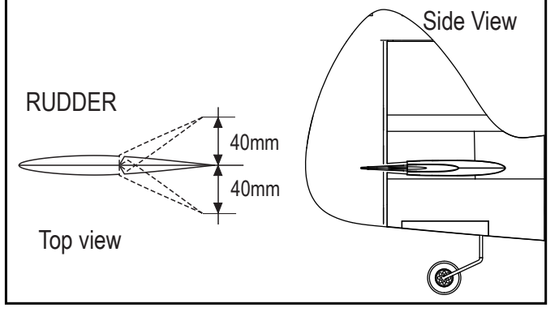
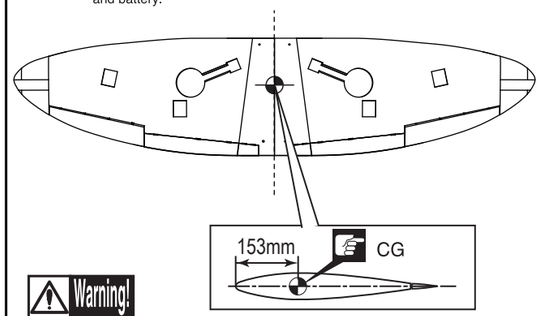
71 Adjustment.

► Adjust the travel of each control surface to the values in the diagrams.
These values fit general flight capabilities.
Readjust according to your needs and flight level.



72 The centre of the Gravity.

► Never fly before checking the CG's required position.
► In order to obtain the CG specified, reposition the receiver and battery.

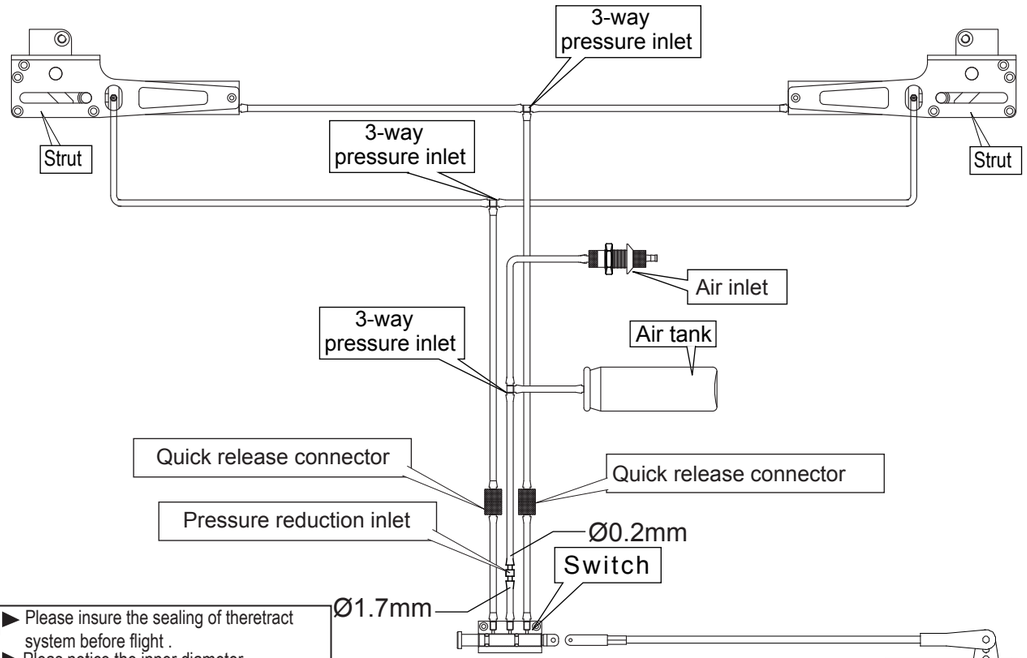


Warning!

► ***NEVER fly the model without well balancing.***

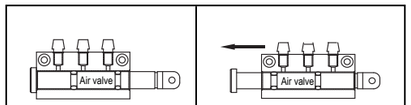
Two wheel retract system

Warning! Make sure to assemble retracts as instructed below.



Warning! ► Please insure the sealing of theretract system before flight .
► Pleas notice the inner diameter of eachside the pressure reduction inlet.

Strut(90°)	2	Switch	1
Retainer	1	Air line (3000mm)	1
Clevis	1	3-way pressure inlet	3
Rod (2X300mm)	1	Air tank	1
TP Screw(2x14mm)	2	Air inlet	1
		Quick release connector	2
		Pressure reduction inlet	1



The status when the gear up

Pull out length of 8mm to make gear down

A B Apply epoxy glue.
L R Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol!
Warning!
C.A Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.

Before start , please carefully read the explanations!

50cc SPITFIRE

Specifications:

Length:	1935mm(76.2")
Wing span:	2260mm(89")
Wing area:	93sq.dm(10sq.ft)
Wing loading:	108.6g/sq.dm(35.6oz/sq.ft)
Flying weight:	10.1kg(22.2lbs)
Radio:	6ch & 8servos
Engine:	50cc gas engine

INSTRUCTION MANUAL

SAFETY PRECAUTIONS

This R/C airplane is not a toy!

(The people under 18 years old is forbidden from flying this model)

First-time builders should seek advice from people having building experience.If misused or abused,it can cause serious bodily injury and damage to property.
Fly only in open areas and preferably at a dedicated R/C flying site.
We suggest having a qualified instructor carefully inspect your airplane before its first flight.Please carefully read and follow all instructions included with this airplane,your radio control system and any other components purchased separately.

REQUIRED FOR OPERATION (Purchase separately!)

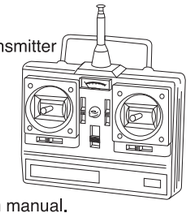
CAUTION: For details concerning the equipment listed below (size, maker, etc.), check with your hobby shop.

1 A minimum 6 channel radio for airplanes (with 8 servos), and dry batteries.

CAUTION: Only use a minimum 6 channel radio for airplanes! (No other radio may be used!)
6 channel radio for aiplane is highly recommended for this model.

12 AA-size Batteries

A minimum 6 channel transmitter for airplanes.

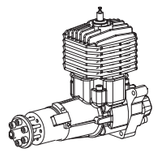


For handling the radio properly, refer to its instruction manual.

2 Engine and Muffler

Model Airplane Engine 50cc gas engine

Muffler



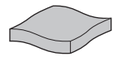
3 Propeller Spinner

4.75 in Spinner

Purchase a propeller that will match your engine.

22"X8-10

4 Sponge Sheet



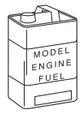
Gasoline tube

Fuel Filter

5 Required for engine starting:

WARNING: Normal gasoline cannot be used with glow engines.

Gasoline

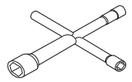


Fuel Pump

Booster Cord

4 D-size Batteries

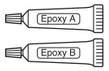
Plug Wrench



6 Glue

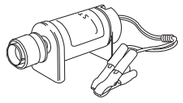
Instant Glue

Epoxy Glue

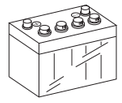


7 Other equipment for enhancing airplane operation & performance

Engine Starter



12V Battery (for starter)

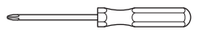


9 Optional parts: rubber wheel with metal hub.

TOOLS REQUIRED (Purchase separately!)

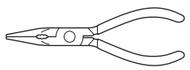
Sharp Hobby Knife

Phillips Screw Driver (l, m, s)

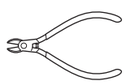


Awl

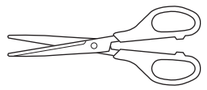
Needle Nose Pliers



Wire Cutters



Scissors



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.
3. Symbols used throughout this instruction manual, comprise:
4. We strongly recommen you use the thread lock for all the screws when you build your model.

Do not overlook this Symbol!

Warning!

Apply epoxy glue.

Drill holes with the specified diameter (2mm).

Cut off excess.

Pay close attention here!

Assemble left and right sides the same way.

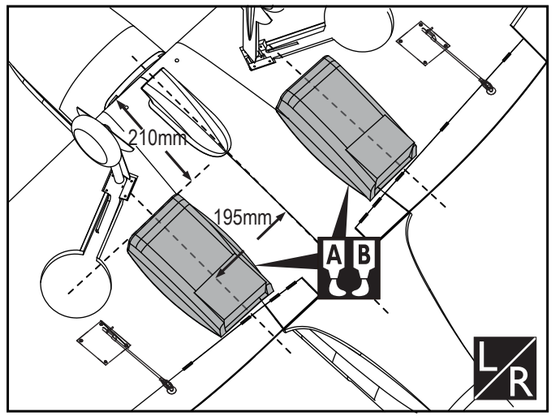
Apply instant glue (CA glue, super glue).

Cut off shade portion.

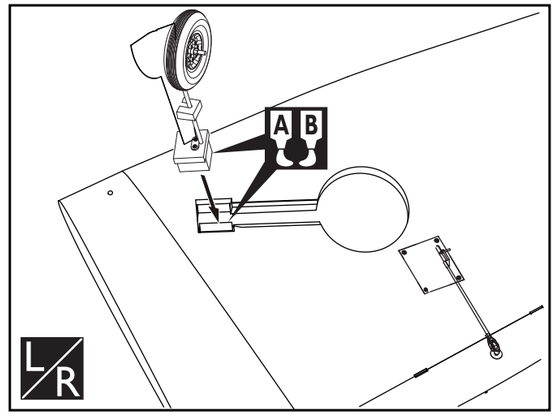
Ensure smooth non-binding movement while assembling.

Must be purchased separately!

66 Epoxy the fiber deconations to aprropriate position on the bottom of the wing.



68 Epoxy the landing gear to the wing steadily.

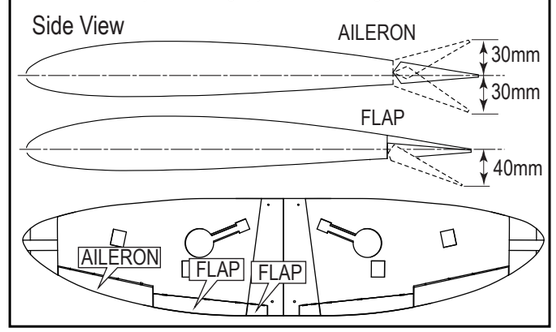


Accessory list for the coming installation steps.

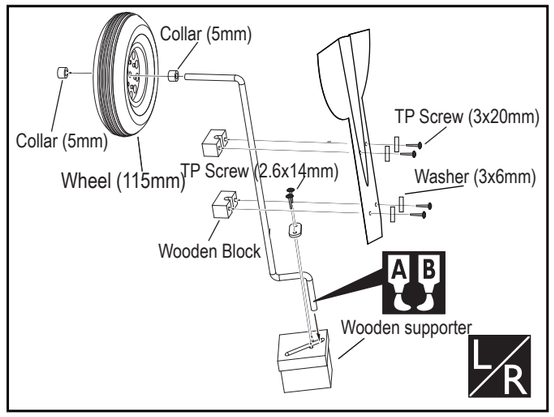
Wheel (115mm)	2
Collar (5mm)	4
Wooden Block(43x28x26mm)	2
Landing gear(5mm)	1
TP Screw (3x20mm)	8
Landing gear straps	2
Gear door	1
Wooden Block(25x15x13mm)	4
TP Screw (2.6x14mm)	4
Washer (3x6mm)	8

69 Adjustment.

Adjust the travel of each control surface to the values in the diagrams.
These values fit general flight capabilities.
Readjust according to your needs and flight level.

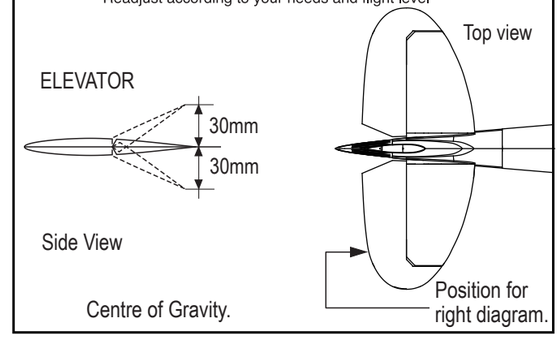


67 Assemble the wheel and gear door to landing gear.



70 Adjustment.

Adjust the travel of each control surface to the values in the diagrams.
These values fit general flight capabilities.
Readjust according to your needs and flight level



Apply epoxy glue.

Assemble left and right sides the same way.

Pay close attention here!

Do not overlook this symbol!

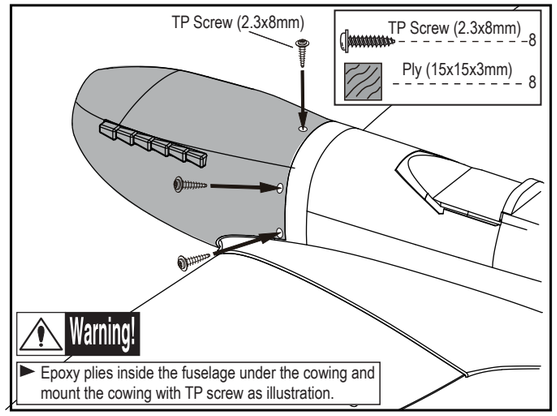
Warning!

Apply instant glue (CA glue, super glue).

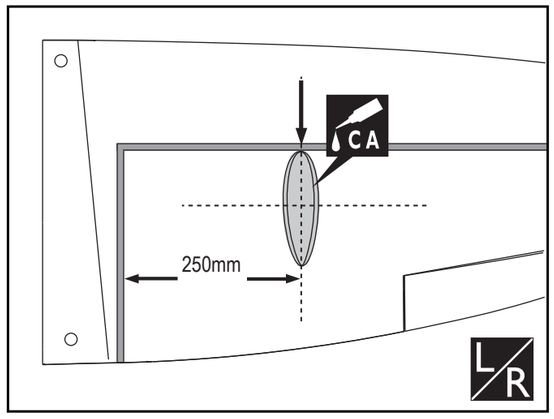
Ensure smooth non-binding movement while assembling.

Cut off shaded portion.

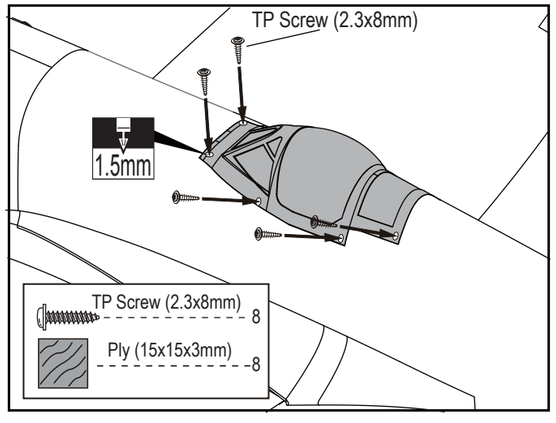
60 Epoxy plies to relevant position inside the fuselage as below for assembling the cowling.



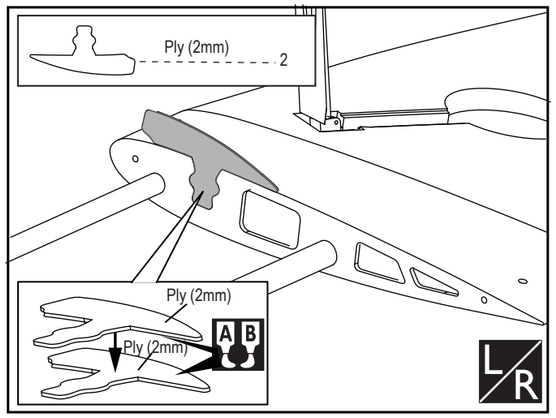
61 Epoxy the PVC decoration parts to the appropriate position on the wing as illustration.



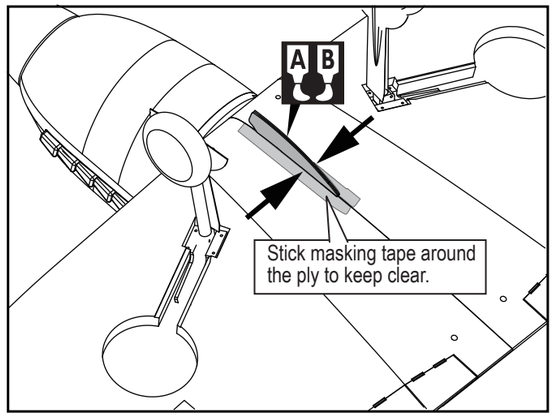
62 Epoxy plies inside the fuselage under the cowing and mount the cowing with TP screw as illustration.



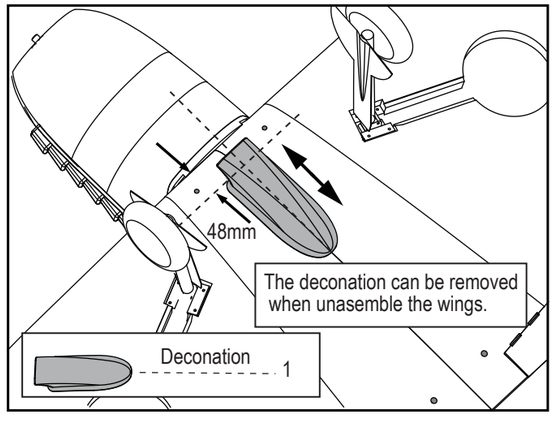
63 Disassemble the wing and set the ply to the slot in the wing root.



64 Assemble the wings together,stick masking tape around the ply and add some epoxy glue to top of the ply.



65 Assemble the air intake deconation to appropriate position on the ply and wait until the glue dry.

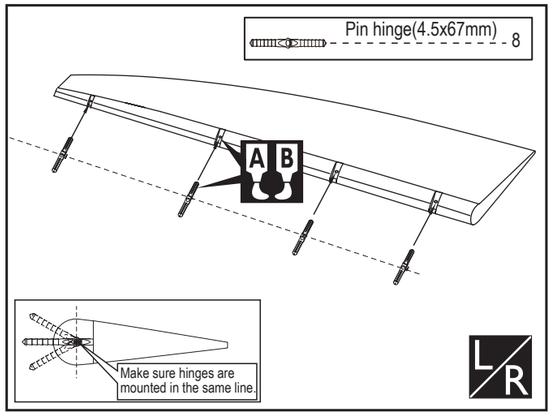


A B Apply epoxy glue.
C.A Apply instant glue (CA glue, super glue).
L/R Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

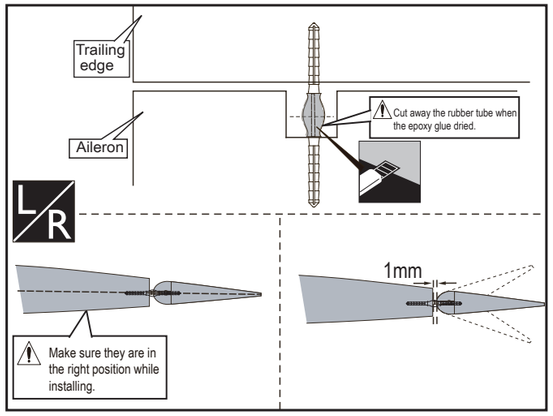
Accessory list for the coming installation steps.

Clevis	2
Clevis	2
Collar (3mm)	2
Rod (2.5x300mm)	2
TP Screw (2.3x12mm)	8
Servo tray(68.5x56.5x2mm)	2
Wooden Block(20x20x8mm)	2
Pin hinge(4.5x67mm)	8
Screw (4x40mm)	2
Lock Nut (4mm)	2
Washer	2
Washer(4x14mm)	2

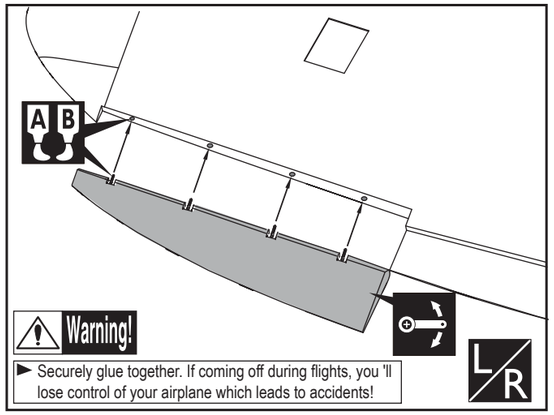
1 Apply instant AB glue to aileron and pin hinge.



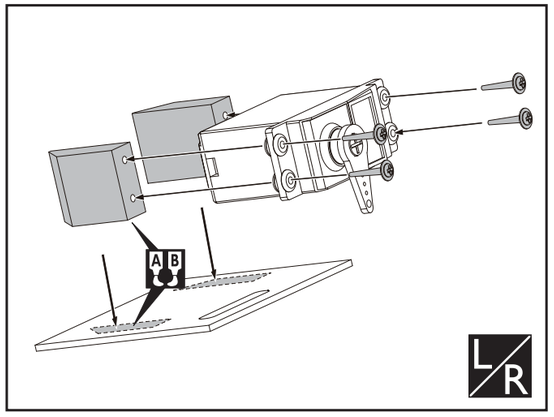
2 Keep some space about 1mm width between the trailing edge and the aileron.



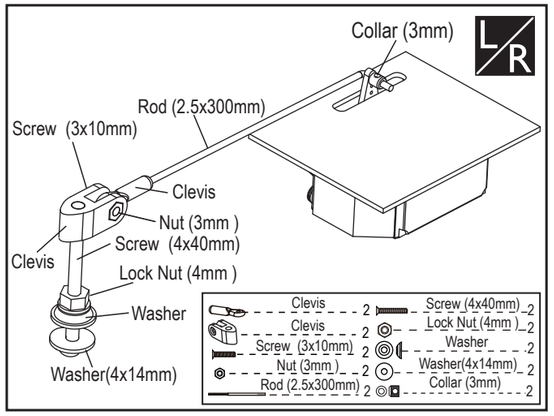
3 Assemble the aileron to main wing with instant type AB glue. Be careful to ensure the moving parts of the hinges are able to move freely.



4 Install the servo as the illustration below

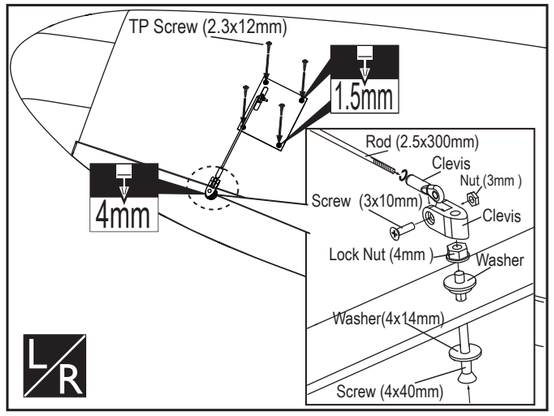


5 Install the nylon control horn and connect the linkage.

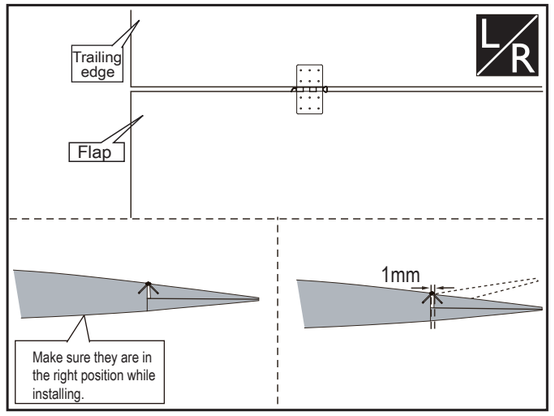


A B Apply epoxy glue.
C.A Apply instant glue (CA glue, super glue).
L/R Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

6 Secure the servo.Install the nylon control horn and connect the linkage.



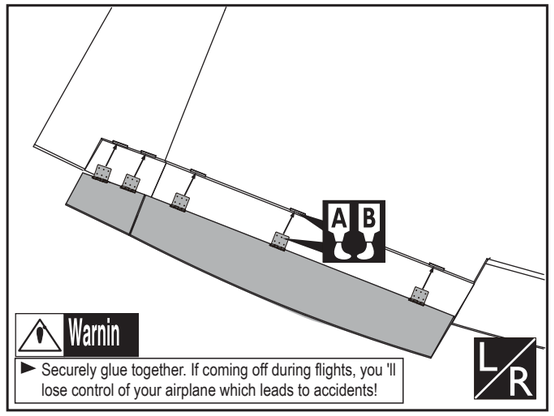
8 Keep some space about 1mm width between trailing edge and flap.



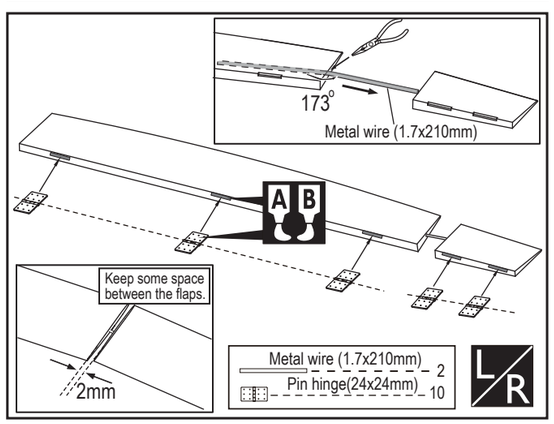
Accessory list for the coming installation steps.

Metal wire (1.7x210mm)	2
Clevis	2
Clevis	2
Collar (3mm)	2
Rod (2.5x300mm)	2
TP Screw (2.3x12mm)	8
Servo tray(68.5x56.5x2mm)	2
Wooden Block(20x20x8mm)	2
Pin hinge(24x24mm)	6
Screw (4x35mm)	2
Lock Nut (4mm)	2
Washer	2
Washer(4x14mm)	2

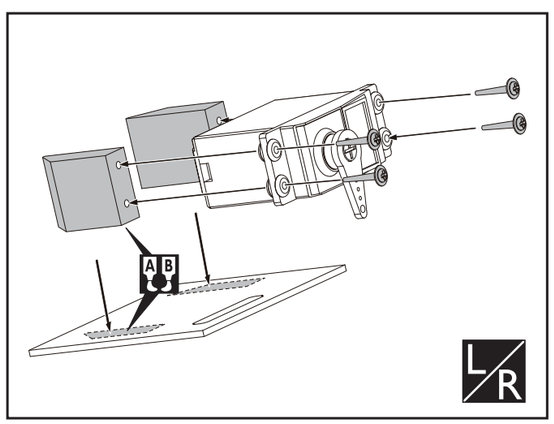
9 Epoxy the flaps to the wings as illustration.



7 Connect the two flaps with metal wire,keep some space between them and epoxy the pinned hinges to the flaps as below.

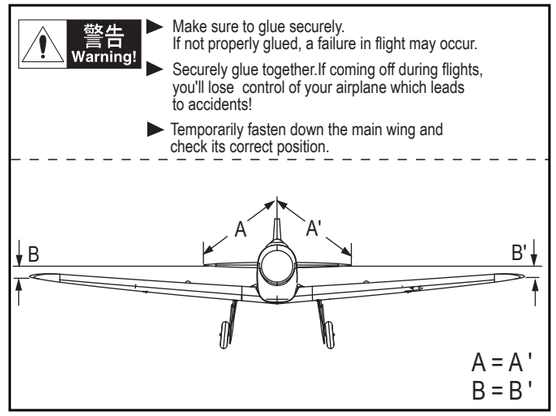


10 Install the servo as the illustration below

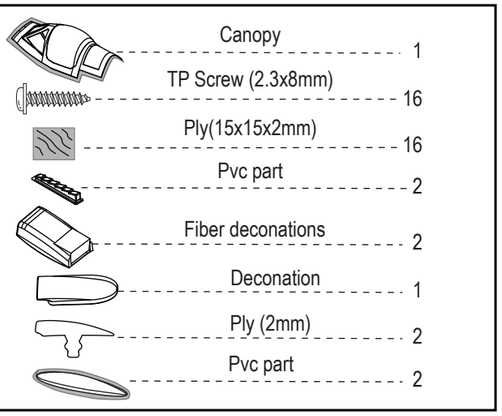


A B Apply epoxy glue.
L/R Assemble left and right sides the same way.
Pay close attention here!
C.A Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.
Do not overlook this symbol!
Warning!

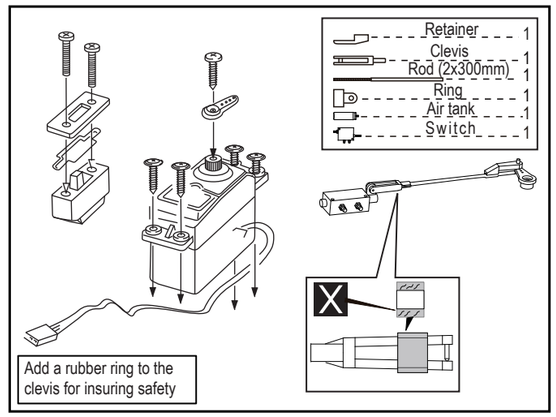
55 The sketch map should be when the stabilizer assembly completion.



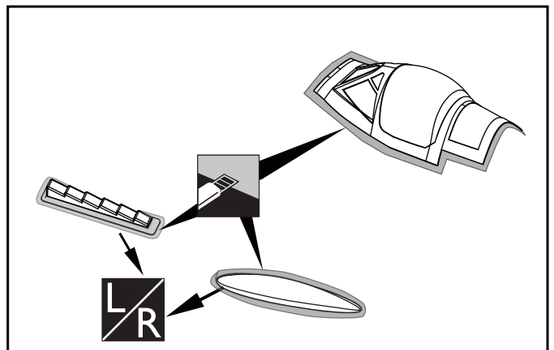
Accessory list for the coming installation steps.



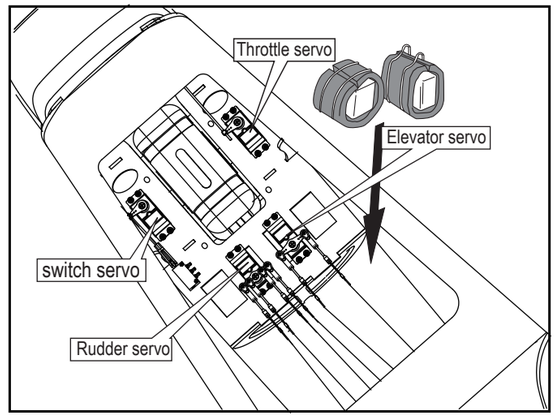
56 Install the servo of swith.



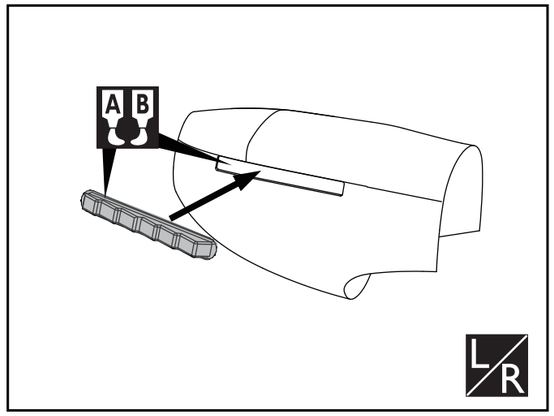
58 Cut off the surplus part from the cowling,exhausts and canopy carefully.



57 The servos installation finished sketch map.

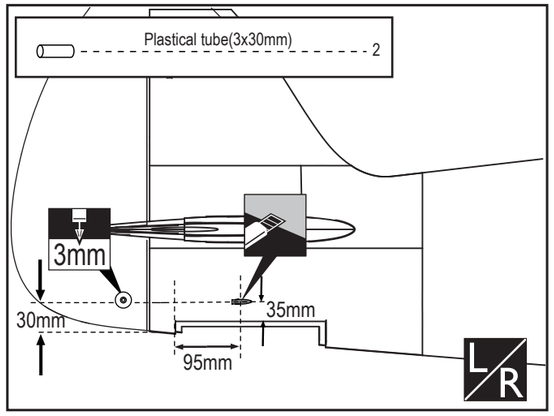


59 Epoxy the exhaust the the cowling as figure.

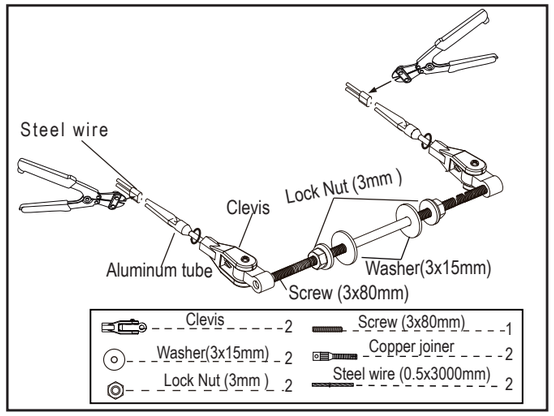


A B Apply epoxy glue.
L/R Assemble left and right sides the same way.
Pay close attention here!
C.A Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.
Do not overlook this symbol!
Warning!

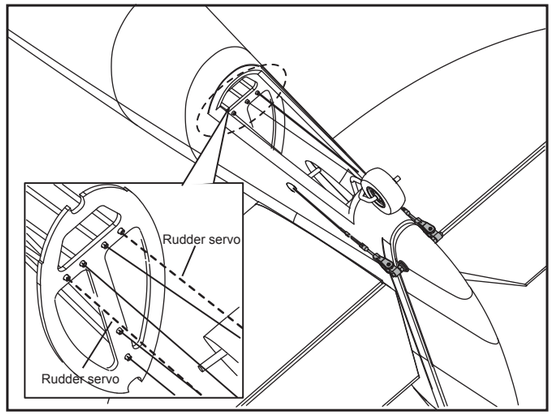
49 Drill a small hole to appropriate possition in the fuselage for installing the plastical tube.



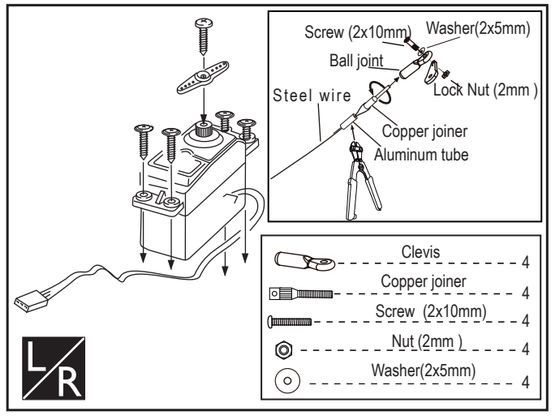
50 The sketch map after the rudder shaft assemble finished.



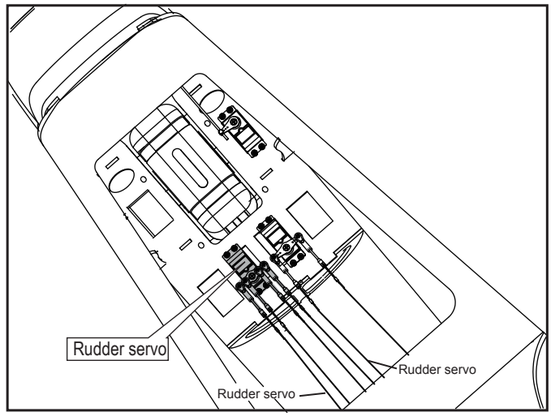
51 Connect the servo of rudder and the shaft for rudder with steel wire as illustration.



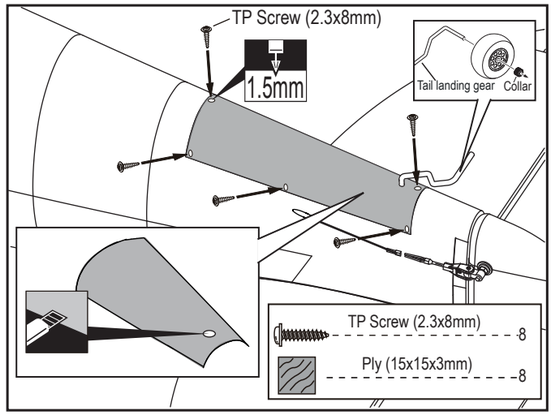
52 Install the servo.



53 The servos installation finished sketch map.

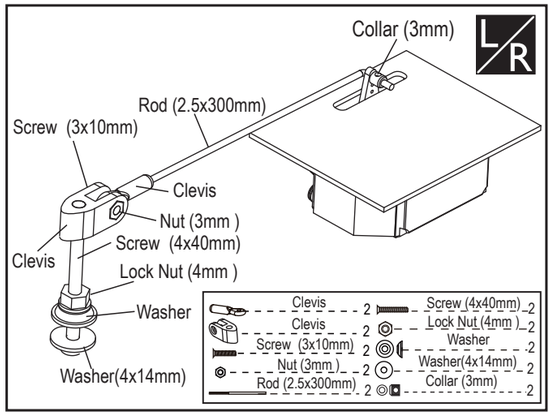


54 Epoxy plies to appropriate position in the fuselage and assemble the tail gear cover with screw.Then assemble the wheel as illustration.

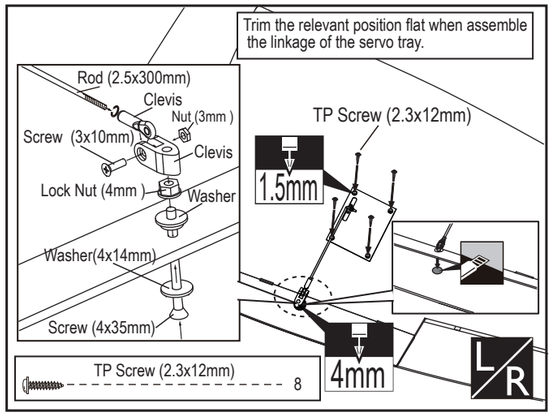


Apply epoxy glue.
Apply instant glue (CA glue, super glue).
Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

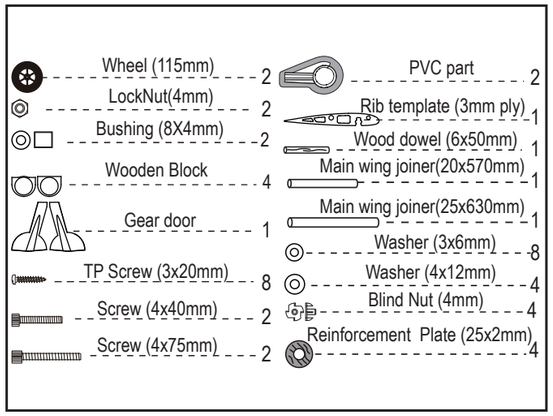
11 Install the nylon control horn and connect the linkage.



12 Secure the servo.Install the nylon control horn and connect the linkage.

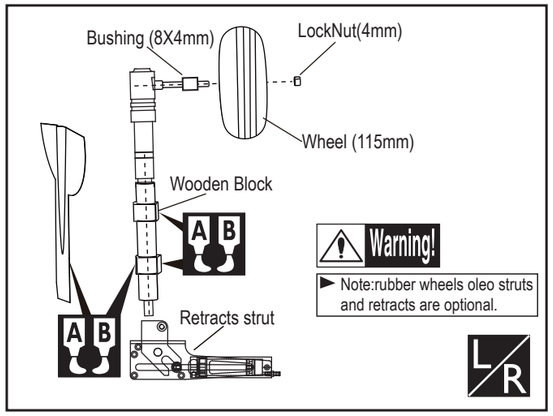


Accessory list for the coming installation steps.

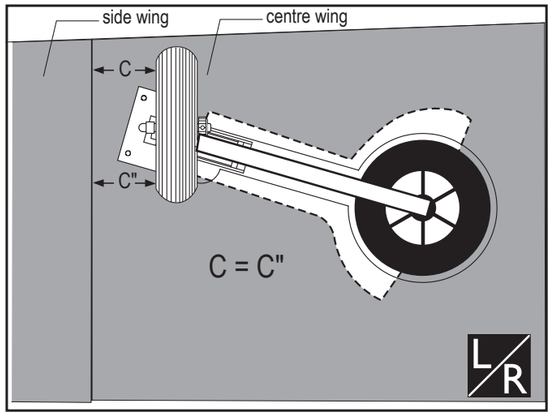


Apply epoxy glue.
Apply instant glue (CA glue, super glue).
Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

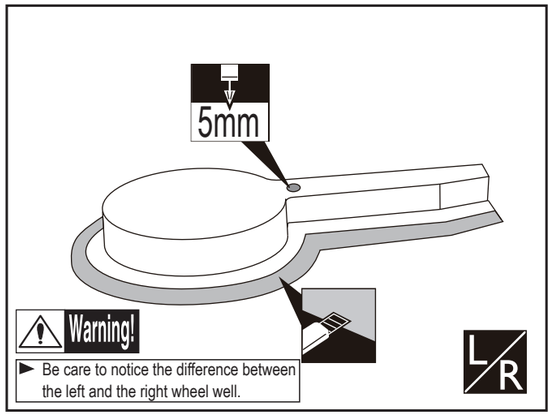
13 Mount the gear door and the wheel to the retract.



14 The sketch maps when the retract up and down.

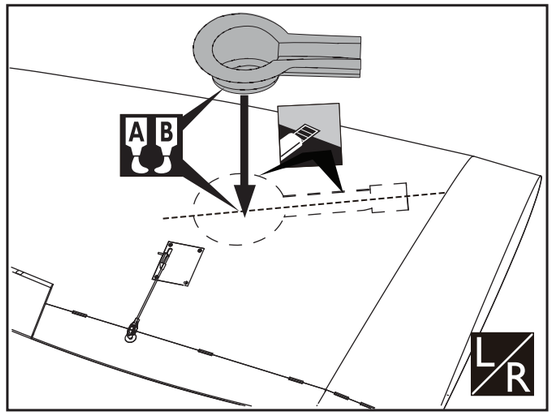


15 Cut away the surplus parts of plastic cover carefully along the shaded line.

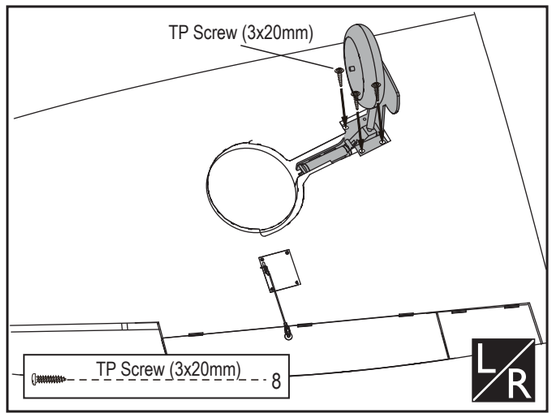


Apply epoxy glue.
Apply instant glue (CA glue, super glue).
Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

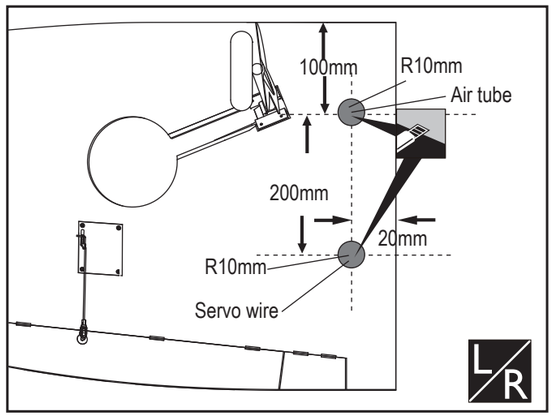
16 Trim the sheet carefully from the wing for assembling the wheel well,epoxy the wheel well to it.



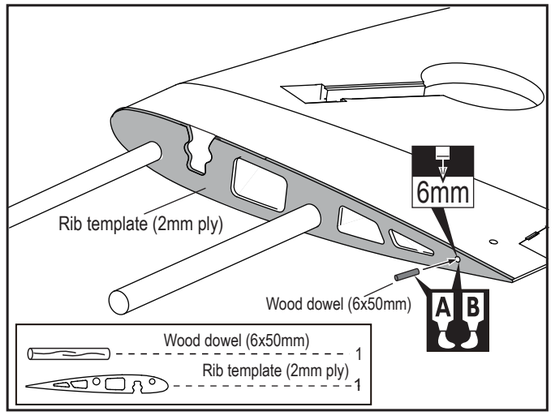
17 Assemble the retracts to the appropriate position in the gear house.



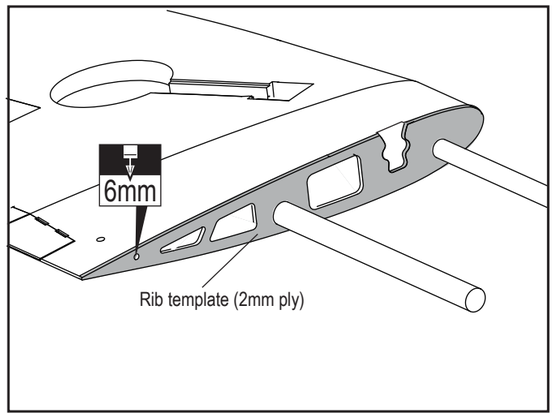
18 Trim holes in the appropriate position in the wing and drag the servo wire and the air tube out.



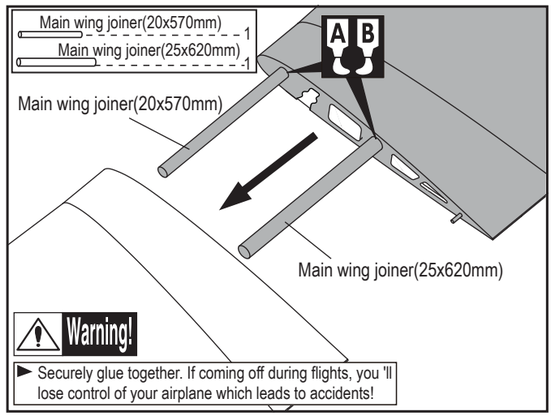
19 According to the rib template drill a hole to one wing root and epoxy wood dowel in it.



20 According to the rib template drill a hole in the other wing root.

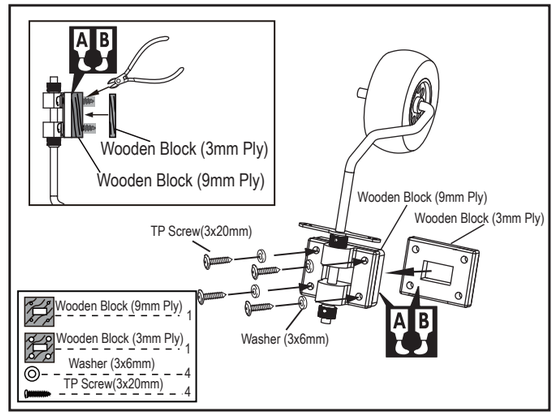


21 Connect the two wings with main wing joiners.

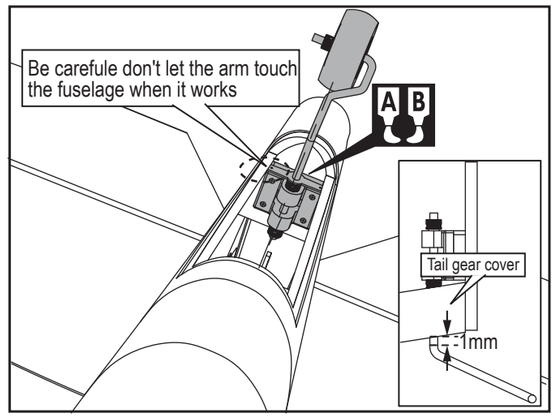


A B Apply epoxy glue.
C.A Apply instant glue (CA glue, super glue).
L/R Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

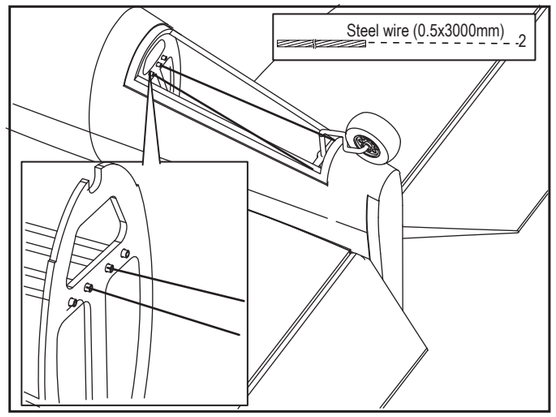
43 Assemble the wheel mount to the thick wooden block with screw,cut the surplus parts and epoxy the thinner wooden block to it as illustration.



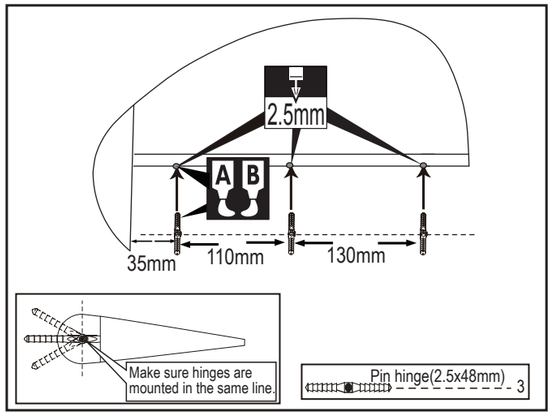
44 Epoxy the the whole wheel mount set to the form in the fuselage and be carefule don't let the arm touch the fuselage when it works



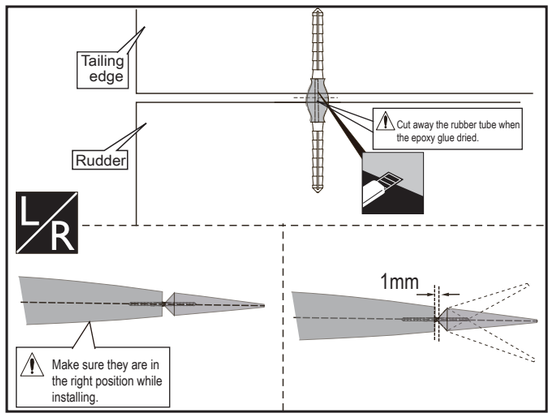
45 Connect the servo of rudder and the arm of tail landing gear with steel wire.



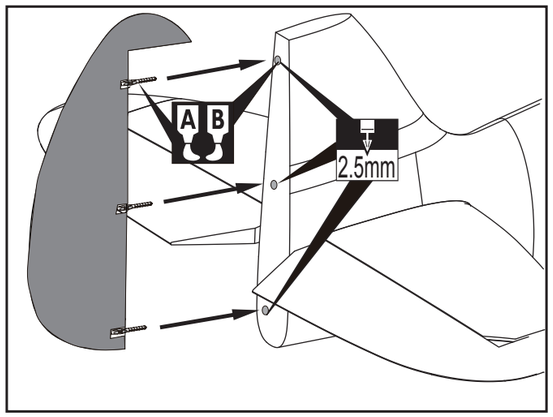
46 Drill holes to appropriate position in the rudder and epoxy the ping hinges in them



47 Keep some space about 1mm width between the tailing edge and the rudder.

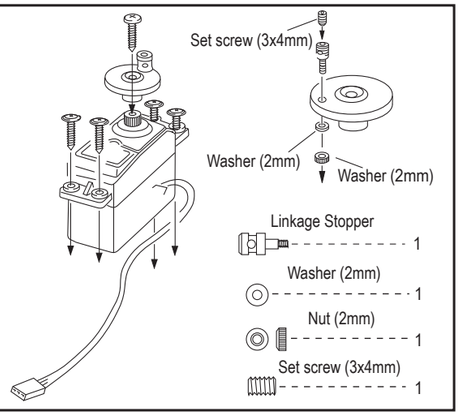


48 Drill holes to the relevant position in the tailing edge and epoxy the rudder to them.



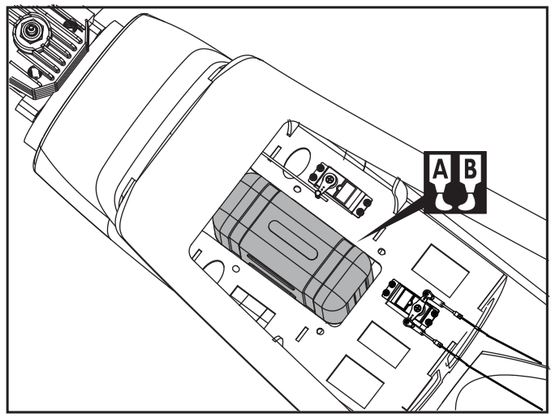
A B Apply epoxy glue.
C.A Apply instant glue (CA glue, super glue).
L/R Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

38 Assemble the servos.

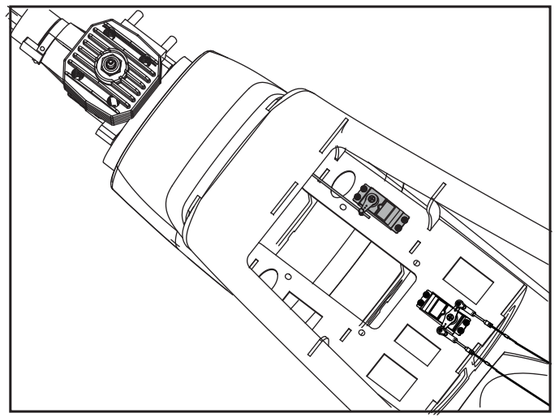


Linkage Stopper	1
Washer (2mm)	1
Nut (2mm)	1
Set screw (3x4mm)	1

41 Mount the fuel tank to the fuselage.



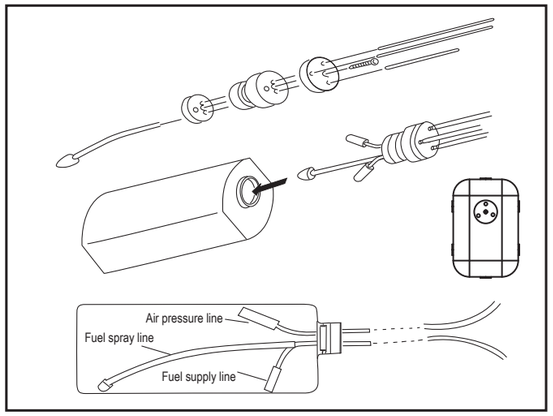
39 Assemble the throttle servo to appropriate position in the fuselage.



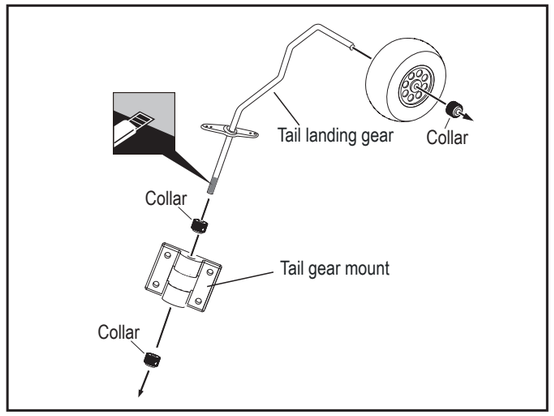
Accessory list for the coming installation steps.

Steel wire (0.5x1200mm)	2	Tail gear mount	1
Clevis	2	Washer (3x6mm)	4
Washer(3x15mm)	2	TP Screw(3x20mm)	4
Lock Nut (3mm)	2	Wooden Block (9mm Ply)	1
Screw (3x80mm)	1	Wooden Block (3mm Ply)	1
Copper joiner	2	Tail landing gear(3mm)	1
Plastical tube(3x30mm)	2	Tail wheel (45mm)	1
Pin hinge(2.5x48mm)	3	Collar (3mm)	2
Ply (15x15x3mm)	8	TP Screw (2.3x8mm)	8
Clevis	4	Screw (2x10mm)	4
Copper joiner	4	Nut (2mm)	4
		Washer(2x5mm)	4

40 Assembly of the fuel tank.



42 The sketch map when assemble the tail landing gear to the wheel steeling mount.

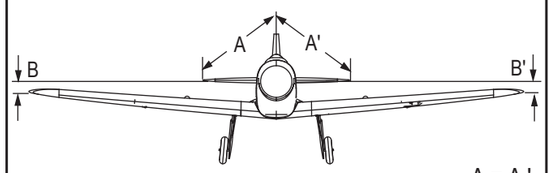


Apply epoxy glue.
Apply instant glue (CA glue, super glue).
Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol!
Warning!

22 The sketch map should be when the stabilizer assembly completion.

警告 Warning!

- Make sure to glue securely. If not properly glued, a failure in flight may occur.
- Securely glue together.If coming off during flights, you'll lose control of your airplane which leads to accidents!
- Temporarily fasten down the main wing and check its correct position.

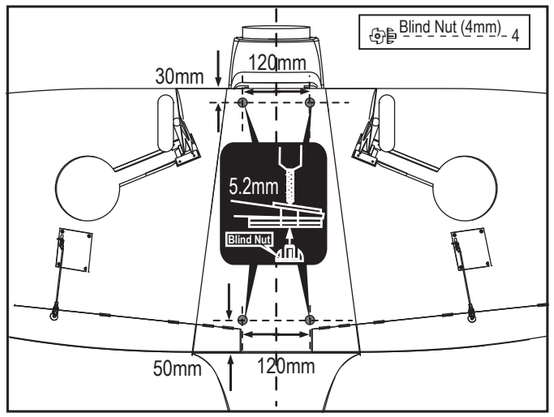


A = A '
B = B '

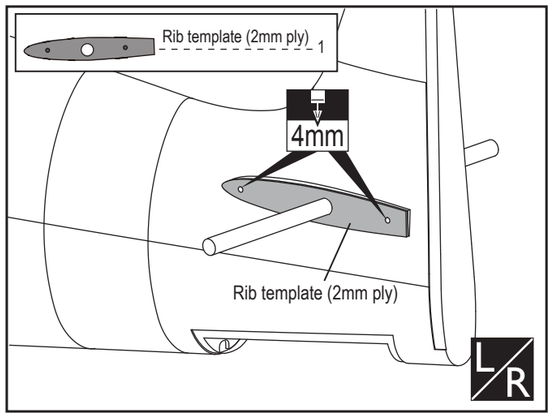
Accessory list for the coming installation steps.

TP Screw (2.3x12mm)	4
U-style wire (130x25x3mm)	1
Steel wire (0.5x3000mm)	2
Pin hinge(2.5x48mm)	3
Wood dowel (4x30mm)	4
Rib template (2mm ply)	1
Stab joiner (12x300mm)	1
Clevis	2
Copper joiner	2
Screw (2x10mm)	2
Nut (2mm)	2
Washer(2x5mm)	2

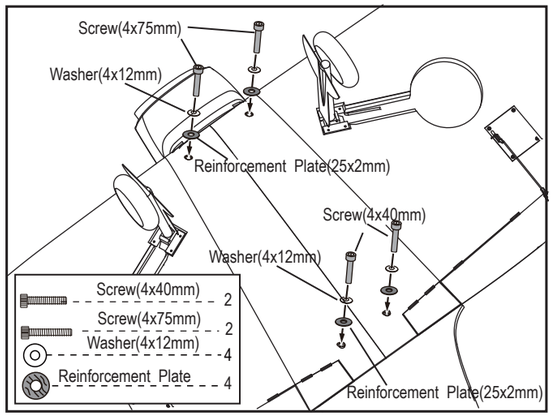
23 Drill holes in the appropriate position through the wing to fuselage,set blind nut in the fuselage.



25 According to the rib templete drill holes to appropriate position in the tail fuselage.

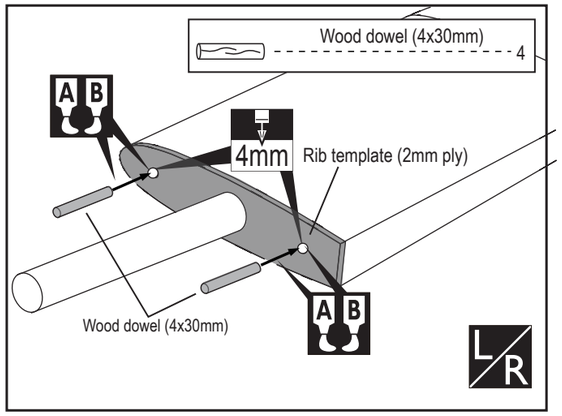


24 Fix the wings to the fuselage with screws.



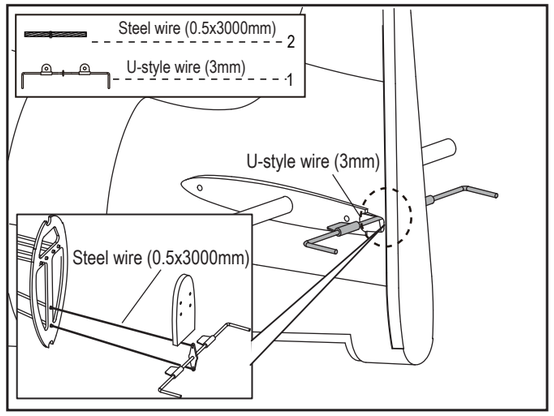
Screw(4x40mm)	2
Screw(4x75mm)	2
Washer(4x12mm)	4
Reinforcement Plate	4

26 According to the rib templete drill holes one the stabilizer root and epoxy wood dowel in them.

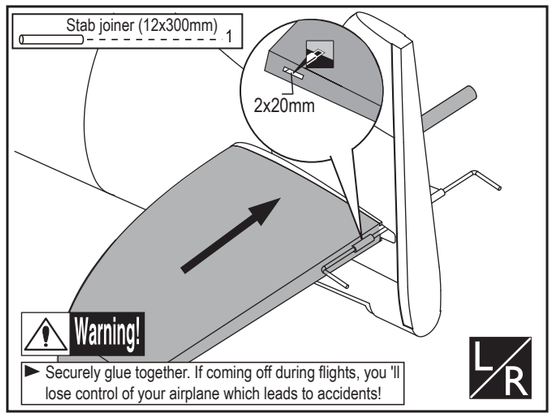


Apply epoxy glue.
Apply instant glue (CA glue, super glue).
Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol!
Warning!

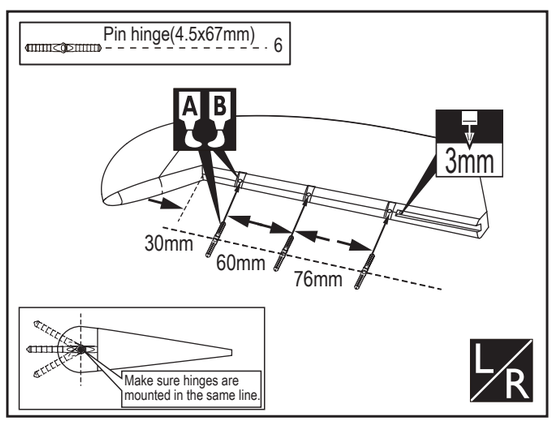
27 Set the U-style wire through the enlarged hole as below.



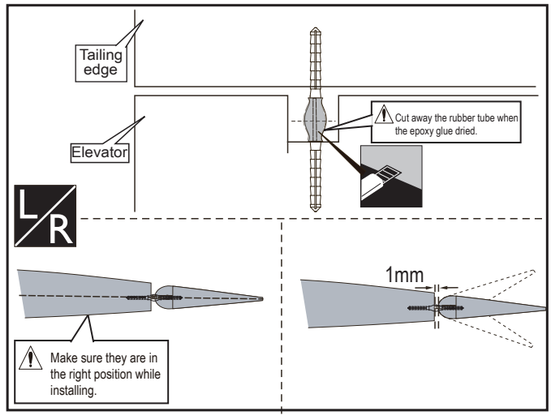
28 Epoxy the stabilizer to the fuselage,trim a small slot in appropriate position in the stabilizer and glue the U-style wire to it.



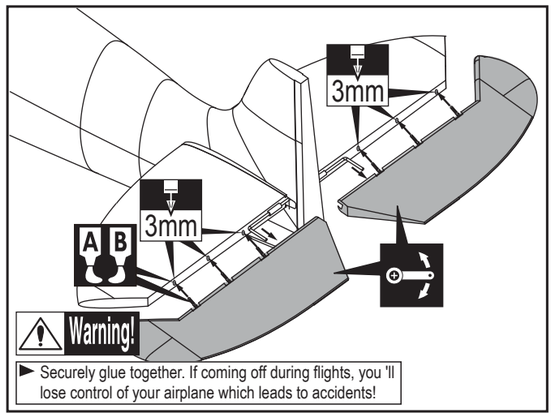
29 Apply instant type AB glue to elevator and pin hinge.



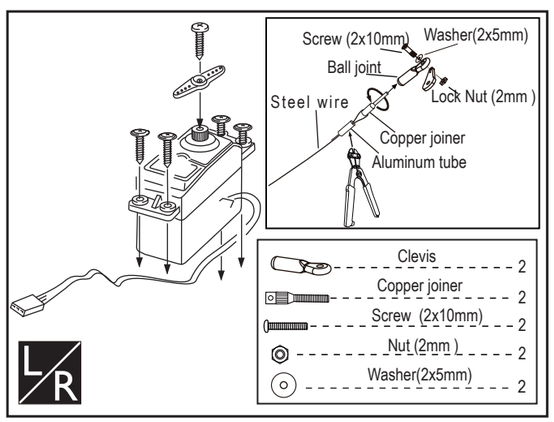
30 Keep some space about 1mm width between elevator and tailing edge.



31 Epoxy the elevator to the stabilizer.

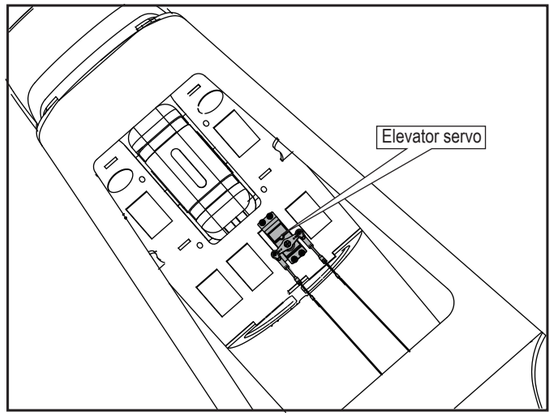


32 Install the servo.

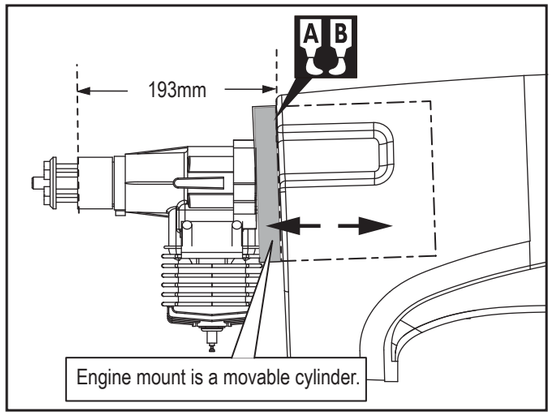


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol! Warning!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.

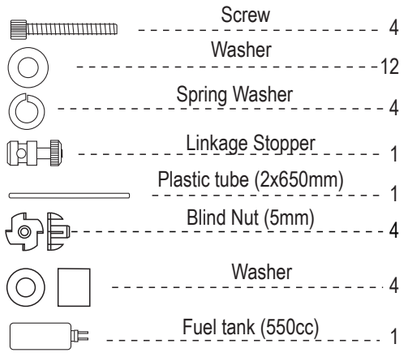
33 Fix the elevator servo to appropriate position in the fuselage.



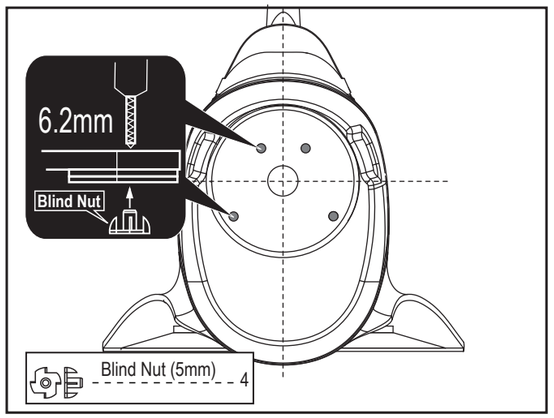
35 The side view when the engine installation finished,the steps should be assemble the engine to engine mount after step 36 &37,adjust the engine mount to a proper position,epoxy the engine mount to the fuselage with AB glue.



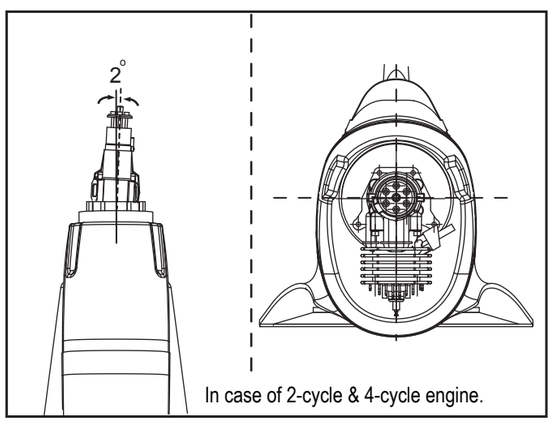
Accessory list for the coming installation steps.



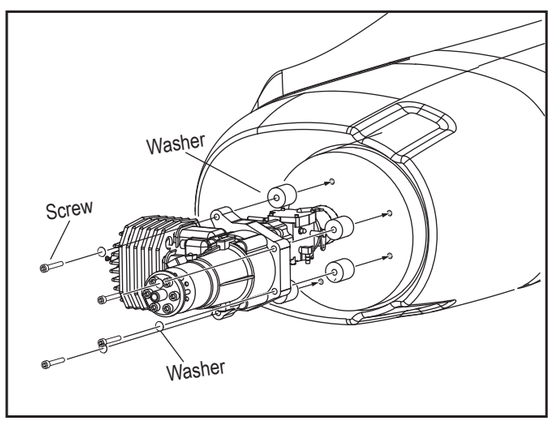
36 Drill 4 holes in appropriate position in the movable cylinder and set blind nut in them.



34 The engine will be 2 degree right skewed once the engine install completion.



37 Assemble the engine.



Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol! Warning!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.