SCALE-PARKFLYER.DE
Depron-Modelle für Individualisten

P38 Lightning „Fatty“

From the Fatty Season:

building instructions

The model of the P38 Lightning as a "cartoon variant" is part of the Fatty Season, which is available here in the shop. The models are simple in construction and allow a quick construction progress. The wing, for example,. consists of only a few components. The selected "KF" profile thus facilitates the construction. The P38 can be launched easily from the hand and can be landed on the hull bottom on grass. The 8X6 propellers do not touch the ground. Even a starting car can be used.

Technical specifications:

- ***Wingspan: 1100 mm***
- ***Hull length: 810 mm***
- ***Weight: approx. 850 grams (depending on engine and battery selection)***
- ***Motorization: 2 X Turnigy D2826 / 10 1400KV (54 gr.)***
- ***Controller: 2 X 30A***
- ***Propeller: 8 x 6 inches***
- ***Battery selection: 2S - 2800 mAh to 3 S - 1800 mAh***
- ***RC function: height / cross and motor***

The Depron components are precisely cut using a CNC machine. Positions of all adjacent components were also marked CNC and labeled. This ensures that all adjacent components can be easily adhered to the exact fit.

The manufacture of all components and the completeness of the kits were carried out by hand and conscientiously. If you notice any inaccuracies or missing components, please contact me to be able to offer the most satisfactory product to you and the following customers. info@scale-parkflyer.de

General:
The building material DEPRON is a very light building material that is normally used in house construction. In DIY stores it can be found in wallpaper departments under the name " Wallpaper isolation" as insulation layer under the wallpaper. Due to its low weight (eg 10X10 cm of 6 mm Depron weighs 2 grams) and its stability makes it ideal for the construction of "slow flyers" up to weight classes of well over 3 kg. So Depron has a justified place on the model airliner for some years reached.

Depron can be cold-formed over a table edge with the palm of your hand. The grinding of corners and protruding edges works well with fine smeared paper. When cutting Depron you should use a sharp knife with a narrow blade. When bonding Depron-Depron is very good UHU-Por, unless it is under tension during bonding, or in conjunction with other materials, or the bonding is a higher load. Since you take the proven epoxy resin. To fill gaps and unevenness is excellent "modeling putty" of "Moldofil" from the hardware store. The toothpaste-like paste can be very well trowel into the Depron gap and after curing hardly harder than Depron.

necessary building materials:

In the Depron kit all necessary Depron components are to be found. All additional necessary building materials such as stiffening materials (CFRP, wood ect) or adhesives or RC components are not included!

Die Stückliste:

Pos.	Bezeichnung	Anzahl	Material
R1	Cockpitspant	1	6 mm Depron
R2	Cockpitspant	1	6 mm Depron
R3	Cockpitspant (2 teilig)	1	6 mm Depron
R4	Cockpitspant (2 teilig)	1	6 mm Depron
R5	Cockpitspant (2 teilig)	1	6 mm Depron
R6	Cockpitstringer	2	6 mm Depron
R7	Cockpitstringer	1	6 mm Depron
R8	Akkuauflage	1	6 mm Depron
R9	Servoverkleidung	4	3 mm Depron
R10	Cockpitboden	2	3 mm Depron
R11	Kanzelrahmen	1	6 mm Depron
R12	Depronhaube	1	6 mm Depron
R13	Depronhaube	1	6 mm Depron

R14	Depronhaube	1	6 mm Depron
T1	Tragfläche	2	6 mm Depron
T2	Tragfläche	2	6 mm Depron
L1	Leitwerk Stringer	2	6 mm Depron
L2	Leitwerks Spant	2	6 mm Depron
L3	Leitwerks Spant 3 teilig	2	6 mm Depron
L4	Leitwerks Spant 3 teilig	2	6 mm Depron
L5	Leitwerks Spant 3 teilig	2	6 mm Depron
L6	Leitwerks Spant 2 teilig	2	6 mm Depron
L7	Leitwerks Spant 2 teilig	2	6 mm Depron
L8	Leitwerks Spant 2 teilig	2	6 mm Depron
L9	Leitwerks Spant 2 teilig	2	6 mm Depron
L10	Leitwerk Stringer	4	6 mm Depron
L11	Leitwerk Stringer Tragfläche	2	6 mm Depron
L12	Höhenleitwerk	1	6 mm Depron
L13	Seitenleitwerk	2	6 mm Depron
S1	Schablone Tragfläche Mitte	2	6 mm Depron
S2	Schablone Tragfläche Außen	2	6 mm Depron
S3	Schablone Tragfläche - HLW	2	6 mm Depron
	Beplankungsmaterial	1	3 mm Depron

Pos.	**Bezeichnung**	**Anzahl**	**Material**
R1	Cockpitspant	1	6 mm Depron
R2	Cockpitspant	1	6 mm Depron
R3	Cockpitspant (2 teilig)	1	6 mm Depron
R4	Cockpitspant (2 teilig)	1	6 mm Depron
R5	Cockpitspant (2 teilig)	1	6 mm Depron
R6	Cockpitstringer	2	6 mm Depron
R7	Cockpitstringer	1	6 mm Depron
R8	Akkuauflage	1	6 mm Depron
R9	Servoverkleidung	4	3 mm Depron
R10	Cockpitboden	2	3 mm Depron
R11	Kanzelrahmen	1	6 mm Depron
R12	Depronhaube	1	6 mm Depron
R13	Depronhaube	1	6 mm Depron
R14	Depronhaube	1	6 mm Depron

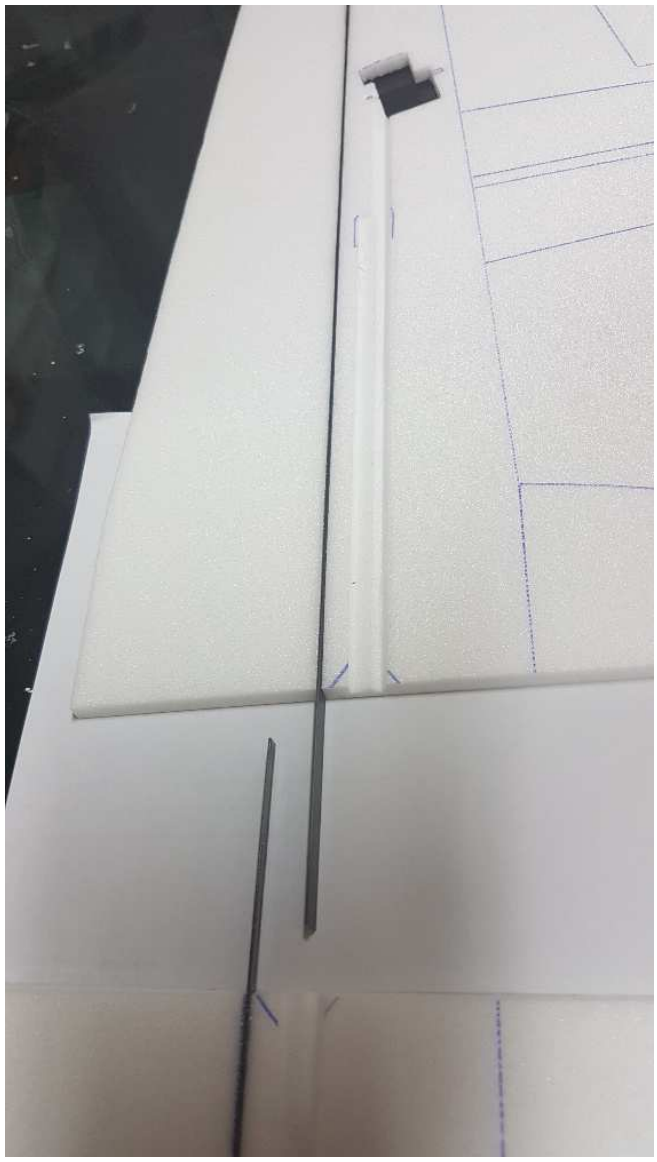
T1	Tragfläche	2	6 mm Depron
T2	Tragfläche	2	6 mm Depron
L1	Leitwerk Stringer	2	6 mm Depron
L2	Leitwerks Spant	2	6 mm Depron
L3	Leitwerks Spant 3 teilig	2	6 mm Depron
L4	Leitwerks Spant 3 teilig	2	6 mm Depron
L5	Leitwerks Spant 3 teilig	2	6 mm Depron
L6	Leitwerks Spant 2 teilig	2	6 mm Depron
L7	Leitwerks Spant 2 teilig	2	6 mm Depron
L8	Leitwerks Spant 2 teilig	2	6 mm Depron
L9	Leitwerks Spant 2 teilig	2	6 mm Depron
L10	Leitwerk Stringer	4	6 mm Depron
L11	Leitwerk Stringer Tragfläche	2	6 mm Depron
L12	Höhenleitwerk	1	6 mm Depron
L13	Seitenleitwerk	2	6 mm Depron
S1	Schablone Tragfläche Mitte	2	6 mm Depron
S2	Schablone Tragfläche Außen	2	6 mm Depron
S3	Schablone Tragfläche - HLW	2	6 mm Depron
	Beplankungsmaterial	1	3 mm Depron

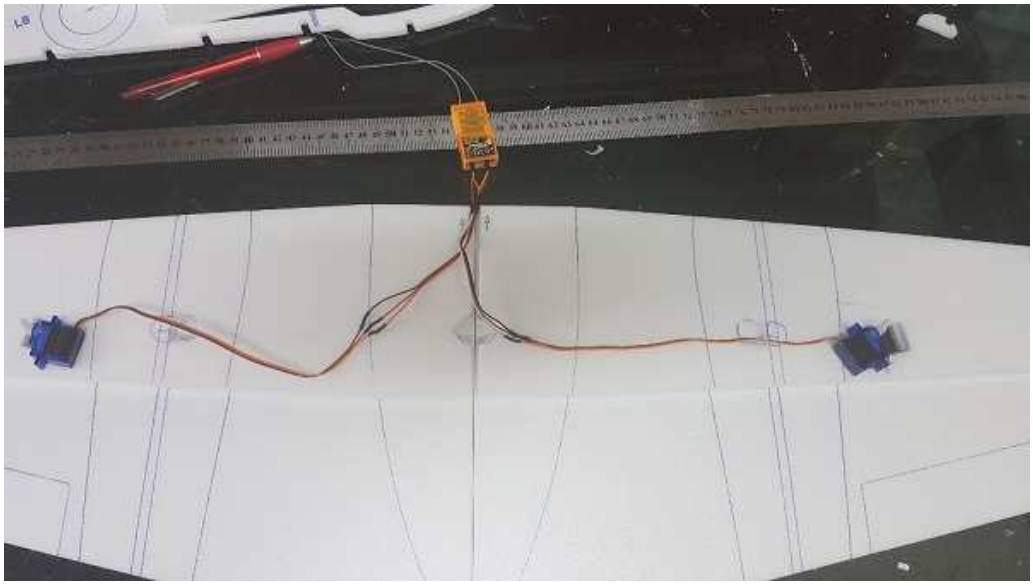
	Nicht im Bausatz enthalten:		
	Kabinenhaube tiefgezogen		als Option zusätzlich erhältlich
	Kohlefaservierkantstab CFK	2	6x1x1000 mm
	Motorträger	2	Sperrholz 2 mm

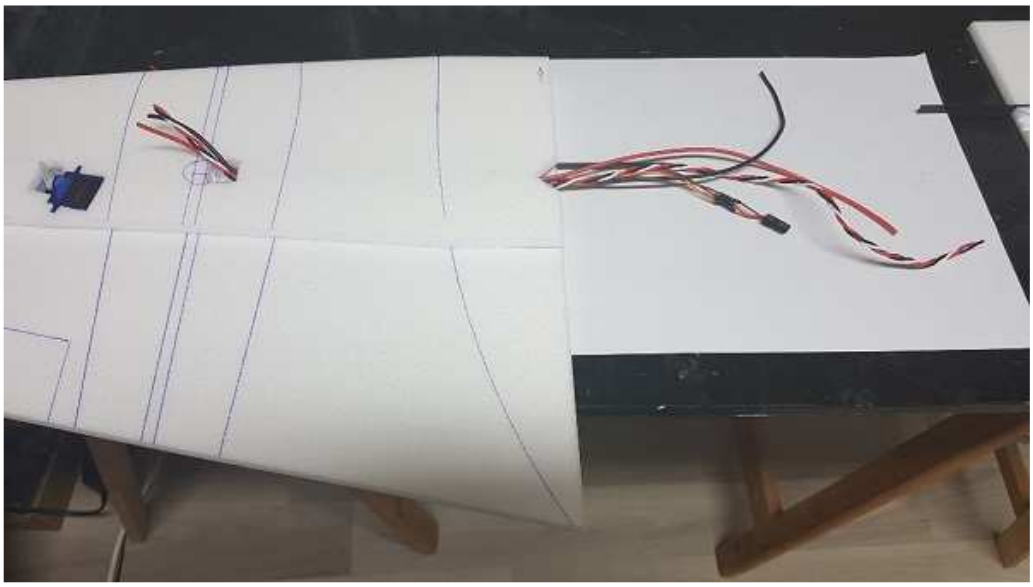
Building instructions:

1. Cut the CFK 6x1 mm rod in half (2 x 500 mm). Glue each half into the intended mark in the wing.
2. Cut the aileron servo shaft from both wing parts T1 & T2. (Depending on the servo type selection)
3. Cut a cable duct from the wing parts T1 and T2 so that the following cables can be inserted:
- aileron servo
- Servo cable regulator
- power supply motor (black / red 2- 2-5 qmm2)
- Servo cable elevator (only on a freely chosen side)

The cable lengths should be about 10 cm up to the middle of the tail, about 20 cm in the direction of the cockpit. See the following pictures:

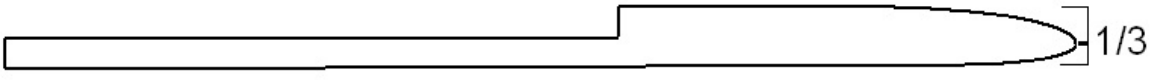




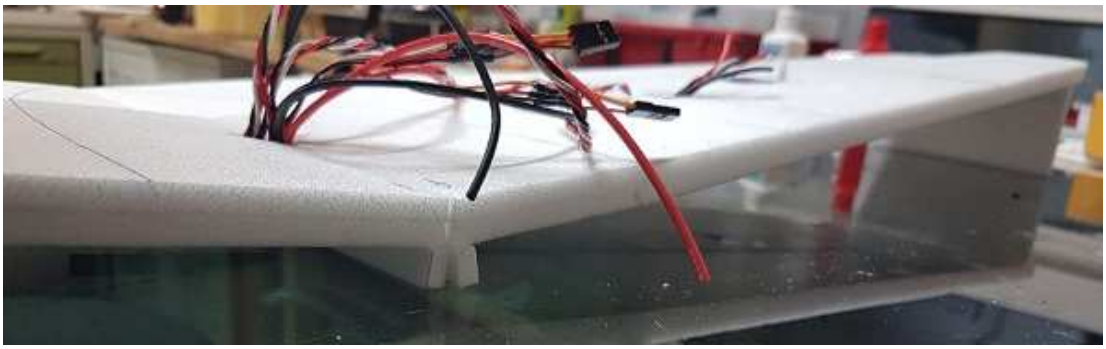


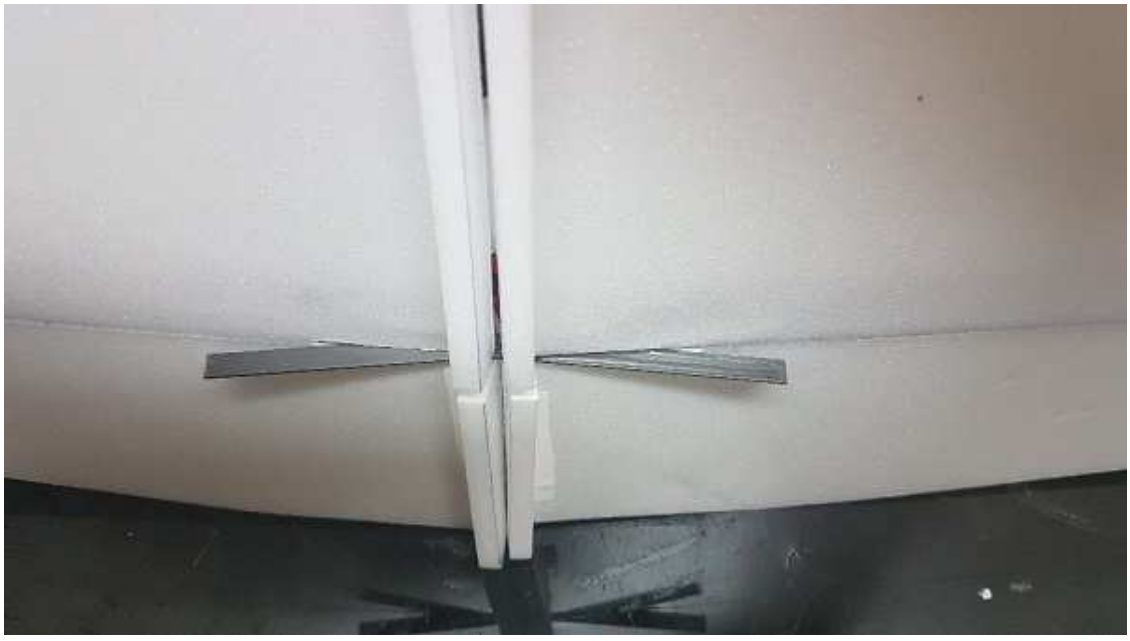
As soon as all cables have been inserted and the upper support surface can be placed stress-free, glue T1 to T2.

1. Sand the canopy: Like every profile, grind the leading edge up to 2/3 and down to 1/3.



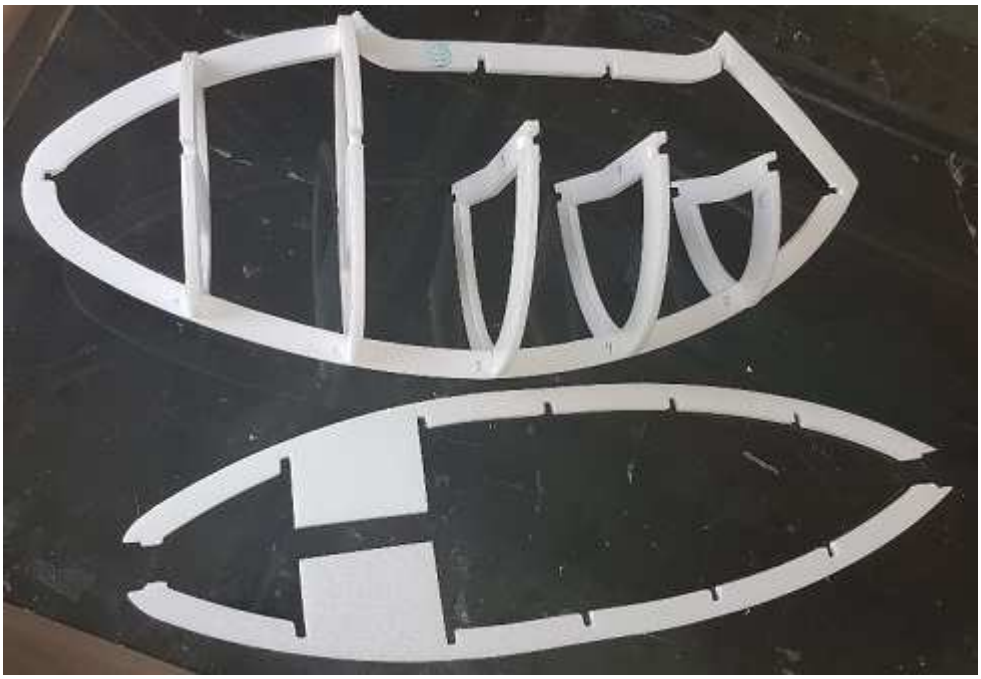
1. Attach the V-Face, S1 and S2 templates to the underside of the wing using double-sided tape. S1: wing end, hull side. S2: flush end aileron.





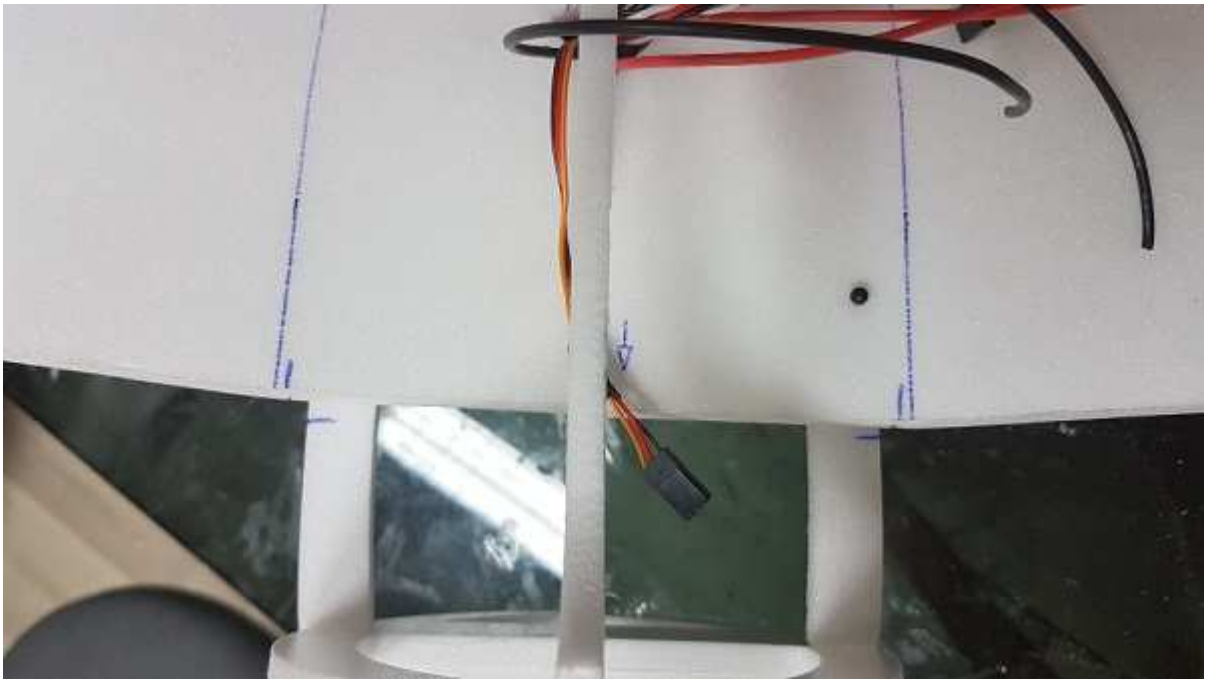
Glue the wings together with epoxy resin, glue the two protruding CFRP rods into place.

Now the middle hull can be prepared. To do this, glue the ribs R1 to R5 (lower parts) to R7. Insert and glue the side stringer R6.



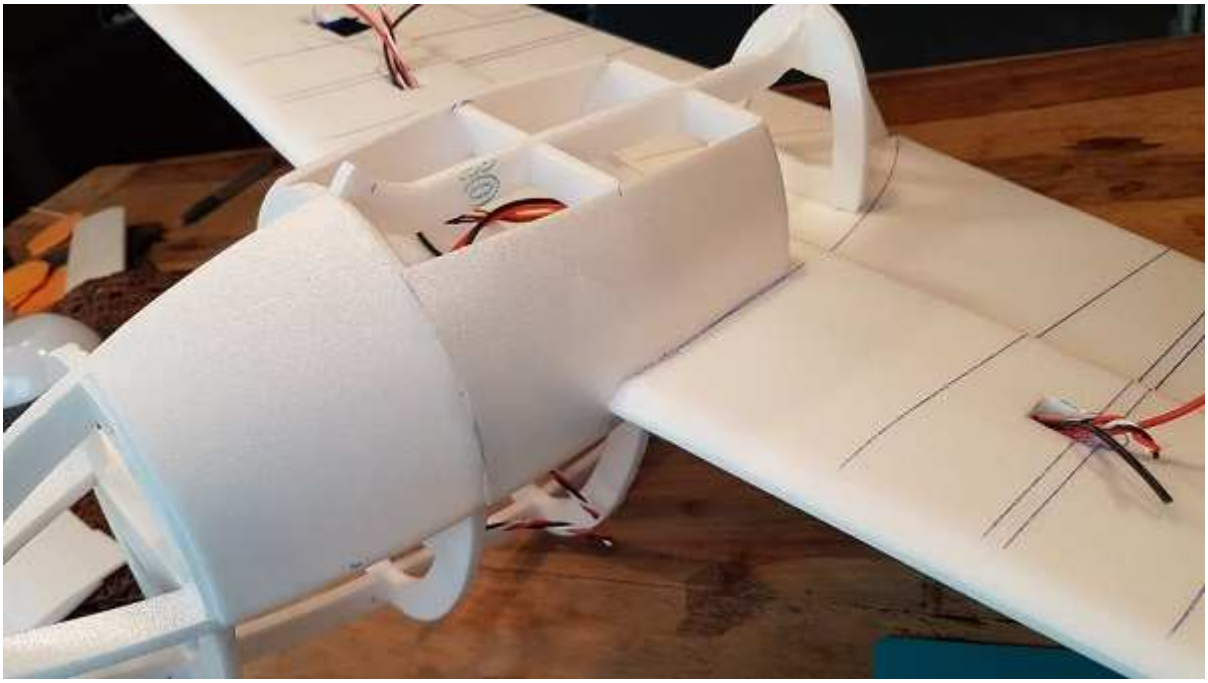
1. **Now push the wing into the fuselage..**

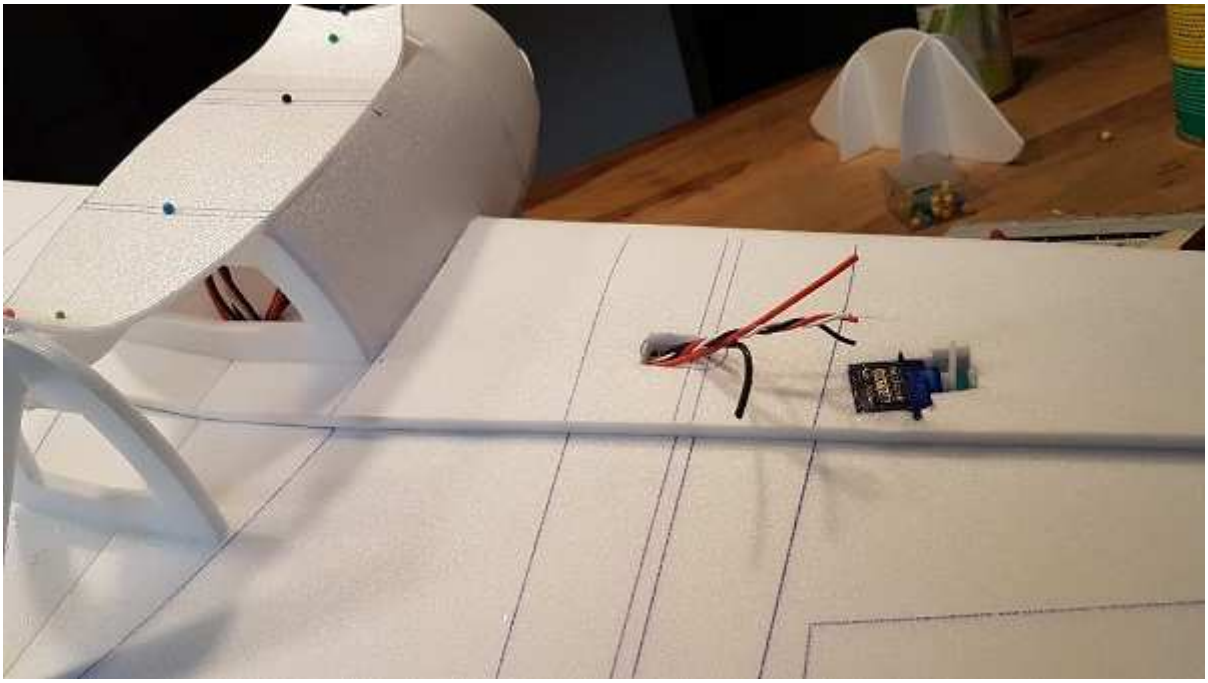
The markings facilitate positioning of both assemblies.

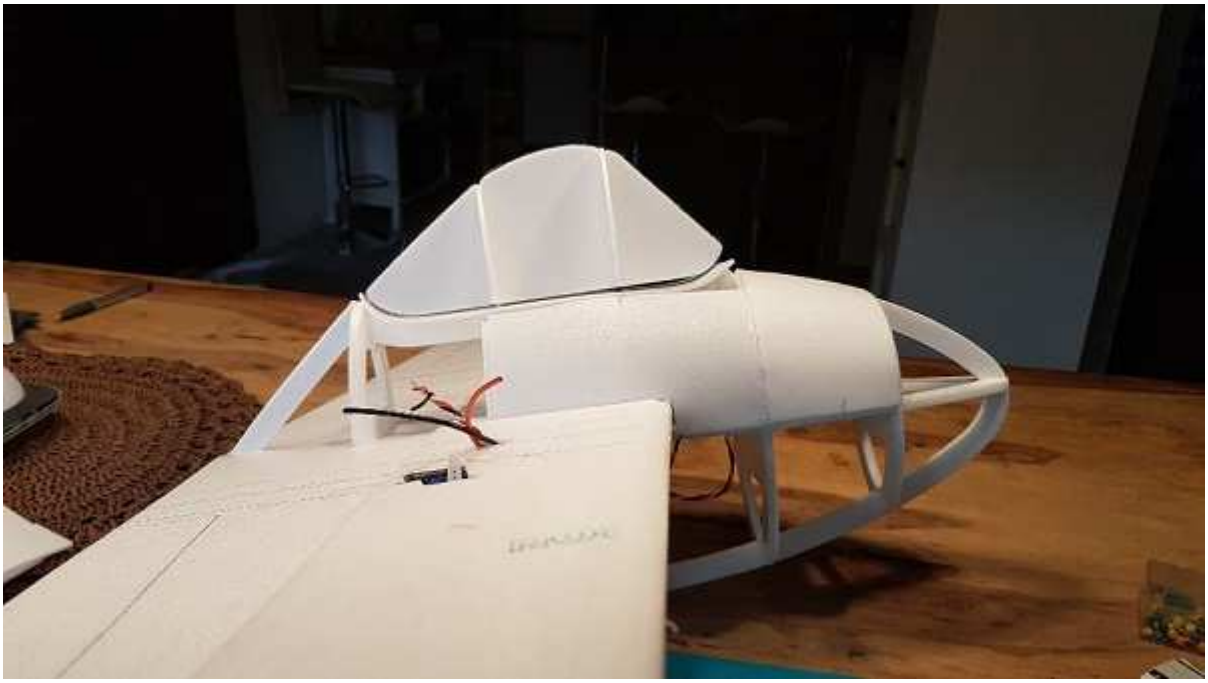


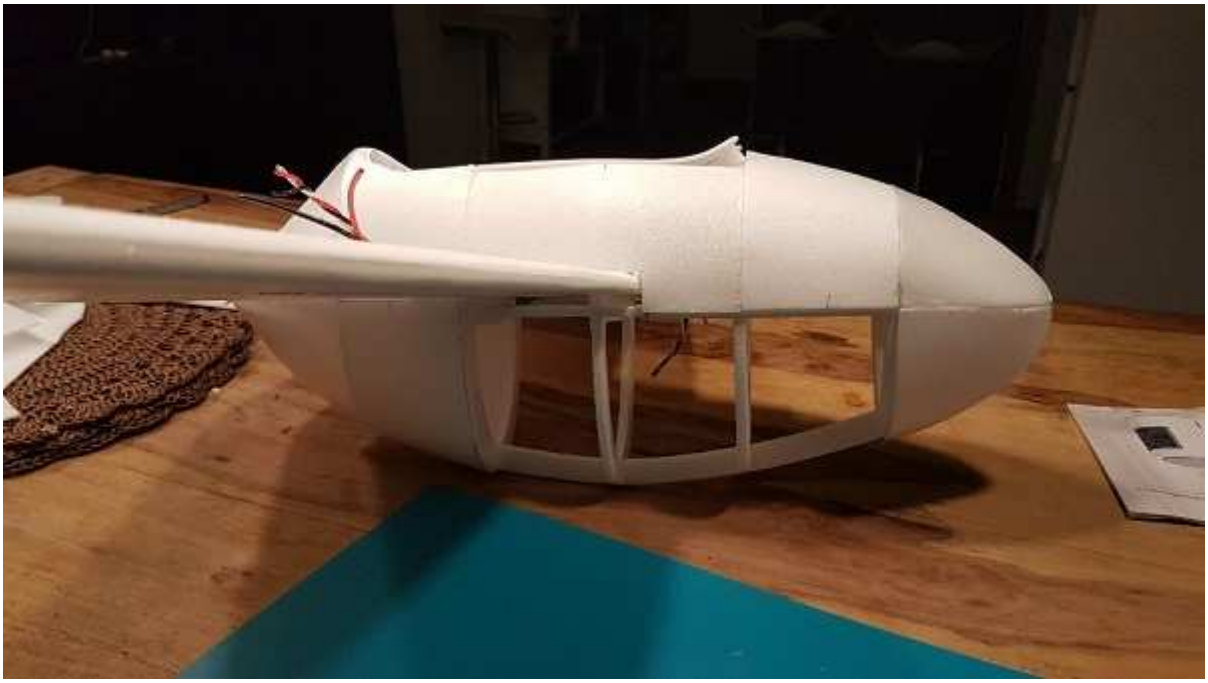
2. Geometrically align and glue both assemblies.
3. The upper frames R3 to R5 can now be placed on the wing in the fuselage.
4. Now the hull can be covered with 3 mm Depron.

Note on planking:
It recommends planking from frame to frame. It is important that the Depron be pre-bent with the "more labile" bending side of the bending contour. The best way to do this is to use the palm of your hand to carefully deform the Depron over a table edge.

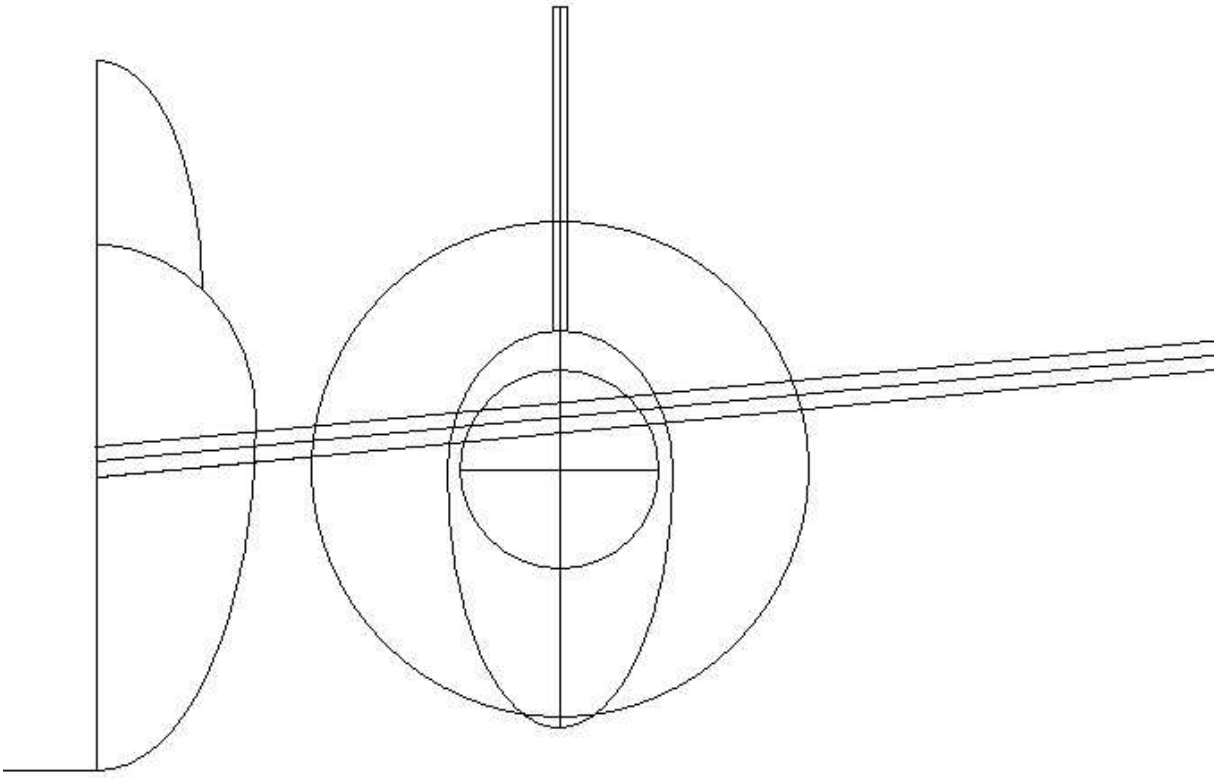


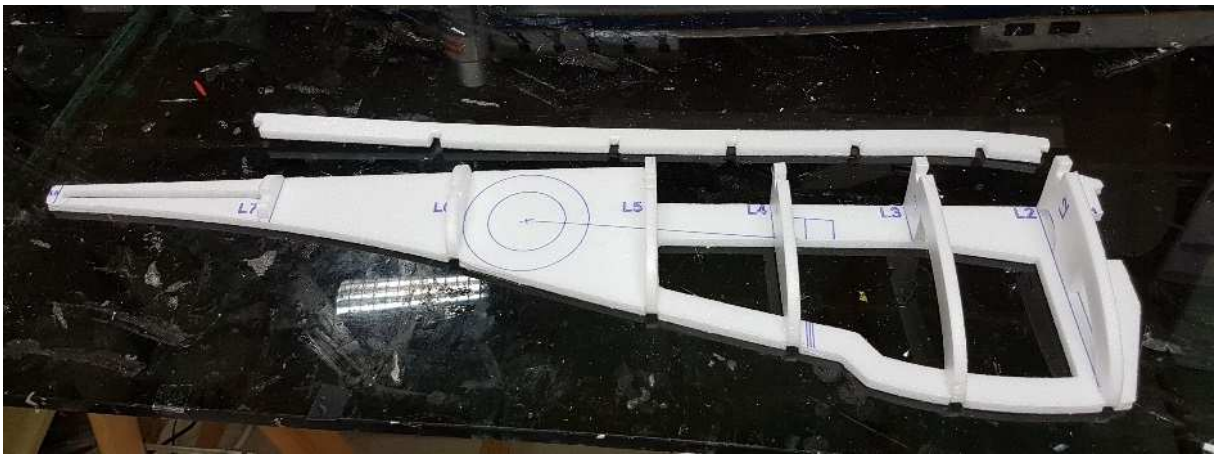






2nd tail hulls: To build the tail body without delay, first one of the two sides is built. On the stringers L1 the ribs: R2 to R8 stick on. Special feature: The frames R2 to R4 must be used correctly because of the V-shape of the wings. The airfoil cutouts in the ribs must run diagonally upwards on the outside.
3. When all the frame halves have been inserted, the longitudinal stringers L10 can be inserted. Now the construction is sturdy enough to be taken off the table surface to build the second side:

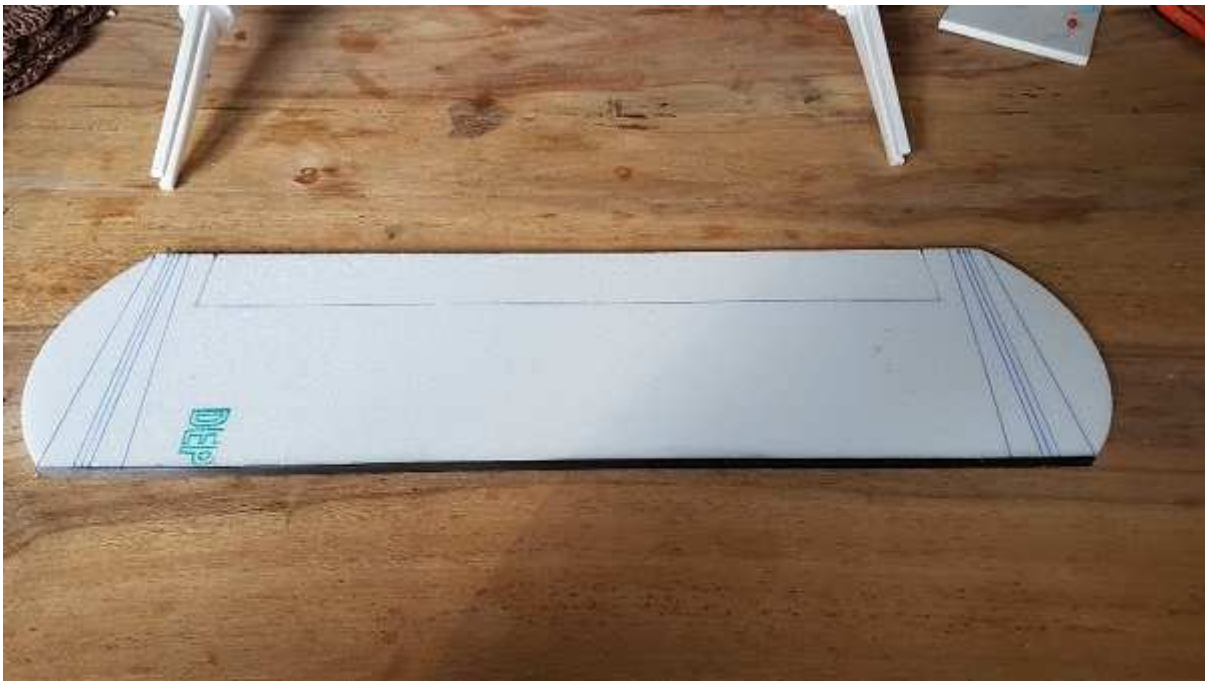



L7
L5
L3
L2

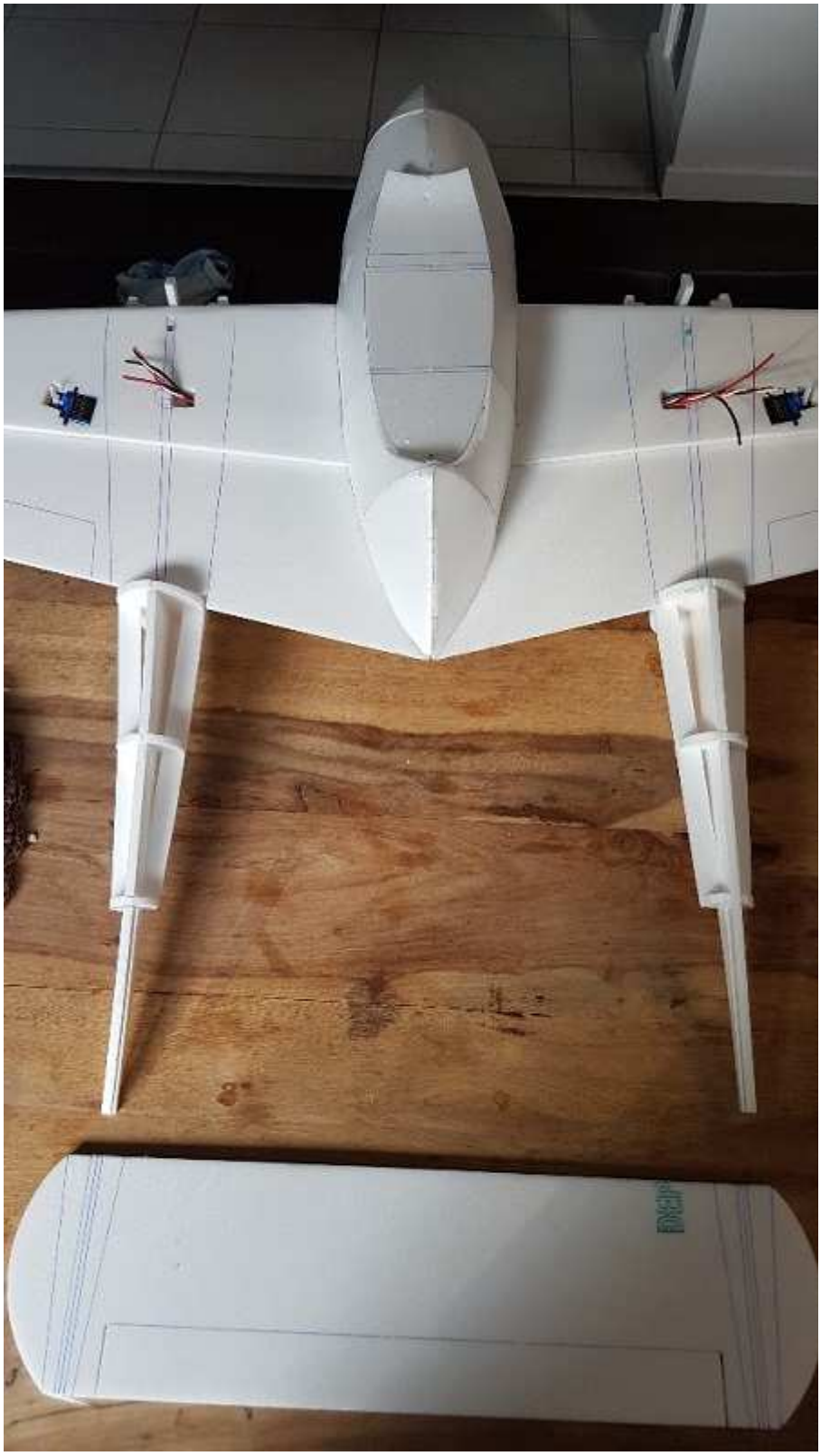

L2
L7

and all frames and stringers to shape.

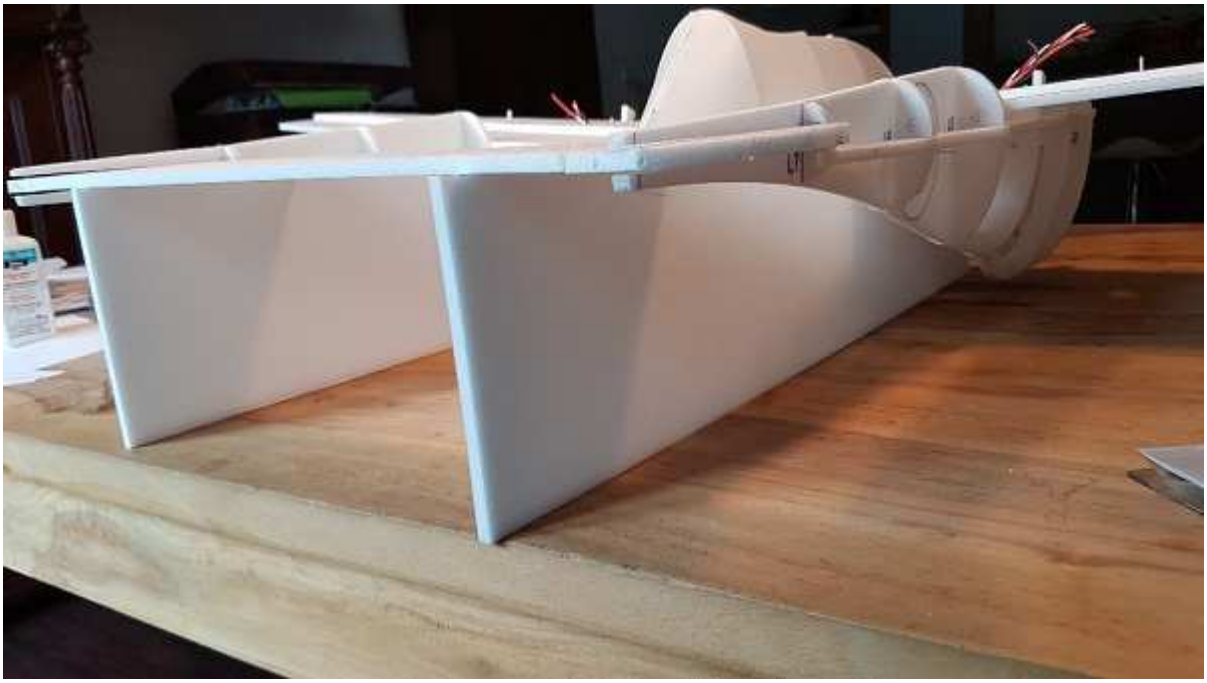
2. Prepare tailplane: Glue a 6X1 mm CFRP strip along the entire front edge of the tailplane.



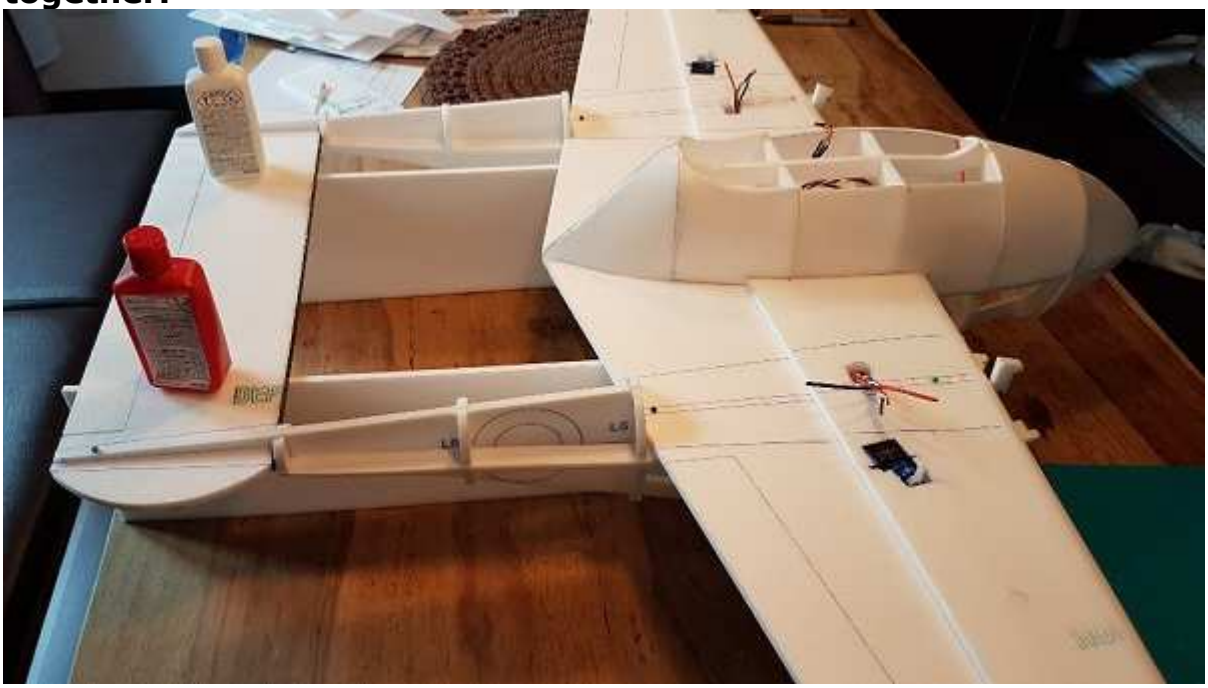
Put the two tail units on the wing and align. Also insert the tailplane. Just staple.



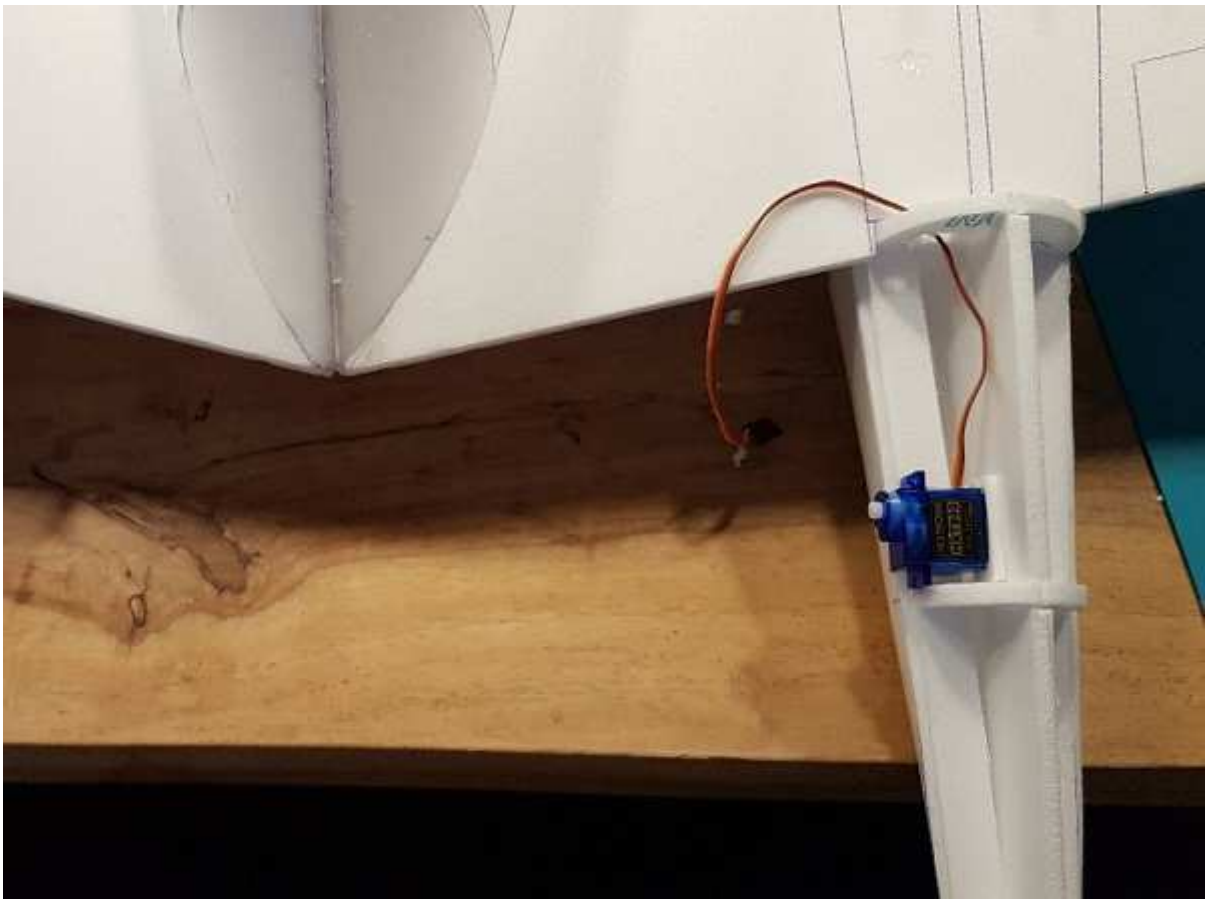
to align and glue please use the templates S3. Position these with double-sided adhesive tape along the wing up to above the tailplane.



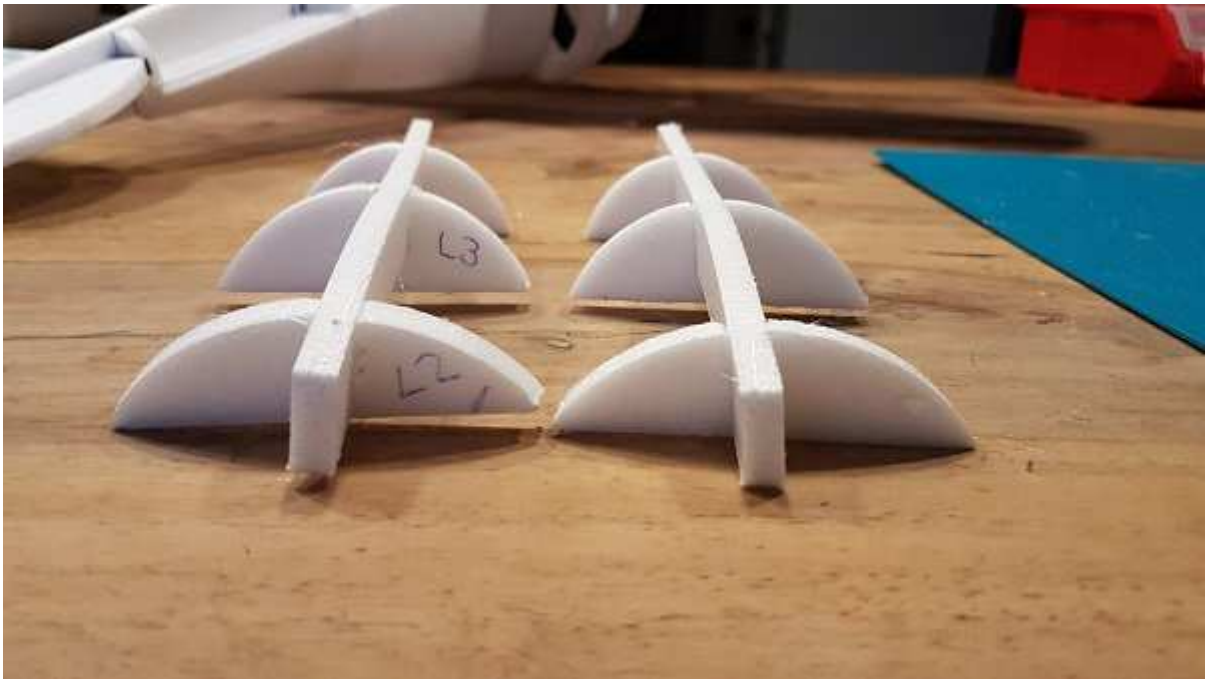
17. Now all modules can be glued together.

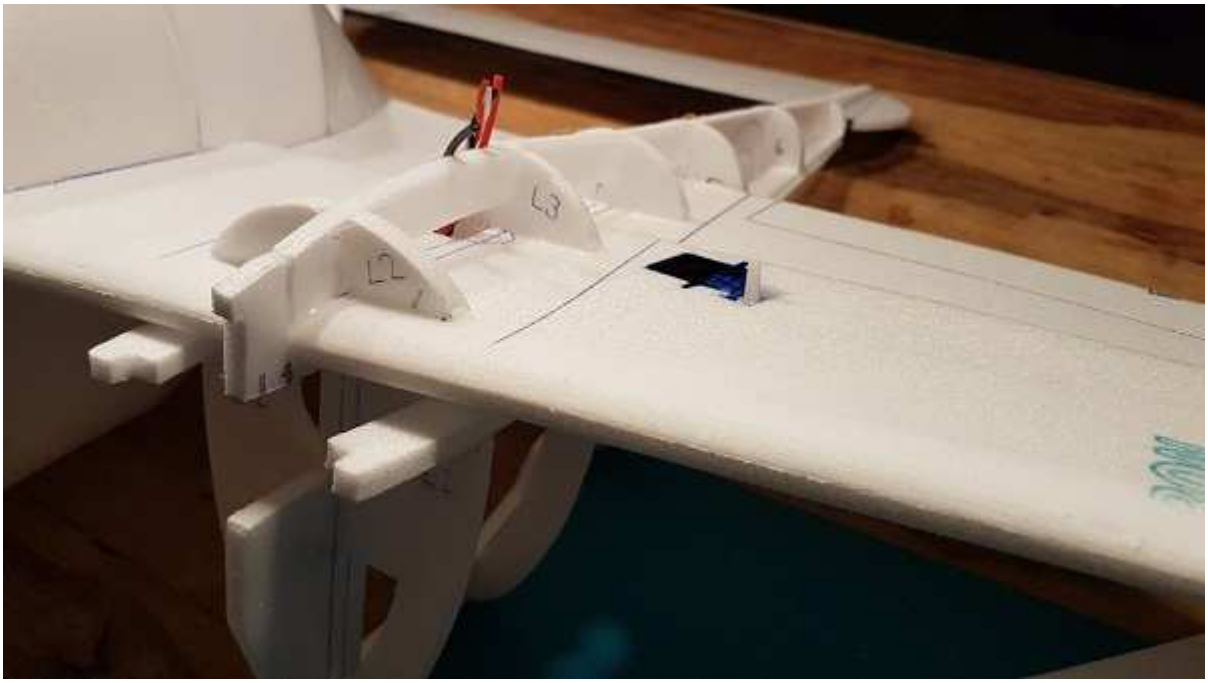


Before planking the tails, attach the elevator servo to the position shown on L7 (left or right side is optional).



19. Now the areas above the wing can also be attached to the tail units. Again, pay attention to the right side.

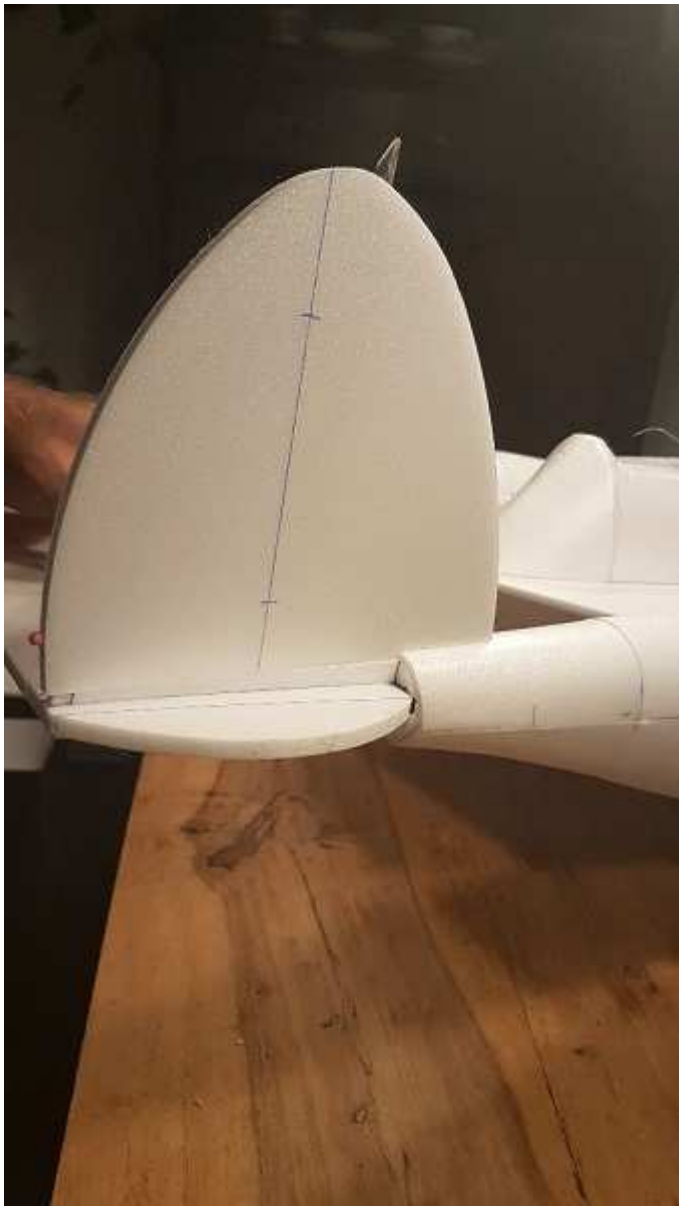




20. Planking of both tail units: (Except for the vertical stabilizer area and the area around L1 to L2, leave it open in advance).

21. Before the area of the vertical stabilizer and vertical stabilizer is planked, the vertical stabilizer (2-part) is put on. To do this, cut the middle area out of the vertical tail according to the diagram. Also cut out the heel of the previously planked fuselage section (if it is already planked, otherwise do not cut it).

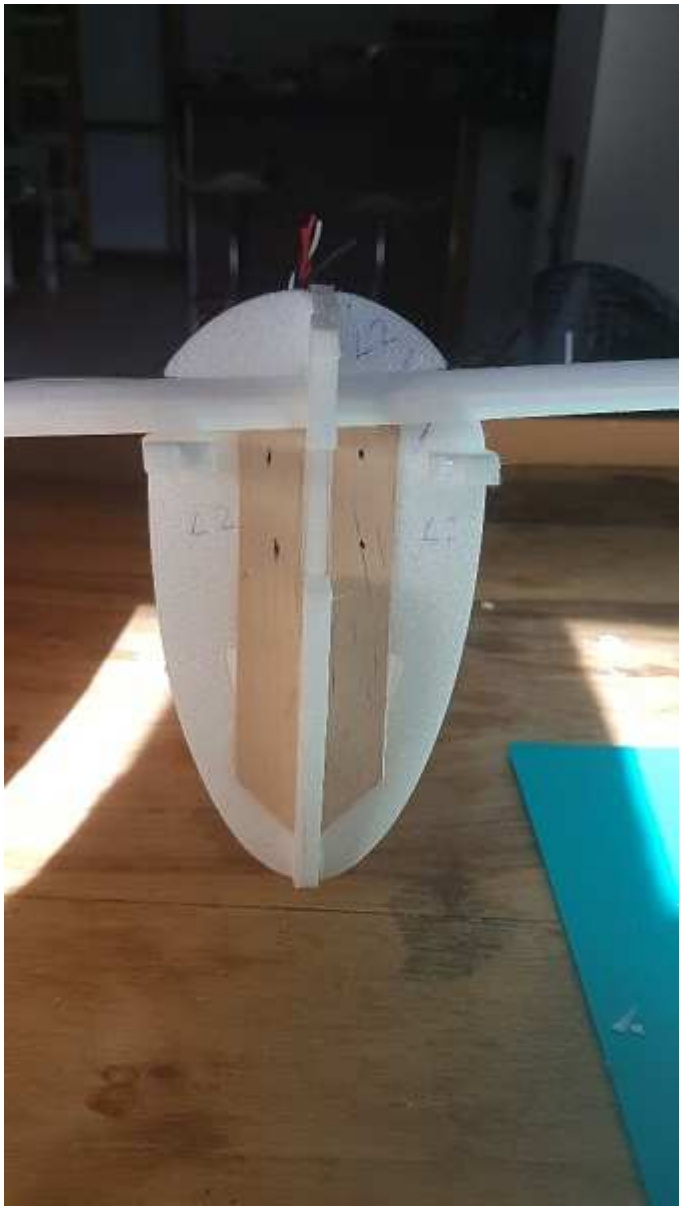
22. Place both vertical stabilizer sections at a right angle and glue together.



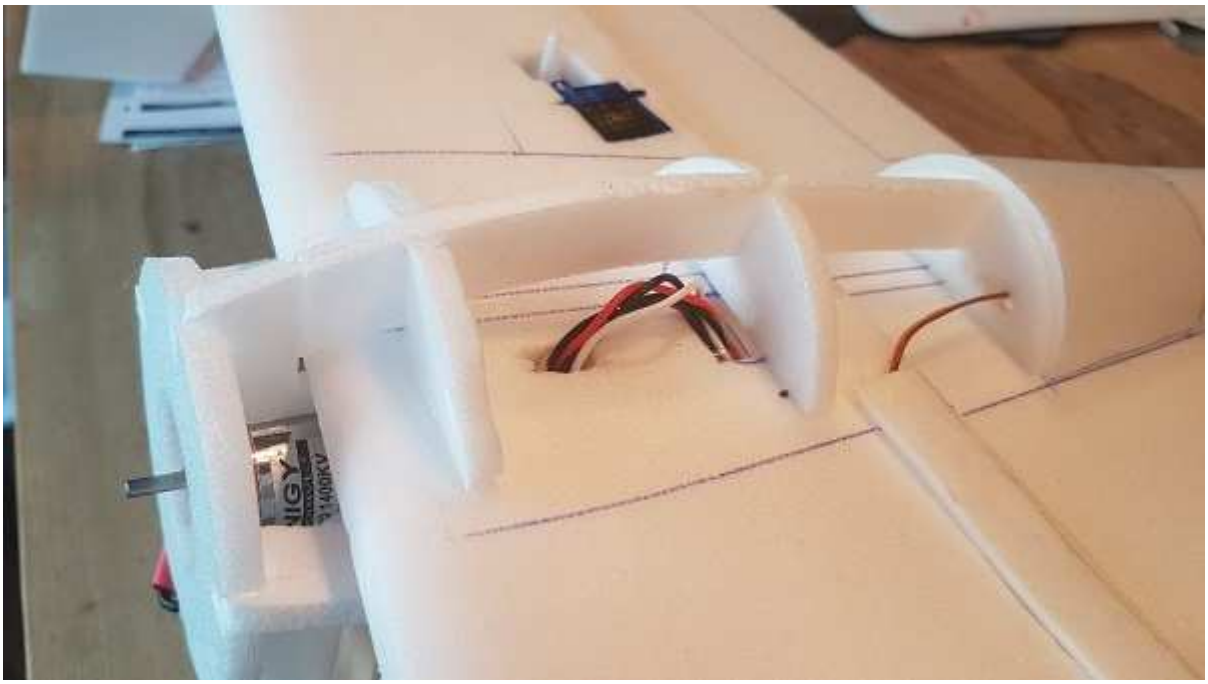
23. At the end of the hull glue a piece of Depron on the stern and sand.

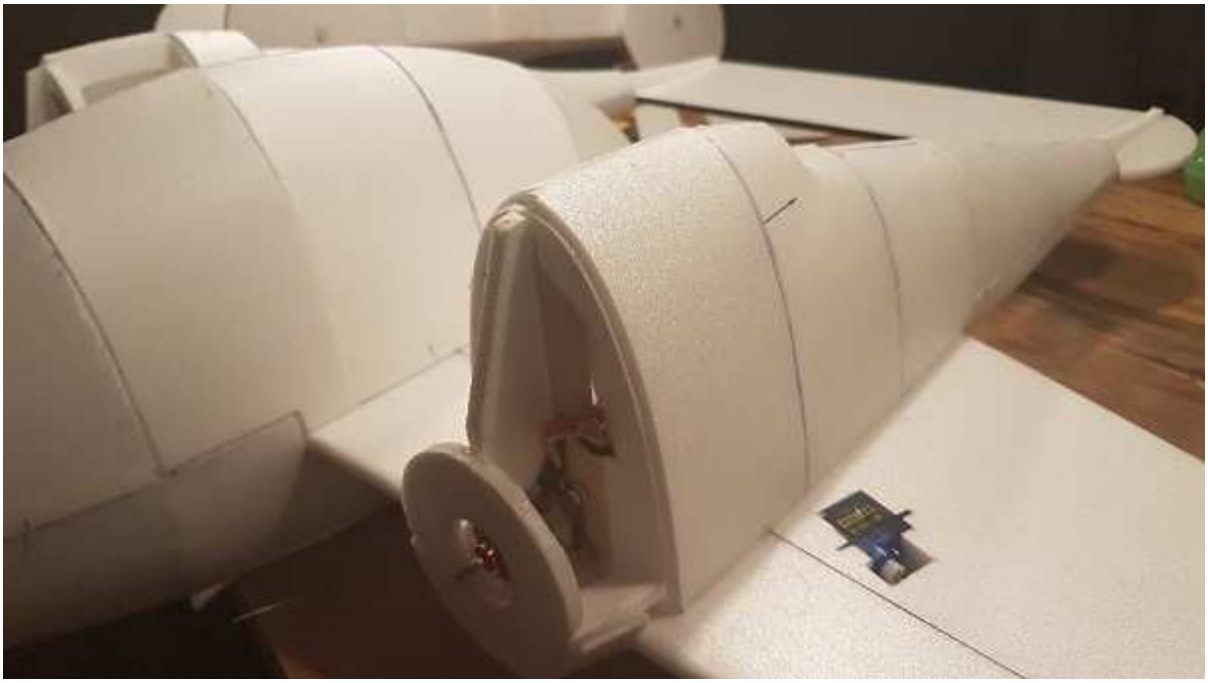
24. Before attaching the front panels, insert and solder the engine mount, motor, controller, and wiring. As a motor mount simple constructive solutions, since the propeller and possibly spinner touch no ground and thus little breaking load.

25. Here two pine strips hold the engine mount. No train and no fall necessary.



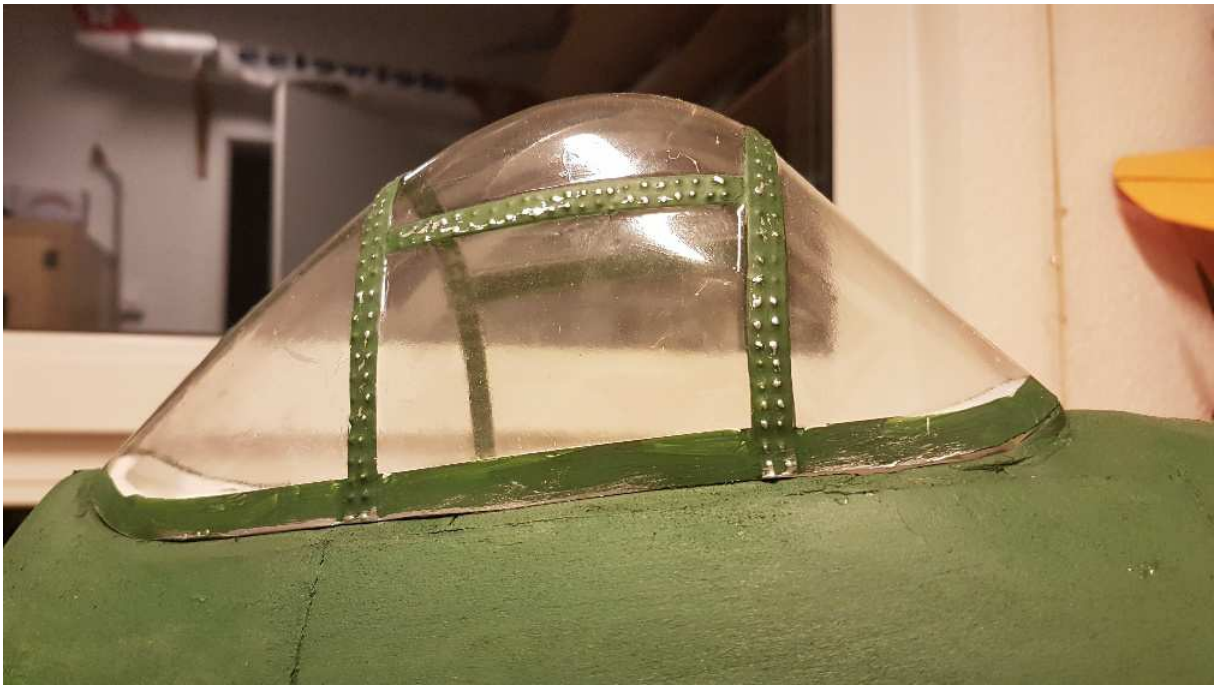
26. Wire the motor and route the cables.



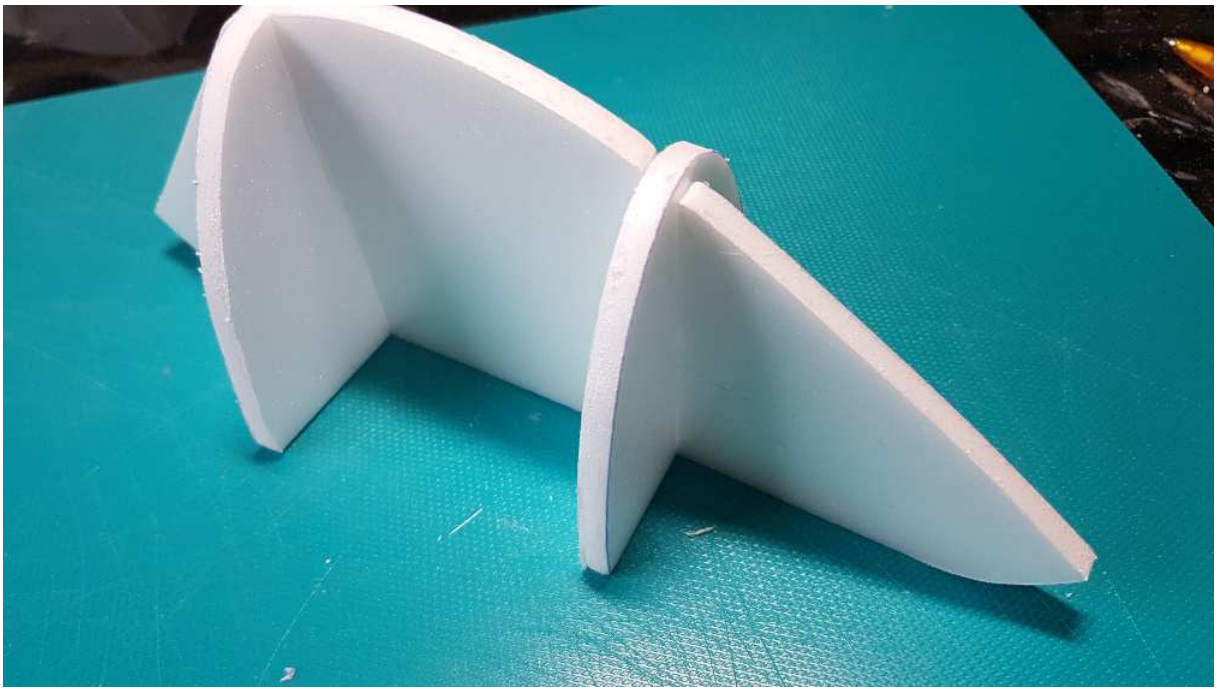


27. Planking the front with Depron is a bit more challenging, but it works well if you stick it in stages with UHU Por. Glue to the side first, then the engine frame L1. Finally, adjust and glue the contours of the longitudinal stringers in the middle.

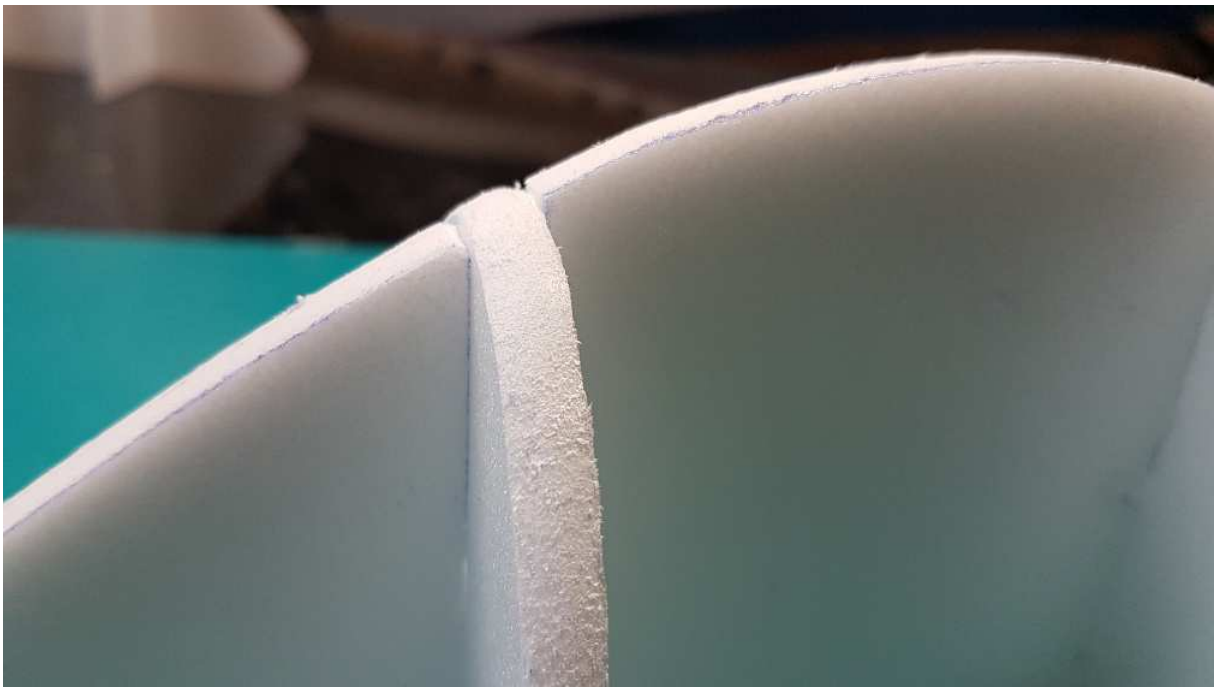
28. If you do not order the optional thermoforming hood, you can stick to the Depron variant.



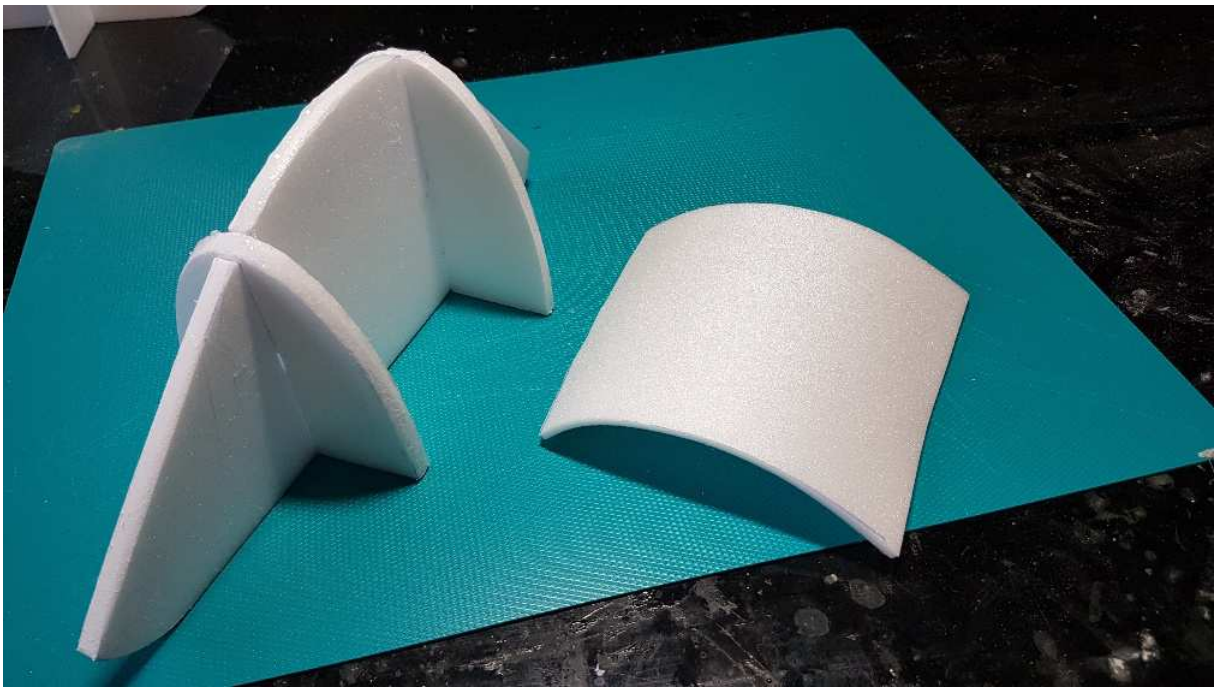
29. To do this, glue the ribs into the stringers.

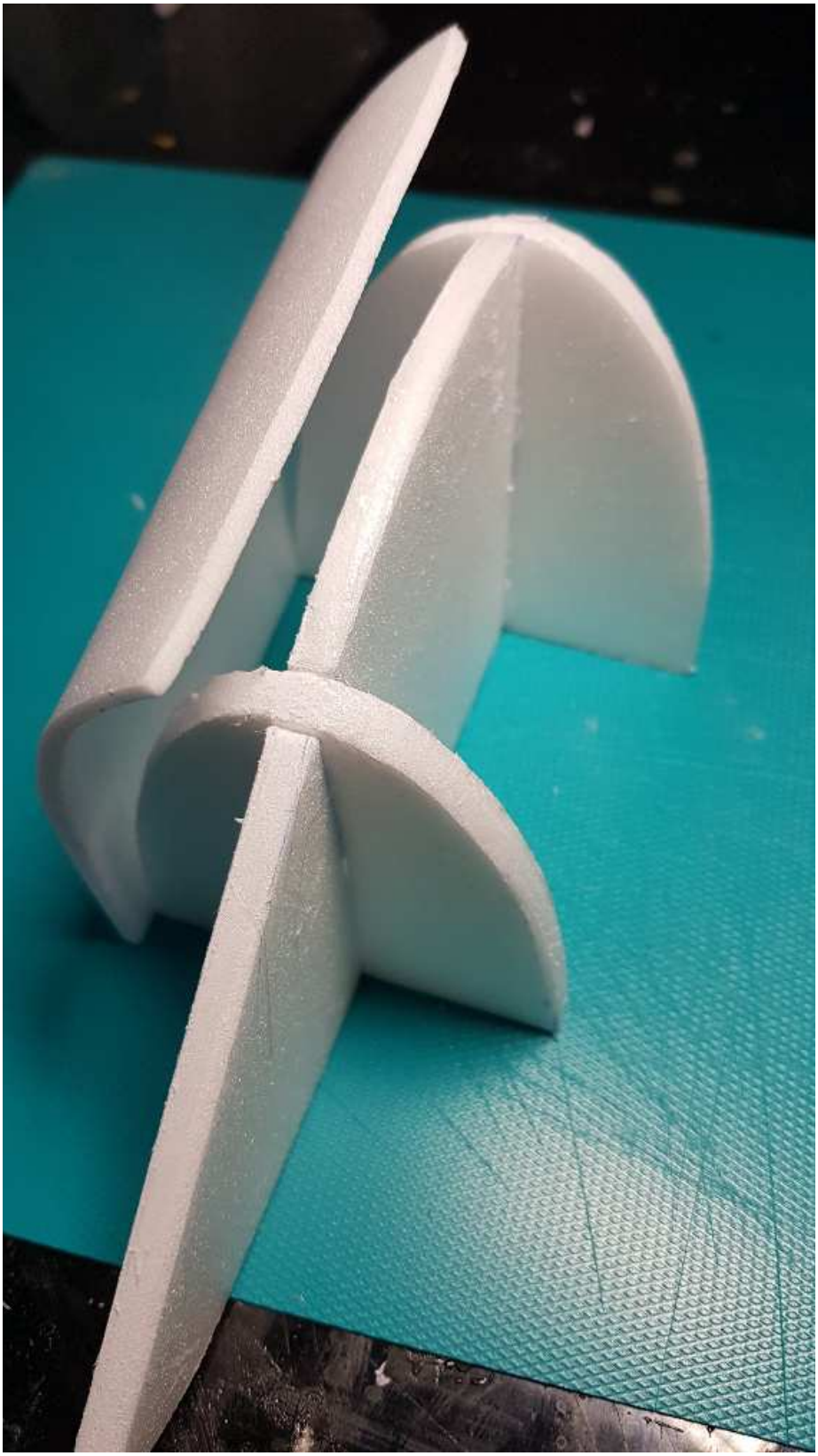


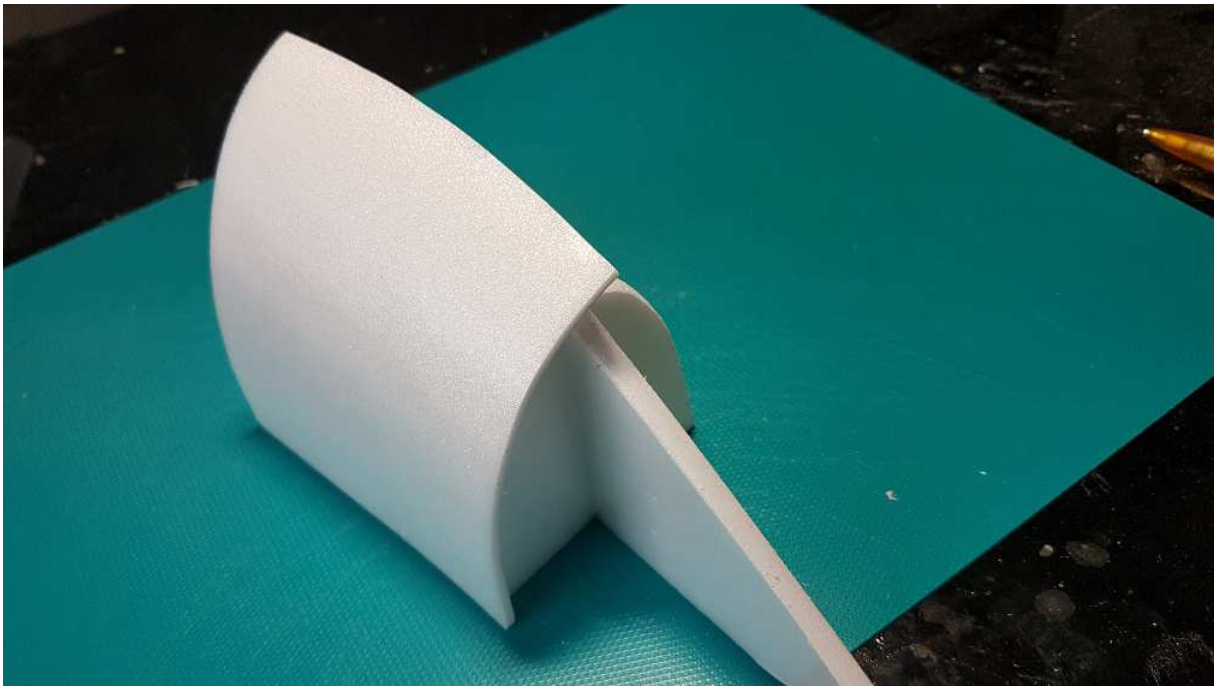
30. Sand the mold

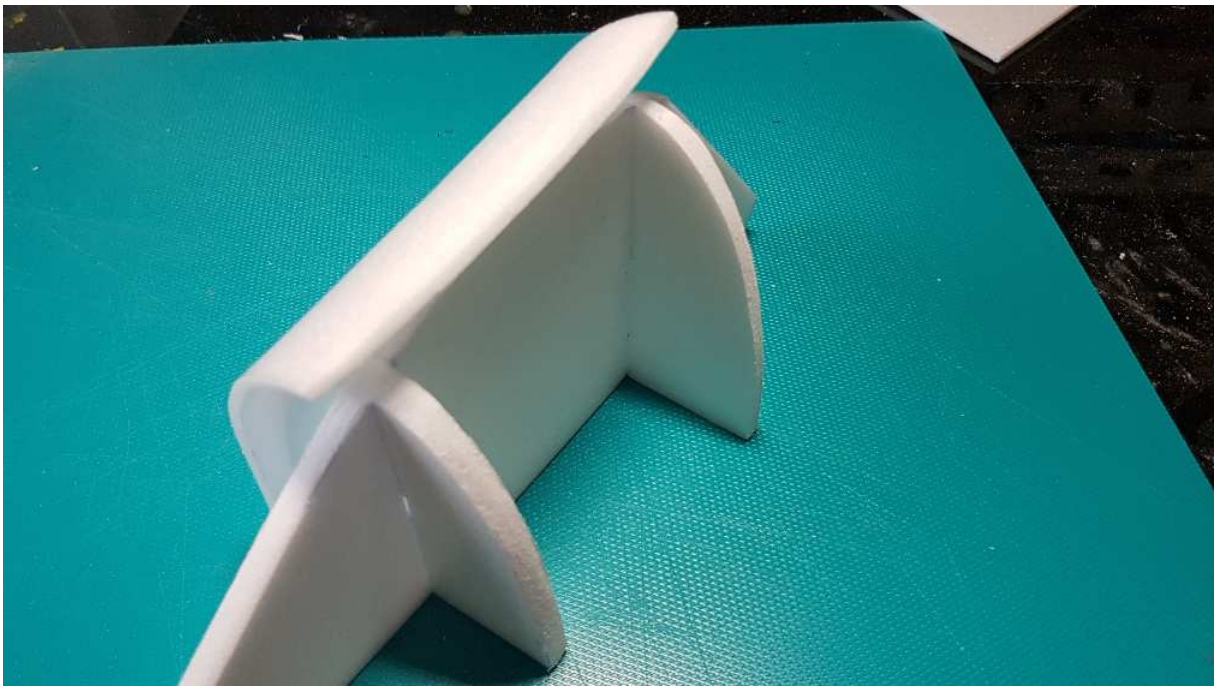


31. Pre-bend 3 mm Depron and adjust to the shape. The planking may like to have excess.

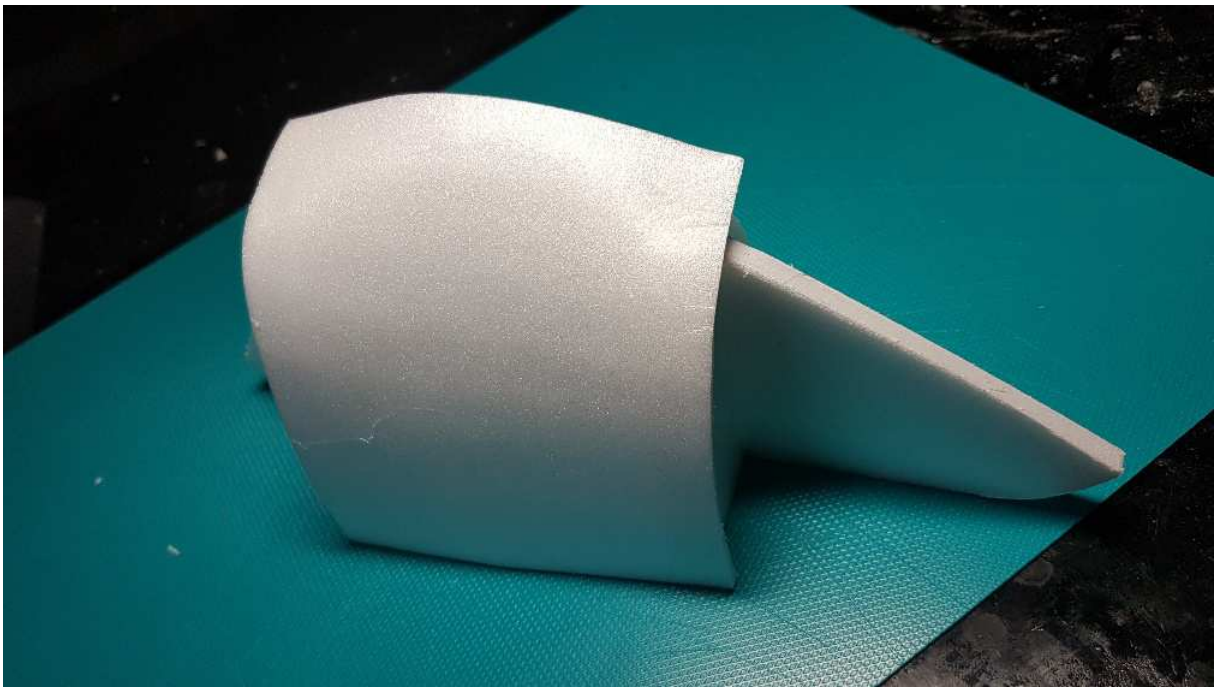


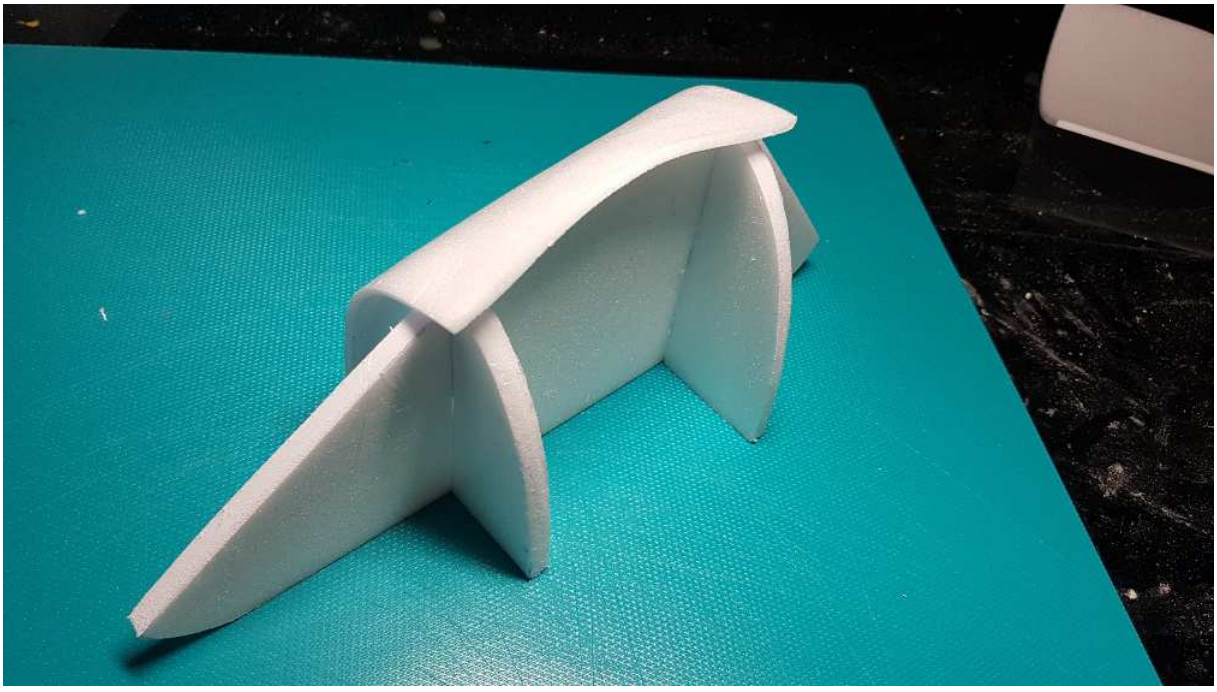




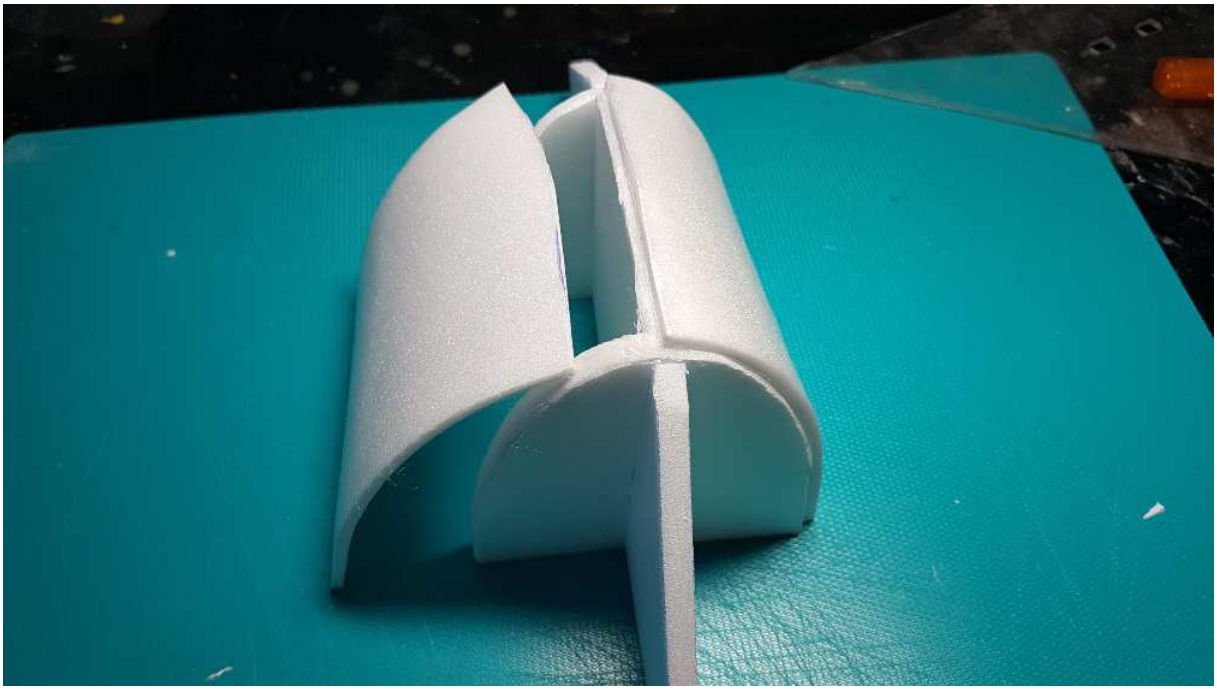


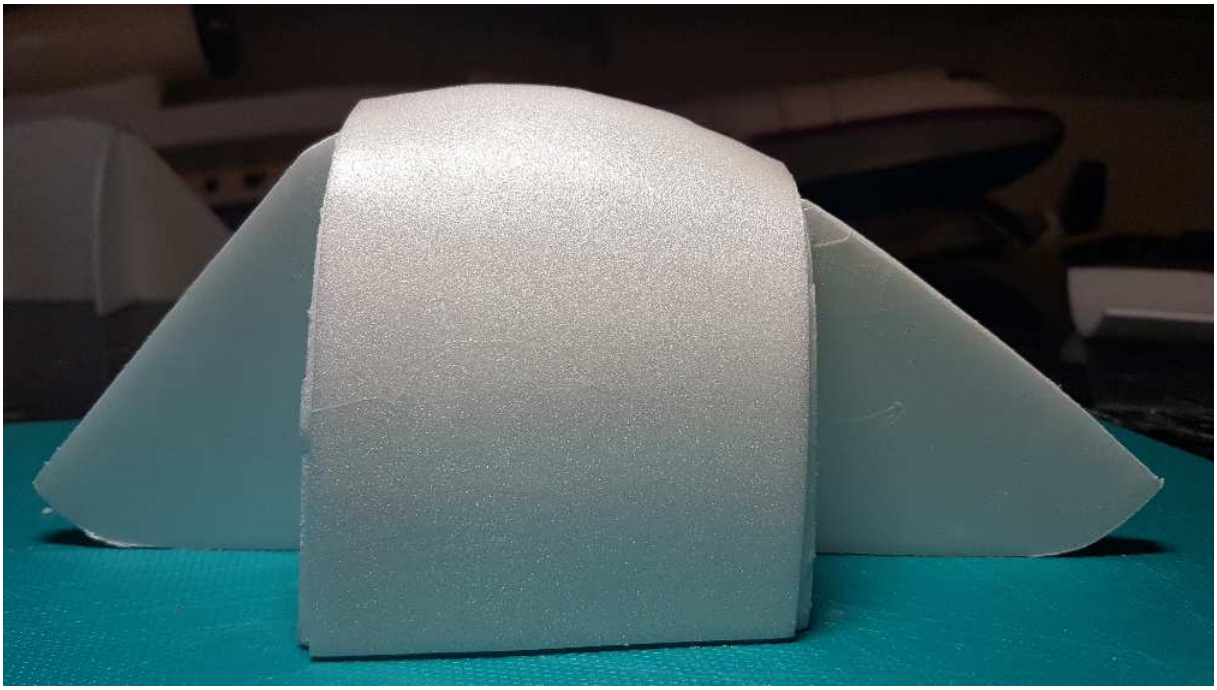
32. Glue with UHU Por and then cut to center of the frames.



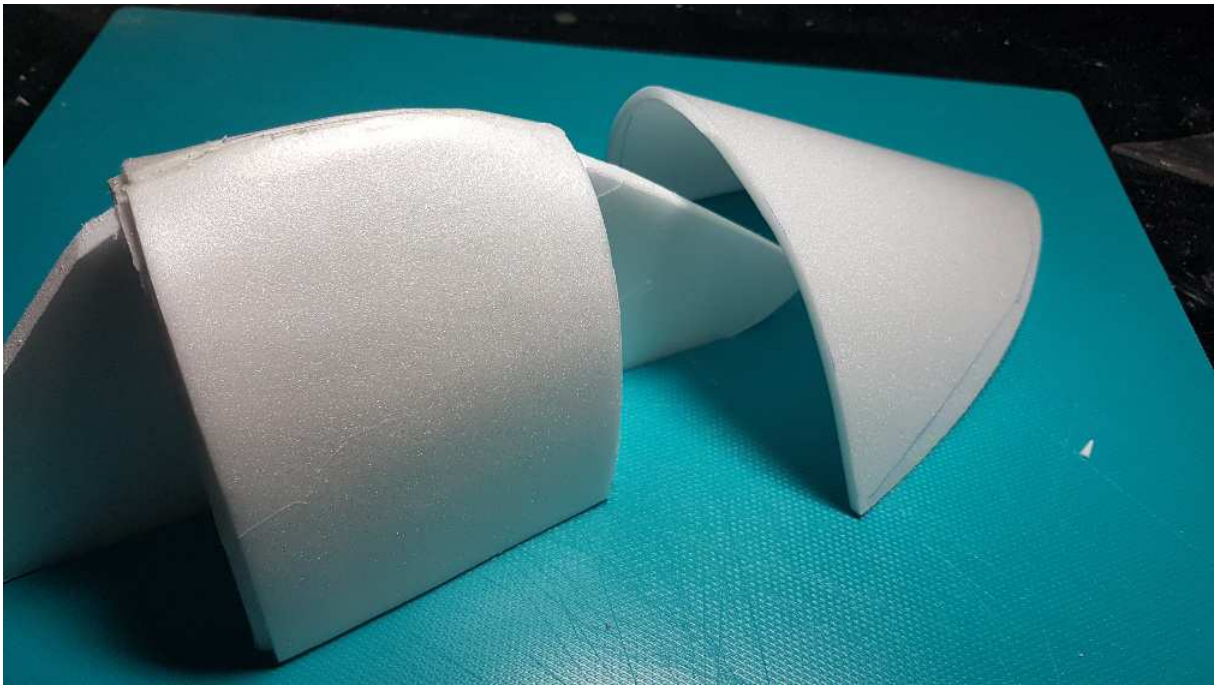


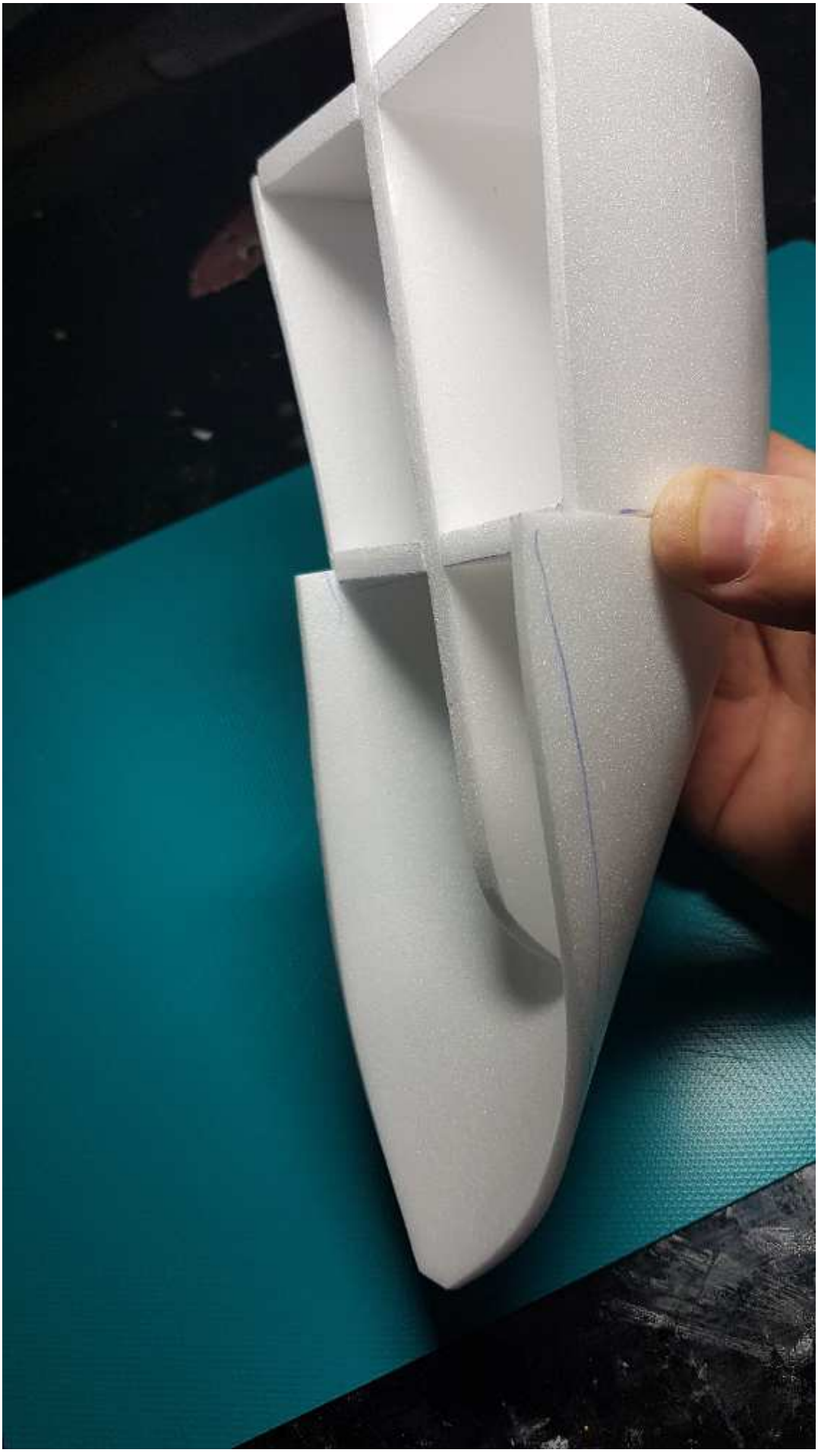
Now adjust the second half and stick it on.

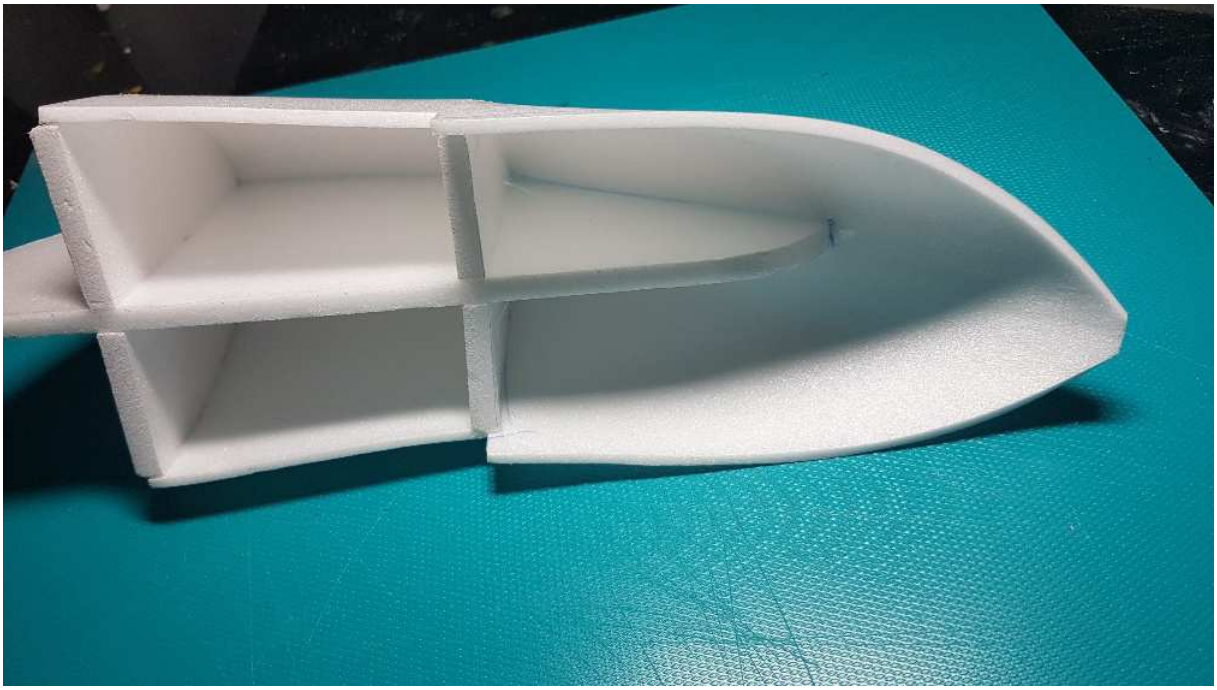




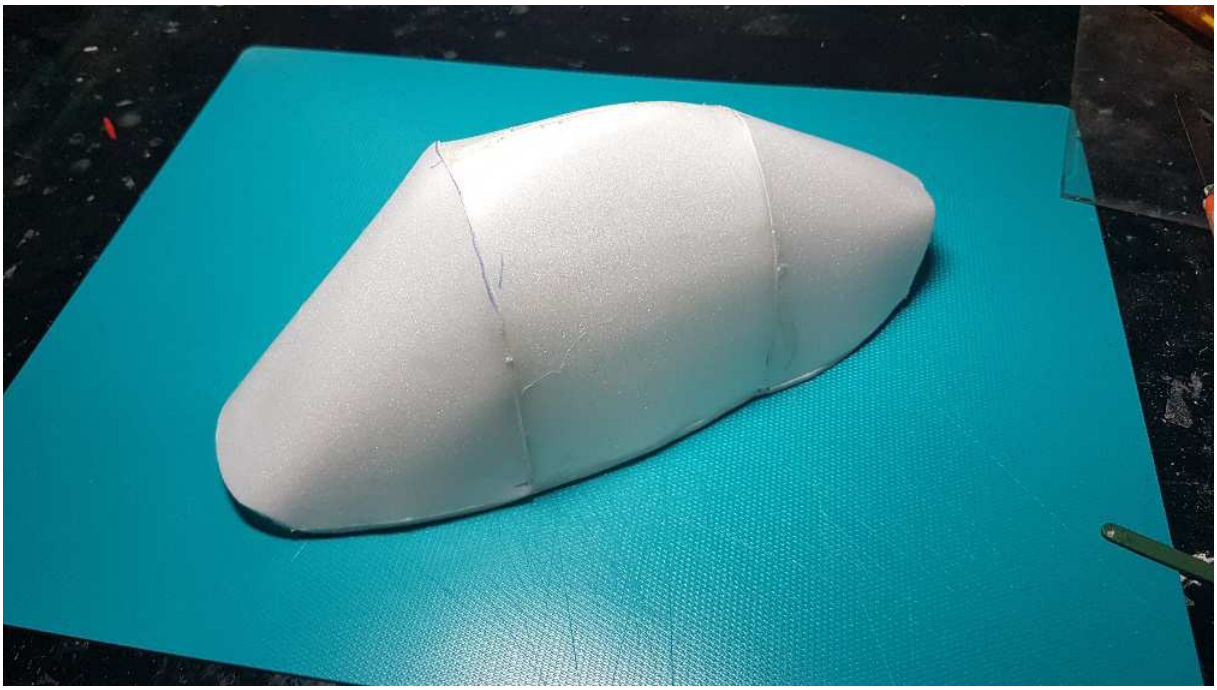
The rear section can be bent in one piece and adjusted. Of course, it is also simpler to adjust the two parts of the disc individually.



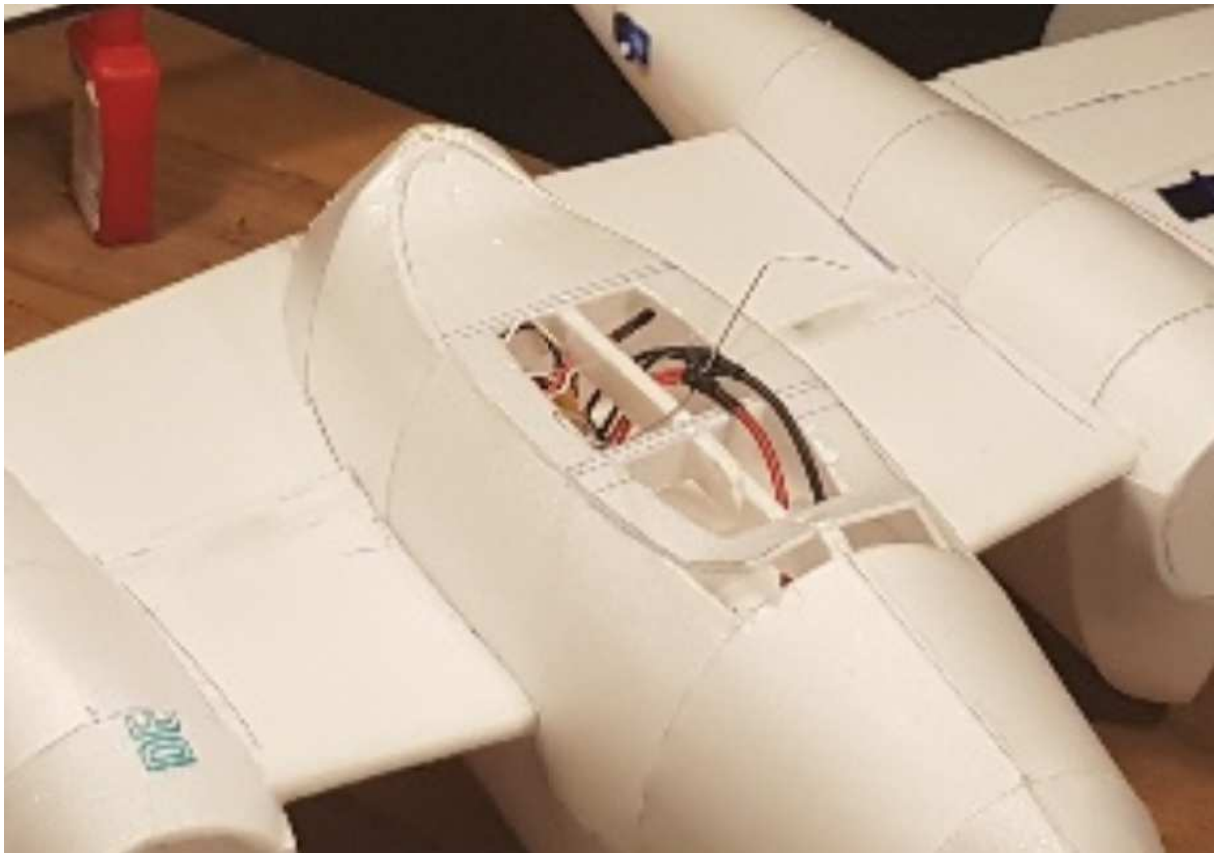




35. Cut off supernatants.
36. Sand and fill with Moltofill until the shape is harmonious.



37. now adjust the cabin floor at the fuselage and glue, grind.



38. If you use the thermoforming hood, you can use the Depron parts R10 and R11. The 6 mm frame serves to stiffen the thermoforming hood. R11 outside along the shape of the hood, grind a little at an angle until the frame fits into the hood. When finished, glue R10 as cabin floor. Fix the hood on the fuselage using pins, magnets or hood fasteners so that all RC components remain accessible.

39. Installation of all linkages: Tailplane can be articulated as follows: (Incidentally, can be dispensed without problems on a rudder steering.The P38 flies very well without rudder.Of course, this is up to any pilot.Here I advise per rudder servo in the fuselage to be used for a backlash-free linkage.

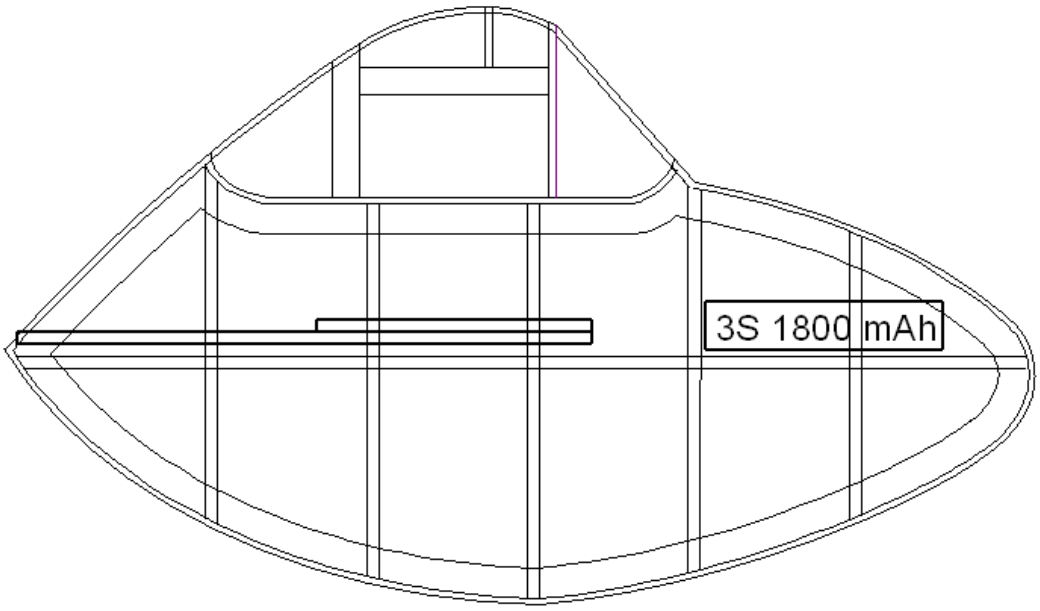
40. Then bend R9 semicircular and cover the servo "a la scale P38".

41. Connect the ailerons.

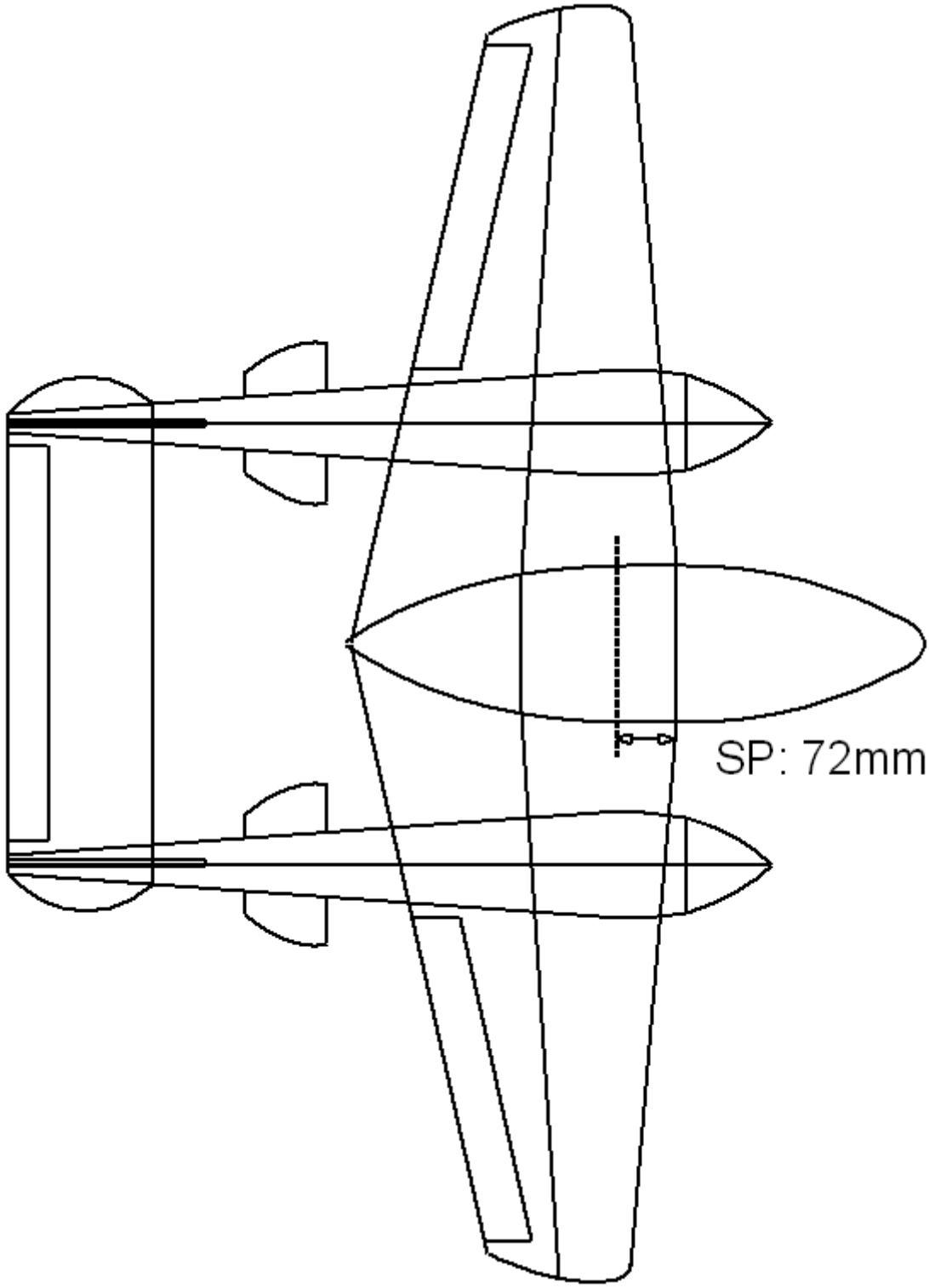
Now the model can be completely sanded. For adhesive gaps "Modelier" "Moltofill", a kind of paste for repairing gypsum, can be optimally used to fill the gap. After curing, the material is hardly harder than Depron and you have a clean shell in your hands.

example image

42. The position of the flight battery lies on the longitudinal stringer in the fuselage front section.



43. The center of gravity is from the front edge of the wing at 72 mm.


SP: 72mm

1. RC system:
2. Rudder rash: height 12mm and cross 15mm to each side.
3. Center of gravity: The center of gravity is 72 mm from the front edge of the wing.
4. Battery mounting: By means of Velcro in the bow of the hull
Recommendation 3 S 1800 mAh.

5. For the finish, I recommend "Hobbyline" water-based paints. Depron, slightly sanded, can roll very well with a soft paint roller without contours. Who wants to achieve a little more stability, should apply parquet lacquer of "Aqua Clou" (water-based) and with intermittent strokes several times. This makes Depron gripier and more stable.

Building inquiries, advice, feedback or suggestions:

I would be glad, if I would receive a feedback of them by email over construction, impressions or photos for the customer gallery to be seen in the shop.

Of course I help by telephone or by email with building problems. I like to call back with an email request.

Always good flight with her new model.

Frank Seuffert

info@scale-parkflyer.de

Warning!!

Before you fl y the R/C model it is essential to read the operating and building instructions in full. This sheet is part of the operating instructions. Please keep it in a safe place for further reference. If you ever sell the model make sure to pass on this sheet to the new owner together with the model. A remote controlled model aircraft (model plane) is not a toy. It is not suitable for children under 14 years of age unless they fly under strict supervision of a knowledgeable adult. Since the manufacturer and his agents have no control over the proper assembly, operation and maintenance of their products, no responsibility or liability can be assumed for their use. Correct assembly, safe operation and proper maintanance are the responsibility of the builder and the flyer.

Attention: Any rotating components on model aircrafts (propeller, main and tail rotor blades) are an ever present danger of injury to operators and spectators. This radio-controlled model aircraft is a technically complex device, which must be built exactly in accordance to the building instructions and operated and maintained with care by a responsible person. Failure to do so may result in a model incapable of safe flight operation. All fasteners and attachments must be secured for safe operation. Do not make any alterations.

General Safety Rules for flying an R/C model aircraft

NEVER ignore the local and national regulations for operating model airplanes. Contact local authorities, hobby shops, R/C clubs or the Academy of Model Aeronautics.

NEVER fly without appropriate liability insurance.

NEVER get near the model airplane with the propeller or main rotor spinning. Keep a safe distance of at least 10 ft. Ask spectators to clear the scene and stay away at least 35 ft. Be aware that rotating propellers and rotor blades are very dangerous and can cause serious injury.

NEVER fly your R/C model near or over crowds, playgrounds, streets, rail roads, airports, power lines or hospitals/radiology practices.

NEVER start and fly with unsafe and questionable equipment.

NEVER fly if you don't feel confident with your equipment, your location or your capabilities.

ALWAYS fly at approved flying fields and obey field regulations.

ALWAYS follow frequency control procedures. Interference can be dangerous to all. Prior to turning on your R/C equipment at the flying site make absolutely sure that the frequency you are going to use is not being occupied by someone else. In such case make appropriate arrangements with the others flyer(s).

ALWAYS perform each time before your first flight a range check of your radio equipment. With the transmitter switched on and its antenna collapsed, the receiver need to receive full signal at least over a distance of 30 yards.

ALWAYS familiarize yourself with your radio equipment. Check all transmitter functions before each flight. Do not only make sure that the servos move, but that their movements are correctly coordinated and are moving in the proper direction as well.

ALWAYS keep a safe distance from the propeller or rotor while starting the motor.

ALWAYS stay behind your model airplane when the engine is running.

ALWAYS keep in mind: Safety First! Loosing your model airplane will cost you some money for replacement parts, but your and others health is not replaceable.

ALWAYS ask an experienced R/C pilot for assistance in trimming the model and in receiving flight training under his supervision.

ALWAYS follow all recommended maintenance procedures for model, radio and motor.

ALWAYS check your R/C model for any worn, broken, damaged or loose parts. You are ultimately responsible for the maintenance of your R/C model and its accessories.

ALWAYS follow carefully the instructions, which have been supplied with your batteries, in particular, when you are using Lithium-Ion or Lithium Polymer batteries.

ALWAYS use the motor/engine recommended for the aircraft and do not exceed the revolutions per minute (rpm) it is designed for. Otherwise the propeller or the main and tail rotor blades may exceed their maximum permissible rpm and may get torn apart. Fragments of the propeller/rotor may get ripped off, flying away at high speed.

ALWAYS make sure that your batteries have been fully charged, otherwise proper function of your equipment will not be guaranteed.

ALWAYS avoid abrupt movement of the control stick while the model is in flight

ALWAYS use only the specified number of battery cells. Otherwise the motor and/or speed controller may be overloaded, may get damaged and/or causes radio interference or fire hazard.

ALWAYS have an eye on the wind and weather conditions and changes.

ALWAYS look for a wide and open flying area, especially if you are a beginner. You will need the space.

ALWAYS keep an eye on your co-flyers.

ALWAYS be considerate of the environment you are guest in.