1/3 SCALE SG-38 SCHULGLEITER KIT

BUILDING INSTRUCTION

CATALOG

INTRODUCTION

THE SCHNEIDER DFS 108-14 SG-38 SCHULGLEITER (GERMAN FOR '"SCHOOL GLIDER"') IS A GERMAN HIGH-WING, CABLE-BRACED, SINGLE-SEAT PRIMARY GLIDER THAT WAS DESIGNED BY SCHNEIDER, REHBERG AND HOFMANN AT EDMUND SCHNEIDER'S FACTORY AT GRUNAU IN 1938, HENCE THE DESIGNATION. IT WAS PRODUCED BY SEVERAL BUILDERS, INCLUDING DEUTSCHE FORSCHUNGSANSTALT FÜR SEGELFLUG (DFS)

PRODUCT LIST

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1* Un-assembled SG-38 KIT:

Plywood sheets pack*1
Batten sets
Laser-cutting steel parts for connection*1
1:1 installation drawing*1
Operation instruction*1
Accessories bag*1

LIST OF PARTS:

List of 1/3 Scale SG-38

No.	Item	Spec.	qty	No.	Item	Spec.	qty
	Accessories				**Screws&Nuts**		
SG-01	Alu crimp tube	M1.2	50	SG-19	Screw	M5X55	1
SG-02		M0.8	30	SG-20		M3X10	1
SG-03	Needle hinge	D2.6XL43	8	SG-21		M3X22	6
SG-04		D4.5XL67	8	SG-22		M3X28	4
SG-05	Flat head rob&clevis set	M3	6	SG-23		M3X32	2
				SG-24		M2.5X14	4
SG-06	Steel clevis	M3XW4.7XL30	4	SG-25		M2.5X20	40
SG-07	CNC brass clevis	M3	18	SG-26		M2.5X28	6
SG-08	Pulley		6	SG-27	Tapping screw	M2.6X18	20
SG-09	Perforating screw	M3	18	SG-28		M1.6X8	10
				SG-29	Locking nut	M5	1
SG-10	Connecting rod for aileron	M3X230MM	2	SG-30		M2.5	50
				SG-31		M3	13
SG-11	Shock absorber		2		**Wood**		
SG-12	Steel bracing wire	1.2mmX5M	4		Pine stick	12X16X1000	2
SG-13		1.0mmX5M	2			8X16X1000	2
SG-14	Steel connecting parts bag		1			8X25X1000	3
						5X16X1000	3
SG-15	Tow hook		1			4X25X1000	2
SG-16	Motor mount		1			8X12X1000	3
SG-17	Bolt&pin	M3X16	15			8X10X1000	4
SG-18		M3X10	12			8X6X1000	15
	Others					6X6X1000	15
SG-32	Laser-cutting sheets		1 set			10X10X1000	2
SG-33	Instruction		1			5X10X1000	2
SG-34	1:1 plan		1			8X14X500	1
					Balsa sheet	8X100X1000	2
						5X100X1000	2

Pictures of accessories for SG-38

KIT FEATURES

- **1/3 Scale detail and scheme-based on DFS 108-14 SG-38 Schulgleiter.**
- **Extremely lightweight, state-of-the-art all-wood construction**
- **Complete hardware pack.Comes with air tow hook.**
- **Power system option.**
- **Full-scale simulation metallic structure.**
- **Extensive clear drawings and full-page colour instructions with hundreds of pictures .**
- **Only adhesives and coverings are required to complete the airframe.**

GERNERAL INFORMATION

BE SURE TO READ THE SAFETY INSTRUCTIONS CAREFULLY BEFORE OPERATING YOUR MODEL.

• Always follow the procedures and settings recommended in the instructions.

• If you are using remote-controlled model aircraft, helicopters, cars or ships for the first time, we recommend that you ask an experienced model pilot for help.

• Remote-controlled models are not toys in the usual sense and may only be used and operated by young people under 14 years of age under the supervision of adults.

• Their construction and operation requires technical understanding, careful craftsmanship and safety-conscious behaviour.

• Mistakes or negligence during construction, flying or driving can result in considerable damage to property or personal injury.

• Since the manufacturer and seller have no influence on the proper construction/assembly and operation of the models, these risks are expressly pointed out and any liability is excluded.

• Propellers on aircraft and all moving parts in general pose a constant risk of injury. Avoid touching such parts at all costs.

• Note that motors and controllers can reach high temperatures during operation. Avoid touching such parts at all costs.

• Never stay in the danger area of rotating parts with electric motors with connected drive battery.

• Overcharging or incorrect charging can cause the batteries to explode. Make sure the polarity is correct.

• Protect your equipment and Models from dust, dirt and moisture. Do not expose the equipment to excessive heat, cold or vibration.

• Always check your equipment for damage and replace defects with original spare parts.

• Do not use equipment that has been damaged or got wet due to a fall, even if it is dry again!

• Do not make any changes to the remote control which are not described in these instructions.

•Before the first flight, check the wing symmetry, tail unit and fuselage. All parts of the model should have the same spacing from the left and right wing or tail plane to the centre of the fuselage or the same angle.

ATTENTION, DANGER OF INJURY!

• Always keep a safe distance from your model aircraft.

• Never fly over spectators, other pilots or yourself.

• Always perform flight figures in a direction away from the pilot or spectators.

• Never endanger people or animals.

• Never fly near power lines or residential areas.

• Do not operate your model near locks or public shipping.

• Do not operate your model on public roads, motorways, paths and squares, etc., but only in approved locations.

• Do not operate the model in thunderstorms.

• Before each flight, check your remote control system for sufficient function and range.

• After flying, remove all batteries from the model.

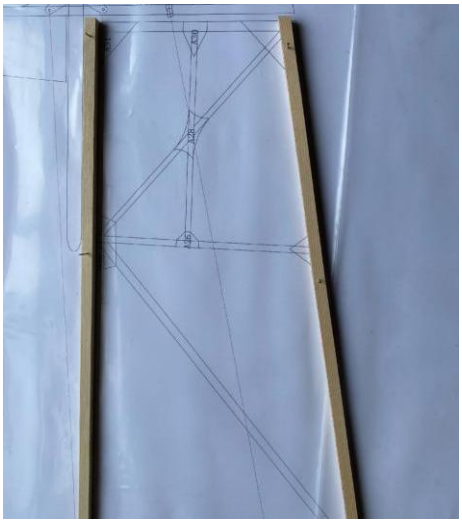
Do not „aim" the transmitter antenna at the model during operation. In this direction, the transmitter has the lowest radiation. The best position of the antenna is to the side of the model.

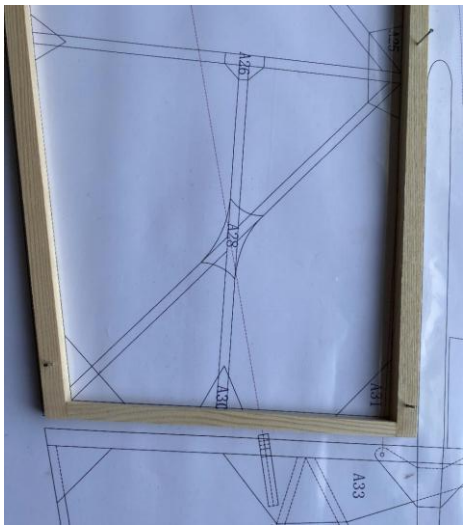
Use of devices with image and/or sound recording function:

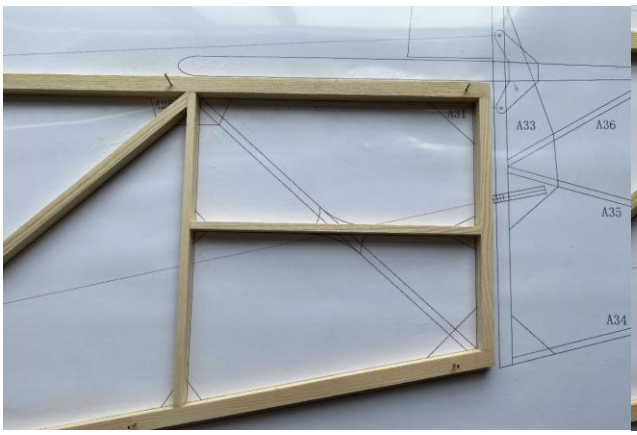
BUILDING INSTRUCTION

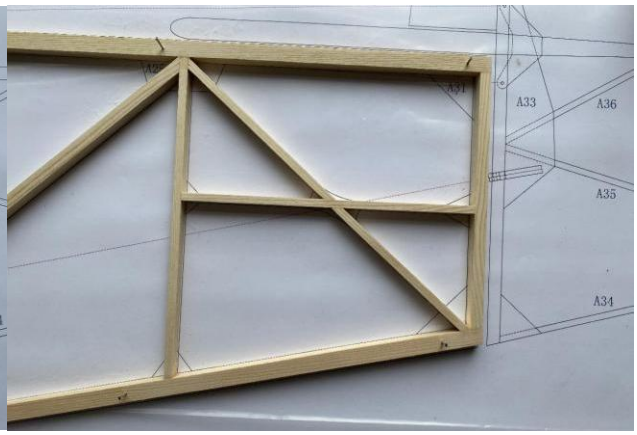
1 FUSELAGE FRAME ASSEMBLY

1) Assemble the rear part of the fuselage according to the drawing.

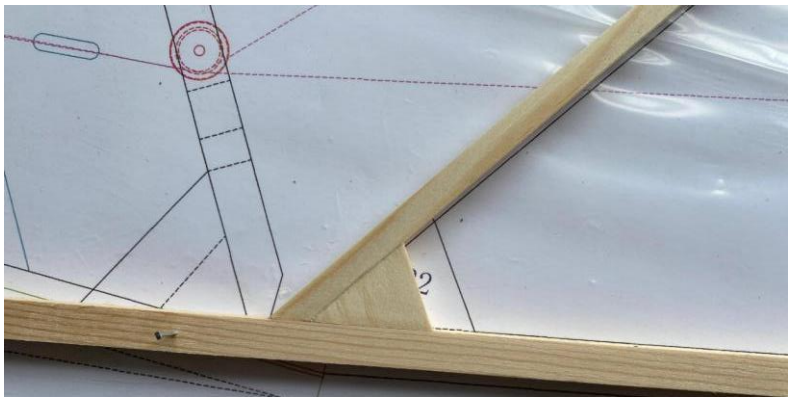






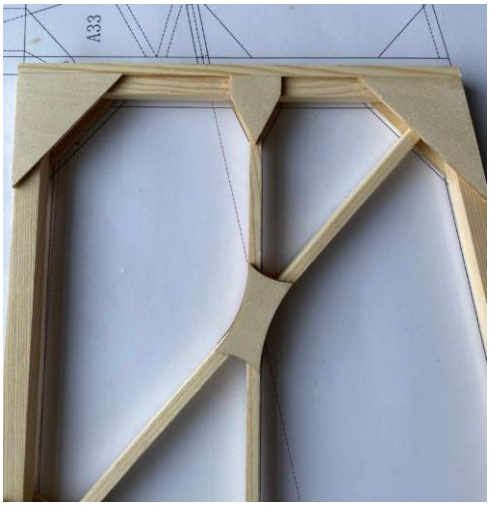


2) The joints are strengthened with pine blocks.



3) Stick the reinforcement plywood with the corresponding number on both sides of the strips.

4) Stick 5X16MM pine strips on the tail.

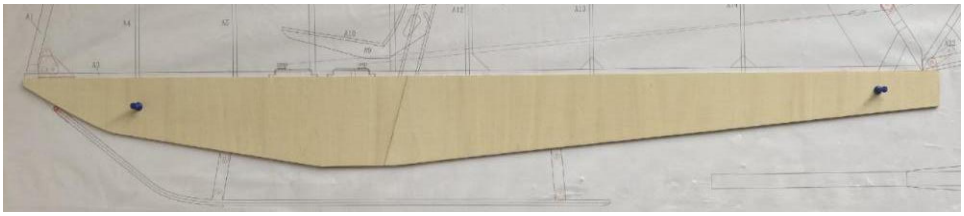


5) Stick 5X16MM pine strips up and down the fuselage.

6) Saw off excess wood strips.

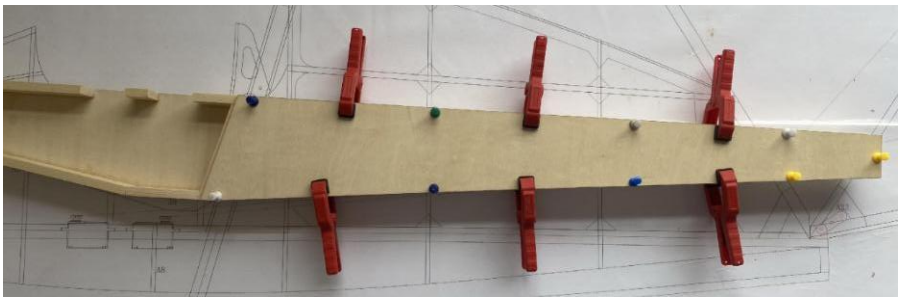
7) Stick 5X16MM pine strips in the middle.

8) Assemble fuselage lateral plates.

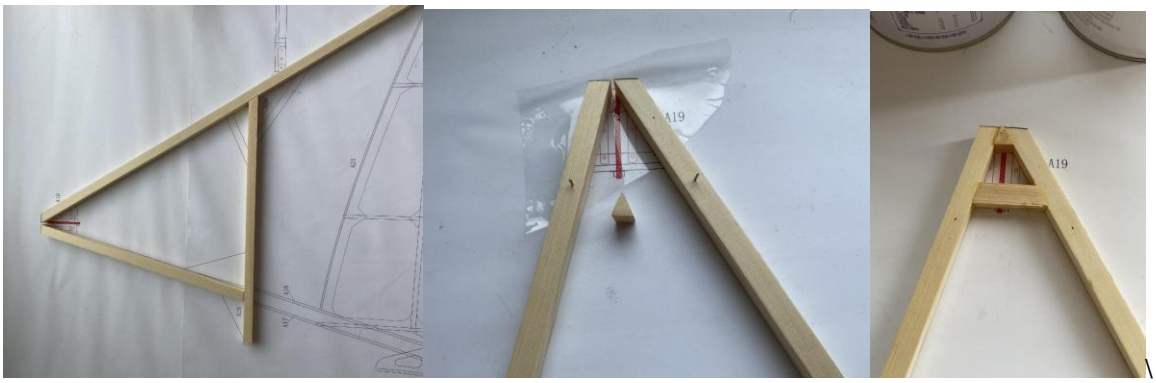


9)Stick 8X25MM pine strips on the fuselage lateral plate and reserve the position for servos installation.

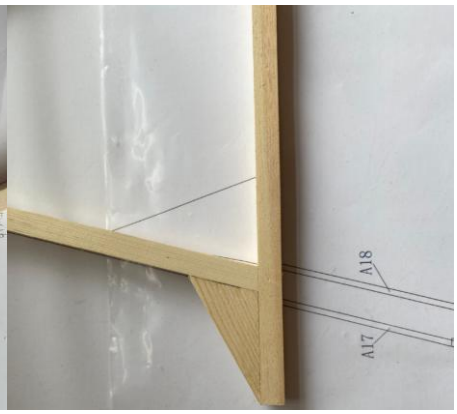
10)Stick the other lateral plate.



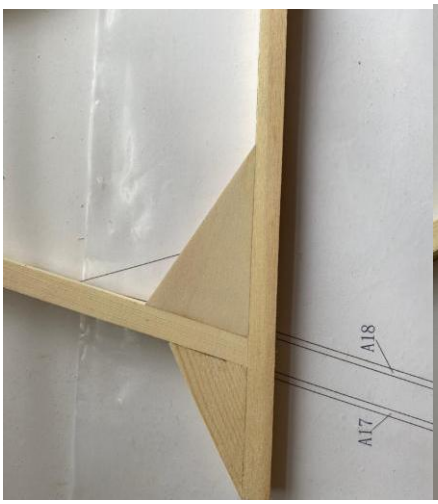
11) Joint 12X16MM pine strips according to the drawing, and strengthen the top position with pine.



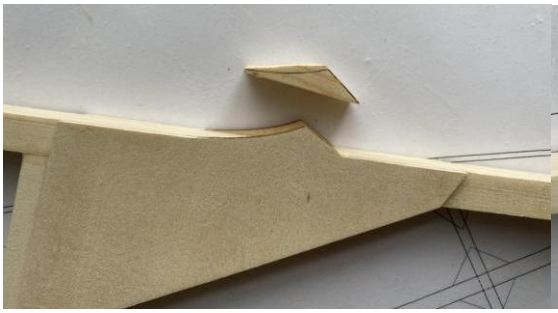
12) Stick the pine reinforcement block.

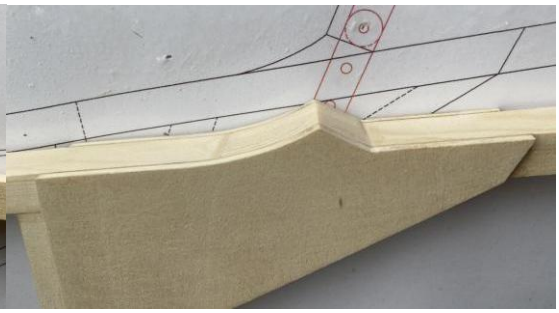


13) Stick the plywood.

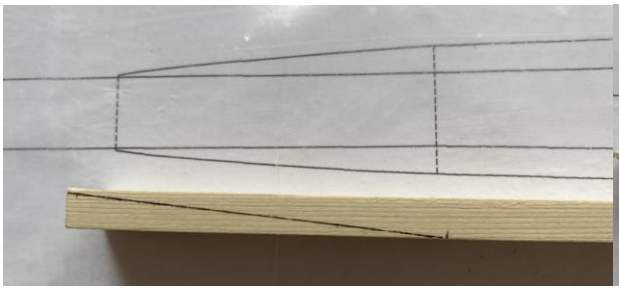
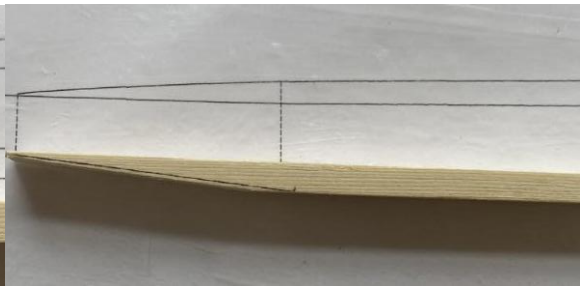
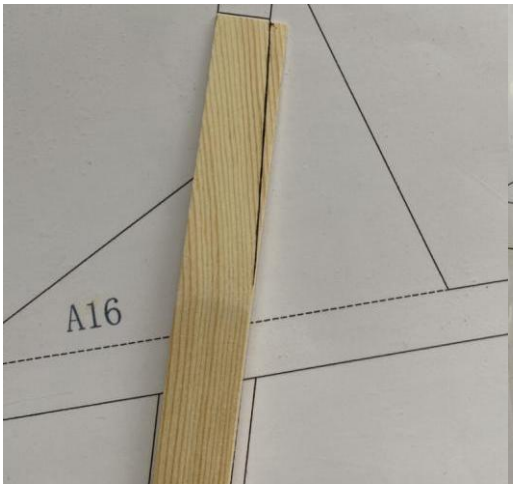


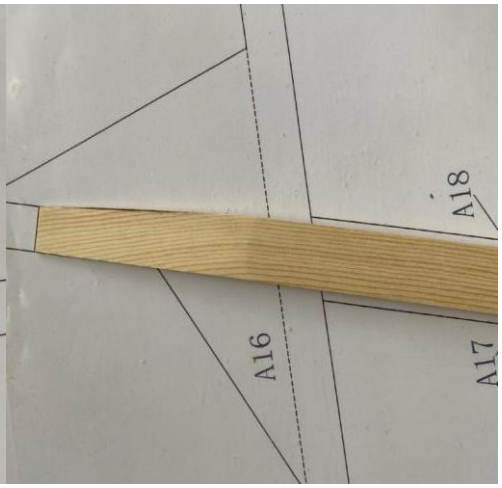
14) Fill pine block.



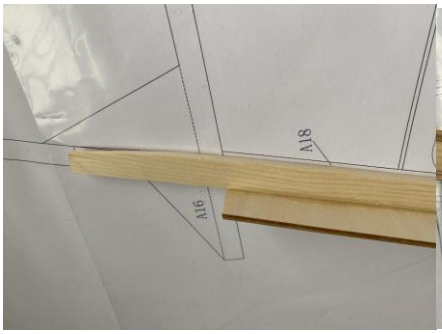


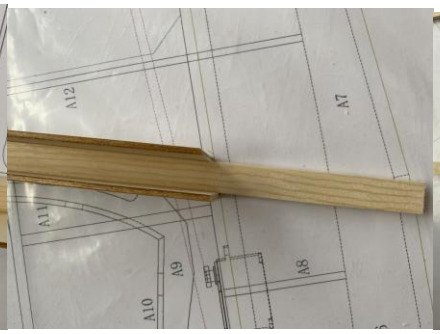
15) Make 8X16MM pine strips as the the one in the picture.

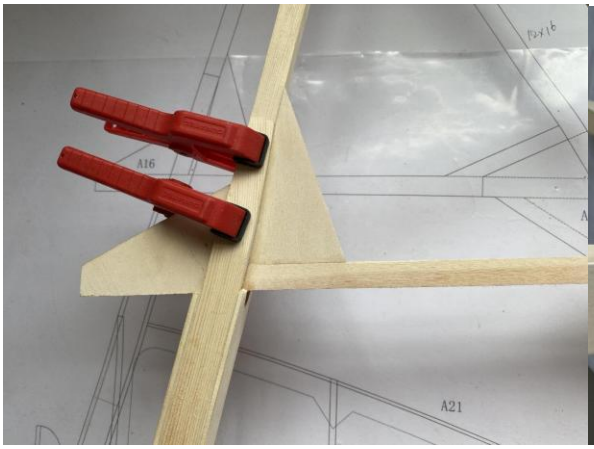


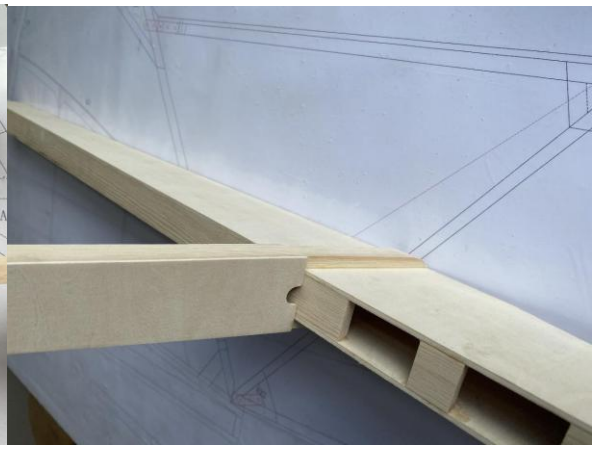
16) Stick the pine wood and the polywood No.37 according to the drawing style.



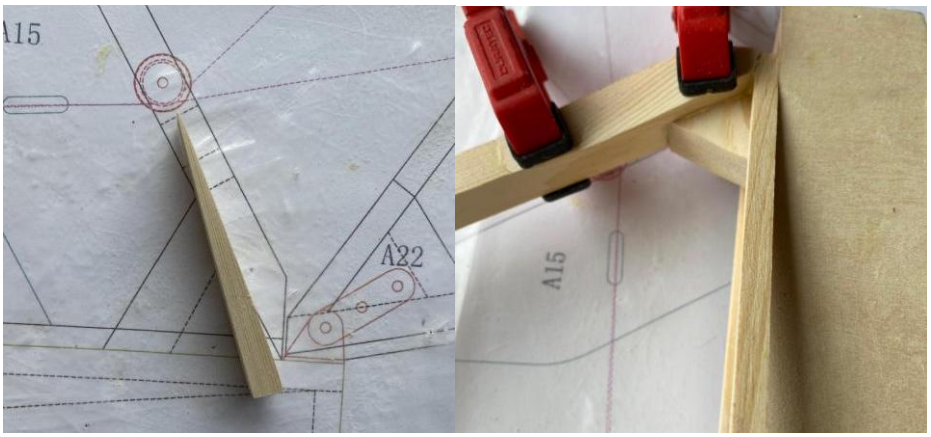


17) Combine the 3 parts.

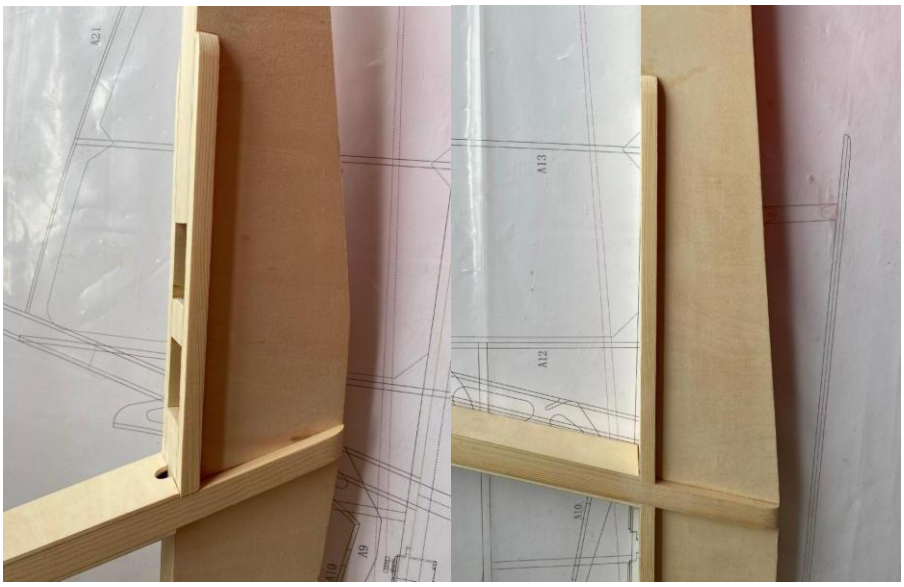




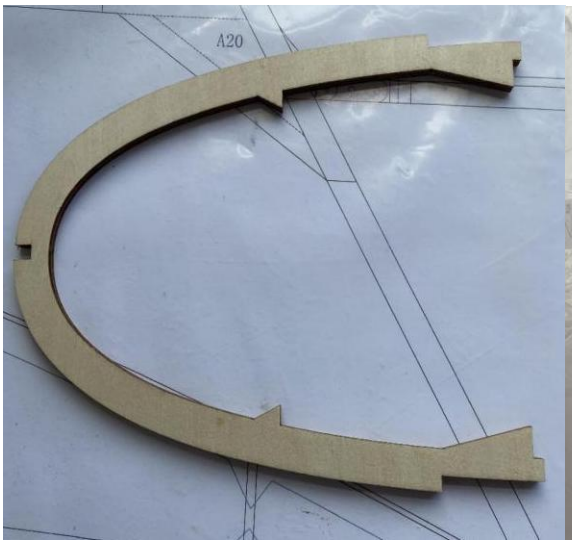
18) Combine fuselage rear, reinforced with pine blocks.

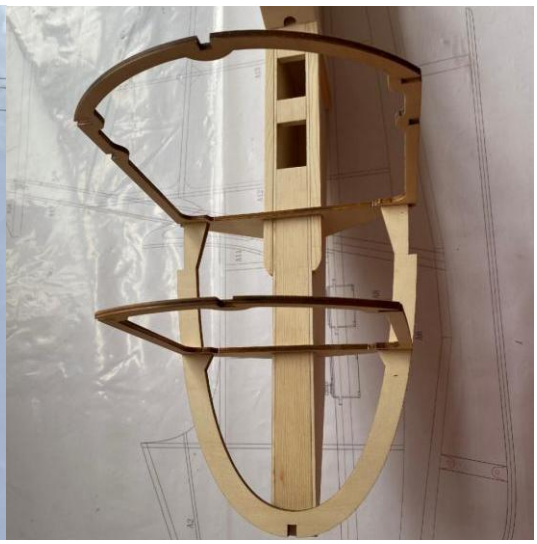


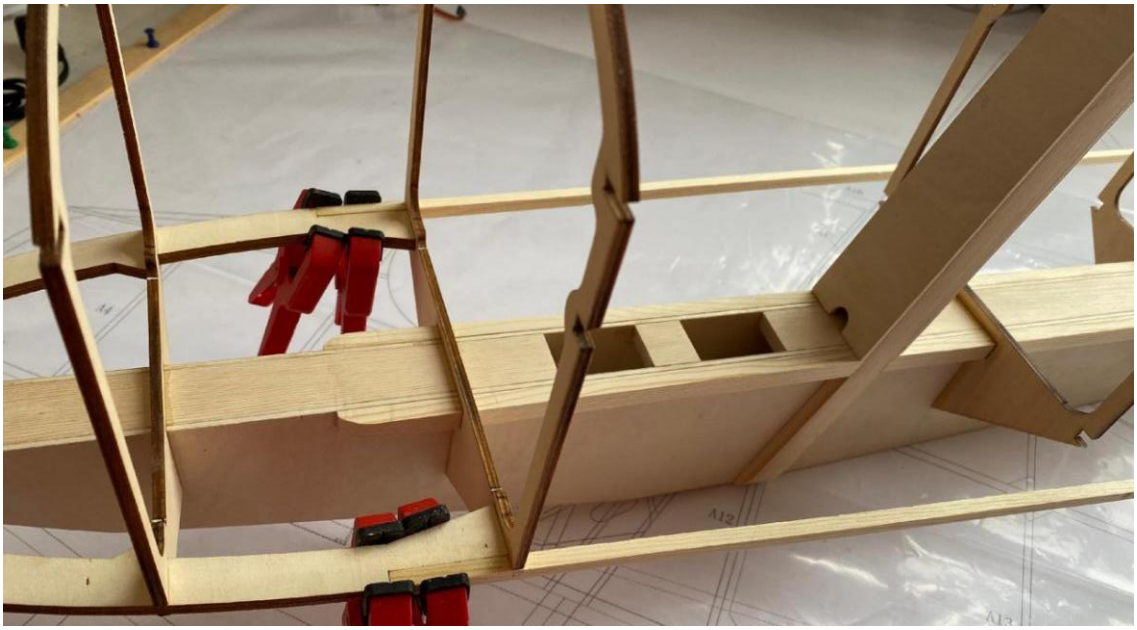
19) Stick lateral strips.



20) Assemble and stick the two pcs of A3 polywood sheets and build the cockpit according to the position in the drawing.


A20





21) The tow hook is needed to be bent, assembled with 3MM screws and mounted to the fuselage.

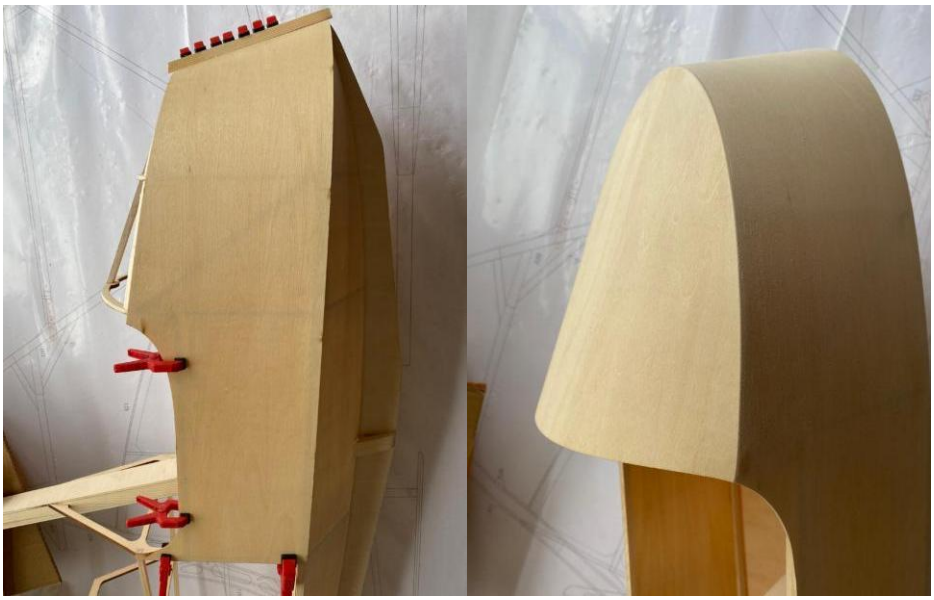
22) The tow hook is needed to be bent, assembled with 3MM screws and mounted to the fuselage.

23) Pine strips for cabin construction.

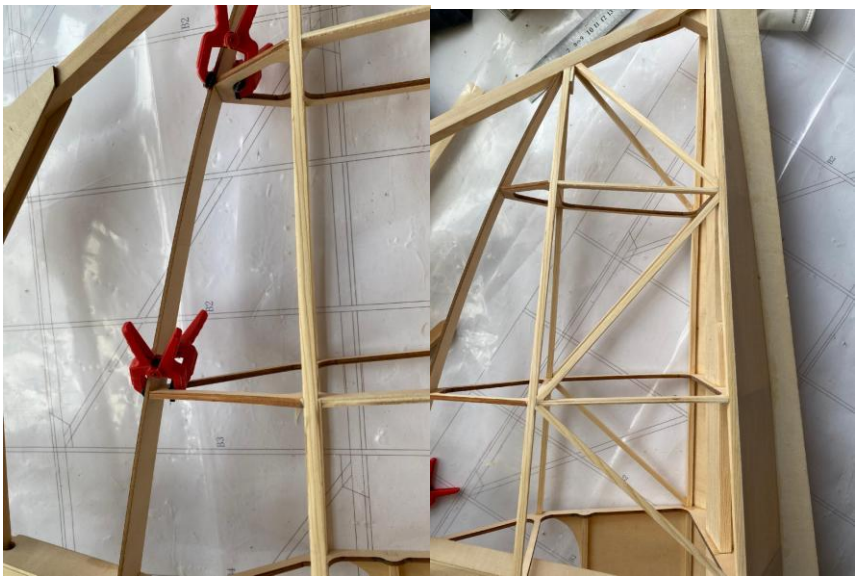
24) Stick bottom cover.

25) Stick the balsa sheets and polish to be radian, so that the cover has a larger bonding area.

26) Stick both sides of the cover and the upper panel.

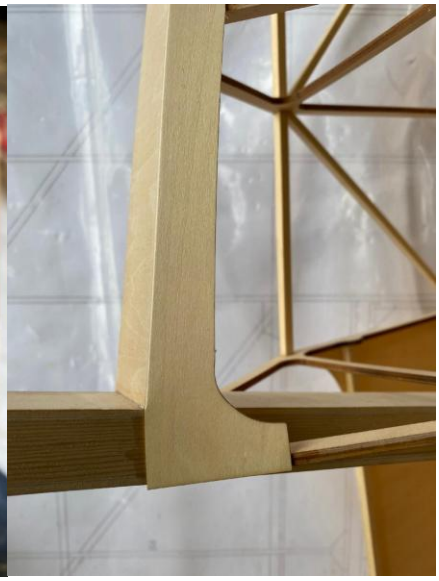


27) Stick pine strips at the rear of the cockpit.

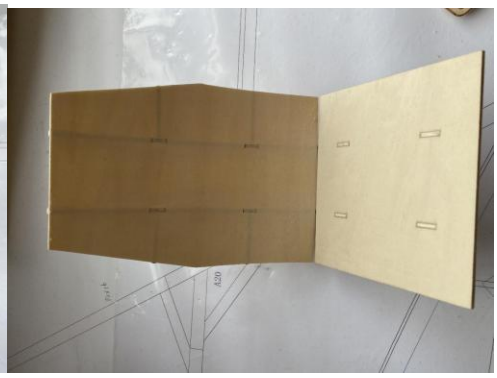


28) Stick the cover for rear cockpit.

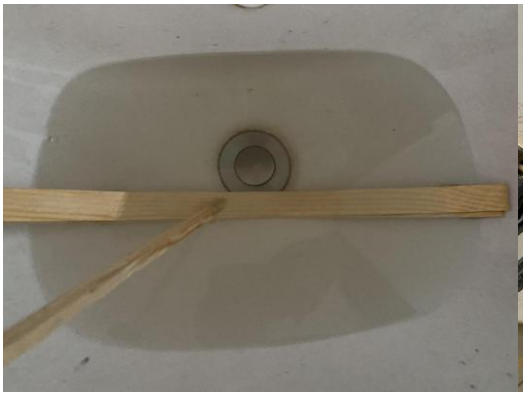
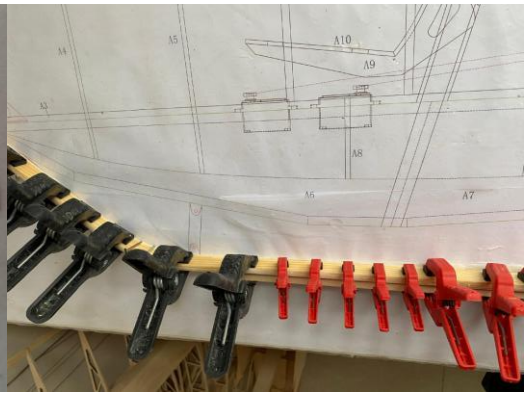





29) Make the seat.

30) Soak 4X25MM pine strips with hot water, so that it is easier to bend, use glue to stick and shape.

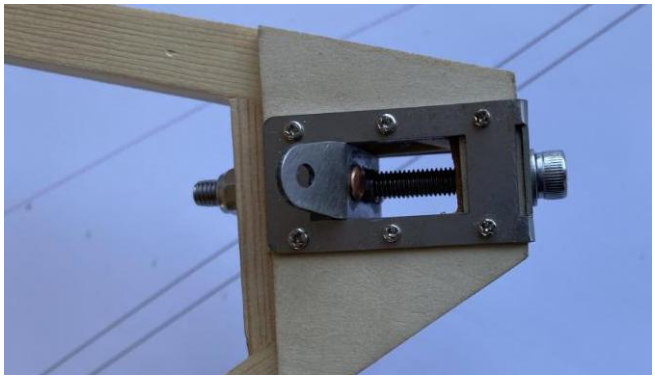



31) Install prefabricated metal pieces.



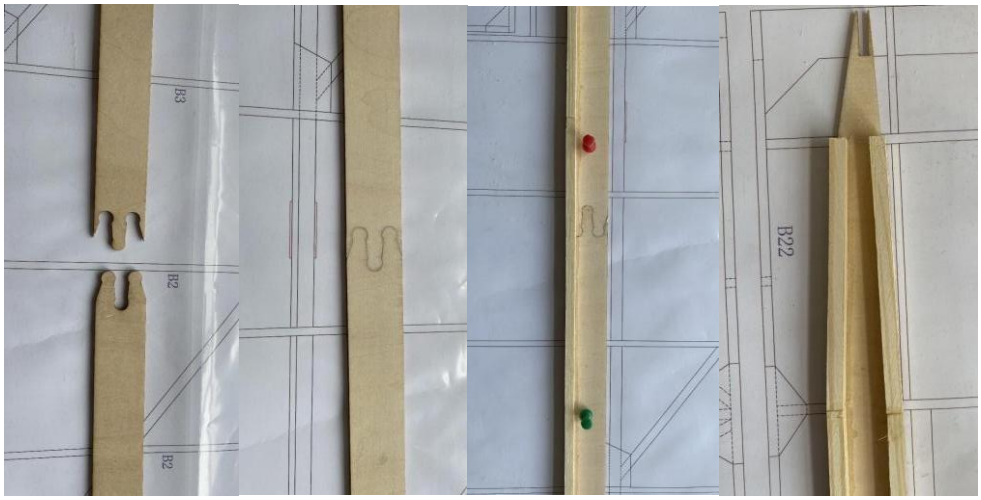

32) The hole is drilled on the front panel for tow hook wires.

33) Install bracing wires tension components.



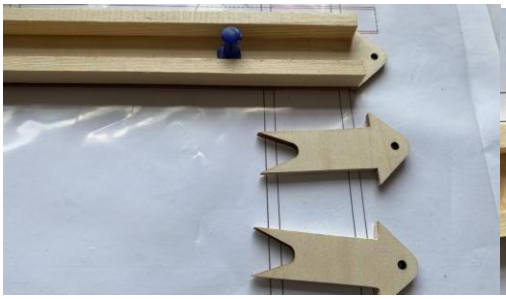
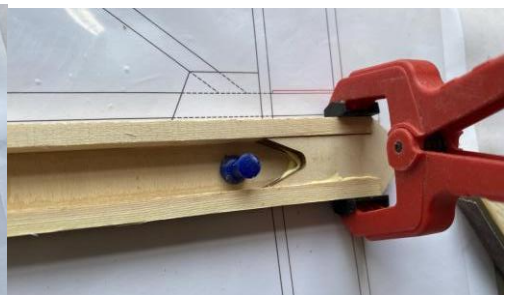
2 WINGS ASSEMBLY

1) Assemble the two polywood sheets and stick 8X6MM pine strips. The left and right girders are not the same. Note that there are directions marked on the polywood.



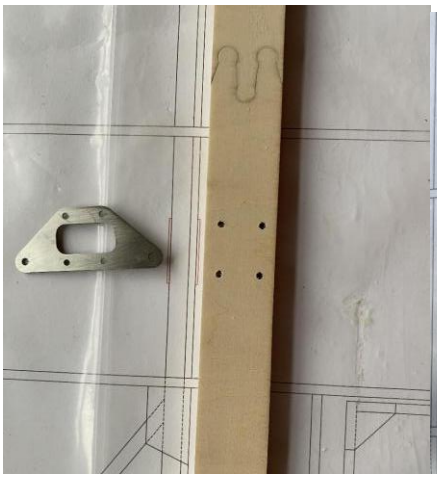
2) Stick the reinforcing board in front and middle of girder.



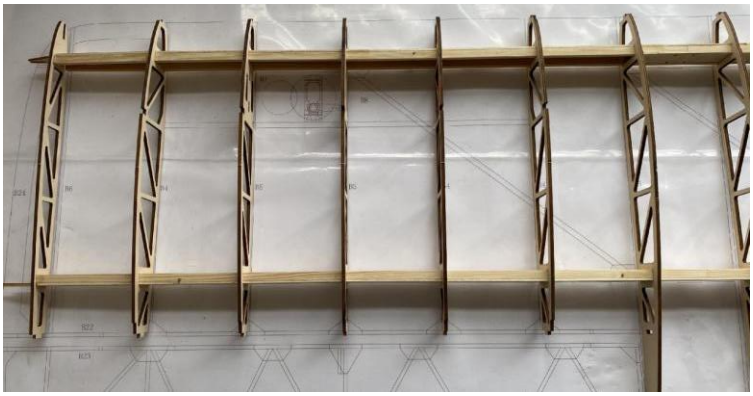



3) Punch holes in the girder using metal parts as templates.

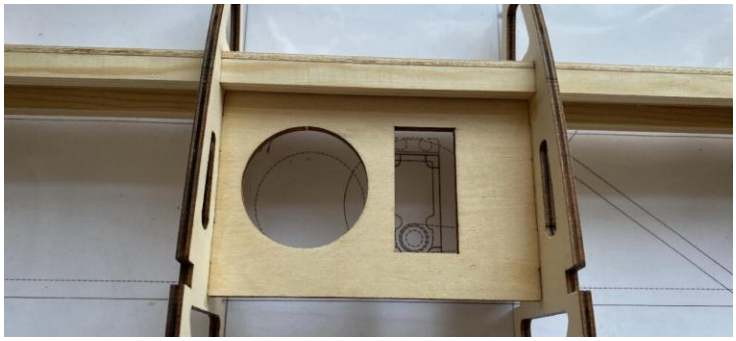


4) Insert the ribs into the main girder according to the drawing numbers and keep the ribs vertical.



5) Fix aileron servos mounting plate.



6) Stick the leading edge polywood.

7) Stick 5X10MM pine strips on the back edge.

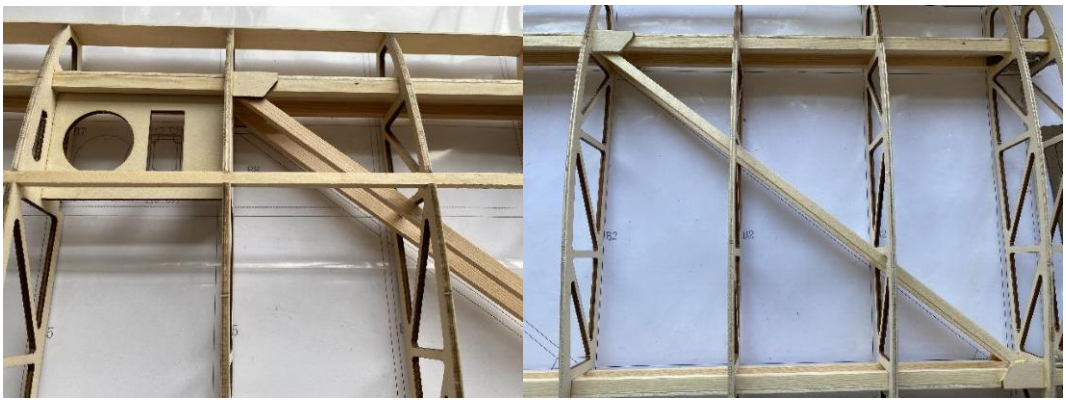
8) Stick aileron trailing edge polywood.

9) Wing tip

10)Install the metal connectors.

11) Stick rib B1.

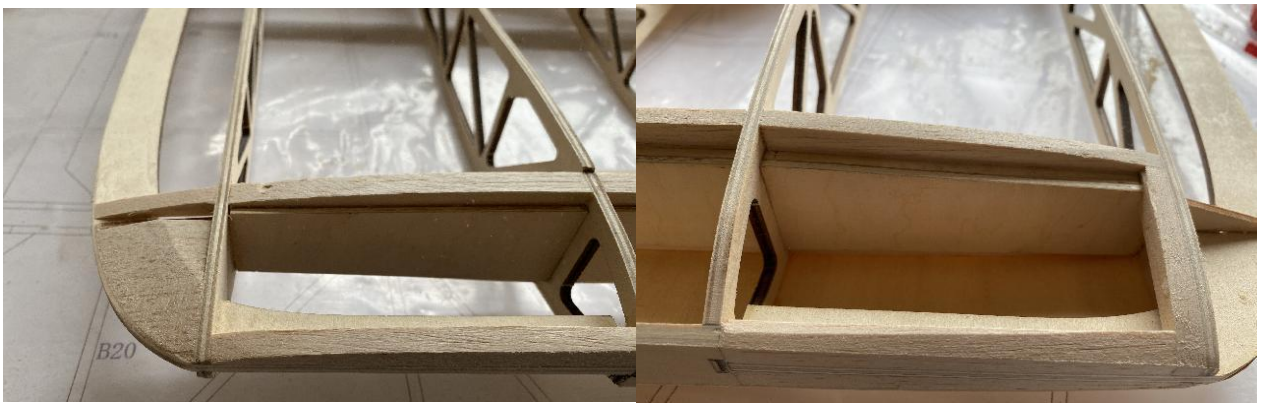
12) Stick the inner bracket of the wing.



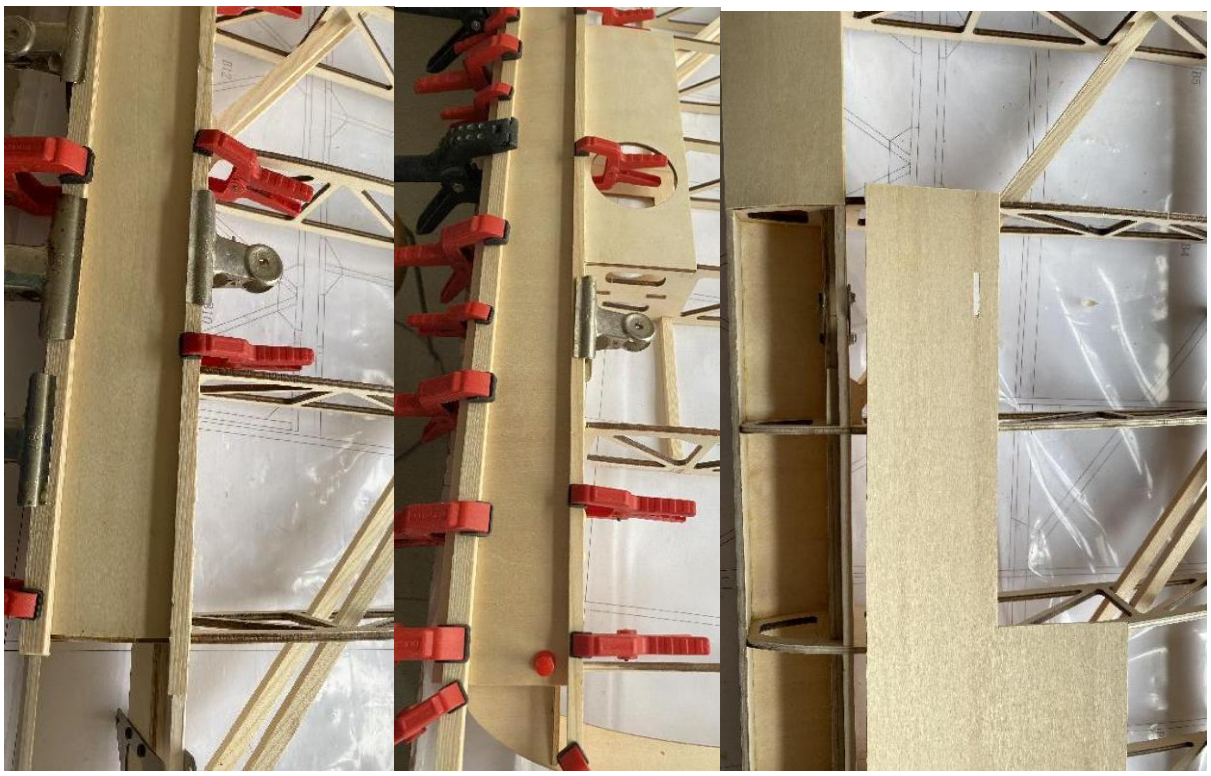
13) Stick the servos cover plate.

14) Stick balsa wood onto the front wing girder and smooth it.

15) Wing tip sticked balsa wood can be increased the pasting area.



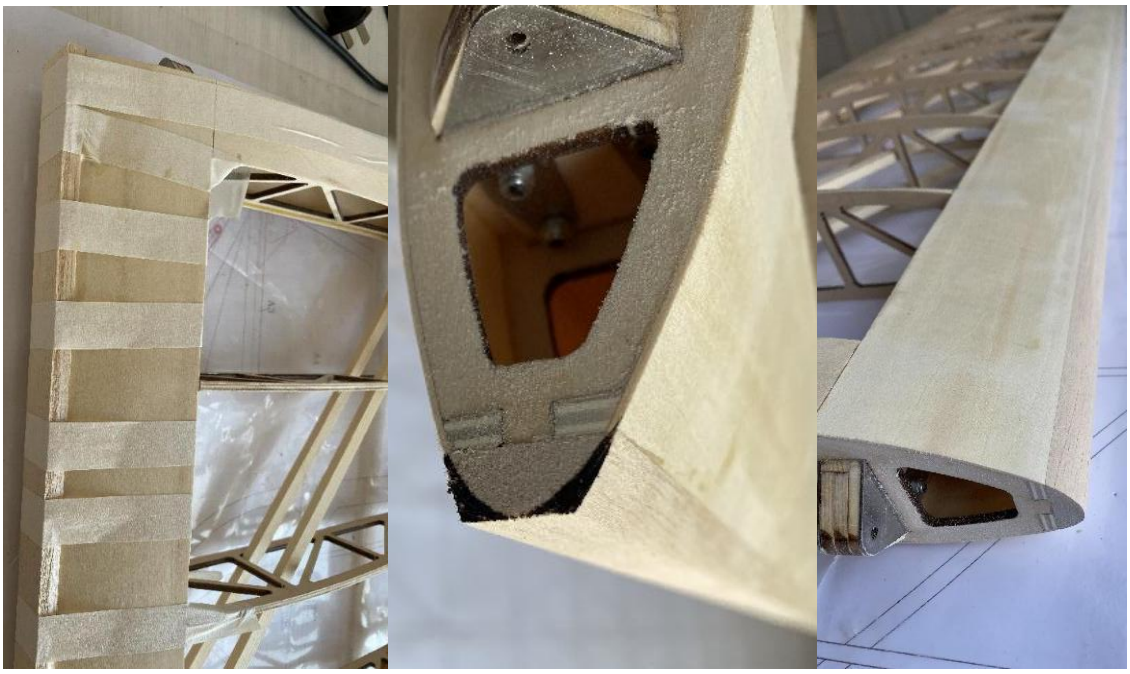
16) Stick the wing cover.



17) Stick the wing root and tip cover.

18) Fill the joint with balsa wood.

19) Paste 8MM balsa sticks on the leading edge of the wing and polish it.



20) Stick balsa wood at aileron connecting rod exit .

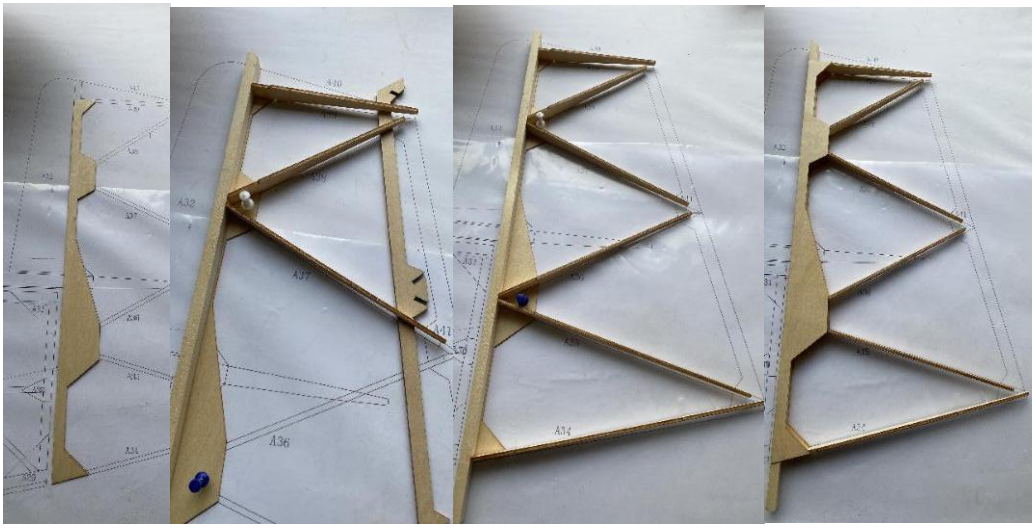
21) Assemble ailerons according to the rib numbers and paste reinforcement plates.

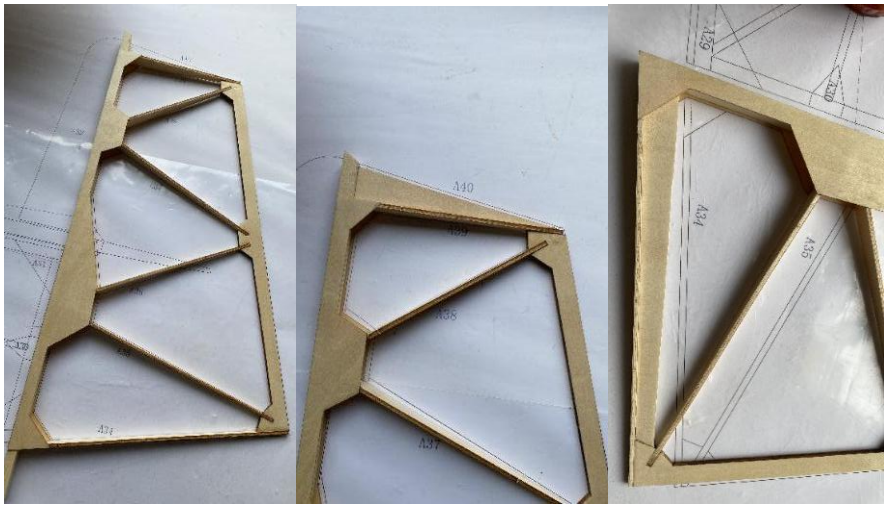
22) The position of the horn is strengthened by sticking pine block.

23) Stick 8MM balsa wood on the front end of the aileron and polished into triangles.

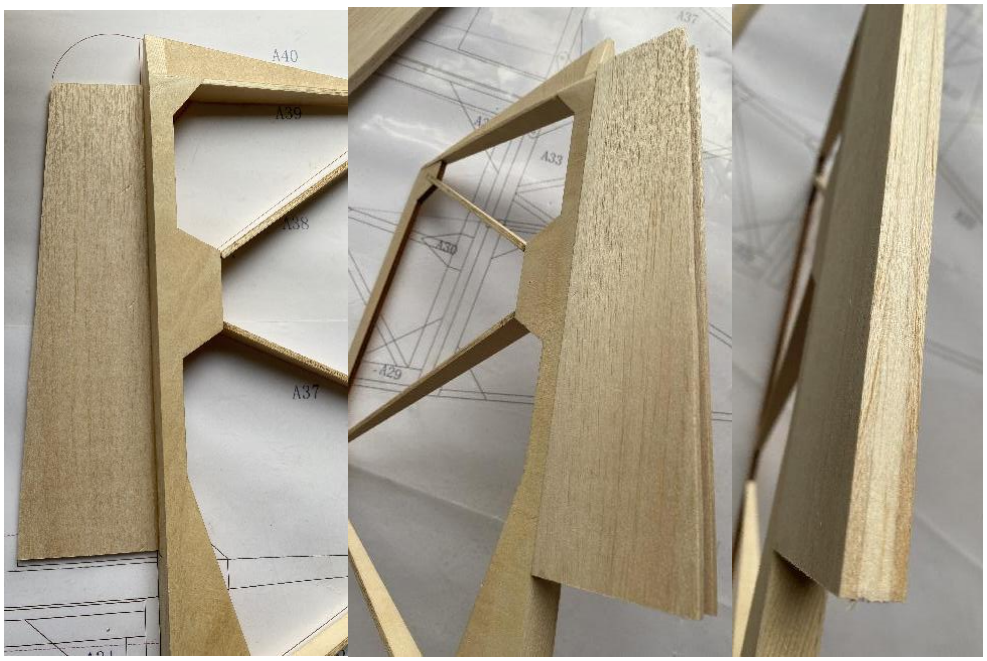
3 THE TAIL ASSEMBLY

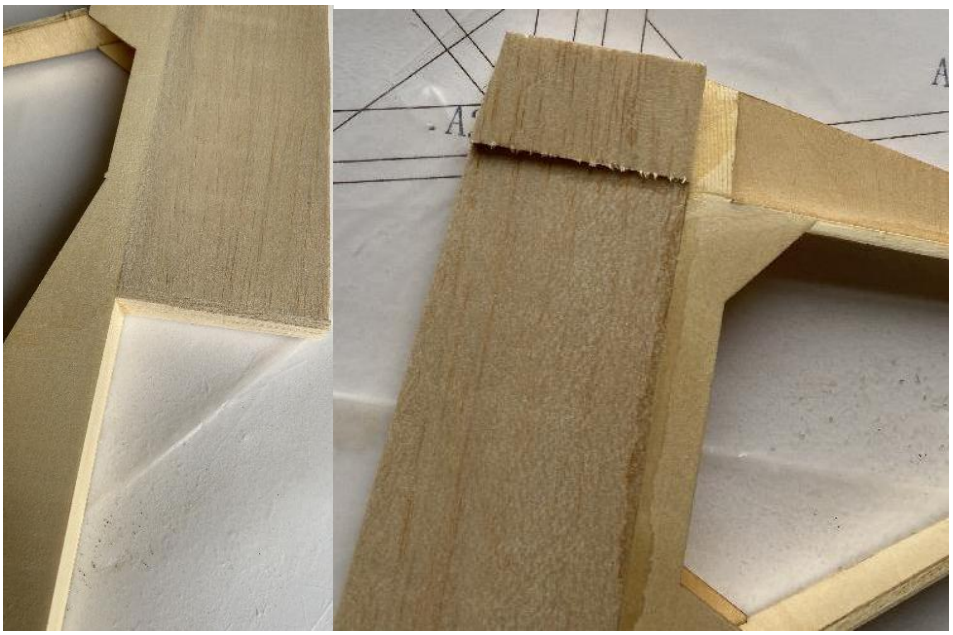
1) Stick parts according to drawings.





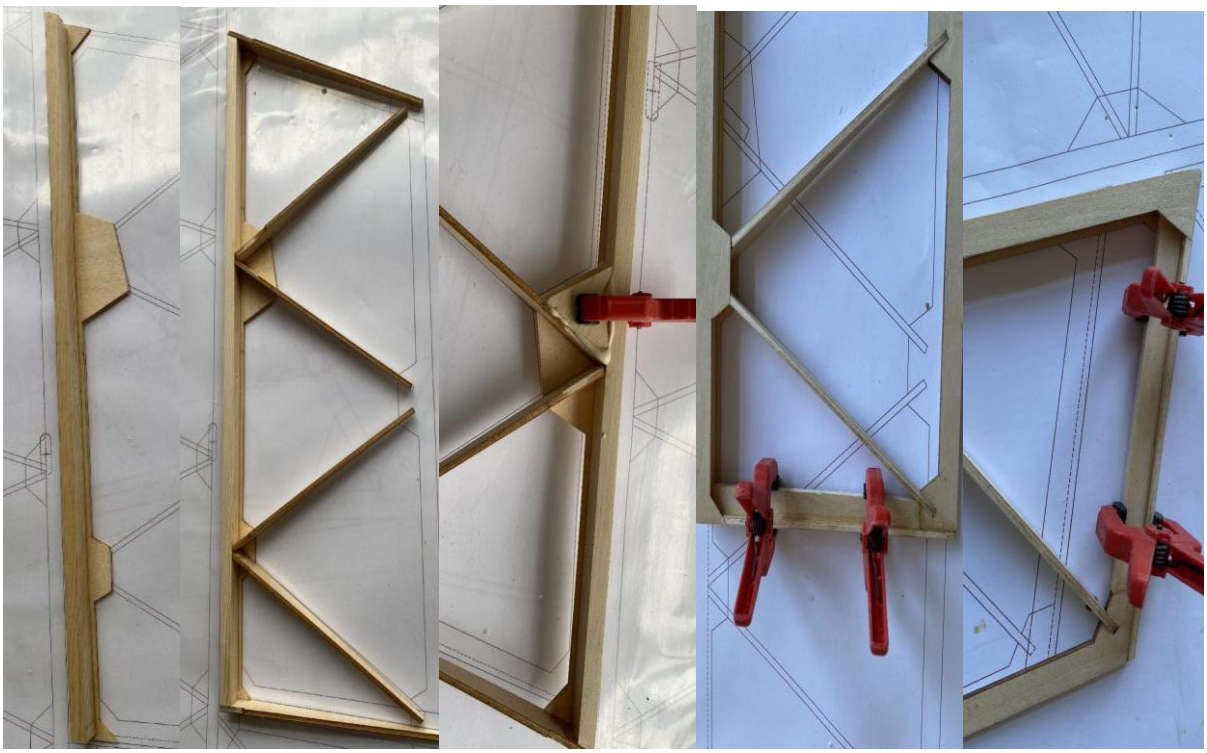
2) Make the leading edge with balsa.





3) The position of horns should be reinforced with pine blocks.

4) Elevator.

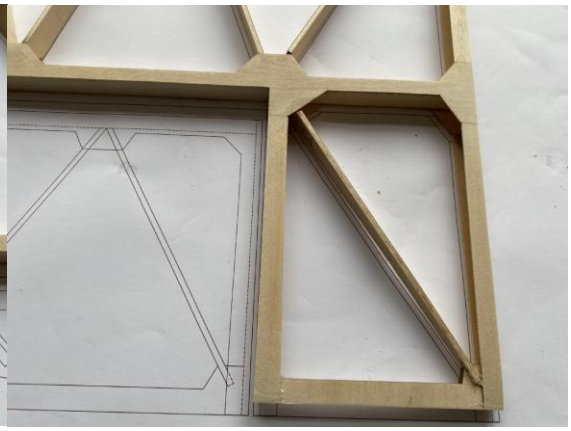


5) Stick the horizontal tail fin according to the drawing position.

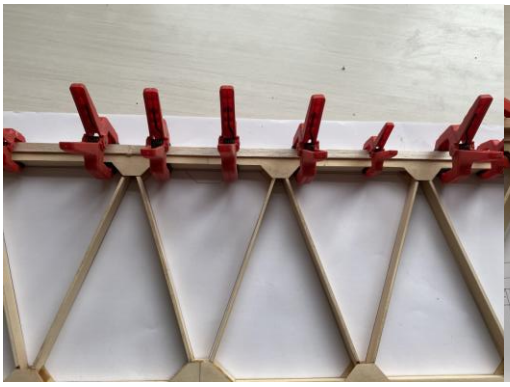
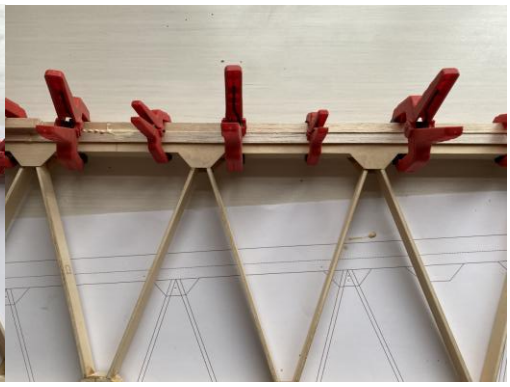
6) Stick the pine stiffener.

7) Wing tip.

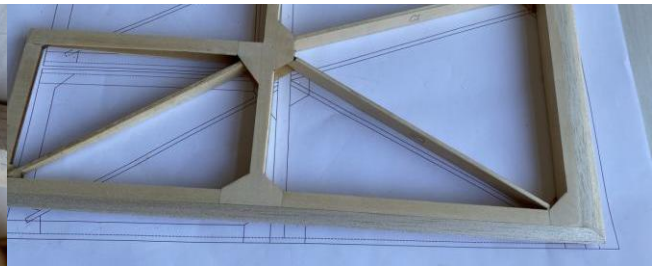
8) Stick 1MM polywood.

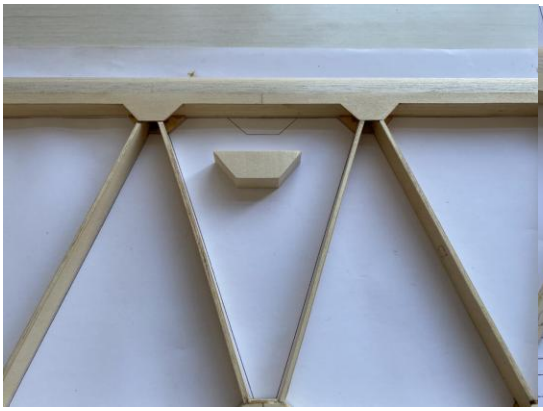
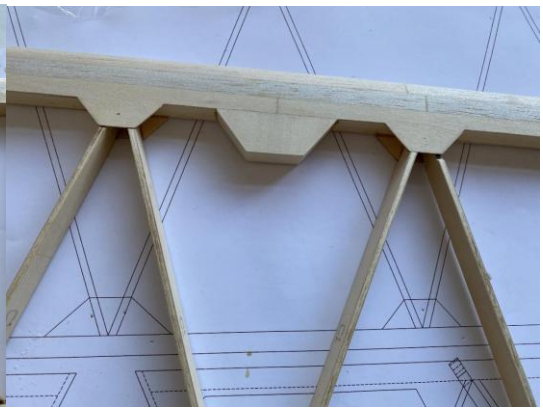
9) Leading edge--- 8MM balsa stick.

10) Polish the leading edge balsa.

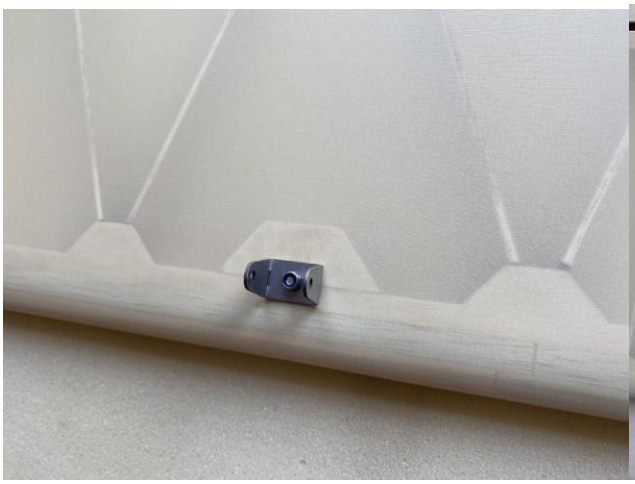



11) Stick the pine reinforcement block.

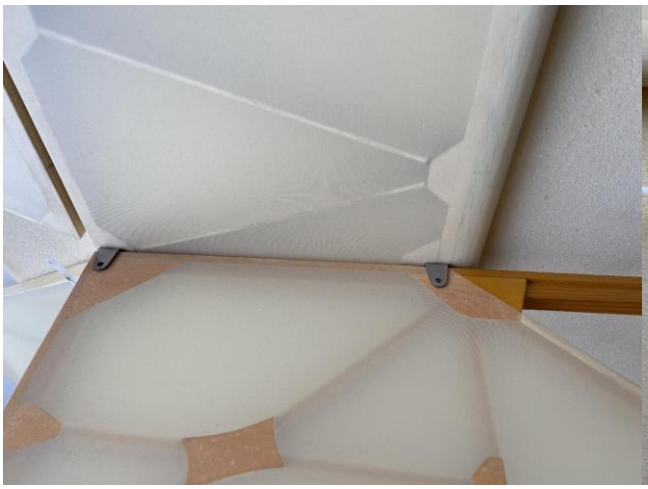
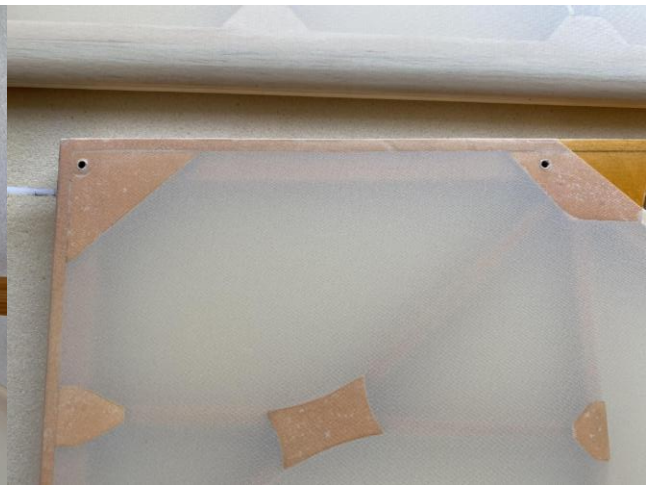



4 OVERALL ASSEMBLY DETAILS

1) Secure the horizontal tail joint with M3 screws.




2) Assemble the tail fins on the fuselage, mark the position where need to drill a 3MM hole, keeping the perpendicularity of the holes.

3) Install metal fittings in the middle of the fuselage.

4) Install pulley with M3 screws.

5) Install landing skid connections with tapping screws.

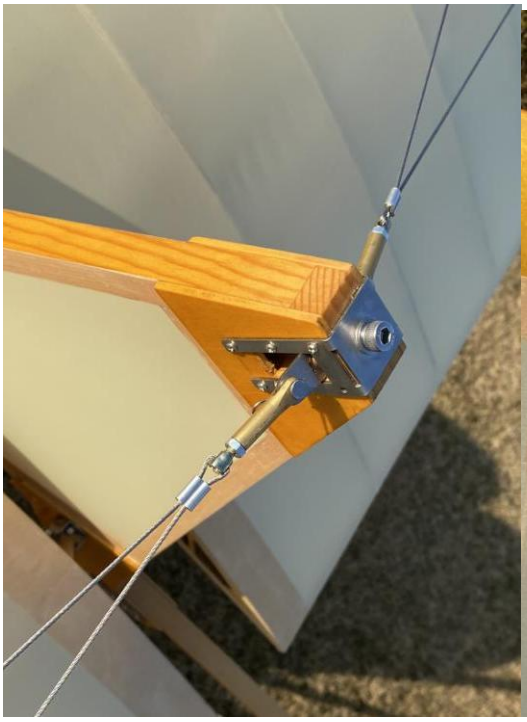
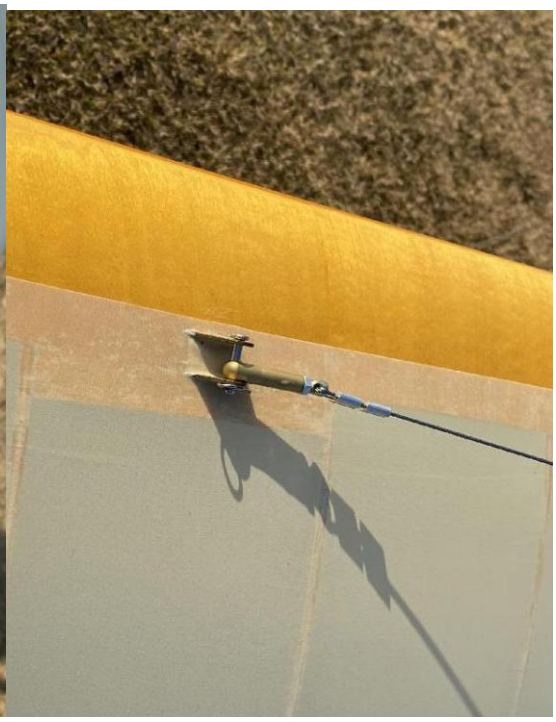
6) Install skid retaining mount.


7) Install skid to fuselage.

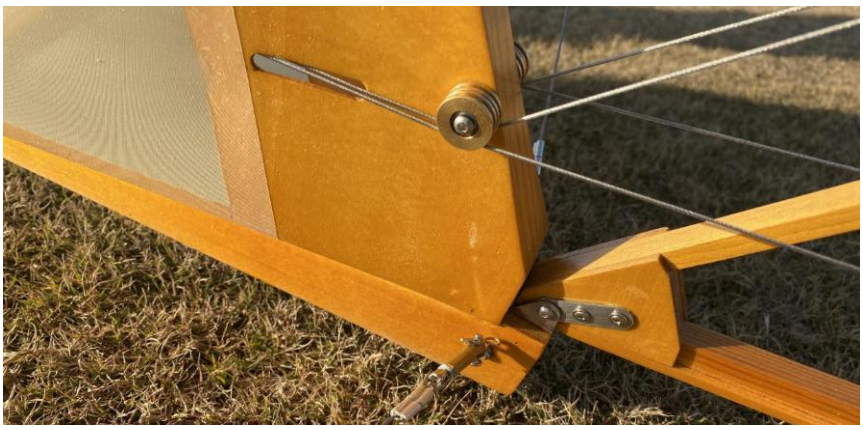

8) Make tail support rods with 8X6MM pine strips.



9) Connection of main wing.

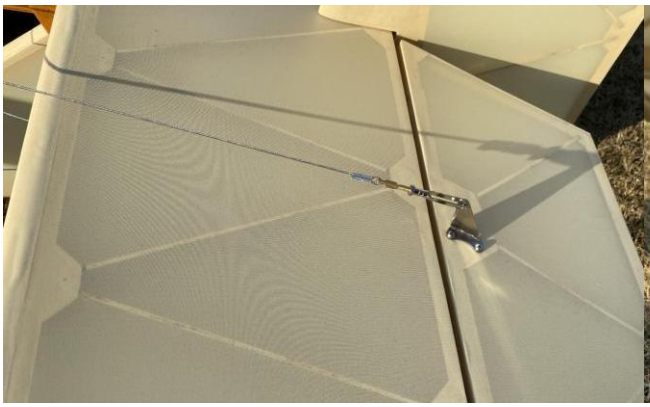




10) Connection of the middle of the fuselage.

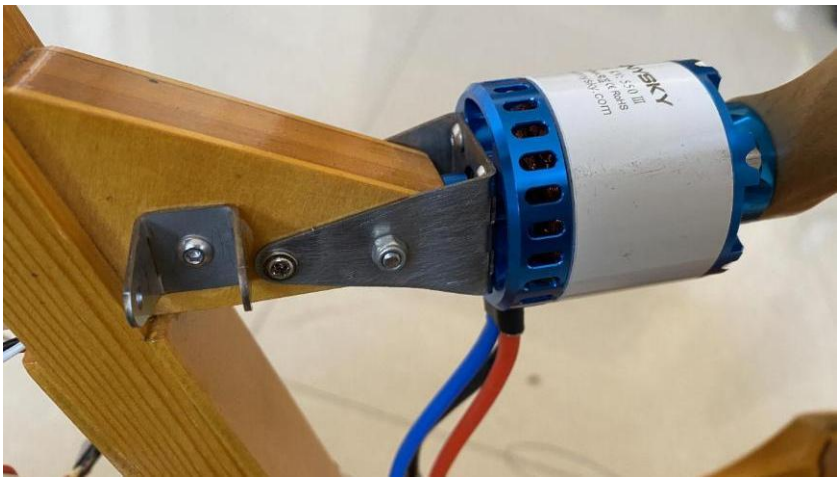


11) Mounting for elevator pulleys.


12) Installation of the bracing wires for the fuselage and tail.




13) Install motor mount to the fuselage .



4 FINISHED