

Before start ,please carefully read the explanations!

Pilatur PC-21



Specification:

Length	:2070 mm(81.5")
Wing Span	:1800 mm(71")
Wing Area	:55.8 sq. dm 6.0 sq. ft
Wing Loading	:123.7 g/sq. dm 40.6 oz/sq. ft
Flying Weight	:6.9 kg(15.2 lbs)
Radio	:6ch&9 servos
Engine	: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.

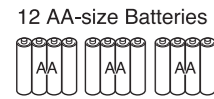
Fly only in open areas and preferably at a dedicated R/C flying site. We suggest having a qualified instructor carefully inspect your airplane before its first flight.Please carefully read and follow all instructions included with this airplane,your radio control system and any other components purchased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

REQUIRED FOR OPERATION (Purchase separately!)

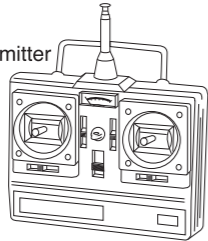
CAUTION: For details concerning the equipment listed below (size, maker, etc.), check with your hobby shop.

1 A minimum 6 channel radio for airplanes (with 9 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.



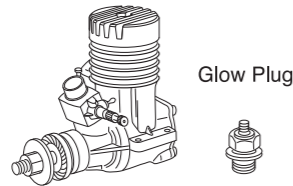
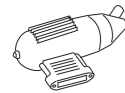
A minimum 6 channel transmitter for airplanes.



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

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

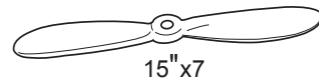
Muffler



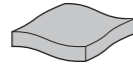
3 Propeller Spinner



Purchase a propeller that will match your engine.



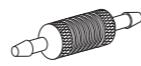
4 Sponge Sheet



Silicone Tube



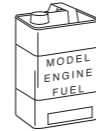
Fuel Filter



5 Required for engine starting:

Glow engine fuel only.

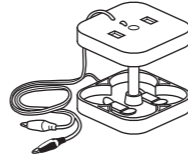
WARNING: Normal gasoline cannot be used with glow engines.



Fuel Pump



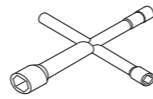
Booster Cord



4 D-size Batteries



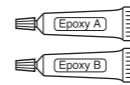
Plug Wrench



6 Glue



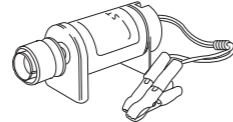
Epoxy Glue



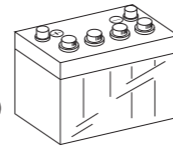
7

Other equipment for enhancing airplane operation & performance

Engine Starter



12V Battery (for starter)



TOOLS REQUIRED (Purchase separately!)

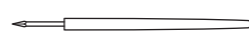
Sharp Hobby Knife



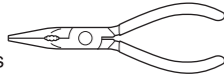
Phillips Screw Driver (l, m, s)



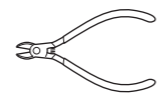
Awl



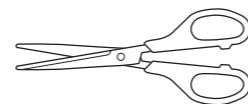
Needle Nose Pliers



Wire Cutters



Scissors

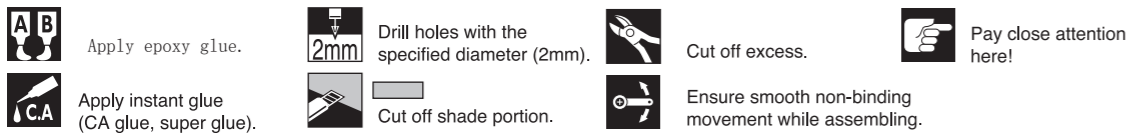


BEFORE YOU BEGIN

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

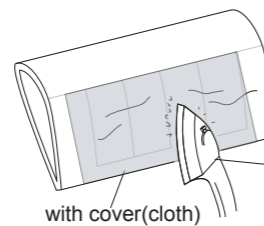
2 Check all parts. If you find any defective or missing parts, contact your local dealer.

3 Symbols used throughout this instruction manual, comprise:



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.

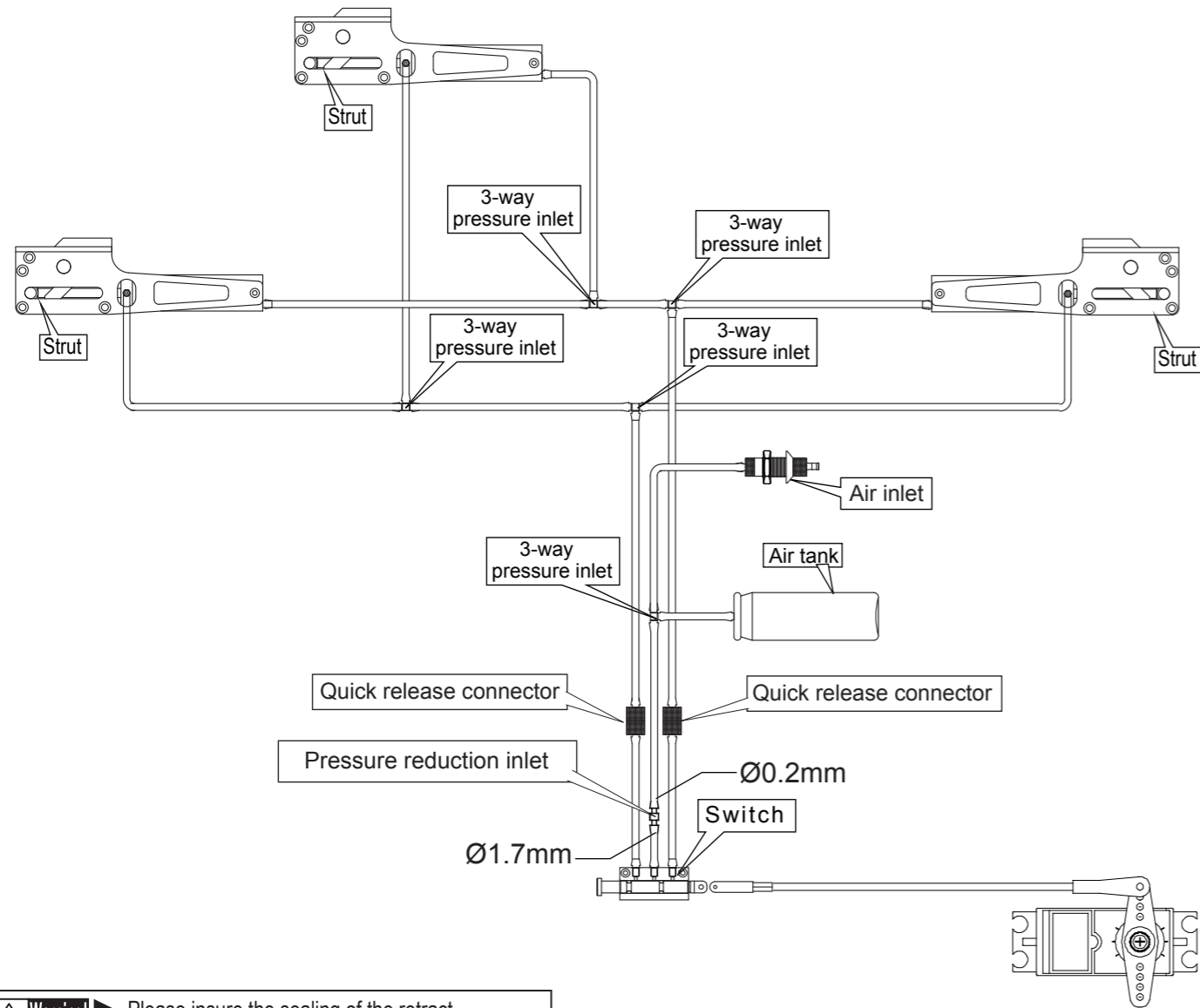


► Pre-cover the covering with clean cloth! Start at low setting. Increase the setting if necessary. If it is too high, you may damage the film.

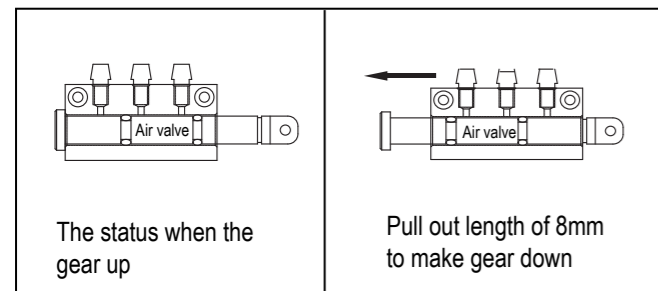
low setting

Three 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.

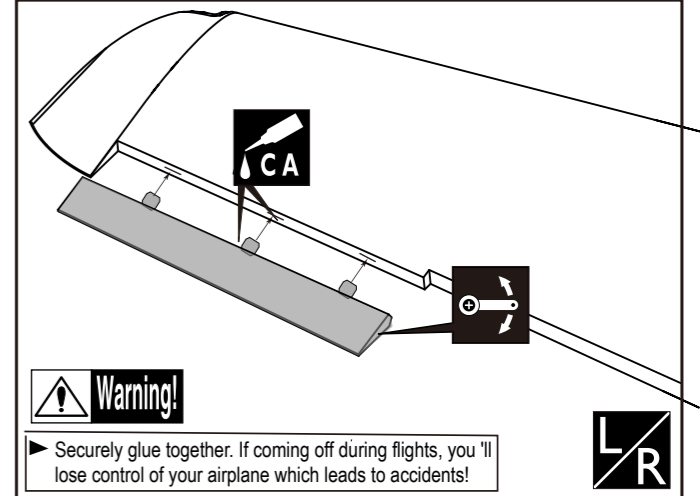


- | | |
|----------------------|---------------------------|
| TP Screw(2.6x14mm) 2 | Switch 1 |
| Retainer 1 | Air line (3000mm) 1 |
| Clevis 1 | 3-way pressure inlet 5 |
| Rod (2X300mm) 1 | Air tank 1 |
| | Air inlet 1 |
| Strut (110°) 1 | Quick release connector 2 |
| | Strut (90°) 2 |

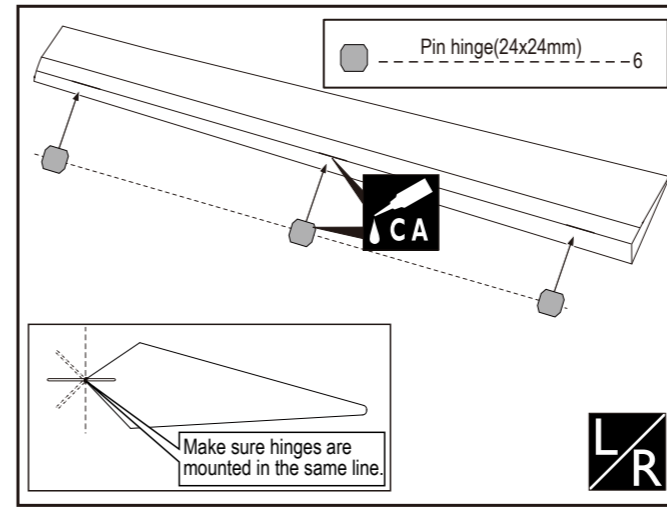
Warning! Accessory list for the coming installation steps.

- | |
|-----------------------------|
| 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 |

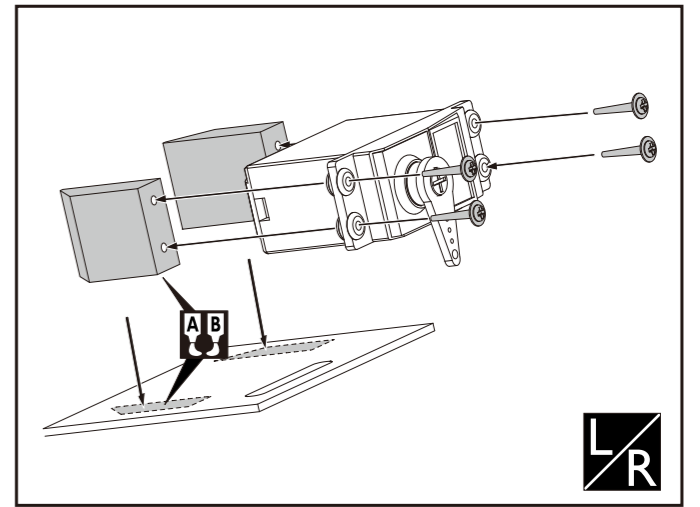
3 Assemble the aileron to main wing with instant type CA glue.



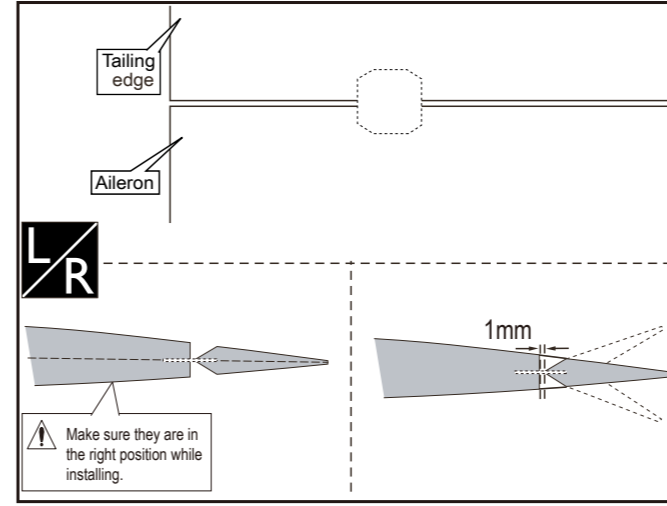
1 Apply instant type CA glue to aileron and pin hinge.



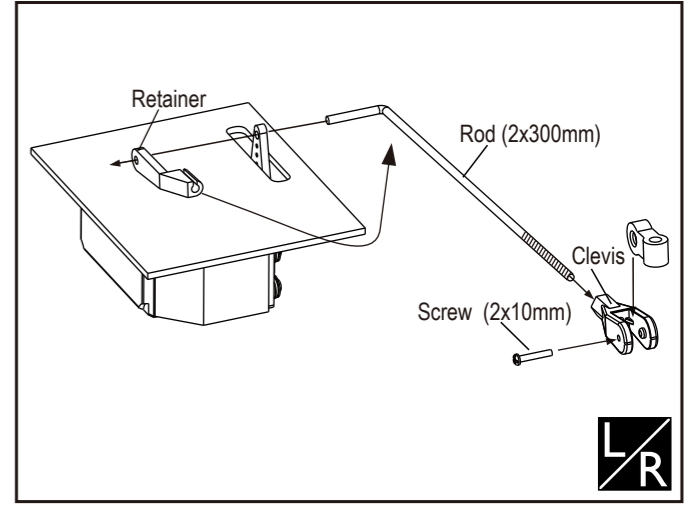
4 Install the servo as the illustration below.



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

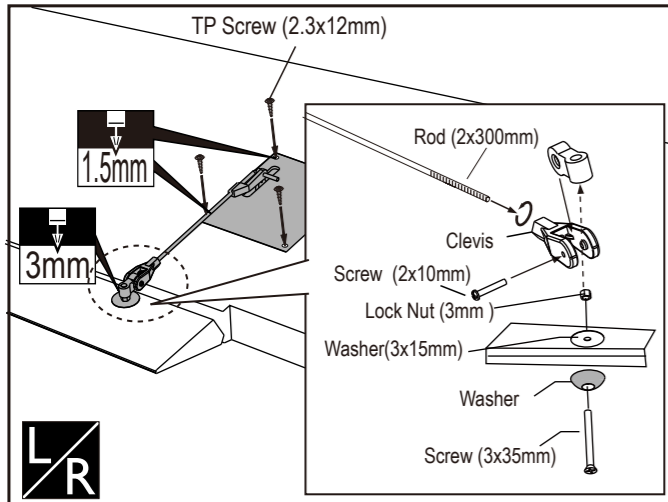


5 Install the nylon control horn and connect the linkage.

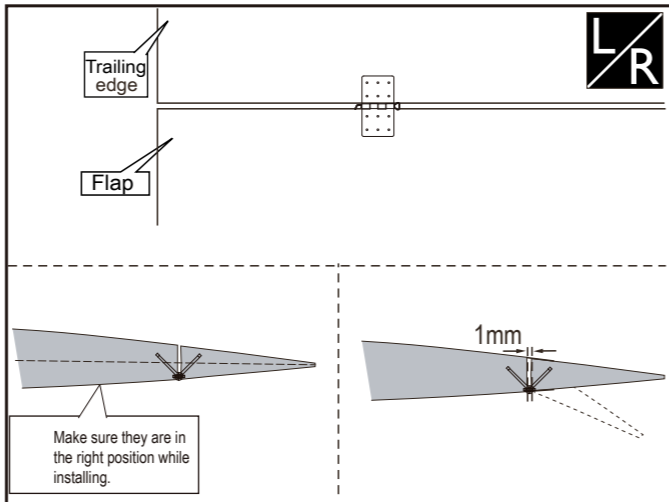


AB Apply epoxy glue.	LR Assemble left and right sides the same way.	Hand Pay close attention here!	Warning! Do not overlook this symbol!
CA Apply instant glue (CA glue, super glue).	Arrow Ensure smooth non-binding movement while assembling.	Scissors Cut off shaded portion.	

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



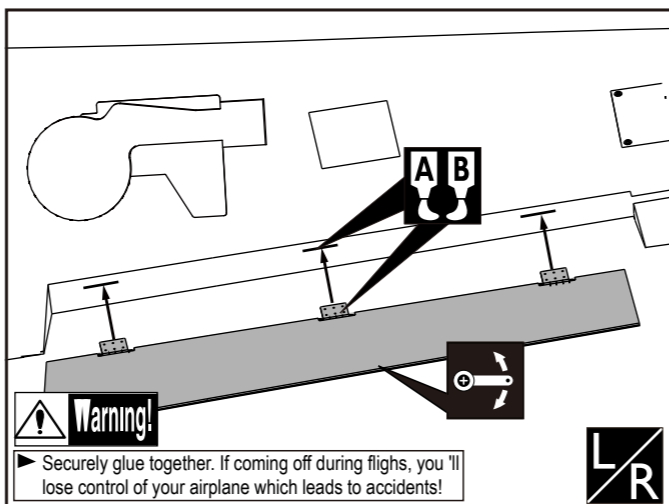
8 Keep some space about 1mm width between trailing edge and flap.



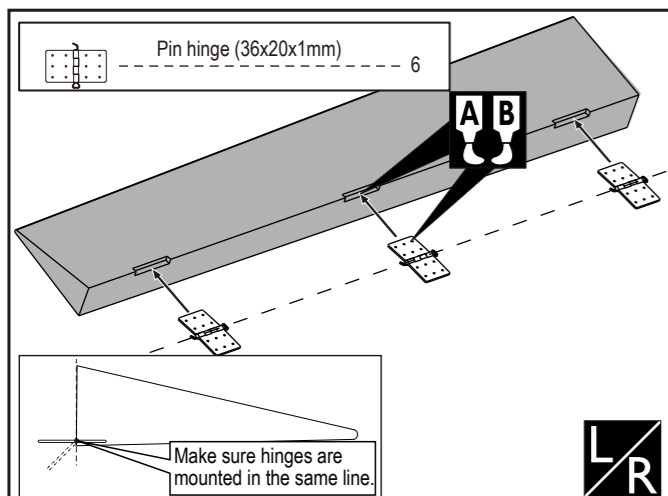
Accessory list for the coming installation steps.

- Clevis ----- 2
- Retainer ----- 2
- Rod (2x300mm) ----- 2
- TP Screw (2.3x12mm) ----- 8
- Screw (3x45mm) ----- 2
- Servo tray (68.5x56.5x2mm) ----- 2
- Wooden Block (20x20x8mm) ----- 4
- Pin hinge (36x20x1mm) ----- 6
- Washer (3x15mm) ----- 2
- Lock Nut (3mm) ----- 2
- Washer ----- 2

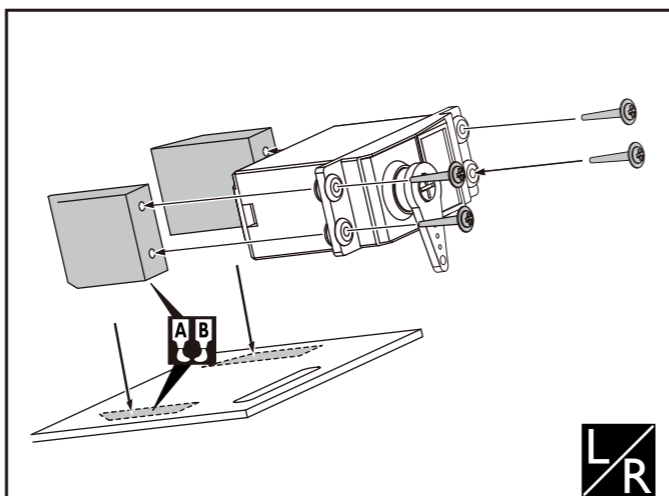
9 Epoxy the flap and the retract strut covering part to appropriate position in the main wing as below. Be careful to ensure the moving parts of the hinges are able to move freely.



7 Epoxy the pin hinges to the flap.

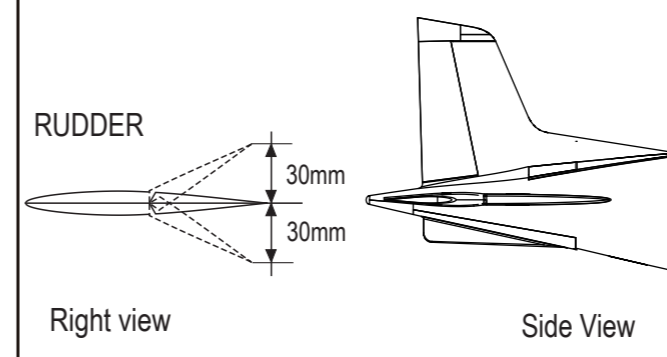


10 Install the servo as the illustration below.



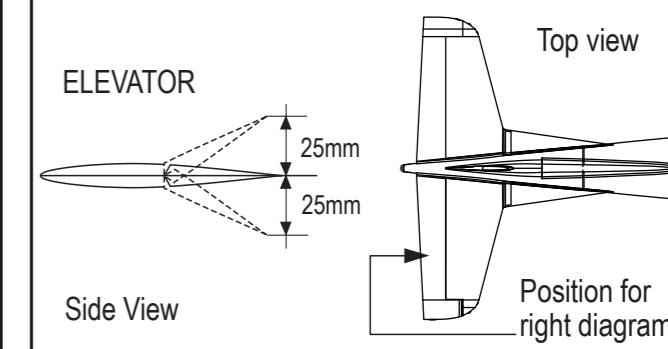
77 Adjustment.

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.



78 Adjustment.

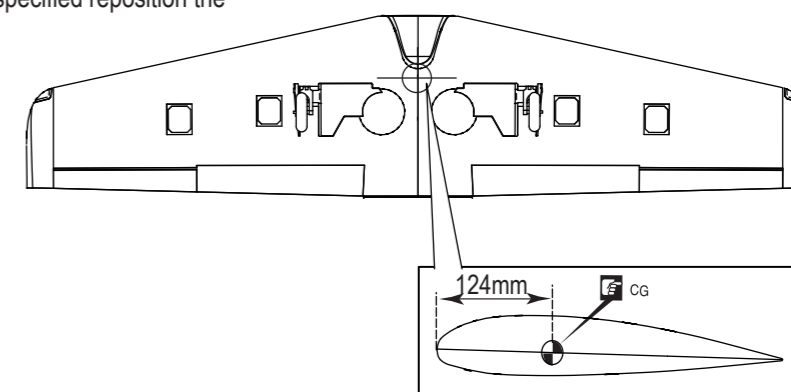
Adjust the travel of each control surface to the values in the diagrams. These values fit general flight capabilities. Readjust according to your needs and flight level.



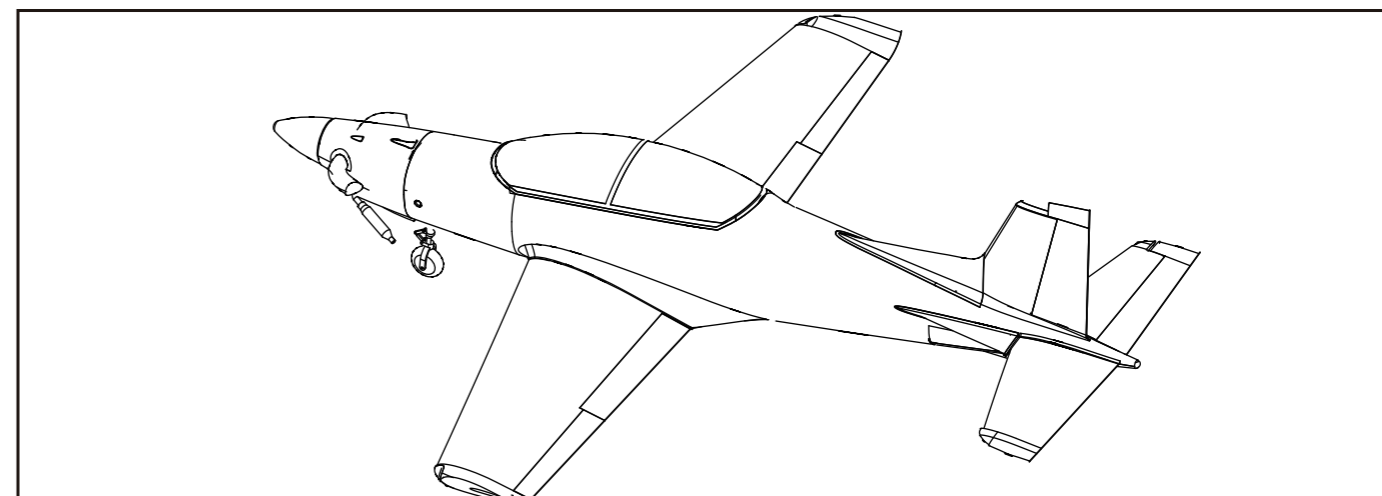
79 The centre of the Gravity.

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

Warning! NEVER fly the model without well balancing.



80 The view of the plane from the 45 degree.



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.

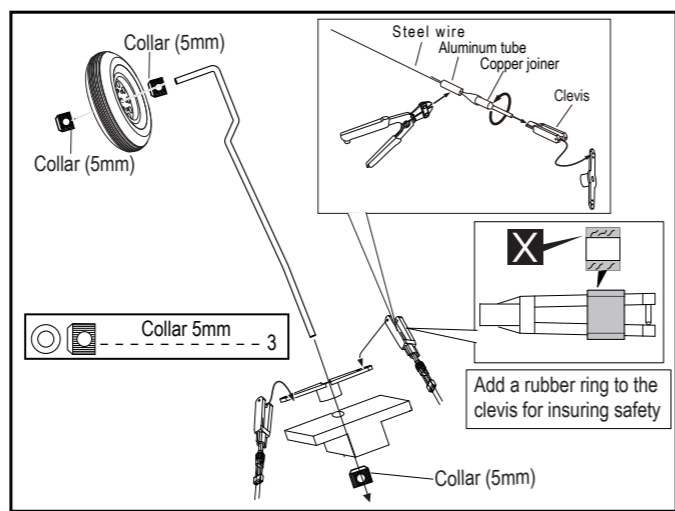
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Apply instant glue (CA glue, super glue). Ensure smooth non-binding movement while assembling. Cut off shaded portion.

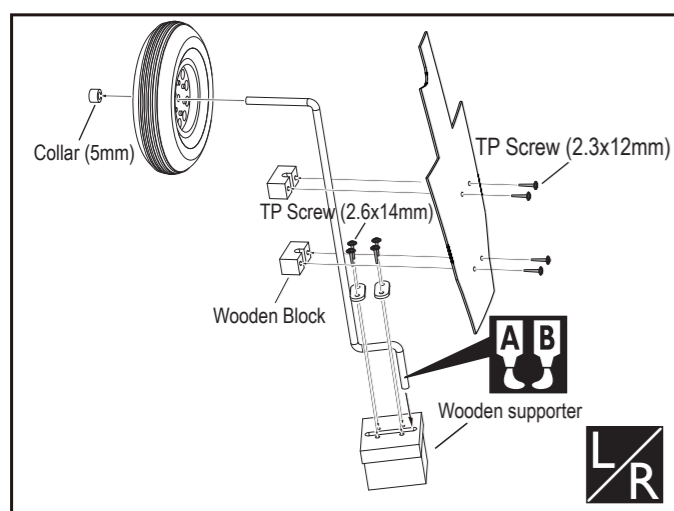
! Accessory list for the coming installation steps.

	Wheel (90mm) ----- 2		Wheel (75mm) ----- 1
	Collar (5mm) ----- 7		Wooden supporter (46x28x14mm) ----- 1
	Wooden supporter (41.5x28x26mm) ----- 2		Landing gear (5mm) ----- 1
	Landing gear (5mm) ----- 1		TP Screw (2.6x14mm) ----- 4
	TP Screw (3x20mm) ----- 8		TP Screw (2.3x12mm) ----- 6
	Landing gear straps ----- 2		Aluminum part (60x6mm) ----- 1
	Wooden Block (25x15x13mm) ----- 4		Gear door ----- 2

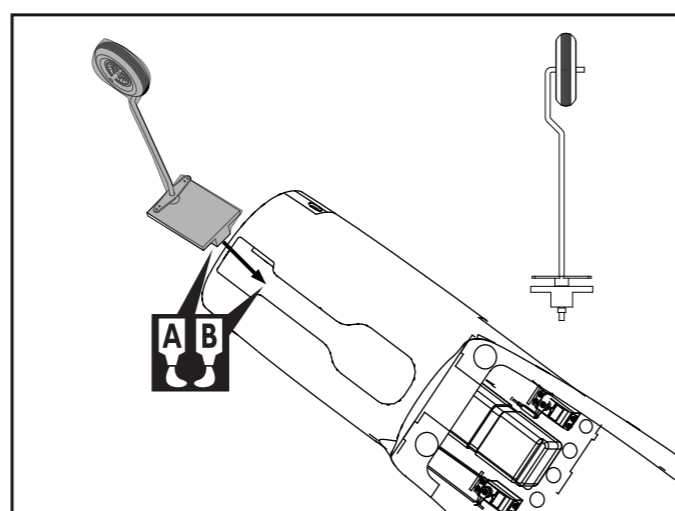
74 Install the wheel to the fixed landing gear.



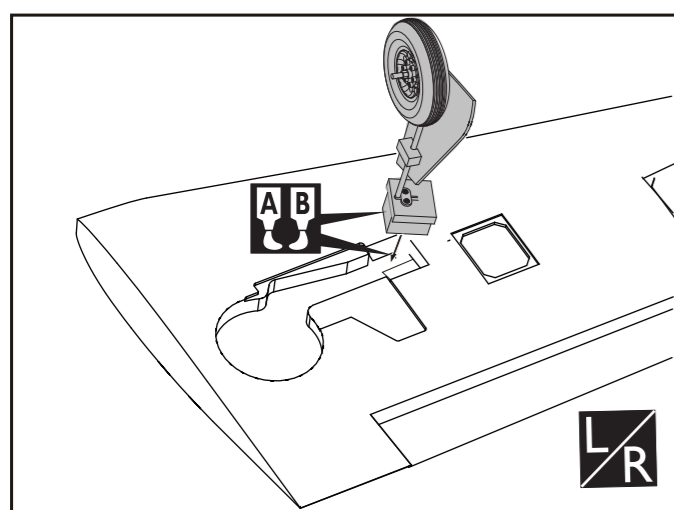
72 Install the wheel to the fixed landing gear.



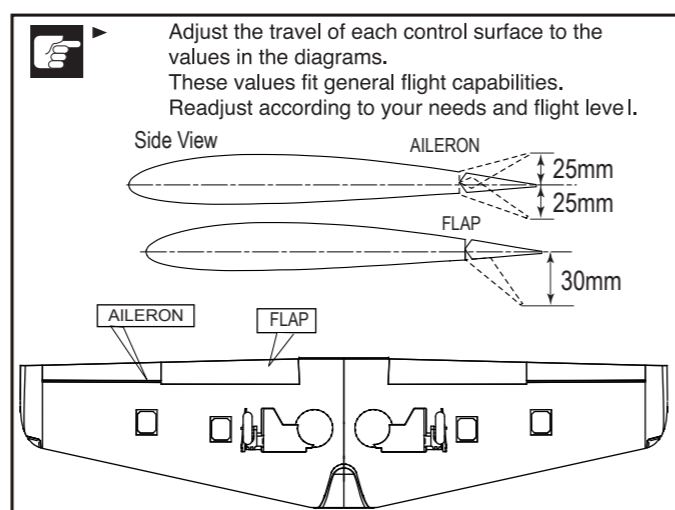
75 Epoxy the fixed landing gear to the fuselage.



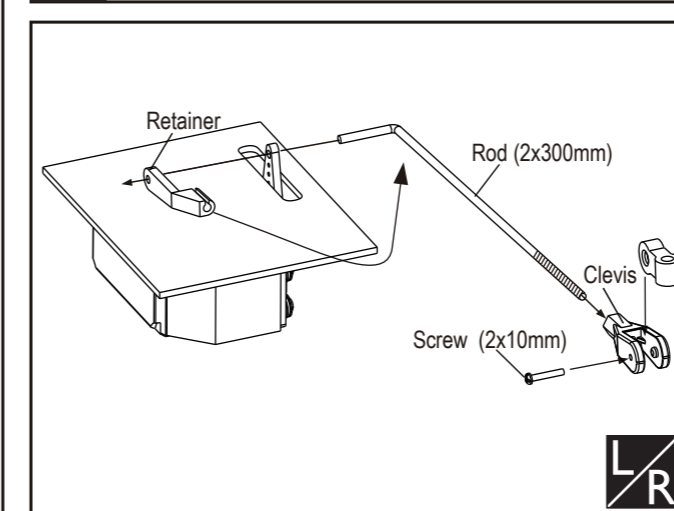
73 Epoxy the fixed landing gear to the main wing.



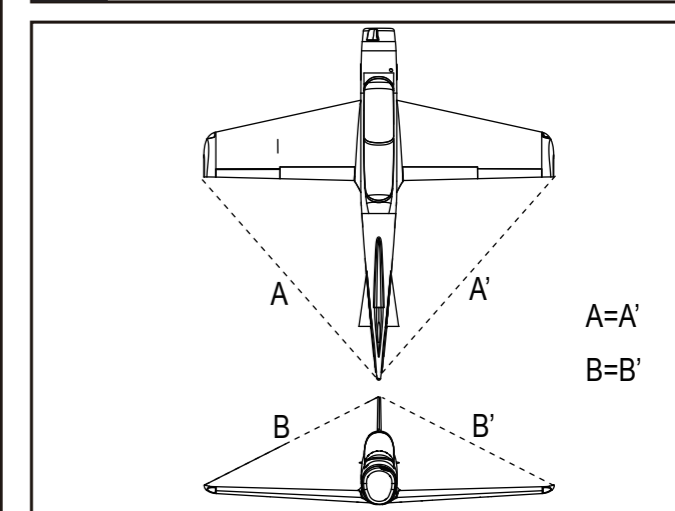
76 Adjustment.



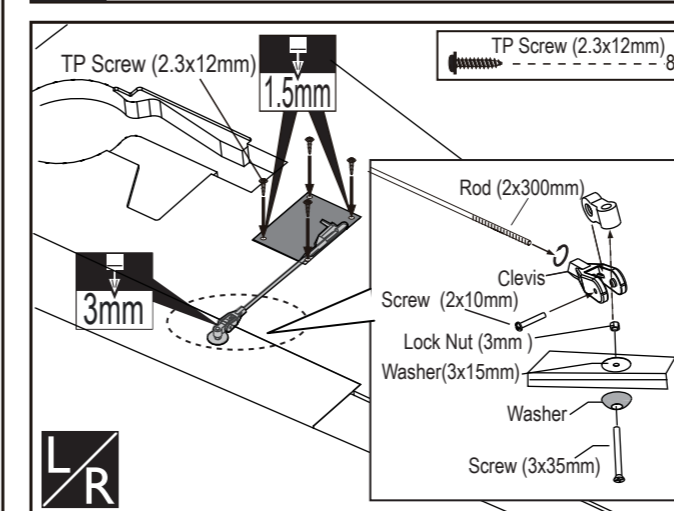
11 Install the nylon control horn and connect the linkage.



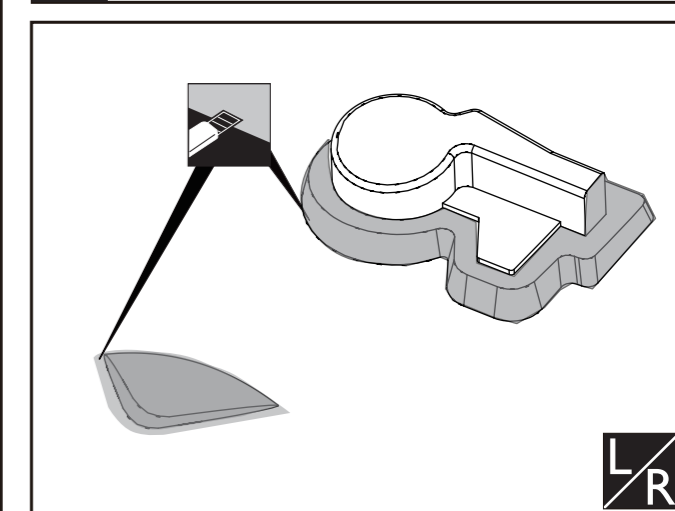
13 Assembly of the main wings.



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



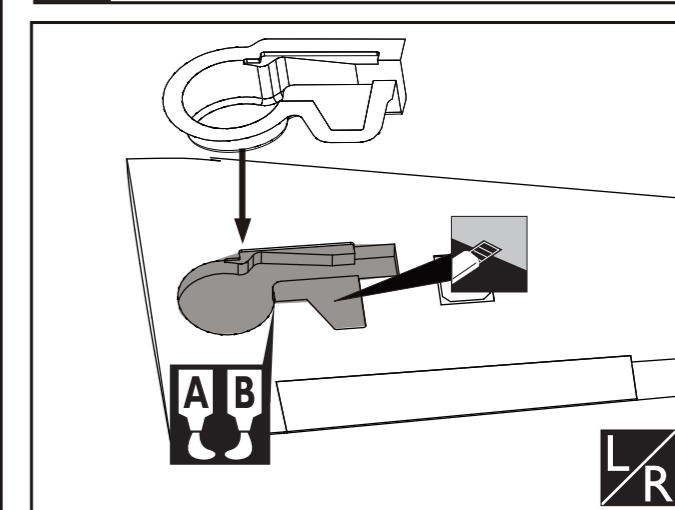
14 Cut off the surplus PVC part carefully along the shaded line



! Accessory list for the coming installation steps.

	Screw (6x50mm) ----- 2
	Blind Nut (6mm) ----- 2
	Wood dowel (6x50mm) ----- 2
	Wood dowel (6x30mm) ----- 2
	Wooden Block (25x15x13mm) ----- 4
	Wheel (90mm) ----- 2
	Gear door ----- 1
	LockNut (4mm) ----- 2
	PVC ----- 2
	Reinforcement plate ----- 1
	Bushing (8X6mm) ----- 2
	PVC ----- 2
	Rib template (2mm ply) ----- 1
	Main wing joiner ----- 1

15 Cut away the film on the position for the air retract landing and epoxy the wheel house to relevant position.



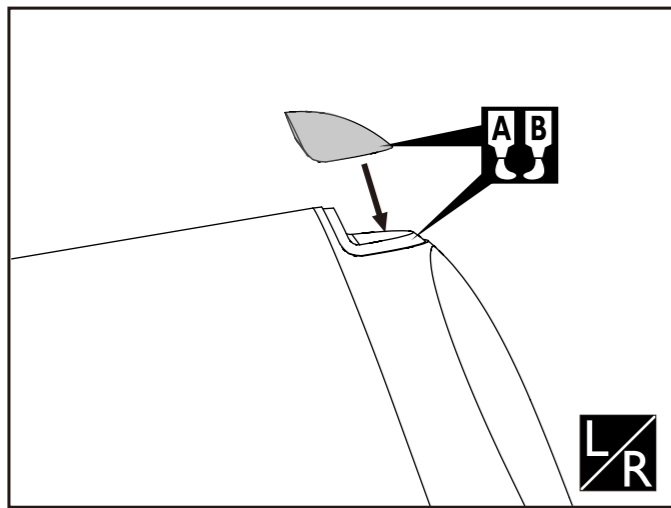
AB Apply epoxy glue. **LR** Assemble left and right sides the same way. **!** Pay close attention here! **Warning!** Do not overlook this symbol!

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

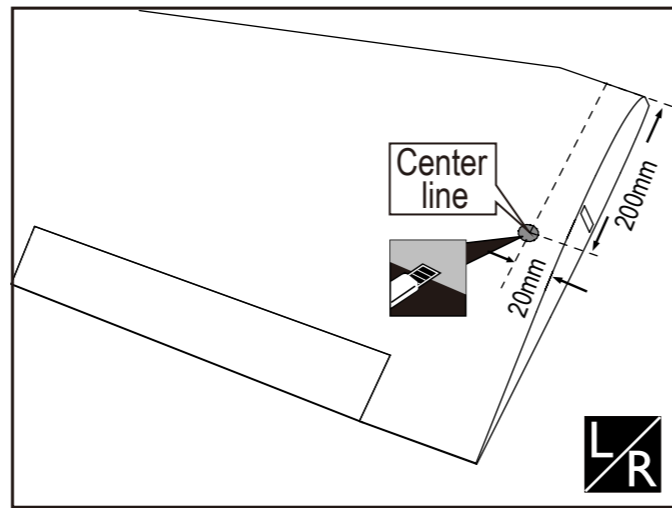
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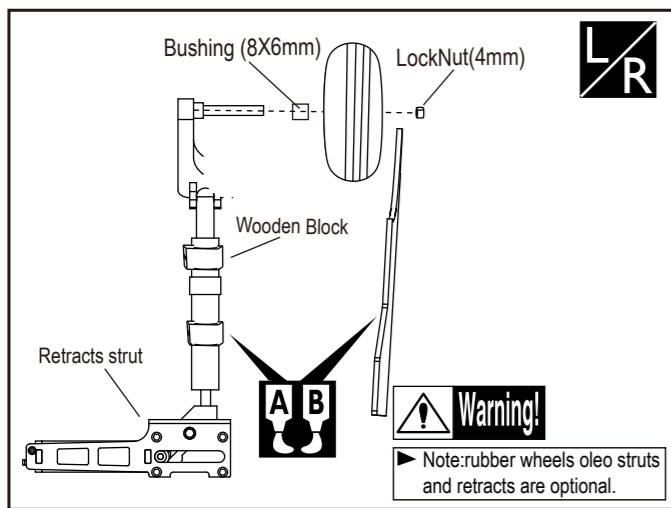
16 Epoxy the PVC parts to the wing tip as below.



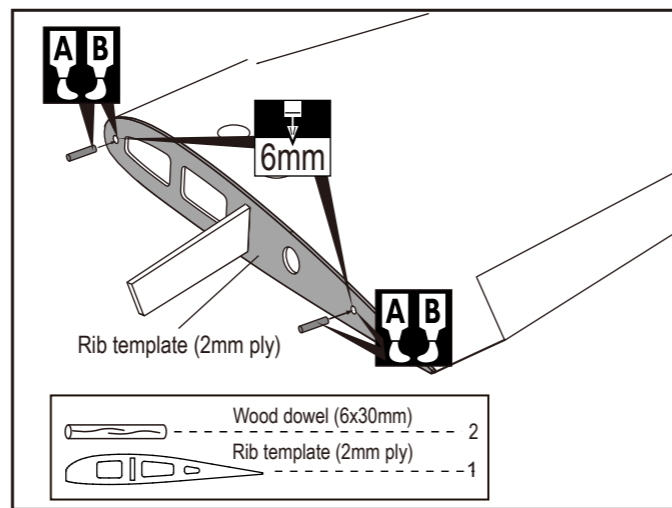
19 Drill holes for pulling out the servo extension line.



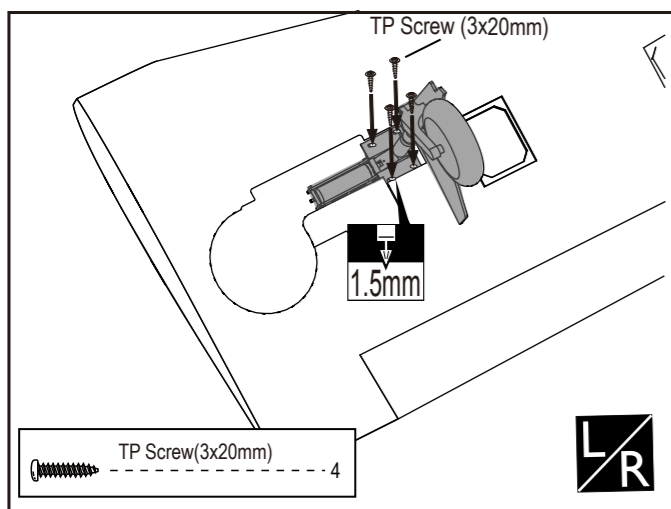
17 Assemble the gear doors and the wheels to the retracts.



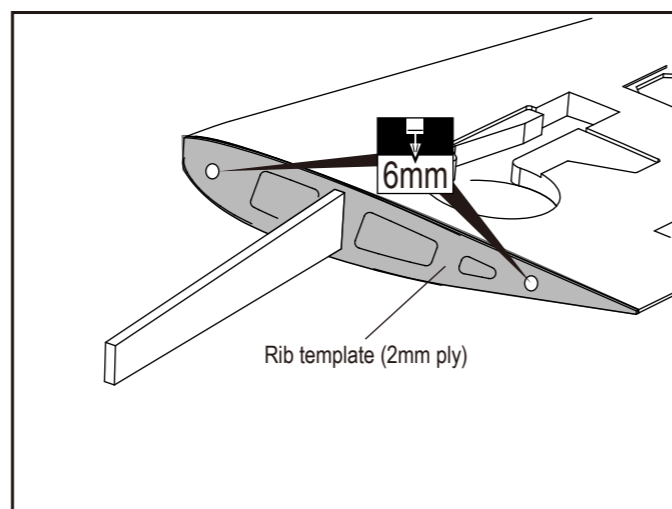
20 According to the rib template drill holes in one wing and epoxy wood dowel in them.



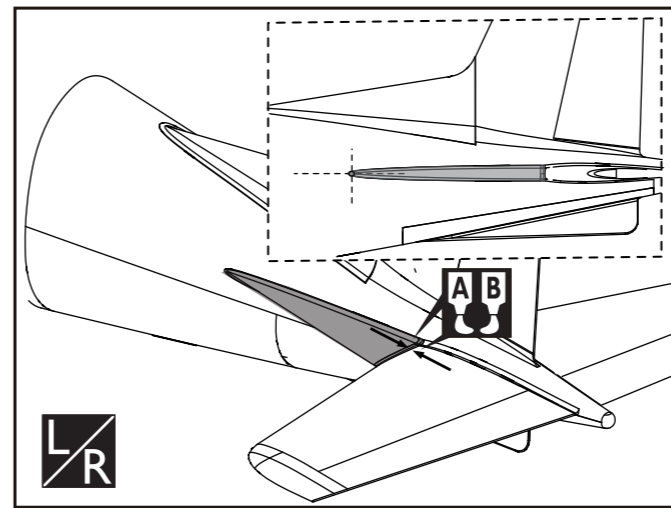
18 Assemble the retract



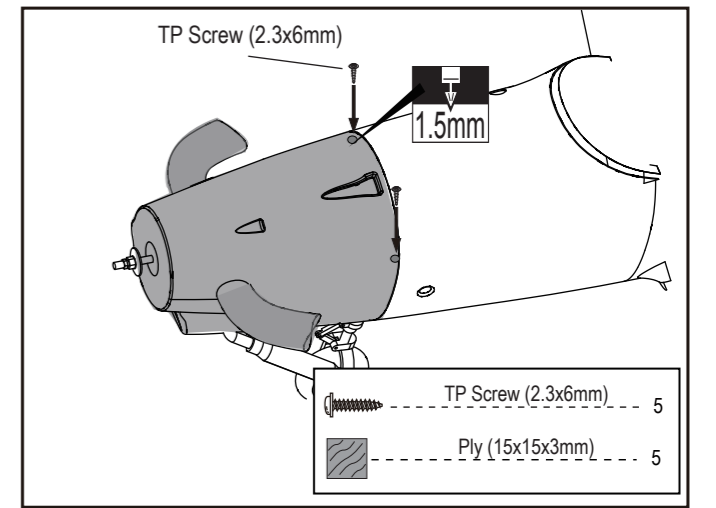
21 According to the rib template drill holes to another main wing.



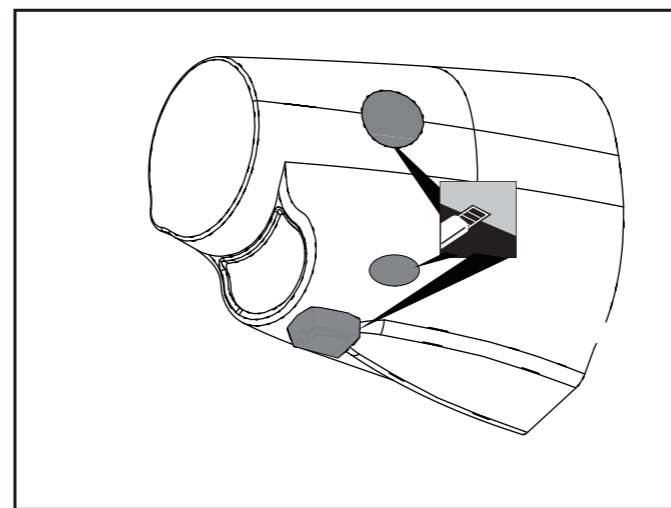
66 Epoxy the PVC decoration to appropriate position as below.



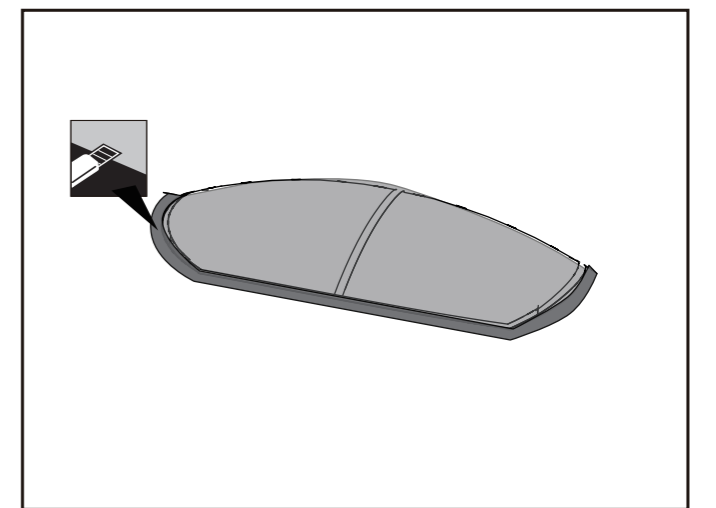
69 Epoxy the plies under the cowling in fuselage and assemble the cowling to fuselage with TP screw.



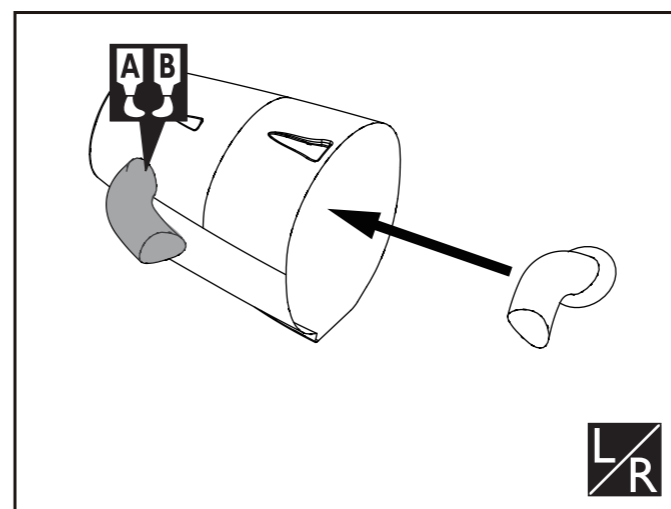
67 Trim the cowling along the shaded line.



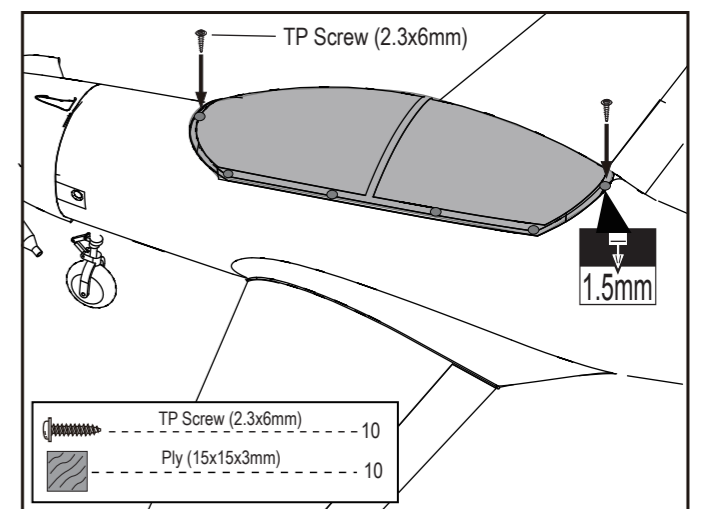
70 Trim the canopy along the shaded line.



68 Epoxy the exhaust to the cowling from Inner.



71 Epoxy plies under the canopy and assemble the canopy to fuselage with screw.



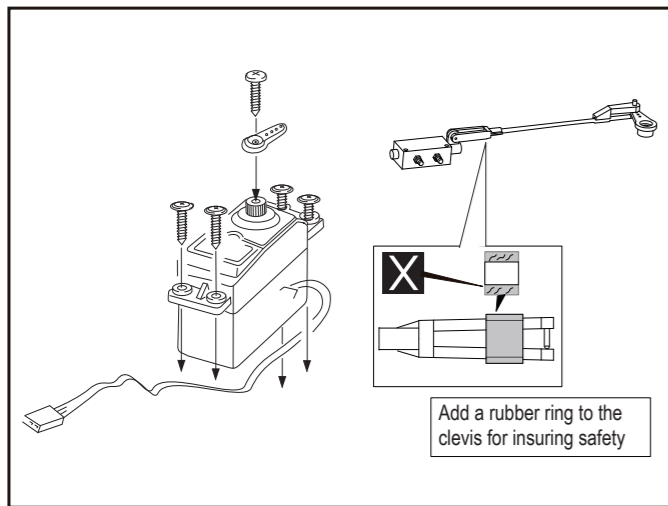
A B Apply epoxy glue. **L/R** Assemble left and right sides the same way. **Hand icon** Pay close attention here! **Warning!** Do not overlook this symbol!

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

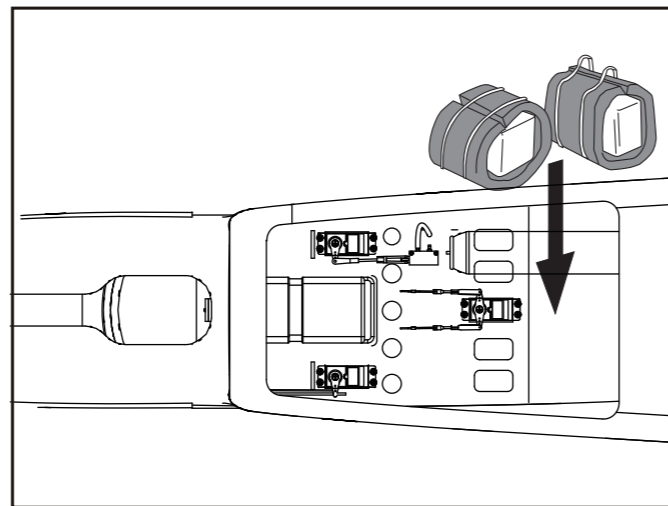
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CA Apply instant glue (CA glue, super glue). **Smooth icon** Ensure smooth non-binding movement while assembling. **Scissors icon** Cut off shaded portion.

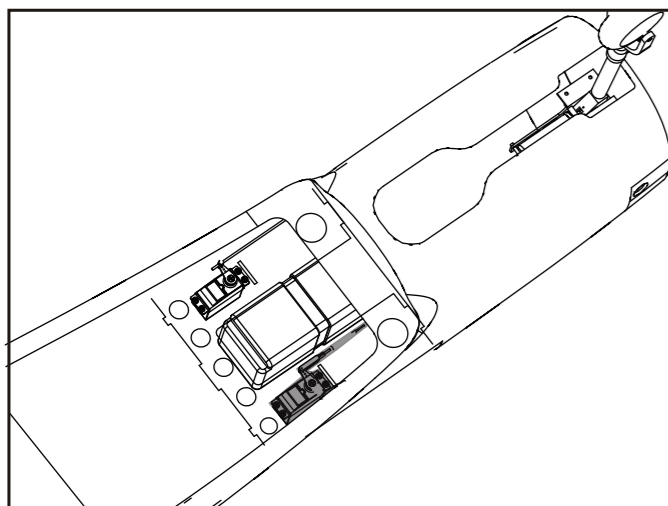
61 Install the servo of switch.



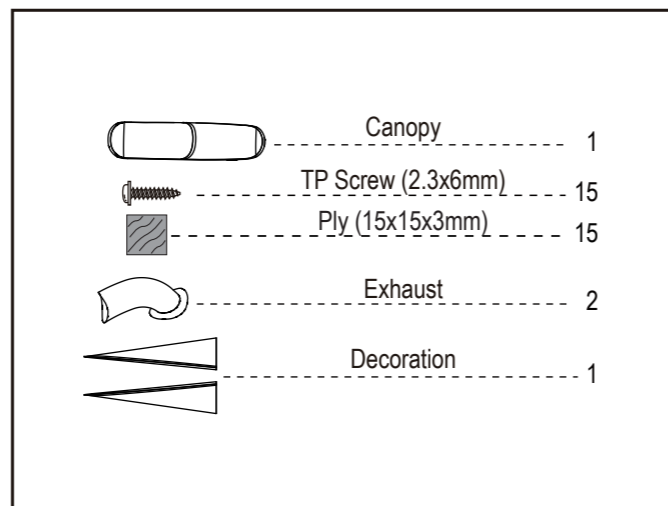
64 Mount the receiver and the battery in the fuselage.



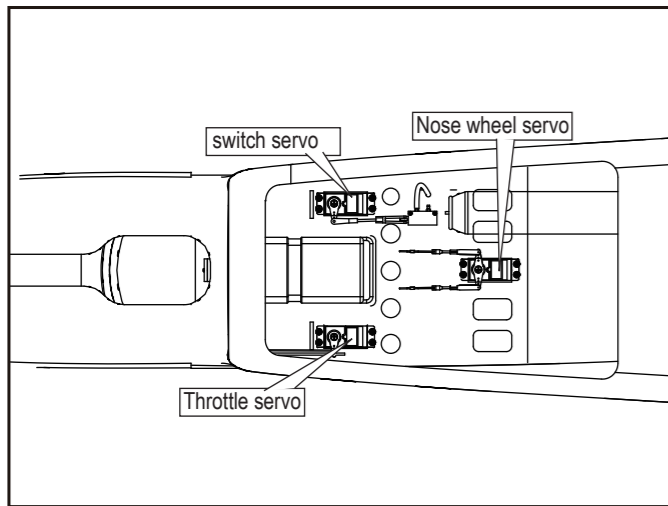
62 Install the servo of switch in the fuselage.



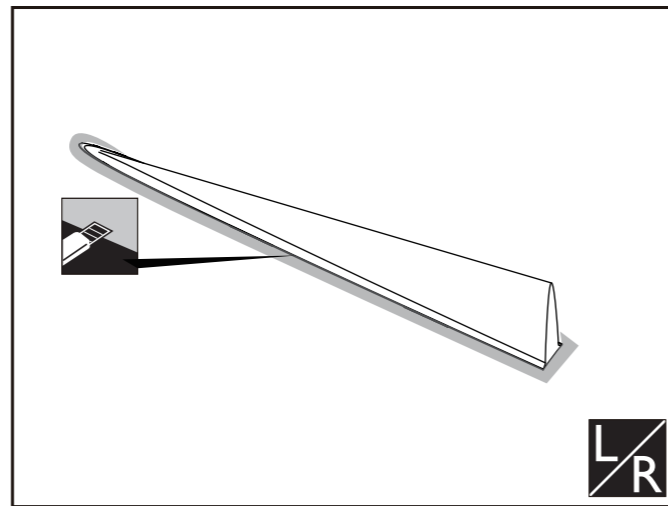
Warning! Accessory list for the coming installation steps.



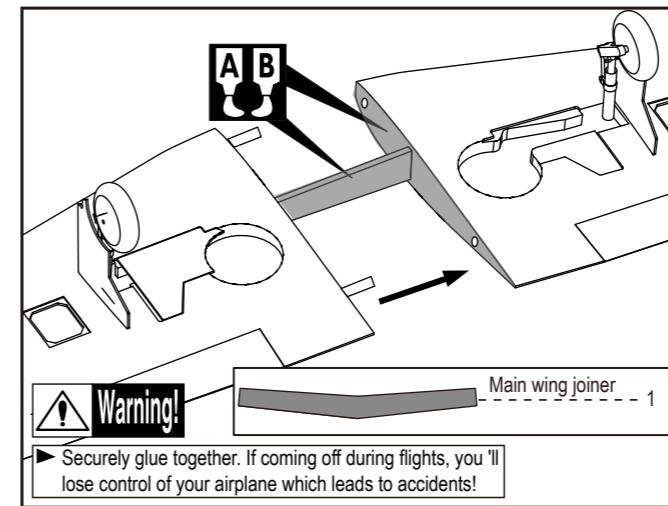
63 The sketch map when the servos install completion.



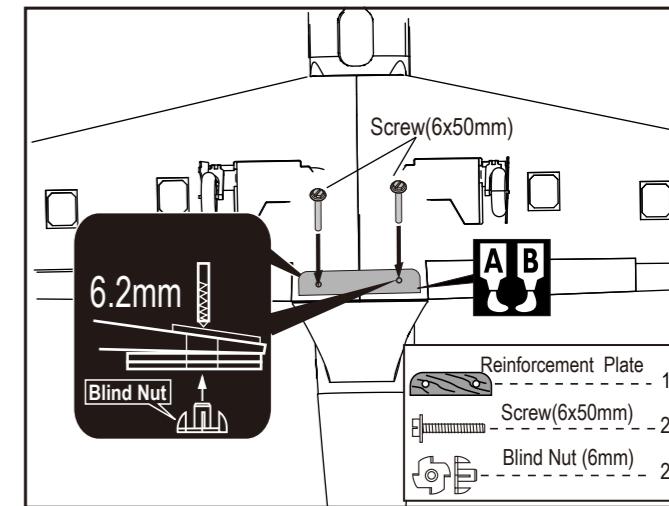
65 Trim the decoration carefully along the shaded line.



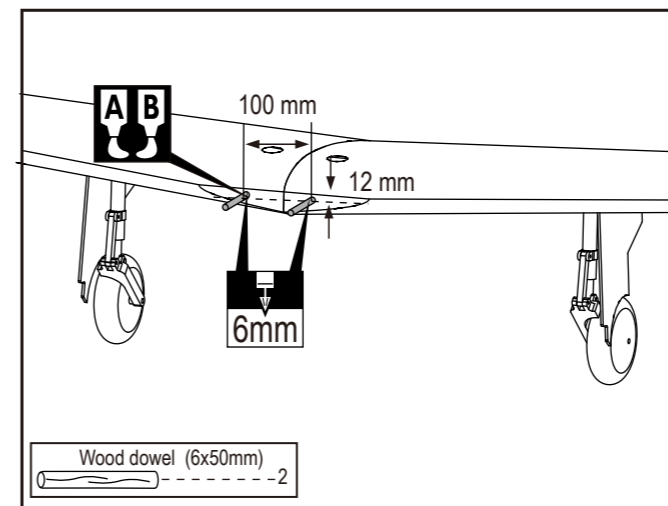
22 Epoxy the main wing hardly together with wing joiner.



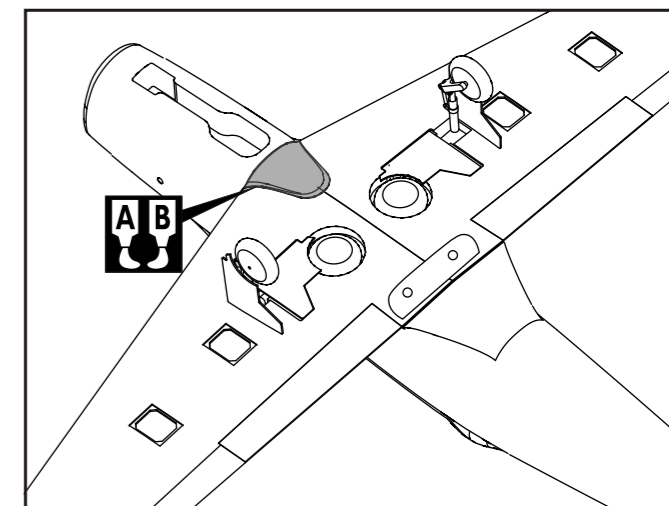
25 Mount the wings to the fuselage with screw.



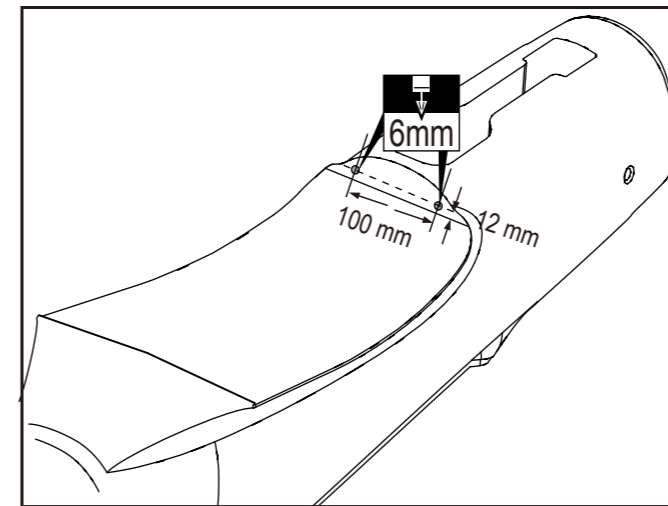
23 Drill holes to appropriate position in the wings and epoxy wood dowels in them



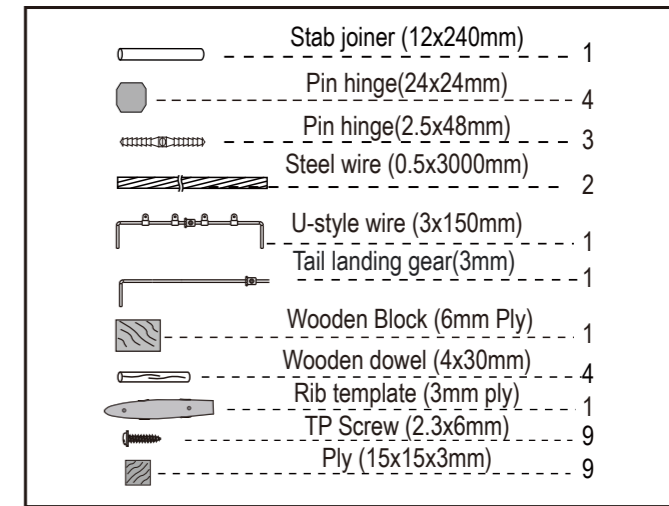
26 Epoxy the belly pants to main wing and drill holes to relevant position on the belly pants



24 Drill holes to relevant position in the fuselage



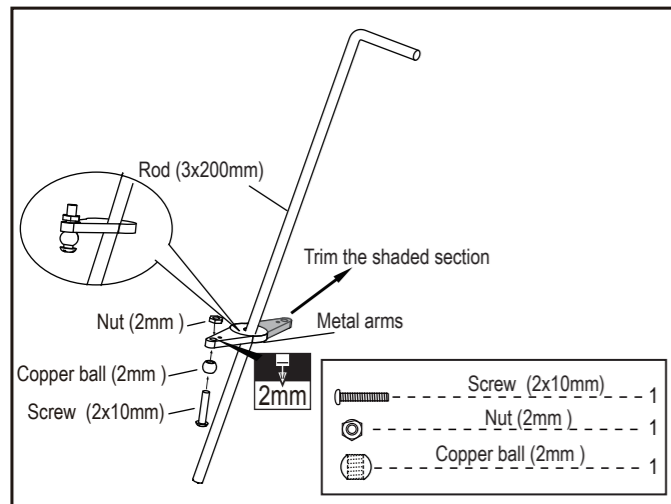
Warning! Accessory list for the coming installation steps.



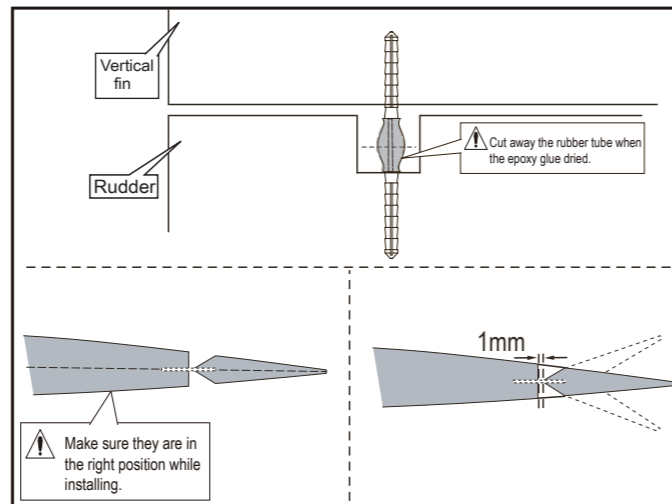
Apply epoxy glue.	Assemble left and right sides the same way.	Pay close attention here!	Do not overlook this symbol!
Apply instant glue (CA glue, super glue).	Ensure smooth non-binding movement while assembling.	Cut off shaded portion.	

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.	

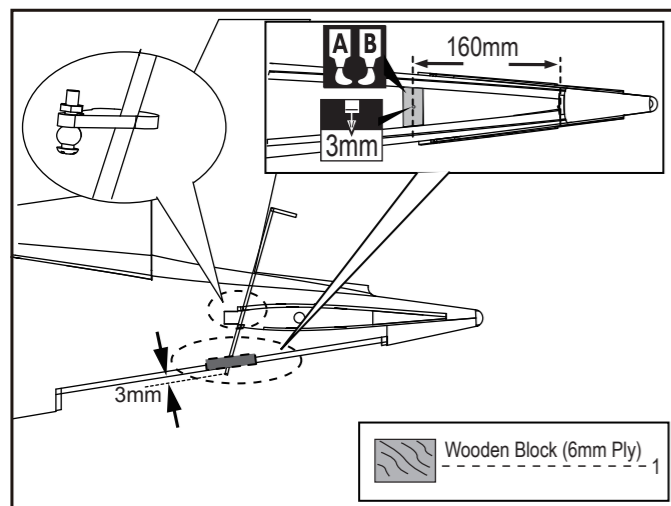
27 Assemble the ball joint to the metal arms.



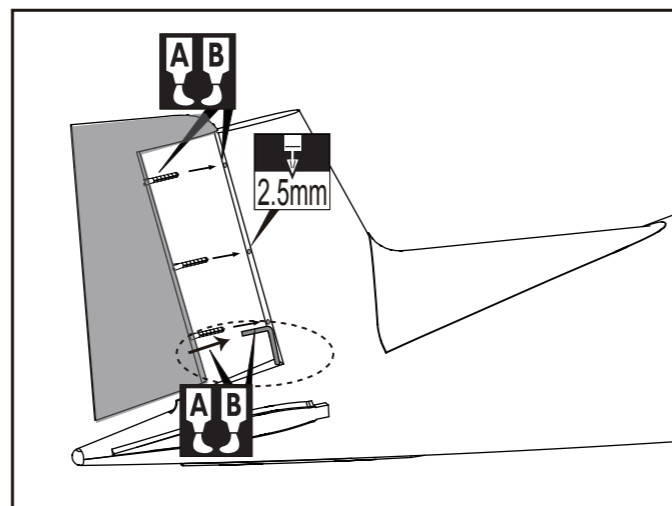
30 keep some space about 1mm width between the vertical fin and rudder



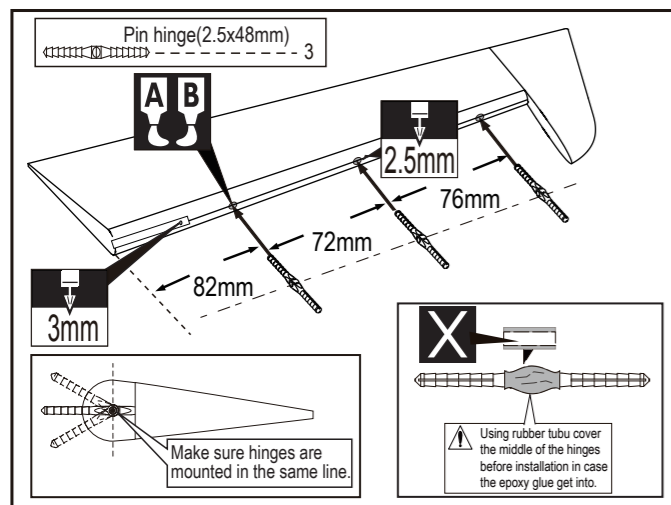
28 Epoxy a wooden block at appropriate position in fuselage, and drill a hole in the centre.



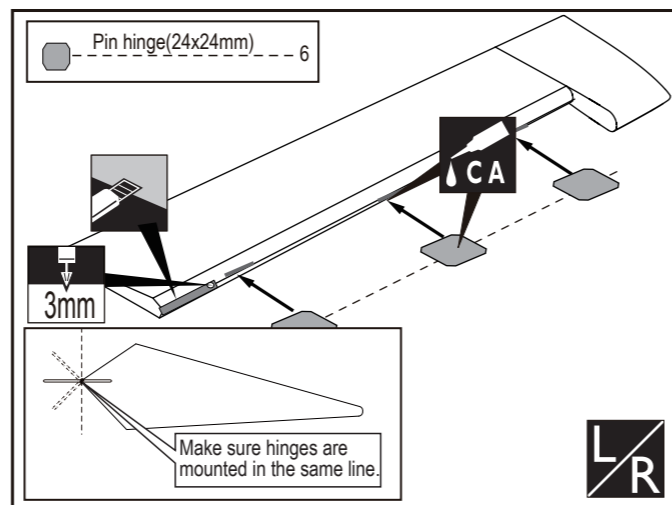
31 Drill holes to the relevant position in the trailing edge and epoxy the rudder to them.



29 Drill holes to appropriate position in the rudder and epoxy the pin hinges in them



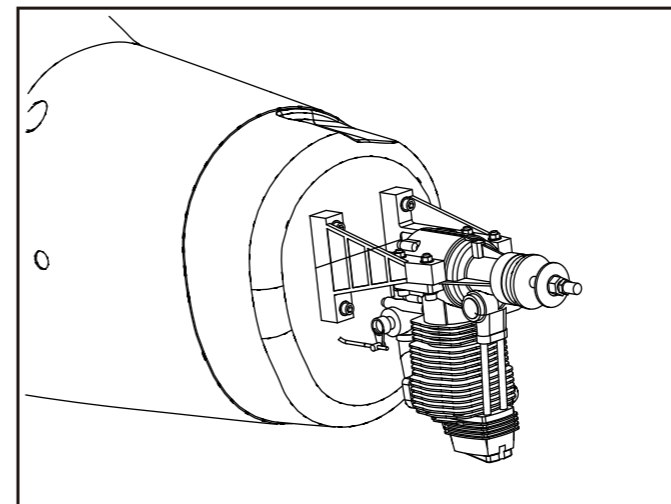
32 Apply instant type CA glue to aileron and pin hinge.



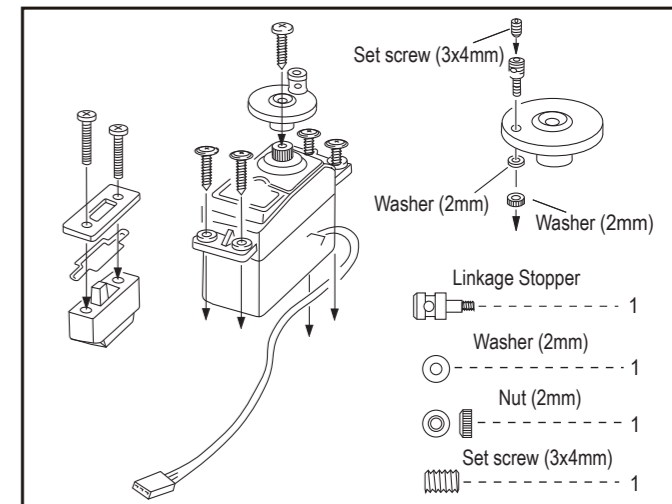
A B Apply epoxy glue. **L R** Assemble left and right sides the same way. **Hand icon** Pay close attention here! **Warning!** Do not overlook this symbol!

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

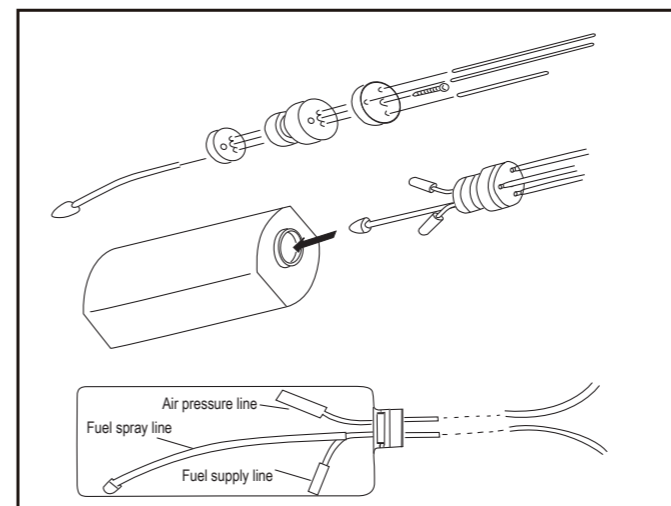
55 The sketch map when the engine install completion.



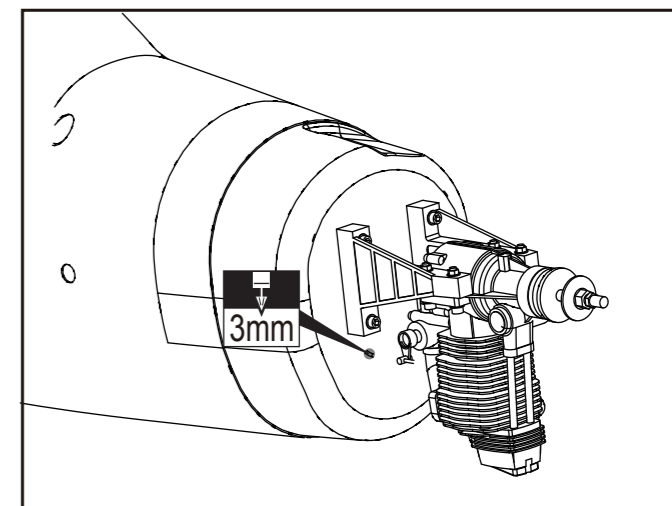
58 Install the switch and the throttle servo



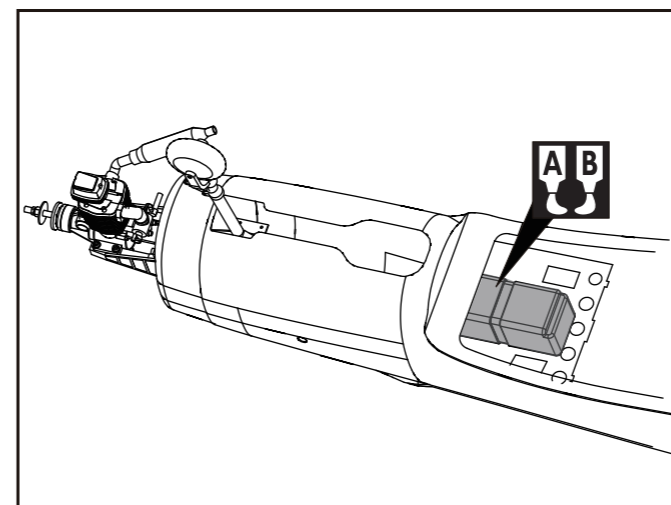
56 Assembly of the fuel tank.



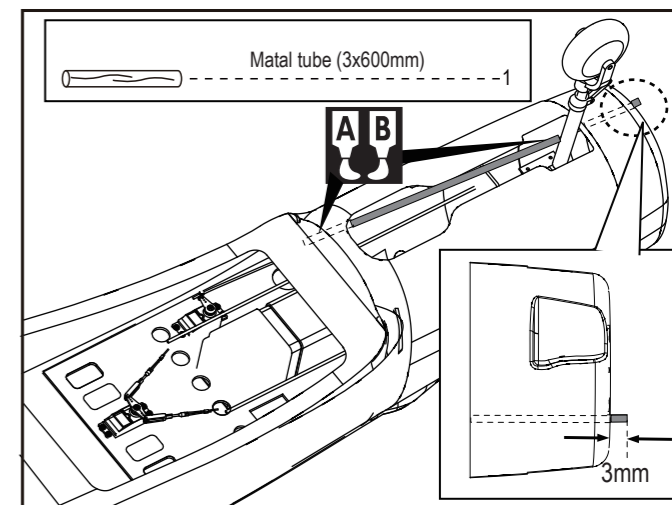
59 Drill a small hole in appropriate position for throttle.



57 Epoxy the fuel tank in the fuselage.



60 Install the throttle servo to appropriate position in the fuselage.



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). **Circle icon** Ensure smooth non-binding movement while assembling. **Scissors icon** Cut off shaded portion.

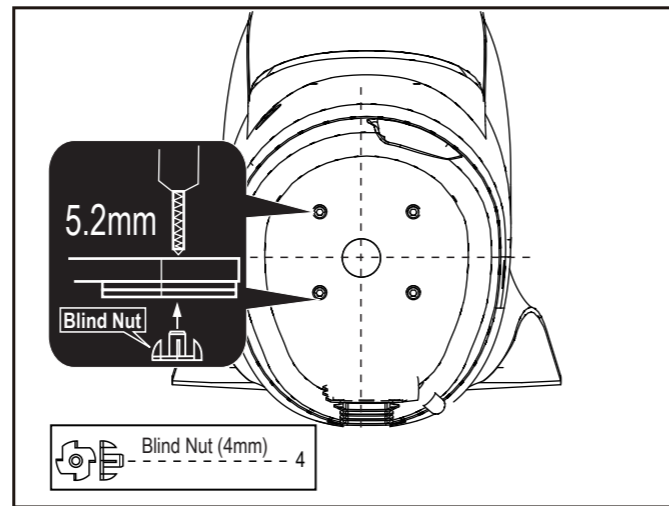


Accessory list for the coming installation steps.

- Blind Nut (4mm) - 4
- Clevis - 4
- Copper joiner - 4
- Aluminum tube(3x6mm) - 4
- Fuel tank (550cc) - 1
- Screw (4x35mm) - 4
- Screw (4x25mm) - 4
- Washer(4x8mm) - 12
- Spring Washer (4mm) - 4
- Nut (4mm) - 4
- Linkage Stopper - 2
- Engine mount (68x105mm) - 2
- Metal tube (3x600mm) - 1
- Rod (1.7x700mm) - 1

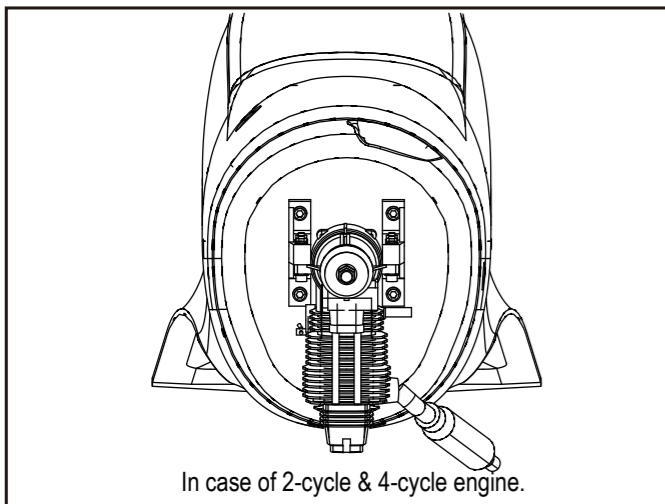
52

Drill four holes at the diameters as shown for engine mount.



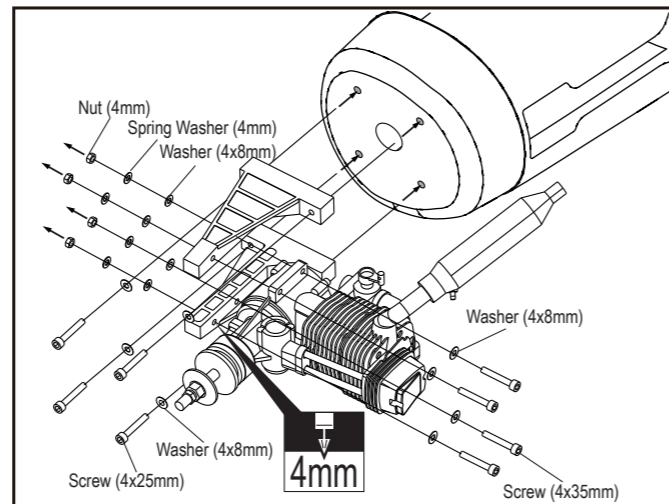
50

The front view of the engine install completion.



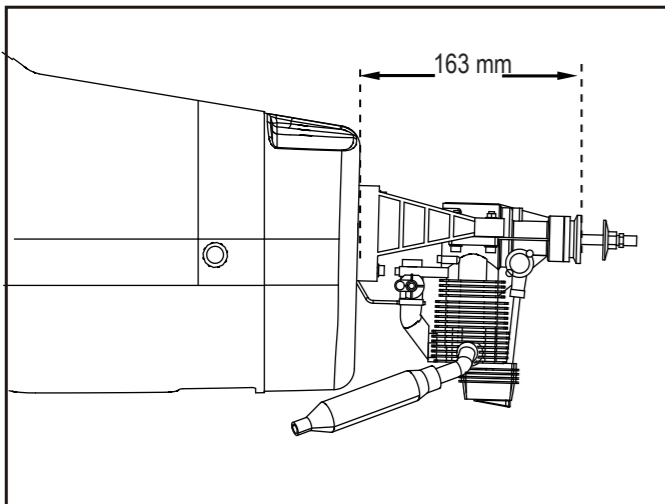
53

Assemble the engine.



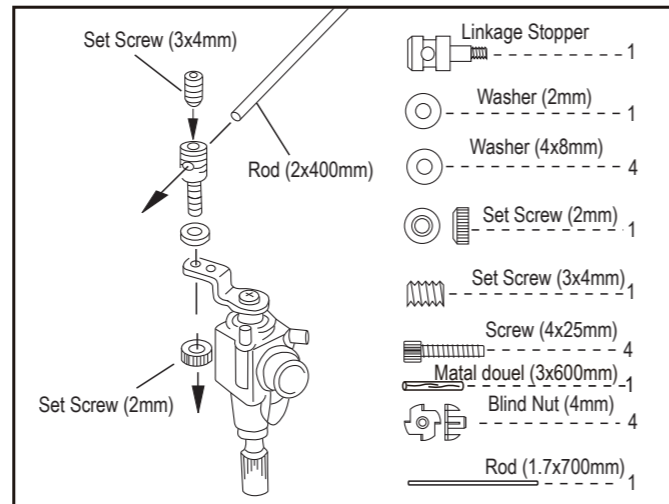
51

The side view when the engine install completion.



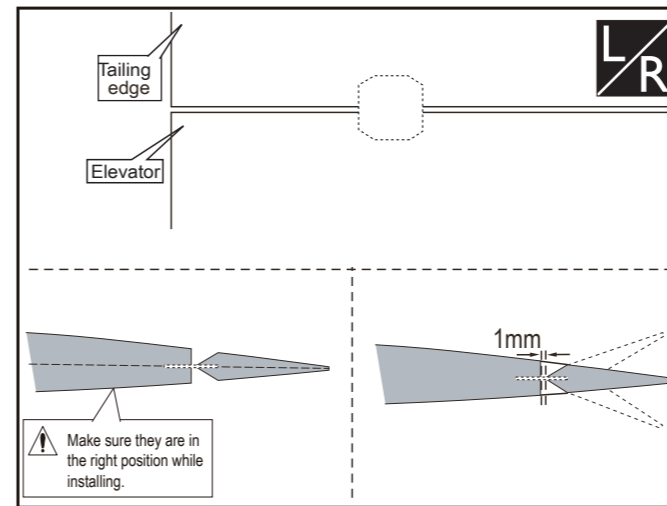
54

Assemble the throttle linkage.



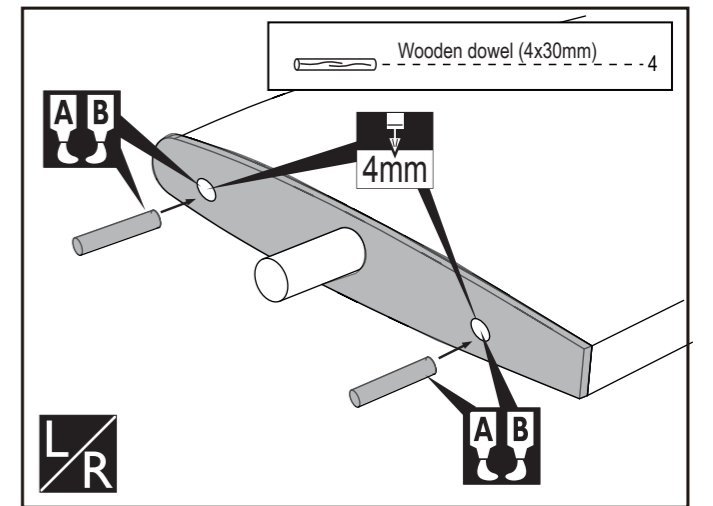
33

Keep some space about 1mm width between the elevator and horizontal tail edge.



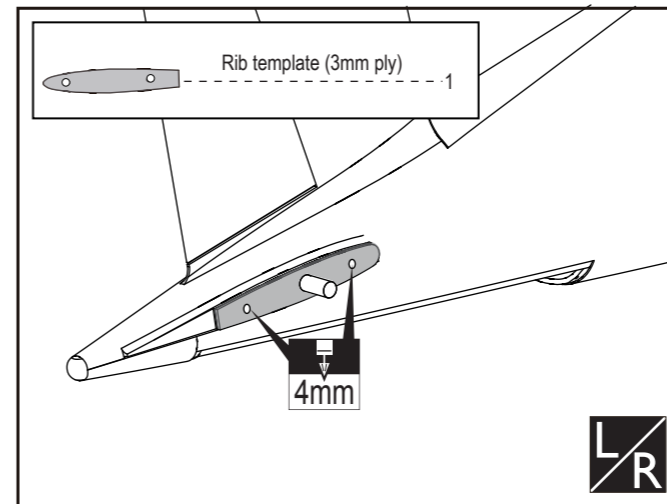
36

Drill two holes at the stabilizer root base on rib template and epoxy the metal dowel in them.



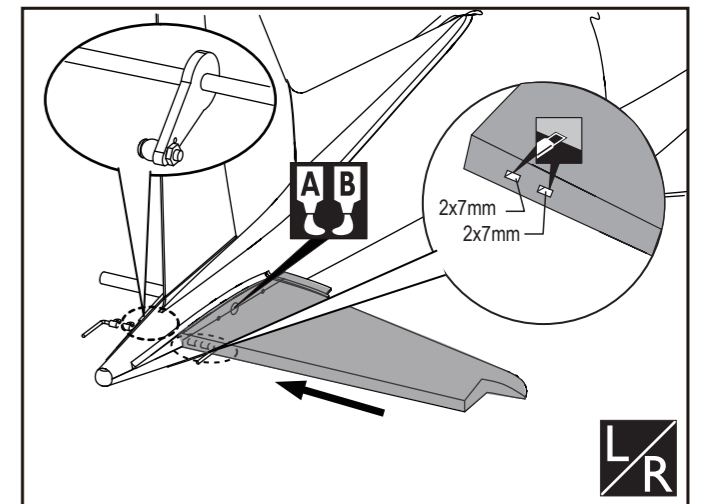
34

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



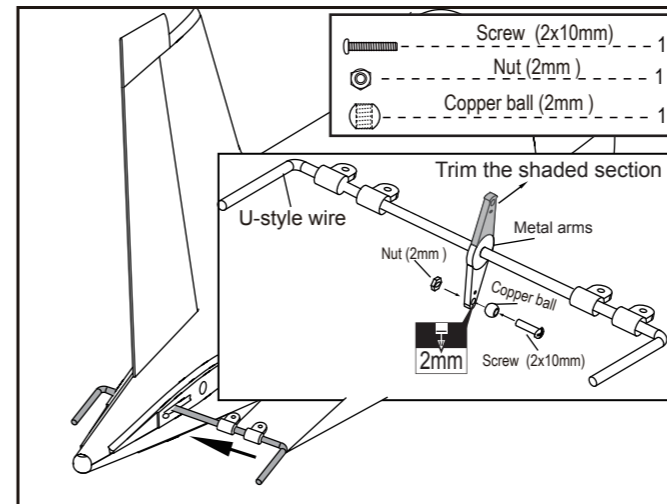
37

Drill holes to appropriate position in the stabilizer and epoxy it to the fuselage as below.



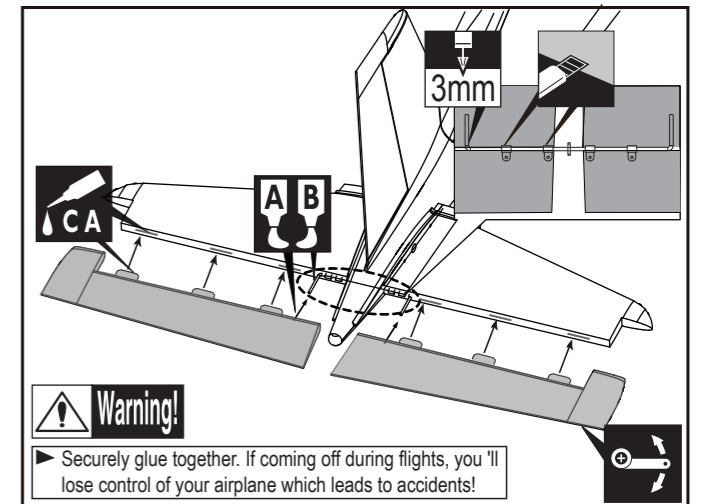
35

Set the U-style wire through the tail of fuselage as below.



38

Glue the elevator to the stabilizer by CA and epoxy.



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.



Warning!



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.

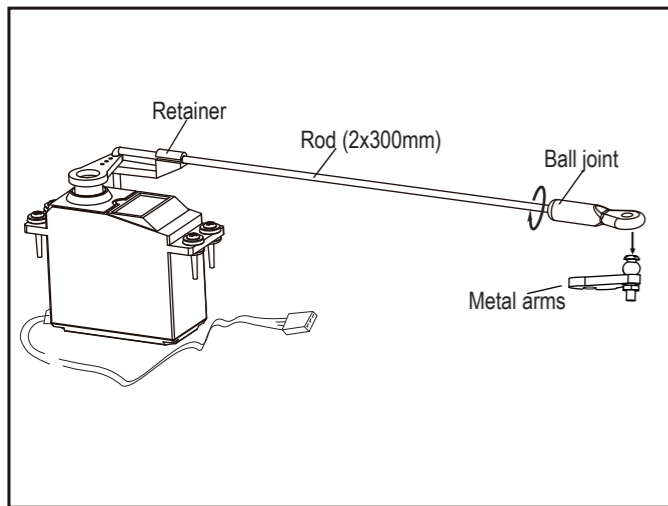


Cut off shaded portion.

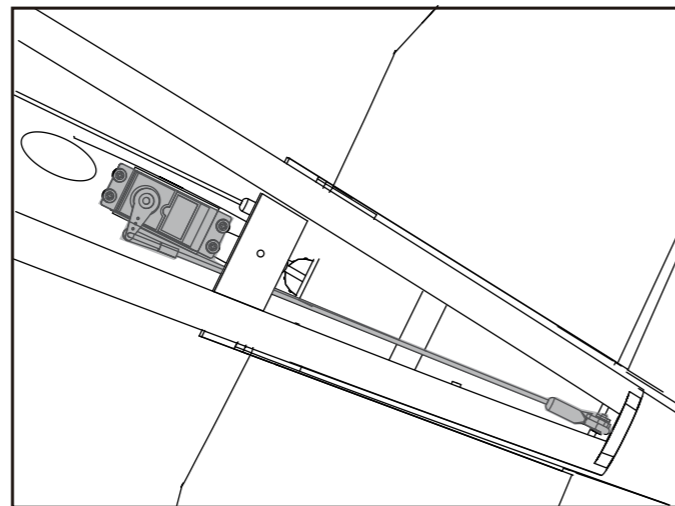


Warning!

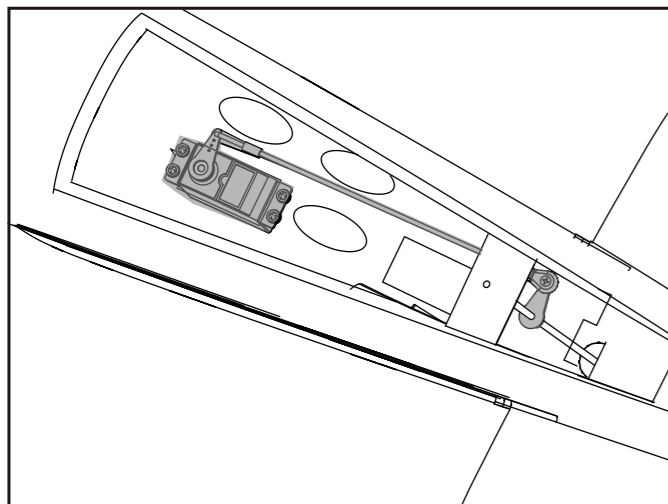
39 Install the rudder servo.



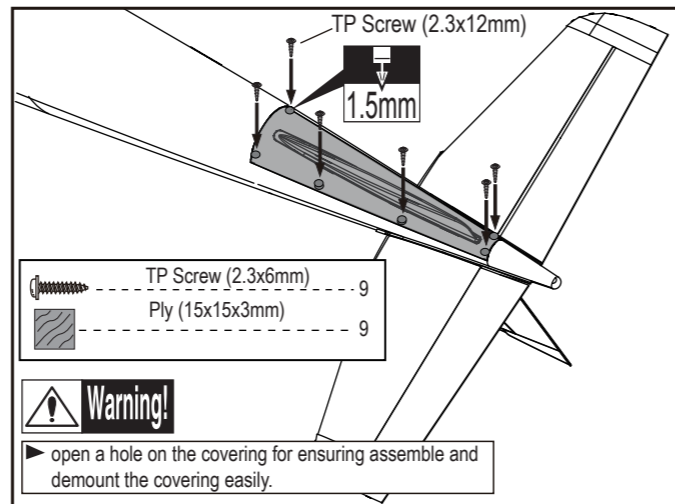
42 Assemble the elevator servo to appropriate position in the fuselage.



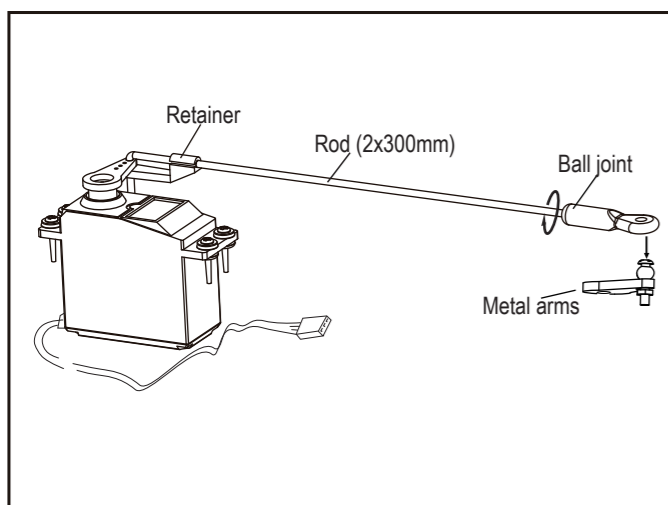
40 Assemble the rudder servo to appropriate position in the fuselage.



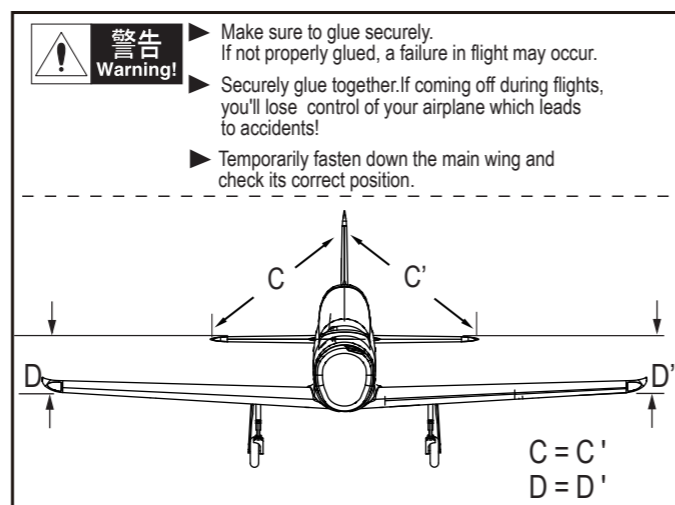
43 Epoxy the plies to appropriate position under the tail landing gear covering and assemble the tail landing gear covering to the fuselage as below.



41 Install the elevator servo.



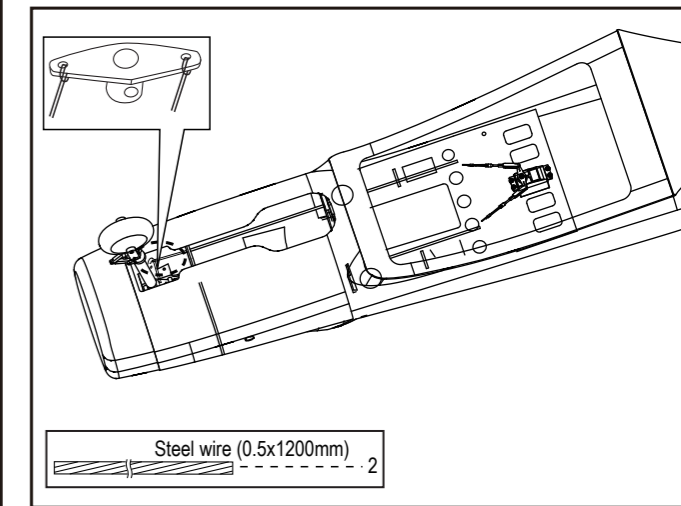
44 Assembly of the stabilizer.



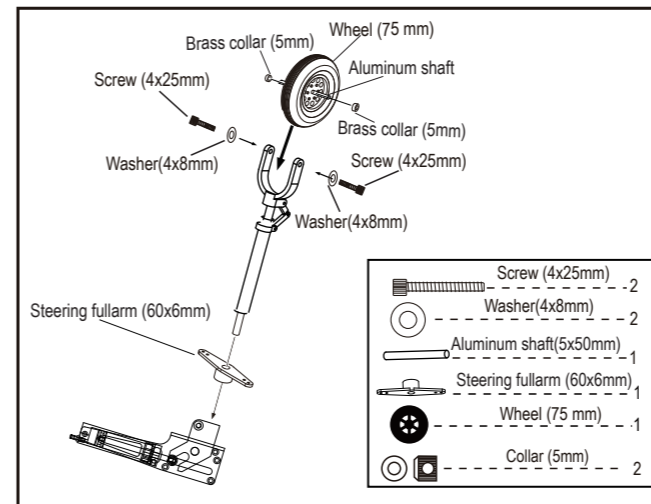
Accessory list for the coming installation steps.

	Clevis	2
	Copper joiner	2
	Aluminum tube(3x6mm)	2
	Screw (2x10mm)	2
	Nut (2mm)	2
	Washer(2x5mm)	2
	TP Screw (3x20mm)	4
	Steel wire (0.5x1500mm)	2
	TP Screw (2.3x12mm)	8
	Wheel (75 mm)	1
	Collar (5mm)	2
	Steering fullarm (60x6mm)	1
	Screw (4x25mm)	2
	Washer(4x8mm)	2
	Aluminum shaft(5x50mm)	1

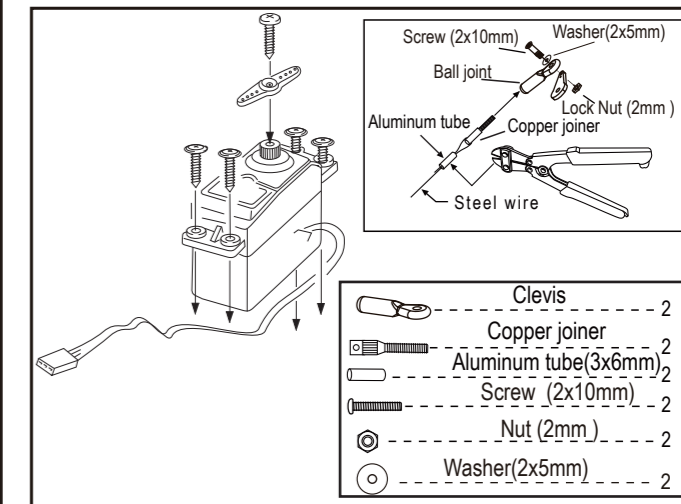
47 Assemble the steeling fullarm around the landing gear.



45 Assemble the nose wheel.



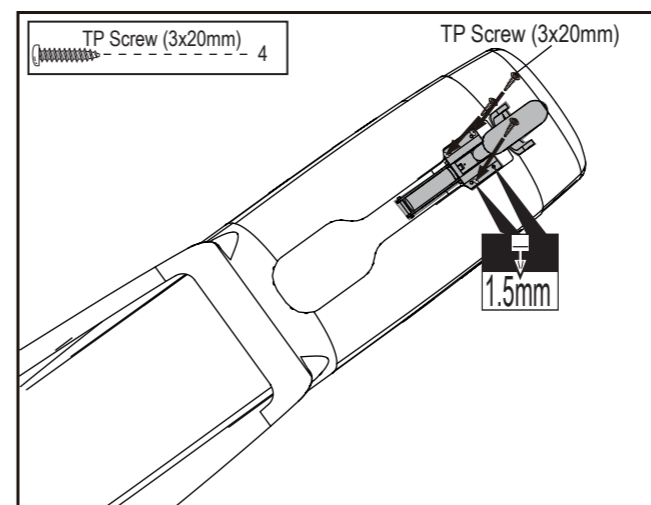
48 Install the servo.



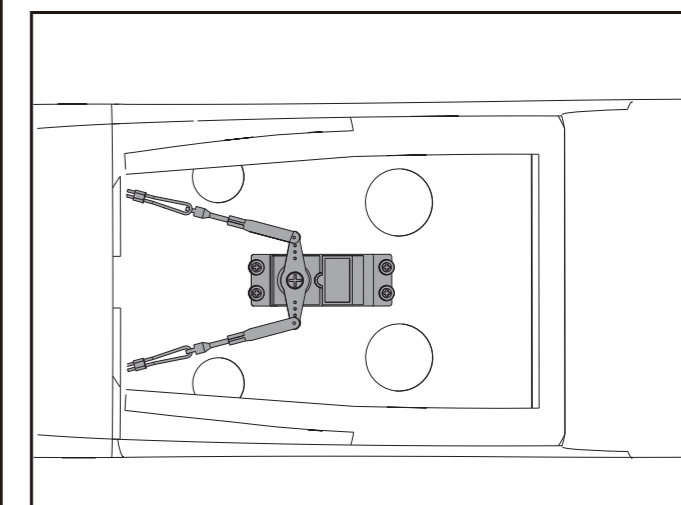
Apply epoxy glue. Assemble left and right sides the same way. Pay close attention here! Do not overlook this symbol!

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

46 Install the nose landing gear to appropriate position in the fuselage.



49 Assemble the servo to the relevant position in the fuselage.



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.