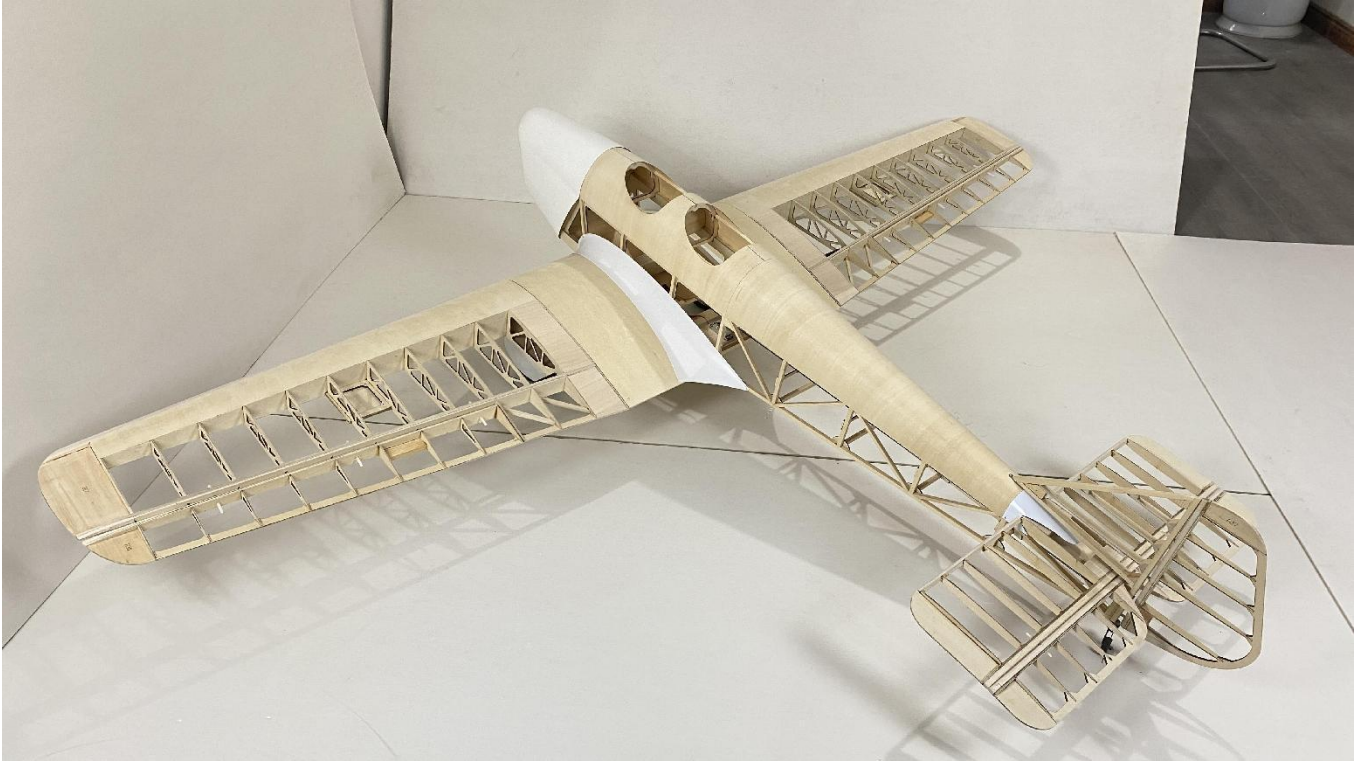




# MILES M.2H HAWK MAJOR<sub>(1/4 SCALE)</sub>

## LASER-CUTTING KIT

### BUILDING INSTRUCTION



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### **SPECIFICATIONS:**

Wingspan : 2480mm      Length : 1820mm

Flying Weight : 9300g      Servos:≥8kg

Suggested engine : OS 40cc 4 strokes

### **INTRODUCTION**

The Hawk Major was a variant of the Miles M.2 Hawk, developed by F.G. Miles to take advantage of the new inverted de Havilland Gipsy Major engine. Other changes included metal (instead of wood) engine mounts and streamlined undercarriage. The production Hawk Major had the 130 hp de Havilland Gipsy Major engine. The aircraft sold well to private owners, including two that were fitted with smoke generators to allow them to be used as skywriters. An improved version (the M.2H) with a trailing edge flap replaced the M.2F on the production line. A number of special one-off racing versions were also built



## PRODUCT LIST

**Plywood sheets pack\*1**  
**Batten sets**  
**Accessories bag\*1**  
**Carbon tube\*2**  
**4.5" rubber wheel\*2**  
**Fiberglass cowling\*1**

**1:1 installation drawing\*1**  
**Operation instruction\*1**  
**PVC scale part\*4**  
**6mm undercarriage\*2**  
**steel pull rods with PVC tube\*2**

## KIT FEATURES

- **Scheme-based on Miles Hawk Major.**
- **Extremely lightweight, state-of-the-art all-wood construction**
- **Complete hardware pack. Comes with PVC scale parts.**
- **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.**
- **High quality 4.5 inches rubber wheels and fiberglass cowling.**

## 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.

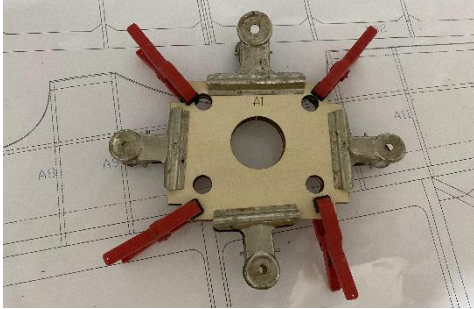
Do not „aim“ the transmitter antenna at the model during operation. In this direction, the transmitter has the lowest radiation. The best position of the antenna is to the side of the model.

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

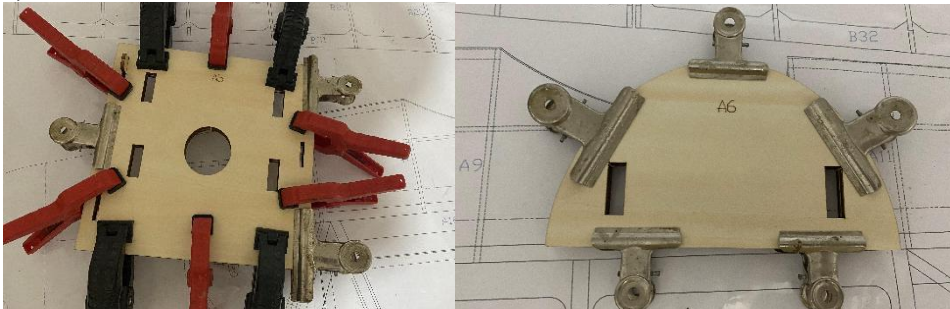
# **BUILDING INSTRUCTION**

## **1 FUSELAGE FRAME ASSEMBLY**

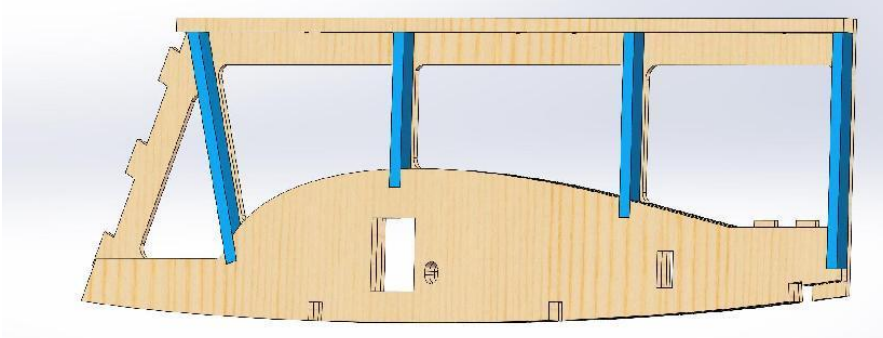
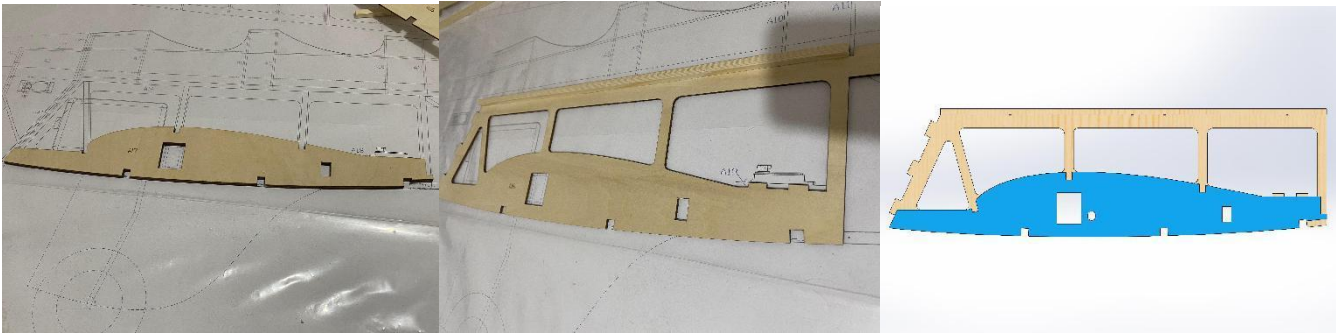
**1) Glue the engine mount (Drill mounting holes according to the different engines).**



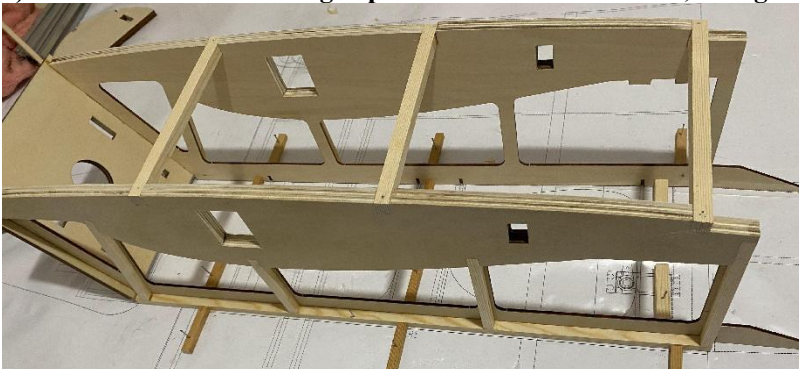
**2) Glue the bulkhead.**



**3) Glue 2 pcs of A17 together to A16, and glue 8X8MM pine sticks.**



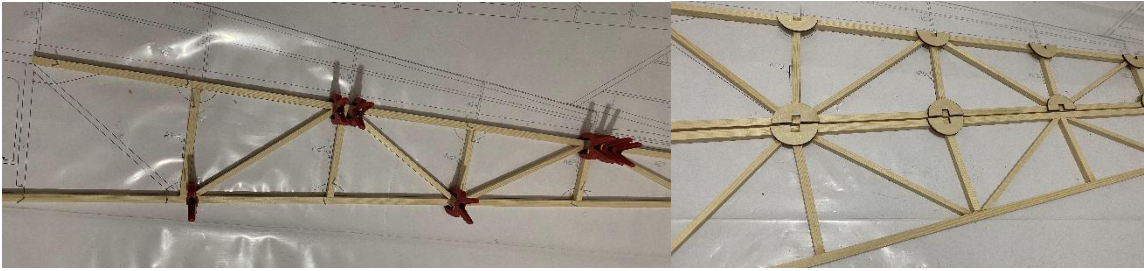
**4)Combine the left and right panels with the bulkhead, and glue 8X8MM pine stick to the bottom.**



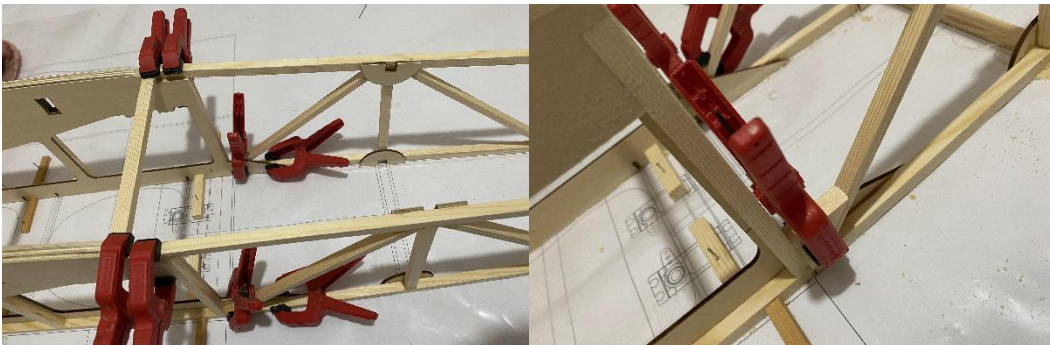
**5)Smooth the plywood of the bulkhead, and glue 1MM plywood sheet at the bottom, and strengthen the bulkhead with pine wood sticks.**



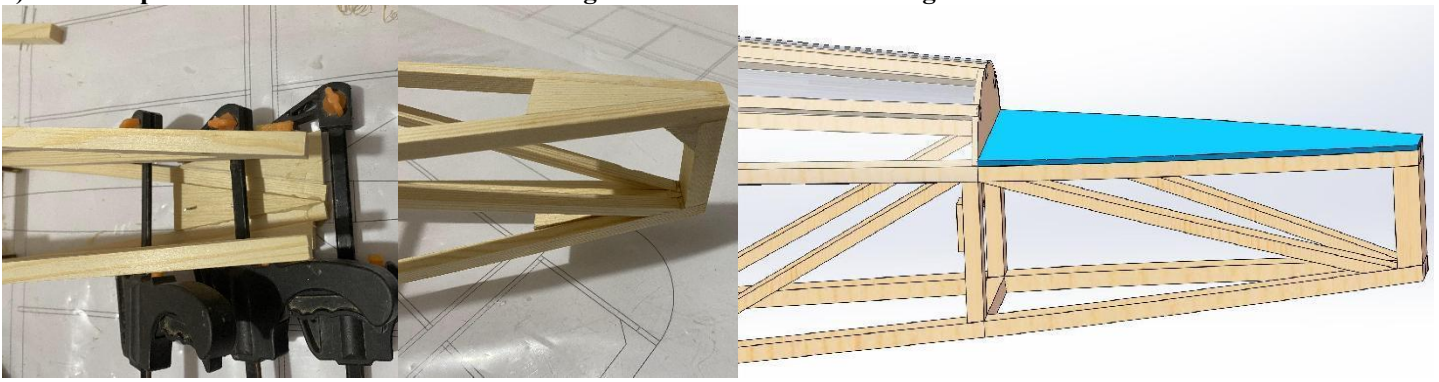
**6)Build fuselage according to the drawing, and make the left and right framesymmetrical.**



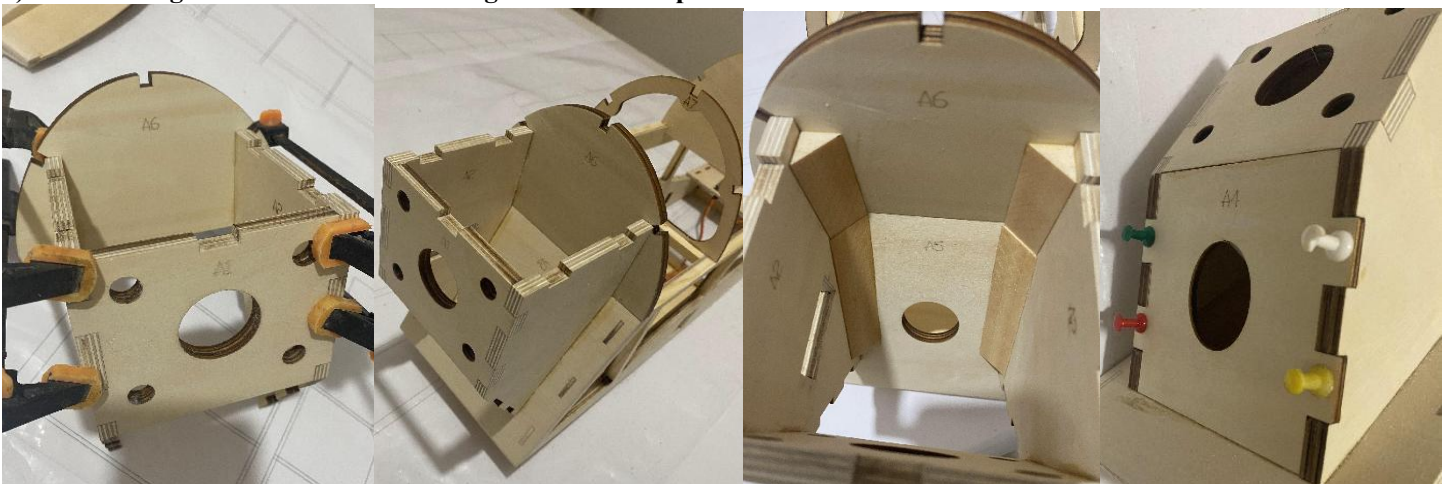
7) Attach the rear part of the fuselage to the front. The joint position is reinforced with pine wood.



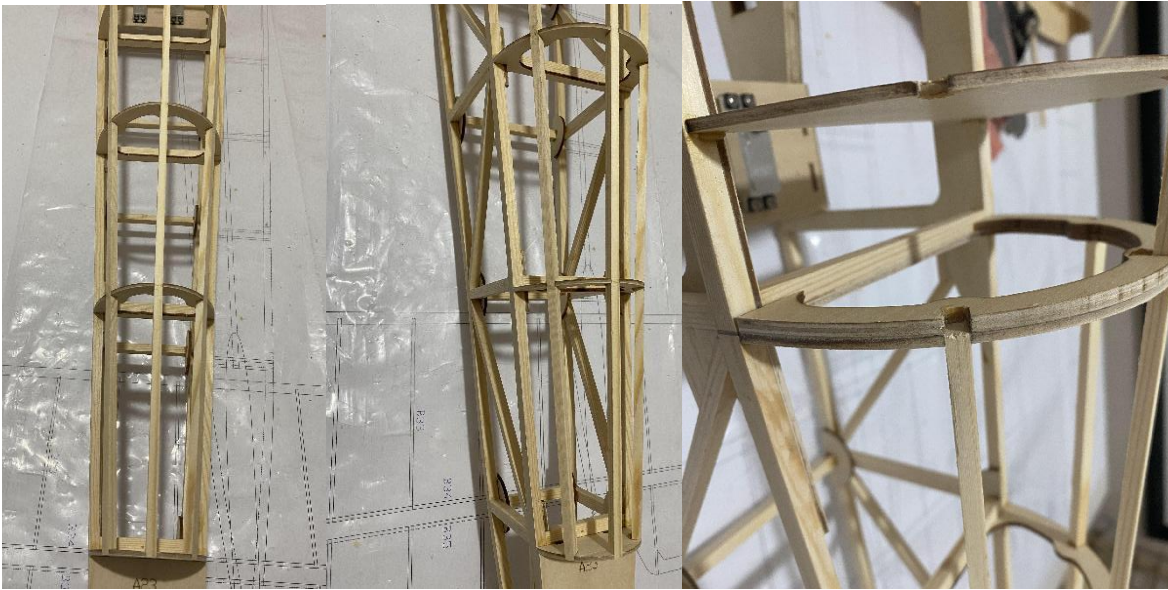
8) Glue the pine block to reinforce the tail and glue the horizontal tail wing table.



9) Glue the engine mount and use triangular wood strips for internal reinforcement.



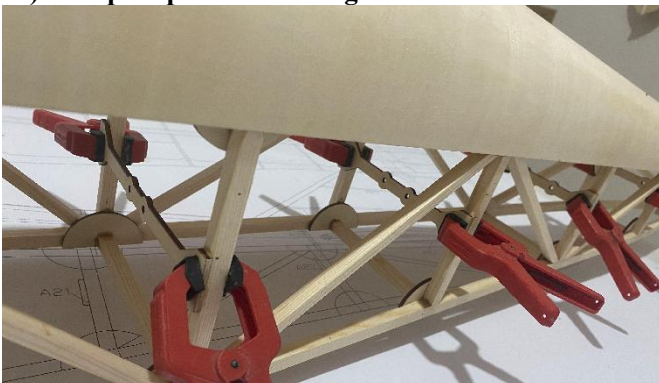
10) Install the fuselage bulkhead.



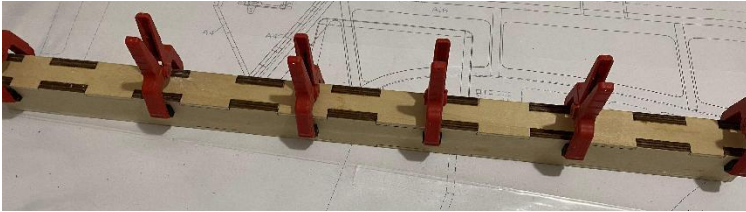
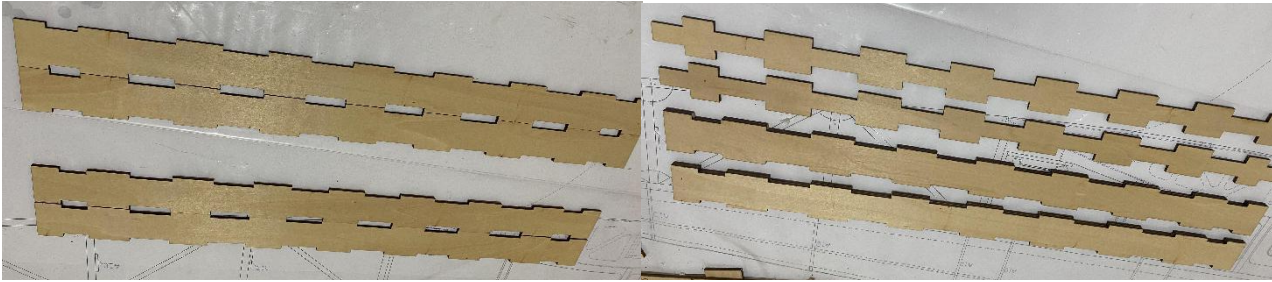
**11) Glue the 1mm plywood fuselage cover.**



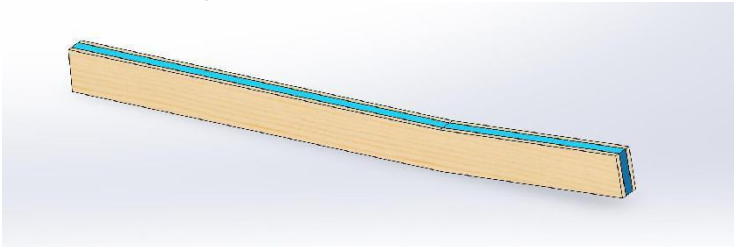
**12) Glue pull-pull rods fixing seat.**



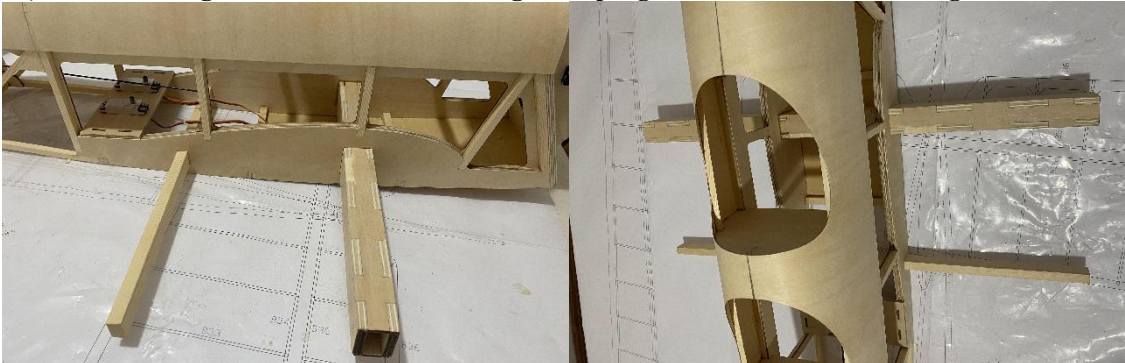
**13) Glue scabbards, taking care to maintain the verticality of the scabbards.**



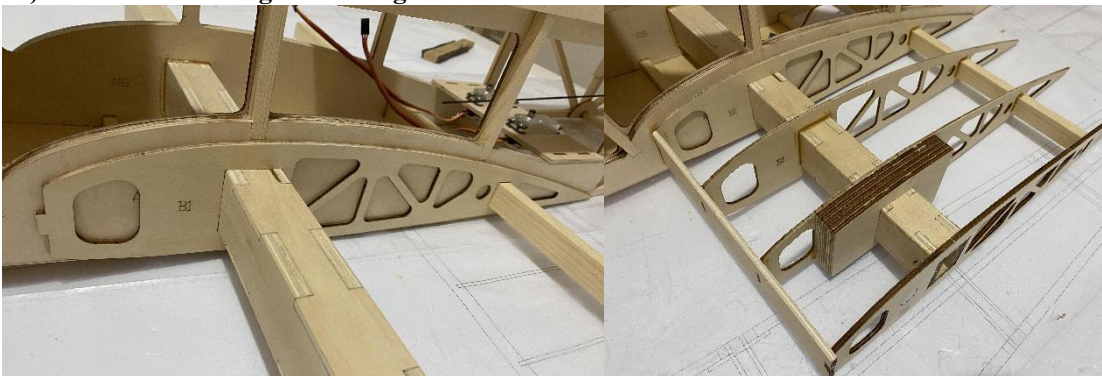
**14) Glue the wing bolts with 8MM balsa in the middle, and fit the made latch to the wing scabbards.**



**15) Glue the wing scabbards to the fuselage, keeping both sides the same length.**

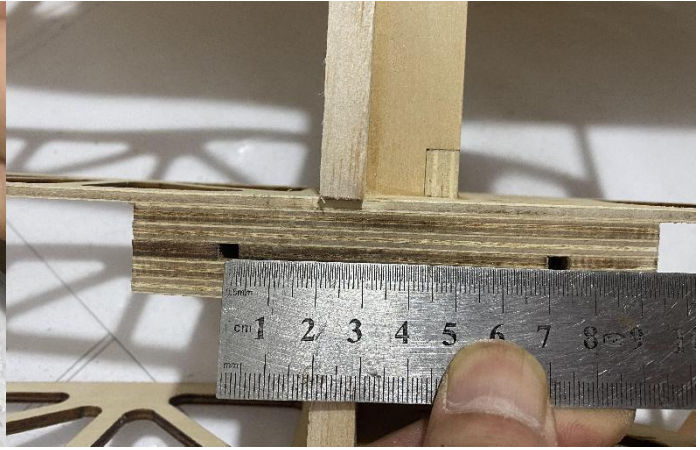
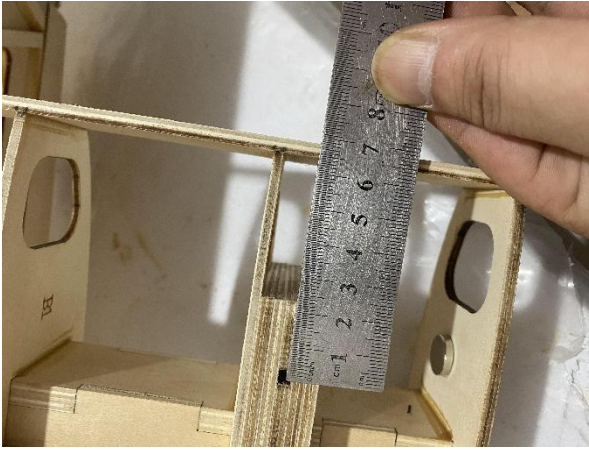


**16) Assemble the wing ribs and glue the undercart stiffeners.**

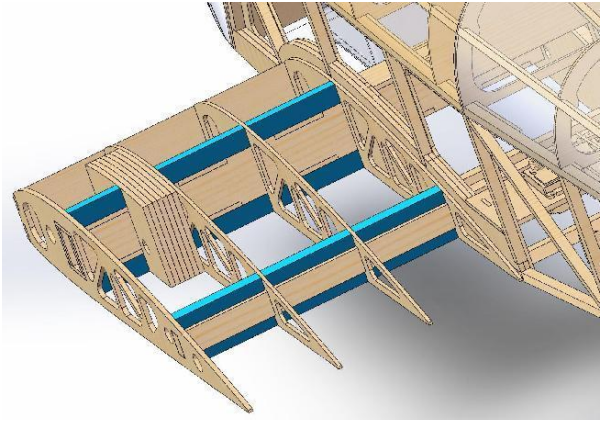


**17) Mark the opening positions of the undercart for later installation.**

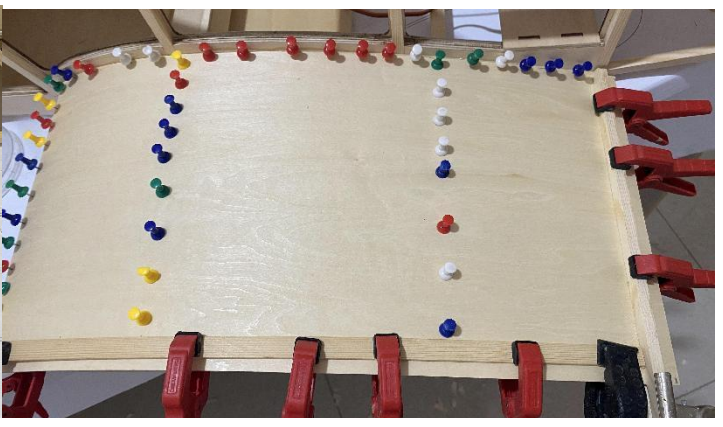
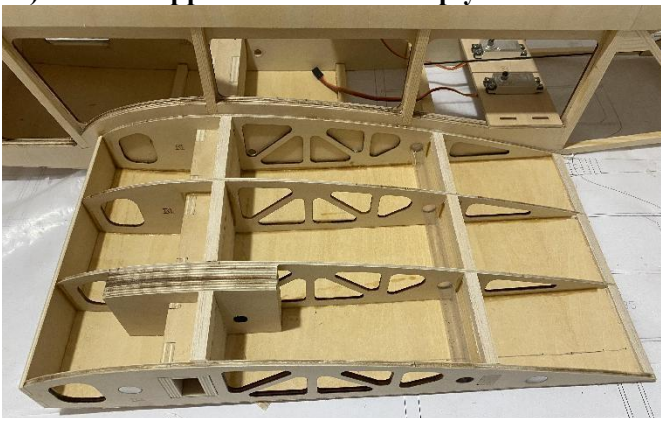




18) Glue balsa blocks above and below the wing spars and polish them in line.



19) Glue the upper and lower 1mm plywood cover.



20) Cut and sand the leading edge of the wing according to the wing section mould.



**21) Glue the wheel cowlings.**



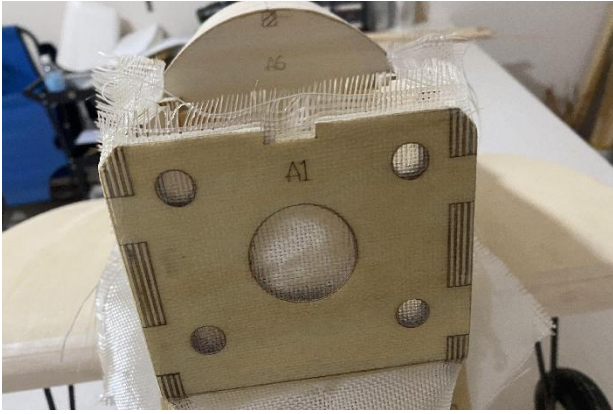
**22) Use the wheel cowling as a template to mark and glue two pine strips to secure it.**



**23) Fix the wing cowlings with self-tapping screws.**

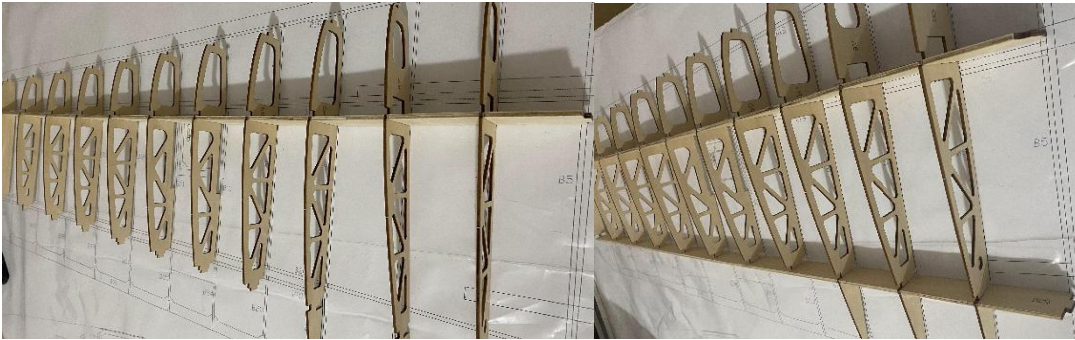


**24) Use fiberglass cloth to reinforce the nose position. (Glass fiber cloth and resin materials need to be prepared by yourselves).**

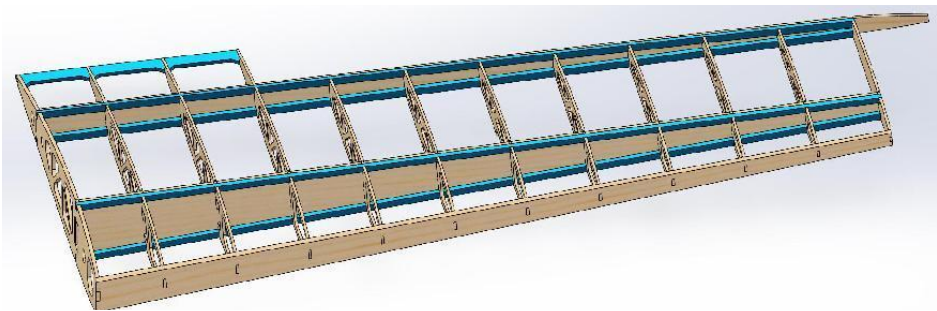


## 2 WINGS ASSEMBLY

1) Build the wings according to the ribs numbering position.



2) Glue balsa strips and trailing edge plywood on the wings.



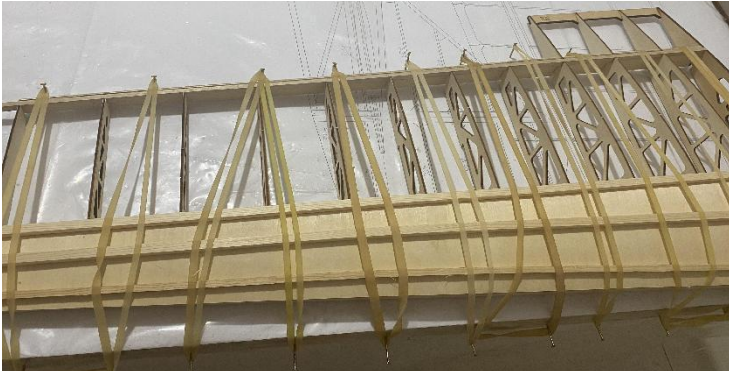
3) Glue the wing tip plywood.



**4)Glue the made wing scabbard and wing sternum together.**



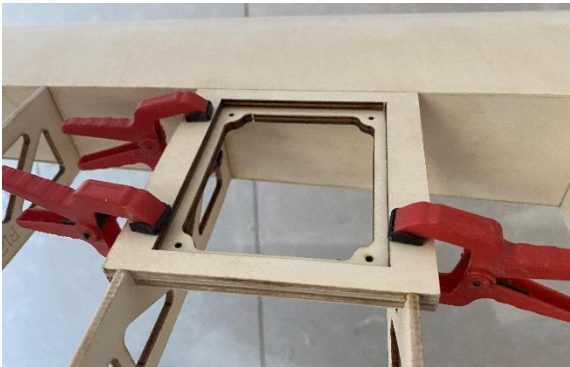
**5)Glue the upper and lower wing cover.**



**6)Glue 2 layers of 8MM balsa sheets on the leading edge of the wing and polish it into the shape according to the airfoil mould.**



**7)Glue aileron servo mount.**



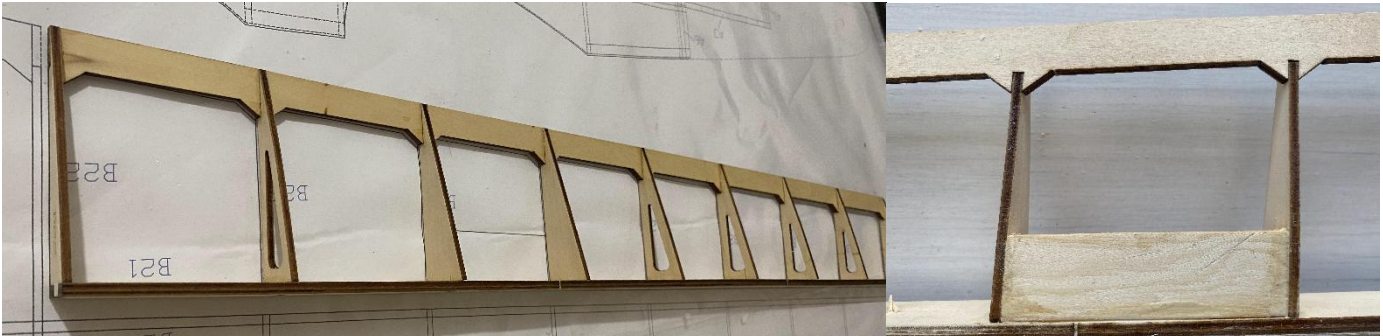
**8)Fill the wing ribs with balsa strips and polish them flat.**



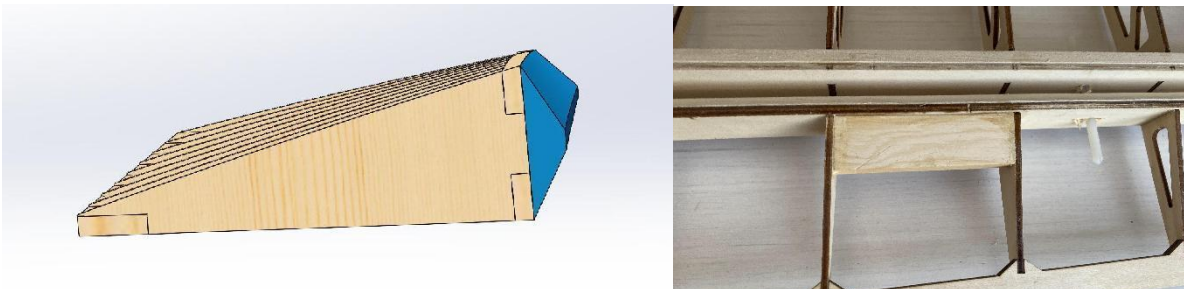
**9) Fixing of aileron servos.**



**10) Assemble ailerons according to the plan, and attach pine blocks to the fixed position of the horns for reinforcement.**

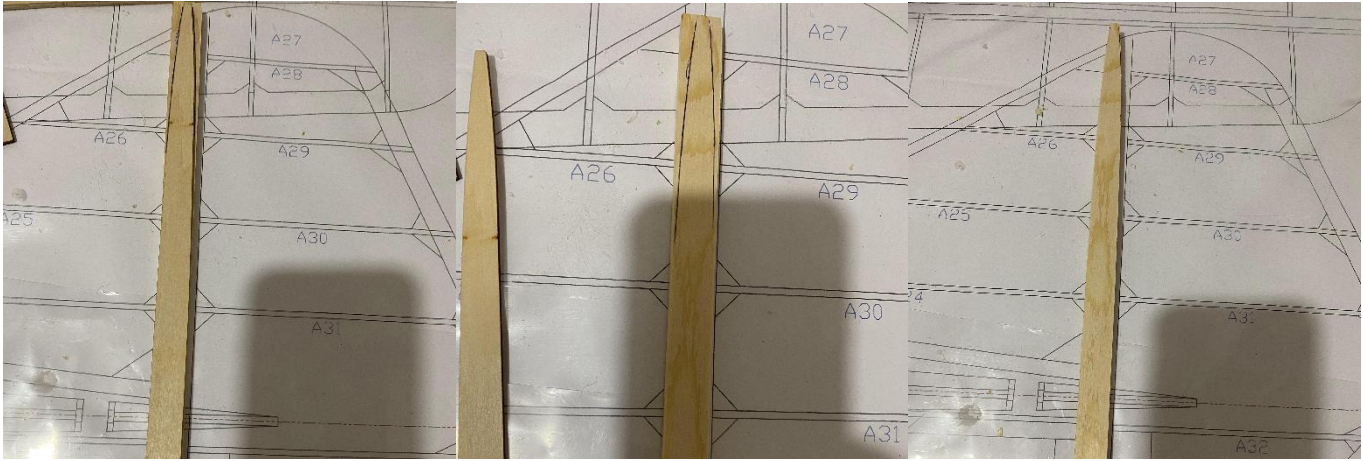


**11) Glue 8MM balsa wood on the leading edge of the ailerons and sand it into the triangle shape.**

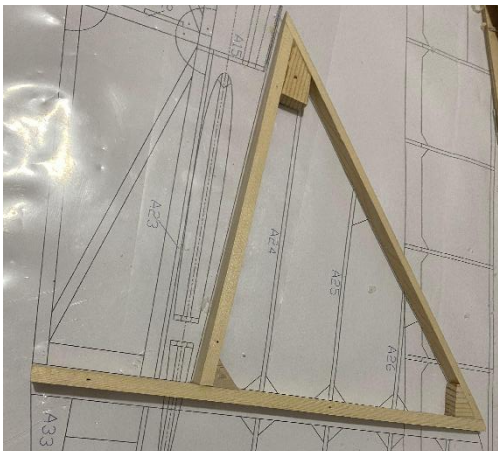


### **3 TAIL ASSEMBLY DETAILS**

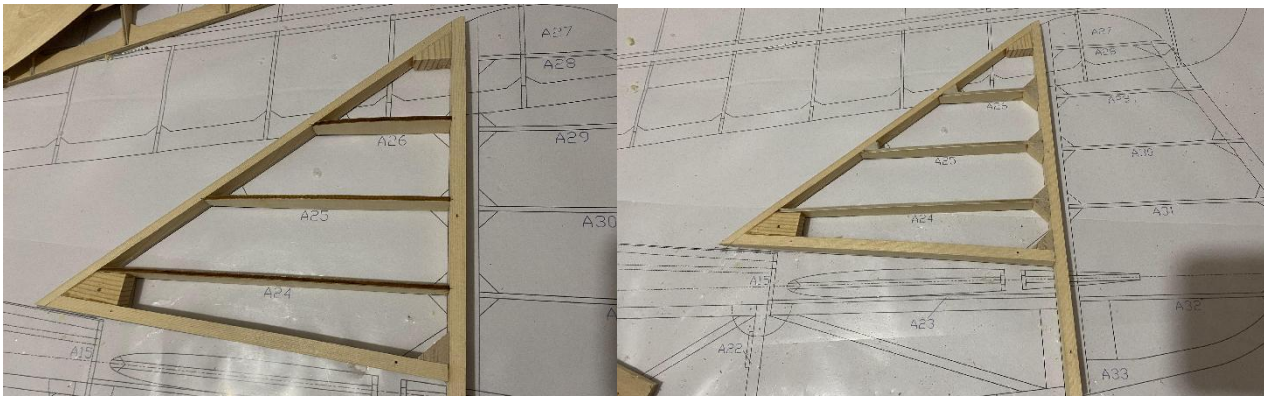
**1) Use A34 as a template to mark the 8X16MM pine strip and trim the excess.**



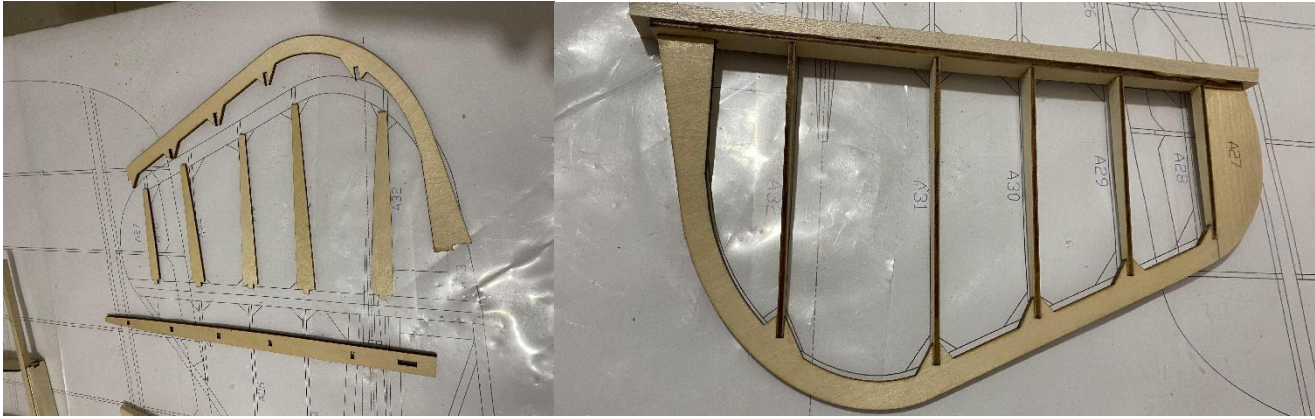
**2) Glue the pine sticks according to the plan, and strengthen the connecting part.**



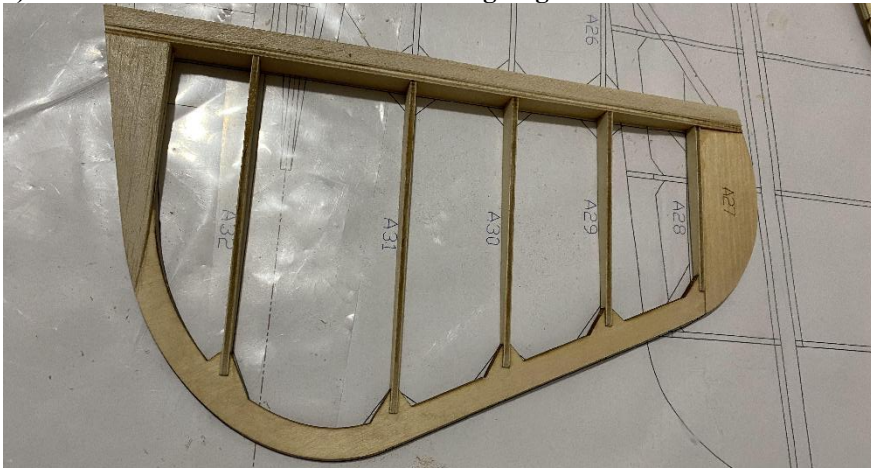
**3) Glue A24.A25.A26 plywood and reinforce them with triangular wood blocks.**



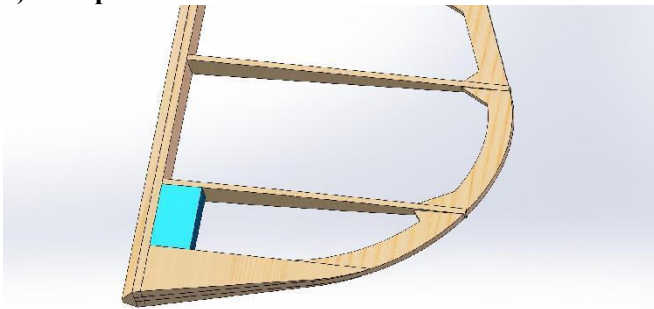
**4) Assemble the rudder according to the plan.**



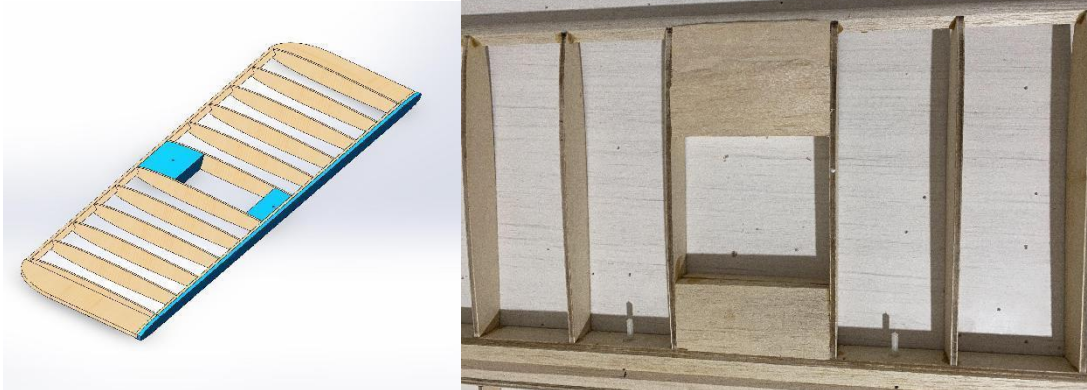
**5) Glue 8MM balsa sheet on the leading edge of the rudder and sand it into the triangle shape.**



**6) Glue pine blocks for horns installation.**



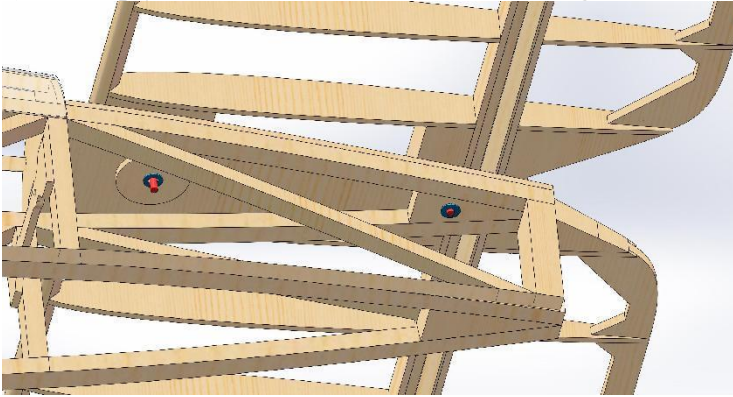
**7) Assemble the horizontal tail according to the plan, reinforced with balsa blocks in the middle.**



**8) Assemble the elevator according to the plan.**



**9) Attach plywood reinforcement under fuselage A23 and install claws nuts to hold horizontal stabilizer.**



**10) Fix the vertical tail with the metal part.**



**Notice: Before flying, you need to put a little tape on the bottom of the wing and center wing joint to prevent the wing from falling off. (Although the main force surface of the wing is up and down during the flight, we still pasted a little tape on the bottom of the wing during the test flights and completed several aerobatics. It worked well and no signs of the wing falling off the middle wing were seen)**



**4 FINISHED**



**THANKS FOR YOUR SUPPORT TO VALUEPLANES!**