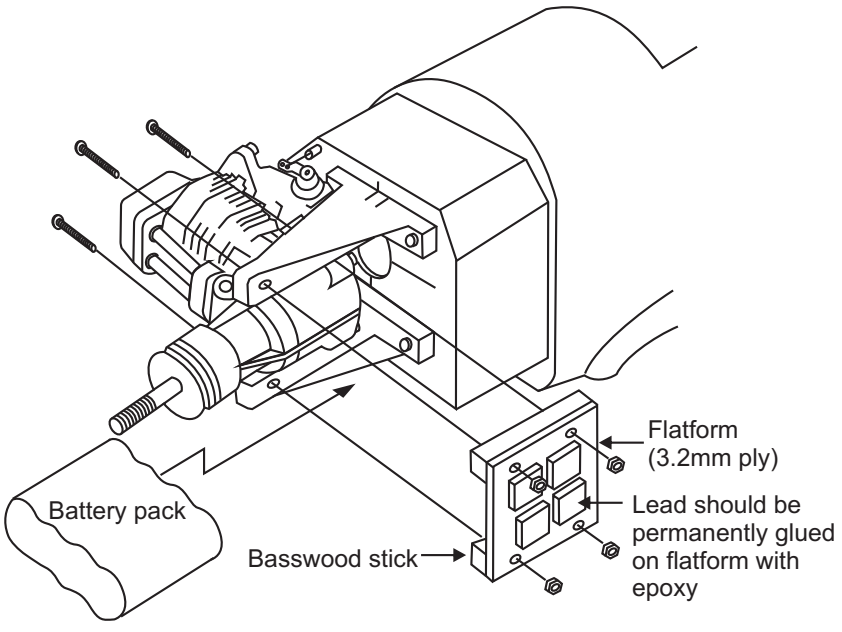
DO NOT try to fly an out-of-balance model !



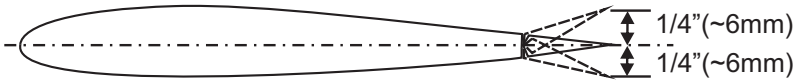
The recommended C.G (Center of Gravity) location for the Hurricane is 3-1/8"(79-81mm) Adjust the location of the battery pack as required to achieve this C.G location.
If necessary , add weight to the nose until the correct balance is achieve.

To get the correct C.G., Several strips of lead weight were required in the nose of this model . To minimize the amount of weight required, it is desirable to position the weight as far forward as possible. This can be done by making a platform form leftover basswood stick and 3.2mm (1/8") ply wood. Using 4x35mm bolts to mount the engine would also be long enough to mount the flatform. The lead should be permanently glued on with epoxy.
IMPORTANT: Recheck the C.G. After the weight has been installed.

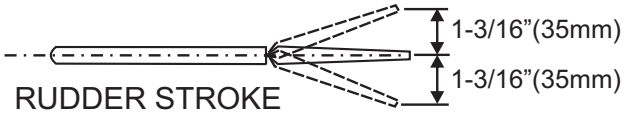
! Securely install the nose-weight ensuring it will not come loose during flights.



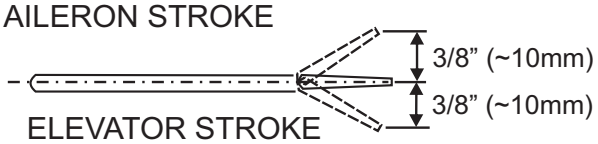
26- Control Surface



AILERON STROKE



RUDDER STROKE



ELEVATOR STROKE

Warning!

BEFORE FLYING CHECK EVERYTHING

Before each flight, inspect the airplane for any loose parts. Check the hinges, make sure the pushrods are still firmly attached, and check the engine mounting bolts. In general, check everything on the plane that might possibly come loose.

DO NOT FLY NEAR A POWER LINE

The power lines cause radio interference, so avoid flying near them.

Adjust the engine always from behind, but never from infront or the sides as rotating propeller may badly injure you!

Do not allow watching people to get too close to a rotating propeller.

Ensure the spinner and propeller are securely attached. Immediately disure defective propeller as well as deformed spinners.

IMPORTANT: Please do not clean your model with pure alcohol, only use liquid soap with water or use glass cleaner to clean on surface of your model to keep the colour not fade.