PICHLER

Manual

Joker # 15382

Wingspan 1550mm

R/C flight model for electric drives
Control via 4 channels (rudder, elevator, aileron, 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 starting to build. If any parts are missing or damaged, please let us know immediately by email: 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 assembly instructions completely before you start building. Familiarize yourself with the basic construction. Please check the corresponding product page in our online shop at www.pichler.de to see if there is a newer version of these instructions or additions.

The kit is intended for advanced modelers who have experience in building flying models. The model was developed specifically for electric drives and is not suitable for internal combustion engines.

Pay special attention to good bonding and use BINDAN propeller glue for wood bonding. In our experience, this is the best wood glue for our purpose. You can also glue particularly stressed areas with 5-minute epoxy. If it has to go fast and no big loads are expected, Zoom superglue can be used. For building, we recommend using the Extron building board and covering it with household foil to prevent the components from sticking to the building base or board. Carefully remove the wooden parts with a sharp knife as construction progresses. Do not use force - risk of breakage! Carefully remove the remains of the webs with a sanding block.
For optimum flight characteristics, we recommend the Extron brushless drive set, servos and batteries we recommend. Also, everything is ready to plug in, so no soldering is required.
A stronger battery or motor does not mean more power. On the contrary, the performance of the model may deteriorate with, for example, a larger or heavier battery / motor. The model was developed, tested and flown by us in the suggested configuration.

Recommended accessories

Brushless Combo Set BOOST 40, # C9109
LiPo battery RED POWER 3500-3S, # 15428
Battery Velcro strap, # C4738
Adapter plug, # X6460
[4] Servo MASTER DS3012MG, # C5638
[4] Servo extension cable 200mm, # C9614
Remote control system MASTER GigaProp 6, # C8802

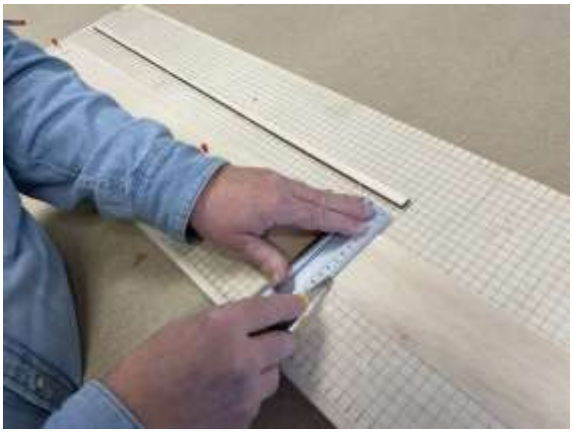
For building the model we recommend the following accessories (see also www.extron-modellbau.de)

Extron building board, 900 x 300mm, # X5535
Hinge slot set, # C5829
Mini balsa plane, # C8891
Extron sanding block, # X5568
Sanding discs for sanding block, # X5569
Sandpaper file, # X5565
BINDAN propeller glue, # X3577
Uhu Por, # C9208
Plastic adhesive L530, # X3583
Fix It! CA glue, # C4930 + C4931
Fix It! metal clips 50mm, # C4919
Crimping pliers, # C8333
Fix It! quick clamp, # C4922
Push pins (50pcs.), # X3441
Foil iron, # C9758
Protective cover for foil iron, # X9983
Mini clamps, # C4923
Hobby knives, # C9860 and # X5563

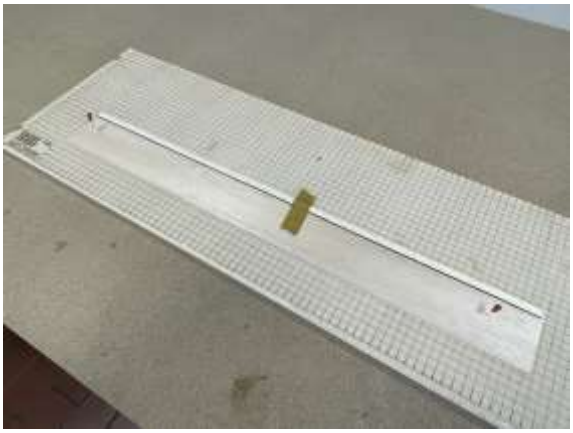
Building the wing

ATTENTION The wing is made in two parts so that it can be disassembled for transport.
So you have to build a left and a right wing. The wing halves are NOT side by side!

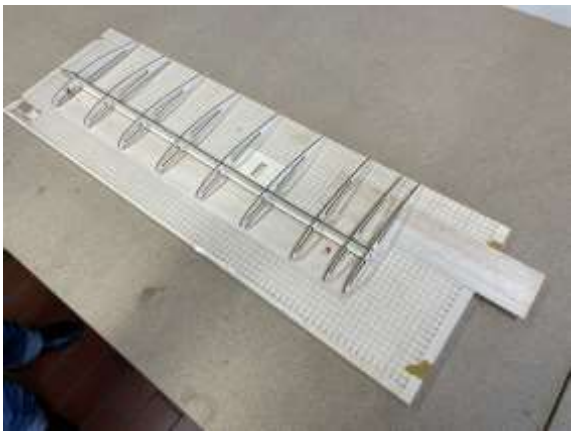
Cut balsa board 1.7mm (B=75mm) to length according to strip H1.



Place strip B2 on the planking. Use a 1.7mm thick balsa board as a base but do NOT glue it.

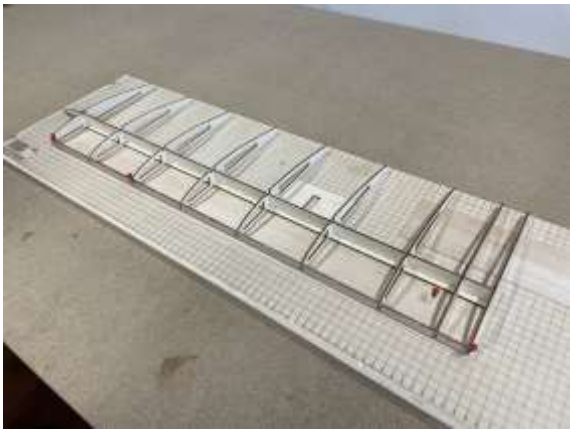


Place the wing spar B1 and insert the ribs from left to right: A6, A5 (3x), A4 (2x), A3, A2, A1. Insert servo board D2. Do NOT glue yet. Use a 1.7mm thick balsa board as a base for the inner 3 ribs, but do NOT glue it.

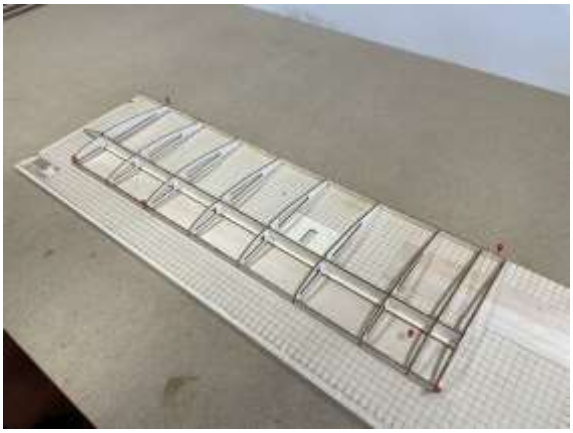


Fix the B1 surface spar with adhesive.

Fit strip G1 onto the ribs at the front.



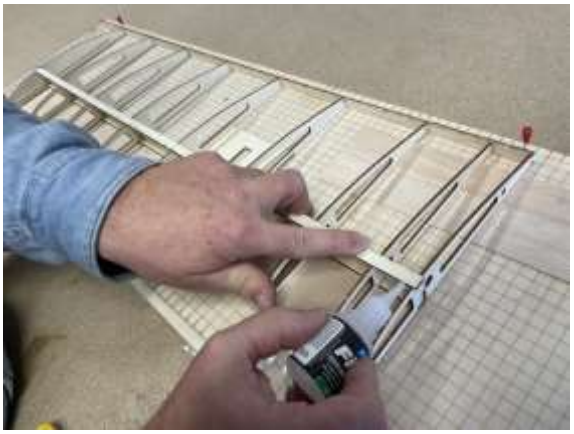
Attach strip G2 to the ribs at the rear.

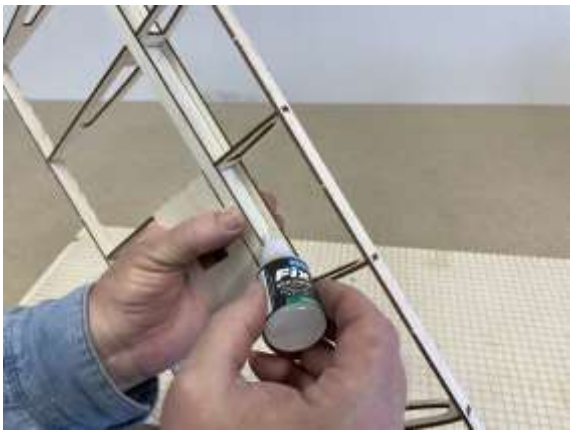


Align wing components and then glue them in place.

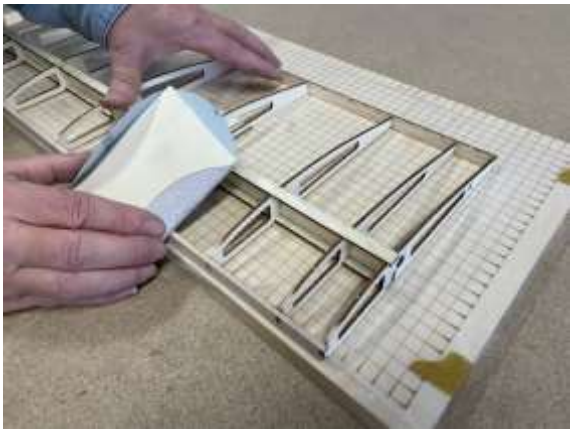
Glue in servo board D2.

Glue upper bar B2.

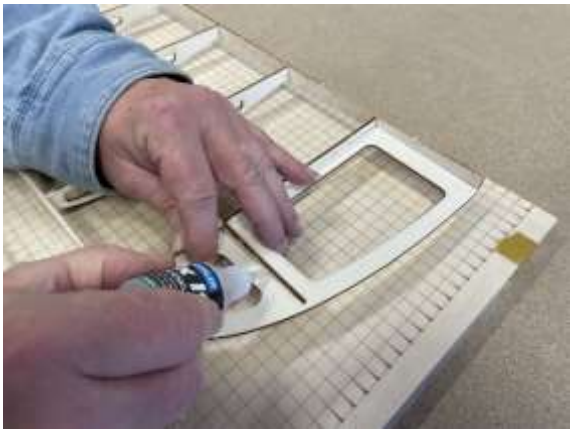




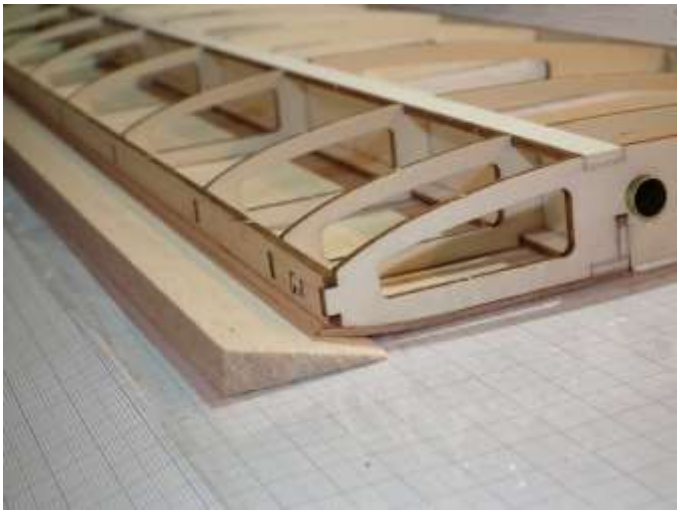
Sand strip G1 / G2 to match the ribs.



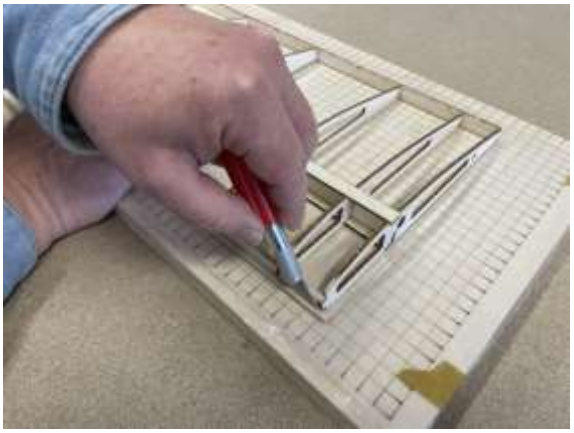
Glue in edge curve D3.



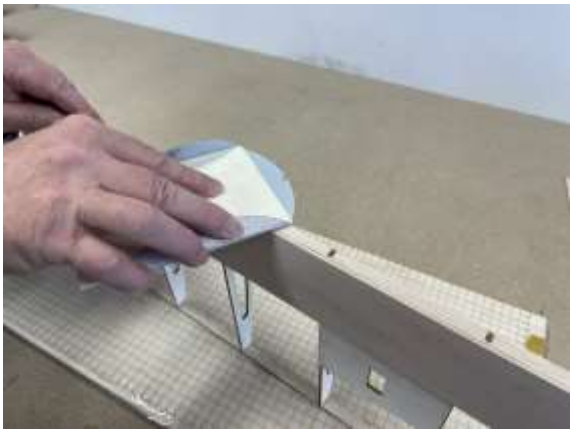
To glue on the bottom planking, coat the ribbed framework with white glue in the appropriate places. Place the planking section flat on the building board Place the rib frame on the planking section and align.
Slide a triangular strip underneath in the area of the leading edge strip. Use the strip of the aileron for this purpose. This presses the planking against the ribs or leading edge. During the drying phase, weigh down the wing on the building board with weights.



Cut excess planking to length as shown.

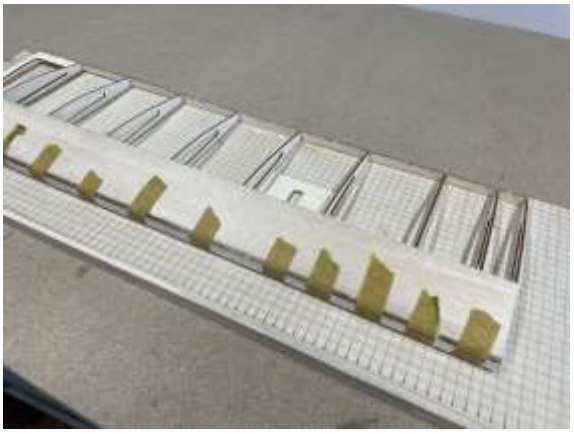


Sand wing flush at front.



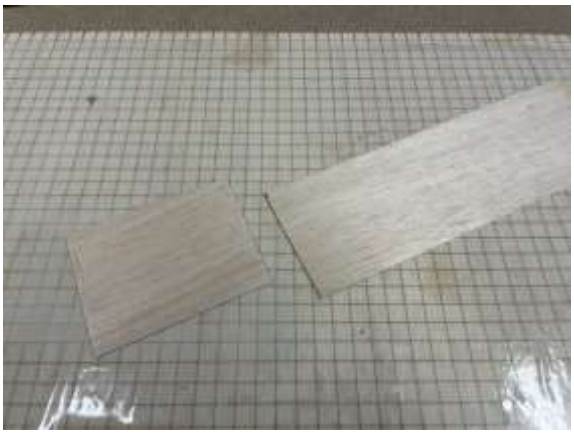
Glue on the top planking as well.

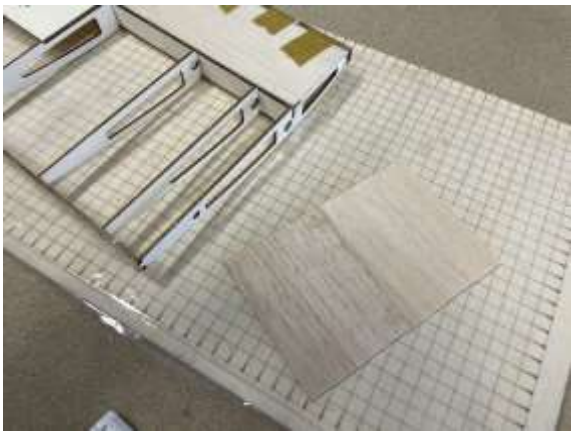
Fix while drying.



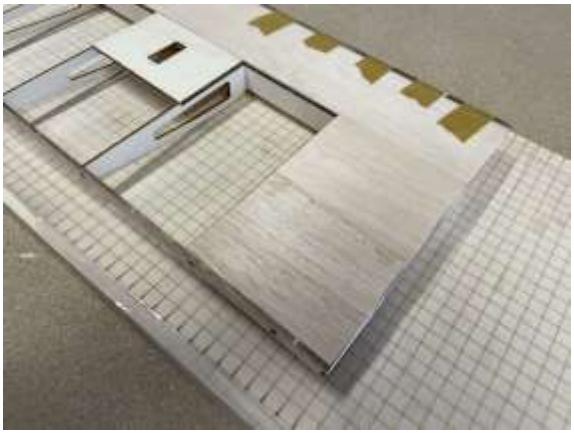
If necessary, sand the front wing flush again and glue on the strip H1.

Cut planking pieces from 1.7mm thick balsa boards with a length to cover the first 3 ribs A1 to A3.





Glue the lower planking parts first.



Glue in filler pieces H3 as shown as reinforcement.

Sand flush as shown.

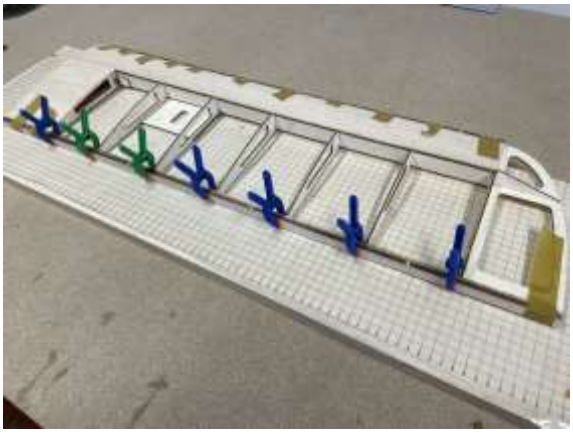
Now glue the upper planking made of 1.7mm balsa board.Sand any excess planking flush with the ribs.

Fit in the brass tube.

Glue in brass tube with 3mm overhang. Do NOT glue in end rib A7 yet.

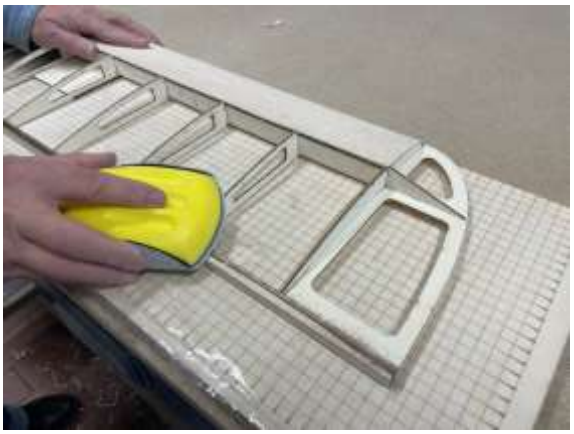
Glue on small piece of plywood from scrap material as shown as stopper for surface connecting rod.

Glue on end strip H2 and secure with clamps.



Grind the leading edge and end strip.

Grind the top and bottom of the end strip so that it tapers towards the end of the edge curve, as dictated by the slope on the spar.

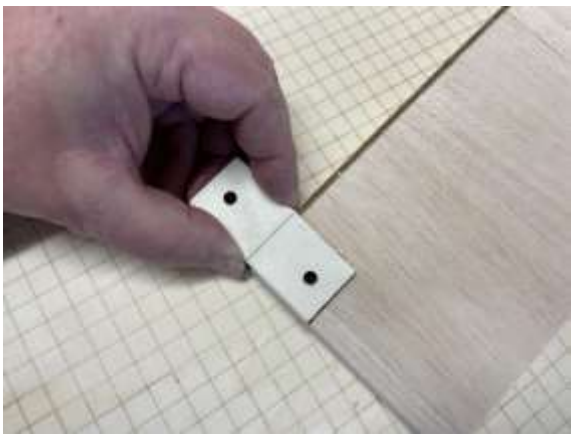


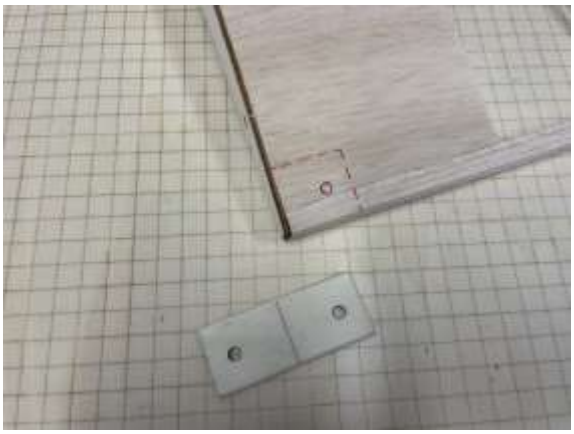
Glue on the A7 closing rib.

Cut the triangular strip for the ailerons to 730mm and adjust it at the end to the course of the end strip. (sand)

If a foil hinge is used, grind the lower edge to approx. 30 degrees.
When using flow hinges, grind the front edge of the ailerons to a point at an angle of 45°.

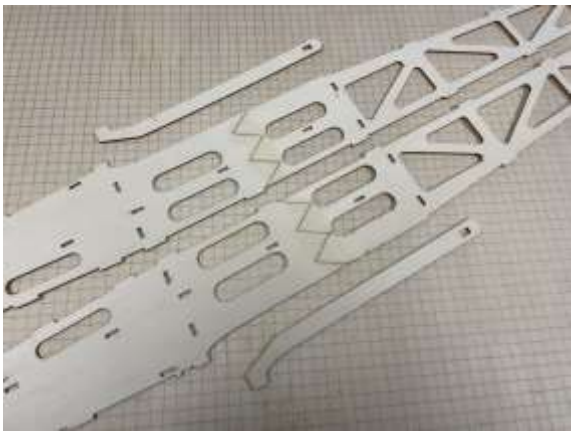
Mark a center line on plywood part B10 and use it as a drilling guide for the wing screws.



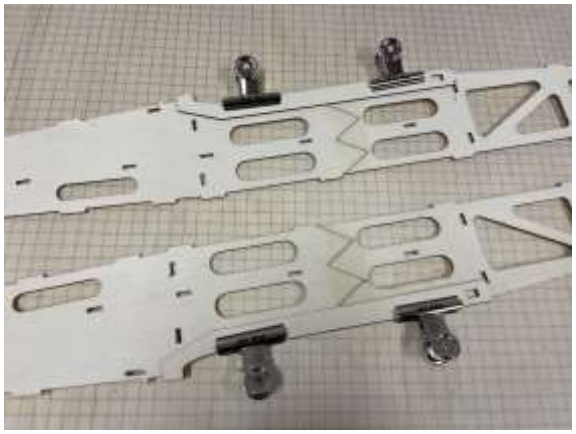


Building the fuselage

Glue side parts C1 and D1 together.

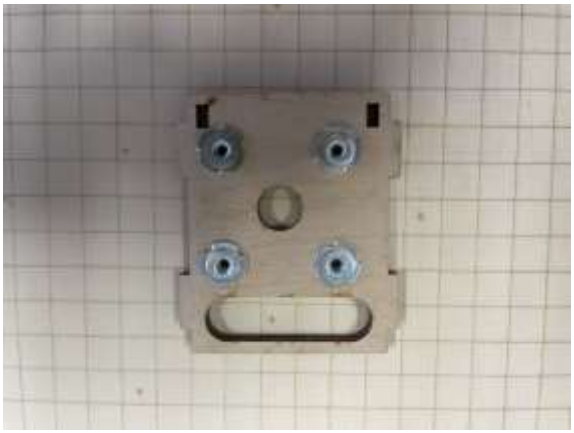


Glue on reinforcements B3.



Glue together the motor bulkhead from parts F1.

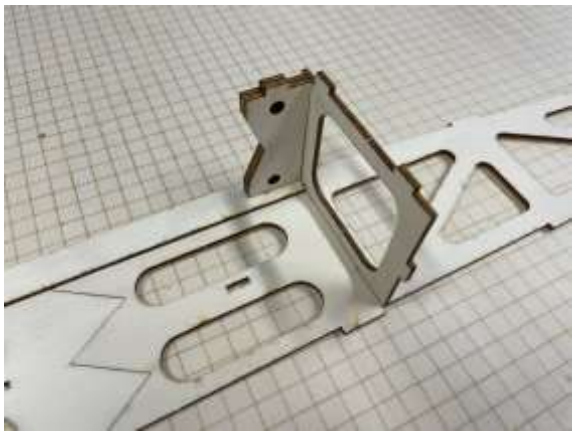
Carefully drive in the drive-in nut.



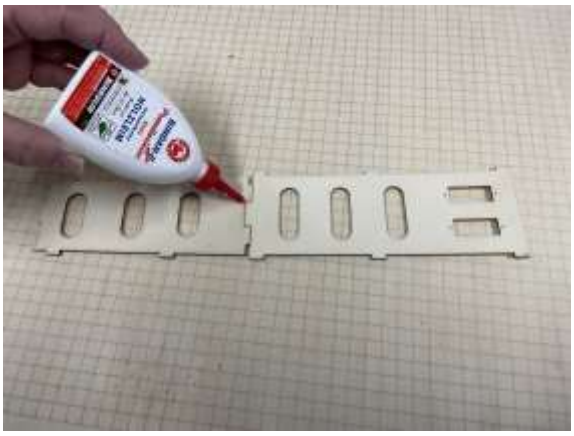
Glue parts B6 together.

Carefully drive in the drive-in nuts.

Glue parts B9 and B6 into the fuselage side wall.



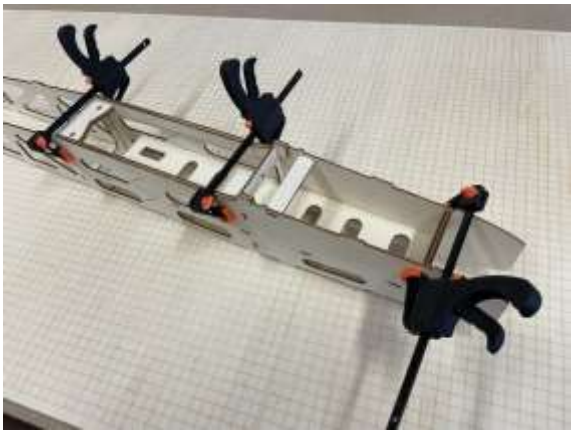
Glue servo board E3 and C4 together.



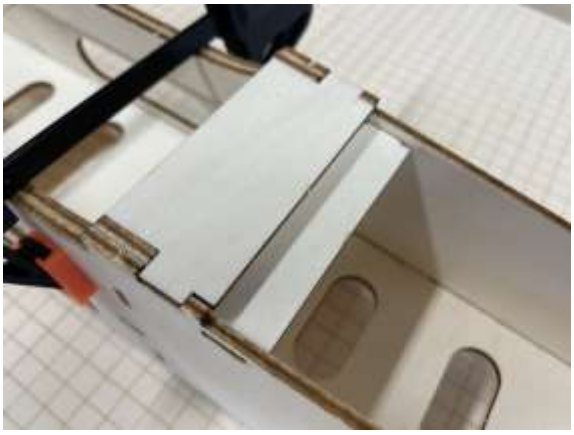
Glue servo board, B8 and C5 in place. The pin of B8 must point downwards, this will later engage with the bottom of the fuselage.
When gluing C5, the longer side (63 mm) must be (63 mm) to the rear towards B8 and the shorter side (62 mm) must point forward to the motor bulkhead.

Glue motor bulkhead in front as shown. and glue fuselage halves together.

Glue the fuselage halves together and fix them.

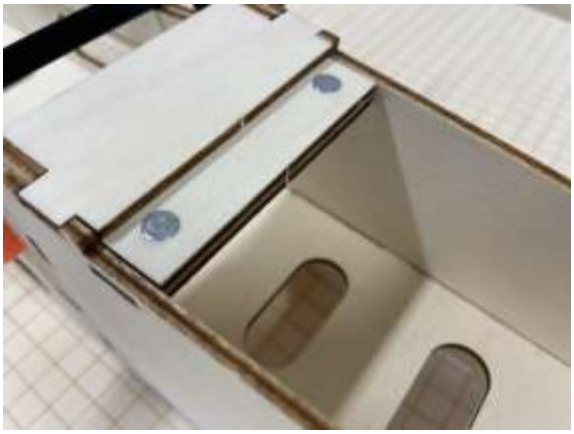


Glue in part B5.

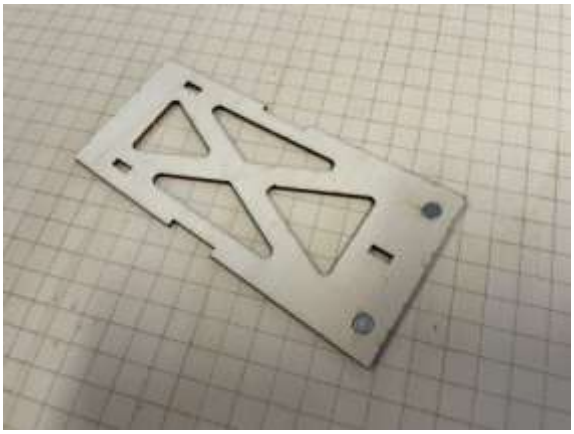


Glue magnets into part C6.

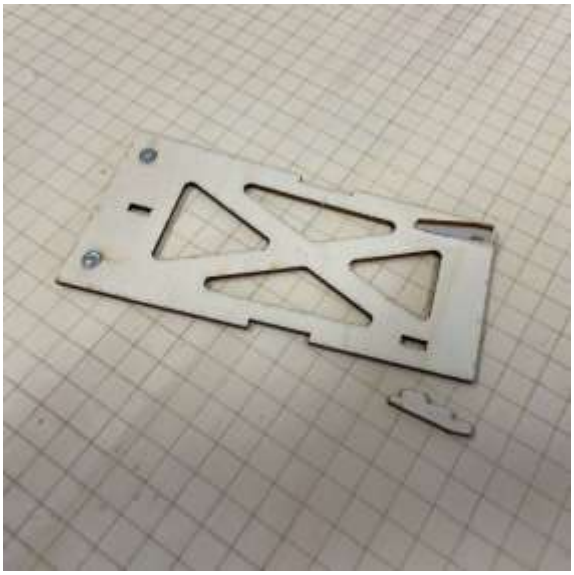
Glue part C6 in the fuselage.



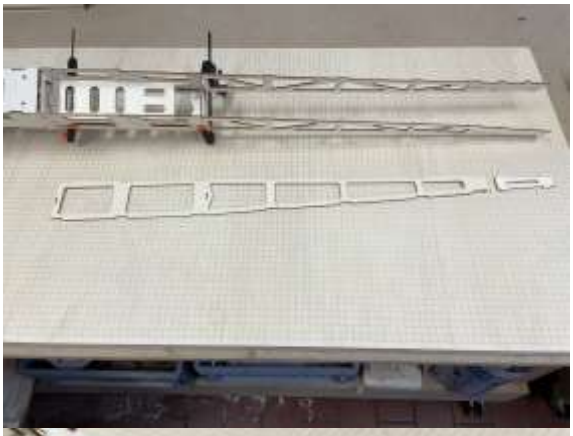
Glue the magnets into the service flap C2. Make sure that they are inserted in the correct position and do not repel the magnets in C6.



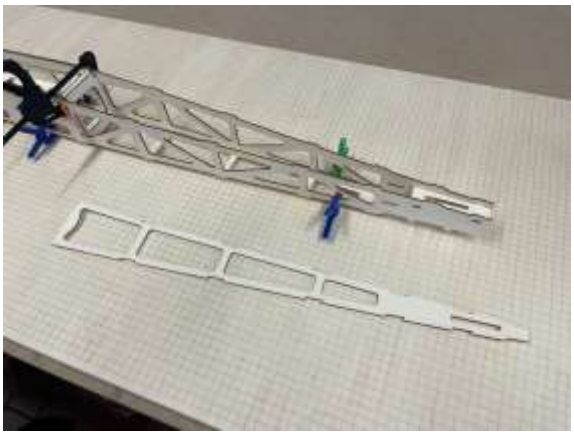
Glue the two pins C7 into part C2. Glue part C8 into the center slot .



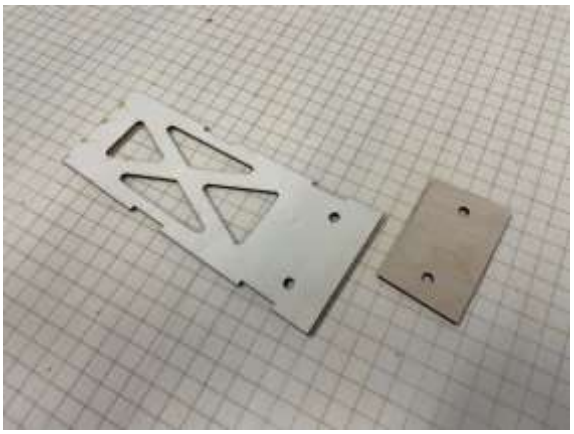
Glue fuselage bottom part E2 and part B4.



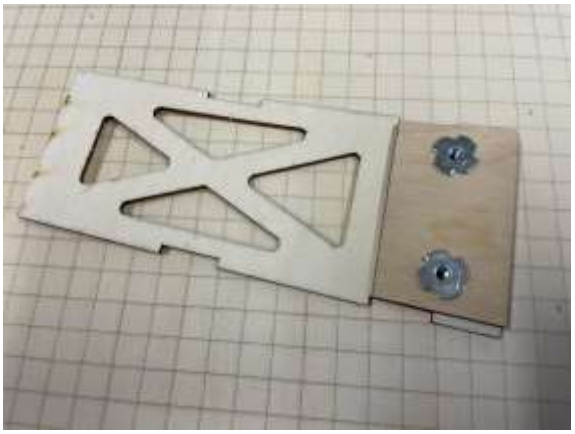
Glue in upper fuselage section E1.



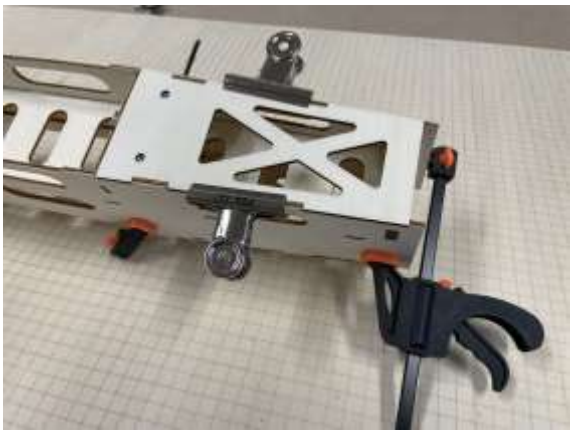
Glue reinforcement F2 to front fuselage bottom C3.

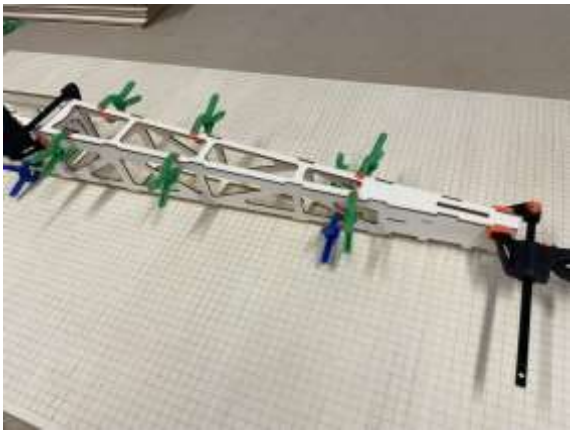


Carefully drive in the drive-in nuts.

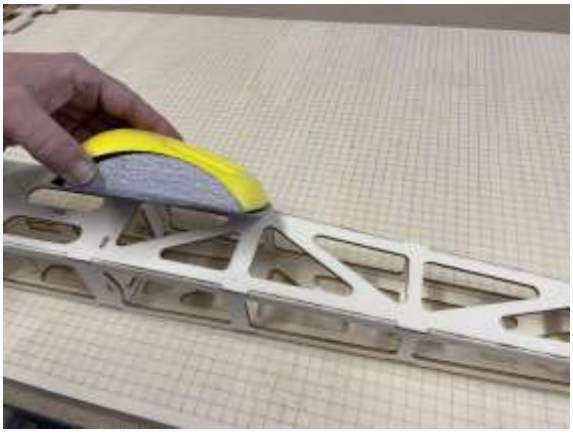


Glue in front fuselage bottom C3.



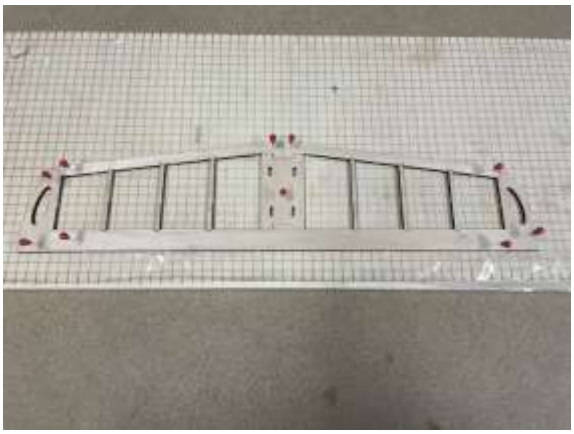


Sand after drying.

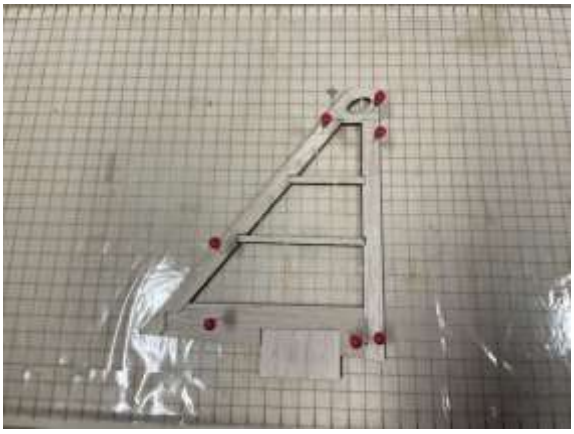


Building the elevators

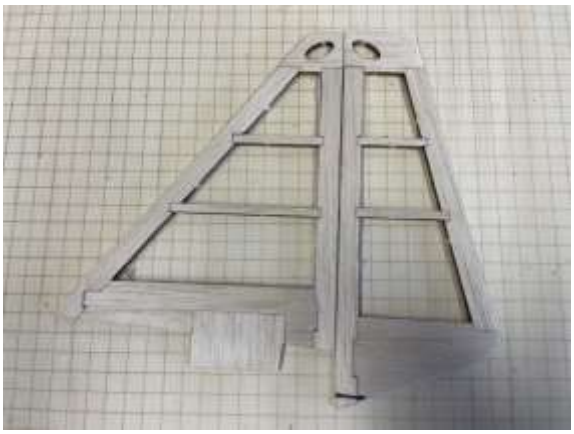
Glue the elevator from parts I1 to I8.



Glue the fin from J1 to J7.

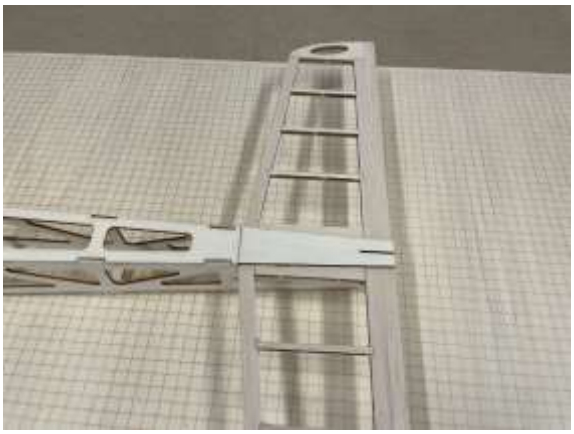


Glue the rudder from K1 to K6.



Grind the rudder to a 45° angle at the leading edge for flow hinge.
Sand the front edge of the elevator at an angle when using foil hinges.
When using flow hinges, sand the leading edge at an angle of 45°.

Glue rudder and elevator to the fuselage at right angles **AFTER** covering.
Glue plywood part B7 to the fuselage bottom.



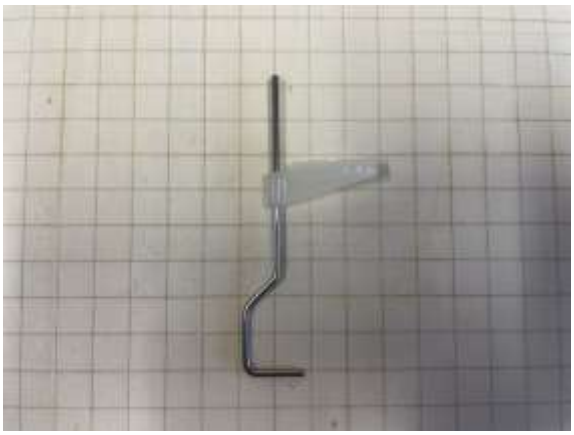
Mounting the landing gear

Attach main landing gear with two screws from below. The wheels are fastened with cap screws and may have to be drilled out slightly before assembly.

Mounting the rear landing gear

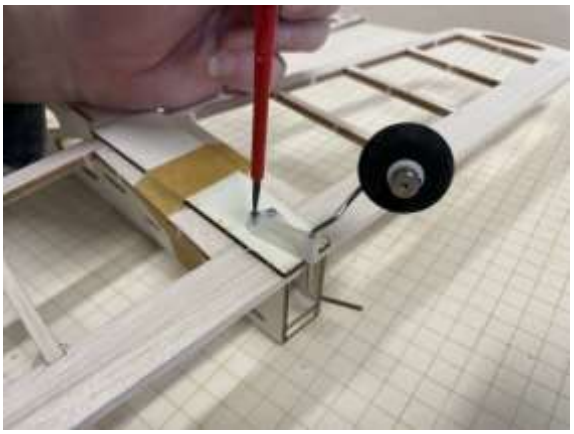
Shorten plastic guide (bracket) to 3mm before gluing in accordance with component B7.

Bend the undercarriage wire with pliers as shown. The 10mm grid on the building board shows the bending dimensions.



Mount star wheel with adjusting ring.

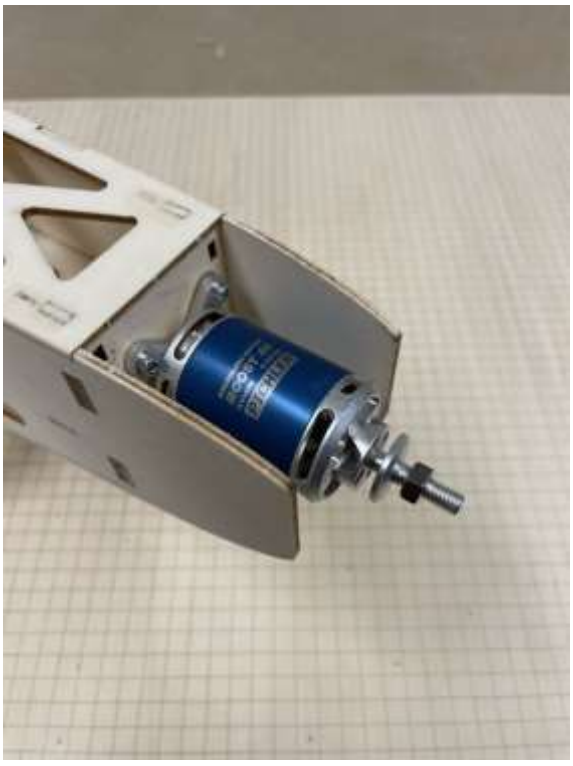
The rear landing gear is attached with two screws.



Center drill the rudder so that the angled landing gear wire can be inserted.

Installation of the motor

The motor is mounted as shown and bolted to the front of the motor bulkhead.



R/C Installation

The servos are screwed into the existing openings in the fuselage and wings. The wing servos are directly hinged with steel wire. Elevator and rudder are hinged by push rods which are to be made as follows:

Bend the free end of the threaded rod by 90°. Place the pushrod (wood Ø 6mm) as shown and transfer the position of the bend and drill a Ø2mm hole at this point. Insert wire into cross hole, cut off protruding wire.

Glue wire to push rod with 5-min epoxy. Slide heat shrink tubing over it and shrink with hot air gun.

Screw plastic control horns to the respective control surfaces of aileron, rudder and elevator and connect the linkage rods or pushrods to the servos. On the servo side the wire can be bent in a Z-shape, on the rudder side a clevis is used.

After completion of the shell, the model can be covered. We recommend polyester iron-on film.
Beforehand, the model should be completely cleaned of dust residues. Carefully sand off sooty interfaces from laser cutting. The best results are achieved with a foil iron, e.g. Order No. C9758. Be sure to use a protective cover, Order No. X9983, to prevent scratching of the foil during ironing.

The flight battery can be securely fastened to the battery board using Pichler Velcro straps, Order.No. C4738. The optimum center of gravity of the model can be adjusted by moving the flight battery.

Ideal center of gravity
80 - 85 mm (measured from the leading edge)

Rudder deflections
Aileron = +15mm / -10mm
Elevator = +/- 8mm
Rudder = +/-20mm

The operation of model aircraft is subject to different regulations depending on the country. Please check with your state authority for the current, legal regulations. You may need a certificate of knowledge and insurance to operate model aircraft. You can obtain all the information you need from the German Model Aviation Association (DMFV) or the German Aeroclub (DAeC). You can find the respective addresses and contact persons on the Internet.

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 assume no liability for consequential damages.

For spare parts inquiries, general questions and suggestions
please write us an eMail to service@pichler.de

We wish you a lot of flying fun as well as spar and rib breakage!

Building instruction version V1.0

Information presented enclosed is subject to change.

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With QR code directly to the online store (hold cell phone camera on it and follow the link)

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