

Before start ,please carefully read the explanations!

Bull dog



Specification:

Length	:1549 mm(61")
Wing Span	:2210 mm(87")
Wing Area	:60sq.dm 6.54sq.ft
Wing Loading	:86.7g/sq.dm 28.4oz/sq.ft
Flying Weight	:5.2kg(11.4lbs)
Radio	:6ch & 6servos
Engine:	:26cc-36cc

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.

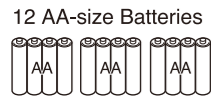
Fly only in open areas and preferably at a dedicated R/C flying site. We suggest having a qualified instructor carefully inspect your airplane before its first flight.Please carefully read and follow all instructions included with this airplane,your radio control system and any other components purchased 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 airplane is highly recommended for this model.

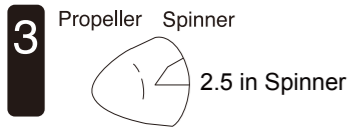
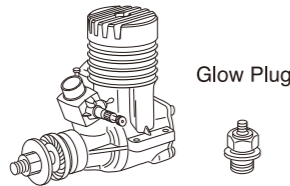


A minimum 6 channel transmitter for airplanes.

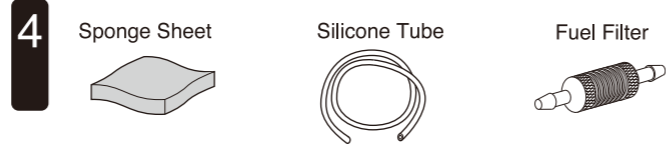
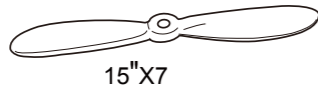


For handling the radio properly, refer to its instruction manual.

2 Engine and Muffler
Model Airplane Engine: 4-cycle .120

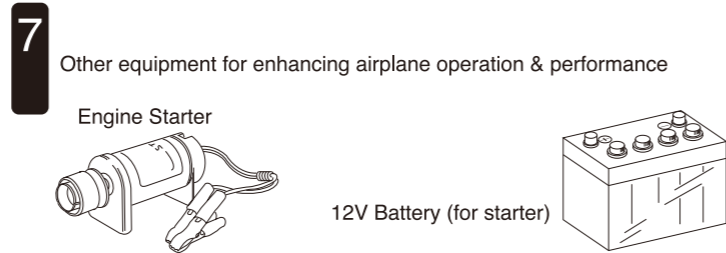
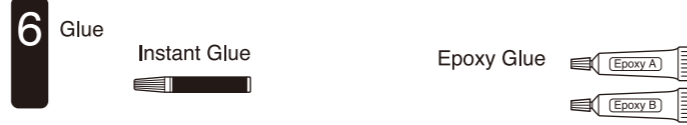
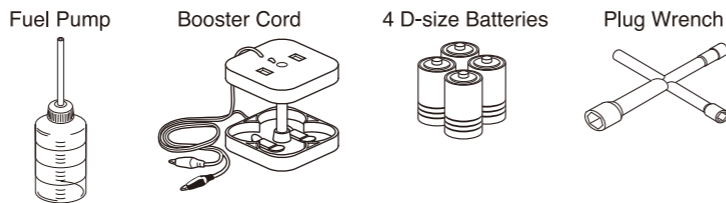
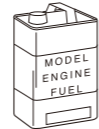


Purchase a propeller that will match your engine.

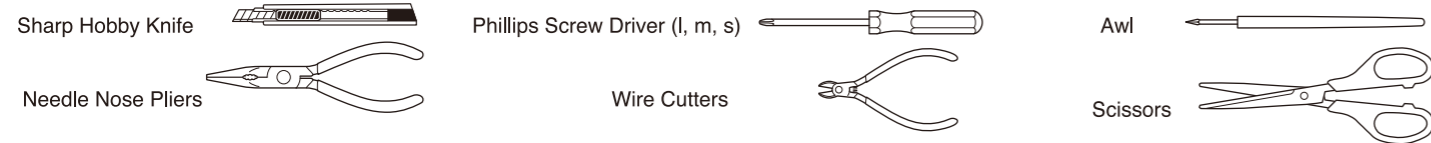


5 Required for engine starting: Glow engine fuel only.

WARNING: Normal gasoline cannot be used with glow engines.



TOOLS REQUIRED (Purchase separately!)



BEFORE YOU BEGIN

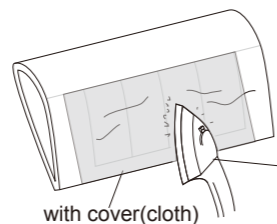
- 1 Read through the manual before you begin, so you will have an overall idea of what to do.
- 2 Check all parts. If you find any defective or missing parts, contact your local dealer.
- 3 Symbols used throughout this instruction manual, comprise:

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!	

Do not overlook this Symbol!
Warning!

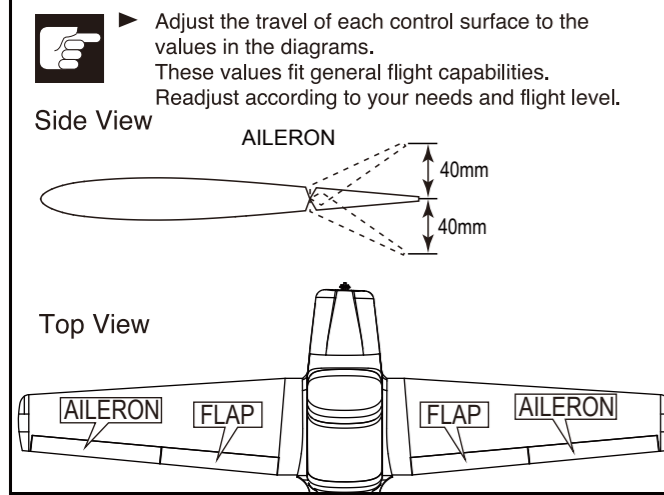
Warning
Remove the covering with proper pressure to cut through only the covering itself. Otherwise, cutting down into the balsa structure may weaken the model part and cause accident.

The pre-covered film on ARF kits may wrinkle due to variations of temperature. Smooth out as explained right.

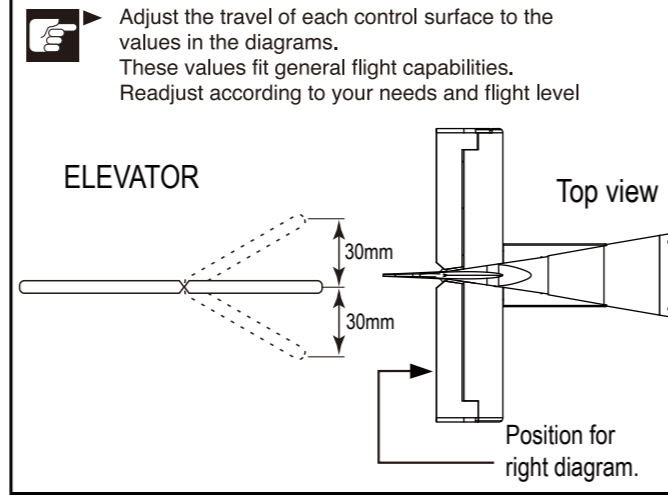


► Pre-cover the covering with clean cloth! Start at low setting. Increase the setting if necessary. If it is too high, you may damage the film.

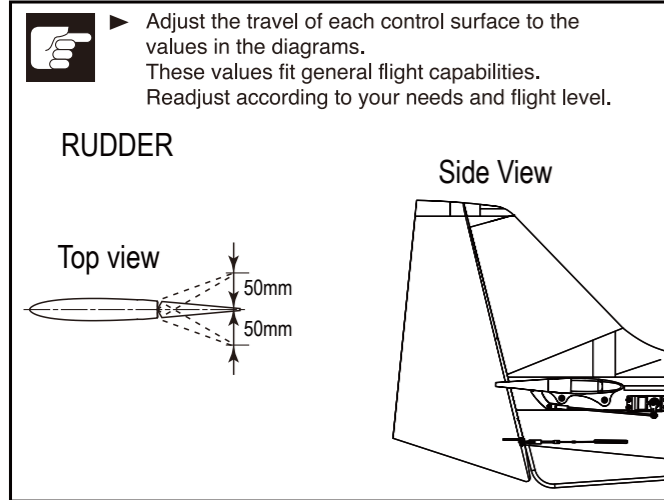
60 Adjustment of the aileron and flap, be sure they can work perfectly.



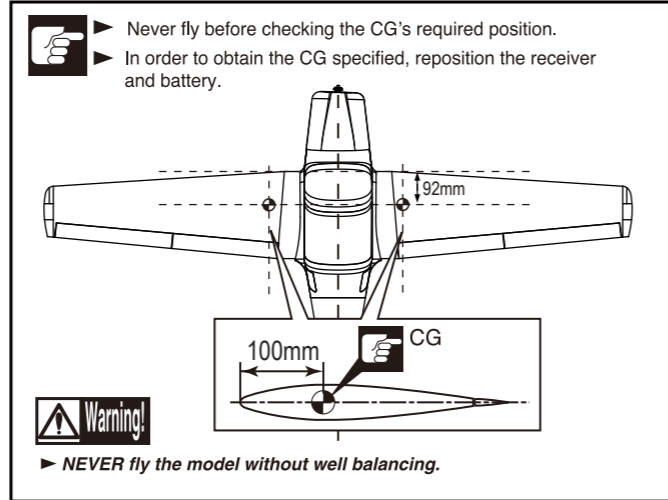
62 Adjustment of the elevator, be sure it can work perfectly.



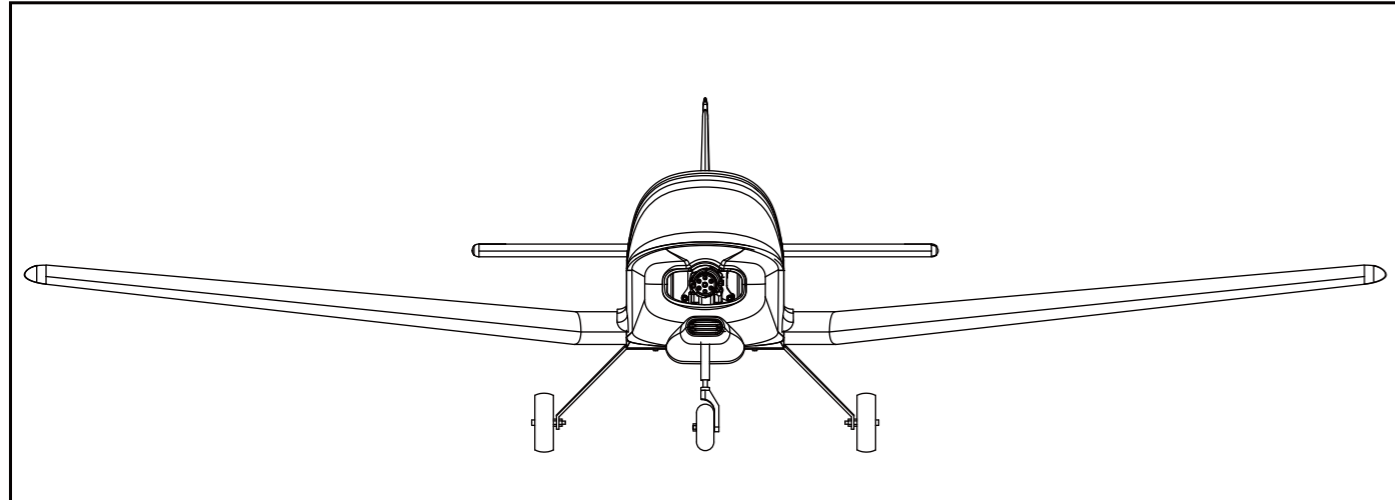
61 Adjustment of the rudder, be sure it can work perfectly.



63 Centre of the Gravity.



64 The front view when the install completion.



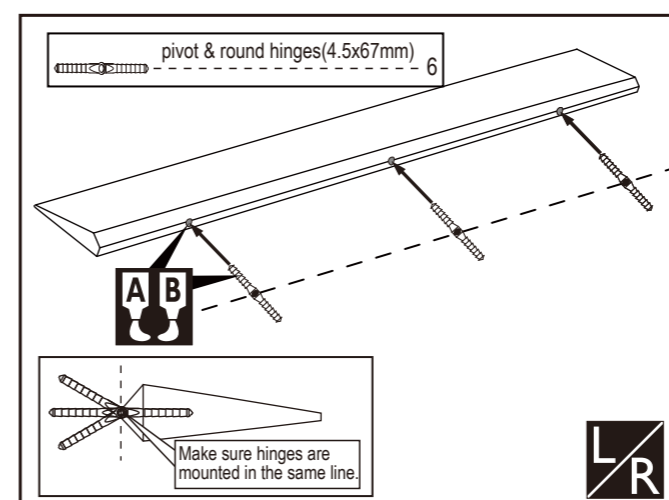
Apply epoxy glue.
 Assemble left and right sides the same way.
 Pay close attention here!
 Do not overlook this symbol!

Apply instant glue (CA glue, super glue).
 Ensure smooth non-binding movement while assembling.
 Cut off shaded portion.

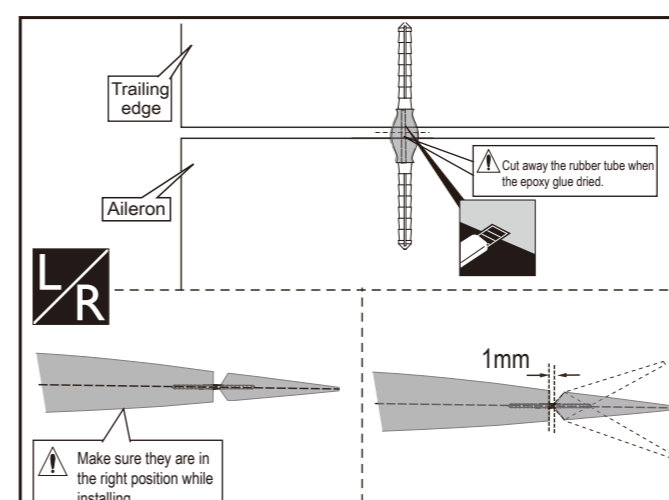
Accessory list for the coming installation steps.

	Rod (2.5x300mm)	2
	TP Screw (2.3x12mm)	8
	Servo tray(70x58x2mm)	2
	Pivot&round hinge(4.5X67mm)	6
	Collar (2.5mm)	2
	Screw (3x16mm)	2
	Nut (3mm)	2
	Clevis	2
	Aluminum Washer (3x6mm)	2
	Control horn	2

1 Apply instant type AB glue to appropriate position of the aileron and pivot & round hinges. Insert the pivot & round hinges to the ailerons.



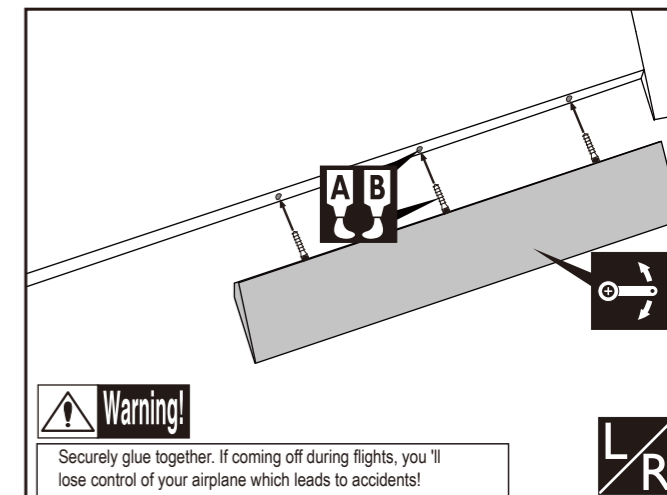
2 Keep about 1mm width space between the aileron and the trailing edge.



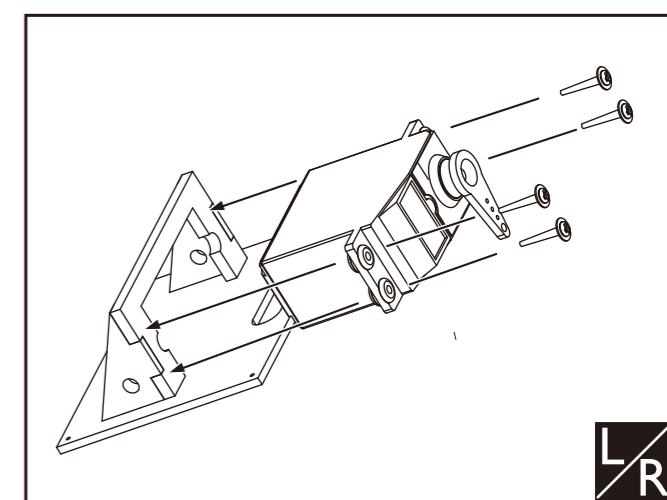
Apply epoxy glue.
 Assemble left and right sides the same way.
 Pay close attention here!
 Do not overlook this symbol!

Apply instant glue (CA glue, super glue).
 Ensure smooth non-binding movement while assembling.
 Cut off shaded portion.

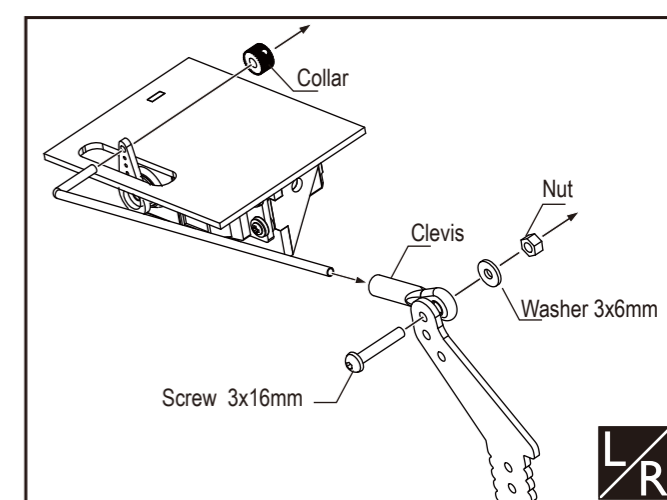
3 Apply instant type AB glue to appropriate position in the trailing edge and assemble the ailerons to them.



4 Install the aileron servo to the servo mount as illustration below.



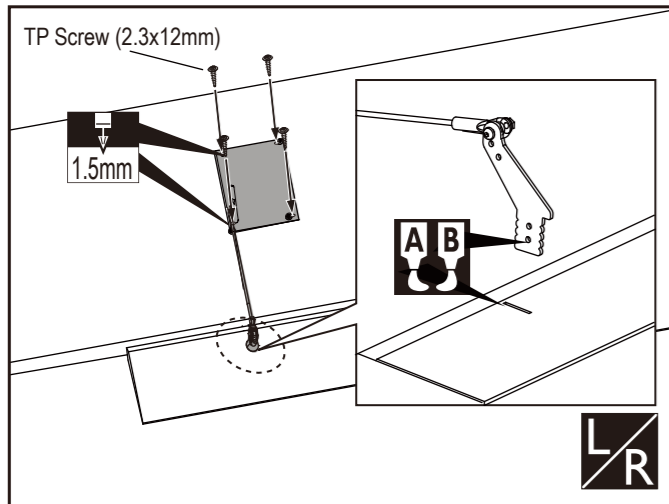
5 Install the control horn and connect the linkage.



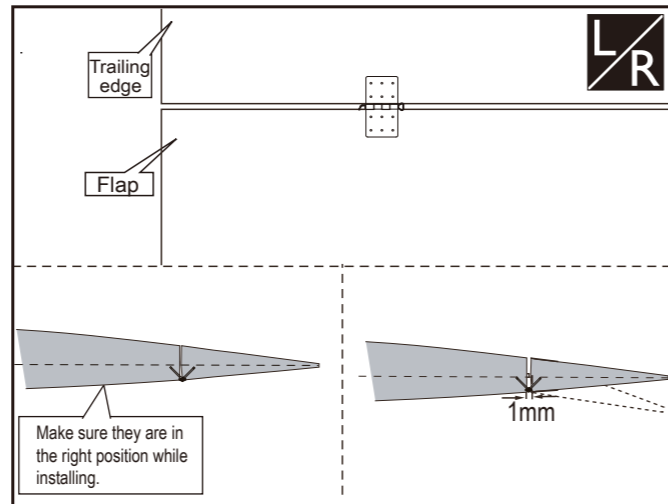
Apply epoxy glue.
 Assemble left and right sides the same way.
 Pay close attention here!
 Do not overlook this symbol!

Apply instant glue (CA glue, super glue).
 Ensure smooth non-binding movement while assembling.
 Cut off shaded portion.

6 Apply instant type AB glue to the control horn and the slots in the aileron, insert the control horn to the slots as illustration.



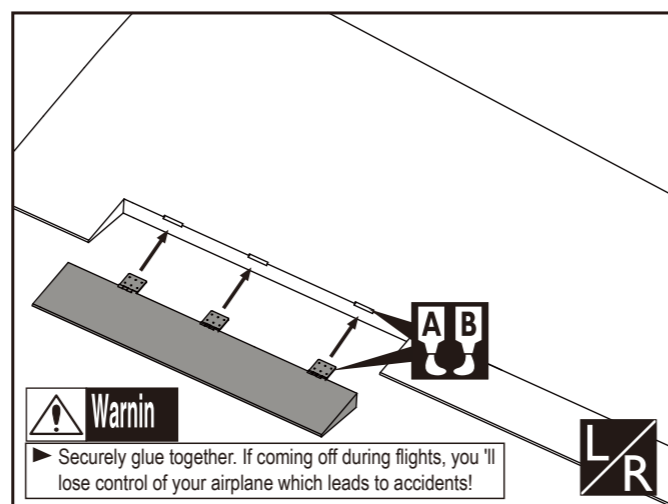
8 Keep about 1mm width space between trailing edge and flap.



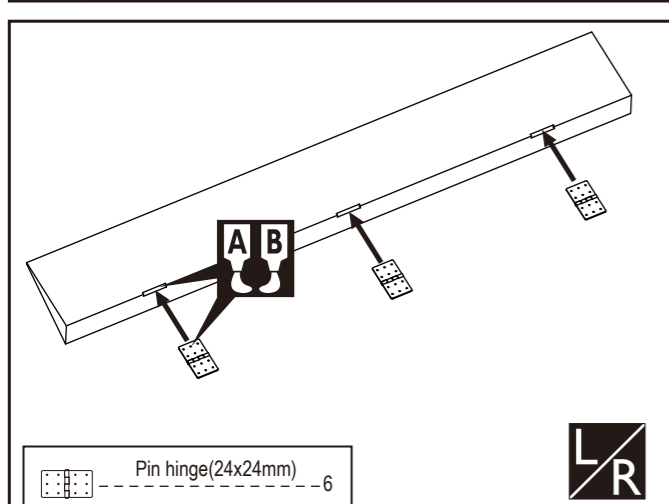
Warning! Accessory list for the coming installation steps.

- Rod (2.5x300mm) ----- 2
- TP Screw (2.3x12mm) ----- 8
- Servo tray(70x58x2mm) ----- 2
- Pin hinge(24x24mm) ----- 6
- Collar (2.5mm) ----- 2
- Screw (3x16mm) ----- 2
- Nut (3mm) ----- 2
- Clevis ----- 2
- Aluminum Washer (3x6mm) ----- 2
- Control horn ----- 2

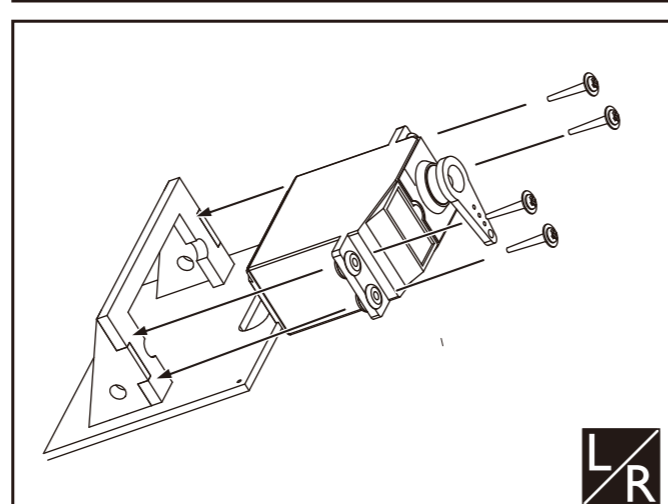
9 Epoxy the flaps to the wings as illustration.



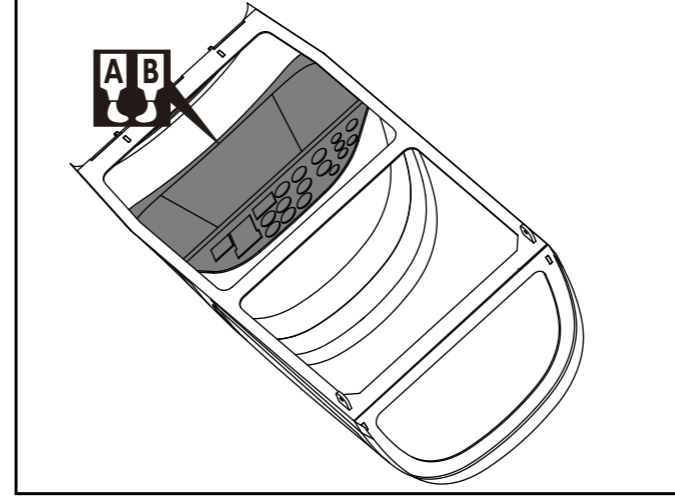
7 Epoxy the pin hinges to the flap.



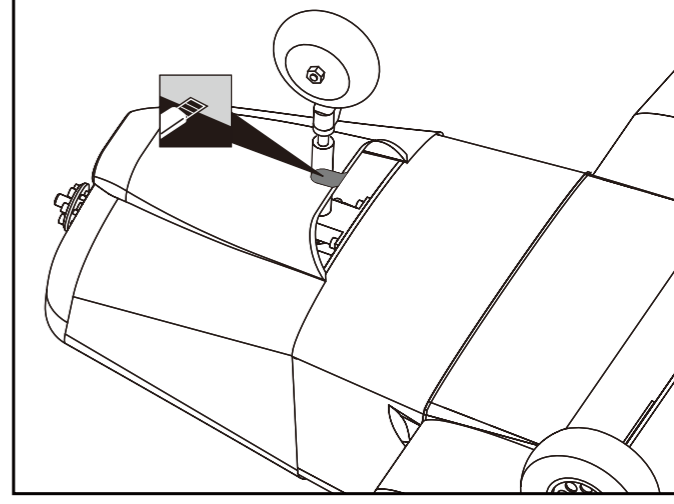
10 Install the flap servo to the servo mount as illustration below.



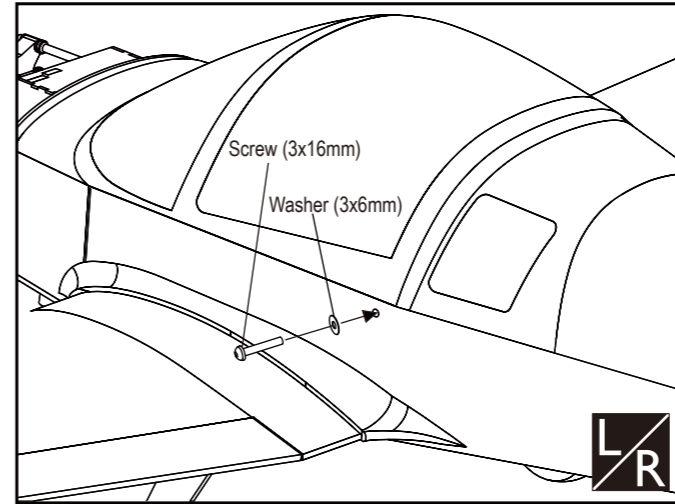
54 Epoxy the instrument plate to the cockpit.



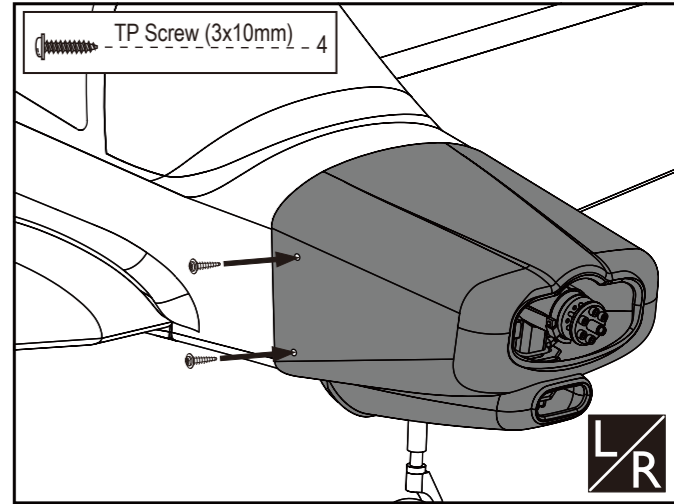
57 Trim a slot for assembling the cowling.



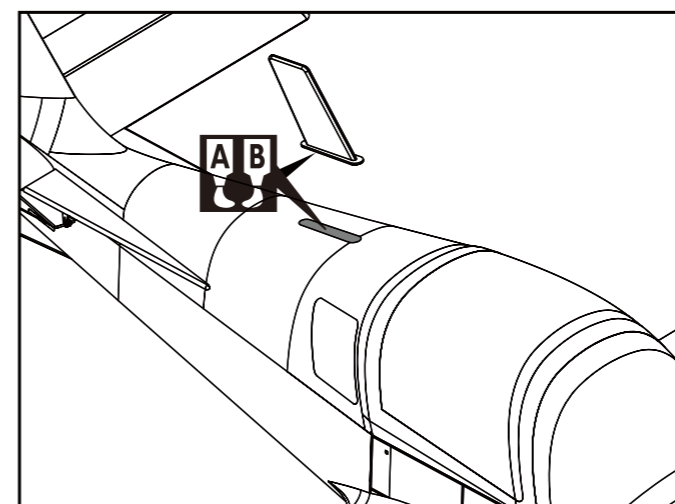
55 Fix the fuselage top cover to the fuselage with screws as illustration.



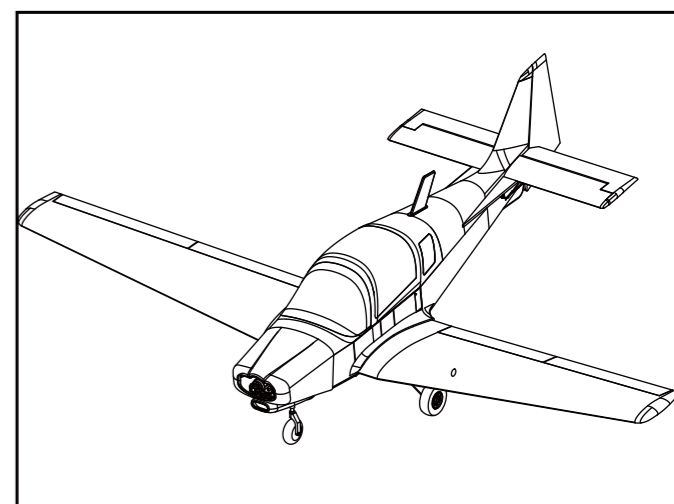
58 Assemble the cowling to the fuselage with TP screws.



56 Epoxy the fin fairing to the fuselage as illustration.



59 The sketch map when the plane assemble completion.



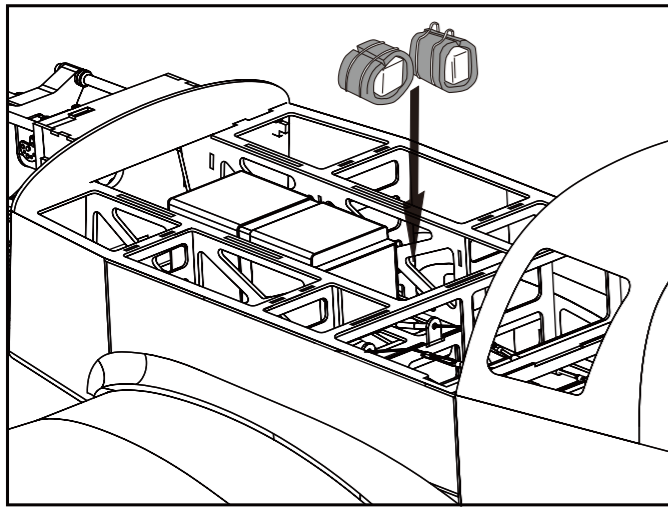
AB Apply epoxy glue. **LR** Assemble left and right sides the same way. **Hand icon** Pay close attention here! **Warning!** Do not overlook this symbol!

CA Apply instant glue (CA glue, super glue). **Arrow icon** Ensure smooth non-binding movement while assembling. **Shaded area icon** Cut off shaded portion.

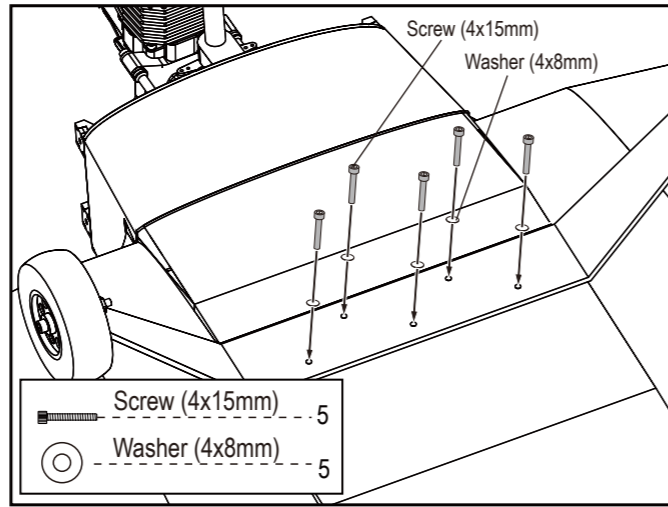
AB Apply epoxy glue. **LR** Assemble left and right sides the same way. **Hand icon** Pay close attention here! **Warning!** Do not overlook this symbol!

CA Apply instant glue (CA glue, super glue). **Arrow icon** Ensure smooth non-binding movement while assembling. **Shaded area icon** Cut off shaded portion.

49 Mount the receiver and the battery to appropriate position in the fuselage.



51 Assemble the undercarriage to the fuselage with screws.

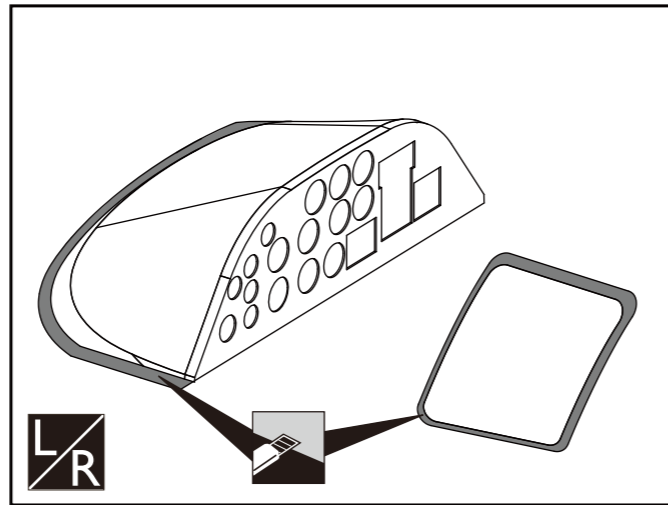


- Screw (4x15mm) 5
- Washer (4x8mm) 5

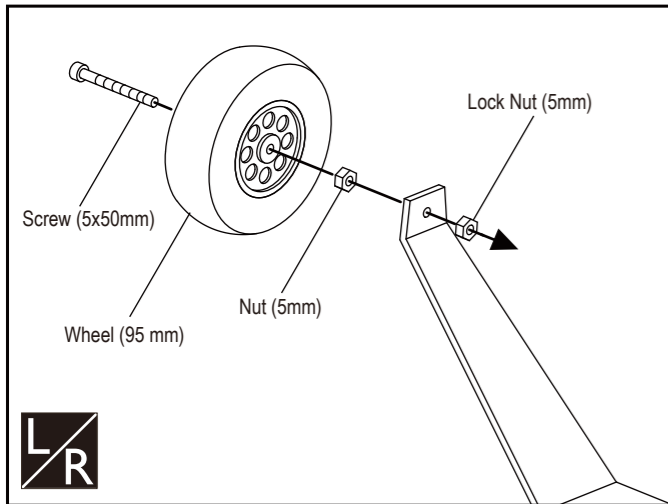
Accessory list for the coming installation steps.

- Screw (5x50mm) 2
- Wheel (95 mm) 2
- Nut(5mm) 2
- Main landing gear 1
- LockNut (5mm) 2
- Screw (4x15mm) 5
- Washer (4x8mm) 5
- Washer (3x6mm) 2
- Screw (3x16mm) 2
- TP Screw (3x10mm) 4

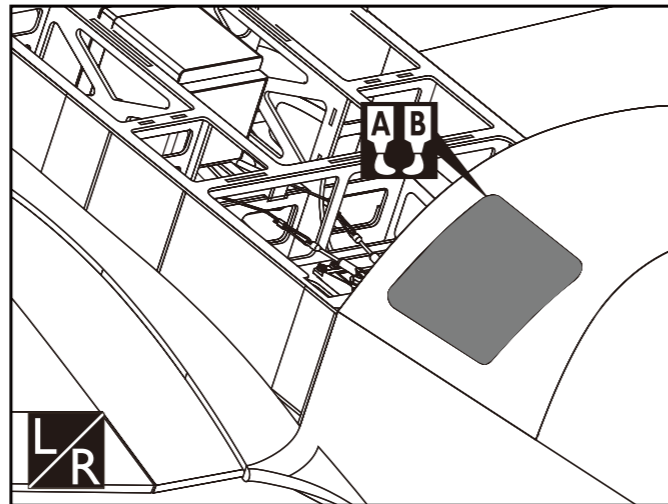
52 Trim the PVC parts along the shaded line.



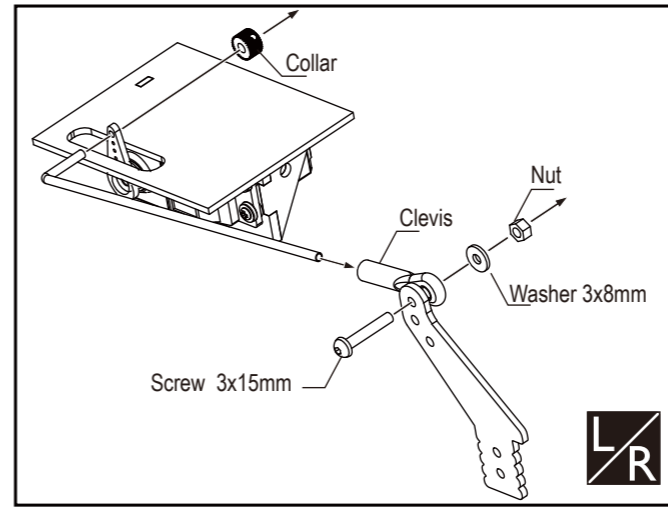
50 Assemble the wheels and wheel pants to the landing gears with screws.



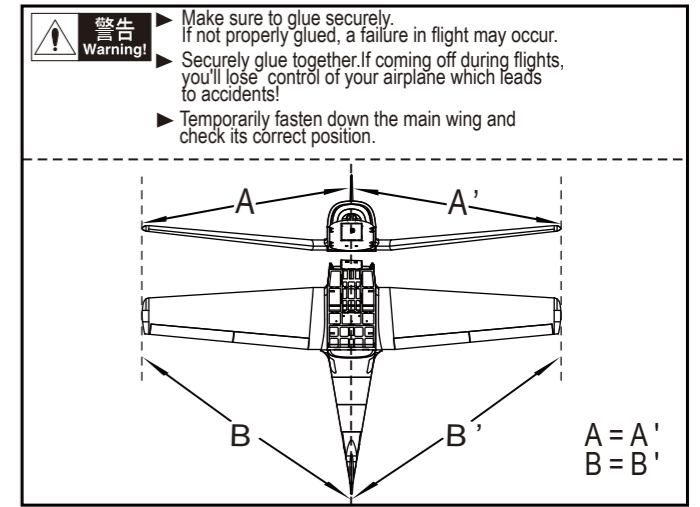
53 Epoxy the PVC part to appropriate position in the fuselage.



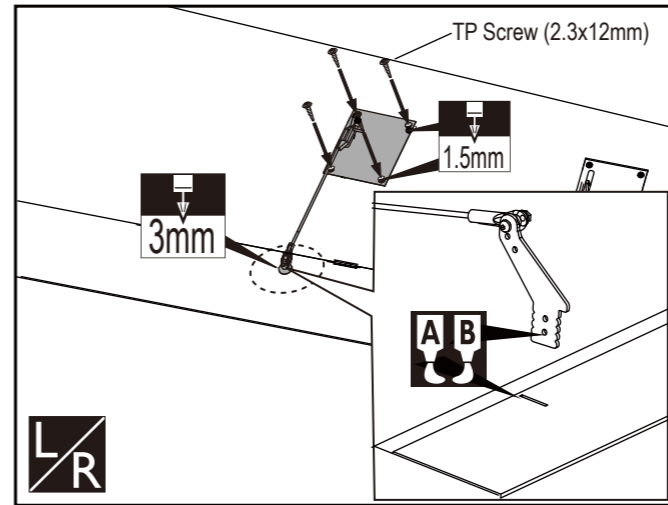
11 Install the control horn and connect the linkage.



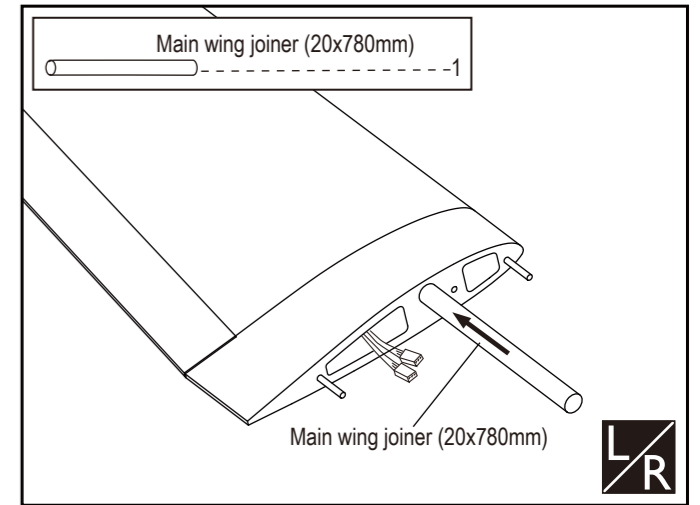
13 The standard sketch map when the kit install completion.



12 Secure the flap servo, install the control horn and connect the linkage.



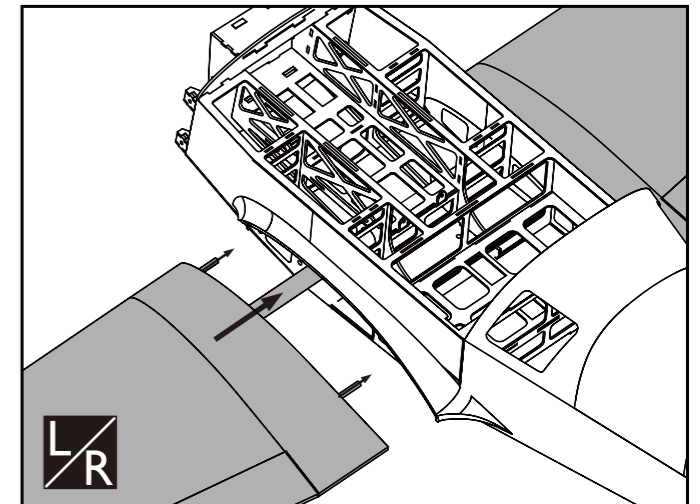
14 Insert the main wing joiner to the wing.



Accessory list for the coming installation steps.

- Main wing joiner (20x780mm) 1
- Screw (6x30mm) 2
- Washer (6x12mm) 2

15 Assemble the wings to the fuselage through the main wing joiner carefully.



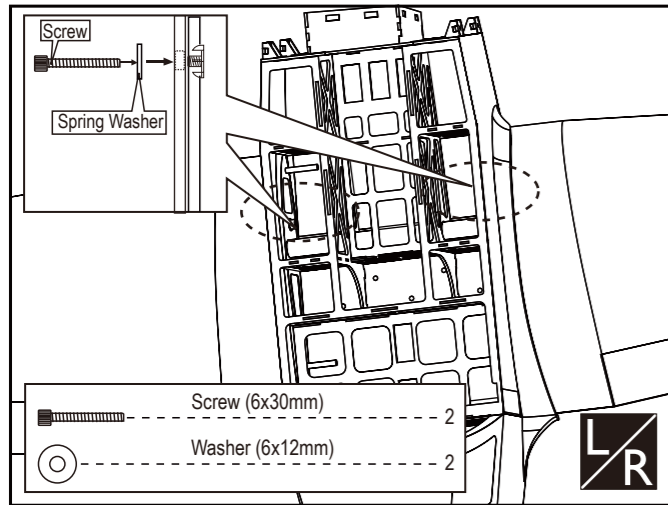
Apply epoxy glue. Assemble left and right sides the same way. Pay close attention here! Do not overlook this symbol!

Apply instant glue (CA glue, super glue). Ensure smooth non-binding movement while assembling. Cut off shaded portion.

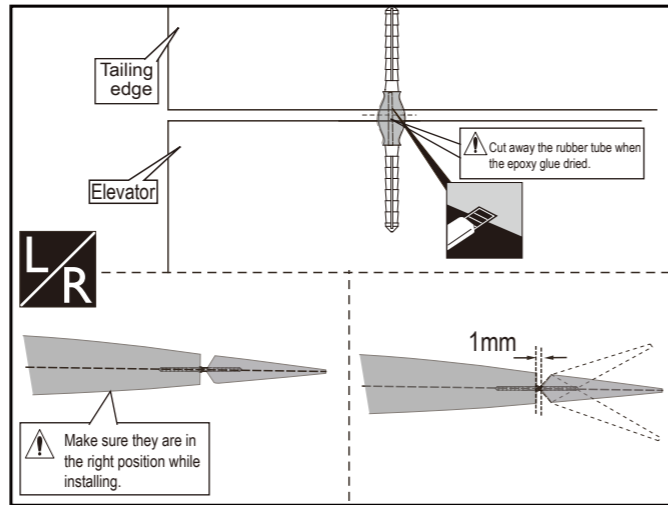
Apply epoxy glue. Assemble left and right sides the same way. Pay close attention here! Do not overlook this symbol!

Apply instant glue (CA glue, super glue). Ensure smooth non-binding movement while assembling. Cut off shaded portion.

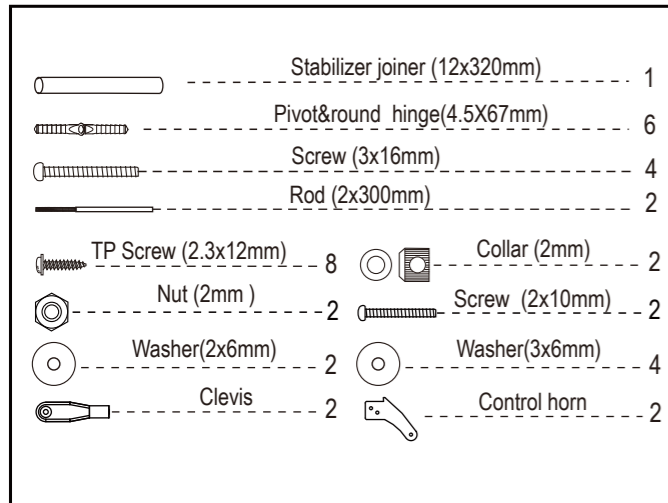
16 Fix the wing to fuselage with screws through the holes applied in the wings and fuselage.



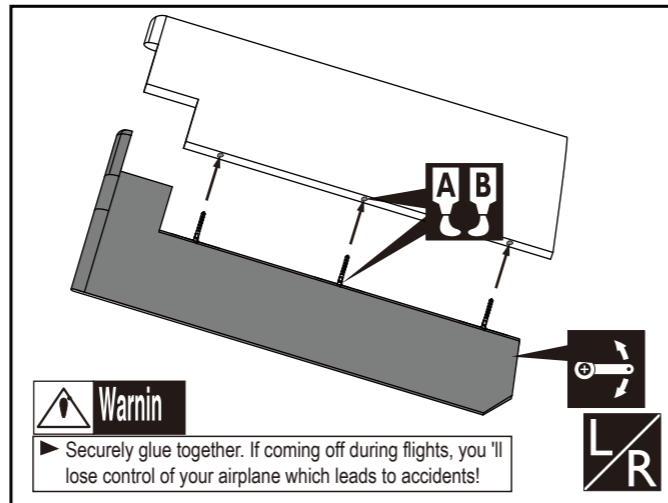
18 Keep about 1mm width space between elevator and trailing edge.



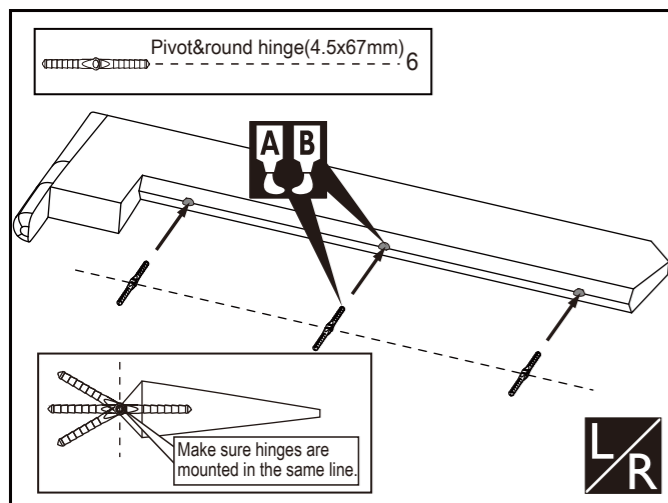
! Accessory list for the coming installation steps.



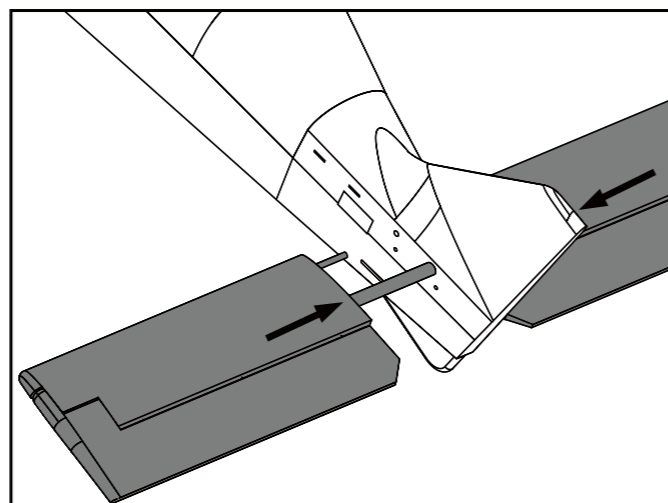
19 Epoxy the elevator to the stabilizer.



17 Apply instant type AB glue to appropriate position of the elevator and pivot & round hinges. Insert the pivot & round hinges to the elevator.



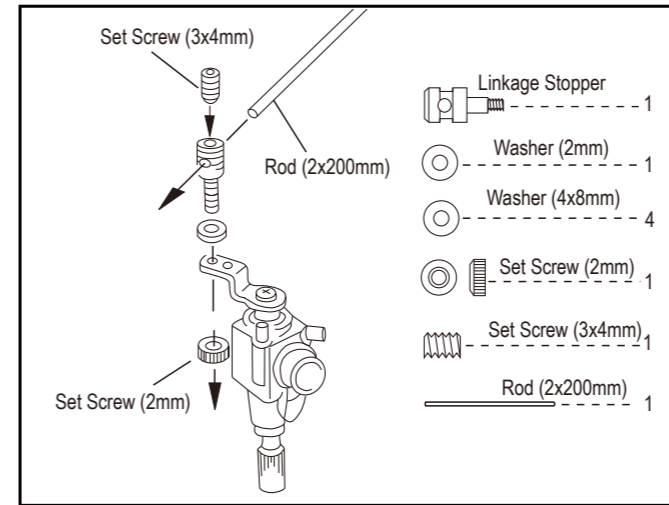
20 Assemble the stabilizer to the fuselage through the stabilizer joiner.



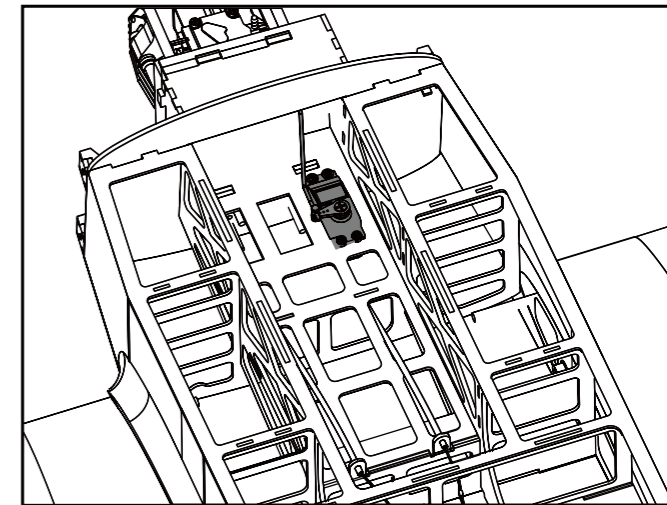
AB Apply epoxy glue. **LR** Assemble left and right sides the same way. **!** Pay close attention here! **Warning!** Do not overlook this symbol!

CA Apply instant glue (CA glue, super glue). **→** Ensure smooth non-binding movement while assembling. **✂** Cut off shaded portion.

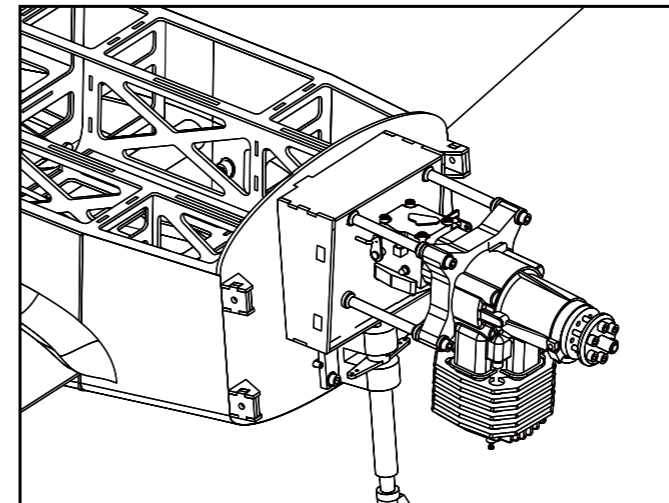
43 Install the throttle linkage.



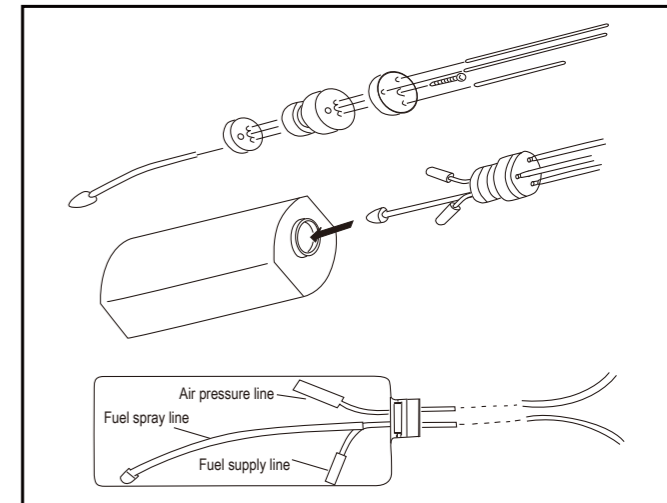
46 Assemble the servo in the fuselage.



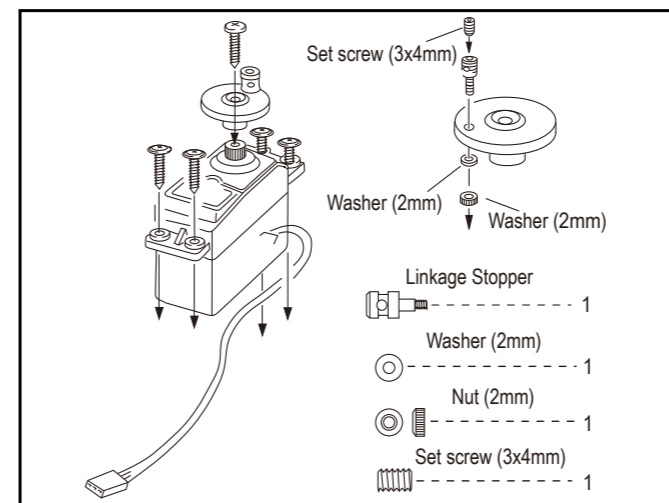
44 The sketch map when the engine install completion.



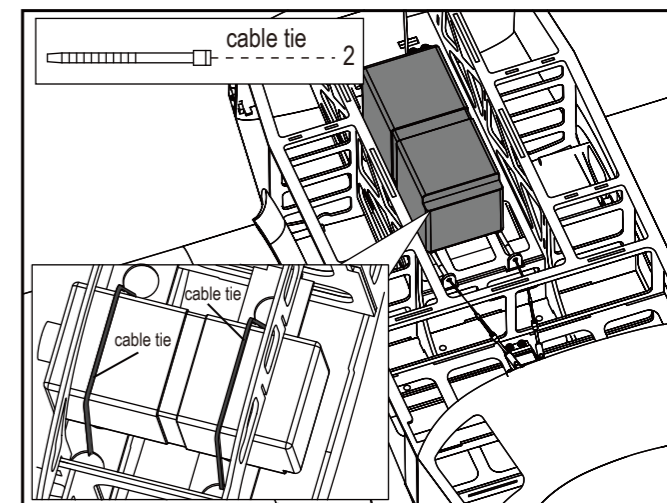
47 Assembly of the fuel tank.



45 Install the servo of throttle.



48 Fix the fuel tank to appropriate position in the fuselage with cable tie.



AB Apply epoxy glue. **LR** Assemble left and right sides the same way. **!** Pay close attention here! **Warning!** Do not overlook this symbol!

CA Apply instant glue (CA glue, super glue). **→** Ensure smooth non-binding movement while assembling. **✂** Cut off shaded portion.

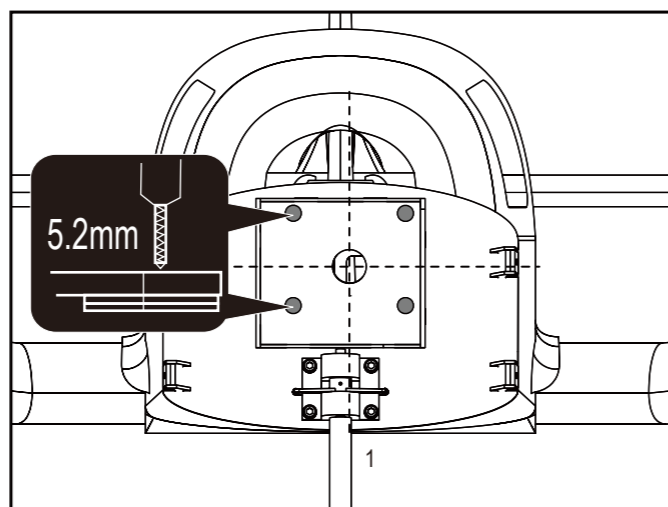


Accessory list for the coming installation steps.

- Screw (4x45mm) ----- 4
- Screw (4x20mm) ----- 4
- Washer(4x8mm) ----- 12
- Linkage Stopper ----- 2
- Plastic tube (2x400mm) ----- 1
- Fuel tank (550cc) ----- 1
- cable tie ----- 2
- Blind Nut (4mm) ----- 4
- Rod (2x200mm) ----- 1

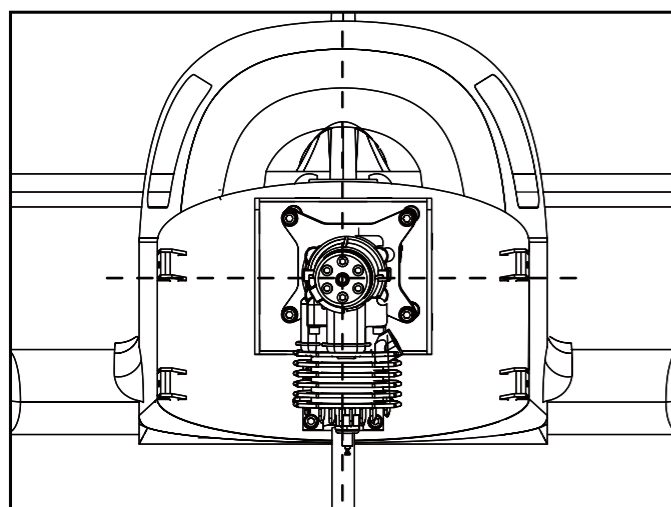
40

Drill four holes at the diameters as shown.



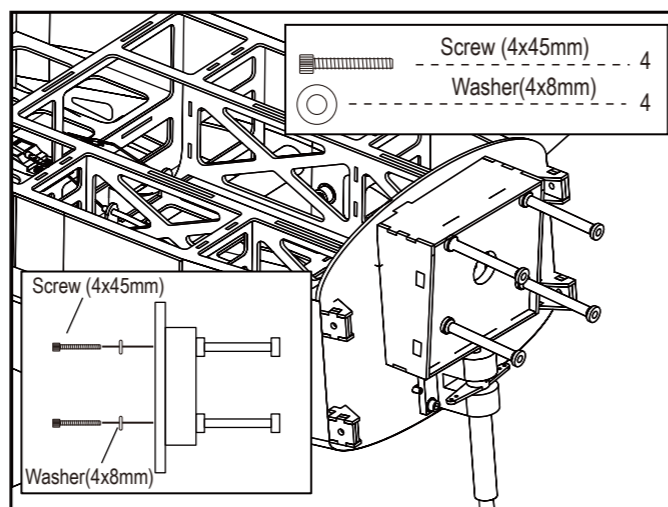
38

The front view once the engine install completion.



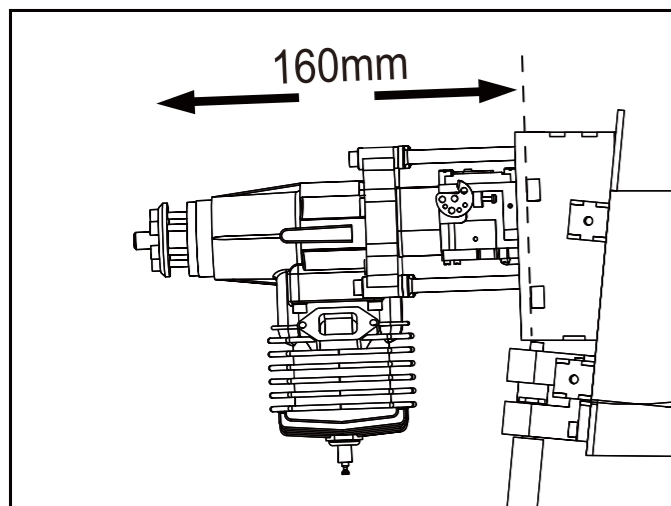
41

Install the engine mount tubes to the fuselage ,lock them from inside of the fuselage.



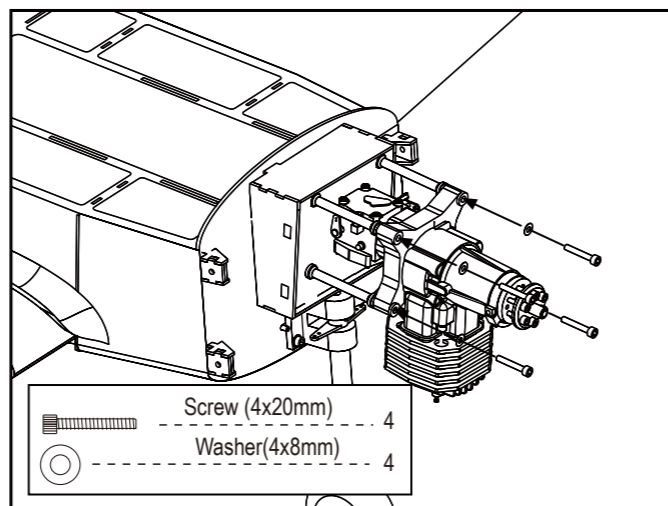
39

The side view once the engine install completion.



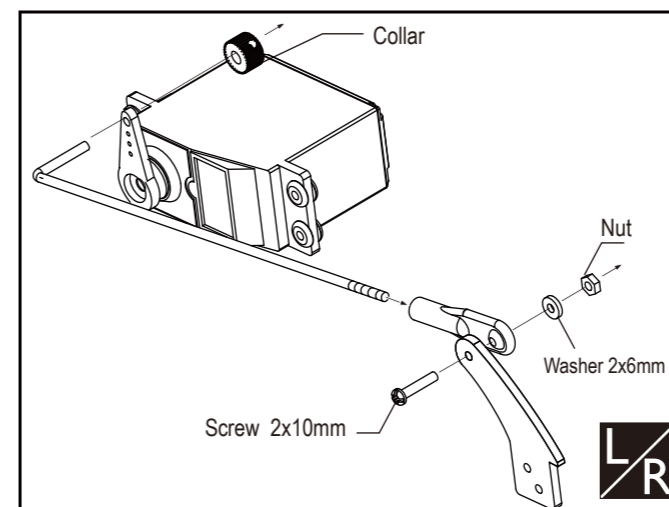
42

Assemble the engine to the fuselage.



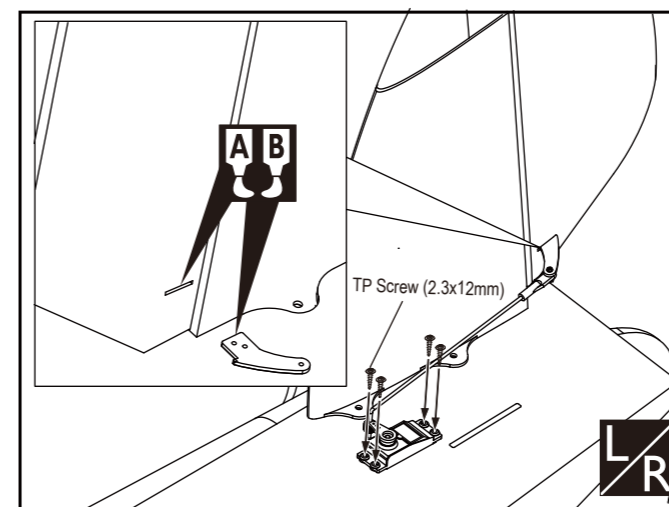
21

Install the control horn and connect the linkage.



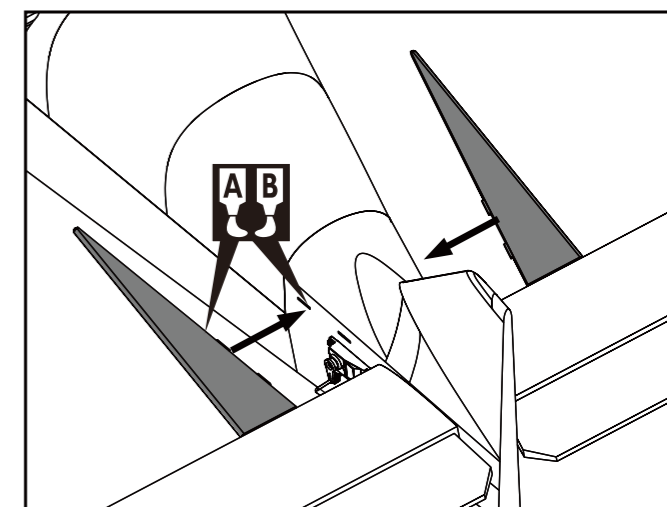
22

Epoxy the control horn to the slots in the elevator,assemble the elevator servo to the fuselage as illustration.



24

Epoxy the fairing sheet to the slots in the fuselage as illustration.

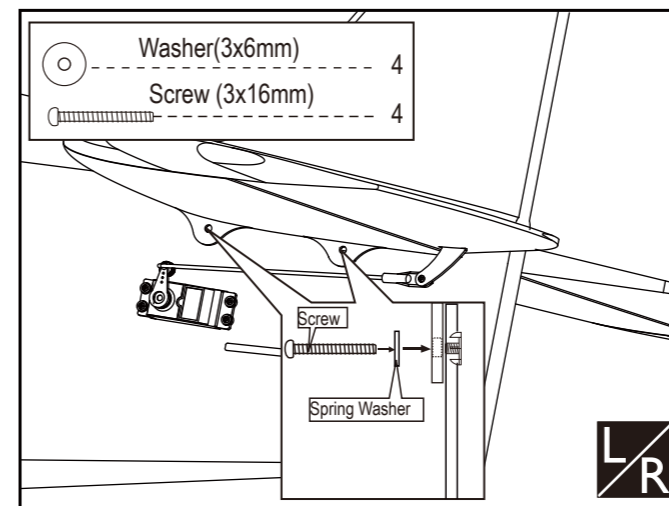


Accessory list for the coming installation steps.

- Screw (2x10mm) ----- 6
- Washer(2x6mm) ----- 6
- Washer(4x8mm) ----- 4
- Clevis ----- 6
- Tail wheel (75mm) ----- 1
- Steering fullarm (60x6mm) ----- 1
- Steel wire (0.5x900mm) ----- 2
- Steel wire (0.5x1500mm) ----- 2
- Nose gear ----- 1
- Pivot&round hinge(4.5x67mm) ----- 3
- Copper joiner ----- 6
- Front wheel steering mounts ----- 1
- Collar (5mm) ----- 1
- Nut (2mm) ----- 6
- Aluminum tube ----- 6
- Control horn ----- 2
- Screw (4x25mm) ----- 4
- Lock Nut (5mm) ----- 1

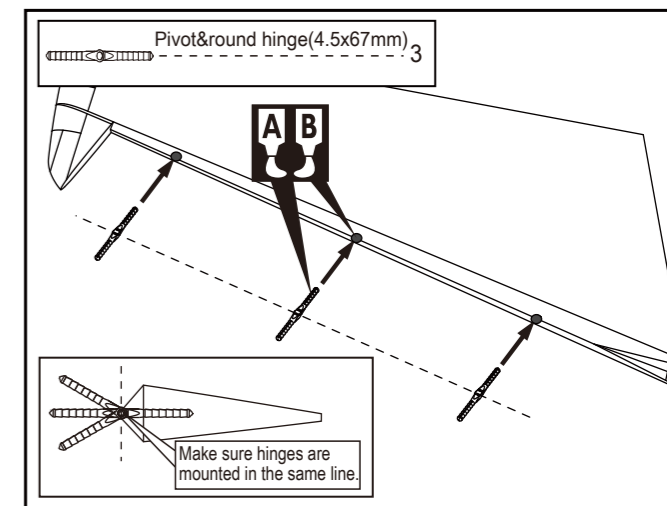
23

Fix the stabilizers to the tail fuselage via screws.



25

Apply instant type AB glue to appropriate position of the rudder and pivot & round hinges. Insert the pivot & round hinges to the rudder.



Apply epoxy glue.



Assemble left and right sides the same way.



Pay close attention here!

Do not overlook this symbol!



Apply instant glue (CA glue, super glue).



Ensure smooth non-binding movement while assembling.



Cut off shaded portion.



Apply epoxy glue.



Assemble left and right sides the same way.



Pay close attention here!

Do not overlook this symbol!



Apply instant glue (CA glue, super glue).

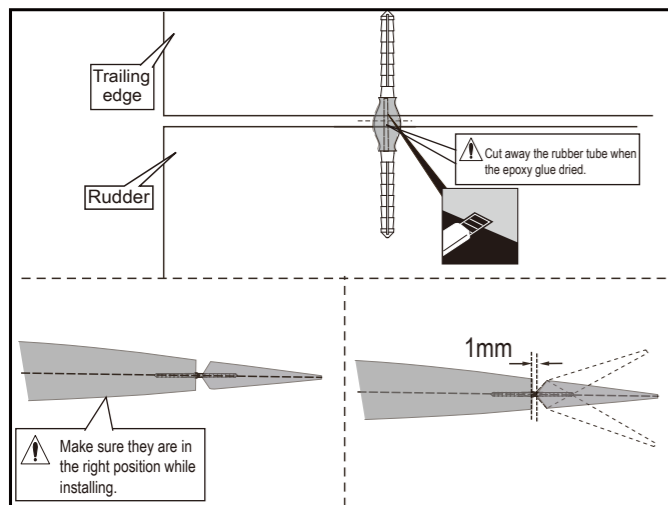


Ensure smooth non-binding movement while assembling.

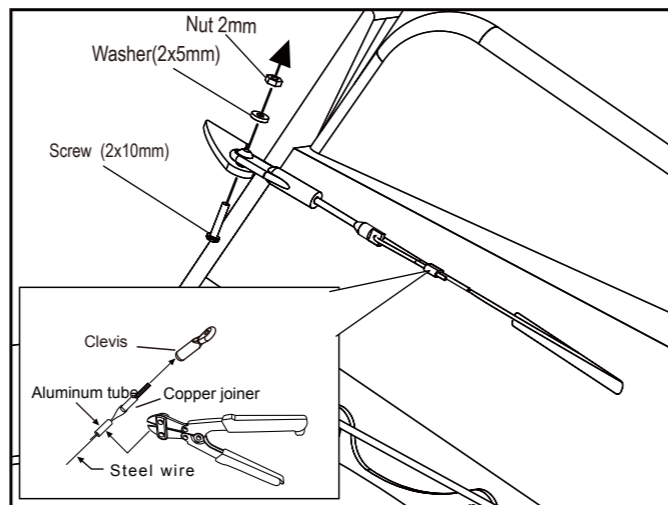


Cut off shaded portion.

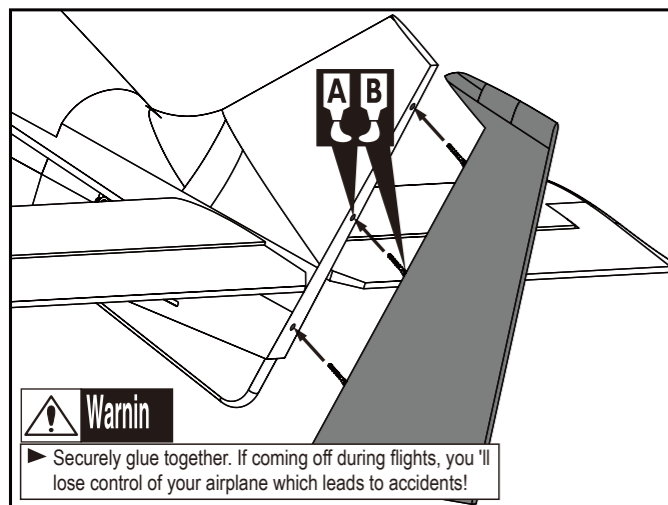
26 Keep some space about 1mm width between the rudder and tail edge.



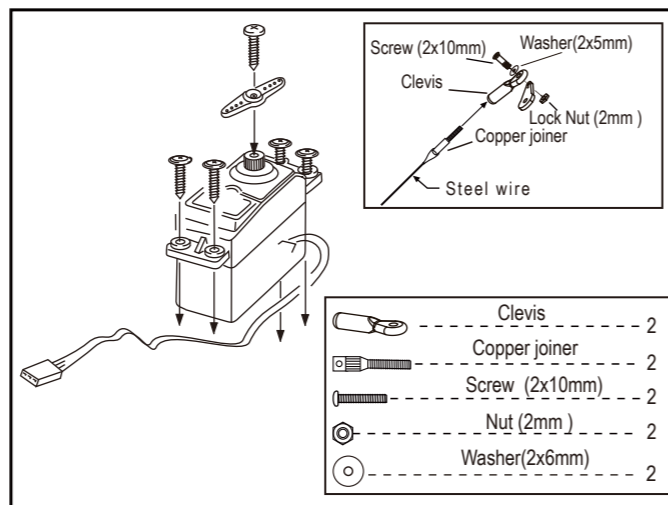
29 Lock the linkage to the control horn with screws and nuts as below.



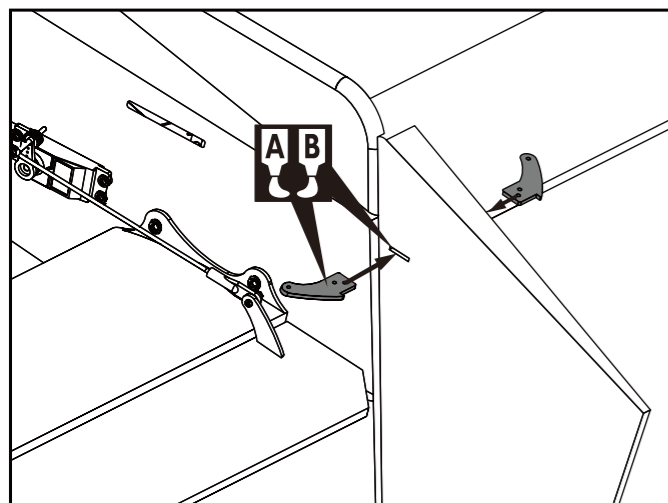
27 Epoxy the rudder to the vertical fin..



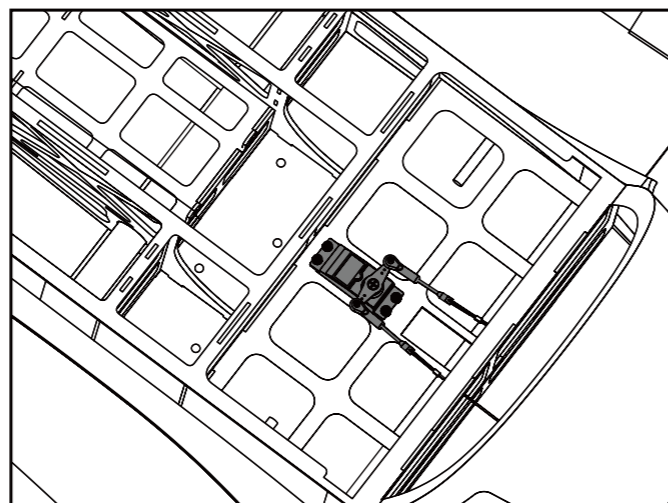
30 Install the servo of the rudder.



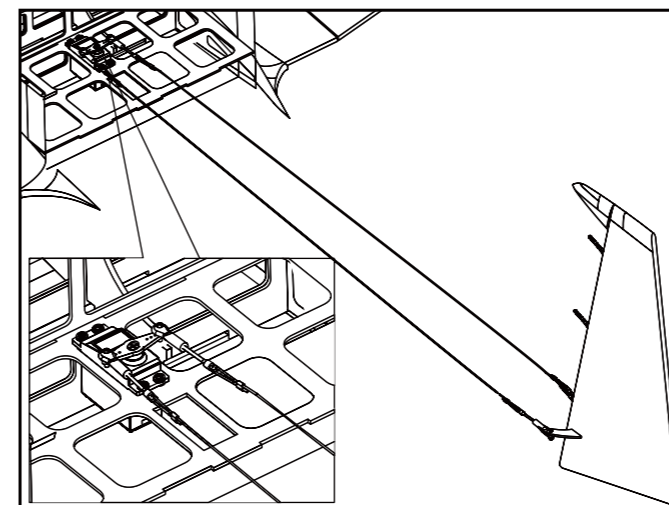
28 Epoxy the control horns to the slots in the rudder.



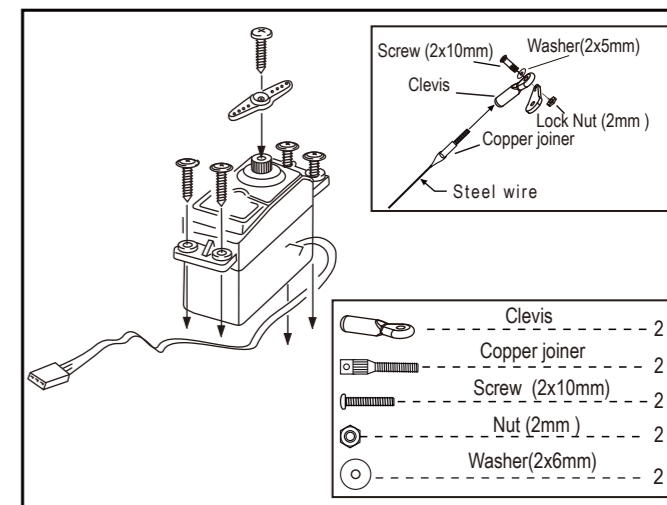
31 Assemble the servo of the rudder in the fuselage and connect the servo and the rudder via steel wires.



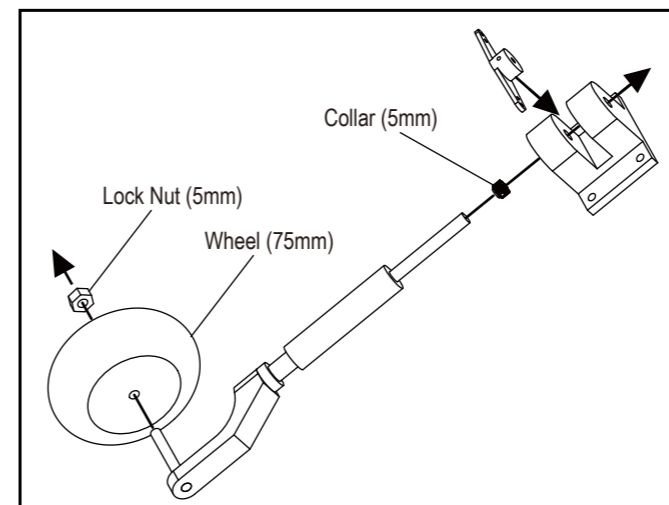
32 The sketch map of how the steel wires works for the rudder.



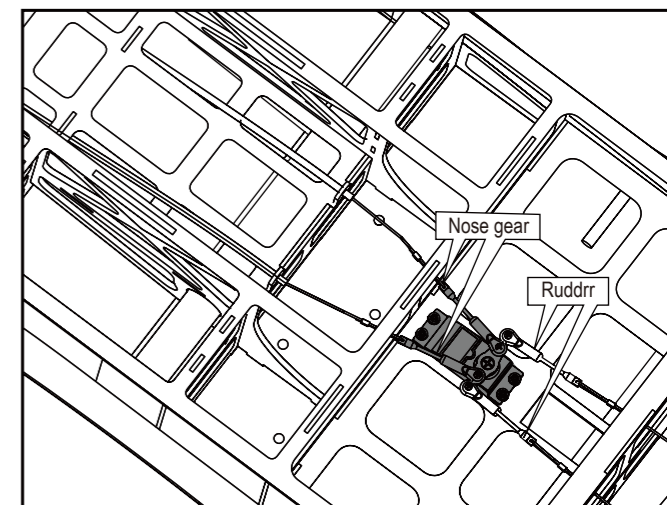
35 Install the servo of the rudder.



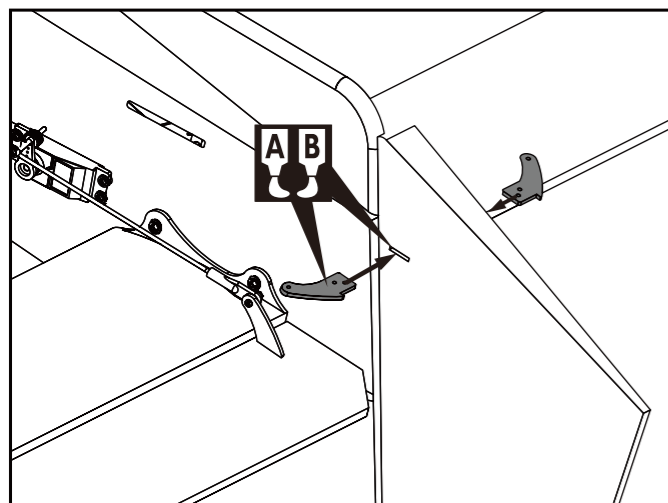
33 Install the wheel and the nose arm to the nose landing gear.



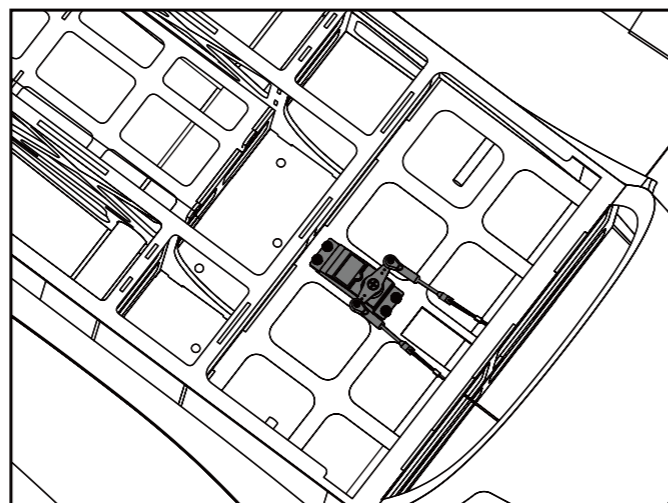
36 Assemble the nose gear servo to the fuselage.



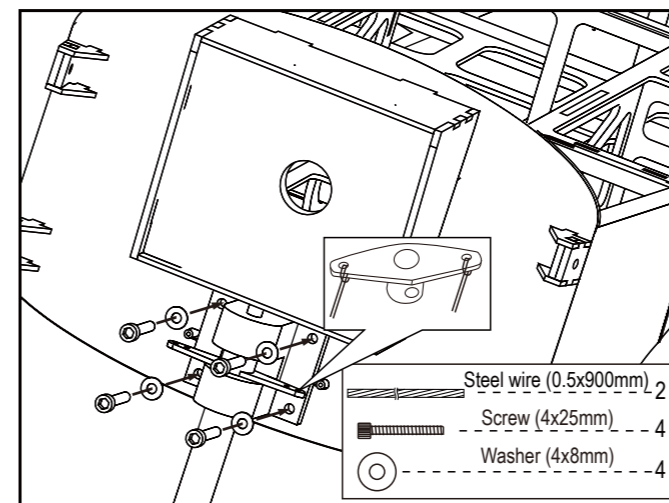
28 Epoxy the control horns to the slots in the rudder.



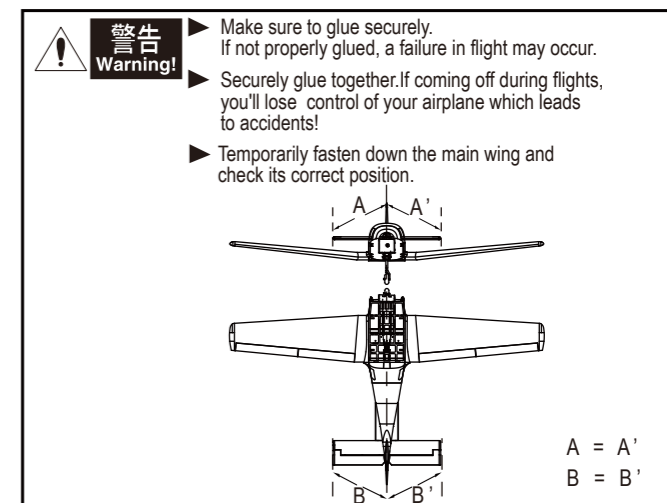
31 Assemble the servo of the rudder in the fuselage and connect the servo and the rudder via steel wires.



34 Fix the nose landing gear to the fuselage steadily which screws.



37 The sketch map should be when the rudder and stabilizer install completion.



Apply epoxy glue.
 Assemble left and right sides the same way.
 Pay close attention here!
 Do not overlook this symbol!

Apply instant glue (CA glue, super glue).
 Ensure smooth non-binding movement while assembling.
 Cut off shaded portion.

Apply epoxy glue.
 Assemble left and right sides the same way.
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Apply instant glue (CA glue, super glue).
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