



Manual

Amethyst III # 15523



Wingspan 1260mm

R/C flight model for electric drives for control via 3 channels (rudder, elevator, motor)

MADE IN GERMANY

English Instructions are available for download. Please check the product page on our website

Instructions en français disponibles en téléchargement. Visitez notre site Internet.

Istruzioni in italiano disponibili per il download. Visita il nostro sito web.

Please check the contents of the kit before you start building. If any parts are missing or damaged, please let us know immediately by eMail to service@pichler.de We will help you as soon as possible.

CAUTION - The appearance of the parts included in the kit may possibly differ from the pictures.

Read these building instructions completely before you start building. Familiarize yourself with the basic construction. Please check the corresponding product page at our online shop www.pichler-modellbau.de to see if there is a newer version of this manual or if there are any additions.

The kit is intended for advanced model builders who have experience in building model aircraft. The model was developed especially for electric drives and is not suitable for combustion engines.

Pay special attention to good gluing and use BINDAN propeller glue for wood gluing. In our experience, this is the best wood glue for our purpose. Particularly stressed areas can also be glued with 5-minute epoxy. If it has to go fast and no big loads are expected, Fix It! superglue can be used.

For optimal flight characteristics, we recommend the brushless drive set, servos and batteries we recommend. A stronger battery and/or motor does not mean more performance. On the contrary, the performance of the model may deteriorate with e.g. a larger or heavier battery / motor. The model was developed, tested and flown by us in the suggested configuration.

Optional accessories (recommended):

Brushless set Amethyst, # 15027
LiPo battery LEMONRC 650-7.4V or 350-11.1V

R/C Servo Set Amethyst, # 15026
MASTER GigaProp 6, # C8802
MASTER Receiver 6K, # C8978

For the assembly of the model we recommend the following accessories,
see also www.extron-modellbau.de or www.pichler-modellbau.de

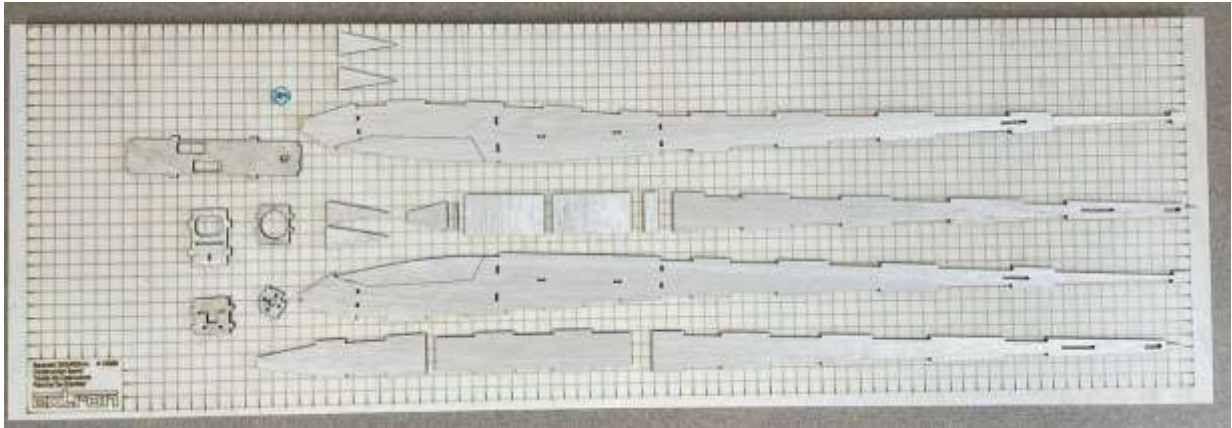
Extron Building Board 900 x 300mm, # X5535
Hinge slot set, # C5829
Mini balsa plane, # C8891
Sandpaper file, # X5565
Sanding block, # X5568
BINDAN propeller glue, # X3577
Plastic glue oarsman L530, # X3583
Fix It! glue set, # C4924
Fix It! metal clamps 50mm, # C4919
Crimping tool, # C8333
Mini clamps, # C4923
Fix It! quick clamp, # C4922
Push pins (50pcs.), # X3441
Foil iron, # C9758
Protective cover for foil iron, # X9983

For covering the model we recommend ORACOVER or ORALIGHT covering foil.

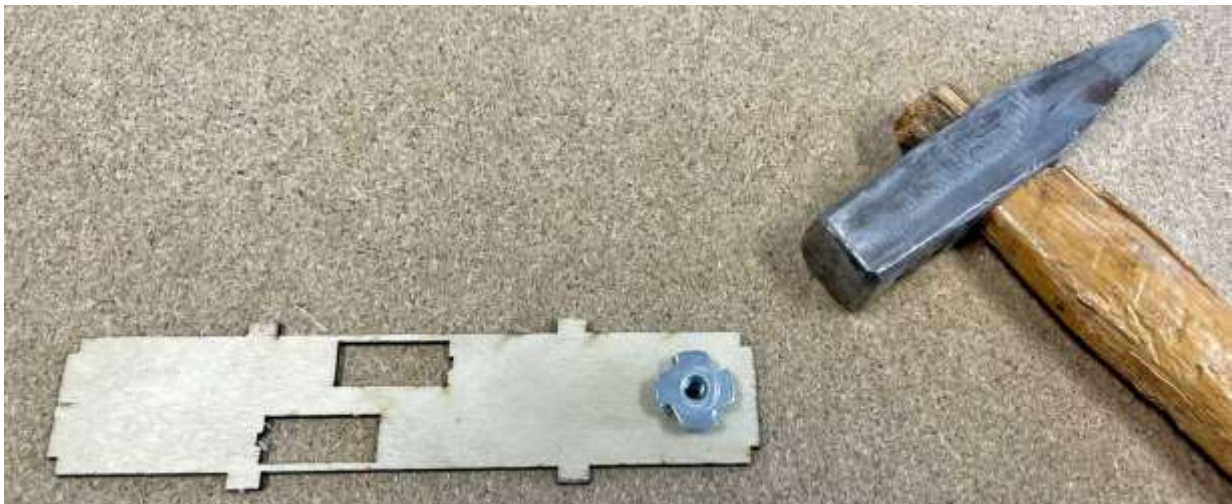
Glue recommendation. We generally recommend the use of BINDAN propeller glue. This will give you permanent, secure bonding. For gap-free joints, Fix It! superglue can also be used. For particularly stressed areas, we recommend Fix It! 5-Min. epoxy.

To build the model, a straight board such as the Extron Building Board 300×1200mm # X5537 is required as a building base. Protect the base with foil to prevent the parts from sticking to the base.

Fuselage construction



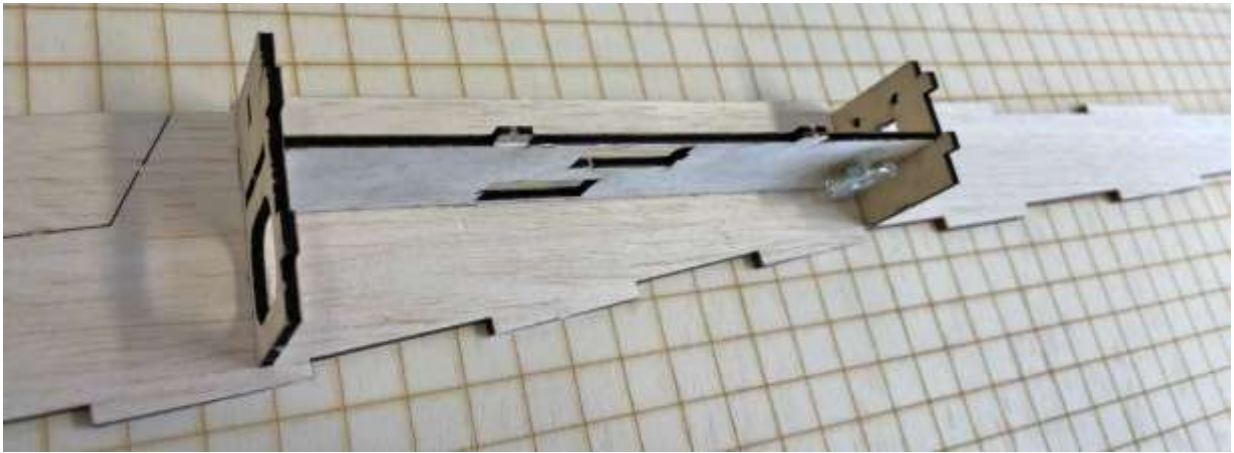
The following components are required first: A1 - A2, B1 - B9 as well as C1 - C3, C6 and C8.



Carefully hammer the M4 drive-in nut into the servo board C8. Caution: The serrations must not protrude.



Secure the drive-in nut with medium CA glue.



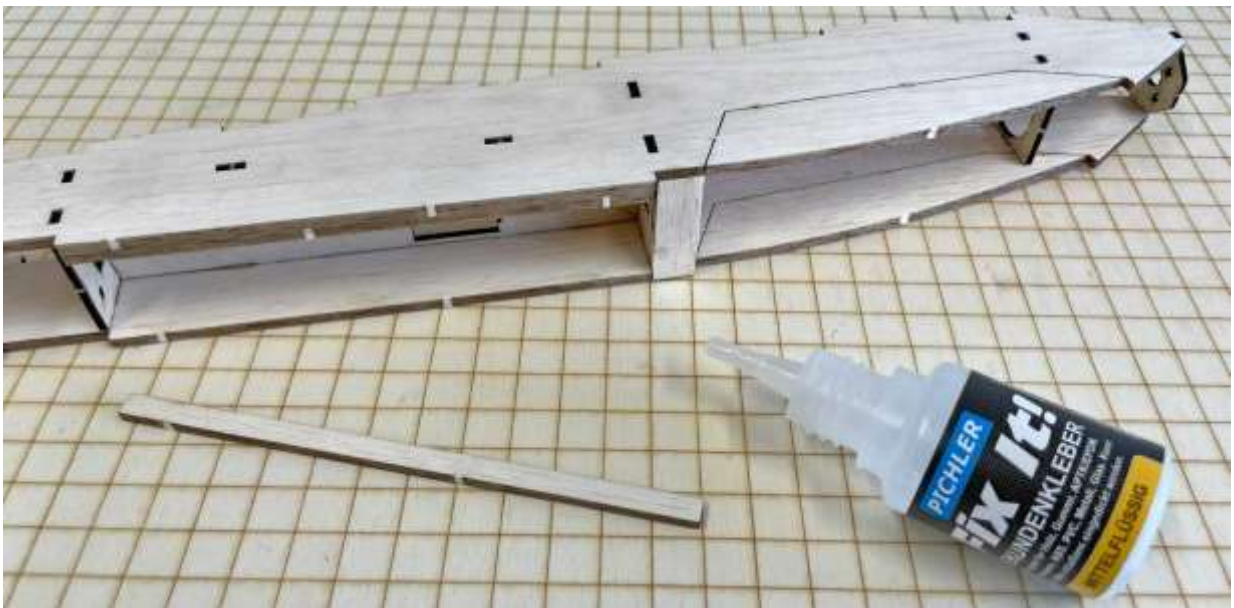
Glue the fuselage formers C1 and C2 and the servo board C8 as shown.



Glue in the second fuselage side panel A1.



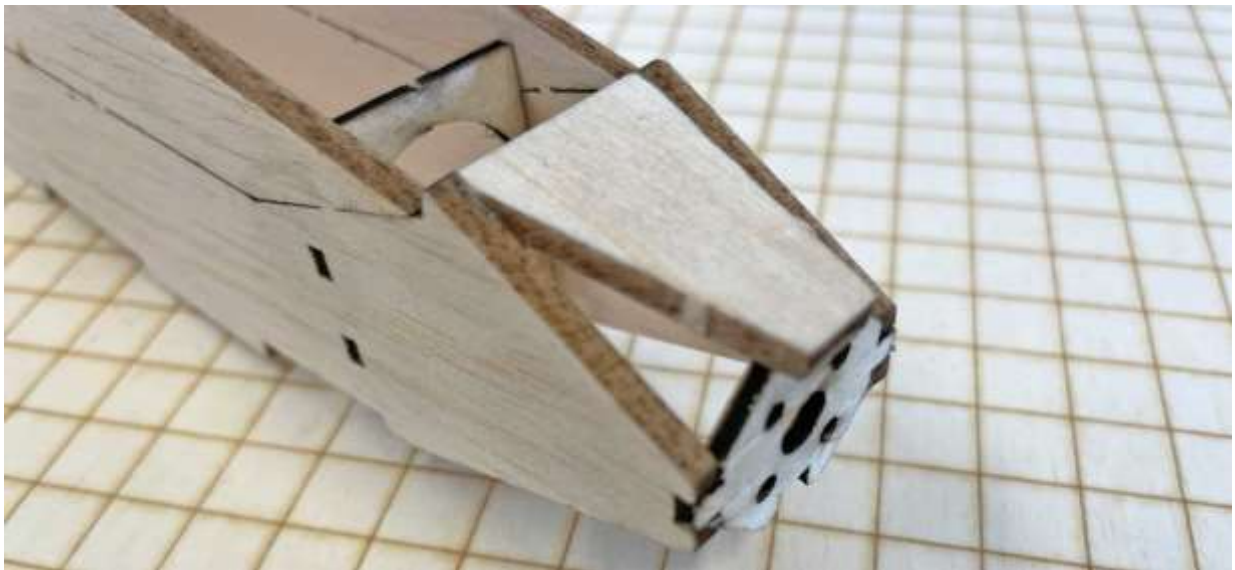
Glue in fuselage formers C3 and C6.



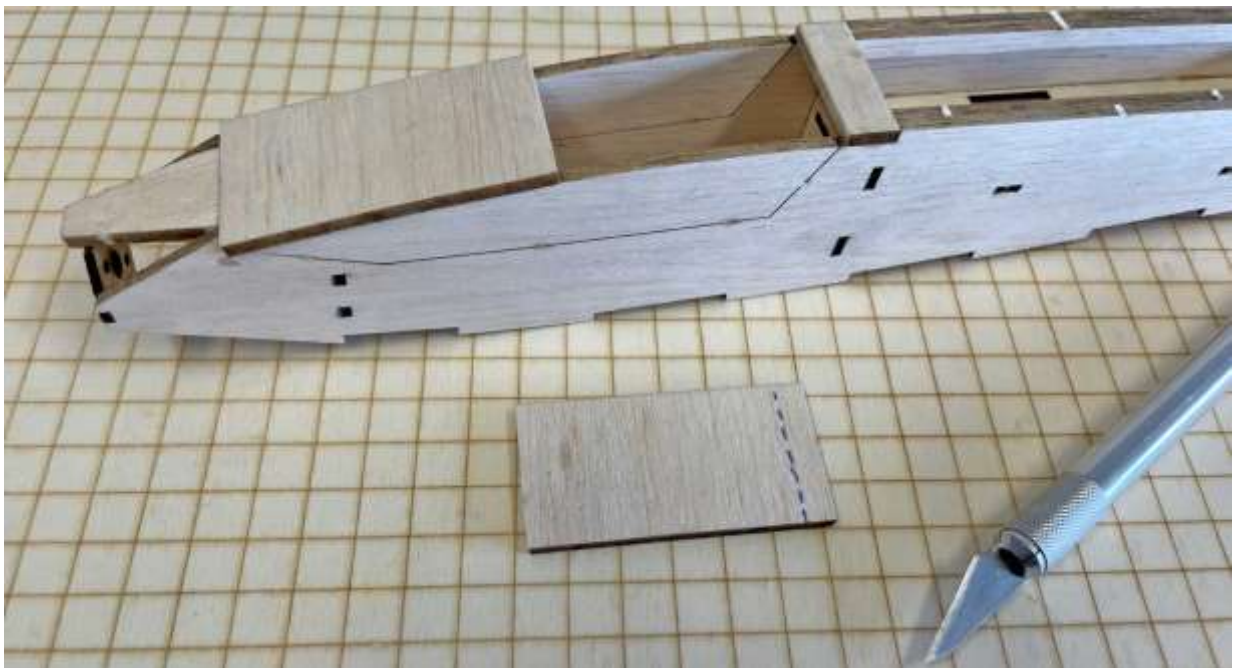
Glue in reinforcing strips A2 and cover B4.



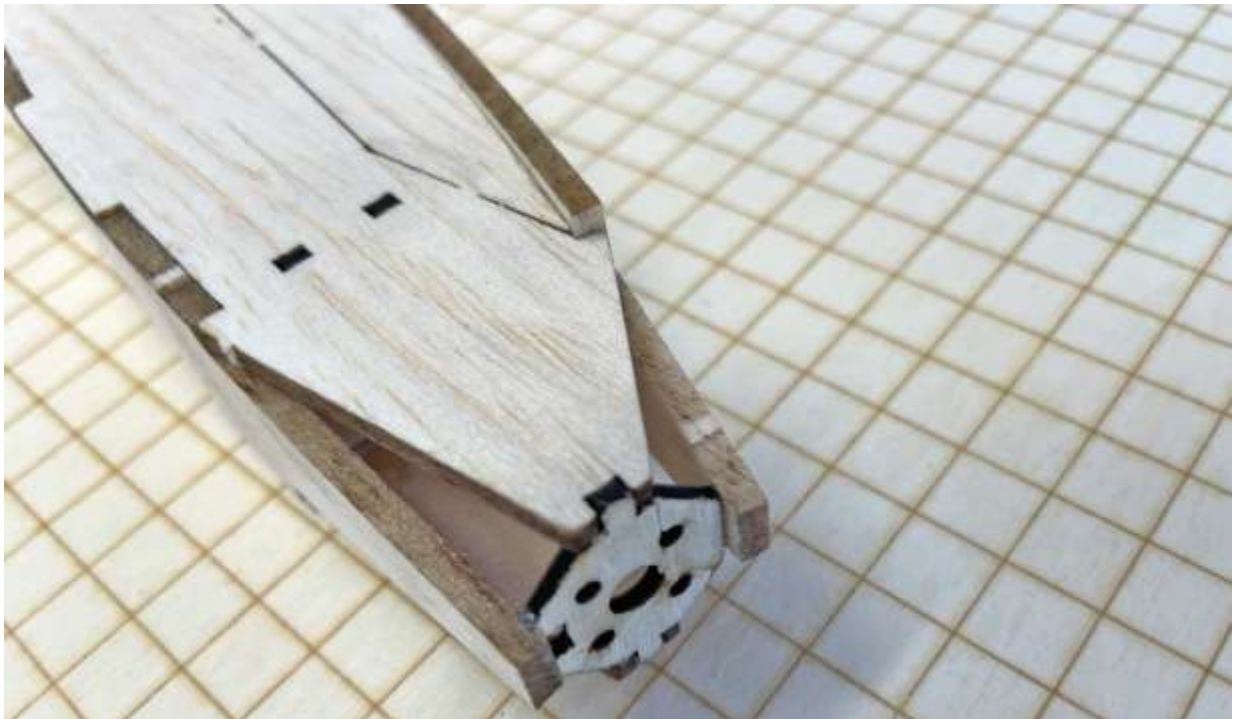
Glue the front upper fuselage planking from parts B6 and B7. File part B6 approx. 5mm wide in the center so that the flap of the canopy can be inserted later.



Then glue the part to the front top of the fuselage.



Adjust the two upper planking panels B9 as shown, shorten them accordingly and glue them as shown.



Glue lower fuselage planking B2 and B3.



Sand off protruding edges on the canopy and match the front fuselage sides to the motor bulkhead.

Tip We recommend starting sanding with 180 grit sandpaper, fine sanding with 240 grit.



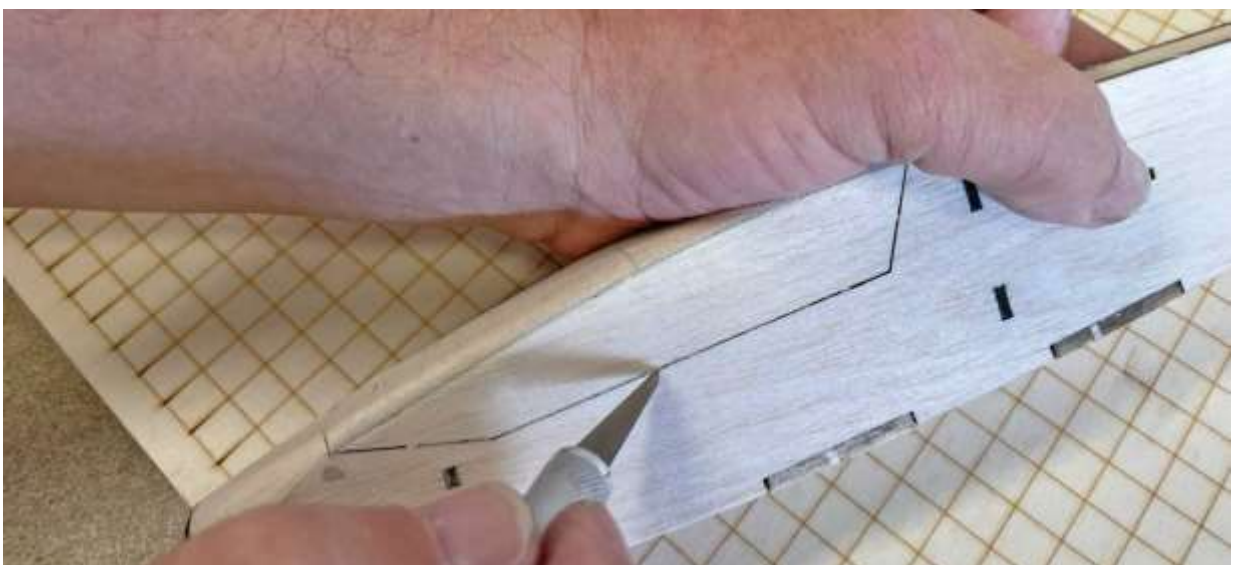
Glue on front planking parts B7 and B8.

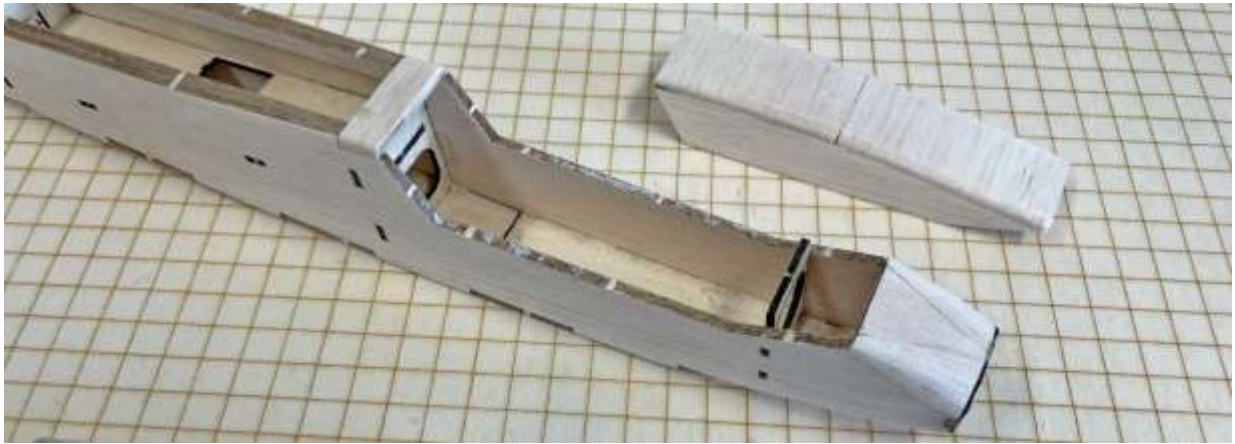


Sand the front part of the fuselage flat and glue the ring G2 in the center of the front part.



Then sand the front part of the fuselage.





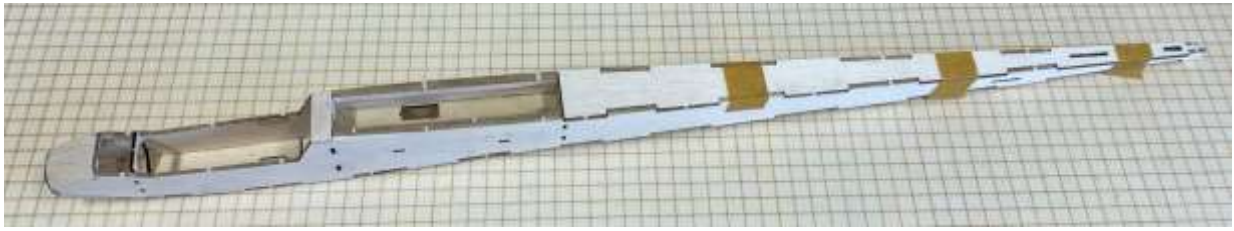
Carefully separate the canopy from the fuselage using a sharp knife.



Glue canopy guides G5 to the inside of both fuselage sides as shown.



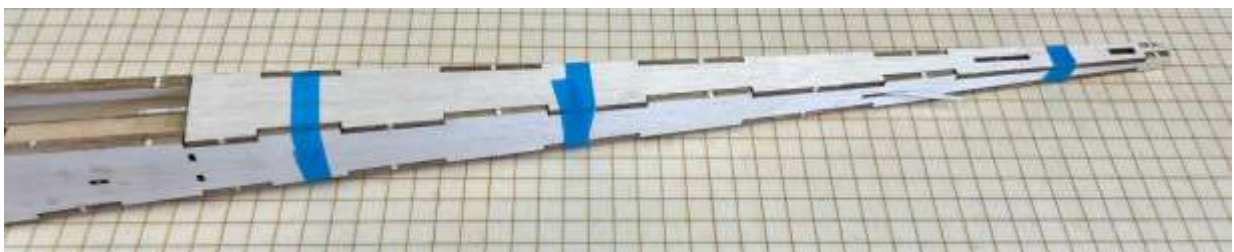
Glue plywood tab G4 into the canopy as shown. File part B6 slightly in the center from below so that the canopy tab can be inserted.



Fix and glue rear upper fuselage section with tape as shown.



Route the bowden cable tubes in the fuselage and allow them to protrude slightly at the exits.

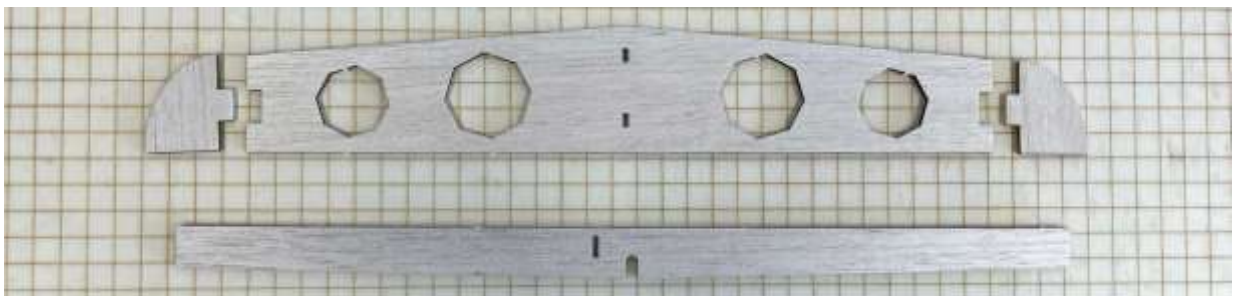


Once the bowden cables have been fixed with glue, the rear fuselage bottom section can be glued and secured with tape until cured.



Adjust the tailplane support C7 as shown. We recommend to glue this part only at the end, when all parts of the model are already covered with foil.

Construction of elevator and rudder



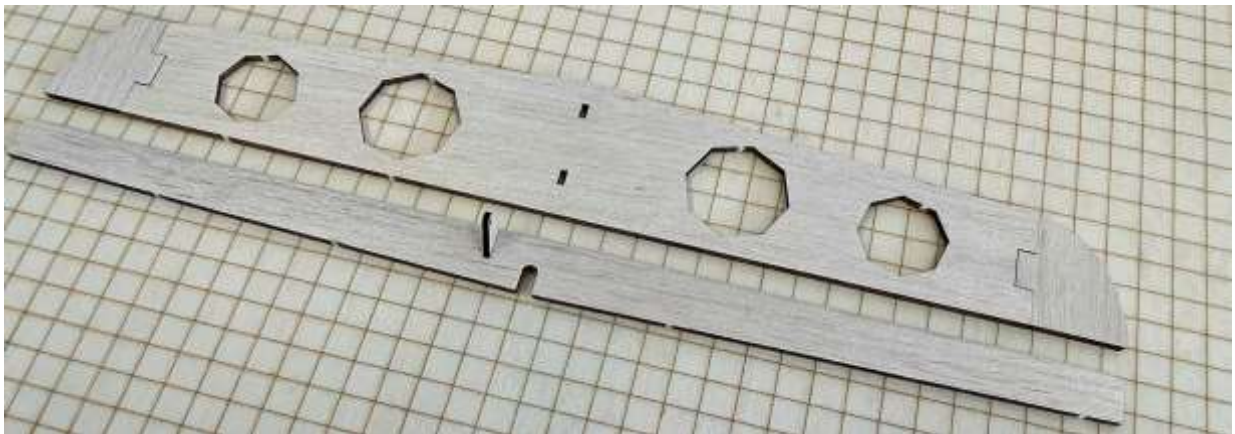
Glue the elevator parts F1 - F2 as shown.



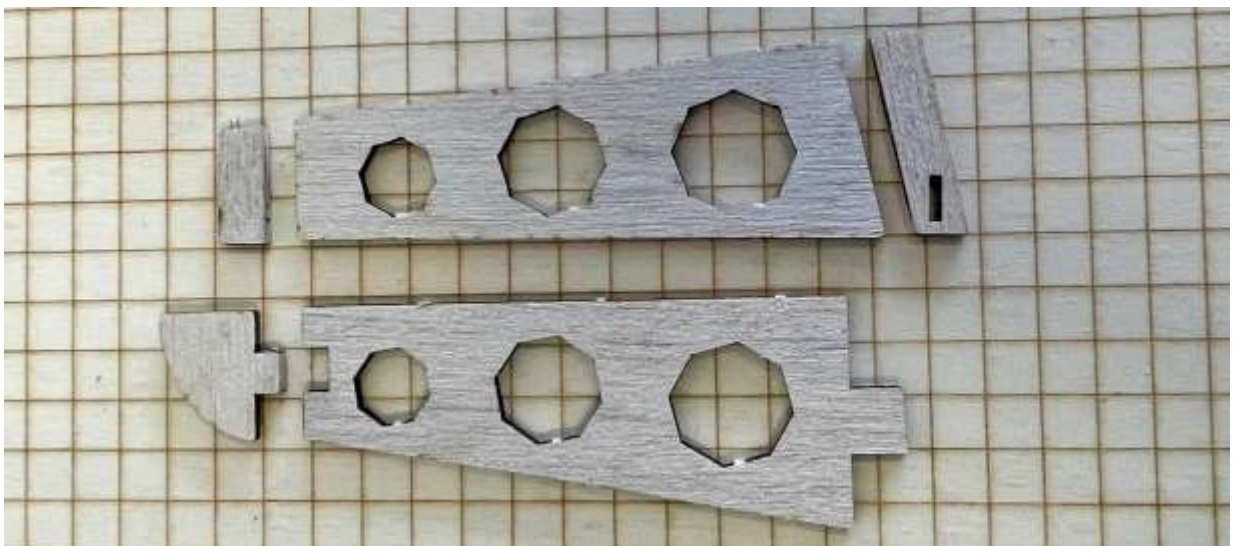
Sand the elevator at an angle of approx. 45° on one side as shown.



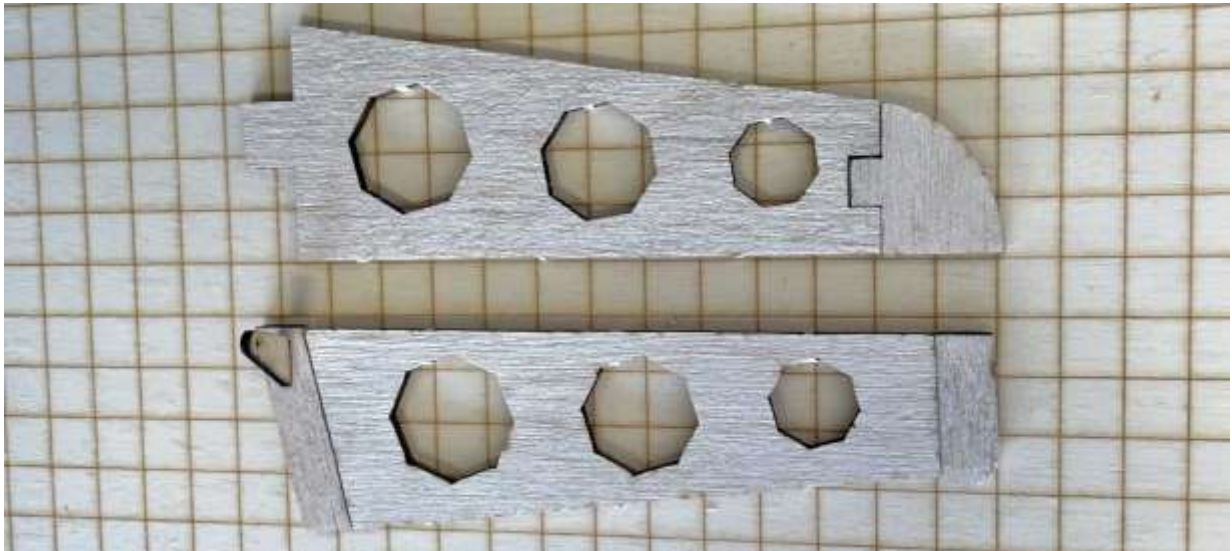
Then fit the rudder horn. We recommend gluing the rudder horn only at the end, after all parts have been finished covering.



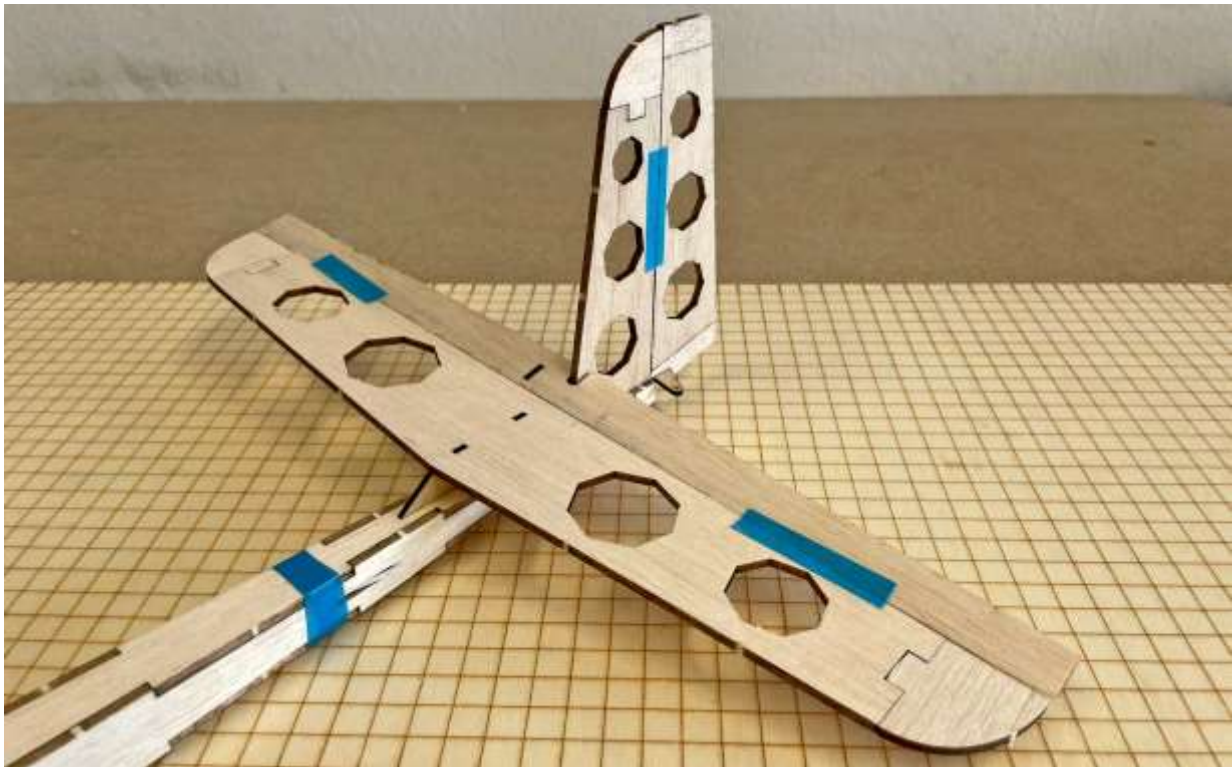
The finished elevator before fine sanding.



This illustration shows the components of the rudderF4 - F8.

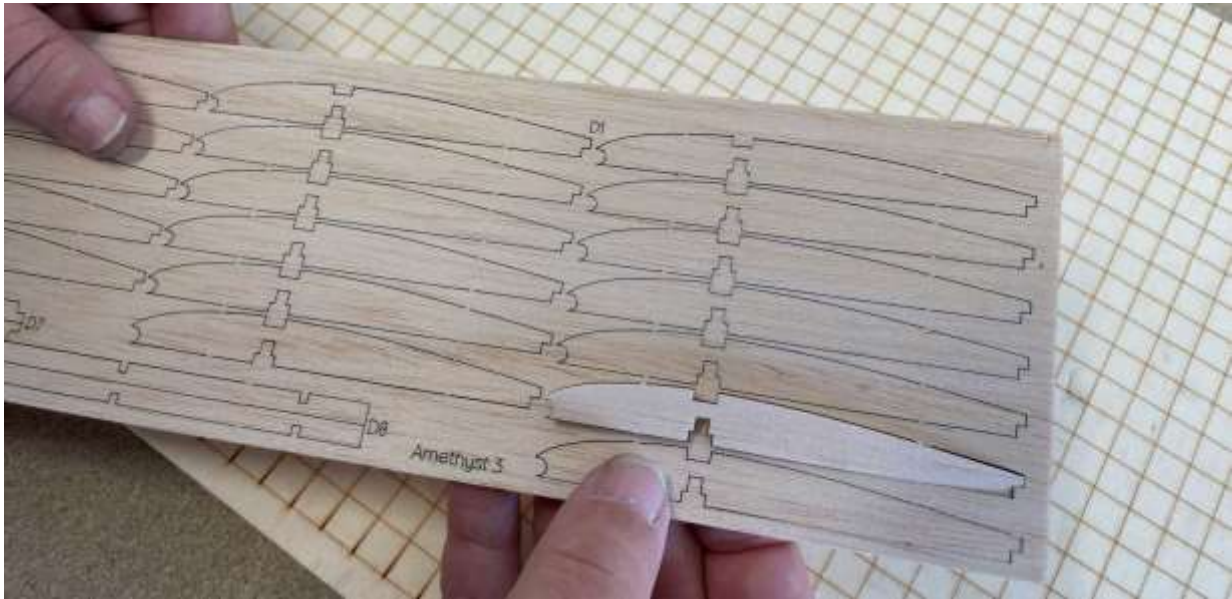


Glue the parts of the rudder as shown and fit the rudder horn C9. We recommend gluing the rudder horn only at the end, after all parts have been completed.

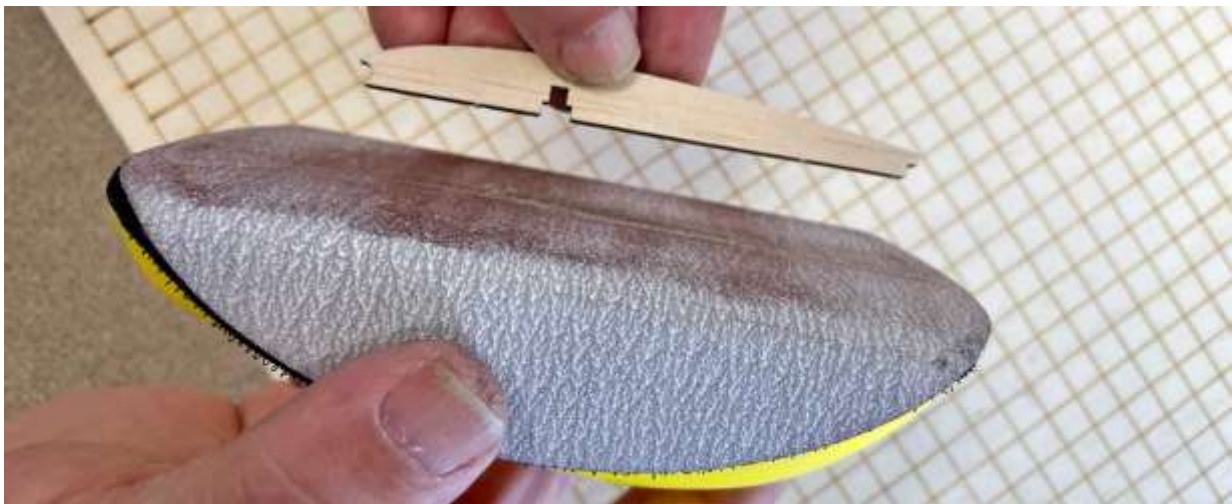


Assembly diagram of the rudder and elevator.

Wings construction



First, carefully remove the ribs D1 (18 pieces).



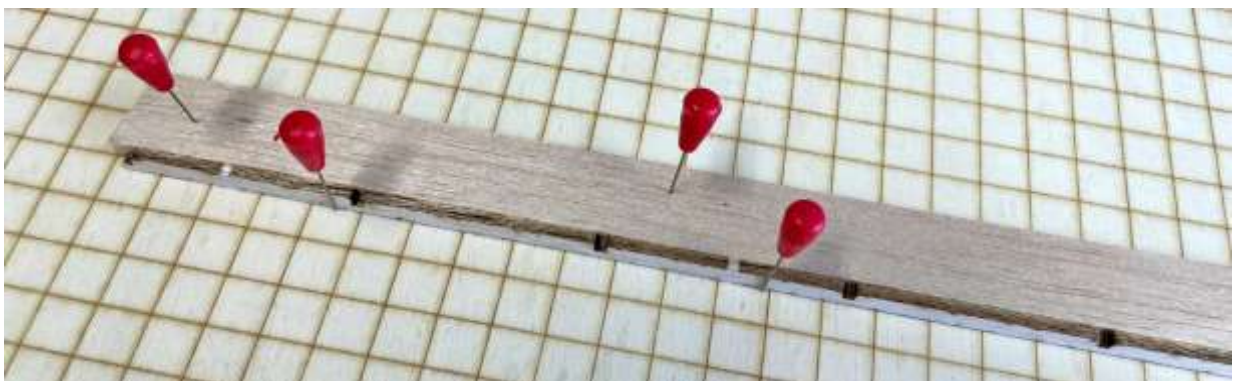
Carefully smooth the straight undersides of the ribs with a sanding block (180 grit) so that they will later lie exactly on the building board.



Glue ribbed strip D8 butt to each other.



Then glue the ribbed strip flush to the wing end strip (long triangular strip).



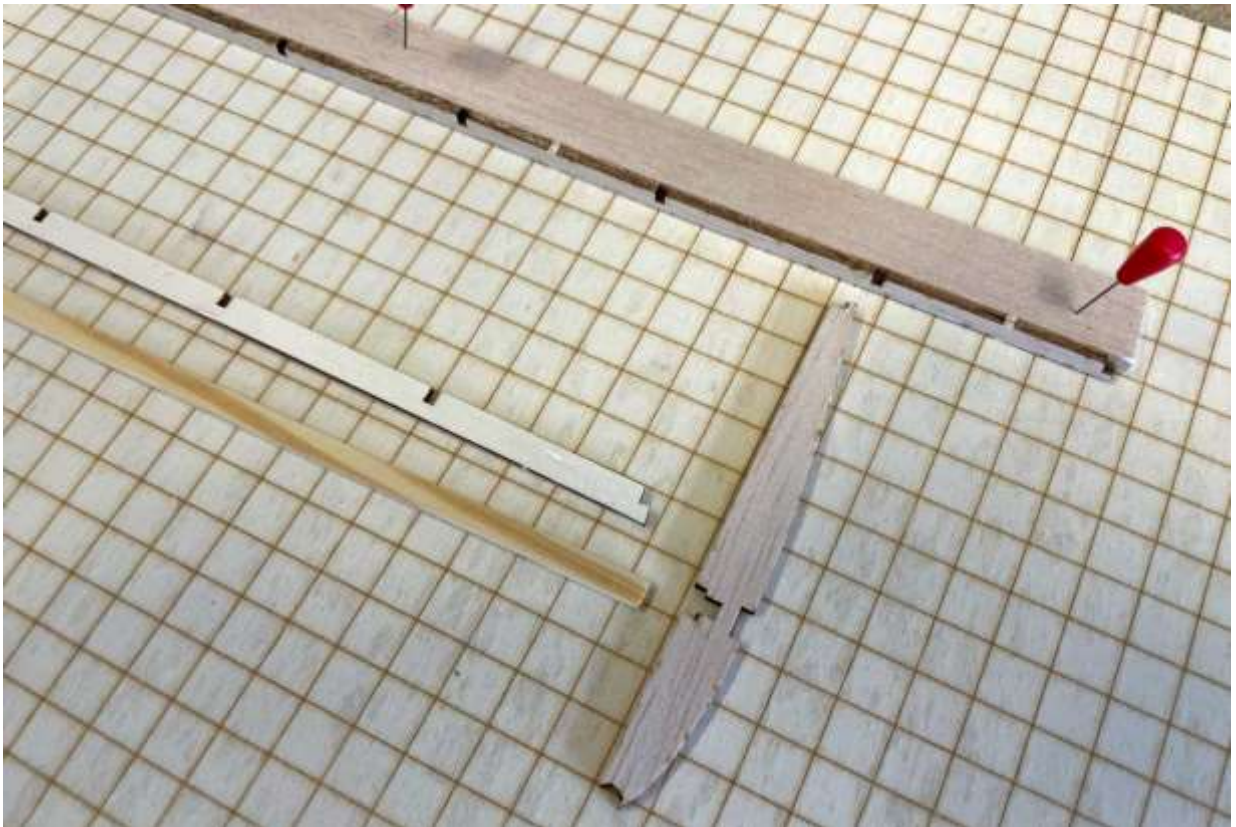
The EXTRON building board with line grid and the EXTRON push pins provide valuable services here.



Carefully smooth the undersides of the E1 rib comb with a sanding block (180 grit).



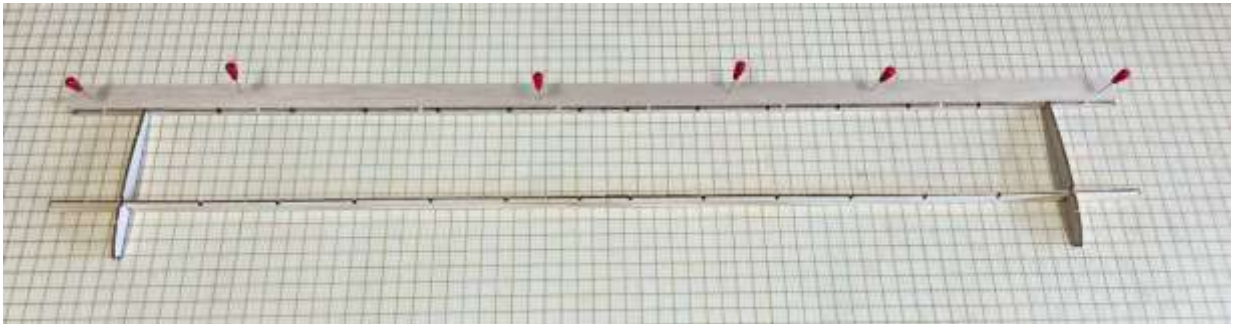
Glue the two parts of the rib comb together.



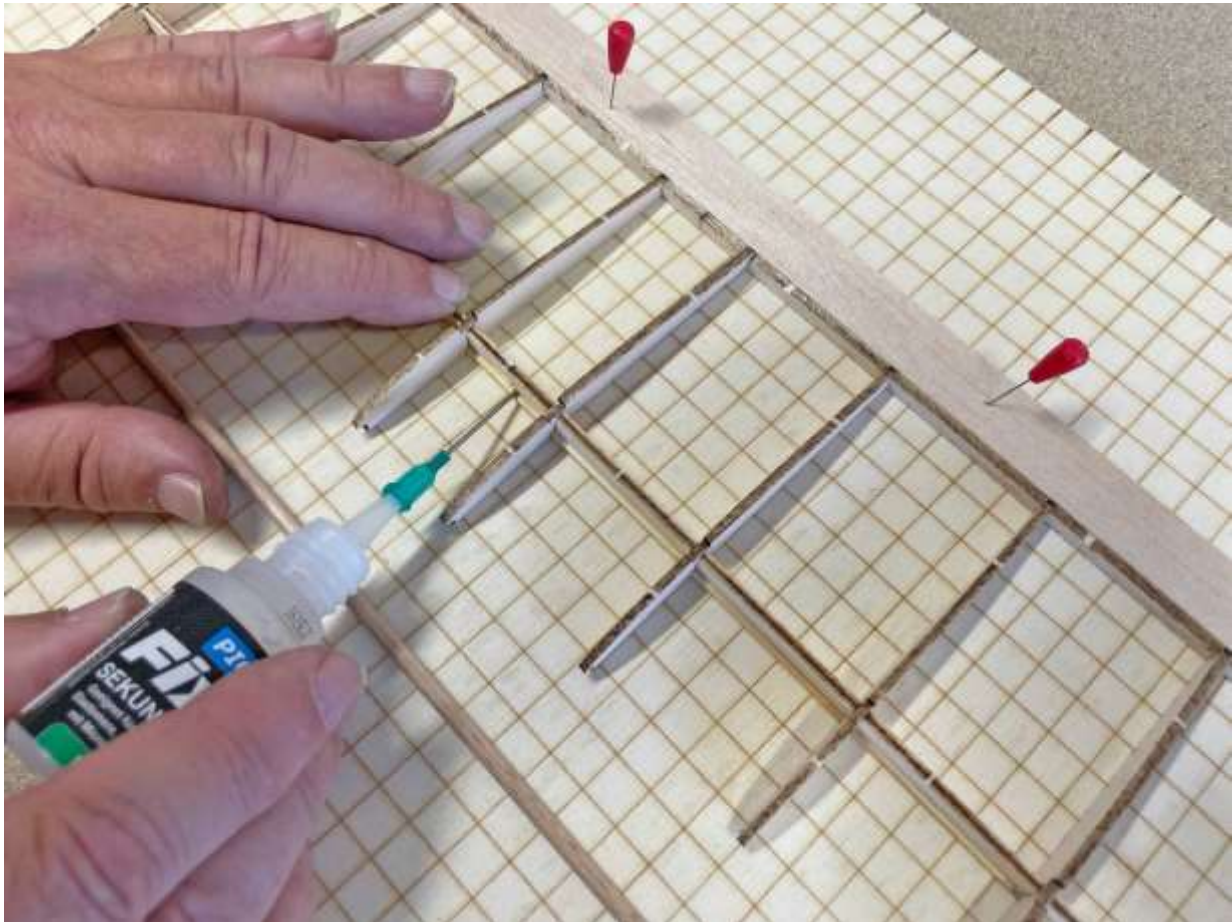
Secure the wing end strip to the building board with push pins.



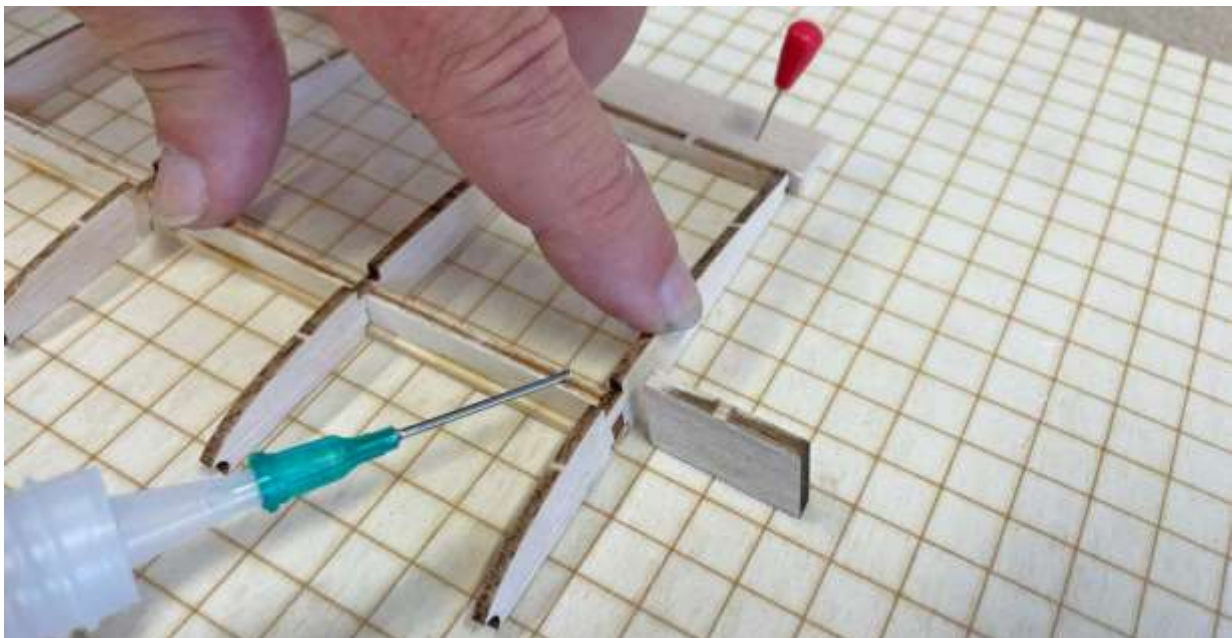
The pine strip is arranged lying flat on the building board. The rib comb E1 "stands" vertically in the wing ribs.



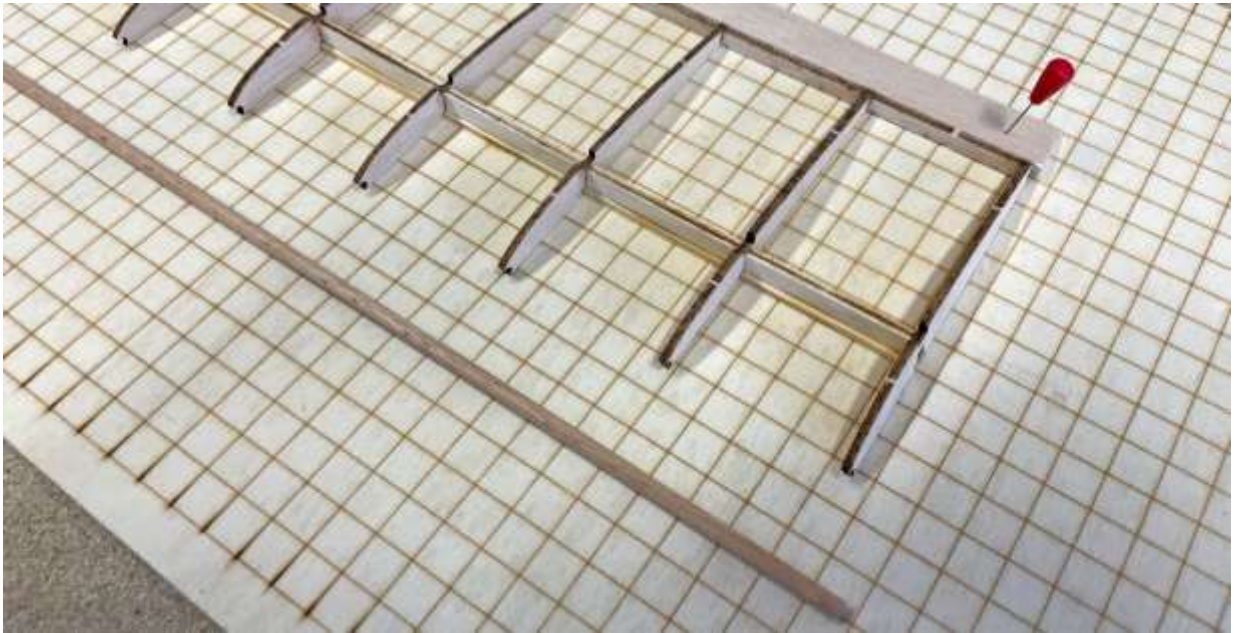
We start the alignment by placing the penultimate rib in each case.



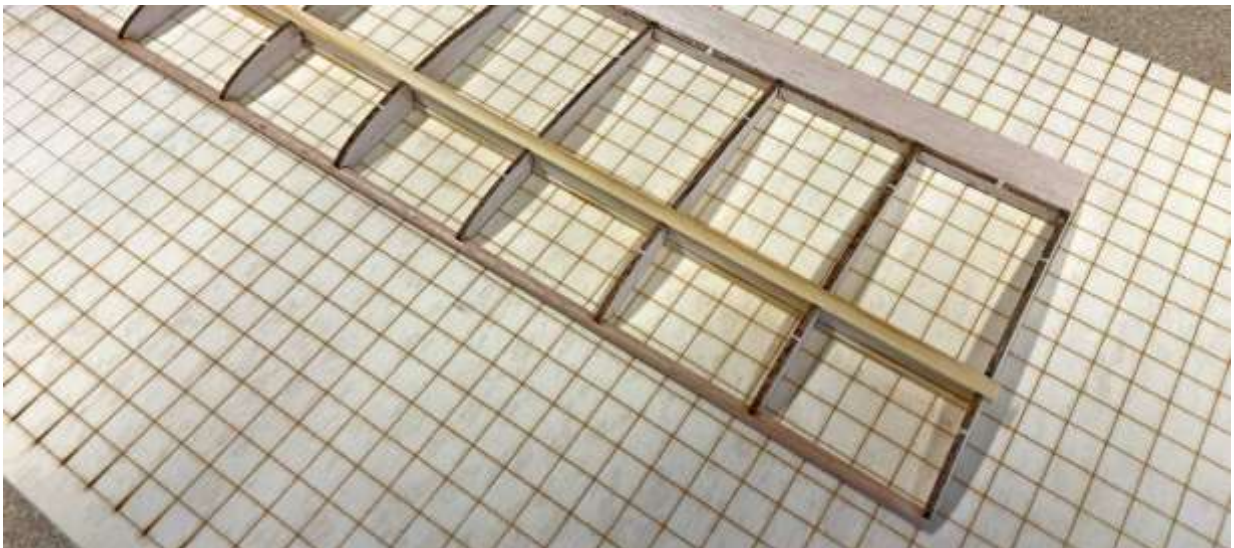
After all the ribs are threaded, you can start gluing.



The last rib on the left and right must be glued in at a slight angle (use template F9 for alignment) so that the wing later achieves the correct V-shape.



Now the \varnothing 4mm round bar (leading edge) can be glued in place.



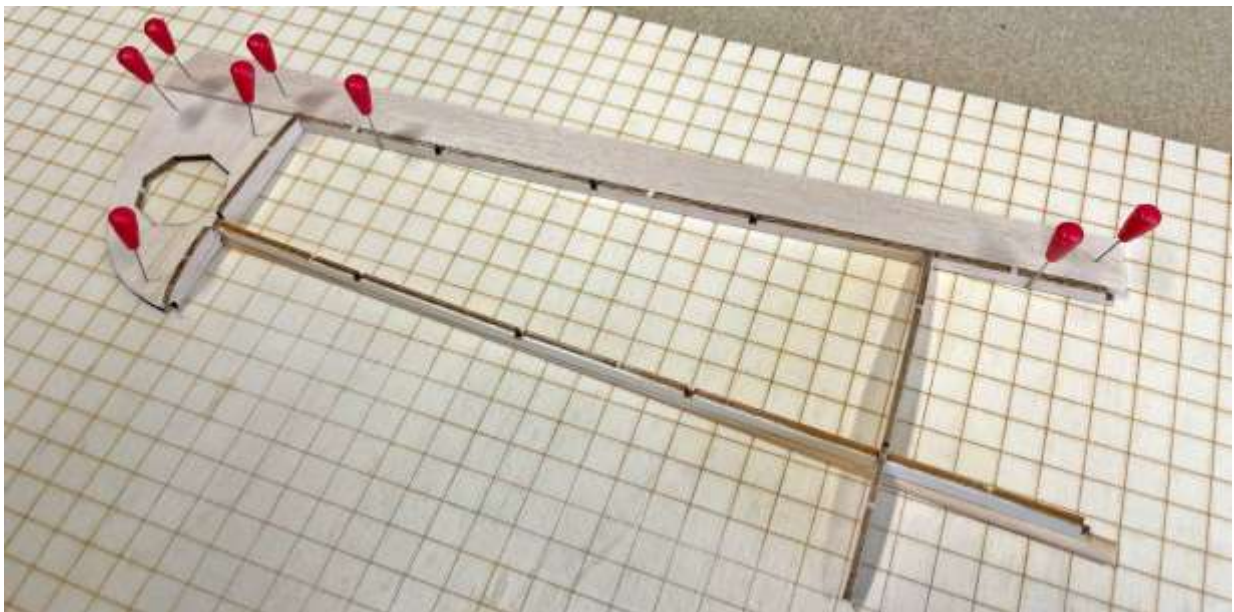
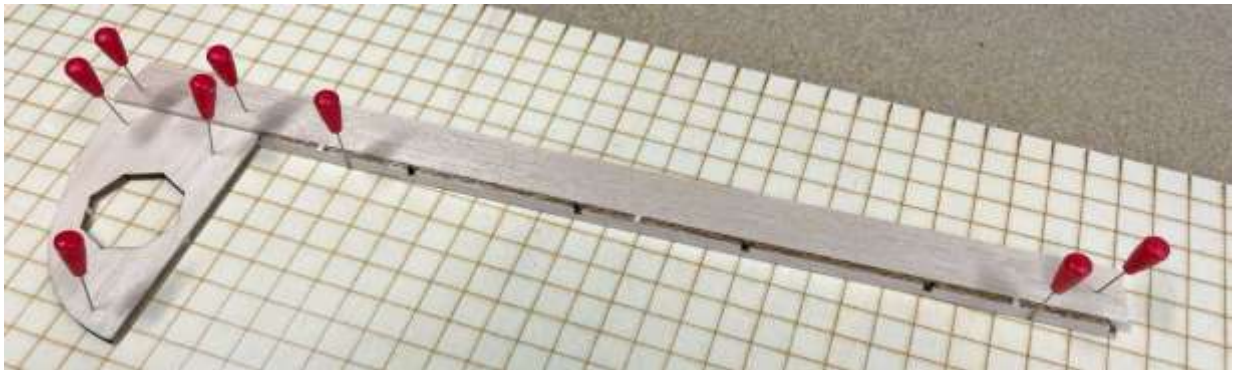
Now glue the upper pine strip to the rib comb. The center wing section is now complete. Next, we turn to building the outer wings with edge arches.



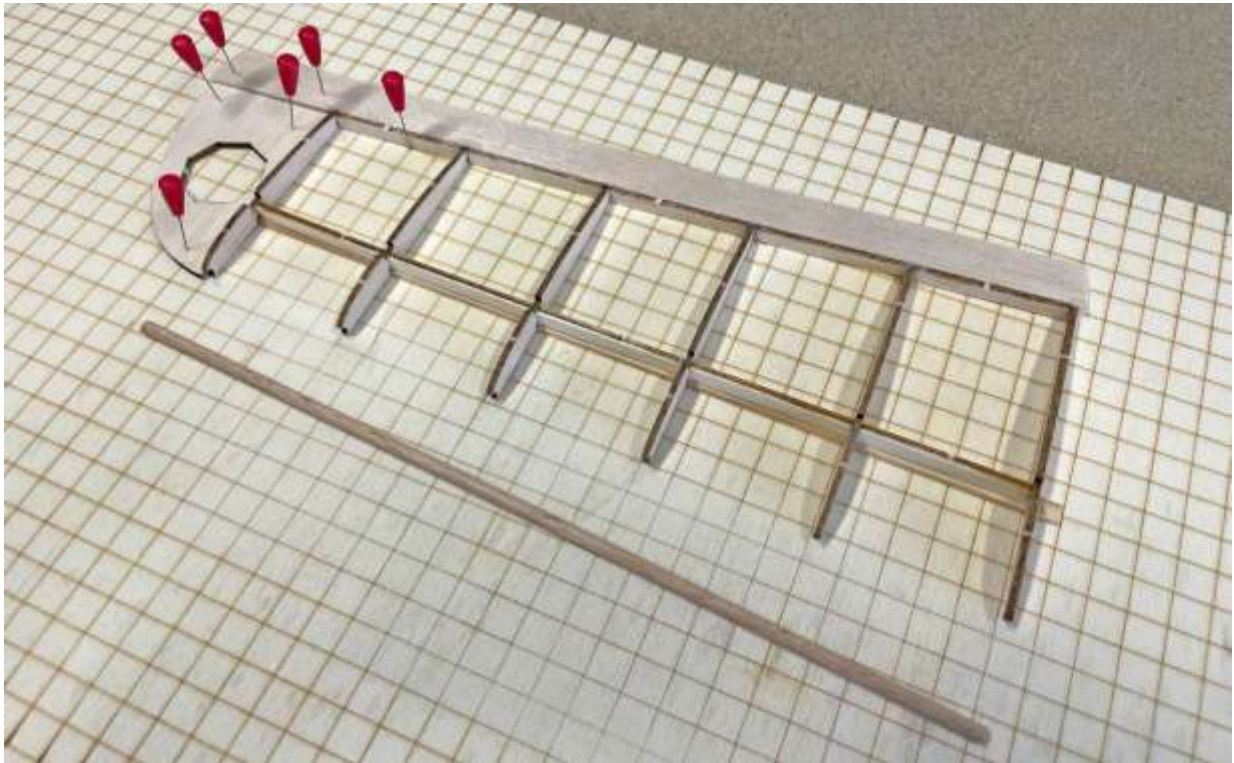
Pin the wing end strip (triangular strip) and the A3 edge sheet to the building board as shown.



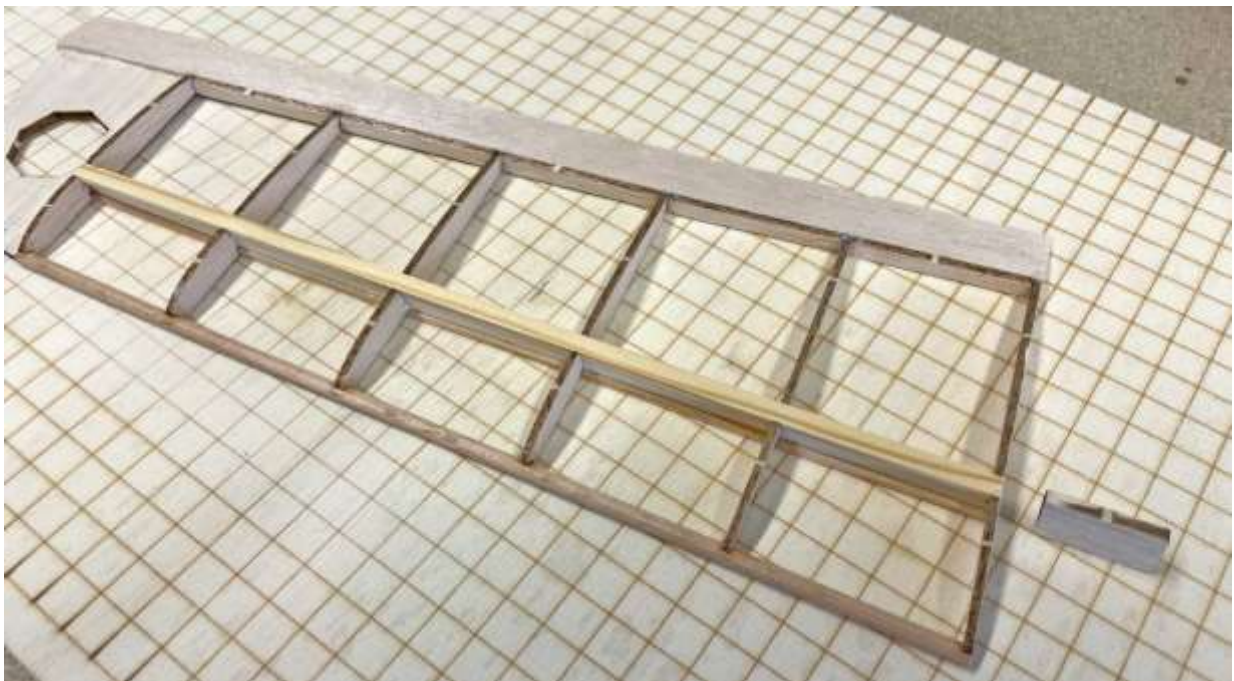
Then glue the ribbed strip flush to the wing end strip (long triangular strip).



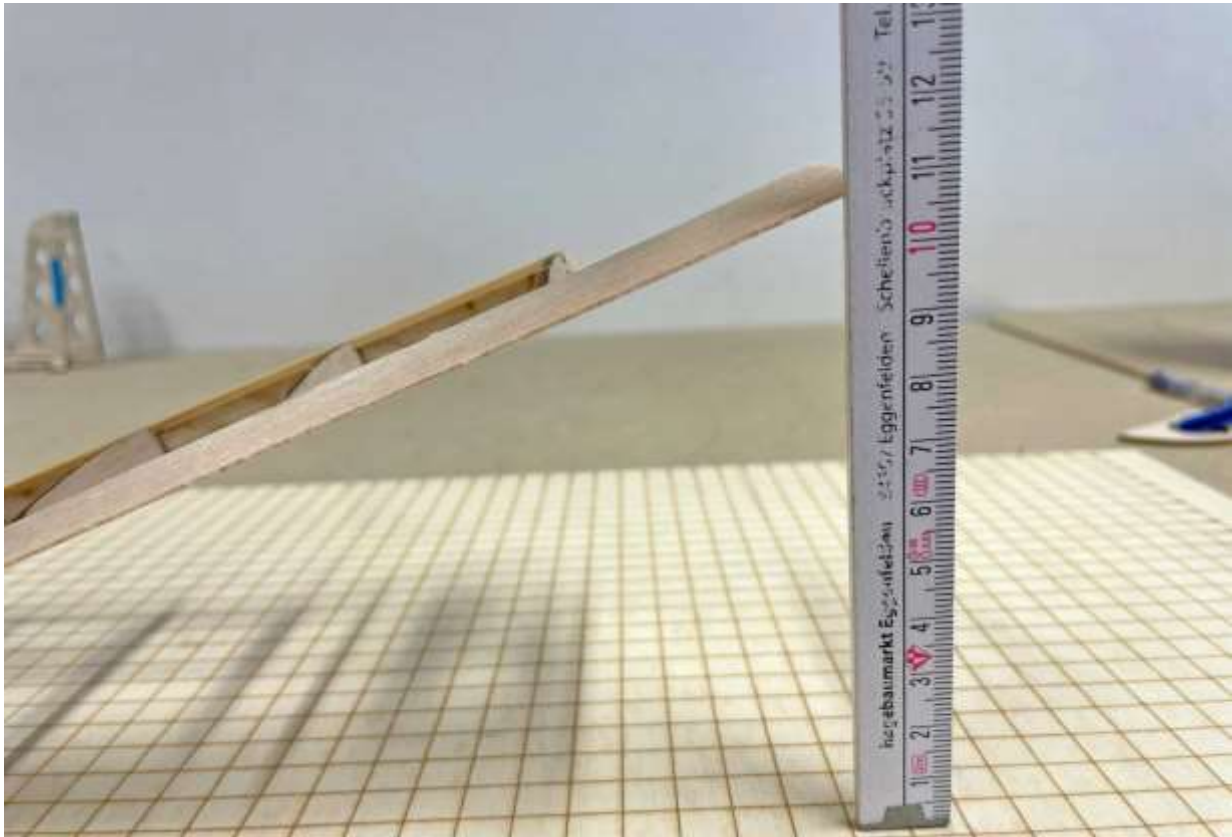
For the construction of the outer wings we need the ribs D2 - D6. Attention - These must of course be built up laterally reversed 1x for left side and 1x for right side. Lay the pine strip flat on the building board and insert the rib comb D7 vertically. Caution: The ribs are of different sizes and become smaller towards the end. Pay attention to their correct position. Please use template F9 for alignment - the end rib must be glued in at an appropriate angle.



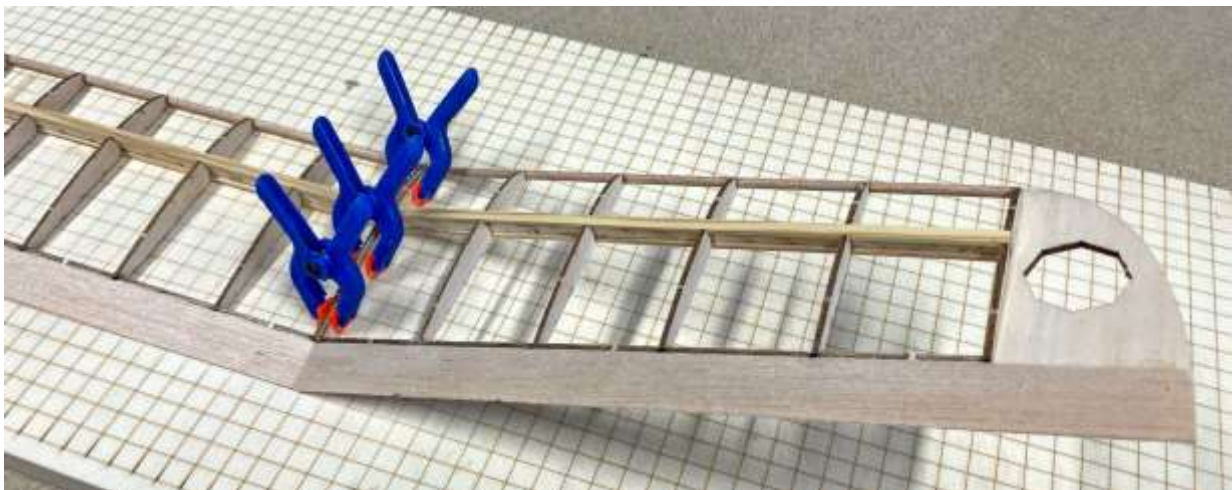
Now the Ø 4mm round bar (leading edge) can be glued in place.



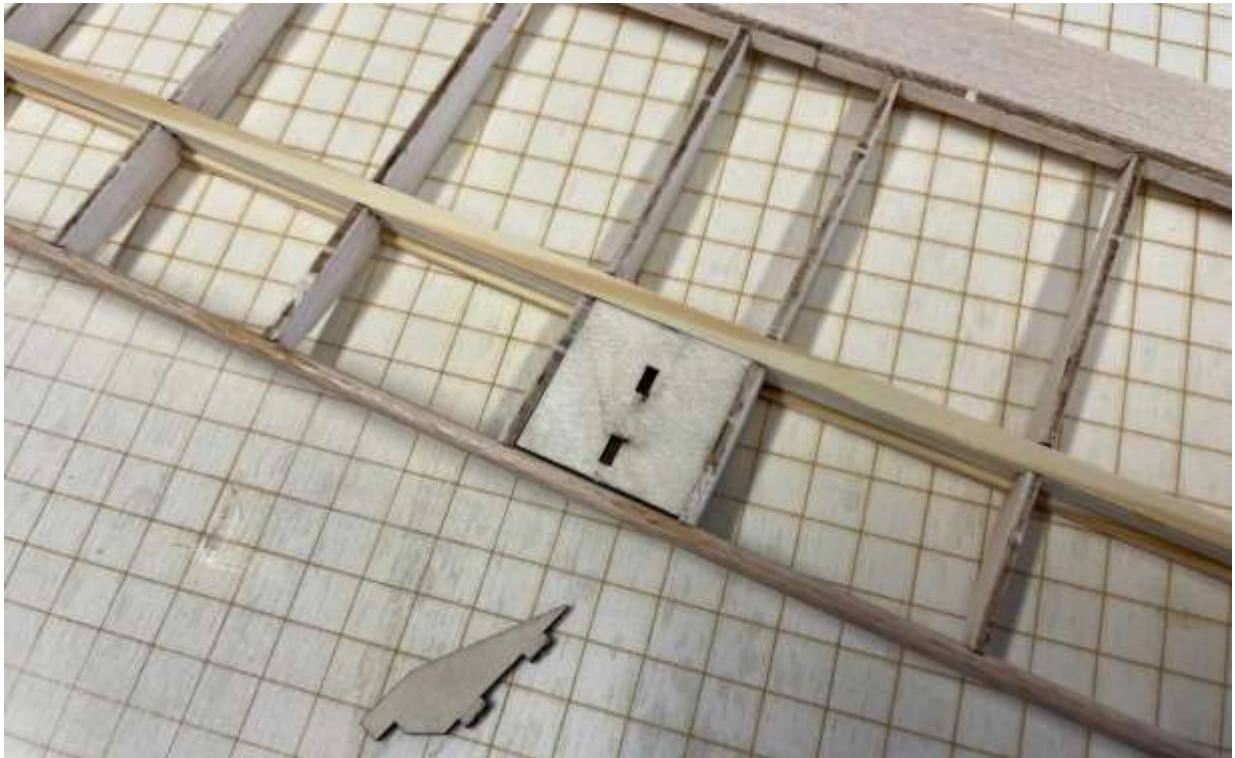
Now glue the upper pine strip to the rib comb. Finally, sand all wing parts clean.



The three wing panels are now butt glued together. The height of the dihedral should be about 110mm on each side as shown.



Our Mini Clamps C4923 work perfect during bonding.

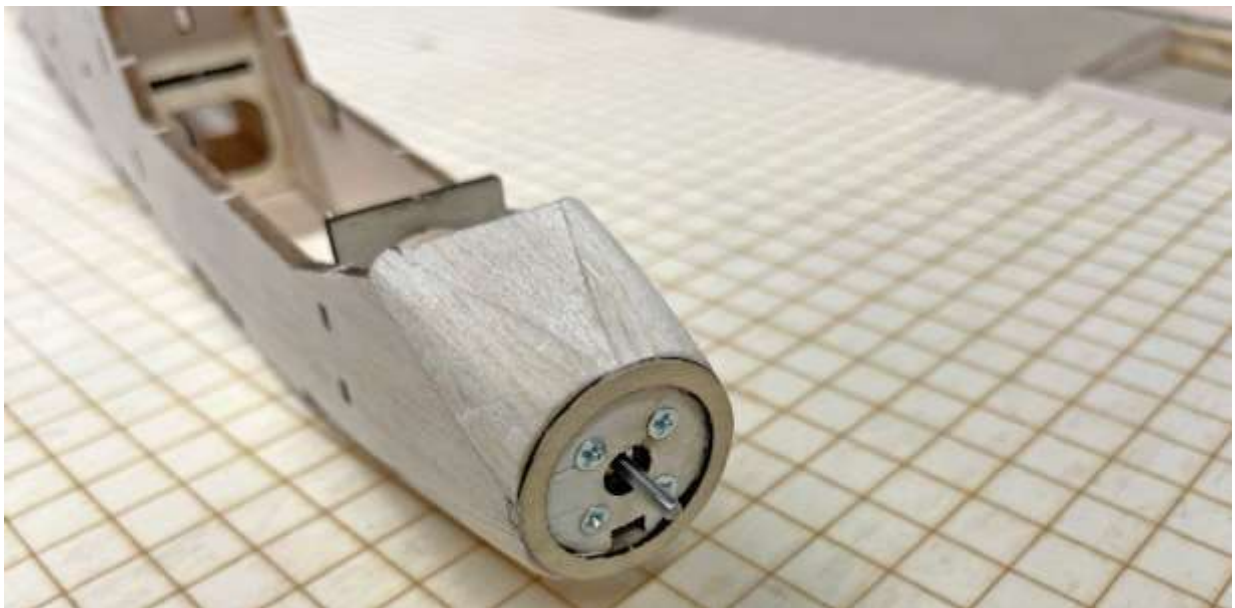


The wing attachment C4 is now glued in place. The transom C5 can be glued in place after the model has been covered.





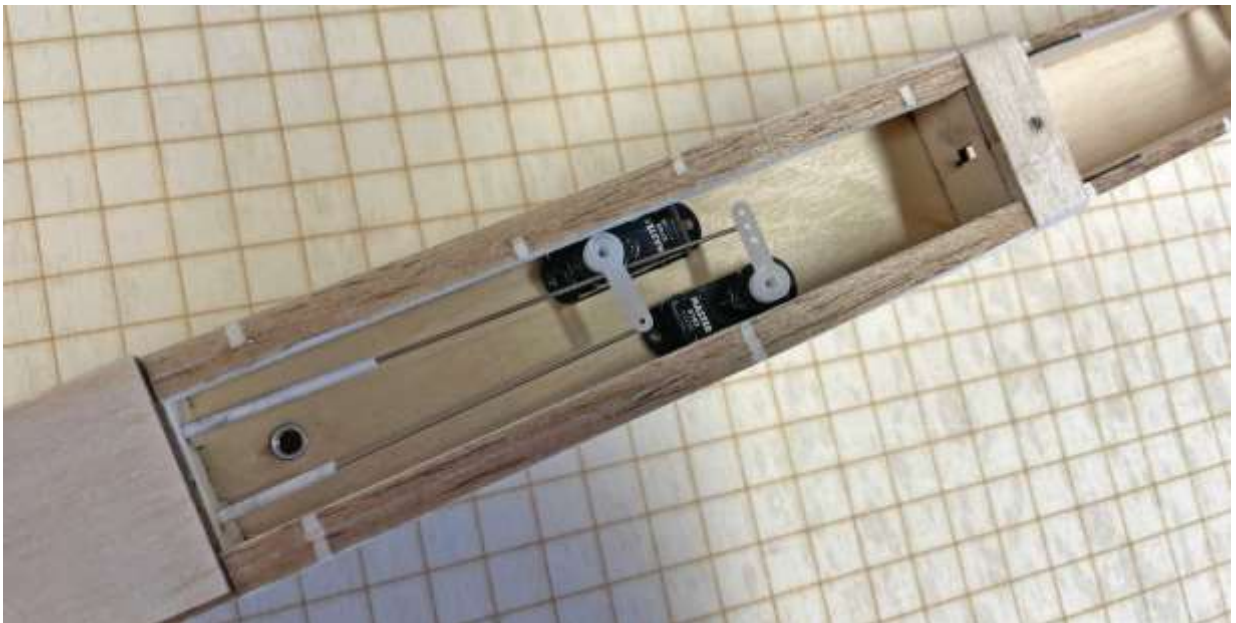
The G3 reinforcement plate for the fixing screw is glued on centrally.



The recommended motor is fastened with 4 screws. Make sure that the cables do not drag on the motor, if necessary, some wood must be removed at the appropriate place inside the fuselage.



The G1 cabin bolt is fixed with a screw.



Here the installation position of the servos and the linkages is shown.



The enclosed steel wire is used to link the rudders. The ends are bent 90° and secured with a small piece of glued Bowden cable.

After completion of the body, the model can be covered. We recommend ORACOVER or ORALIGHT covering foil. Beforehand, the model should be completely cleaned of dust residues. Carefully sand off sooty interfaces from laser cutting. For best results, use **Extron foil iron # C9758**. Be sure to use an **Extron protective cover # X9983** to prevent scratching the foil during ironing. It should be possible to adjust the optimum center of gravity of the model by moving the flight battery. Additional ballast # C9830 may need to be used.

Rudder deflections (recommended)

Rudder = 20mm to the left and right

Elevator = 5mm up and down

Center of gravity (recommended)

The optimum center of gravity is 38mm from the leading edge of the wing measured backwards.

Before each flight

The operation of model aircraft is subject to different regulations depending on the country. Please check with your state authority for current, legal regulations. You may need a certificate of proficiency and insurance to operate model aircraft. If you are a beginner, please contact a model club in your area and ask for assistance. They will be happy to help you there.

You can get all the information you need from Deutscher Modellflugverband (DMFV) or Deutscher Aeroclub (DAeC). You can find the respective addresses and contact persons on the Internet.

Maiden flight

Before each flight, check the model, drive and remote control for function. Perform a range test.

Disclaimer

Our liability is limited to the value of the model kit. Since we cannot supervise the proper assembly and operation of the model aircraft, we do not assume any liability for consequential damages.

spare parts

Spare parts are available for the Amethyst III. Further information is available at www.pichler-modellbau.de or in the Online Shop.

Questions, suggestions & technical support

Please write us an eMail to service@pichler.de

IMPORTANT NOTE

Please check the corresponding product page in our online store to see if a newer version of this manual or supplements to it are available.

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Version 1.1

Subject to changes

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