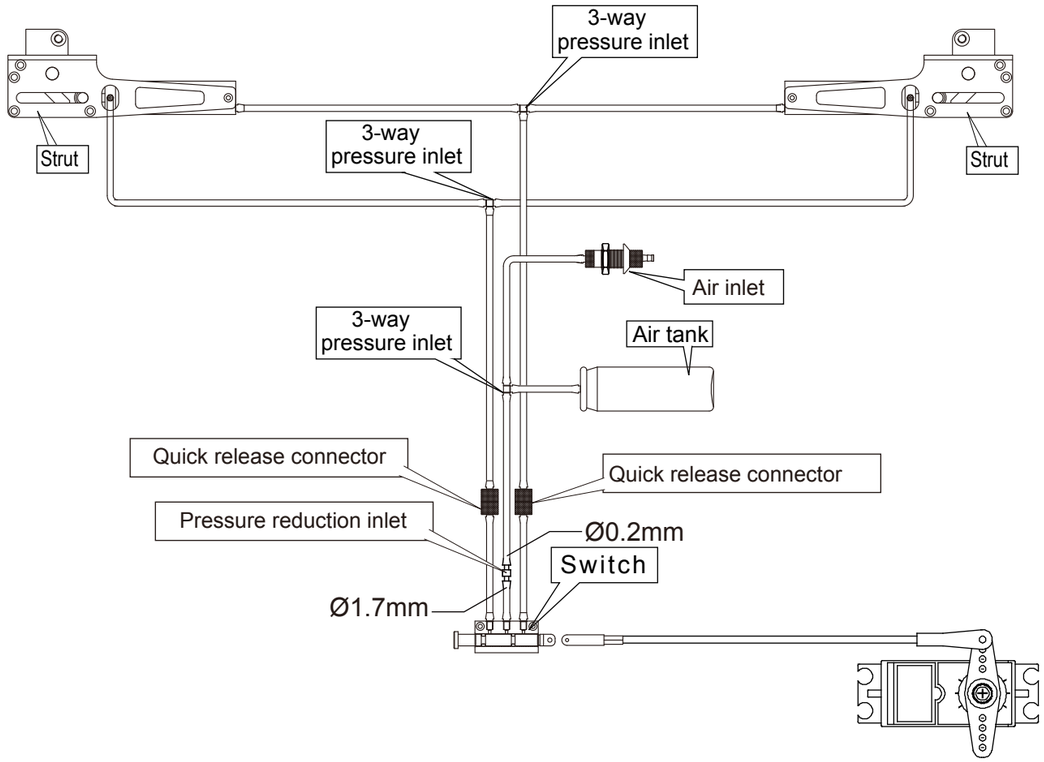
Two wheel retract system

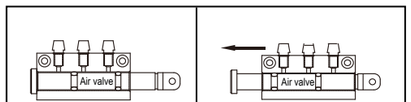
Warning! Make sure to assemble retracts as instructed below.



Warning! ▶ Please insure the sealing of theretract system before flight .

▶ Pleas notice the inner diameter of eachside the pressure reduction inlet.

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



The status when the gear up

Pull out length of 8mm to make gear down

A B Apply epoxy glue.

C.A Apply instant glue (CA glue, super glue).

L/R Assemble left and right sides the same way.

Ensure smooth non-binding movement while assembling.

Pay close attention here!

Cut off shaded portion.

Do not overlook this symbol!

Warning!

Before start , please carefully read the explanations!

DOUGLAS SBD-5 DAUNTLESS

Specification:

Length	:1400 mm(55")
Wing Span	:1800 mm(71")
Wing Area	:52.9 sq. dm
	5.7 sq. ft
Wing Loading	:117.2 g/sq. dm
	38.4 oz/sq. ft
Flying Weight	:6.2 kg(13.7 lbs)
Radio	:6ch& 9 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 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 aiplane is highly recommended for this model.

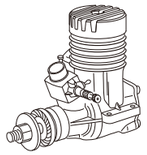
12 AA-size Batteries

A minimum 6 channel transmitter for airplanes.

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

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

Muffler



Glow Plug

3 Propeller Spinner

Purchase a propeller that will match your engine.

15"X7

4 Sponge Sheet

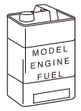
Silicone Tube

Fuel Filter

5 Required for engine starting:

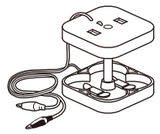
WARNING: Normal gasoline cannot be used with glow engines.

Glow engine fuel only.



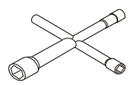
Fuel Pump

Booster Cord



4 D-size Batteries

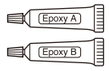
Plug Wrench



6 Glue

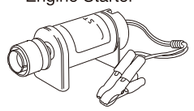
Instant Glue

Epoxy Glue

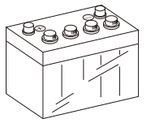


7 Other equipment for enhancing airplane operation & performance

Engine Starter



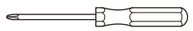
12V Battery (for starter)



TOOLS REQUIRED (Purchase separately!)

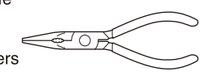
Sharp Hobby Knife

Phillips Screw Driver (l, m, s)

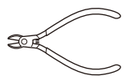


Awl

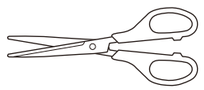
Needle Nose Pliers



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:

Do not overlook this Symbol!

Warning!

A B Appy epoxy glue.

C.A Apply instant glue (CA glue, super glue).

2mm Drill holes with the specified diameter (2mm).

Cut off shade portion.

Cut off excess.

Ensure smooth non-binding movement while assembling.

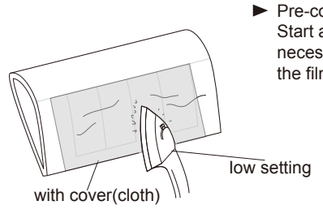
Pay close attention here!

L/R Assemble left and right sides the same way.

X Must be purchased separately!

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.

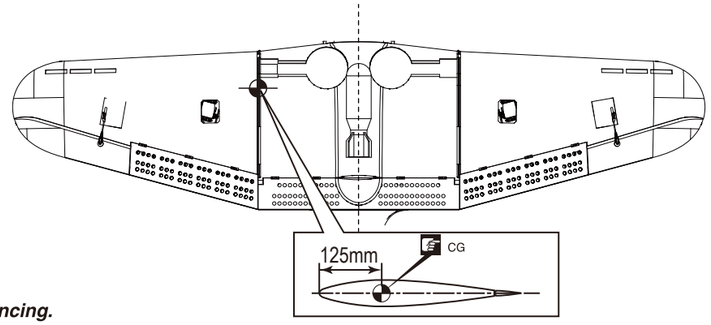
The pre-covered film on ARF kits may wrinkle due to variations of temperature.Smooth out as explained right.



► 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.

90 The centre of the Gravity.

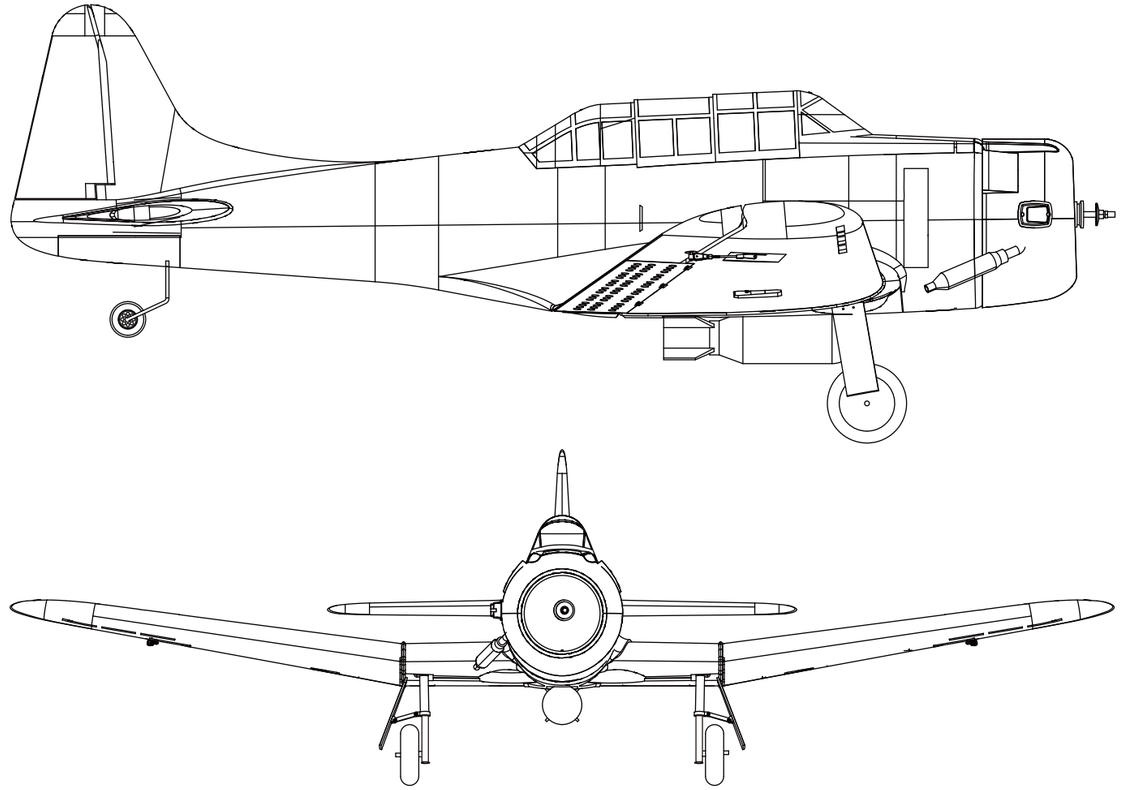
► Never fly before checking the CG's required position.
► In order to obtain the CG specified, reposition the receiver and battery.



Warning!

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

91 The front view and side view when the model install completion.



Apply epoxy glue.

Apply instant glue (CA glue, super glue).

Assemble left and right sides the same way.

Ensure smooth non-binding movement while assembling.

Pay close attention here!

Cut off shaded portion.

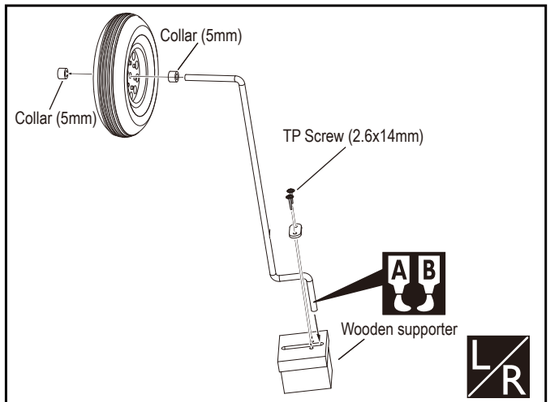
Do not overlook this symbol!

Warning!

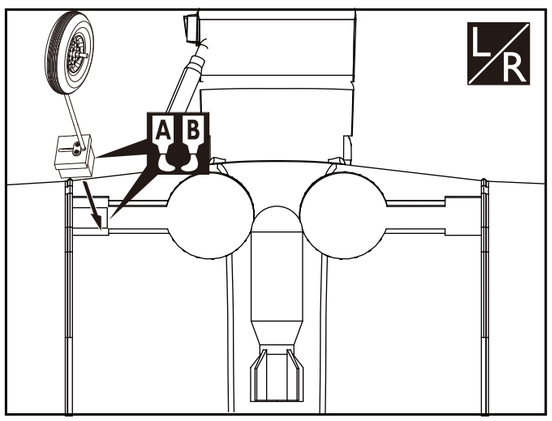
Accessory list for the coming installation steps.

- Wheel (100mm) — 2
- Collar (5mm) — 4
- Wooden Block(43x28x26mm) — 2
- Landing gear(5mm) — 1
- Landing gear straps — 2
- TP Screw (2.6x14mm) — 4
- Washer (3x6mm) — 4

85 Assemble the wheel and gear door to landing gear.

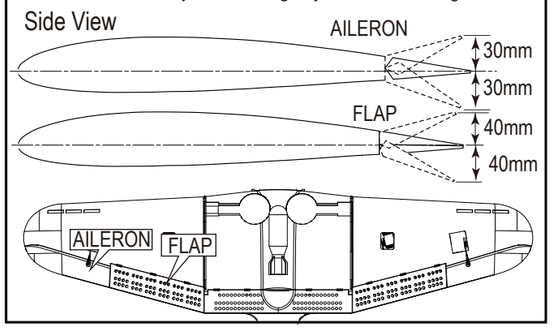


86 Epoxy the landing gear to the wing steadily.



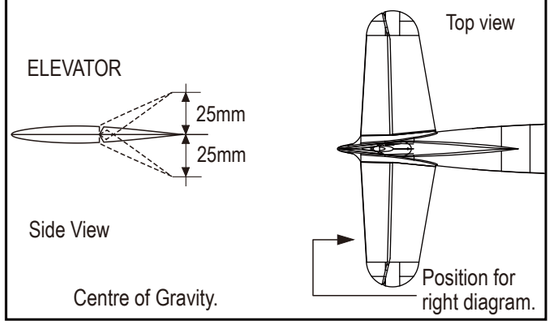
87 Adjustment.

► 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.



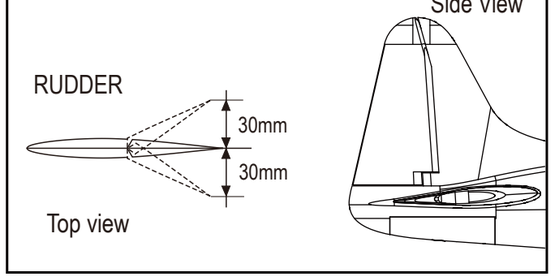
88 Adjustment.

► 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



89 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.

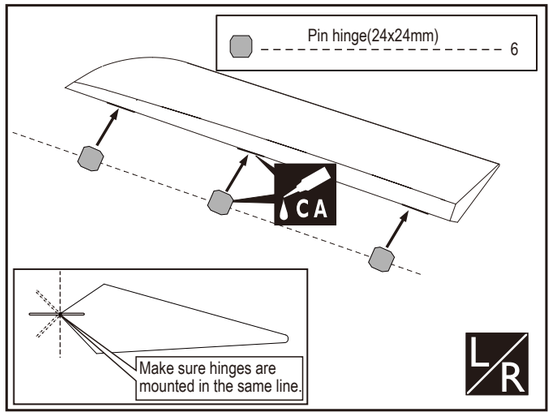


A B Apply epoxy glue.
C.A Apply instant glue (CA glue, super glue).
L/R Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

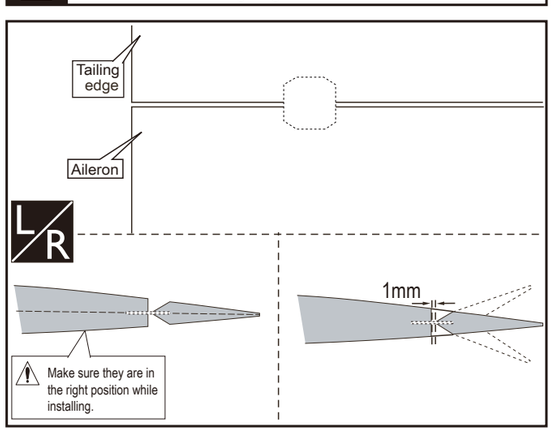
Accessory list for the coming installation steps.

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

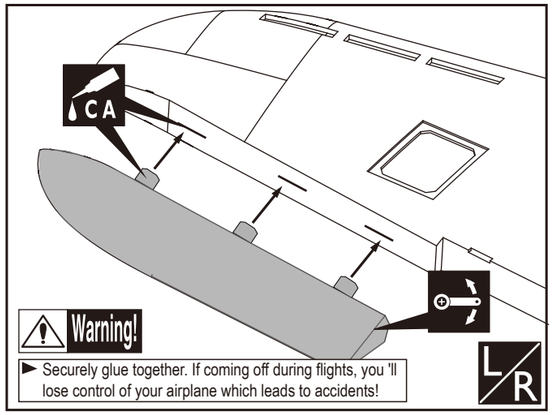
1 Apply instant type CA glue to aileron and pin hinge.



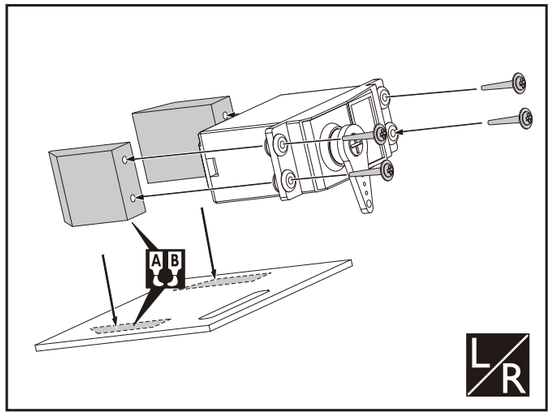
2 Keep some space about 1mm width between aileron and trailing edge.



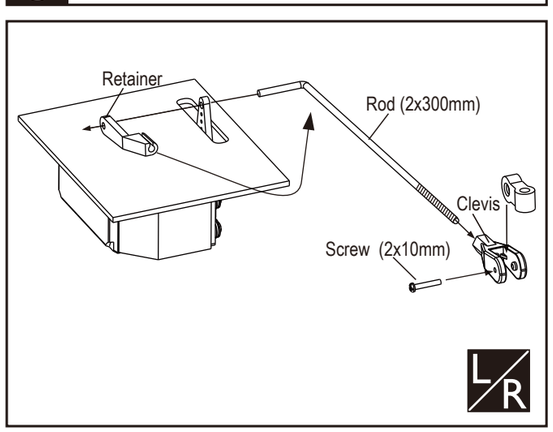
3 Assemble the aileron to main wing with instant type CA glue. Be careful to ensure the moving parts of the hinges are able to move freely.



4 Install the servo as the illustration below

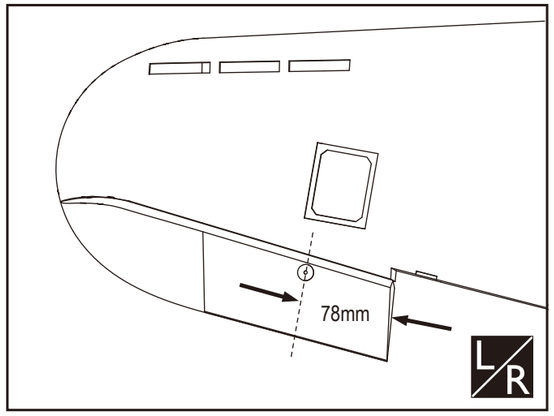


5 Install the nylon control horn and connect the linkage.

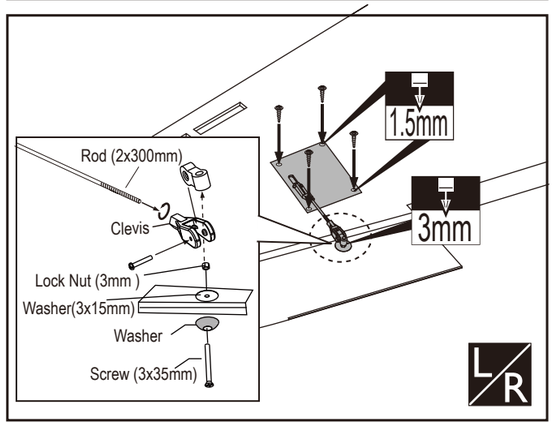


A B Apply epoxy glue.
C.A Apply instant glue (CA glue, super glue).
L/R Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

6 The position of the control horn in the aileron.



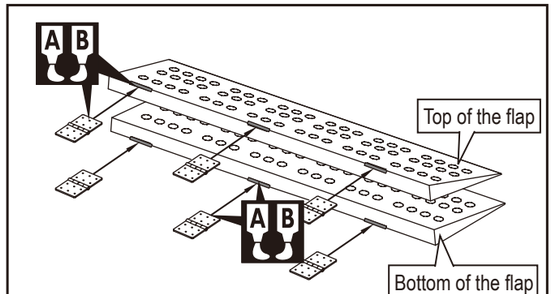
7 Secure the servo.Install the nylon control horn and connect the linkage.



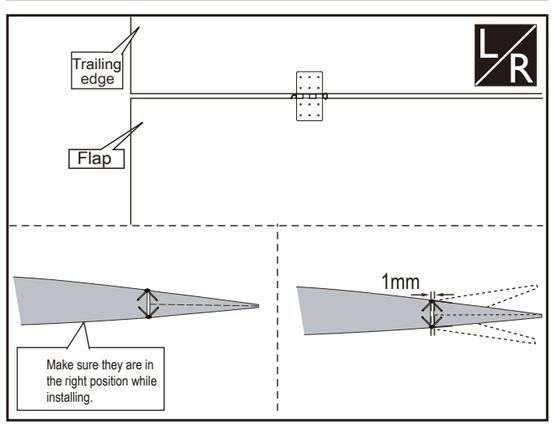
Accessory list for the coming installation steps.

Clevis	2
Retainer	2
Rod (2x500mm)	2
TP Screw (2.3x12mm)	8
Pin hinge(24x24mm)	16
Copper joiner	5
Clevis	5
Screw (2x10mm)	5
Nut (2mm)	5
Nut (1.5mm)	5
Copper ball (2mm)	5

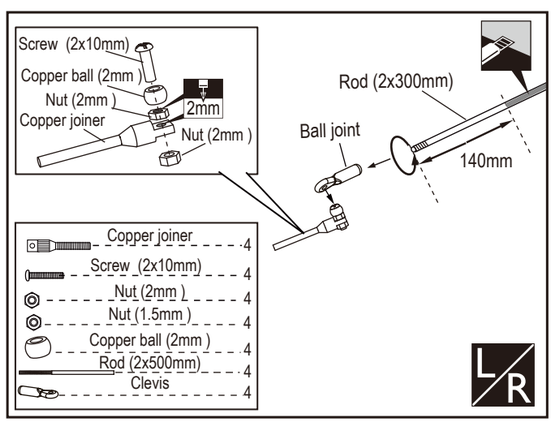
8 Epoxy the pin hinges to top of the flap and bottom of the flap as illustration



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

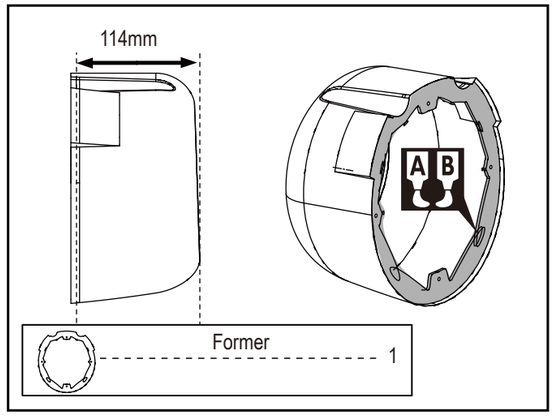


10 Assemble the copper joiner and link it to rod as illustration.

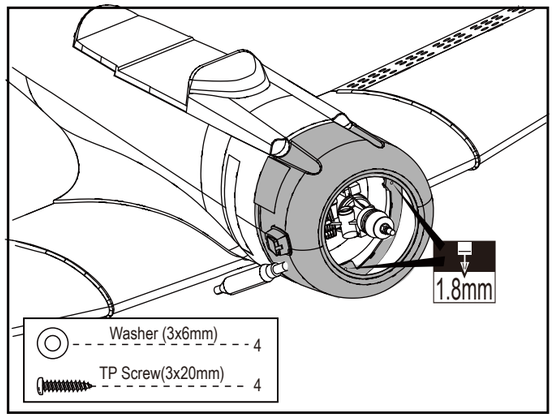


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol!
Warning!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.

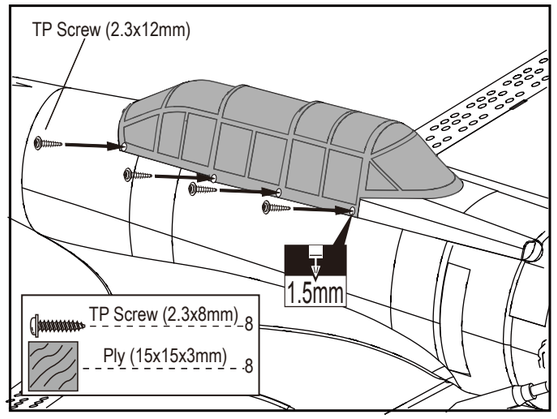
78 Epoxy the former to appropriate position in the cowling.



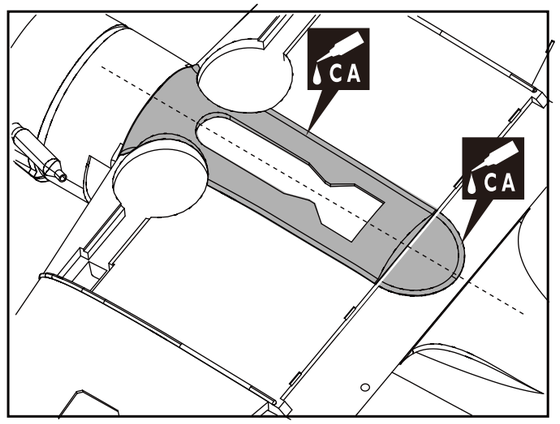
79 Assemble the cowling to fuselage with screw.



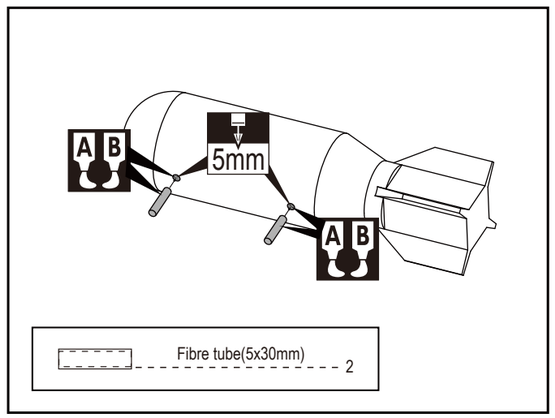
80 Epoxy wood flies to appropriate position in the fuselage under the canopy and assemble the canopy to the fuselage with TP screws.



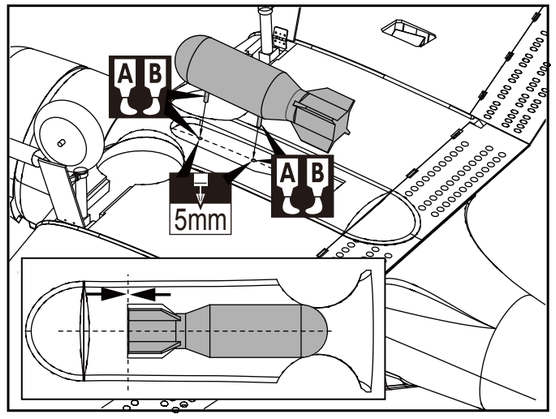
82 Glue the belly pants to appropriate position in the mid wing with CA glue.



83 Drill two holes to the dummy bomb and epoxy fibre tubes in them.

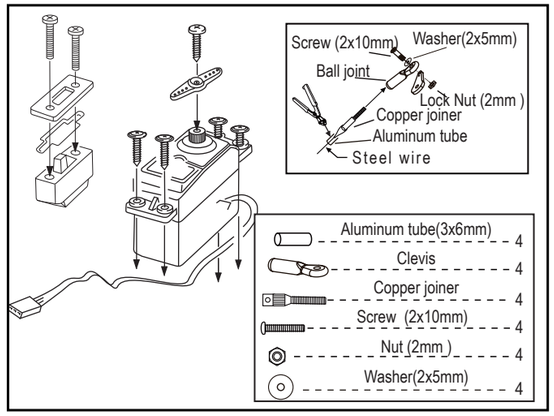


84 Drill holes to relevant position in the mid wing and epoxy the dummy bomb to them.

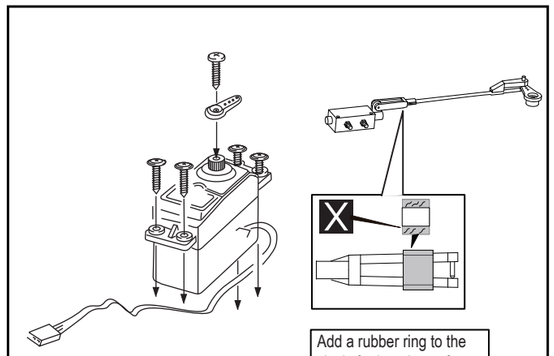


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol!
Warning!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.

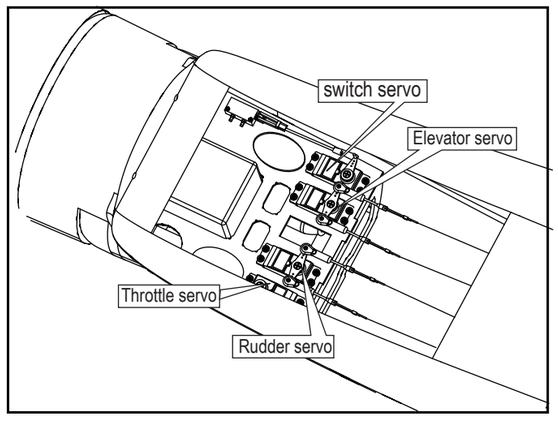
73 Install the servo.



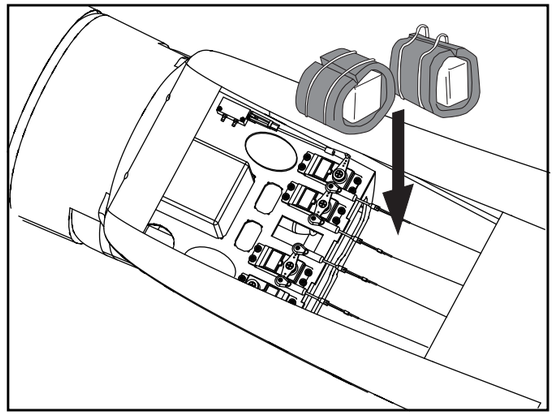
74 Install the servo of swith.



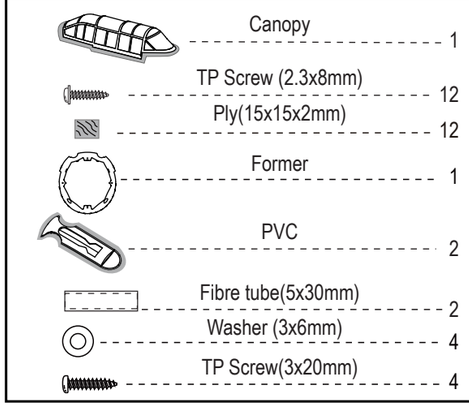
75 The servos installation finished sketch map.



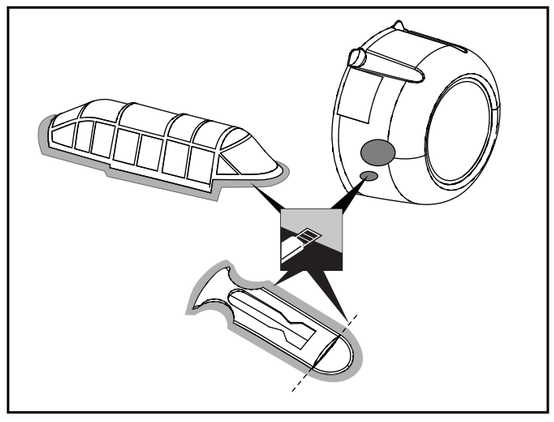
76 Mount the receiver and battery in the fuselage.



Accessory list for the coming installation steps.

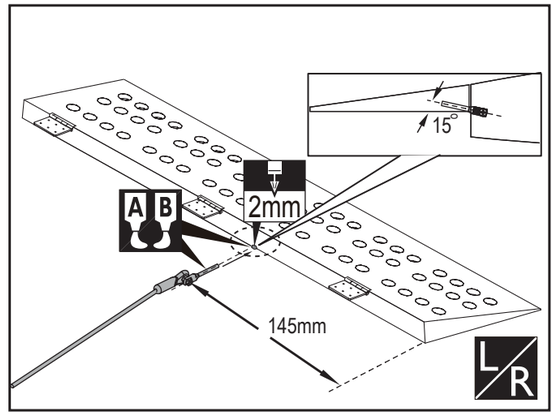


77 Trim the surplus shaded portion away from the canopy, cowling and the belly pants.

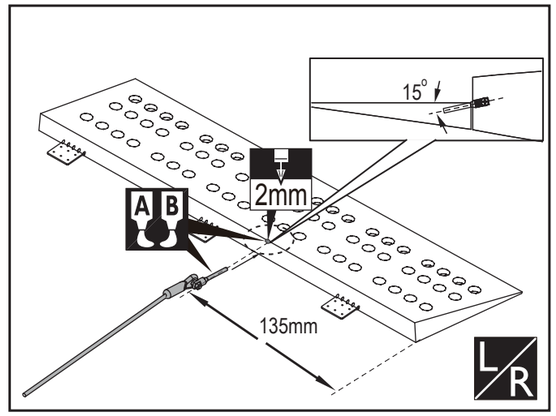


Apply epoxy glue.
Apply instant glue (CA glue, super glue).
Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

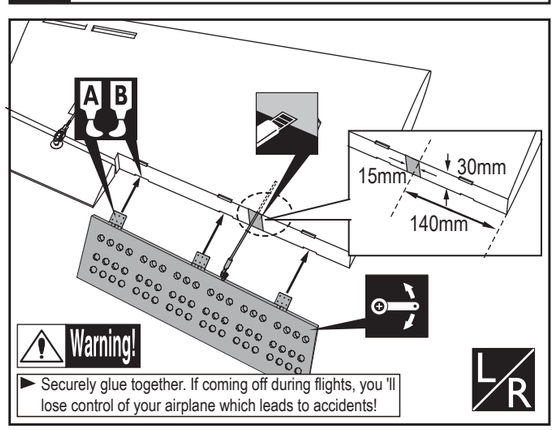
11 Drill a hole to appropriate position in the top flap part and epoxy the copper joiner in it.



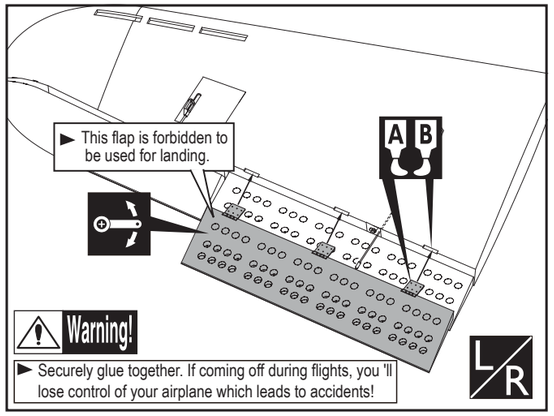
12 Drill a hole to appropriate position in the bottom flap part and epoxy the copper joiner in it.



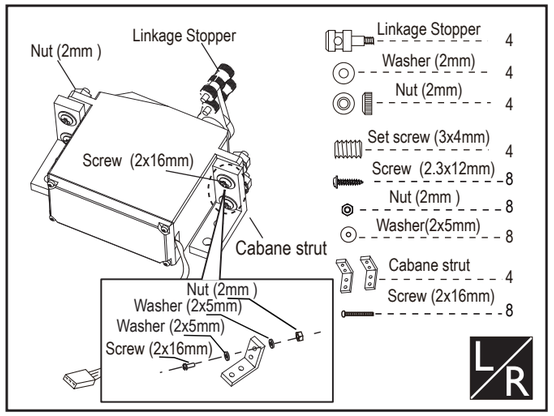
13 Drill a hole to relevant position in the wing and epoxy the top plap part to the wing as illustration.



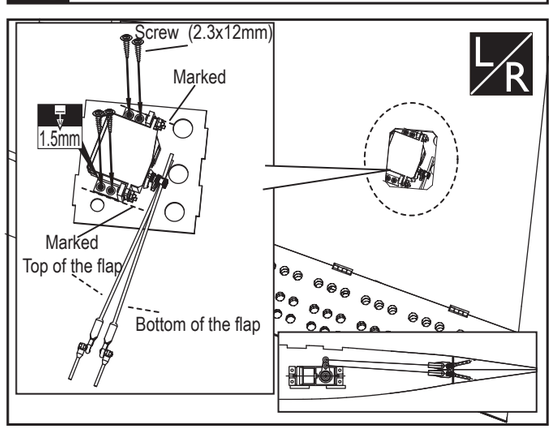
14 Epoxy the bottom plap part to the wing as illustration.



15 Install the servo.

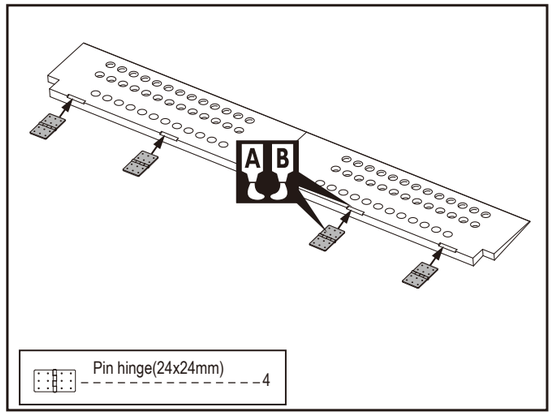


16 Link the rods to the servo as illustration.

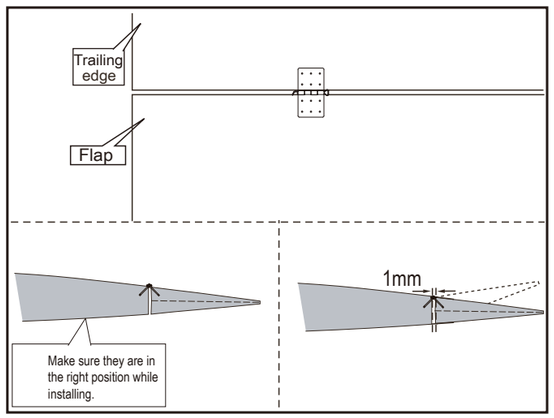


Apply epoxy glue.
Apply instant glue (CA glue, super glue).
Assemble left and right sides the same way.
Ensure smooth non-binding movement while assembling.
Pay close attention here!
Cut off shaded portion.
Do not overlook this symbol! Warning!

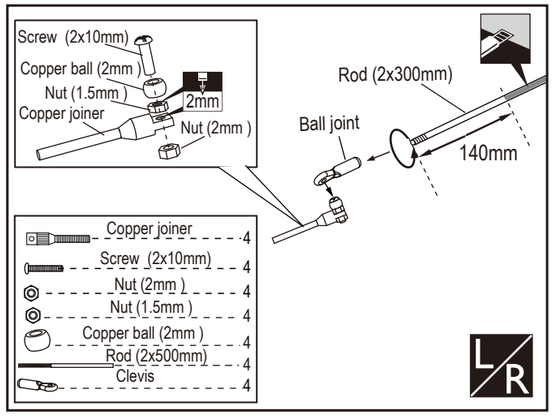
17 Epoxy the pin hinges to the flap of the mid wing.



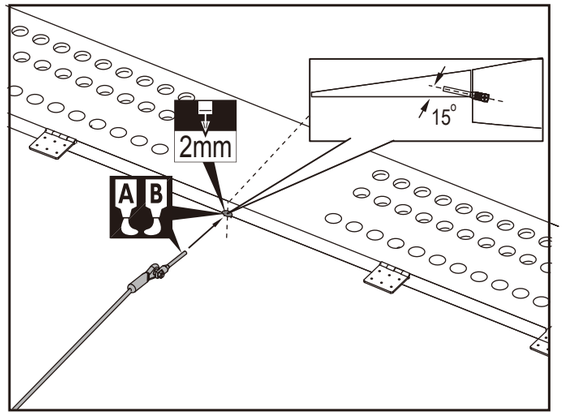
18 Keep some space with about 1mm width between the trailing edge and flap.



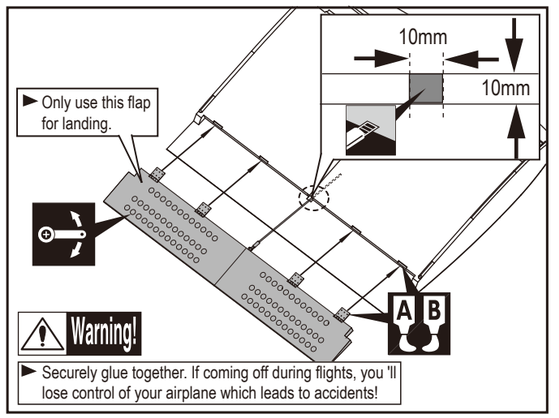
19 Assemble the copper joiner and link it to the rod as illustration.



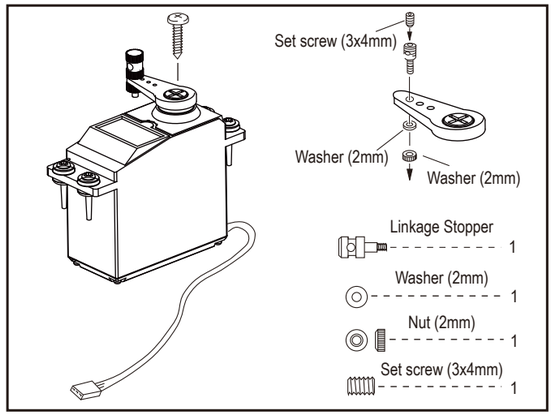
20 Drill a hole to appropriate position in the flap and epoxy the copper joiner in it as illustration.



21 Drill a hole to relevant position in the mid wing and epoxy the flap to the mid wing.

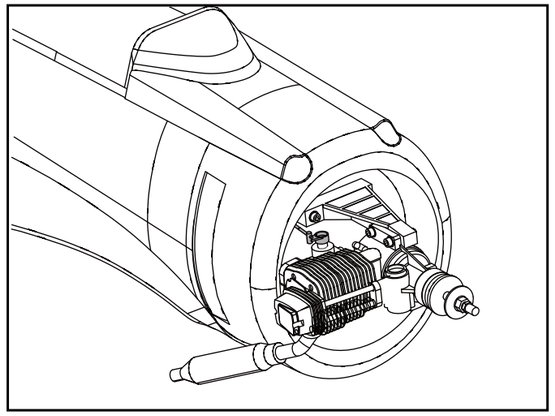


22 Install the servo and assemble it to the mid wing.

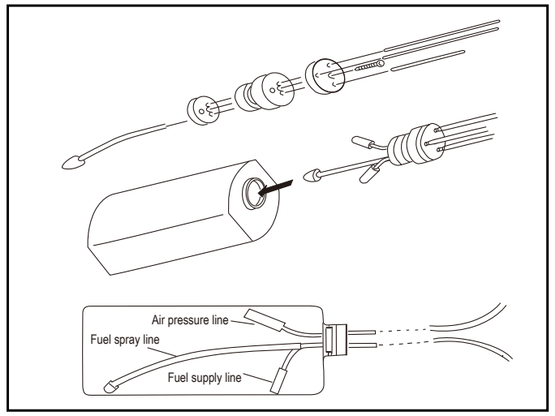


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.
Do not overlook this symbol! Warning!

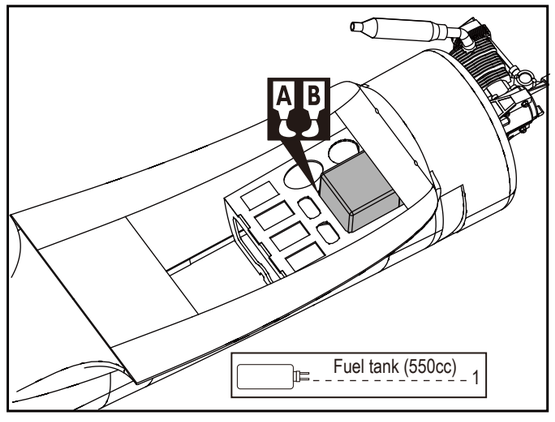
68 The sketch map when the engine install completion.



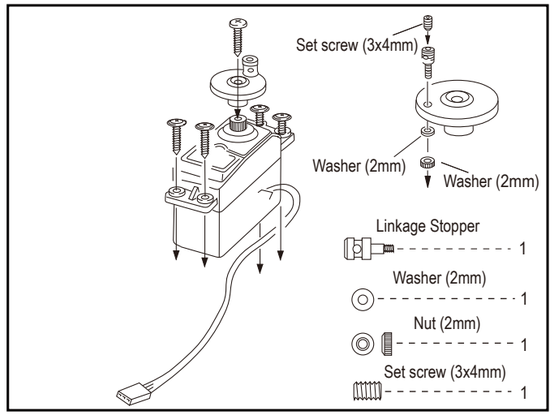
69 Assembly of the fuel tank.



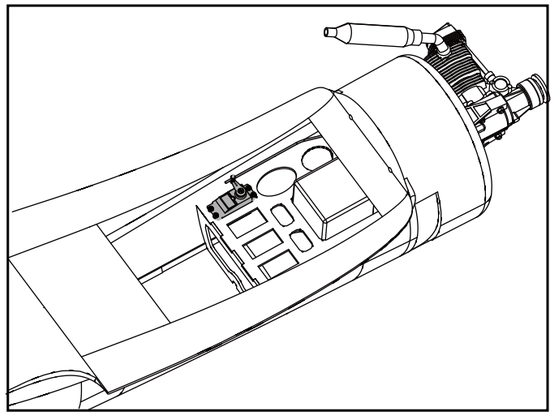
70 Mount the fuel tank to the fuselage.



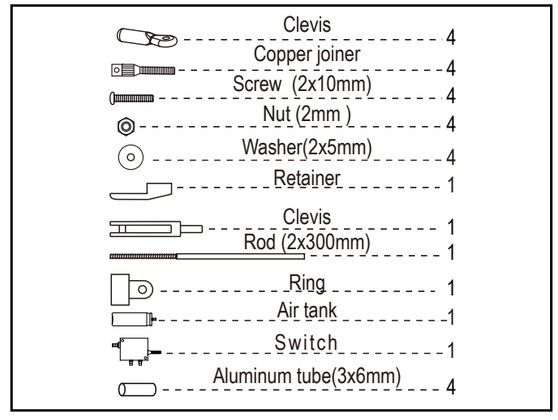
71 Install the servo.



72 Assemble the servo to the fuselage.



Accessory list for the coming installation steps.

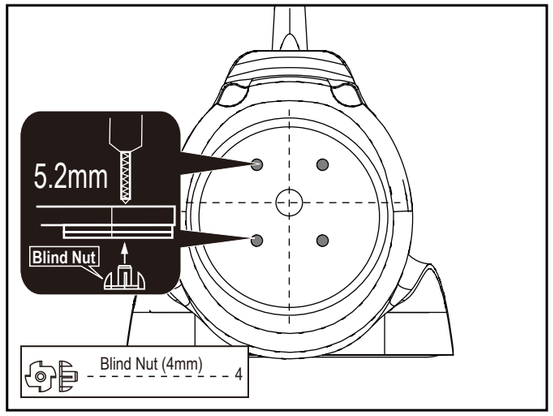


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.
Do not overlook this symbol! Warning!

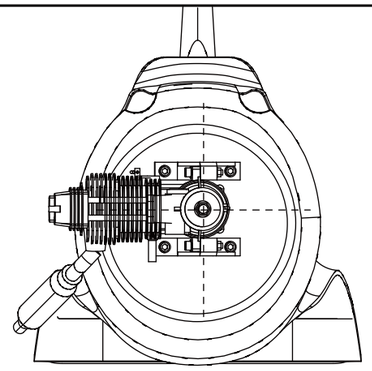
Accessory list for the coming installation steps.

Blind Nut (4mm)	4
Screw (4x35mm)	4
Screw (4x25mm)	4
Washer(4x8mm)	12
Spring Washer (4mm)	4
Nut (4mm)	4
Linkage Stopper	1
Plastic tube (2x400mm)	1
Engine mount (68x105mm)	2
Fuel tank (550cc)	1

65 Drill 4 holes and set blind nut in appropriate position in the firewall before install the engine.

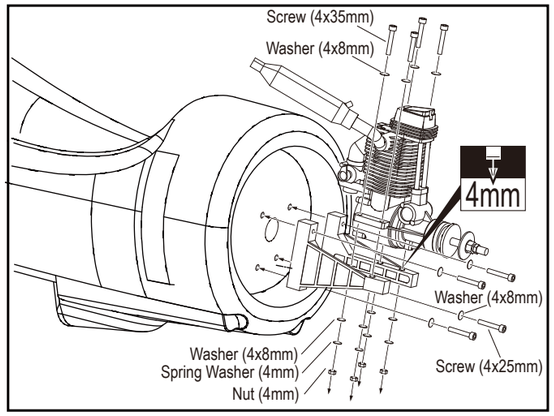


63 The front view of the engine installation finished.

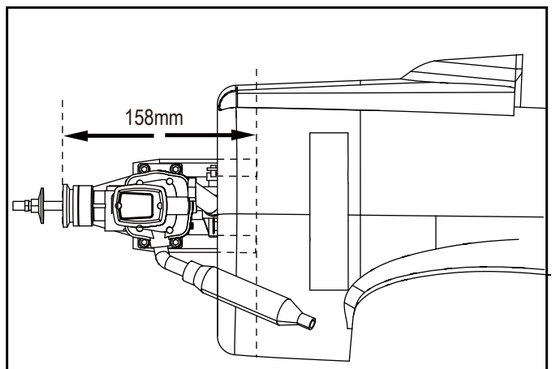


In case of 2-cycle & 4-cycle engine.

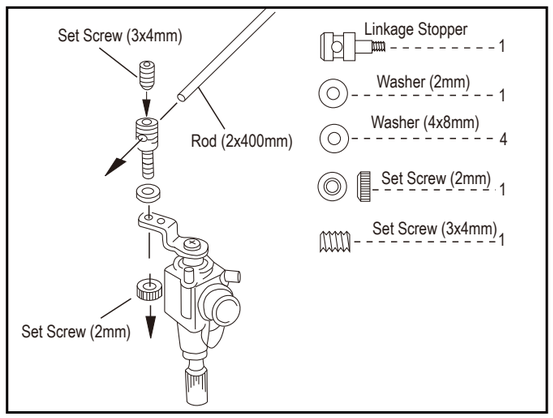
66 Install the engine carefully.



64 The side sketch map of the engine installation finished.

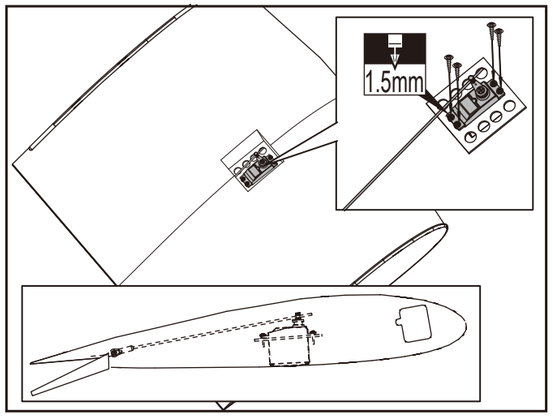


67 Assemble the accelerateor push rod to the engine.

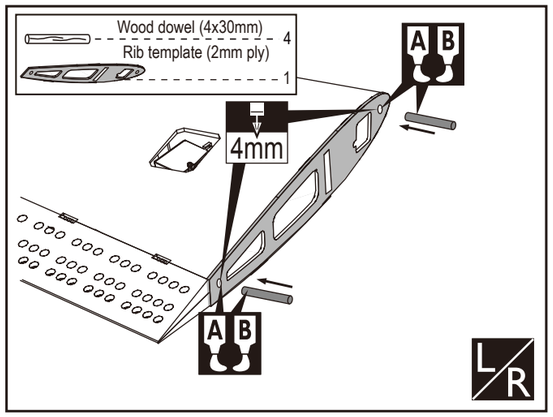


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol!
Warning!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.

23 Link the rod to the servo in the mid wing.



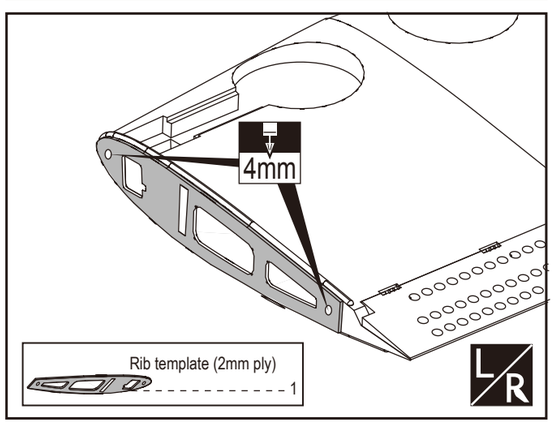
25 According to the rib template drill holes in the main wing and epoxy wood dowel in them.



Accessory list for the coming installation steps.

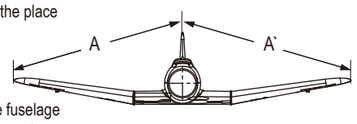
Bushing (8X4mm)	2	Wood dowel (6x50mm)	2
Nut (4mm)	2	Washer (3x6mm)	8
Wheel (100mm)	2	PVC part	2
Gear door	1	Wood dowel (4x30mm)	4
TP Screw (3x20mm)	8	Rib template (2mm ply)	1
Main wing joiner	2	Screw (4x55mm)	2
Blind Nut (4mm)	2	Washer (4x12mm)	2
Pin hinge (36x20x1mm)	2	Reinforcement Plate	2
Screw (2x10mm)	2	TP Screw (2.3x12mm)	4
Washer (2x5mm)	4	Nut (2mm)	2

26 According to the rib template drill holes in the mid wing.

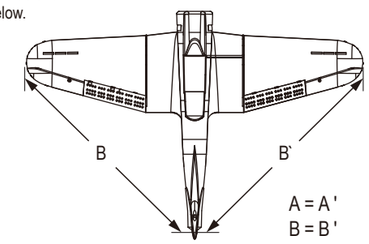


24 Assemble the wings.

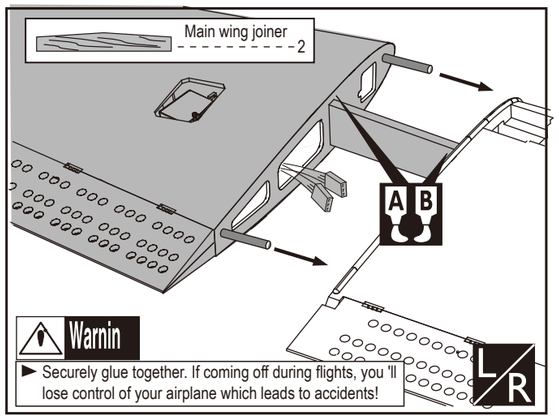
► Drill 6.2mm holes at the place of main wing.



► Install the wing to the fuselage with 6x50mm screws as shown in the diagrams below.

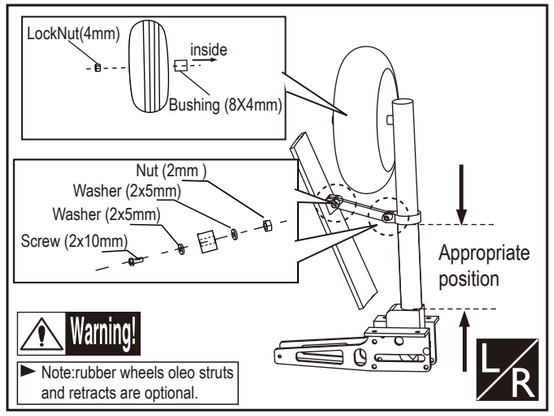


27 Epoxy the main wing to the mid wing through the main wing joiner.

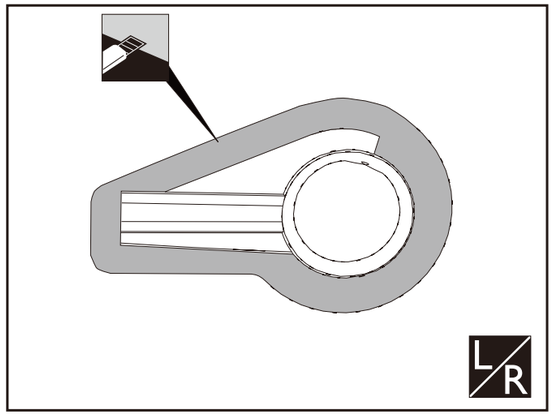


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol!
Warning!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.

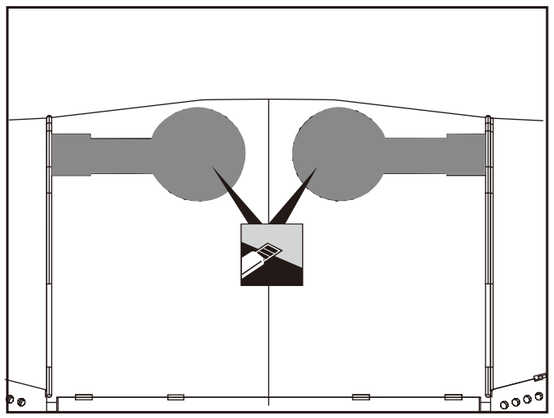
28 Assemble the wheel and the baffle to the landing gear.



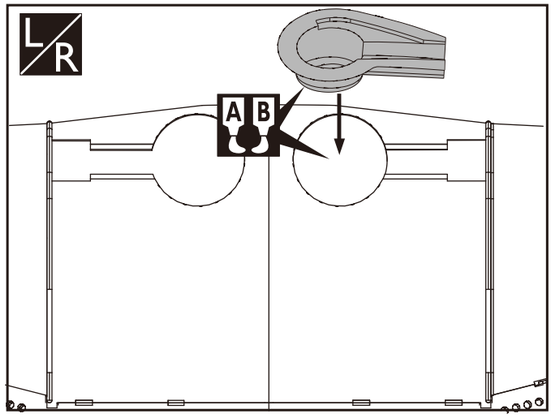
29 Cut off the surplus PVC part carefully along the shaded line



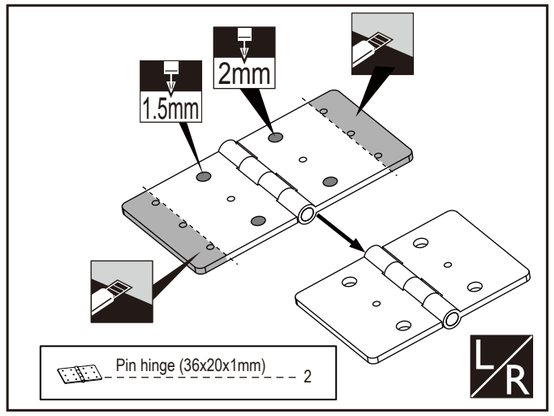
30 Trim the shaded portion covering off the mid wing carefully.



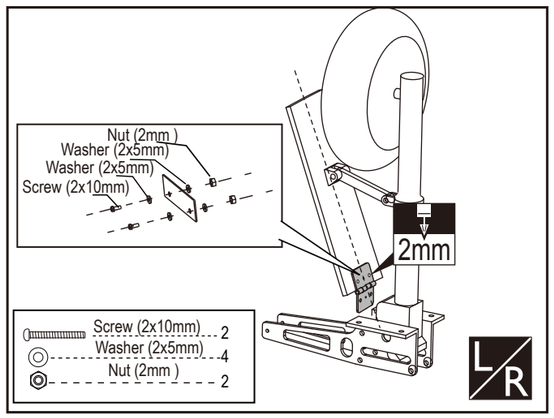
31 Epoxy the wheel wells to the holes, Trim the holes if necessary.



32 Cut the shaded portion away from the available pin hinges and enlarge the holes as below.



33 Assemble one part of the pin hinge to the baffle with screw as illustration.



A B Apply epoxy glue.

C.A Apply instant glue (CA glue, super glue).

L/R Assemble left and right sides the same way.

Ensure smooth non-binding movement while assembling.

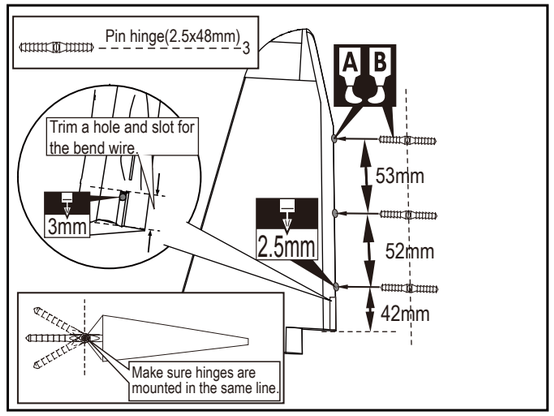
Pay close attention here!

Cut off shaded portion.

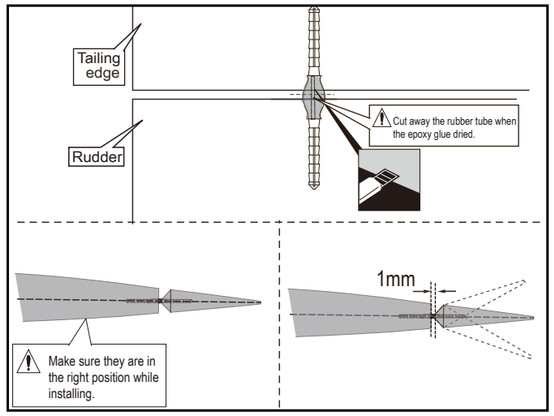
Do not overlook this symbol!

Warning!

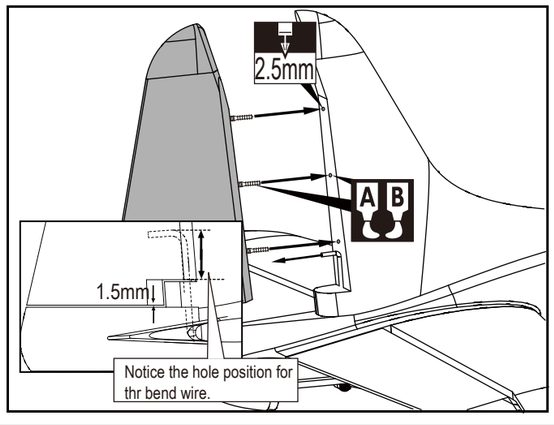
57 Drill holes to appropriate position in the rudder and epoxy the pin hinge to them.



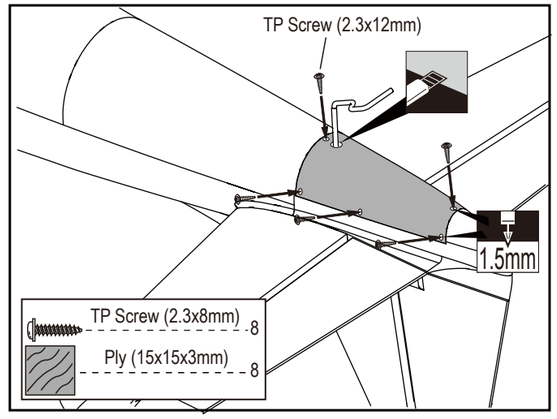
58 Keep some space about 1mm width between the tailing and rudder.



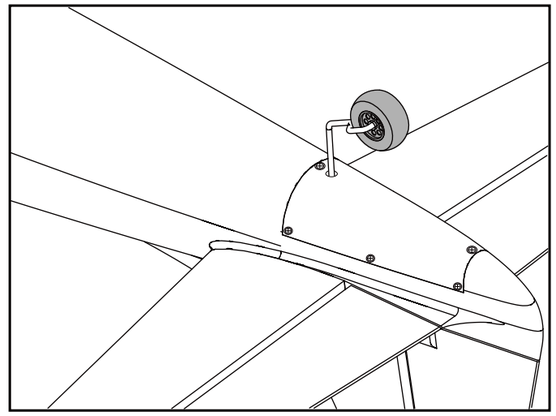
59 Epoxy the rudder to the vertical tail edge.



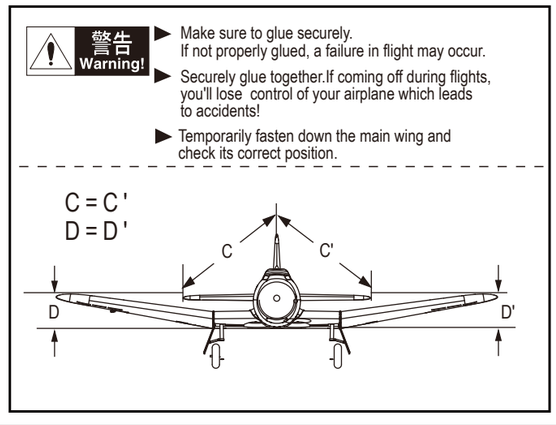
60 Epoxy wood ply to appropriate position under the wheel cover and assemble the wheel cover to fuselage with TP screw.



61 Assemble the tail wheel to the tail landing gear.



62 Assembly of the stabilizer.



A B Apply epoxy glue.

C.A Apply instant glue (CA glue, super glue).

L/R Assemble left and right sides the same way.

Ensure smooth non-binding movement while assembling.

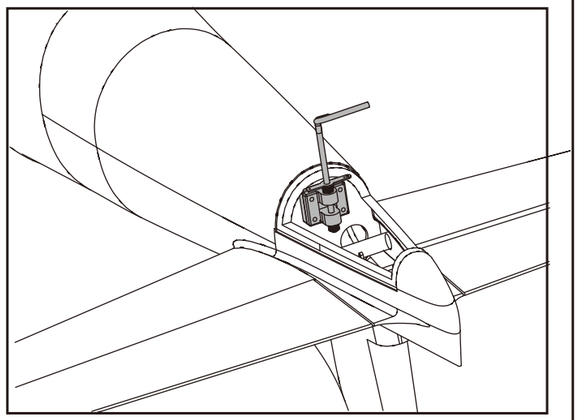
Pay close attention here!

Cut off shaded portion.

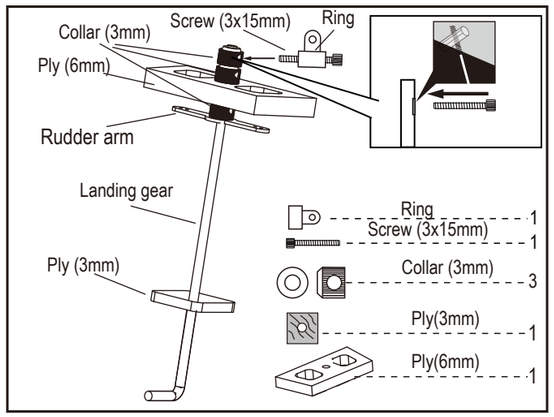
Do not overlook this symbol!

Warning!

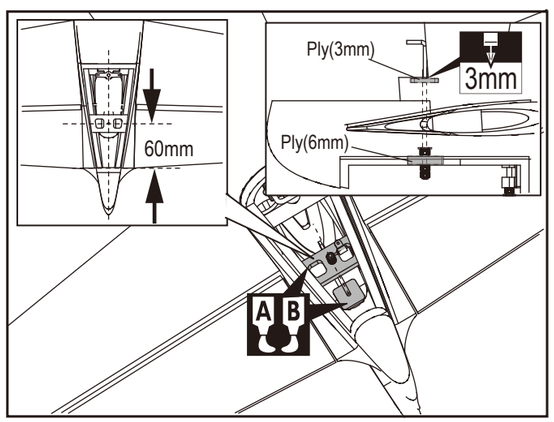
51 The sketch map when the tail landing gear be installed to the fuselage.



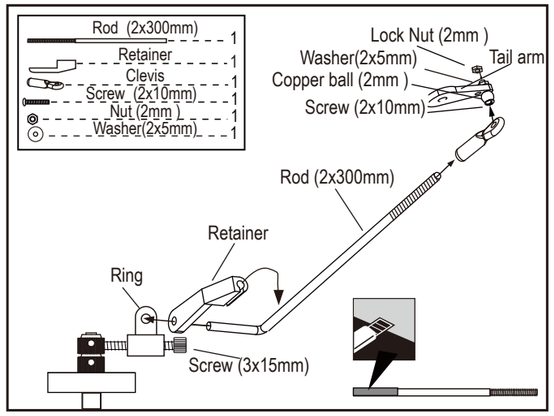
52 Install the rudder arm and the wood plies to appropriate position on the wire.



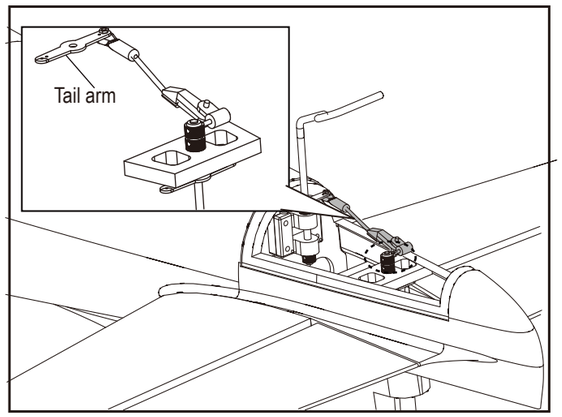
53 Epoxy the plies to appropriate position in the fuselage.



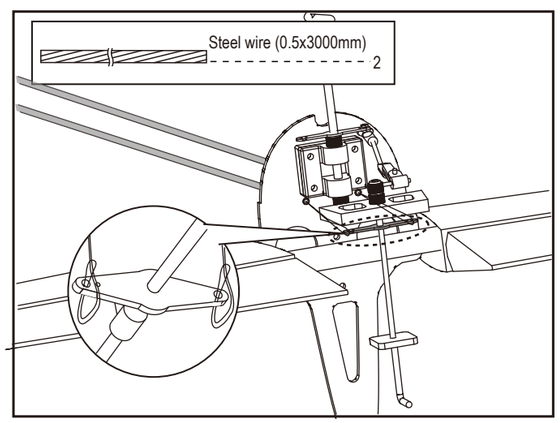
54 Connect the tail arm and the rod,cut the surplus portion as illustration.



55 The sketch map when the arm for the tail wheel and the rudder connect finished.

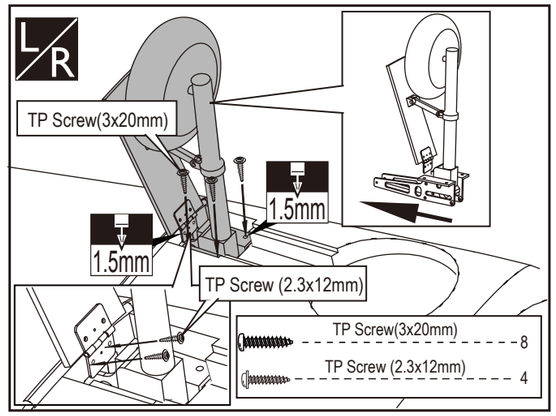


56 Assemble the steel wire to the arm for the rudder.

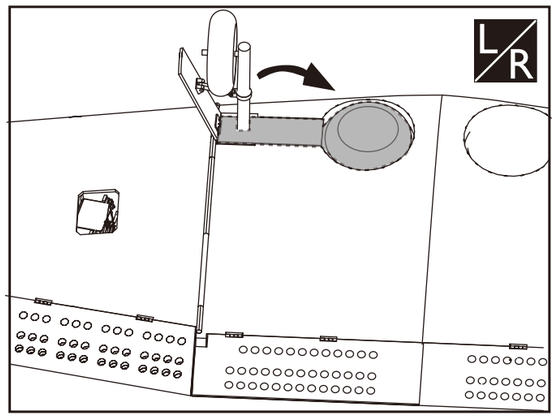


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol!
Warning!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.

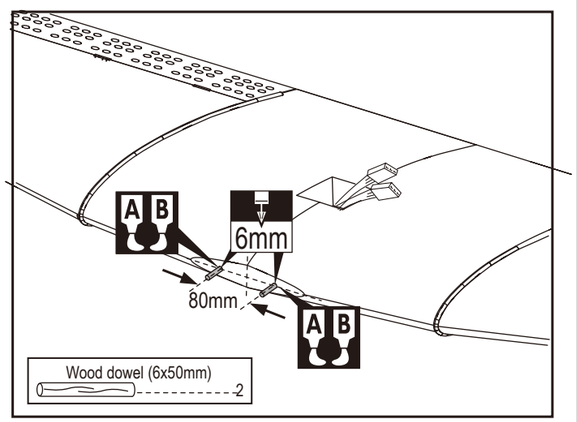
34 Assemble another part of the pin hinge to the mid wing and assemble the retract to the mid wing with screw.



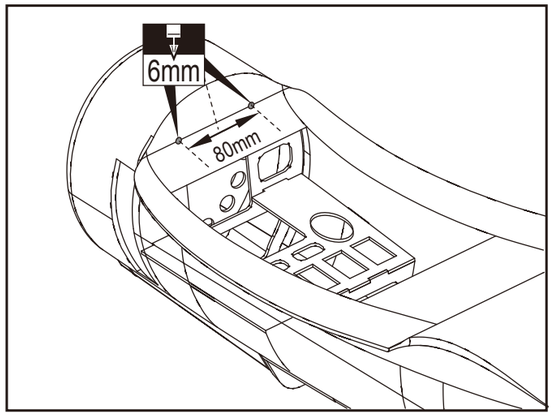
35 The sketch maps when the retract up and down.



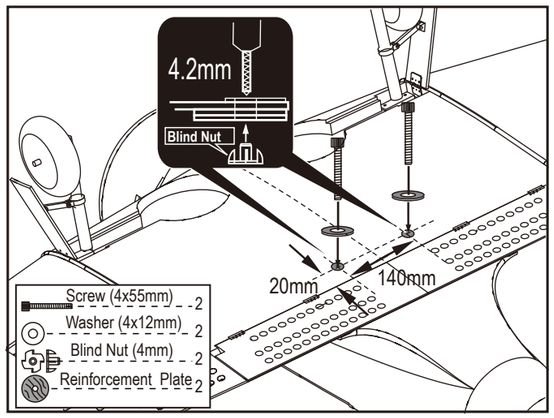
36 Drill holes in the wings and set the wood dowels in them as below.



37 Drill holes to relevant position in the fuselage.

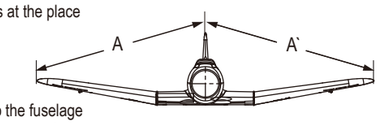


38 Assemble the wings to the fuselage with screw and blind nut as below.

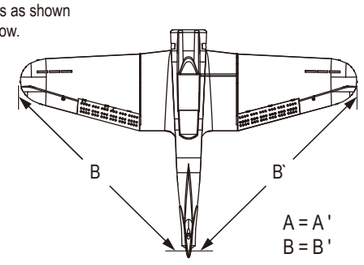


39 Assemble the wings.

- Drill 6.2mm holes at the place of main wing.



- Install the wing to the fuselage with 6x50mm screws as shown in the diagrams below.

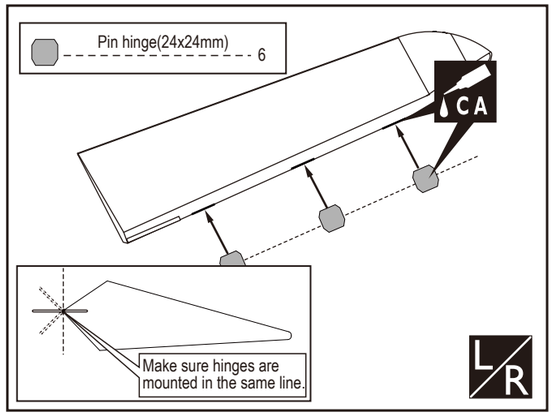


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol!
Warning!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.

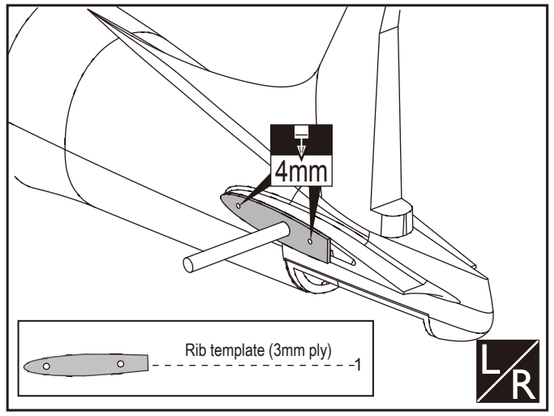
Accessory list for the coming installation steps.

Retainer	1	Ring	1
Clevis	3	Screw (3x15mm)	1
Nose arm(3mm)	1	Collar (3mm)	3
Washer (3x6mm)	4	Ply(3mm)	1
TP Screw(3x20mm)	4	Ply(6mm)	1
Tail landing gear(3mm)	1	Stab joiner (16x230mm)	1
Tail wheel (45mm)	1	U-style wire (3mm)	1
Collar (3mm)	2	Steel wire (0.5x3000mm)	2
Rod (2X257mm)	1	Pin hinge(2.5x48mm)	3
TP Screw (2.3x12mm)	8	Ply (3mm)	2
Pin hinge(24x24mm)	6	Ply (15x15x3mm)	8
Wood dowel (4x30mm)	4	TP Screw (2.3x8mm)	8
Rib template (3mm ply)	1		

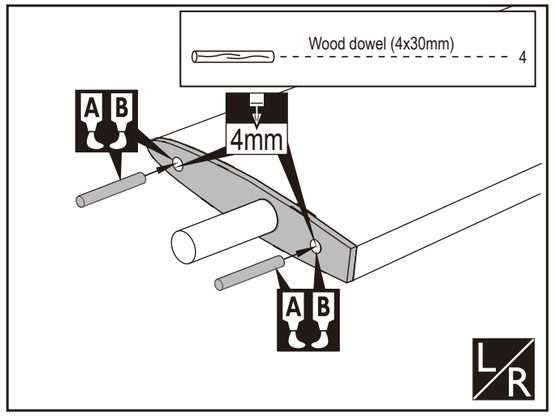
41 Apply instant type CA glue to elevator and pin hinge.



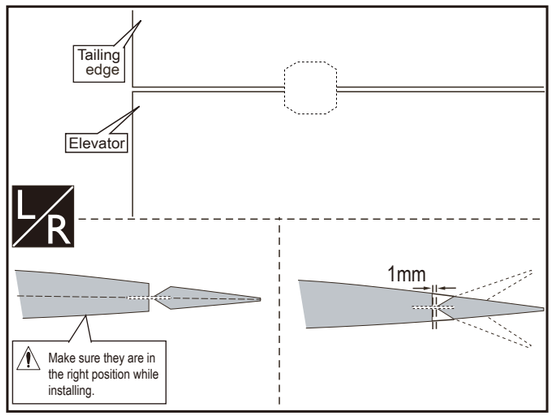
42 According to rib template drill holes to the tail of fuselage as below.



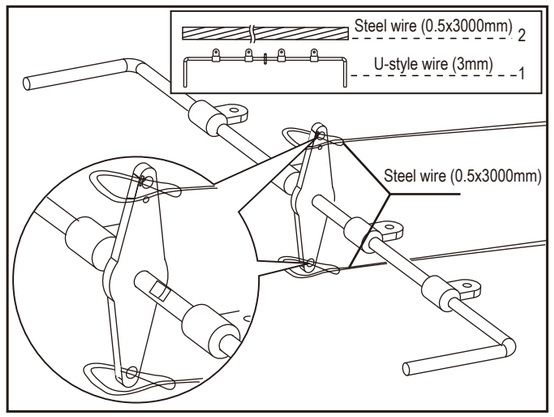
43 According to the rib template drill holes in the stabilizer root and epoxy the wood dowel in them.



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

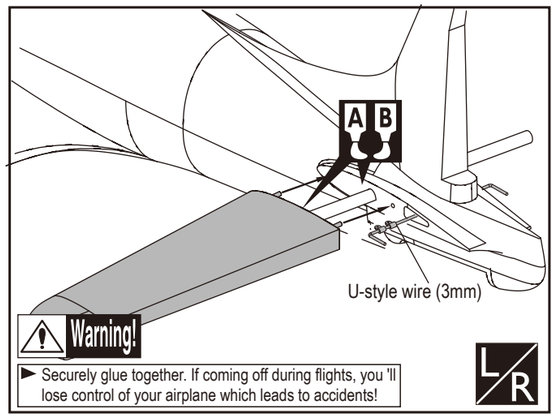


44 connect the fullarm for elevator with steel wire as below.

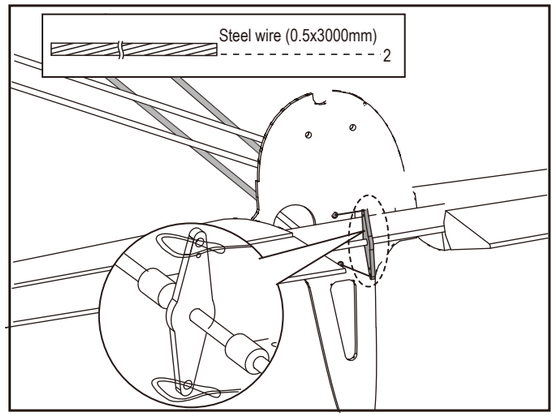


Apply epoxy glue.
Assemble left and right sides the same way.
Pay close attention here!
Do not overlook this symbol!
Warning!
Apply instant glue (CA glue, super glue).
Ensure smooth non-binding movement while assembling.
Cut off shaded portion.

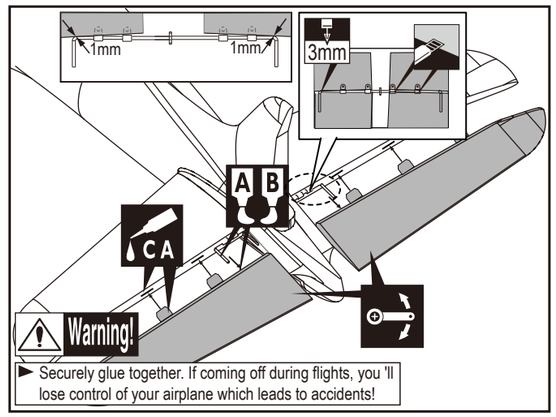
45 Install the U-style wire to appropriate position in the tail of fuselage and assemble the stabilizer to fuselage as illustration.



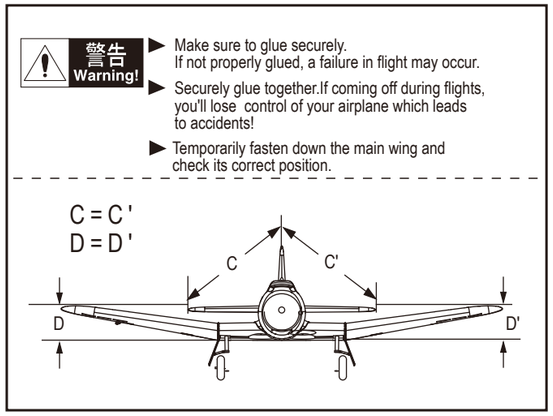
46 Assemble the steel wire to the arm of the U-style wire.



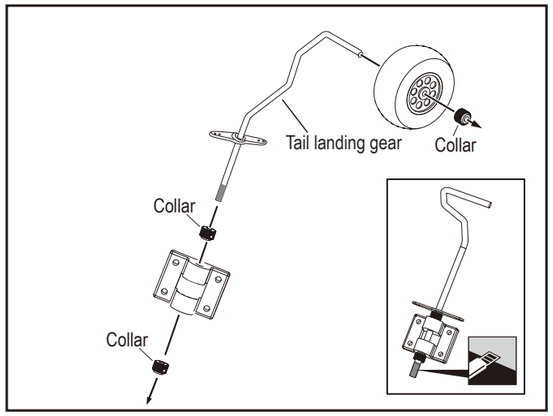
47 Glue the elevator to the stabilizer by CA and epoxy.



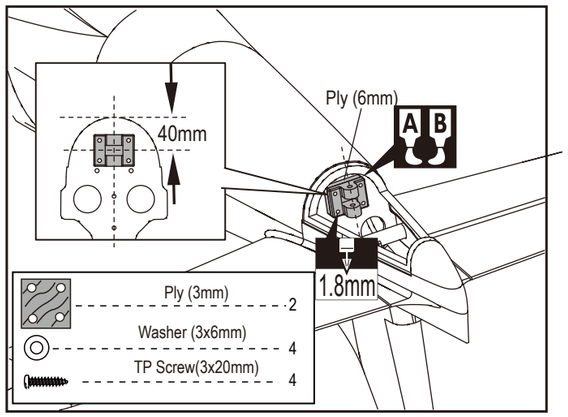
48 Assembly of the stabilizer.



49 Assemble the tail landing gear to the wheel steeling mounts as below.



50 Assemble the wheel steeling mount to appropriate position.



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