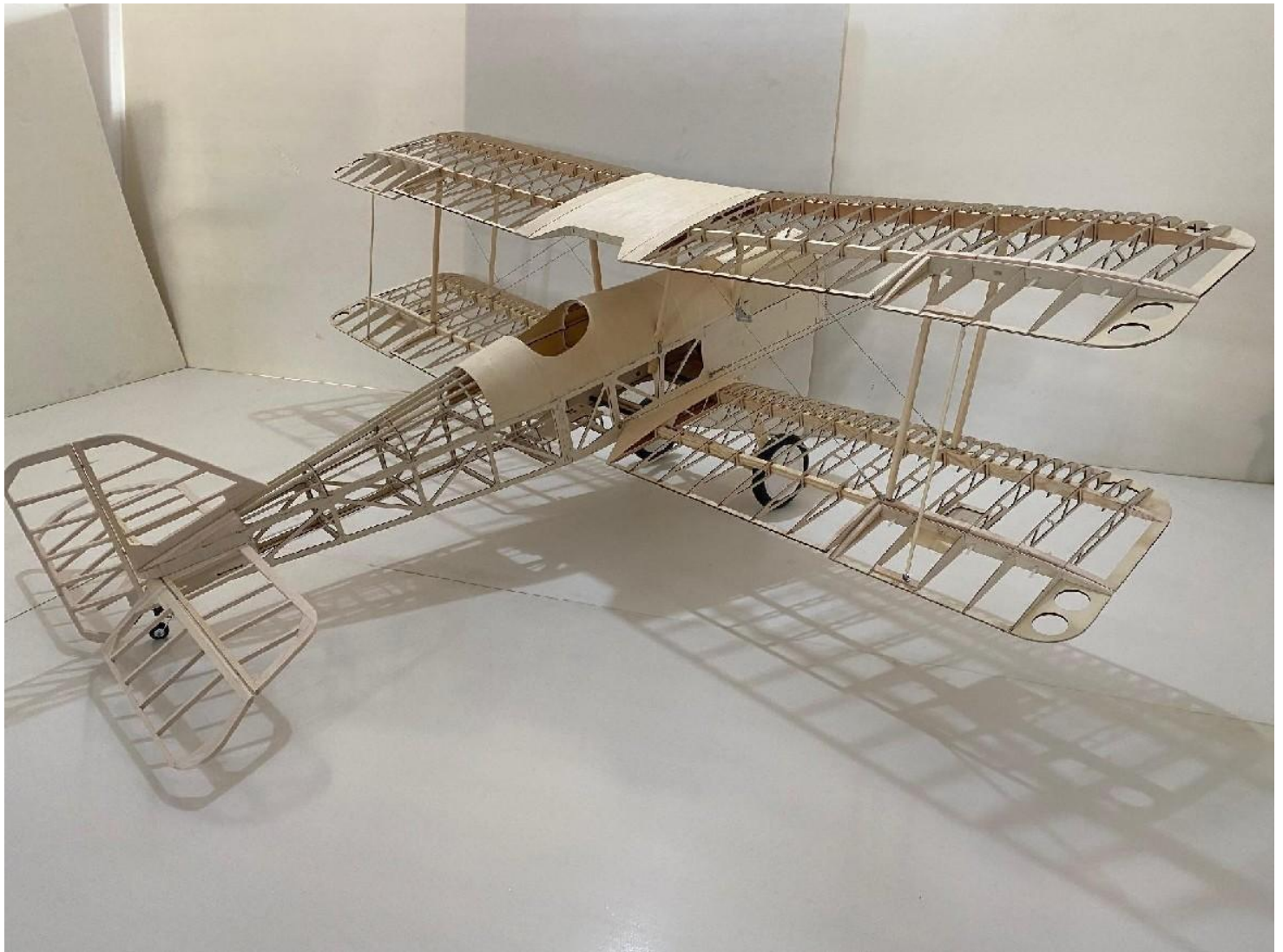


VALUEPLANES
1/4 SCALE SE5a
LASER CUT KIT
BUILDING INSTRUCTIONS



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INTRODUCTION



THE ROYAL AIRCRAFT FACTORY S.E.5 IS A BRITISH BIPLANE FIGHTER AIRCRAFT OF THE FIRST WORLD WAR. IT WAS DEVELOPED AT THE ROYAL AIRCRAFT FACTORY BY A TEAM CONSISTING OF HENRY FOLLAND, JOHN KENWORTHY AND MAJOR FRANK GOODDEN. IT WAS ONE OF THE FASTEST AIRCRAFT OF THE WAR, WHILE BEING BOTH STABLE AND RELATIVELY MANEUVERABLE. ACCORDING TO AVIATION AUTHOR ROBERT JACKSON, THE S.E.5 WAS: "THE NIMBLE FIGHTER THAT HAS SINCE BEEN DESCRIBED AS THE 'SPITFIRE OF WORLD WAR ONE'".

PARTS LIST

Plywood sheets pack x1	1:1 installation drawing x1
Batten sets	Building instruction x1
Laser cut steel brackets	Accessories bag x1
Steel tube set x1	Carbon tube + PVC tube x2
1/4 scale main wheels + tail wheel set	Push rods with tubes

KIT FEATURES

- 1/4 Scale detail and scheme based on Royal Aircraft Factory S.E.5a**
- Extremely lightweight.**
- Quality light weight balsawood and ply.**
- Precision laser cut wood and modern interlocking construction.**
- Suitable for either EP or GP power.**
- Complete and quality all metal hardware pack.**
- Comes with 1/4 scale vintage wheels.**
- Scale Metal parts.**
- Extensive clear drawings and full page colour instructions with numerous pictures covering all stages of construction**
- Only adhesives and coverings are required to complete the airframe.**

GERNERAL AND SAFETY 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 18 years of age under the supervision of adults.
- Their construction and operation requires technical understanding, careful craftsmanship and safety-conscious behavior.
- 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. Please refer to the manufacturer's Instructions.
- 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 defective parts with original spare parts.
- Do not use equipment that has been damaged or has got wet, even if it is dry again!
- Do not make any changes to the model 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. Check the Centre of Gravity.

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.

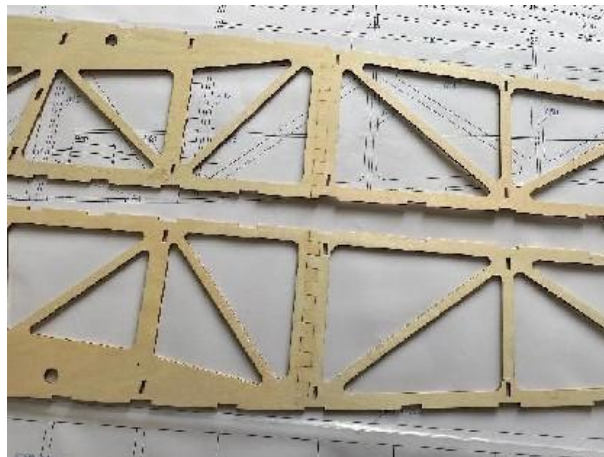
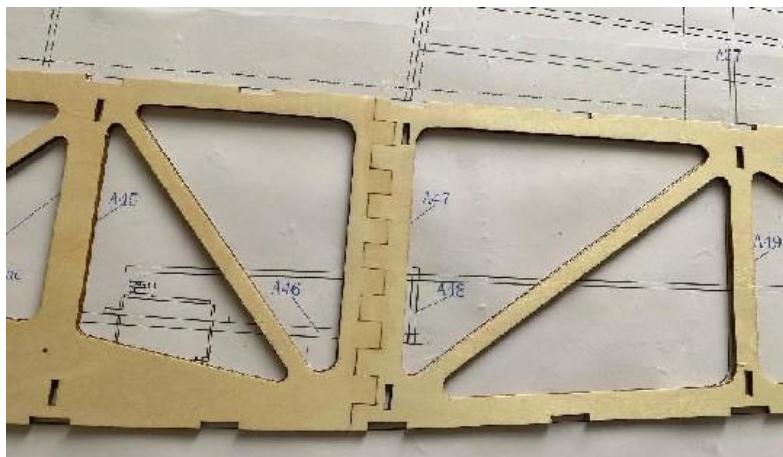
Do not "aim" the transmitter's antenna at the model during operation. In this direction, the transmitter has the lowest radiation. The best position of the antenna is to be side on to the model.

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

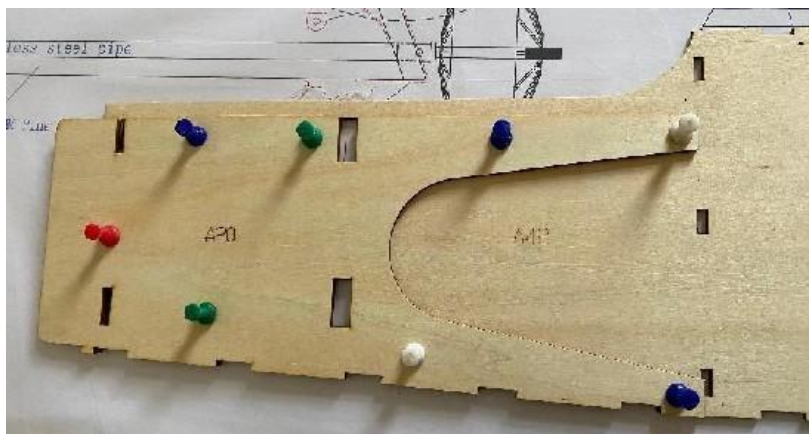
BUILDING INSTRUCTIONS

FUSELAGE ASSEMBLY

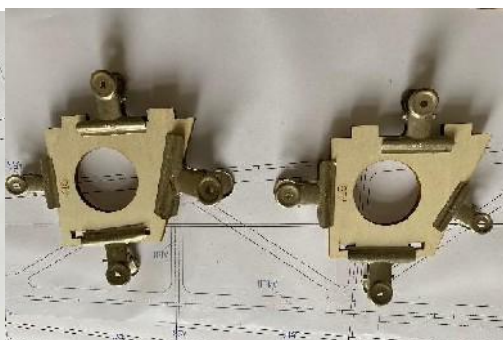
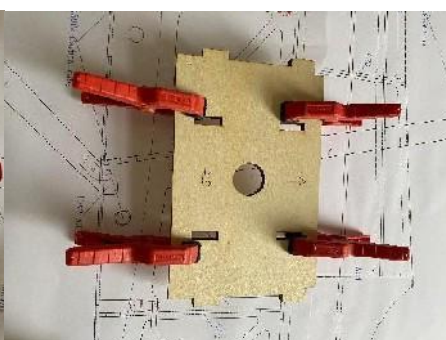
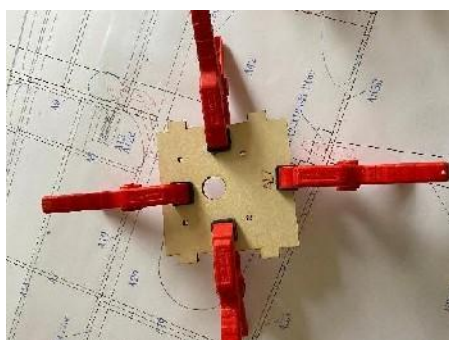
Join the fuselage halves together. Make sure you have a left and a right hand side.



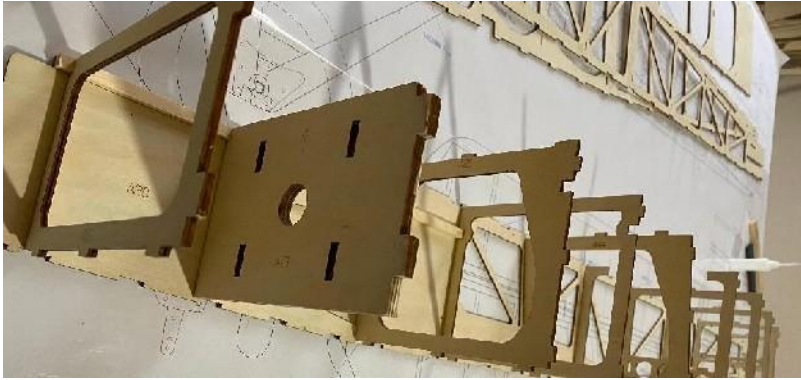
Glue A20 (stiffener) on the nose, make sure you have a left and a right hand side.



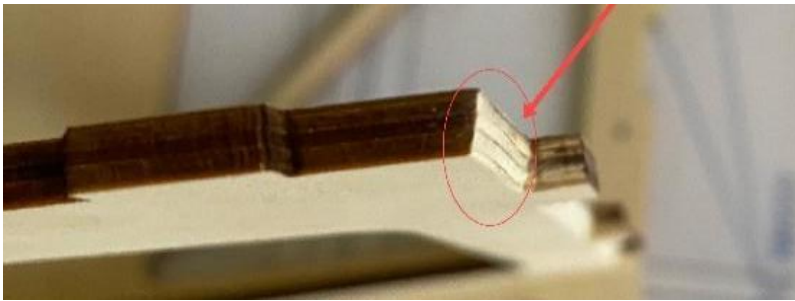
Glue A17, A18, A19 together as per photos below.



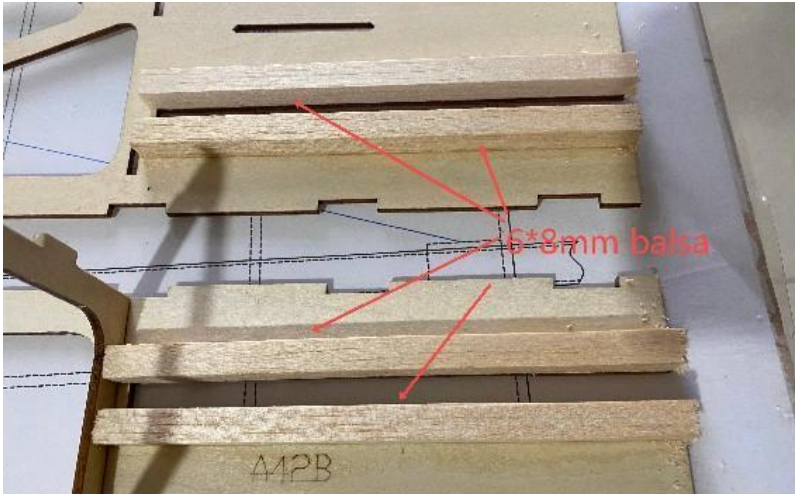
Install the formers to the fuselage.



A44 needs to be chamfered.



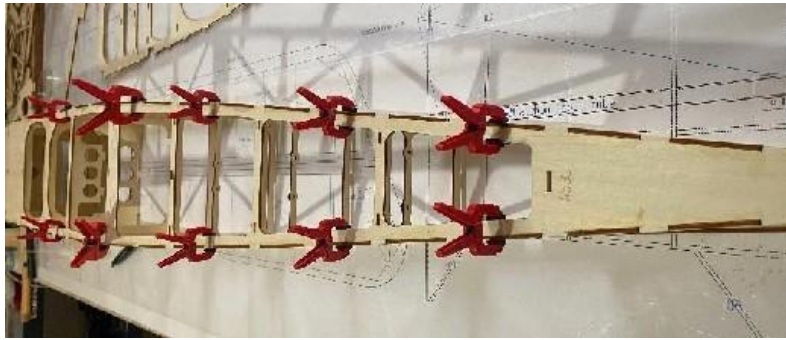
Glue 6x8mm balsa strips to the horizontal tail mounting position for reinforcement.



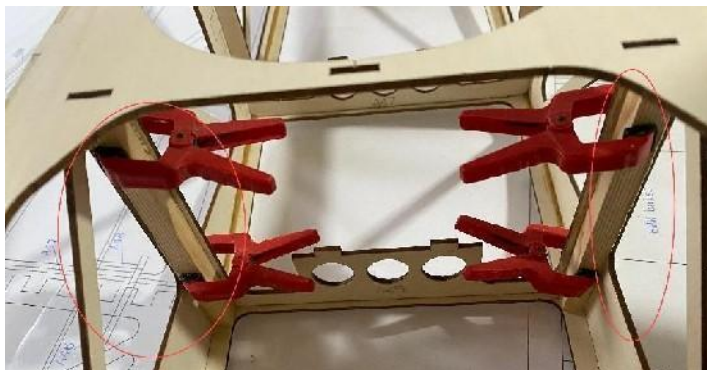
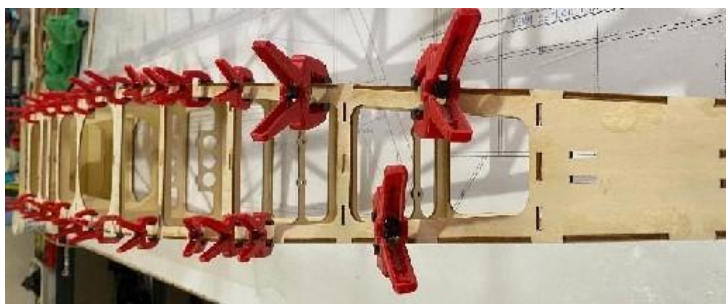
Install the fuselage lateral boards.



Install plywood A53 to the bottom of the fuselage.



Install plywood to the upper fuselage.



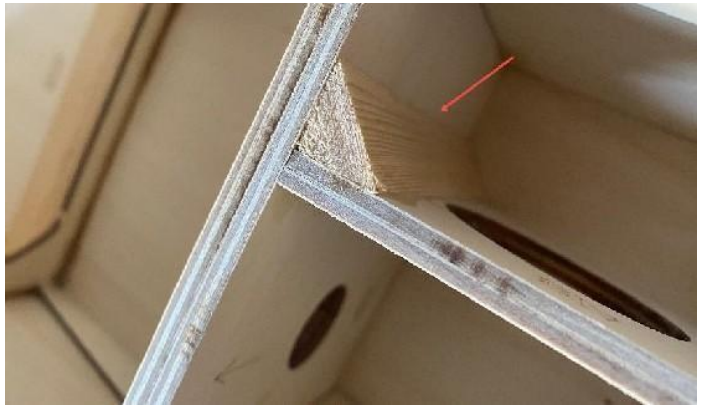
Glue 10x10mm pine strips on the fuselage bulkhead A43, A45 for reinforcement.



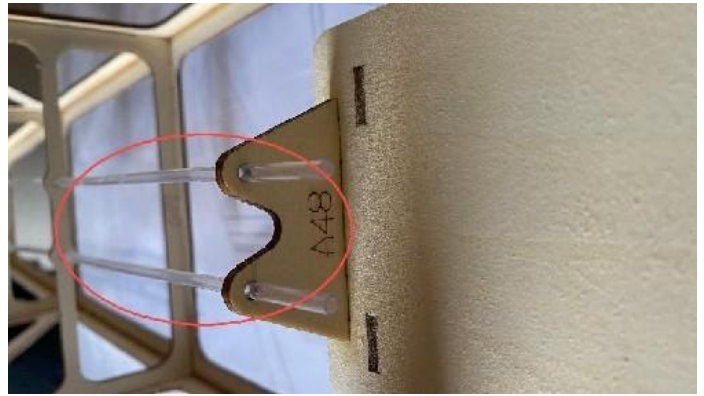
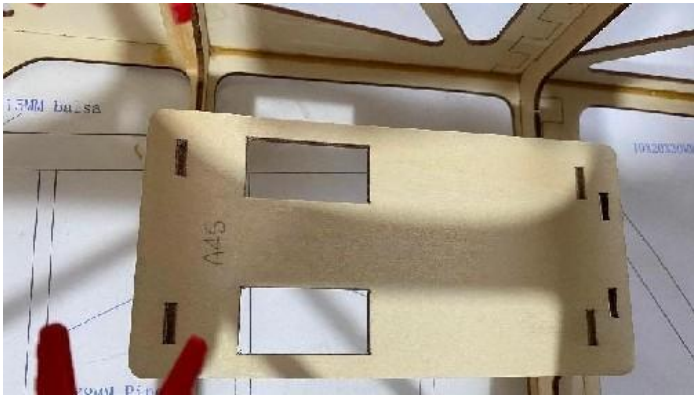
Glue pine strips to the landing gear mounting position for reinforcement.



Glue the motor mount, reinforce it with triangular pine wood.



Glue the servo mounts and install the PVC tubes for the push rods.



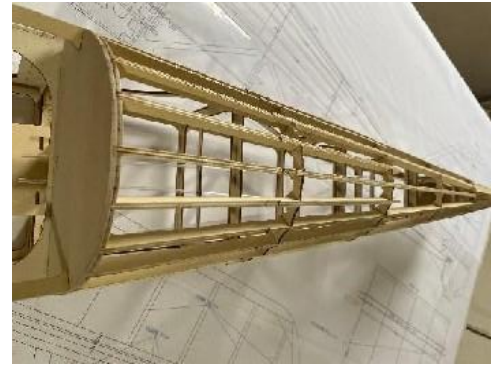
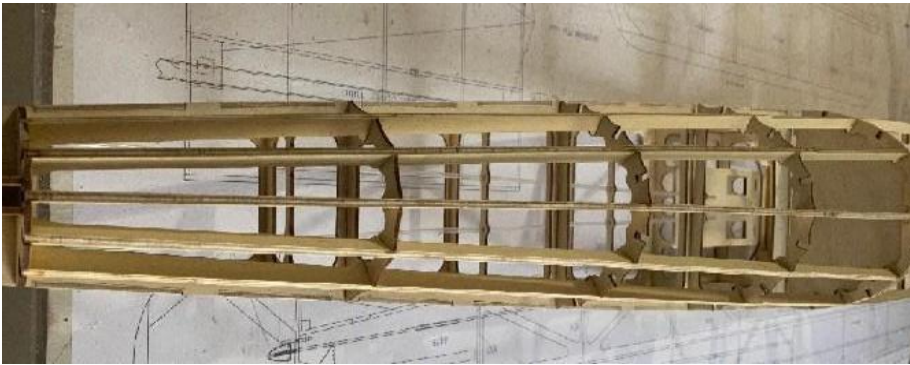
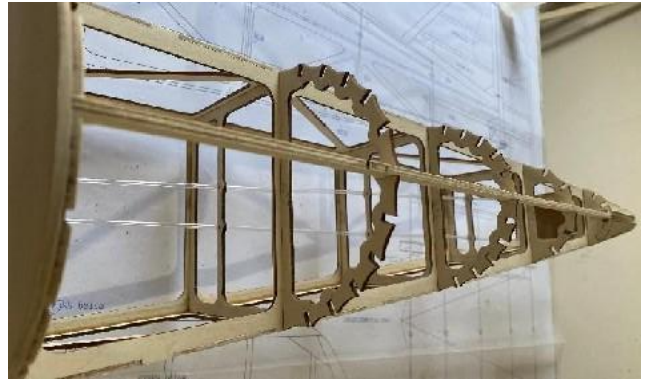
Assemble and glue the upper fuselage formers.



Install the formers to the fuselage.



Glue plywood stringers to connect the formers.



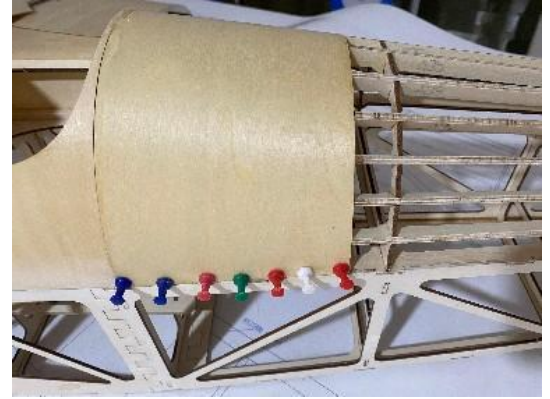
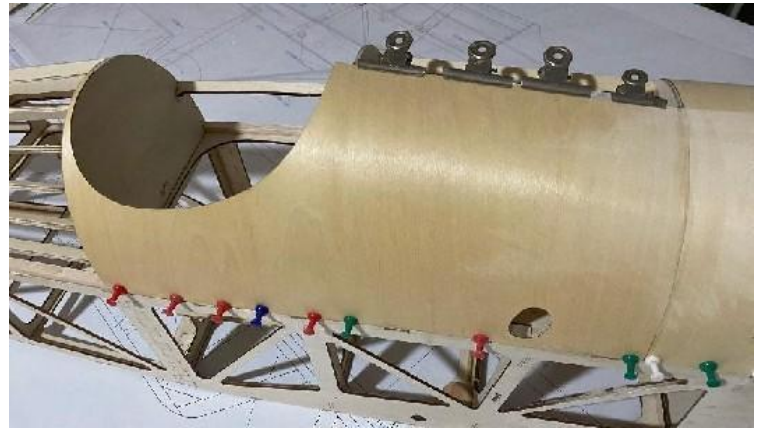
Glue 6x8mm balsa strips on both sides of the formers and remove excess parts.



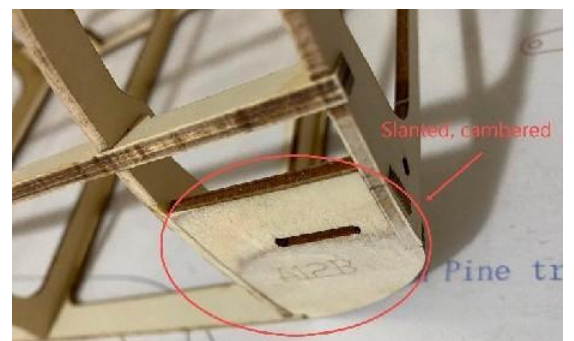
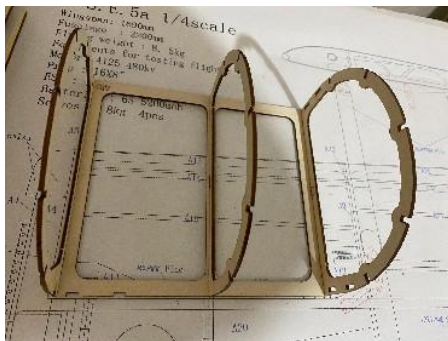
Stack and glue 8mm balsa on the tail of the fuselage and sand it to shape. Cut off any excess to allow room for the elevator to move up and down.



Glue fuselage top deck (1mm plywood).



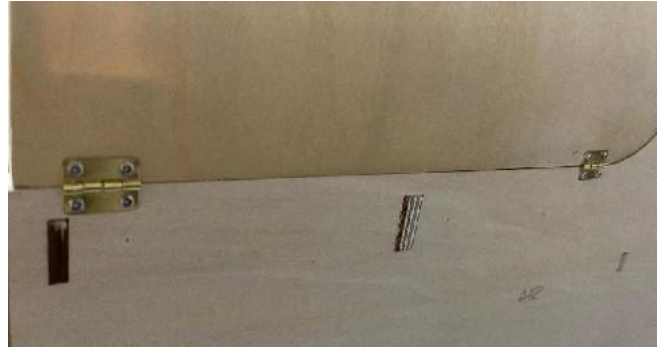
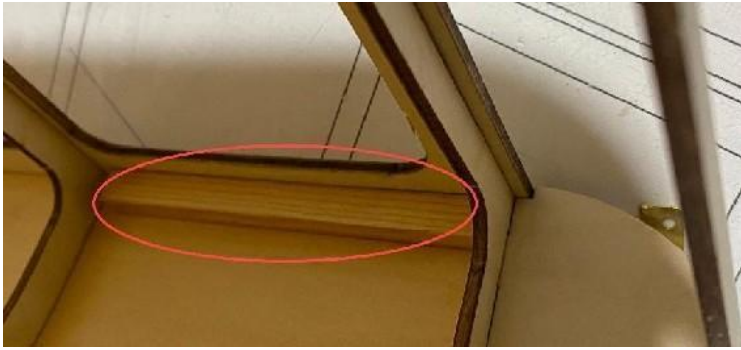
Glue the formers of the hatch, glue the mount A12 of the hatch latch, then glue A12B to A12 and sand the protruding part into an arc in order to glue the hatch cover in the next step.



Glue the top deck (1mm plywood) for the hatch and install the latch locks.



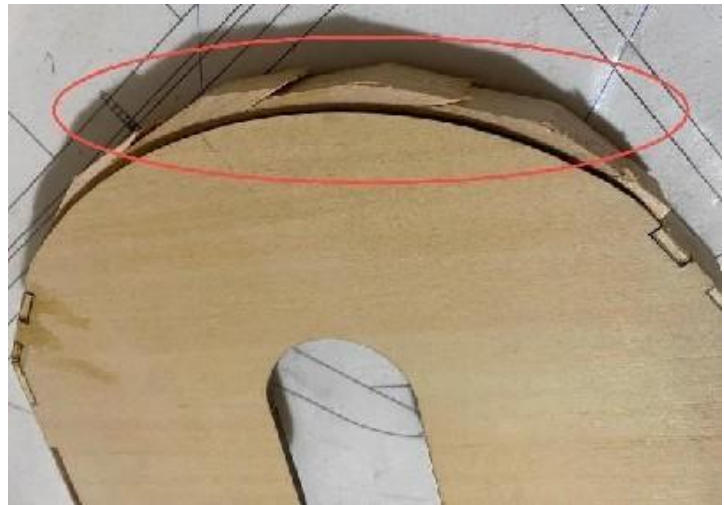
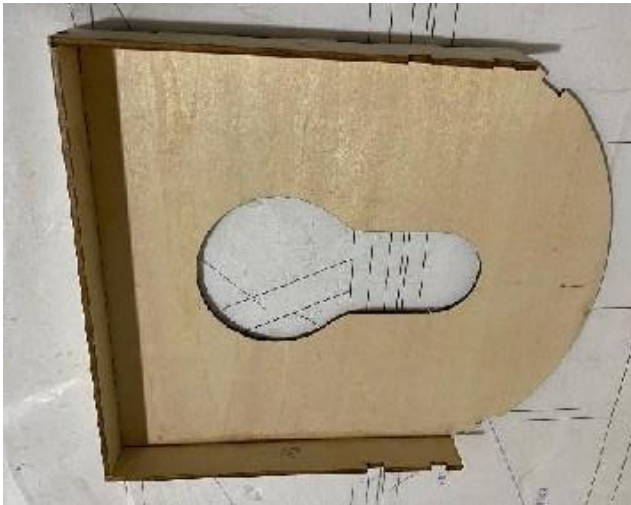
Glue pine wood strips for hinges reinforcement.



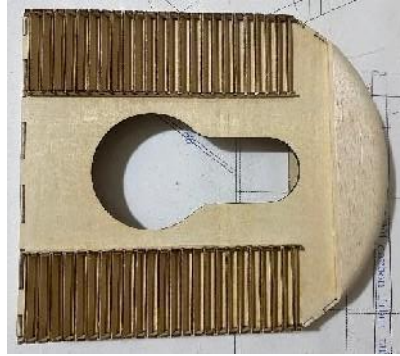
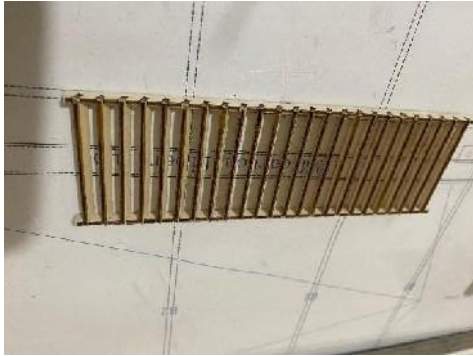
Drill hole in former for the hatch latch.



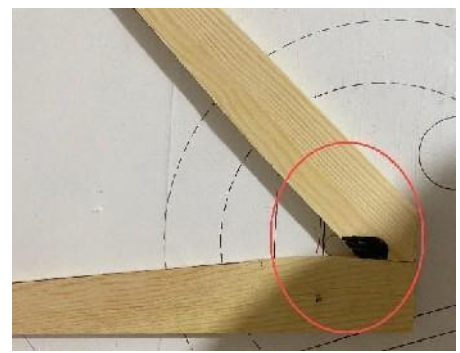
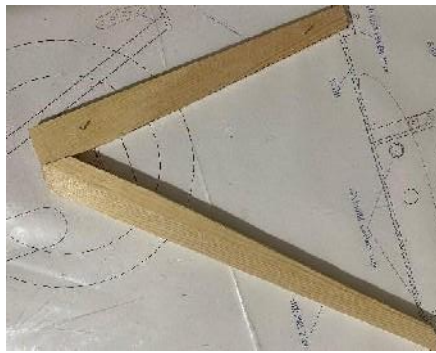
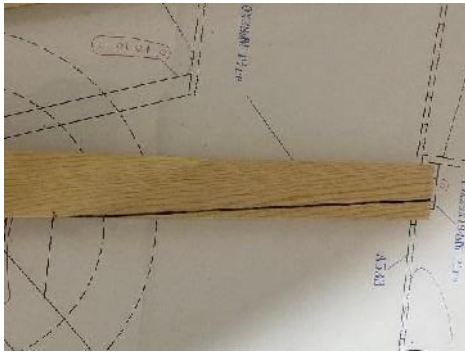
Fill the front with 8mm balsa and sand to shape



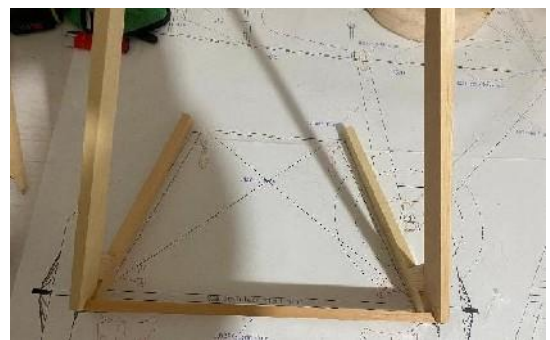
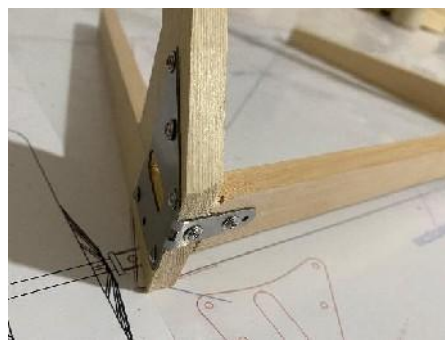
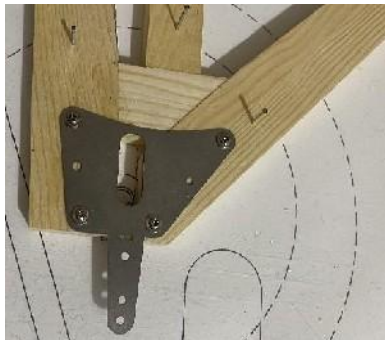
Assemble the radiator and attach it to the front. Fix the front to the fuselage with self-tapping screws.



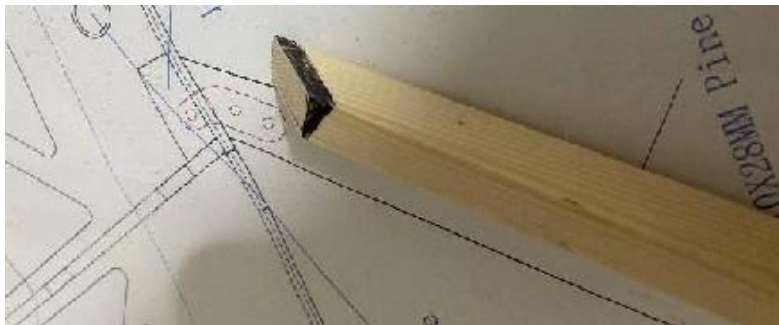
Cut off the excess of the pine strips according to the shape on the drawing. Epoxy wood parts together.



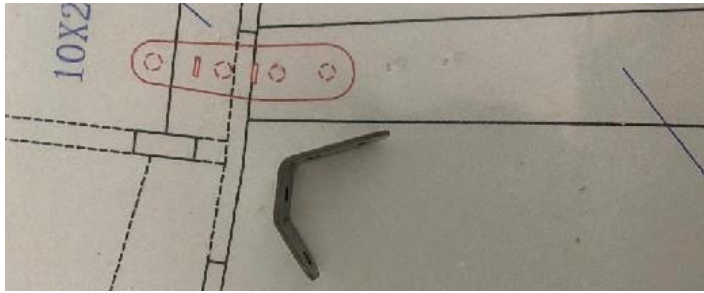
Install the metal brackets and use self-tapping screws to fix the cross bar after bending.



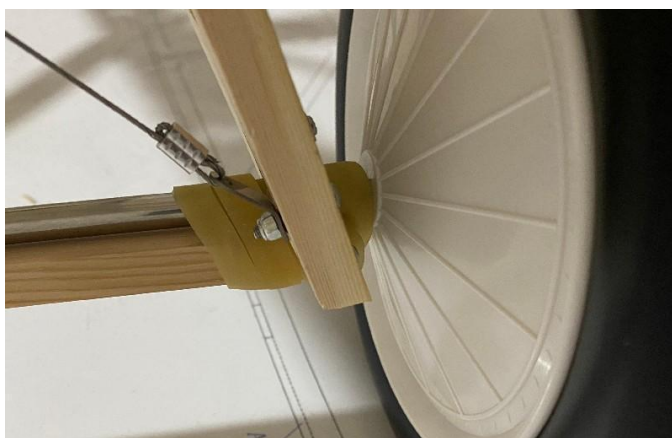
1) A bevel needs to be cut out where the undercarriage meets the fuselage.



Bend the metal mounting brackets and fix the undercarriage to the fuselage with self-tapping screws.



Assemble the landing gear axle, wrap and fix with rubber bands. Make bracing wires to brace the undercarriage.



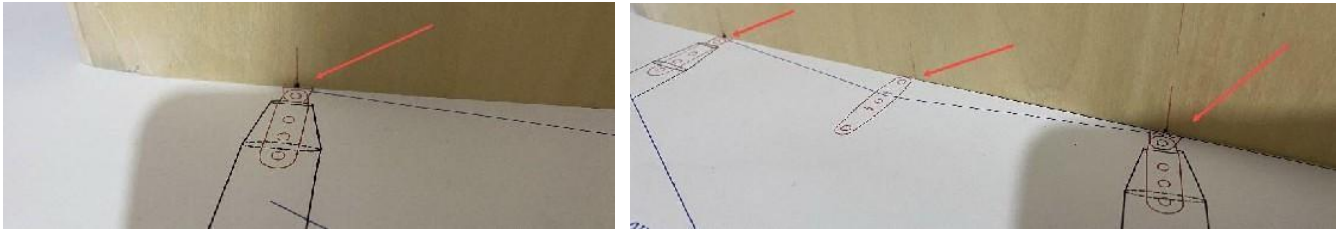
Assemble the centre of the upper wing with the carbon tubes. Glue assembly to lower wing sheeting. Glue pine blocks to strengthen fixing points.



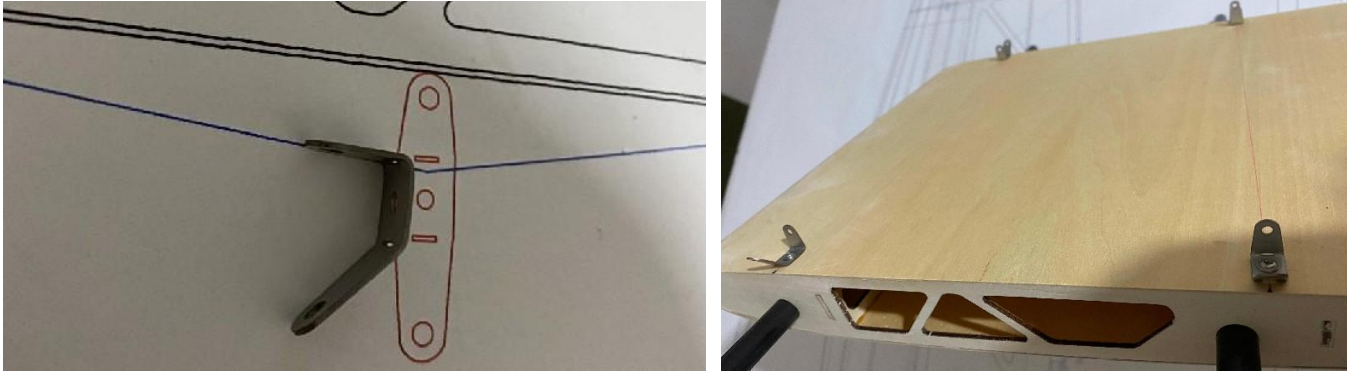
Glue 8x8mm balsa strips to the leading edge, then glue the top sheeting in place.



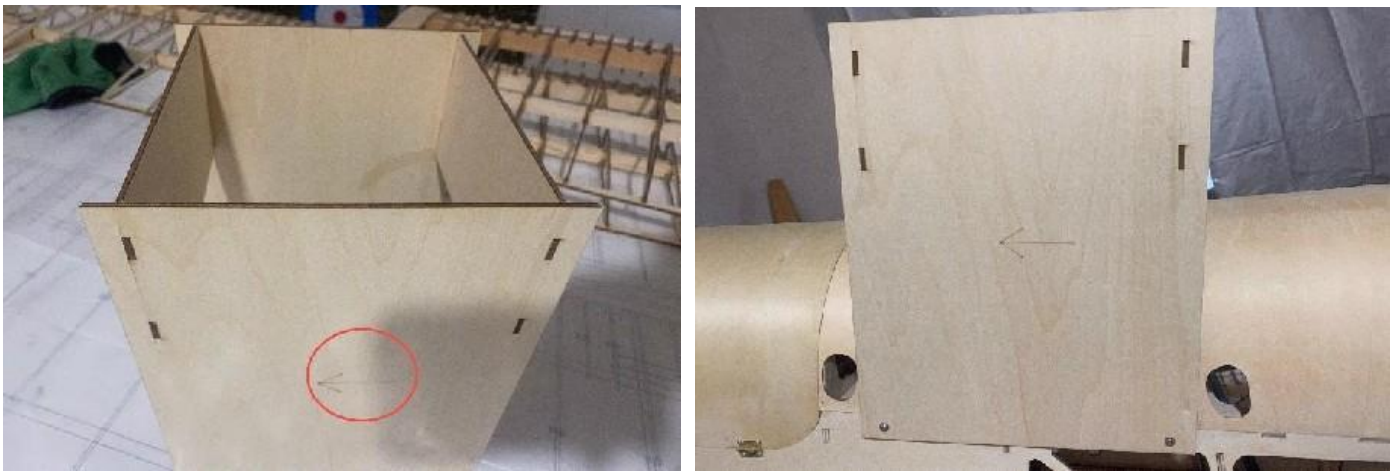
Align the middle wing with the drawing and mark the mounting positions.



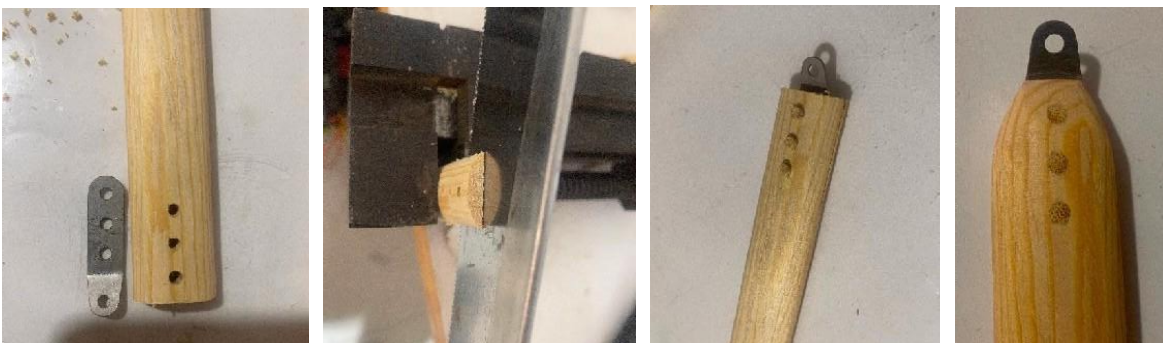
Bend metal brackets and attach to the middle wing with self tapping screws.



Assemble the aligning frame (for positioning the middle of the top wing) and fix it to the fuselage with self tapping screws. (The aligning frame is only temporary and will be removed in the following steps)



Drill 3mm holes in the struts with reference to the metal brackets, cut a slot and epoxy the metal brackets, and then fix it in place with 3mm wooden dowels.

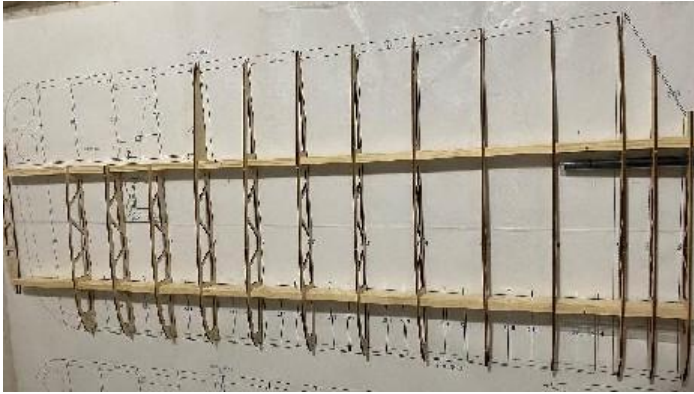


Glue the centre of the upper wing to the fuselage. Connect the struts ensuring everything is centered. Fix in place with the metal brackets. The aligning frame can now be removed.

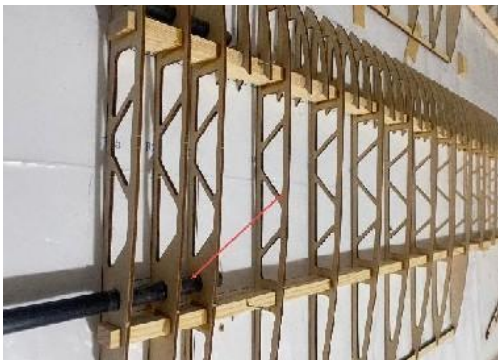


WINGS ASSEMBLY

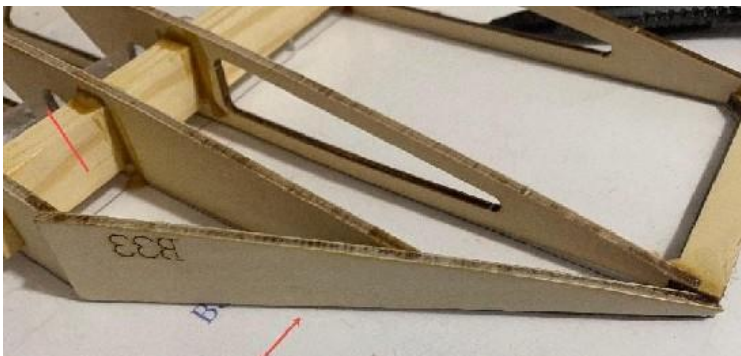
Assemble the wing ribs, spars and trailing edges according to the drawing.

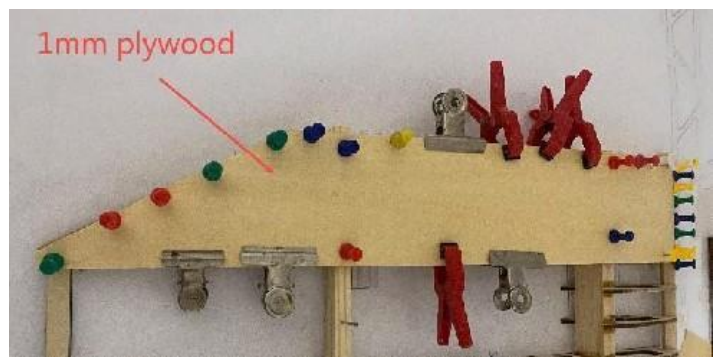


Use the template to set the dihedral angle on the first rib. Then install the PVC tubes for carbon tubes. Make sure the carbon tubes can move inside the PVC tubes freely.

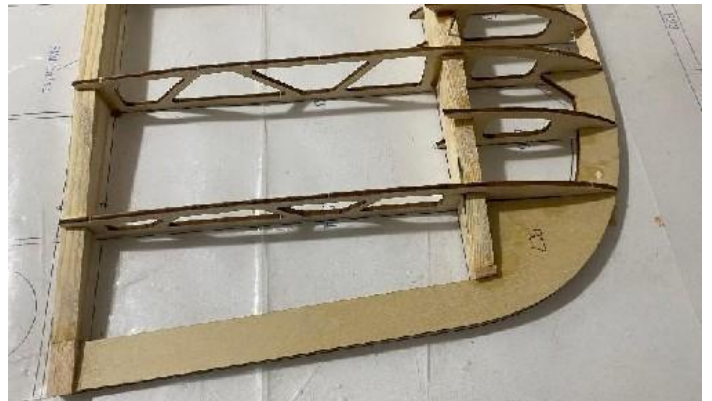


2) Glue 8x8mm balsa strips to the leading edge. Then glue the upper and lower plywood.

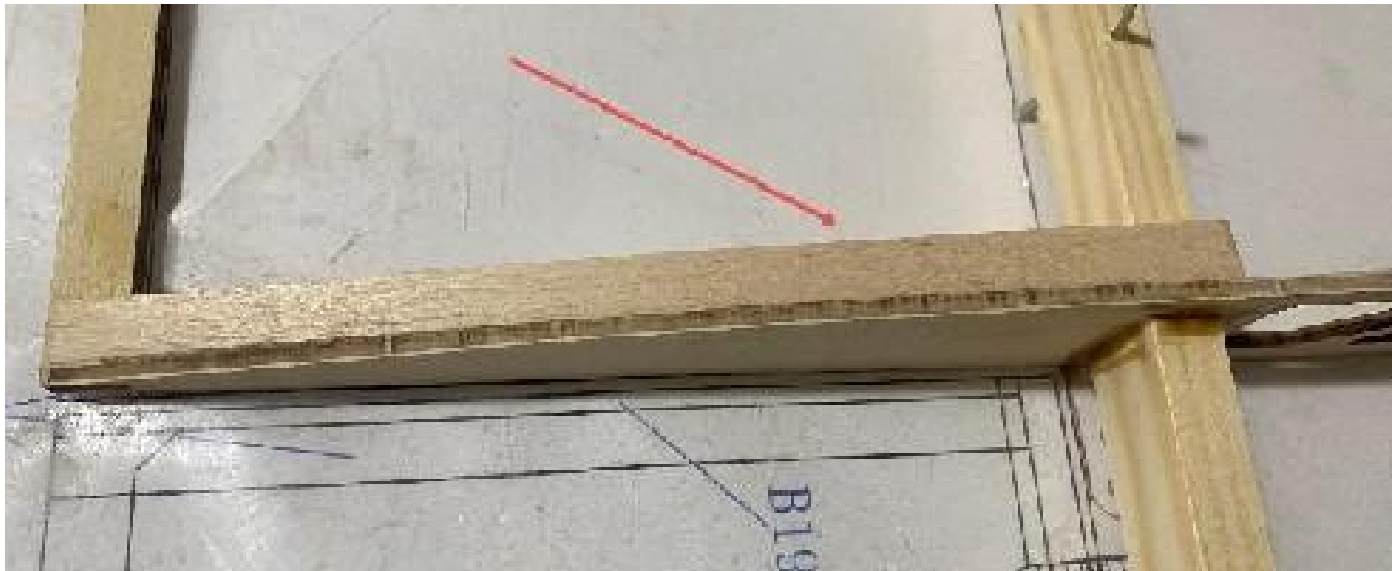




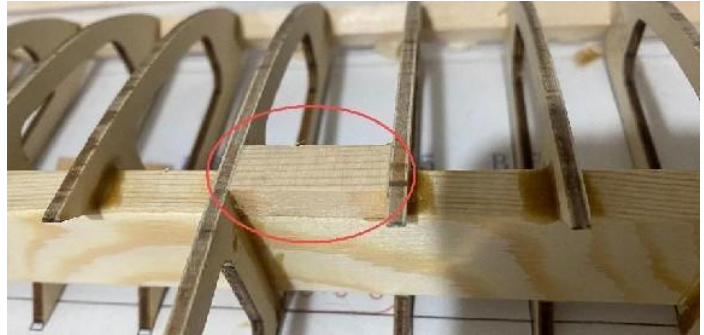
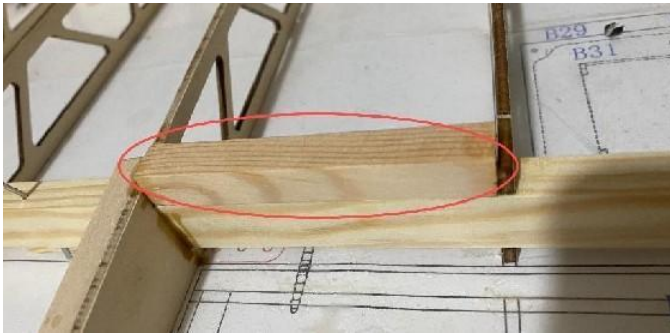
Cut excess wing spar at the wing tip (X).
Install B16 and B14 wing ribs, and glue wing tip plywood B17.



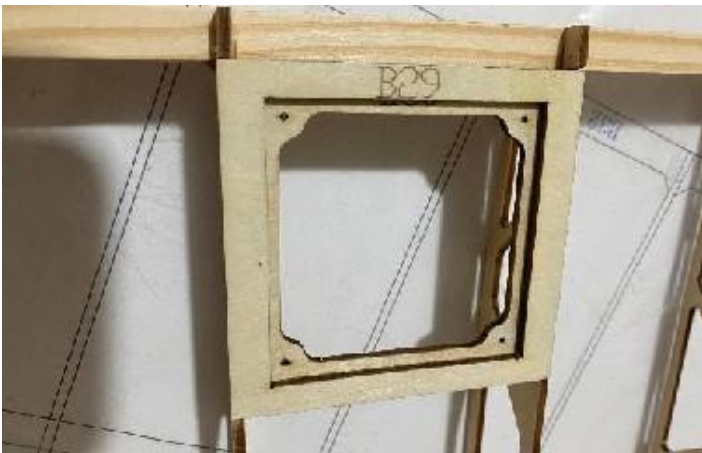
Glue balsawood on the wing ribs for additional strength when covering.



Glue pine to the joint of the wing beam for reinforcement.



Glue the mounts for the aileron servos.



Glue 10x10mm balsa strips on the trailing edge of the wings and sand flush with ribs.

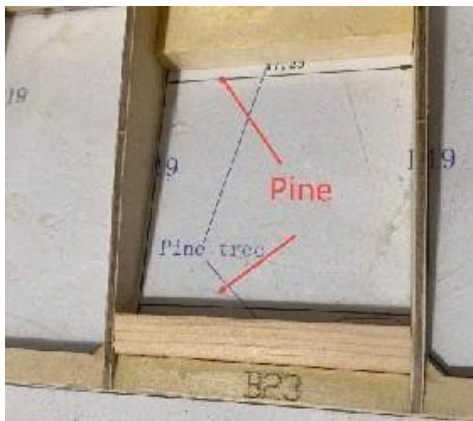
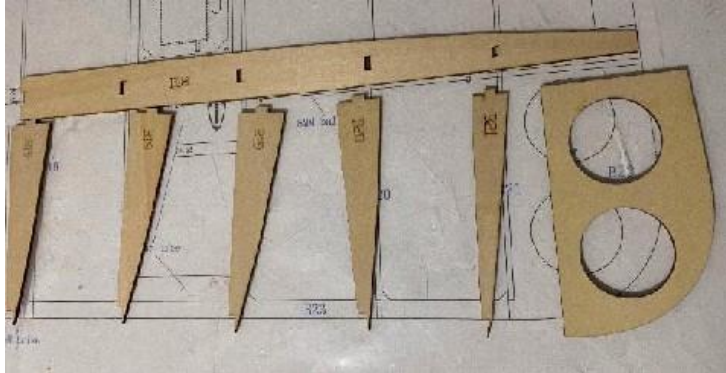


Fix metal brackets with self tapping screws.



TAIL ASSEMBLY

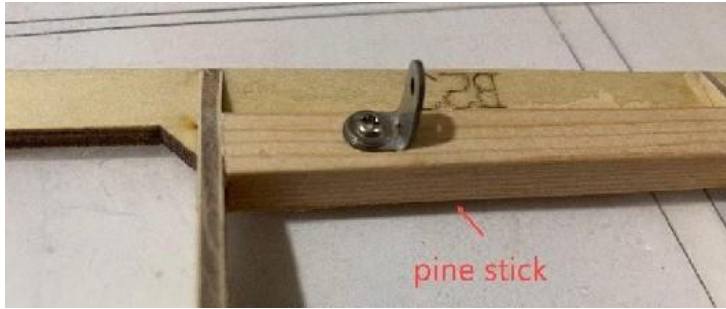
Assemble ailerons over plan and add pine strengthening strips



Glue 8mm balsa strips on leading edge and sand it into V shape.



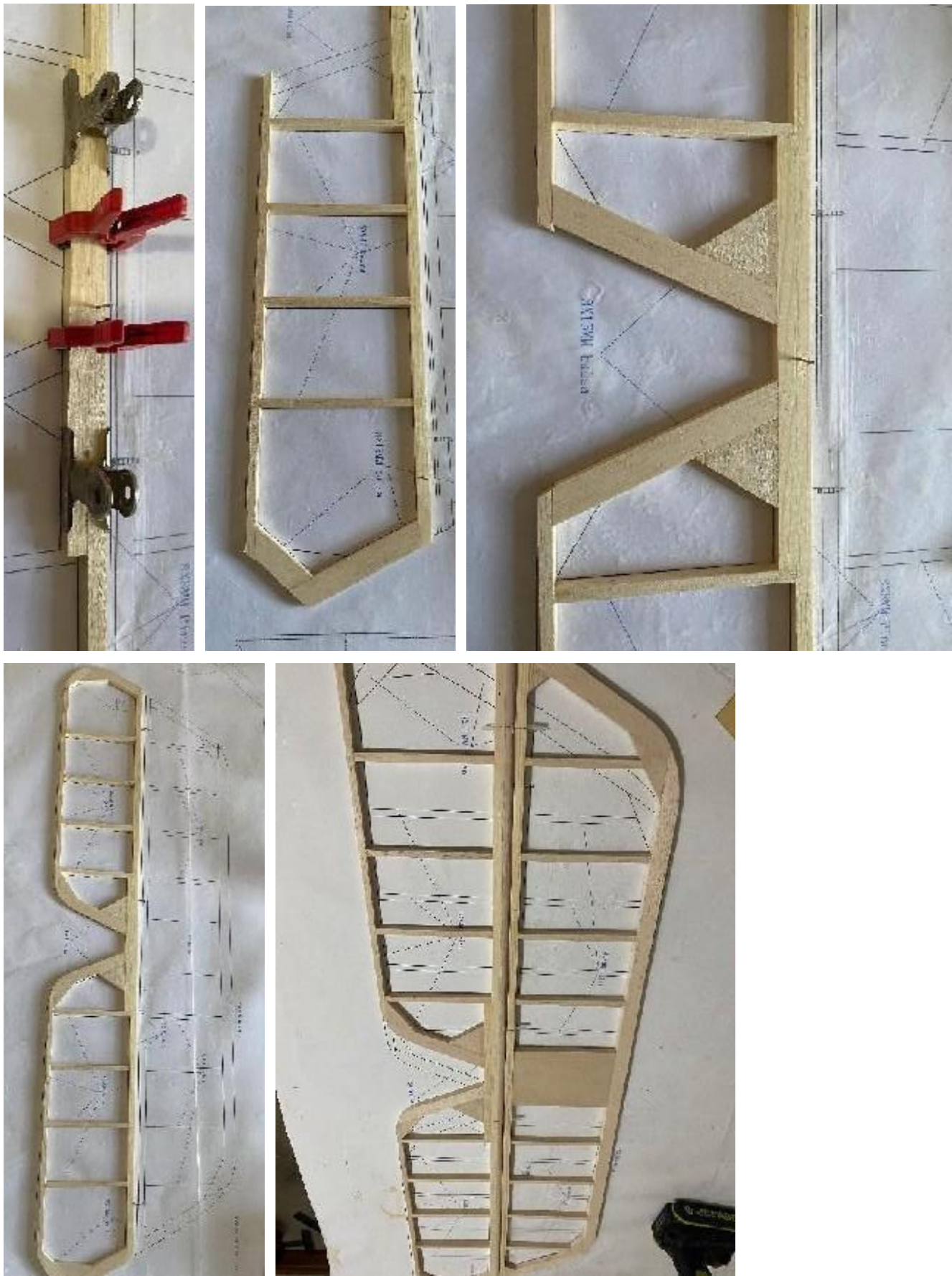
Bend and fix the metal bracket to the trailing edge using a self tapping screw.



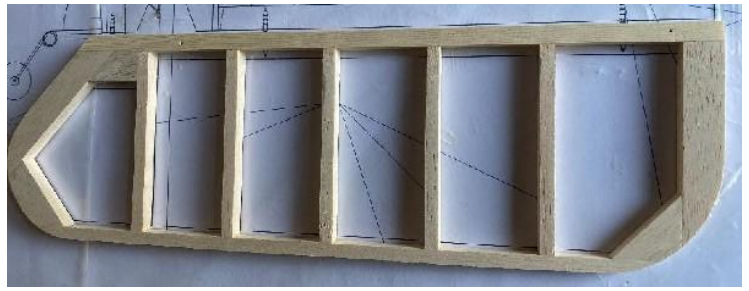
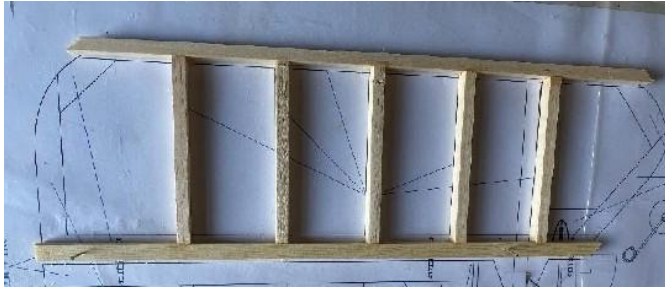
Assemble the horizontal tail over the plan.



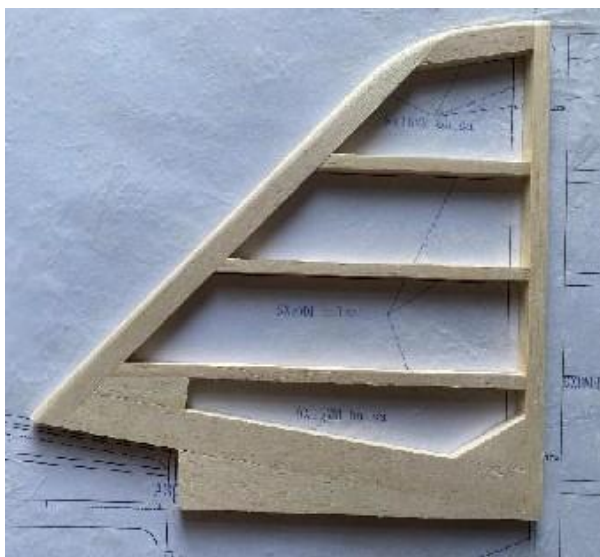
Assemble the elevator over the plan.



Assemble the rudder tail over the plan.

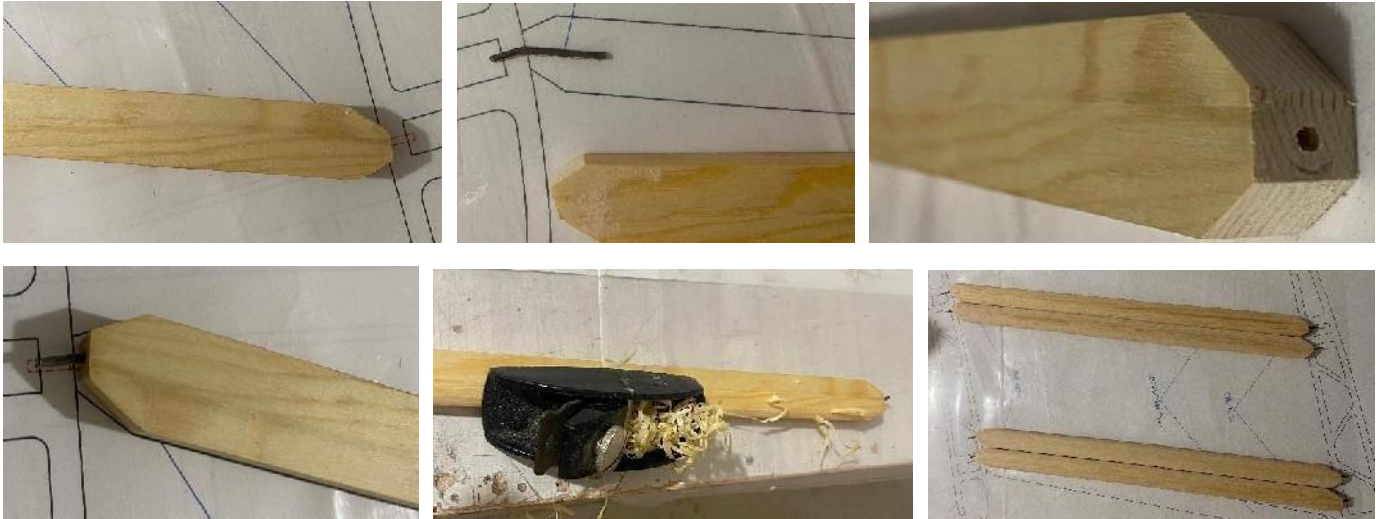


Assemble the fin over the plan.

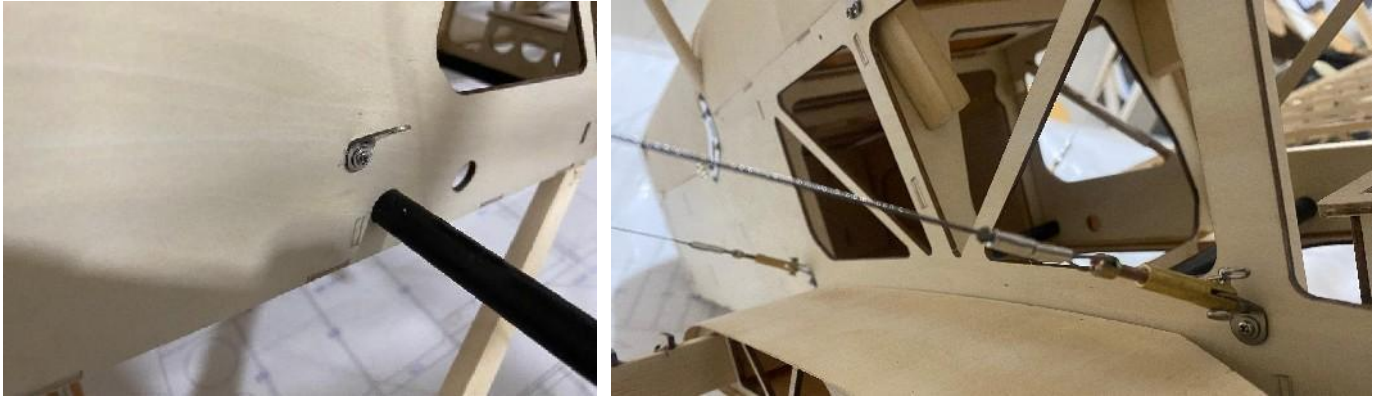


FINAL ASSEMBLY

Make the wing strut according to the shape of the drawing, and the steel wire needs to be fixed with glue.



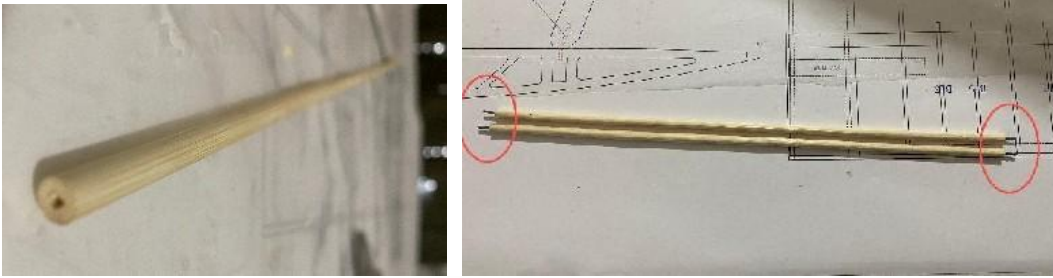
Install metal brackets in marked locations on the fuselage.



Assemble bracing wires.

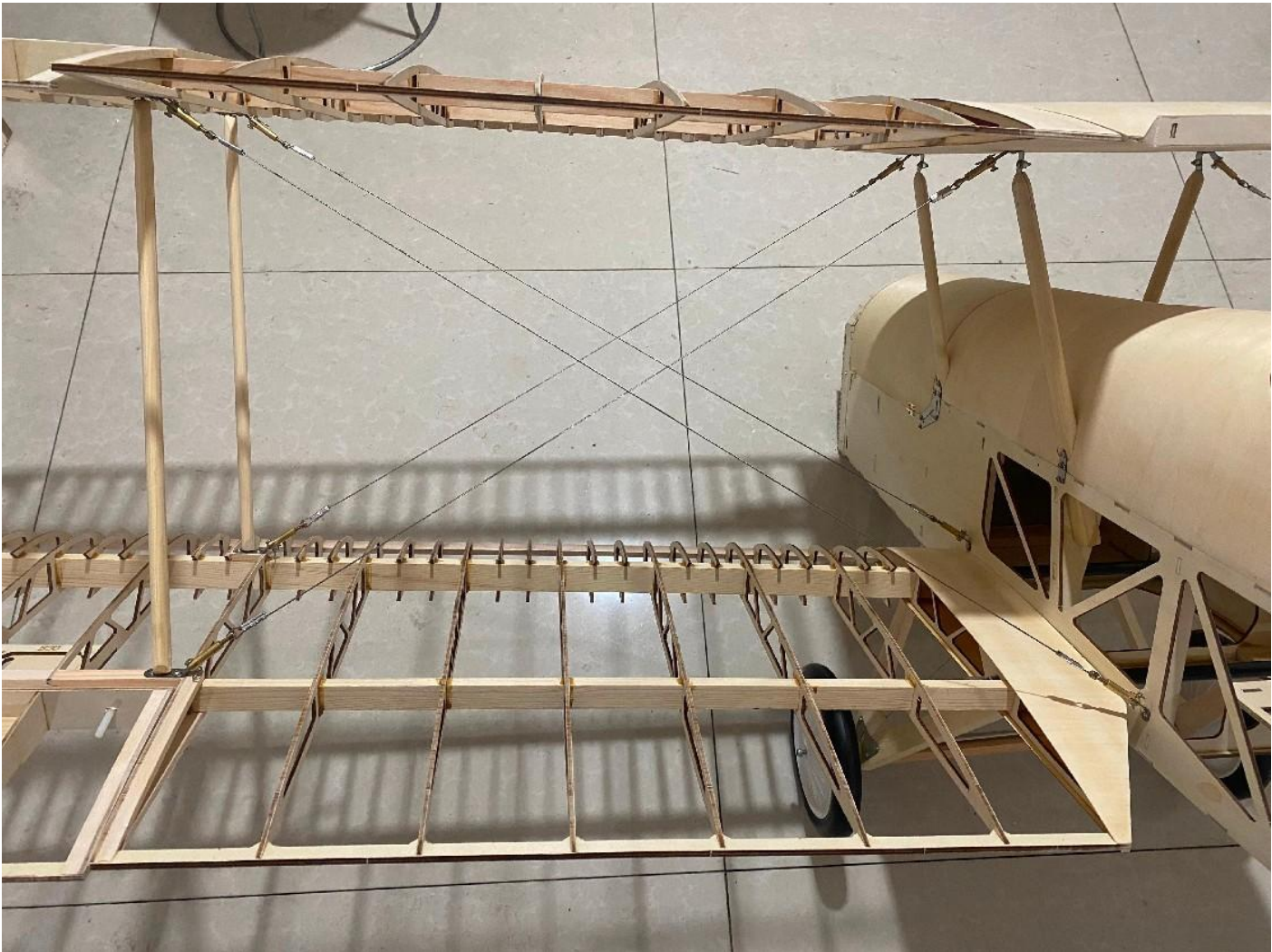


Drill 2mm holes at both ends of the strips, insert the 2mm steel wire and fix it with glue. Then connect the upper and lower ailerons with quick fitting joints.

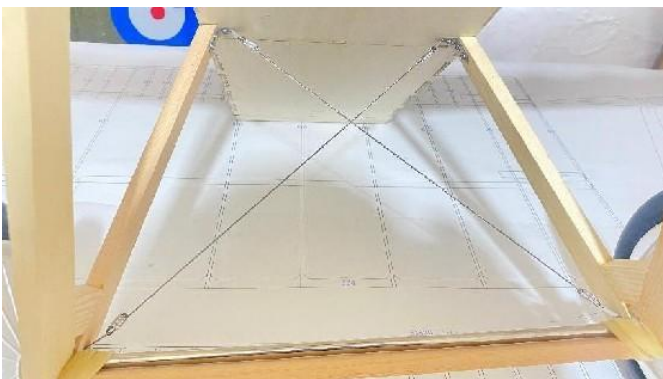
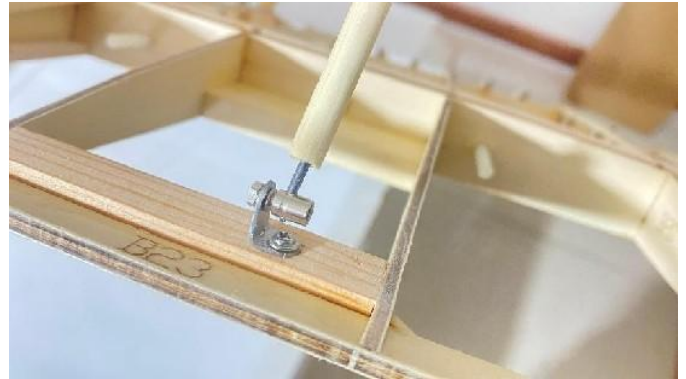


Installing the bracing wires



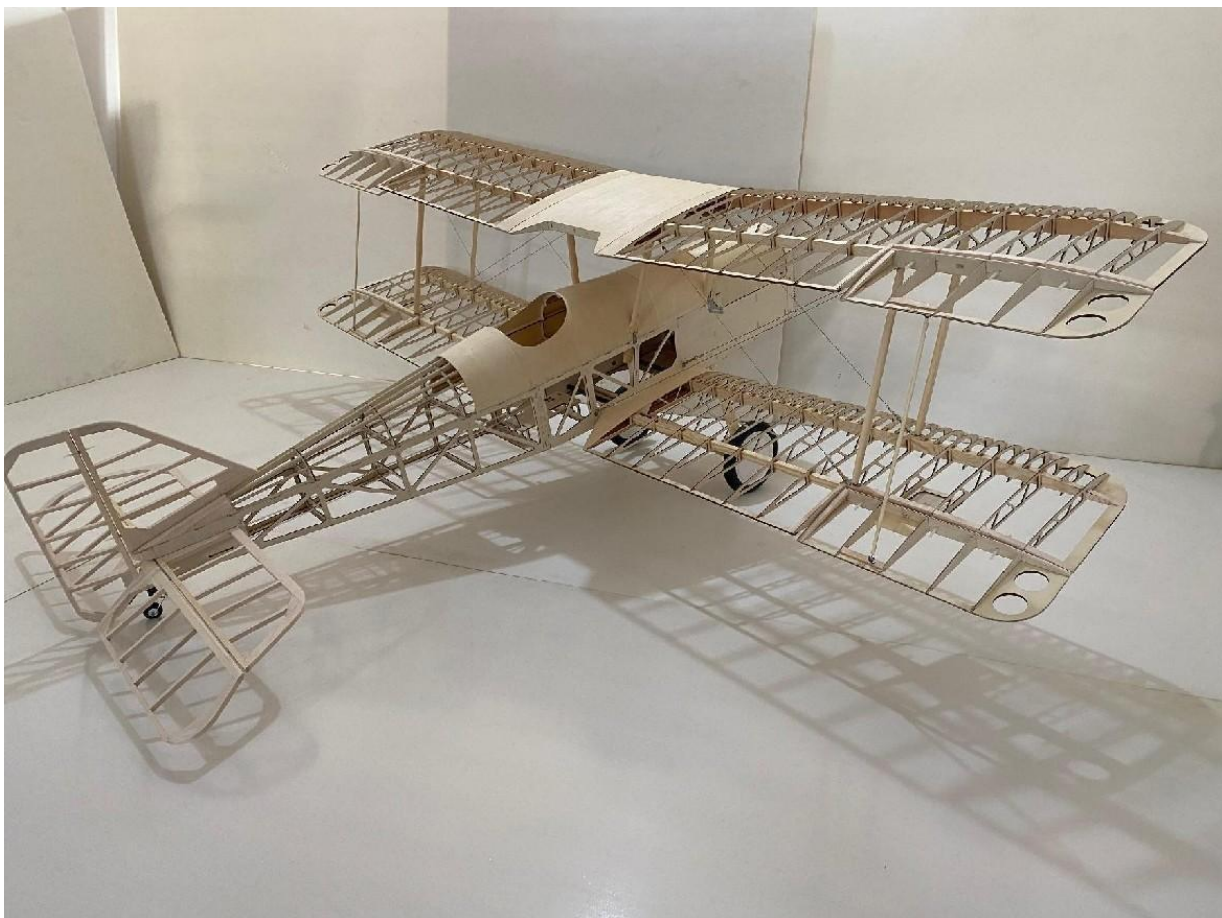


More pictures.





FINISHED



THANKS FOR YOUR SUPPORT TO VALUEPLANES!