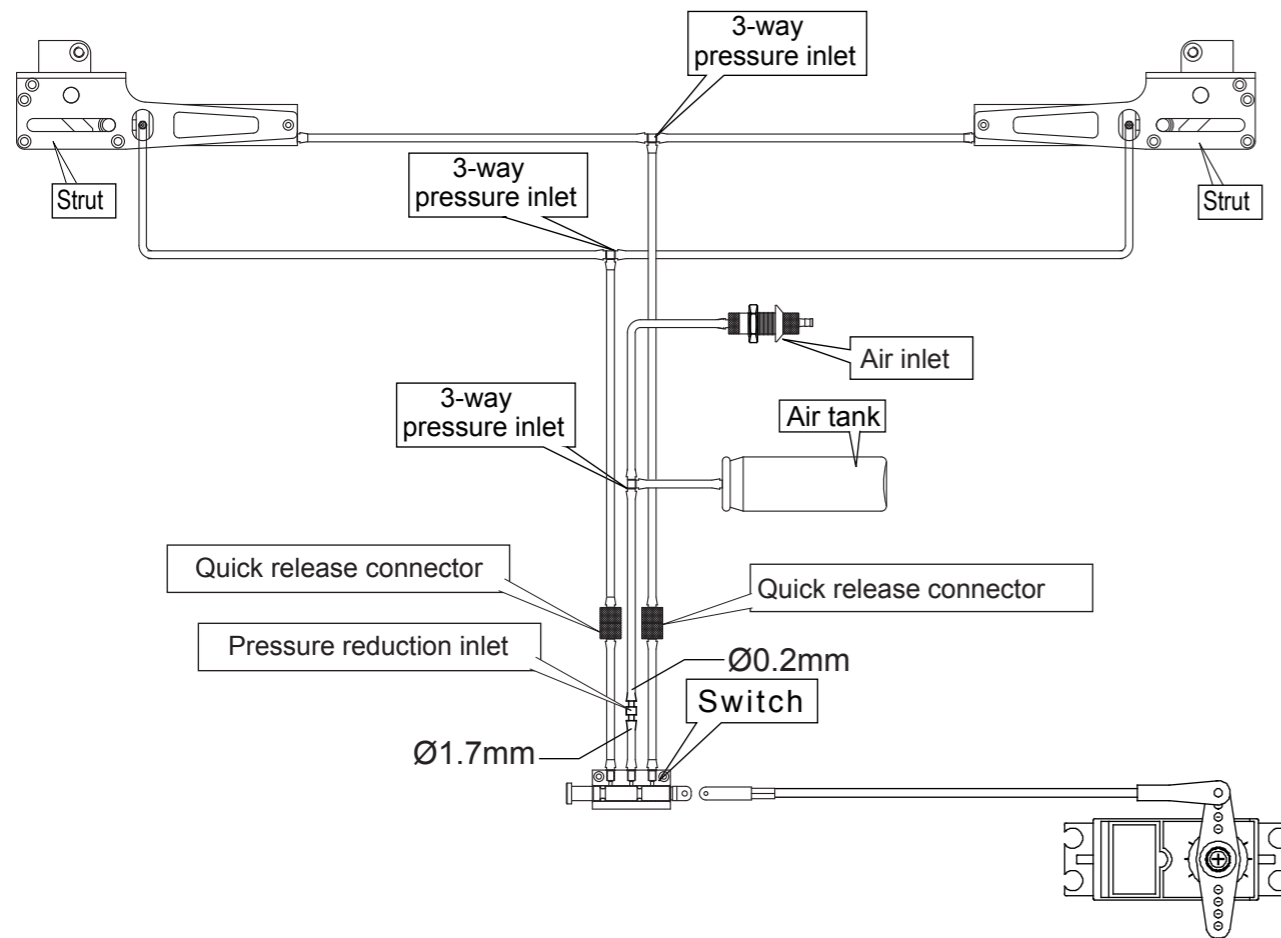


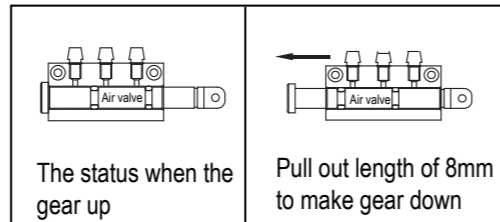
# Two wheel retract system

**Warning!** Make sure to assemble retracts as instructed below.



**Warning!** Please insure the sealing of the retract system before flight.  
 ▶ Please notice the inner diameter for each side of 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 |



- |   |  |                           |
|---|--|---------------------------|
| Apply epoxy glue.                         | Assemble left and right sides the same way.          | Pay close attention here! |
| Apply instant glue (CA glue, super glue). | Ensure smooth non-binding movement while assembling. | Cut off shaded portion.   |

Do not overlook this symbol!

Before start ,please carefully read the explanations!

# F8F



- Specification:
- Length :1346 mm(53")
  - Wing Span :1860 mm(73.2")
  - Wing Area :55.3 sq. dm  
5.95 sq. ft
  - Wing Loading :117.5 g/sq. dm  
38.5 oz/sq. ft
  - Flying Weight :6.5 kg(14.3 lbs)
  - Radio :6ch&8 servos
  - Engine :108 2-cycle  
120 4-cycle

## INSTRUCTION MANUAL

### SAFETY PRECAUTIONS



**This R/C airplane is not a toy!**  
 (The people under 18 years old is forbidden from flying this model)

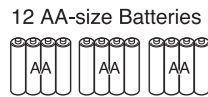
First-time builders should seek advice from people having building experience.If misused or abused,it can cause serious bodily injury and damage to property.  
 Fly only in open areas and preferably at a dedicated R/C flying site. We suggest having a qualified instructor carefully inspect your airplane 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!)**

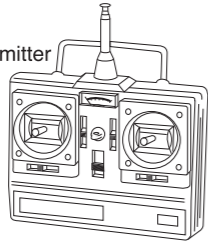
**CAUTION:** For details concerning the equipment listed below (size, maker, etc.), check with your hobby shop.

**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.

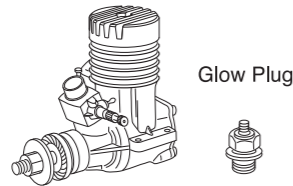


A minimum 6 channel transmitter for airplanes.

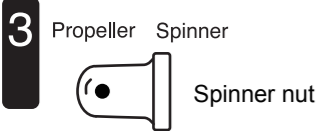


For handling the radio properly, refer to its instruction manual.

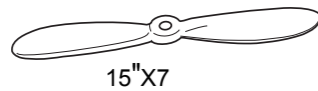
**2** Engine and Muffler  
Model Airplane Engine: 4-cycle .120



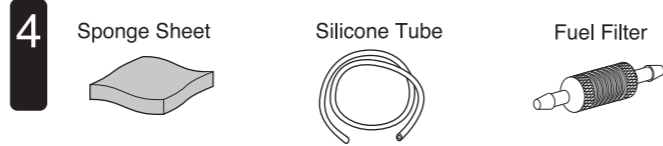
Glow Plug



Purchase a propeller that will match your engine.

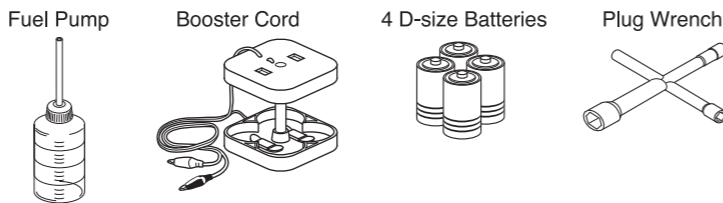
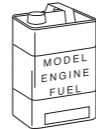


15"X7

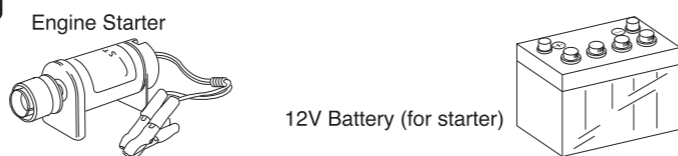


**5** Required for engine starting: Glow engine fuel only.

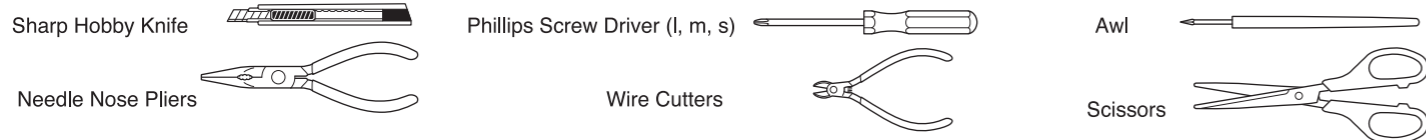
**WARNING:** Normal gasoline cannot be used with glow engines.



**7** Other equipment for enhancing airplane operation & performance



**TOOLS REQUIRED (Purchase separately!)**

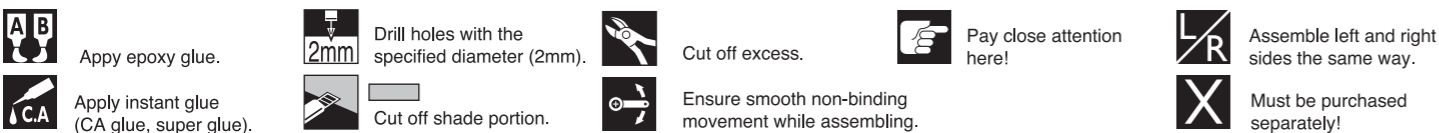


**BEFORE YOU BEGIN**

**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.

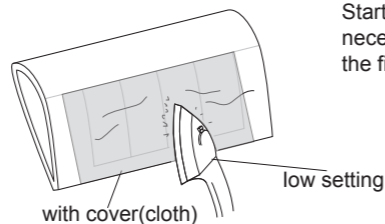
**3** Symbols used throughout this instruction manual, comprise:



Do not overlook this Symbol!



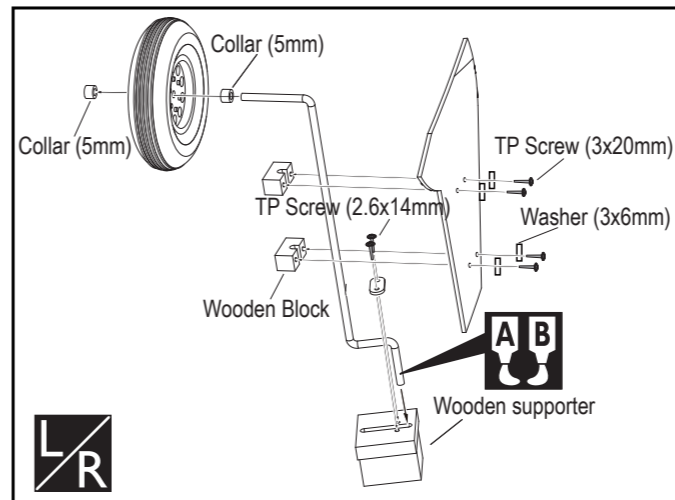
► Pre-cover the covering with clean cloth! Start at low setting. Increase the setting if necessary. If it is too high, you may damage the film.



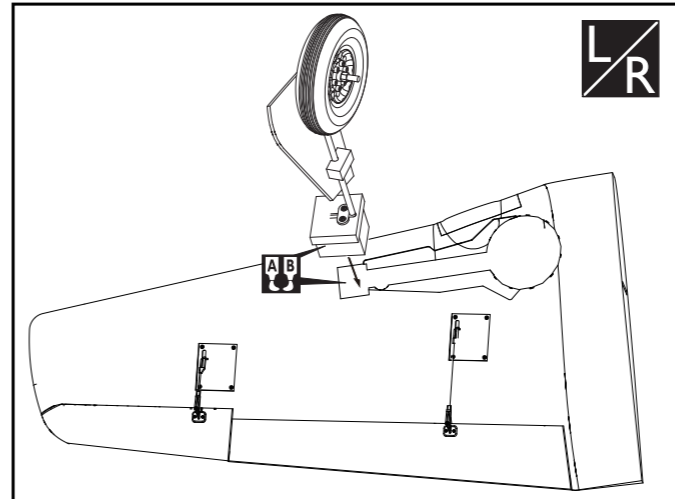
**Warning**  
Remove the covering with proper pressure to cut through only the covering itself. Otherwise, cutting down into the balsa structure may weaken the model part and cause accident.

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

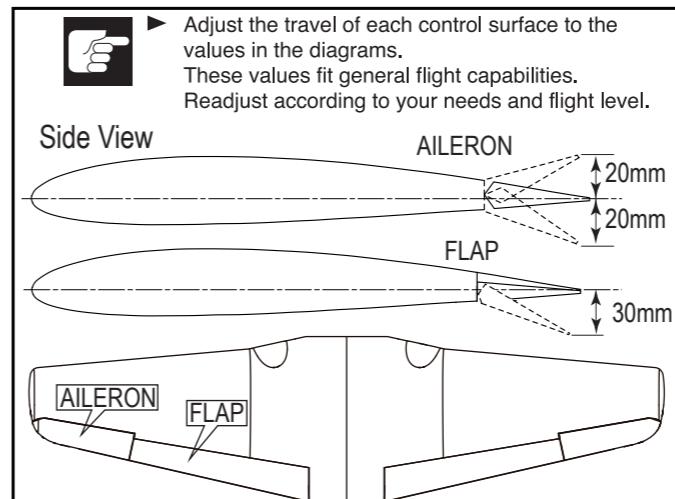
**65** Assemble the main wheels as below.



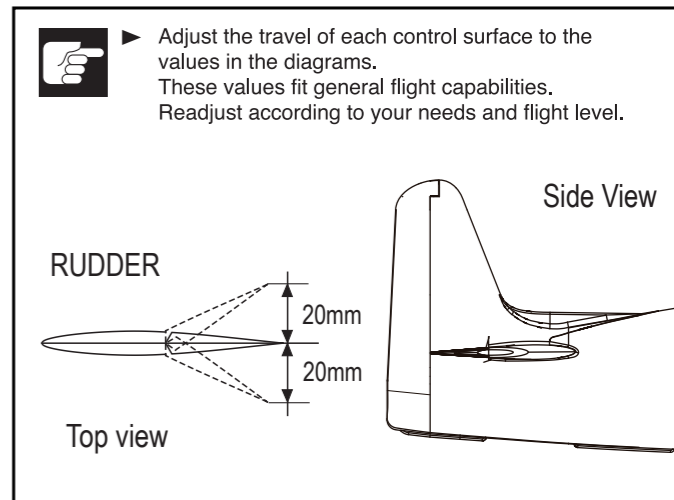
**66** Epoxy the wheels to the wings steadily.



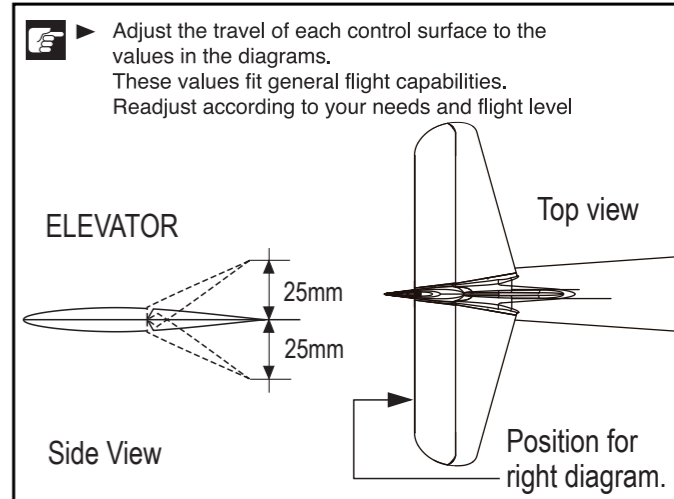
**67** Adjustment.



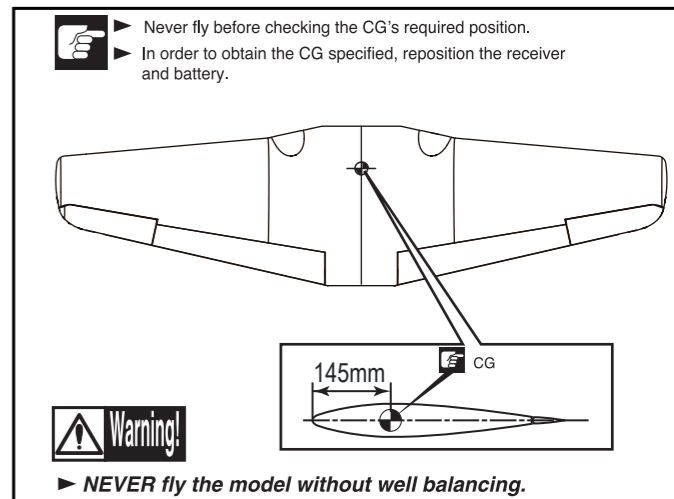
**68** Adjustment.



**69** Adjustment.



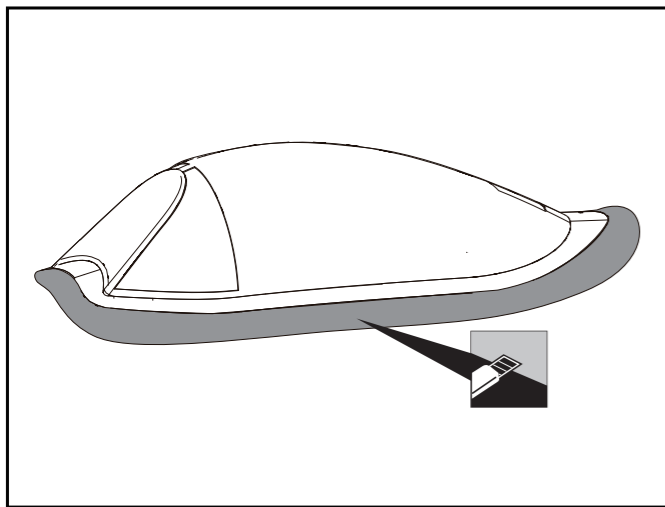
**70** The centre of the Gravity.



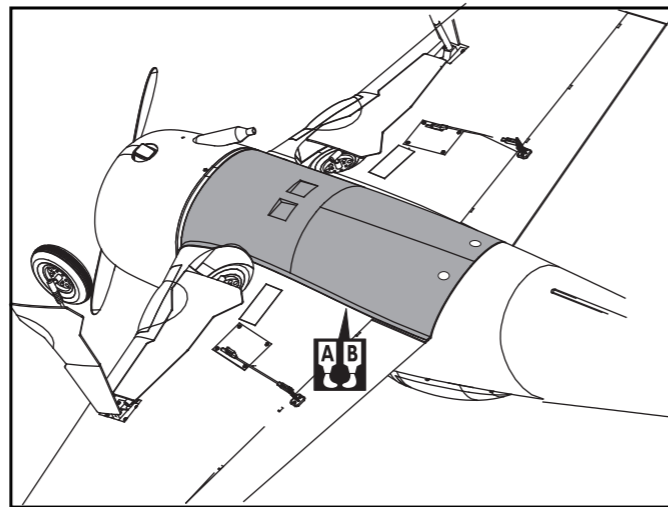
Do not overlook this symbol!



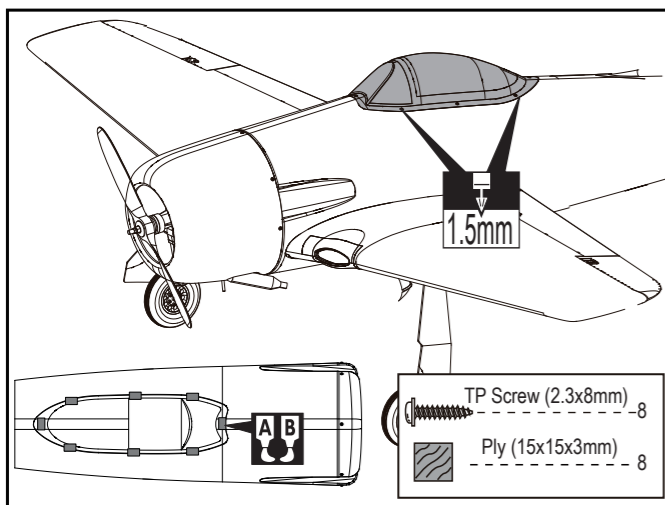
**60** Cut away the surplus parts of canopy carefully along the shade line.



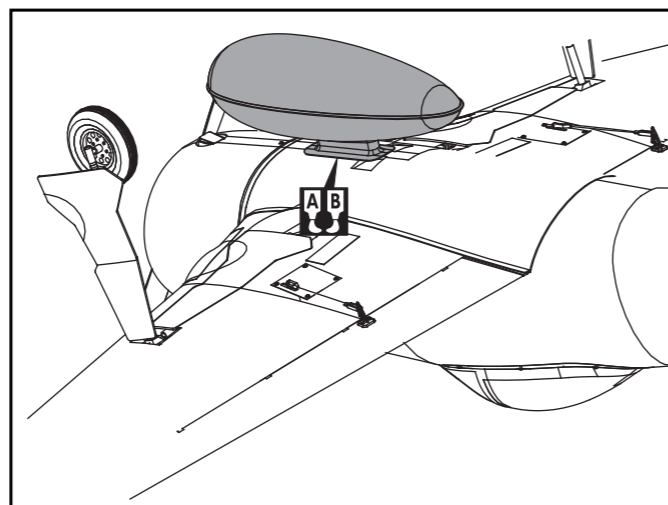
**63** Epoxy the bottom cover to the fuselage.



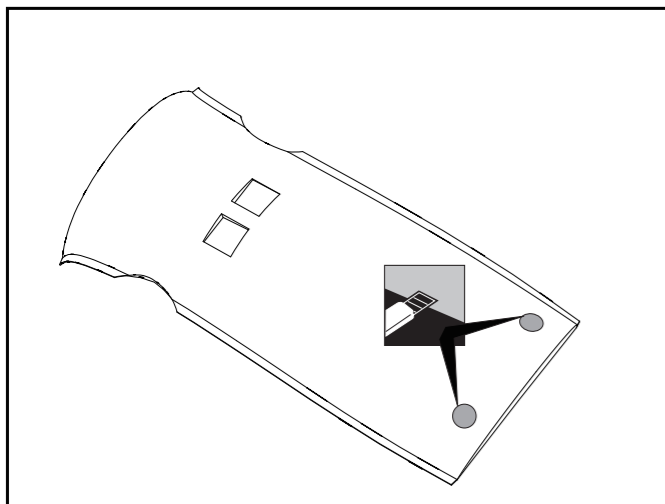
**61** Epoxy the plies in the inside of the fuselage as below and assemble the canopy to the fuselage with TP.



**64** Epoxy the drop tank to the bottom cover.



**62** Trim two holes in the bottom cover as below.



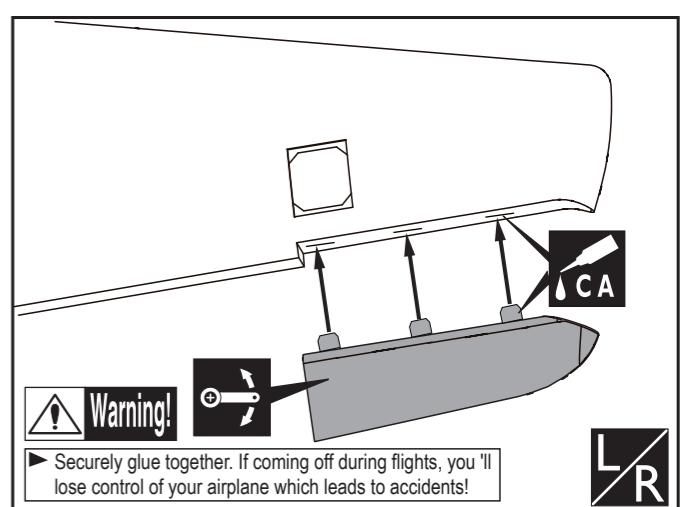
**Accessory list for the coming installation steps.**

- Wheel (100mm) ----- 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

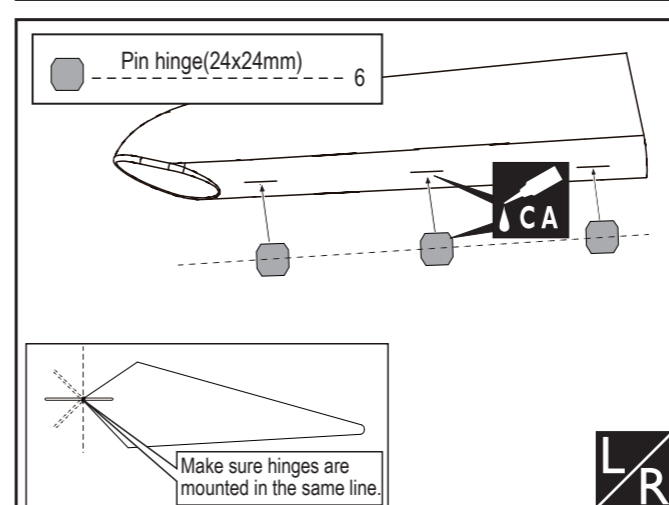
**Accessory list for the coming installation steps.**

- Clevis ----- 2
- Retainer ----- 2
- Rod (2x300mm) ----- 2
- TP Screw (2.3x12mm) ----- 8
- Screw (3x35mm) ----- 2
- Servo tray(68.5x56.5x2mm) ----- 2
- Wooden Block(20x20x8mm) ----- 4
- Pin hinge(24x24mm) ----- 6
- Washer(3x15mm) ----- 2
- Lock Nut (3mm) ----- 2
- Washer(3x15mm) ----- 2

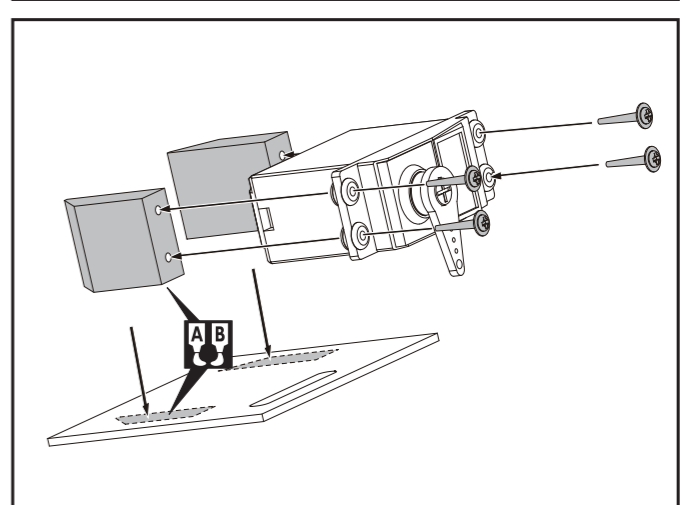
**3** Assemble the aileron to main wing with instant type CA glue. Be careful to ensure the moving parts of the hinges are able to move freely.



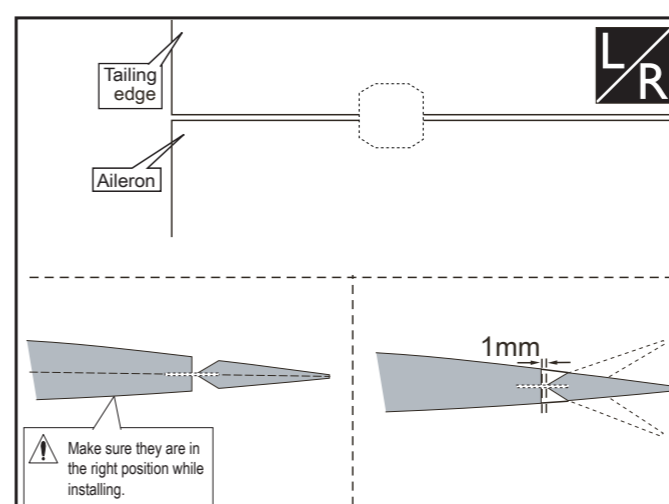
**1** Apply instant type CA glue to aileron and pin hinge.



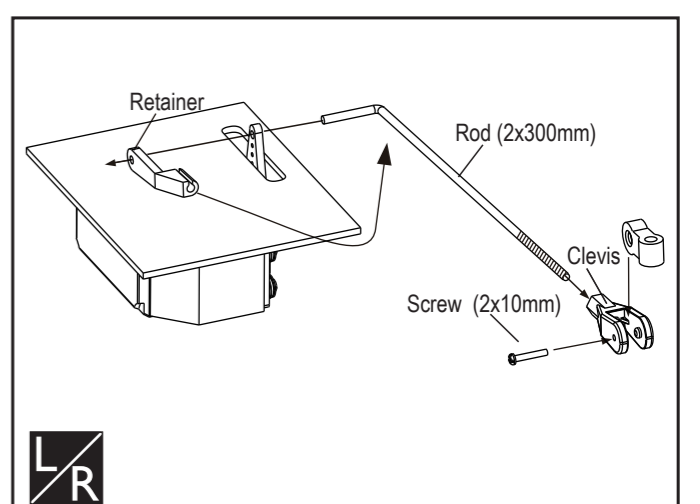
**4** Install the servo as the illustration below



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



**5** Install the nylon 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!

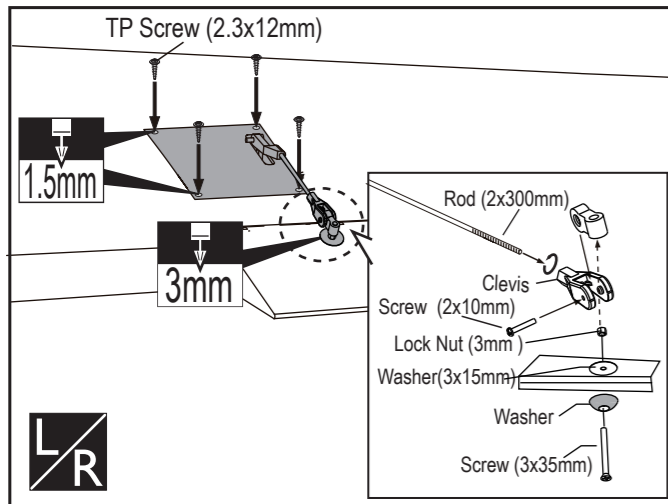
Apply instant glue (CA glue, super glue). Ensure smooth non-binding movement while assembling. Cut off shaded portion.

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.

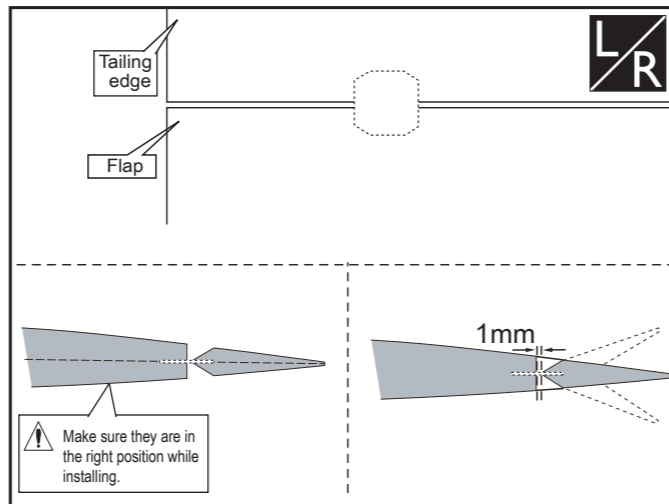
6

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



8

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

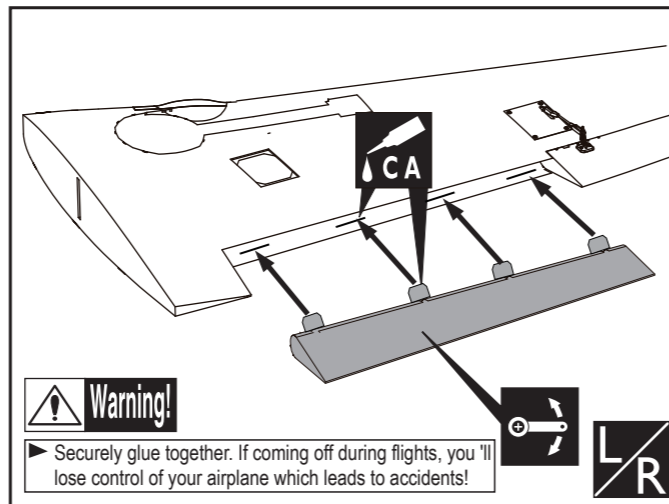


Accessory list for the coming installation steps.

	Clevis	2
	Retainer	2
	Rod (2x300mm)	2
	TP Screw (2.3x12mm)	8
	Screw (3x35mm)	2
	Servo tray (68.5x56.5x2mm)	2
	Wooden Block (20x20x8mm)	4
	Pin hinge (24x24mm)	8
	Washer (3x15mm)	2
	Lock Nut (3mm)	2
	Washer (3x15mm)	2

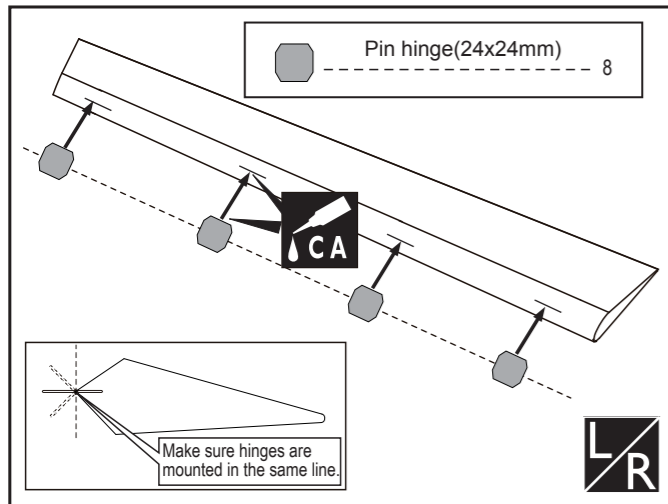
9

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



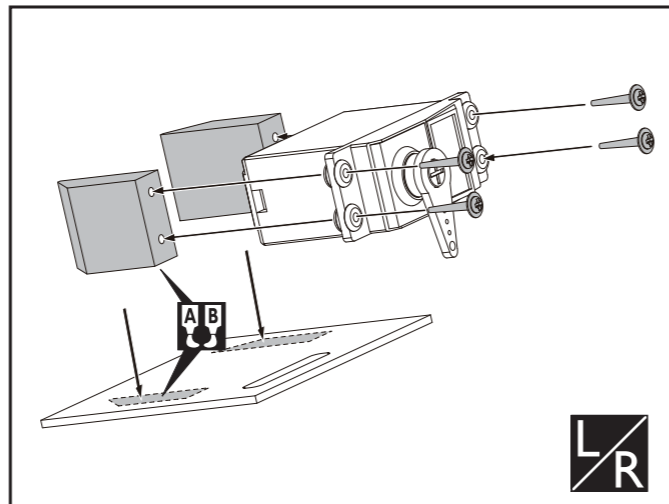
7

Apply instant type CA glue to flap and pin hinges.



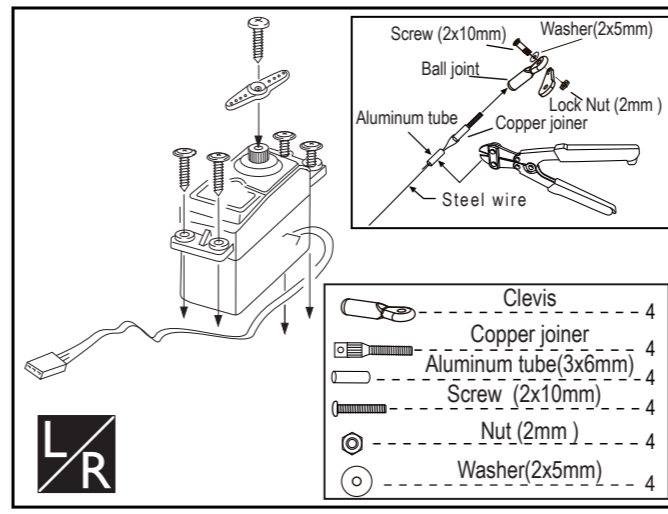
10

Install the servo.



55

Install the servo of the rudder.

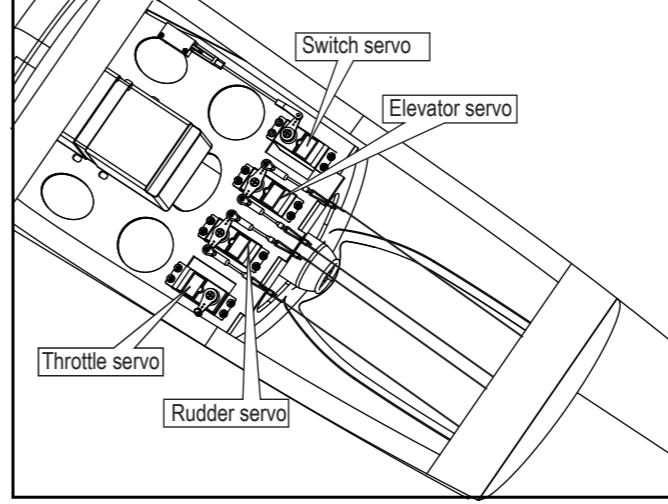


Accessory list for the coming installation steps.

	Canopy	1
	TP Screw (2.3x8mm)	13
	Ply (15x15x3mm)	13
	Drop tank	1
	Bottom cover	1

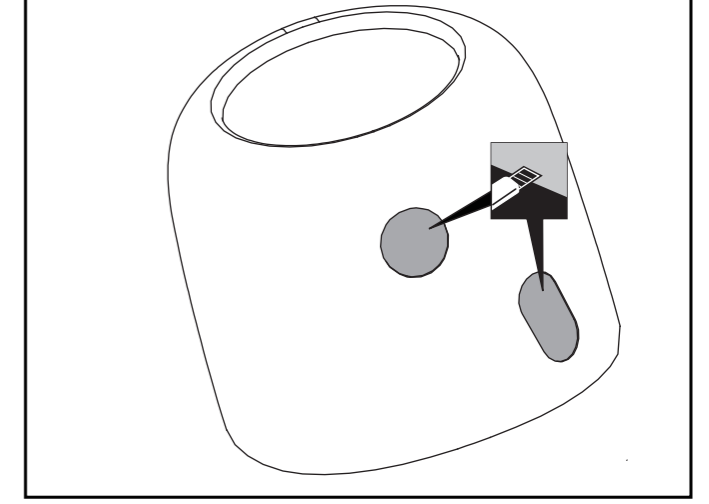
56

The sketch map when the servos install completion.



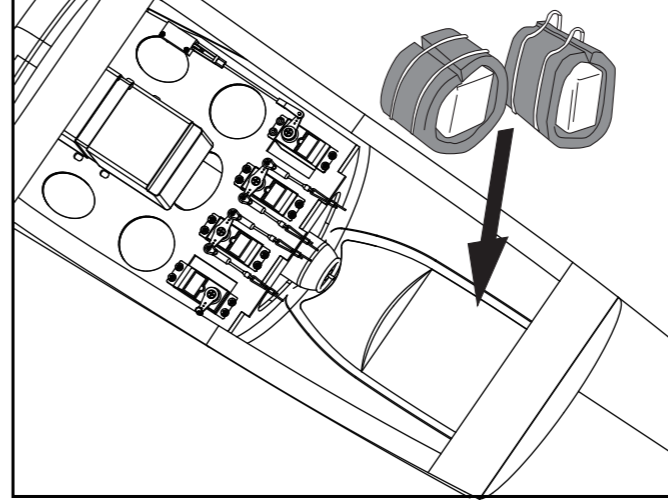
58

Trim the cowling for engine and muffler.



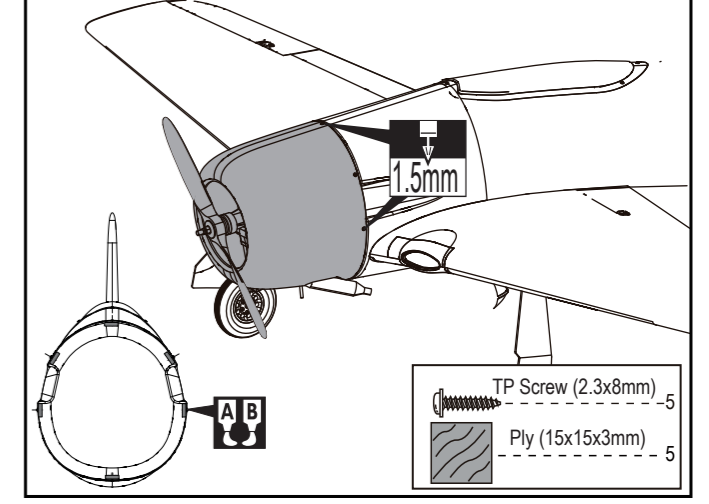
57

Install the receiver and the battery in the fuselage.



59

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



Apply epoxy glue.



Assemble left and right sides the same way.



Pay close attention here!



Apply instant glue (CA glue, super glue).



Ensure smooth non-binding movement while assembling.



Cut off shaded portion.

Do not overlook this symbol!



Apply epoxy glue.



Assemble left and right sides the same way.



Pay close attention here!



Apply instant glue (CA glue, super glue).



Ensure smooth non-binding movement while assembling.

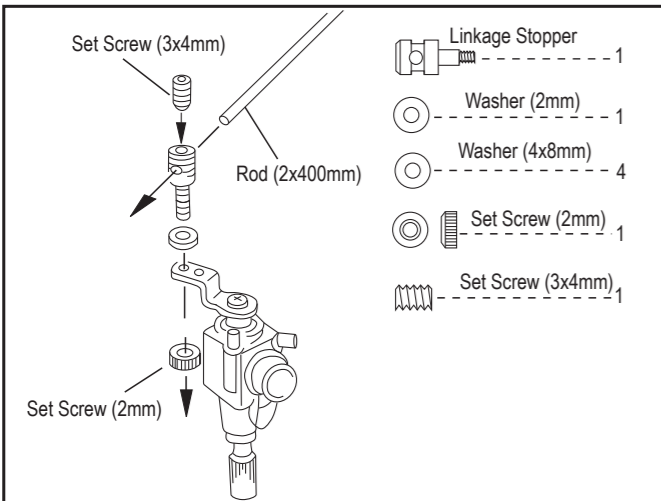


Cut off shaded portion.

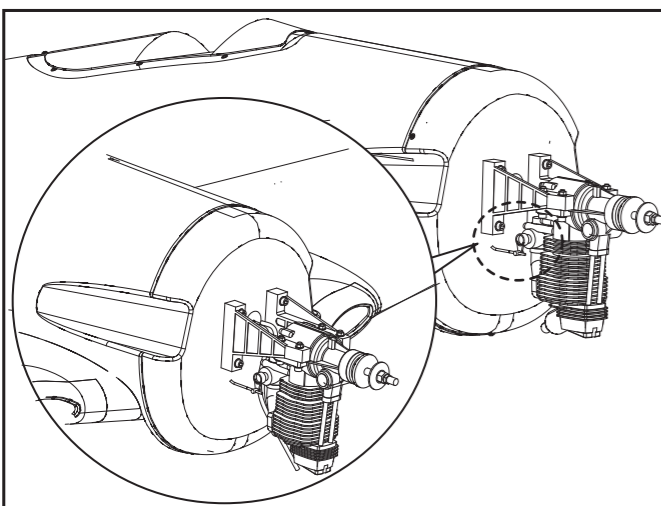
Do not overlook this symbol!



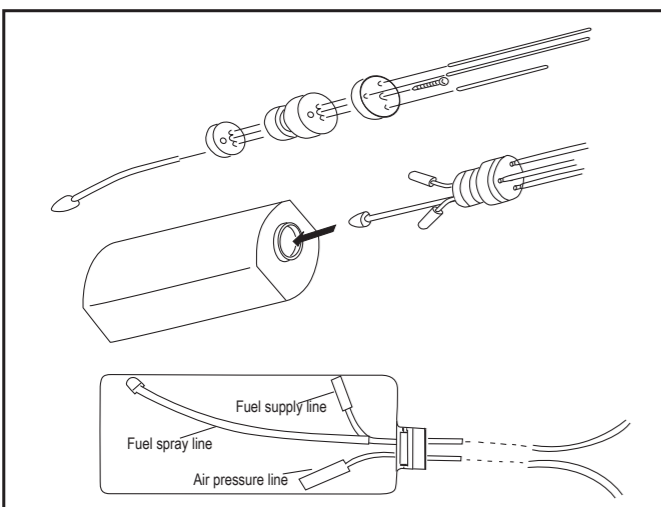
**49** Assemble the accelerator push rod to the engine.



**50** The sketch map of the engine install completion.



**51** Assembly of the fuel tank.

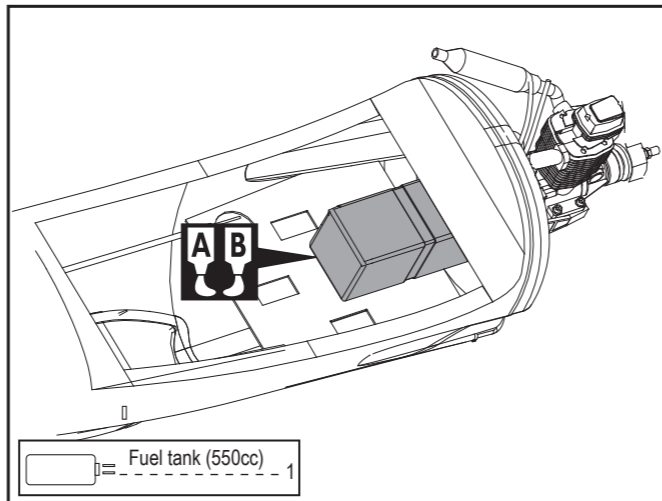


**AB** Apply epoxy glue. **LR** Assemble left and right sides the same way. **Hand** Pay close attention here!

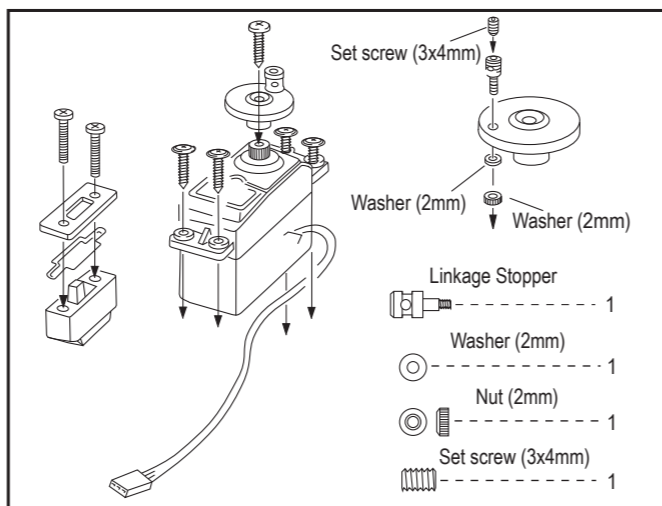
**CA** Apply instant glue (CA glue, super glue). **Arrow** Ensure smooth non-binding movement while assembling. **Scissors** Cut off shaded portion.

Do not overlook this symbol! **Warning!**

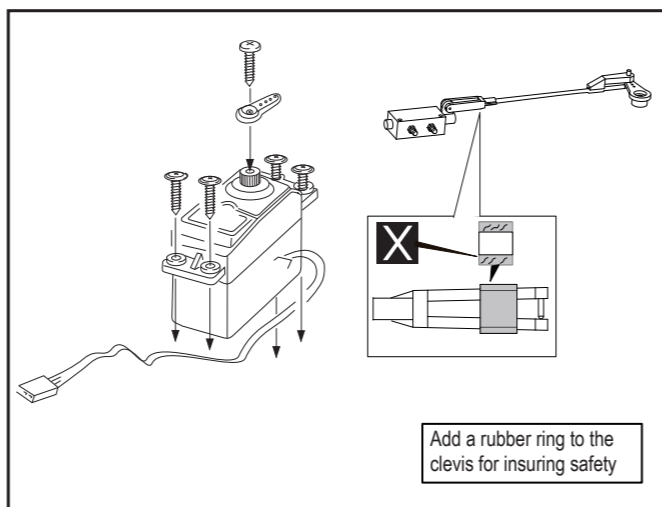
**52** Mount the fuel tank to the fuselage.



**53** Install the throttle servo.



**54** Install the servo of elevator and the switch.

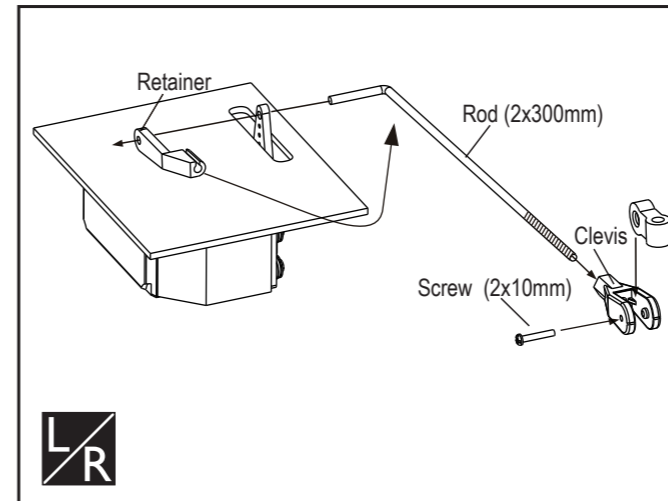


**AB** Apply epoxy glue. **LR** Assemble left and right sides the same way. **Hand** Pay close attention here!

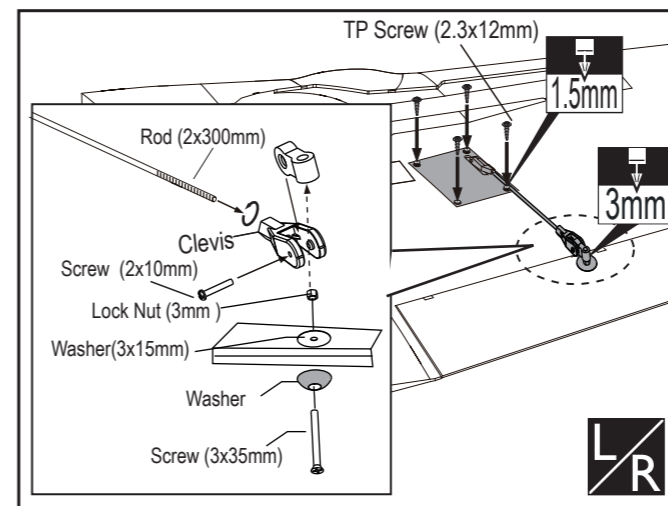
**CA** Apply instant glue (CA glue, super glue). **Arrow** Ensure smooth non-binding movement while assembling. **Scissors** Cut off shaded portion.

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.



**Warning!** Accessory list for the coming installation steps.

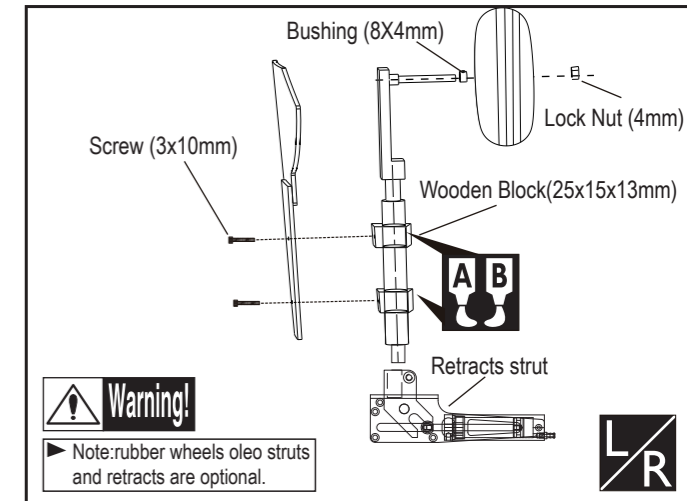
	TP Screw (2.6x14mm)	8
	Lock Nut (4mm)	2
	Wheel (100mm)	2
	Bushing (8x4mm)	2
	Screw (3x10mm)	4
	Wooden Block	4
	PVC part	2
	Gear door	1
	Main wing joiner	1
	Screw (6x50mm)	2
	Blind Nut (6mm)	2
	Wood dowel (6x50mm)	2
	Reinforcement Plate	1

**AB** Apply epoxy glue. **LR** Assemble left and right sides the same way. **Hand** Pay close attention here!

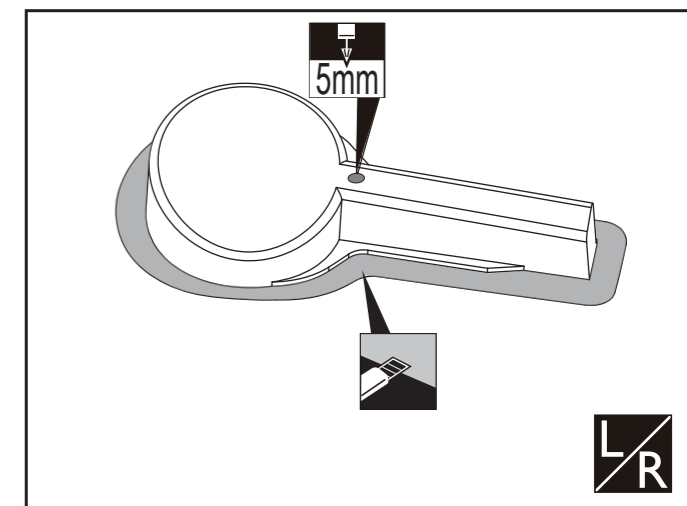
**CA** Apply instant glue (CA glue, super glue). **Arrow** Ensure smooth non-binding movement while assembling. **Scissors** Cut off shaded portion.

Do not overlook this symbol! **Warning!**

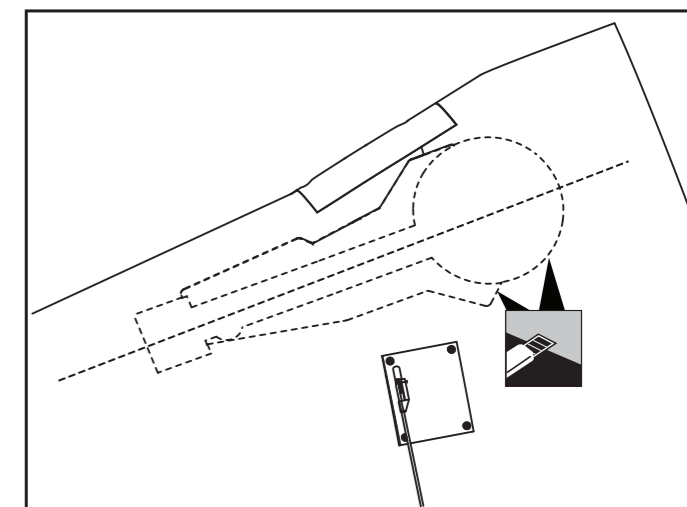
**13** Assemble the wheel and the gear door to the retract.



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



**15** Cut away the shaded portion for assembling the gear house very well.

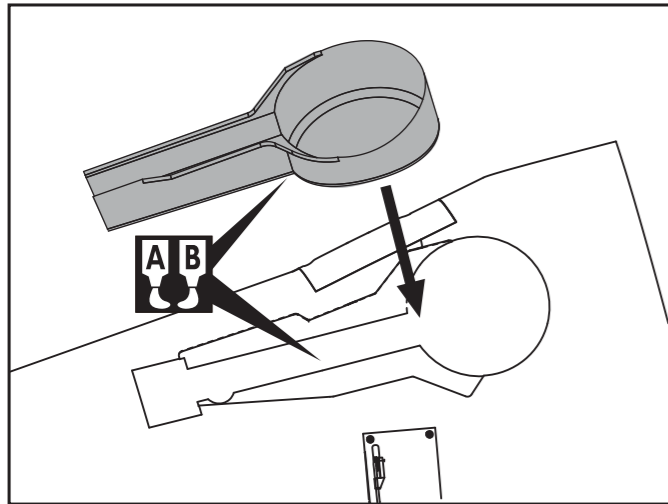


**AB** Apply epoxy glue. **LR** Assemble left and right sides the same way. **Hand** Pay close attention here!

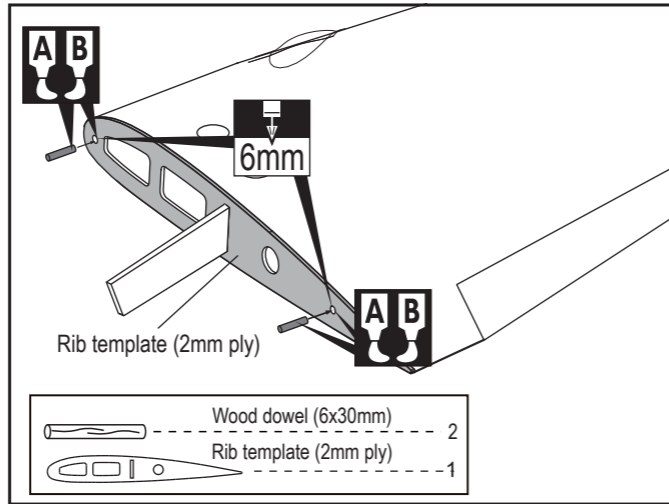
**CA** Apply instant glue (CA glue, super glue). **Arrow** Ensure smooth non-binding movement while assembling. **Scissors** Cut off shaded portion.

Do not overlook this symbol! **Warning!**

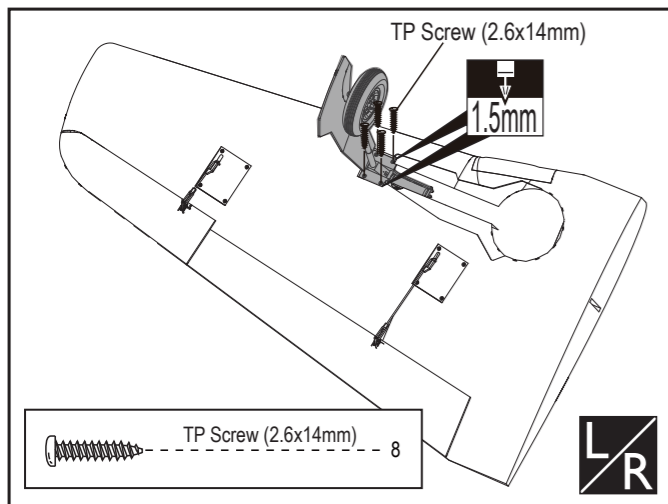
**16** Epoxy the wheel house to the wings carefully.



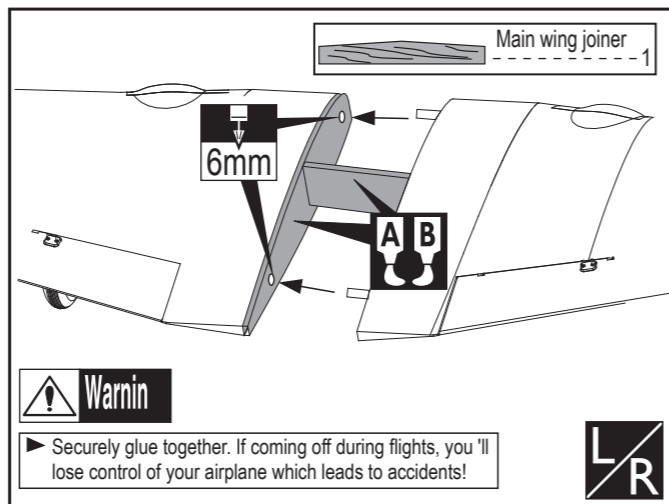
**19** According to the rib template drill holes in one wing and epoxy wood dowel in them.



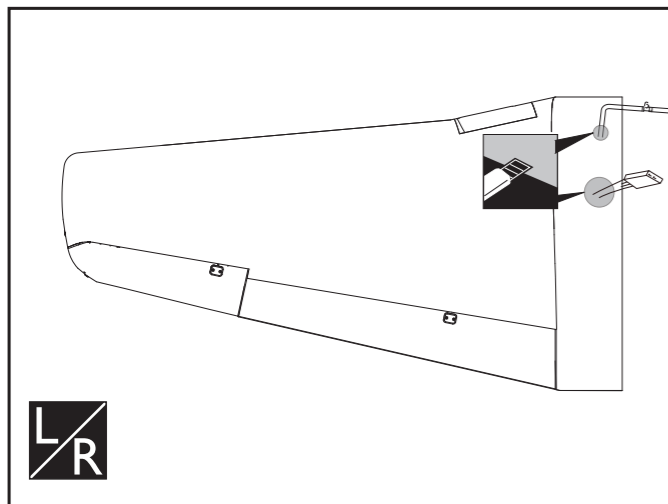
**17** Assemble the retract to the main wing.



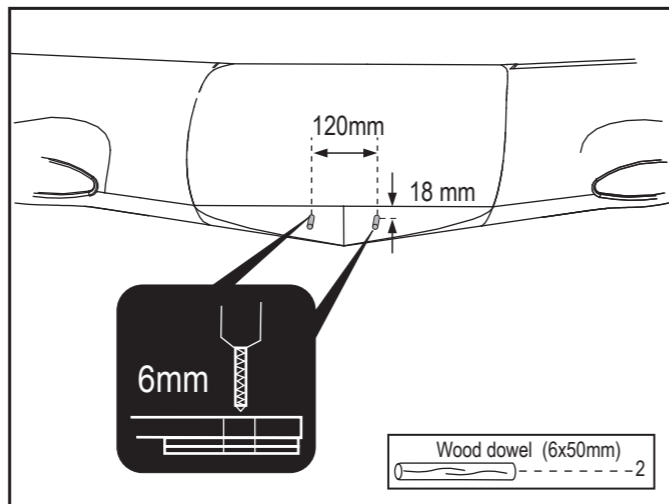
**20** Epoxy the main wing hardly together with wing joiner.



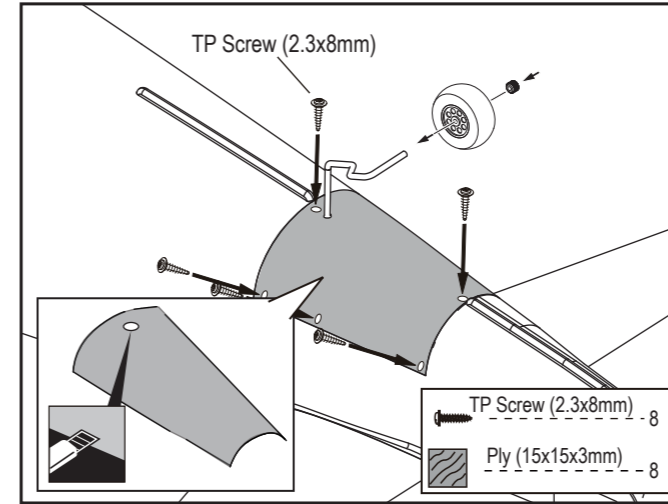
**18** Drill holes at appropriate position in the wings for fetching out the servo line and air pipe.



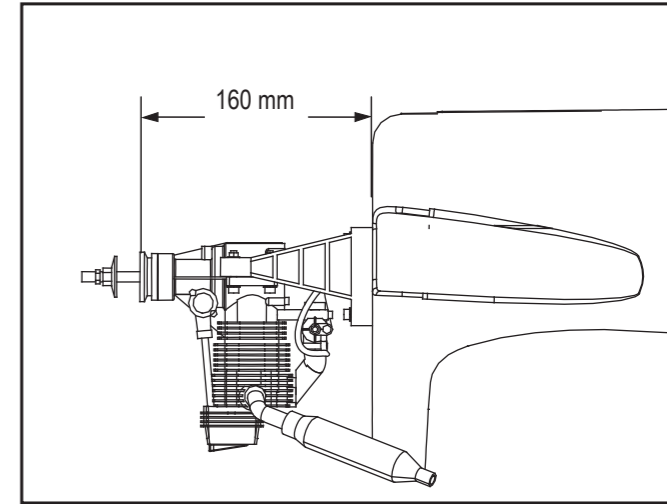
**21** Drill holes at appropriate position in the wings and fix the wood dowel in them.



**44** Drill a hole for assembling the gear cover.



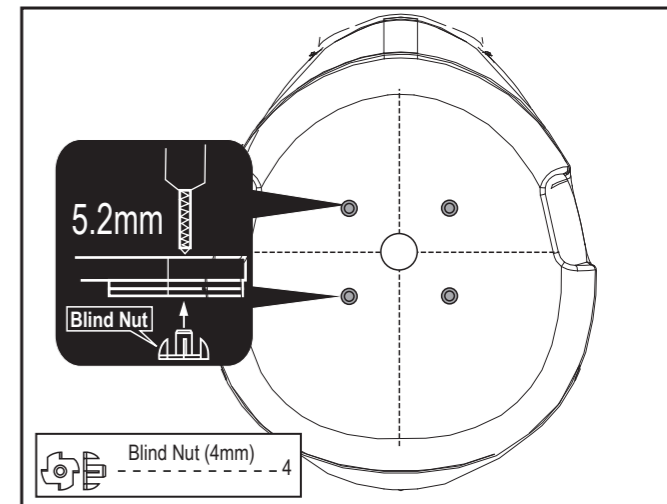
**46** The side view of the engine install completion.



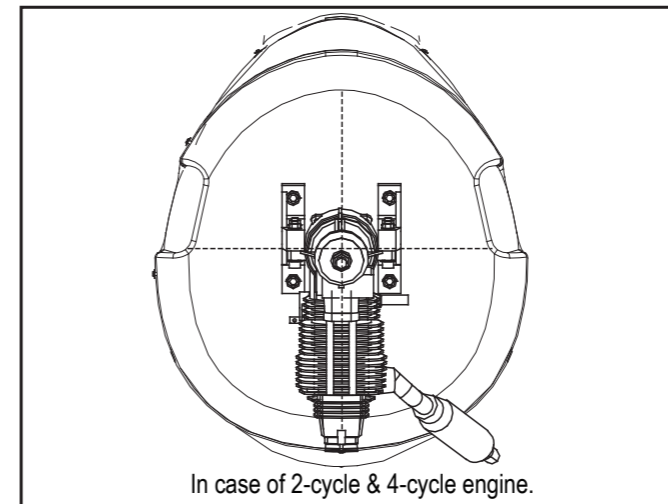
**Warning!** Accessory list for the coming installation steps.

Blind Nut (4mm) - 4	Screw (2x10mm) - 4
Screw (4x35mm) - 4	Nut (2mm) - 4
Screw (4x25mm) - 4	Washer (2x5mm) - 4
Washer (4x8mm) - 4	Clevis - 4
Spring Washer (4mm) - 12	Steel wire (0.5x3000mm) - 4
Nut (4mm) - 4	Copper joiner - 4
Linkage Stopper - 2	Aluminum tube (3x6mm) - 8
Plastic tube (2x400mm) - 1	Retainer - 1
Engine mount (68x105mm) - 2	Clevis - 1
Fuel tank (550cc) - 1	Rod (2X300mm) - 1

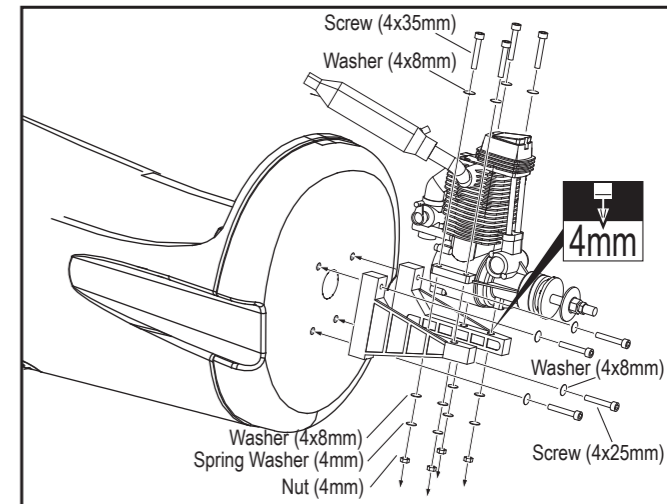
**47** Drill four holes and set blind nut at diameter in the firewall for mounting the engine.



**45** The front view of the engine install completion.



**48** Install the engine carefully.



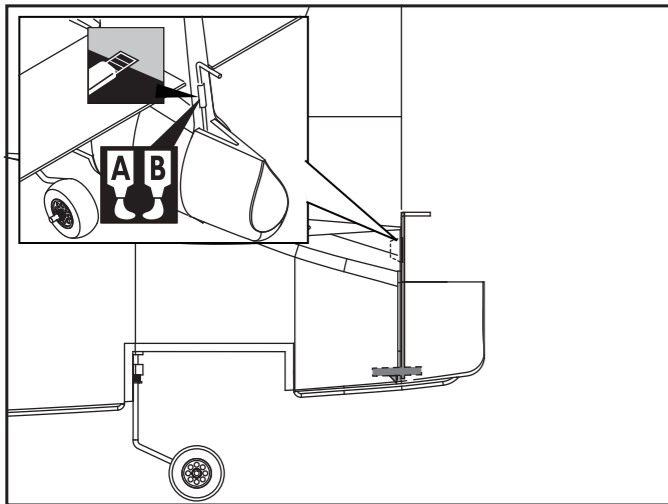
**A B** Apply epoxy glue. **L R** Assemble left and right sides the same way. **Hand icon** Pay close attention here! **Warning!** Do not overlook this symbol!

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

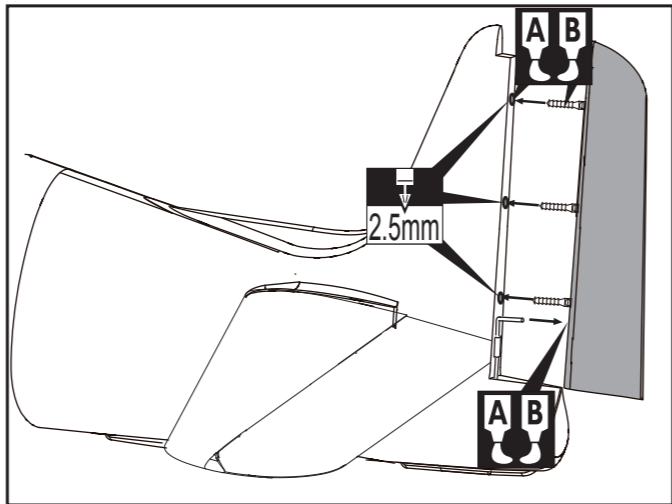
**A B** Apply epoxy glue. **L R** Assemble left and right sides the same way. **Hand icon** Pay close attention here! **Warning!** Do not overlook this symbol!

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

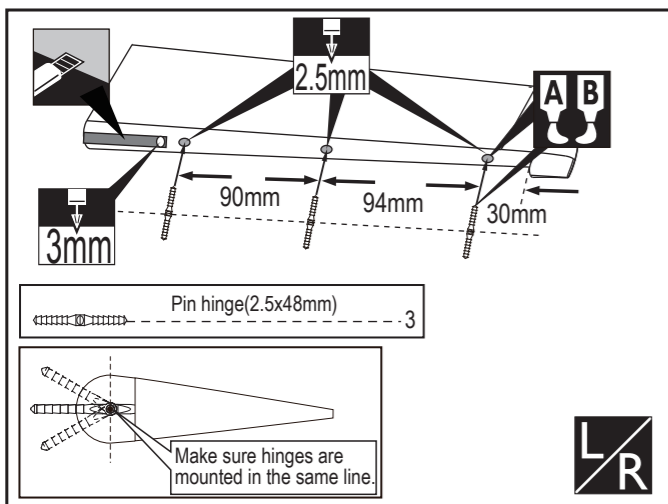
**38** Epoxy a wooden block at appropriate position in fuselage, and drill a hole in the centre.



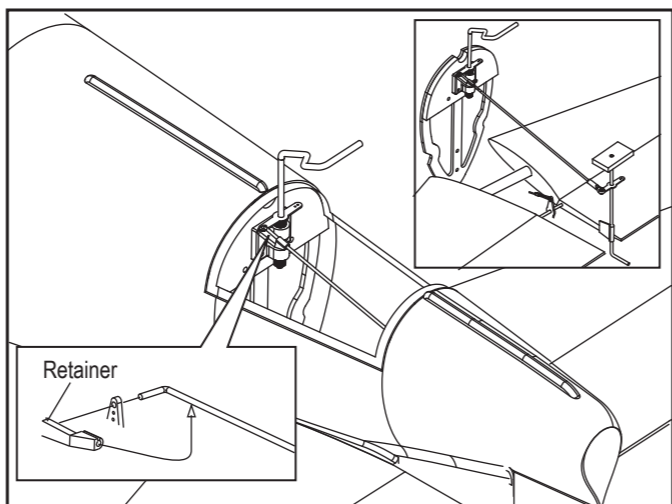
**41** Assemble the rudder to the horizontal tail with instant type CA glue. Be careful to ensure the moving parts of the hinges are able to move freely.



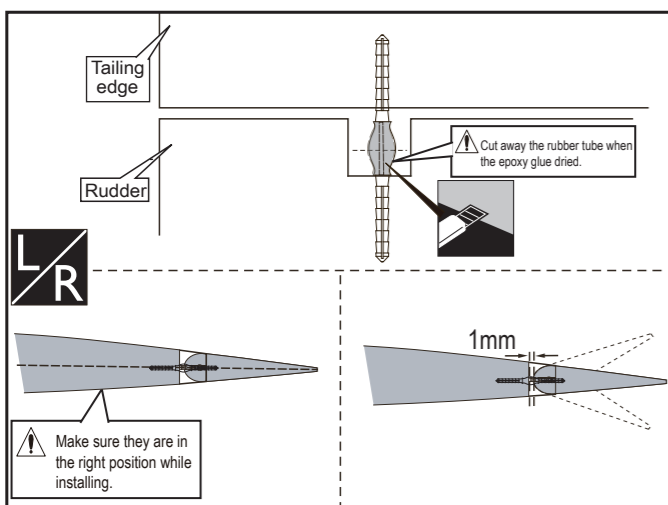
**39** Apply instant type CA glue to rudder and pin hinge



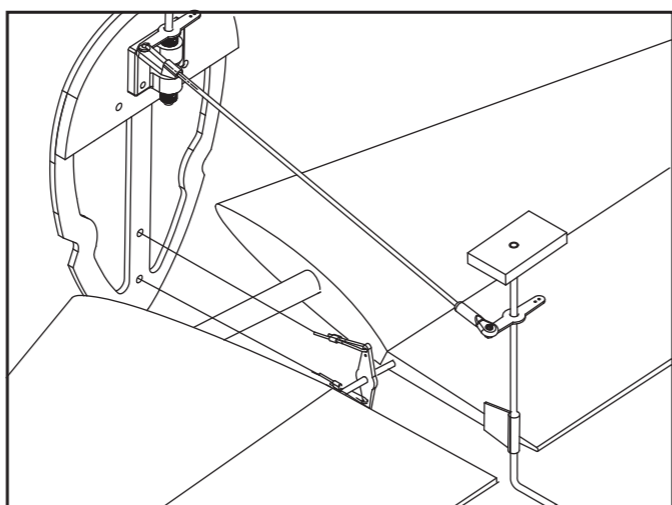
**42** The working sketch map of the linkage between the rudder and the tail gear.



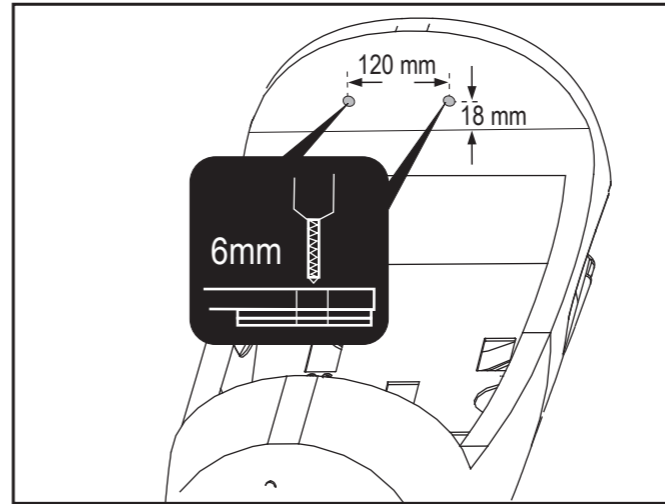
**40** Keep some space about 1mm width between the tailing edge and the rudder.



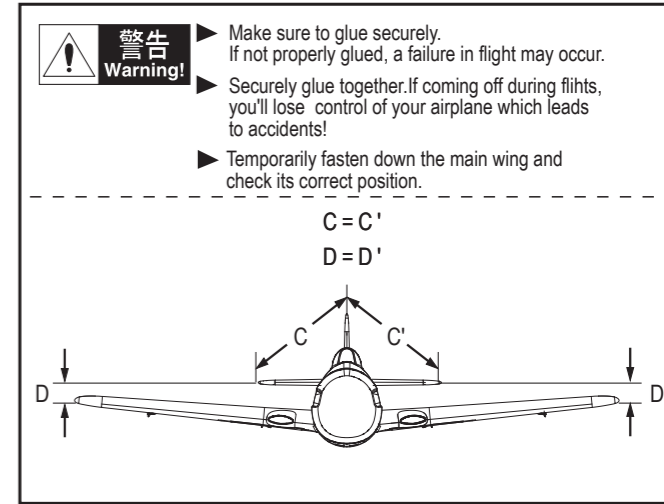
**43** The working sketch map of the linkage between the arm for elevator and the elevator servo.



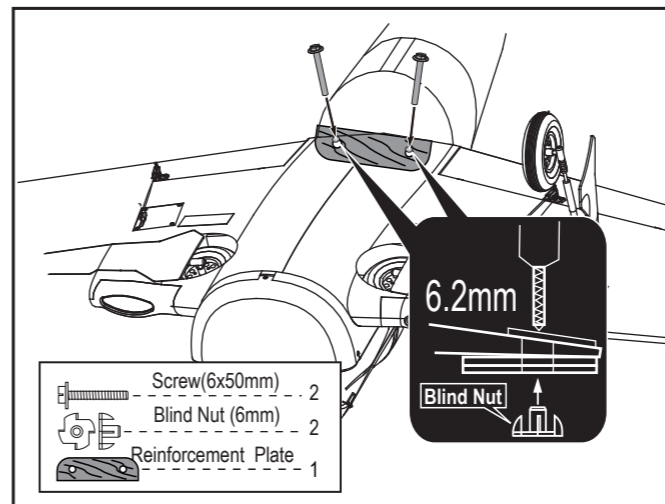
**22** Drill holes at relevant position in the fuselage.



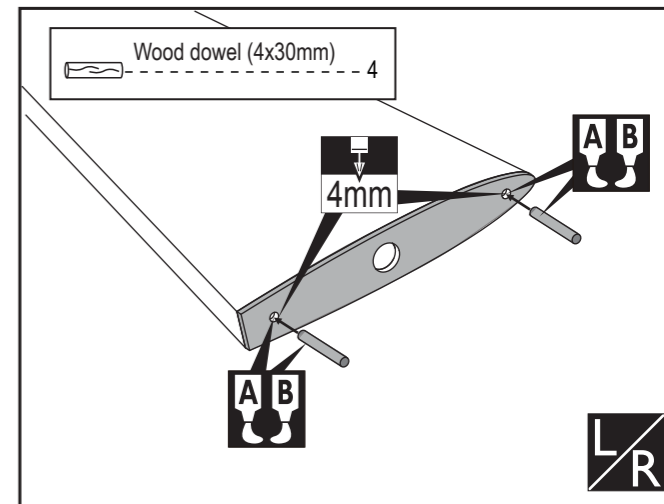
**24** The standard sketch map when the stabilizer and rudder install completion.



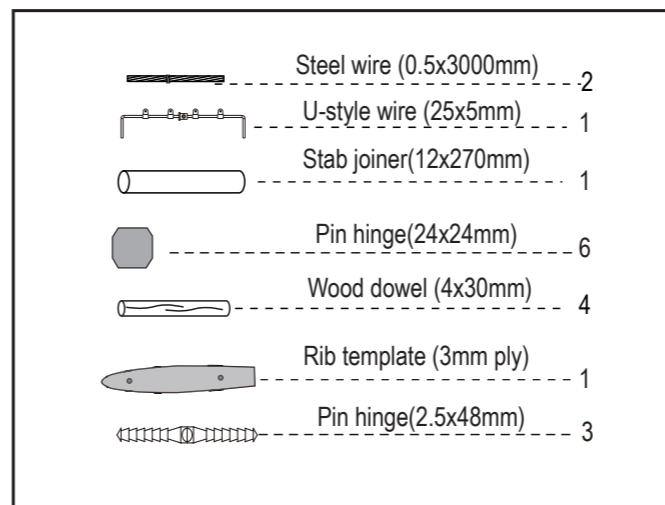
**23** Assemble the wings to the fuselage with screw.



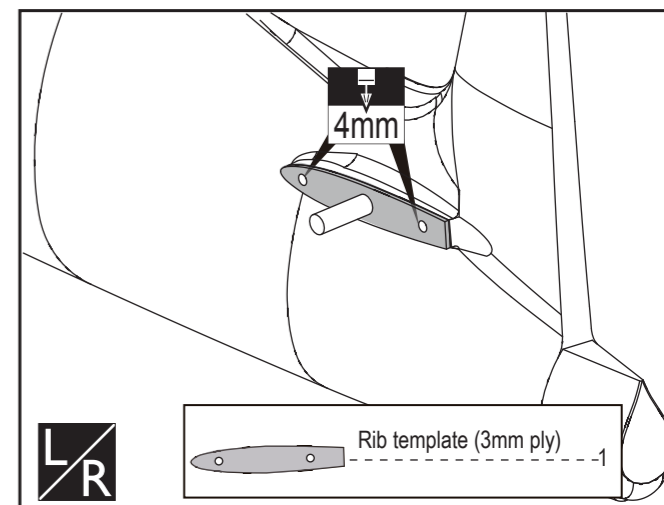
**25**



**Warning!** Accessory list for the coming installation steps.



**26** According to the rib template drill holes to the tail of fuselage as below.



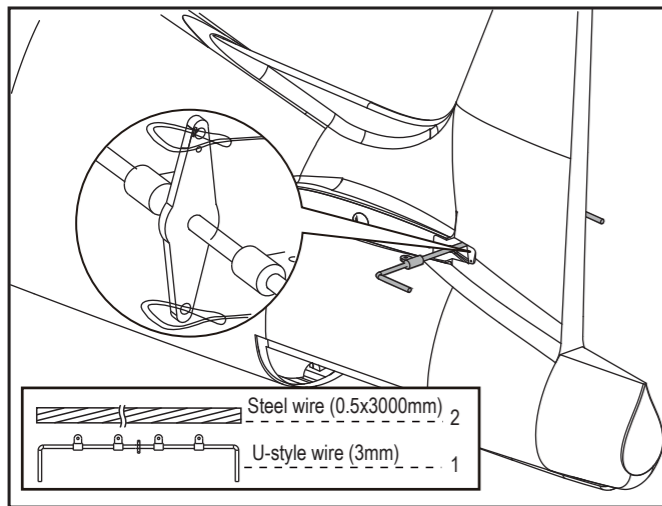
**A B** Apply epoxy glue. **L/R** Assemble left and right sides the same way. **Hand icon** Pay close attention here! **Warning!** Do not overlook this symbol!

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

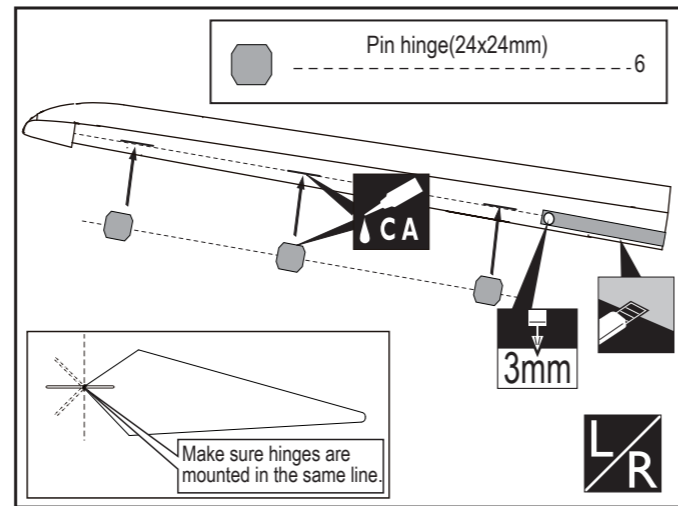
**A B** Apply epoxy glue. **L/R** Assemble left and right sides the same way. **Hand icon** Pay close attention here! **Warning!** Do not overlook this symbol!

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

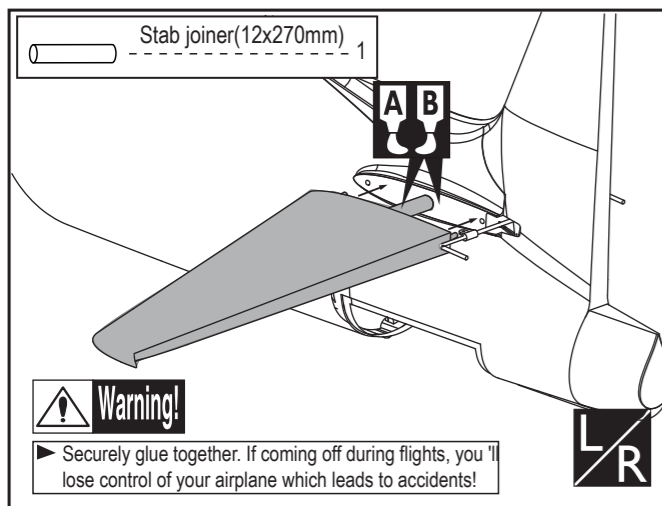
**27** Set the U-style wire through the enlarged hole as below.



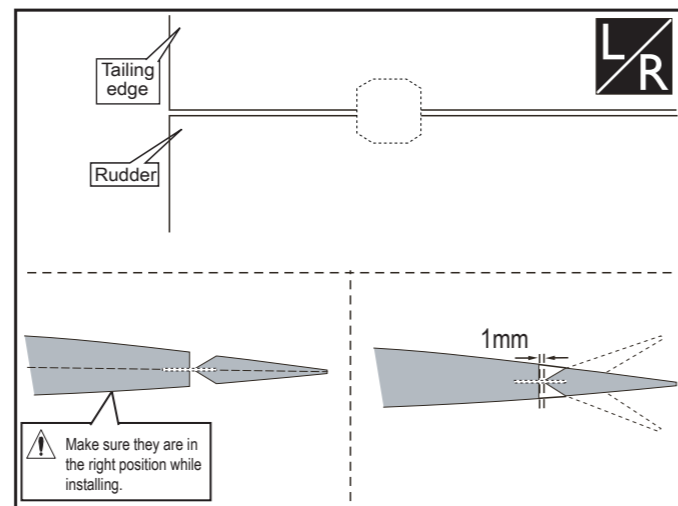
**30** Apply instant type CA glue to elevator and pin hinge.



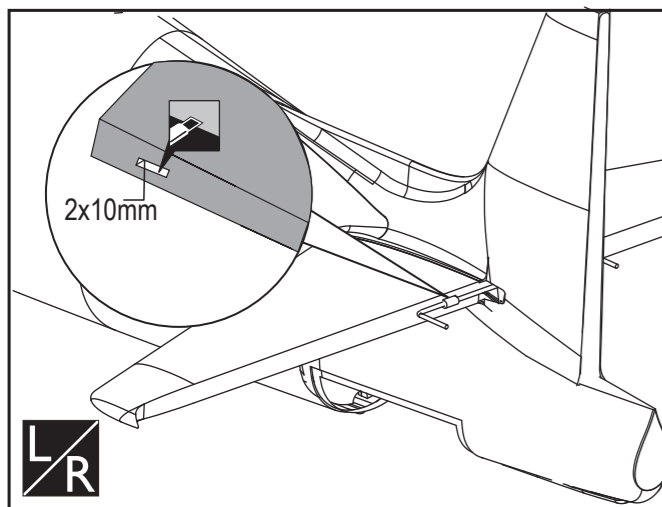
**28** Assemble the stabilizer to fuselage and take care to keep it cleanly.



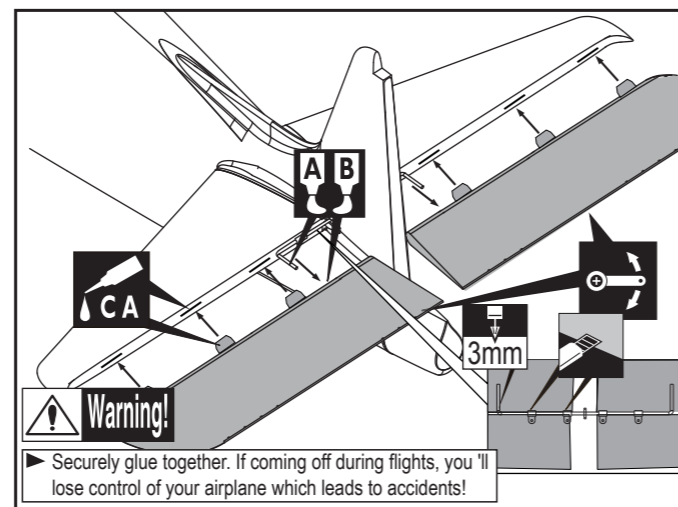
**31** Keep some space about 1mm width between elevator and tailing edge.



**29** Trim slot to appropriate position in the stabilizer.



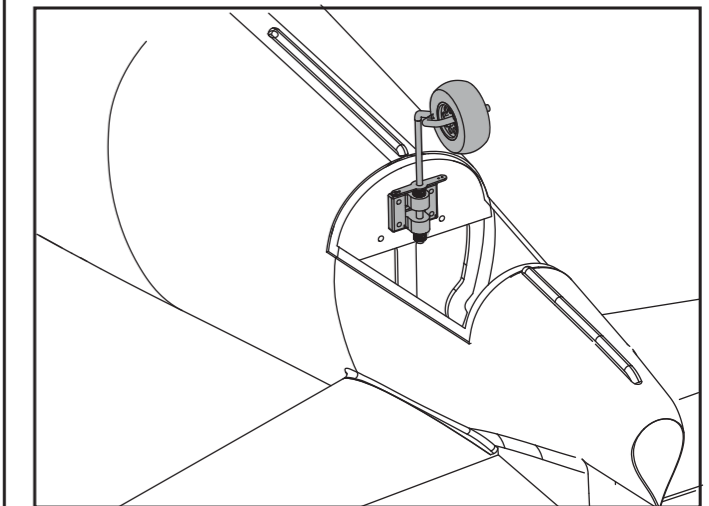
**32** Glue the elevator to the stabilizer by CA and epoxy.



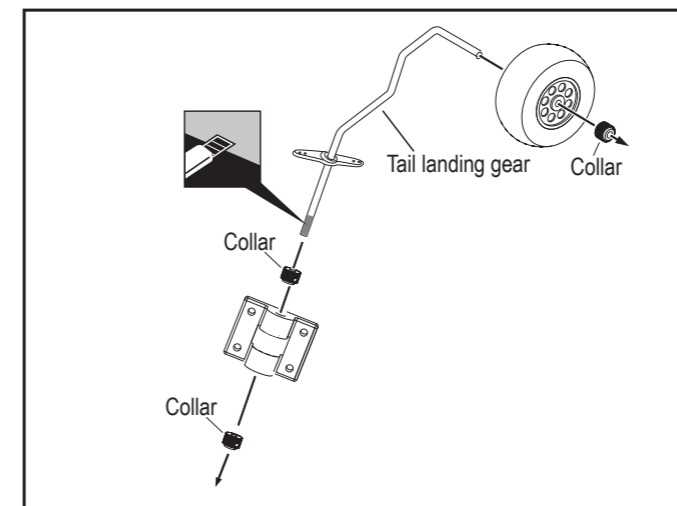
**Accessory list for the coming installation steps.**

Retainer	1	Steel wire (0.5x3000mm)	2
Nose arm(3mm)	1	Clevis	3
Washer (3x6mm)	4	Washer(3x15mm)	2
TP Screw(3x20mm)	4	Lock Nut (3mm)	2
Tail landing gear(3mm)	1	Screw (3x65mm)	1
Tail wheel (45mm)	1	Copper joiner	2
Collar (3mm)	3	Plastical tube(3x50mm)	2
Rod (2X300mm)	1	Pin hinge(2.5x48mm)	3
TP Screw (2.3x8mm)	8	Ply (15x15x3mm)	8
Triangle wood plate (50x10x10mm)	1	Wooden Block (6mm Ply)	1
Metal wire for rudder	1		

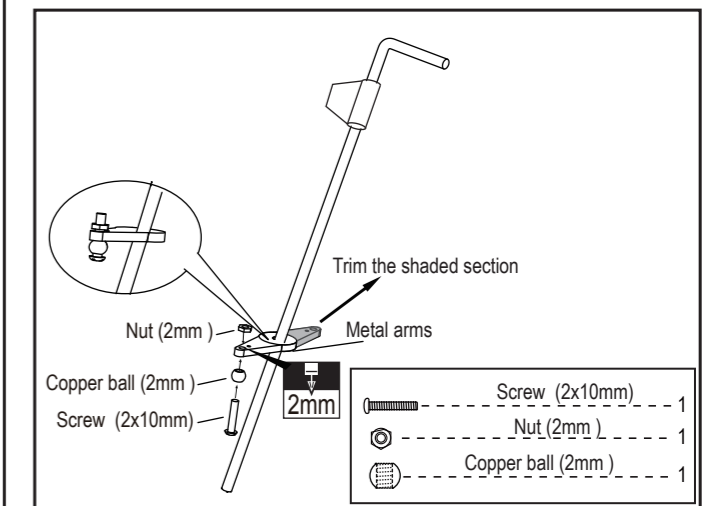
**35** The sketch map when tail wheel assemble completion.



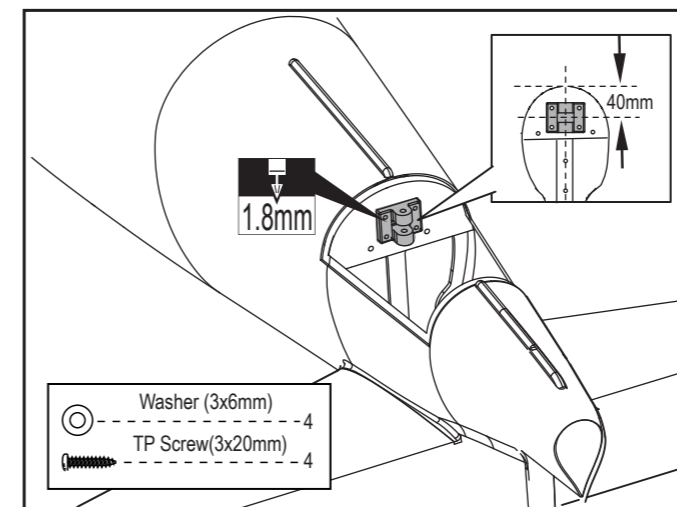
**33** The sketch map when assemble the tail landing gear to the wheel steeling mount.



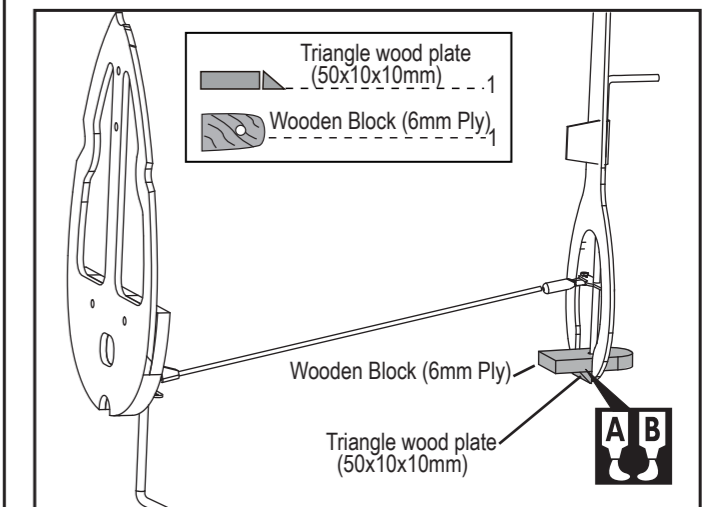
**36** Assemble the ball joint to the metal arms.



**34** Assemble the tail gear mount to the frame steadily with TP screws as illustration below.



**37** Epoxy the wooden block to the frame in the fuselage which below the rudder for fixing the wire of 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.