

113.141 Seaplane



Necessary tools:

Pencil,ruler
Fretwaw
Workshop file
Sand paper
Glue (waterproof)
Hot glue gun
Drill ø2 mm
Crosshead screwdriver
Scissors, craft knife
Soldering iron,solder
Paints, Brush

Please Note

The OPITEC range of projects is not intended as play toys for young children.They are teaching aids for young people learning the skills of Craft, Design and Technology.These projects should only be undertaken and tested with the guidance of a fully qualified adult.
The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Danger of suffocation!

PARTS LIST				
	Quantity	Size (mm)	Description	Part-Nr.
Plywood	1	300x210x4	Basic form, Wings, Rudder	1
Styrodur	1	200x200x30	Basic form	2
Wood strip	1	75x10x5	Support,Rudder	3
Self tappers	5		Joining	4
Motor	1	ø20	Motor	6
Micro switch	1	19x6	Switch	7
Battey battery	1		Energy source	8
Wiring	1	500	Cable	9
Propeller	1		Propeller	10
Distance piece	1		Spacer	11

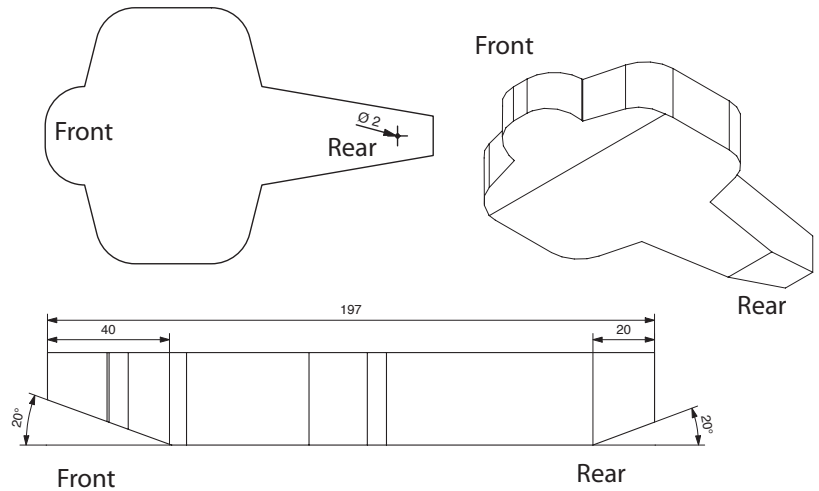
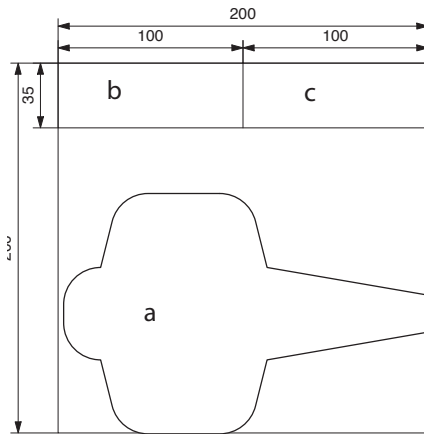
Instructions

1. The patterns for the hull construction (4) can be traced on to the Styrodur foam (2) and cut out with a Fretsaw.

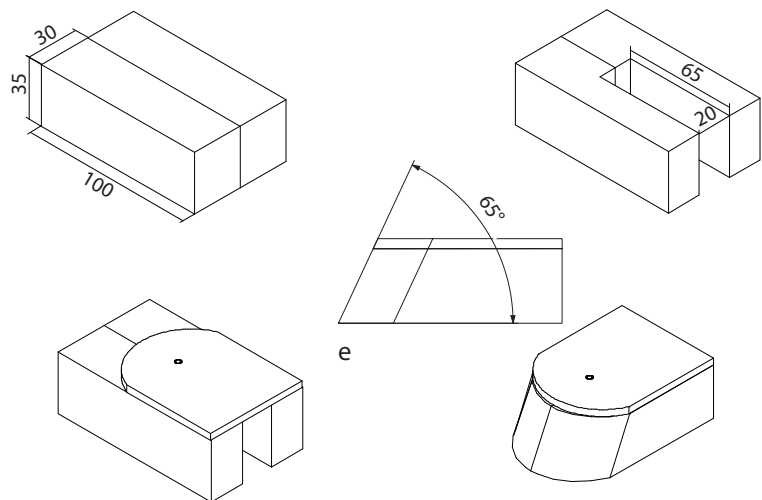
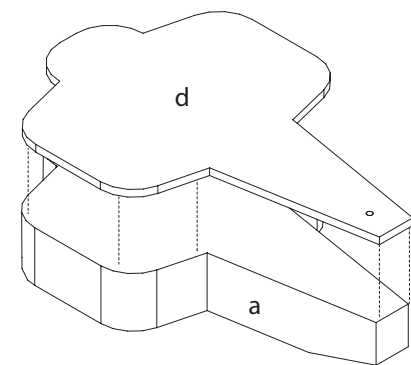
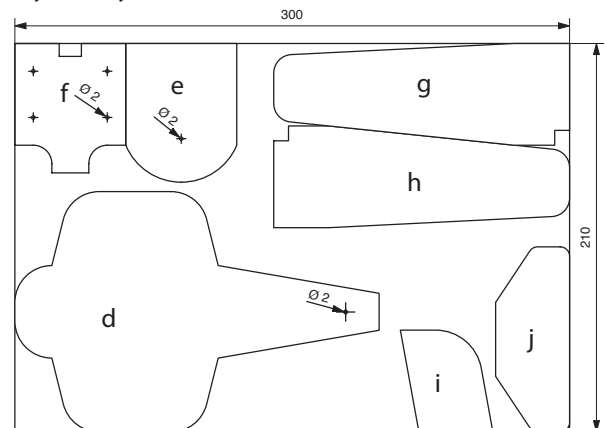
Angle the front and rear ca 20 degrees with a workshop file as shown.

Trace the parts (b+c) from the plans on the styrodur remainder and cut them out

Cutting plan (Styrodur):



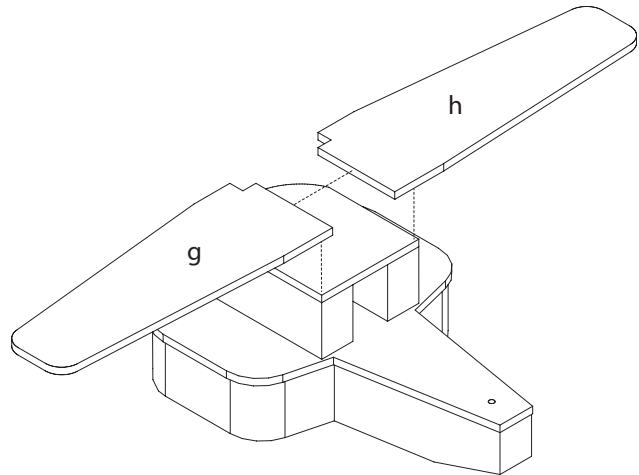
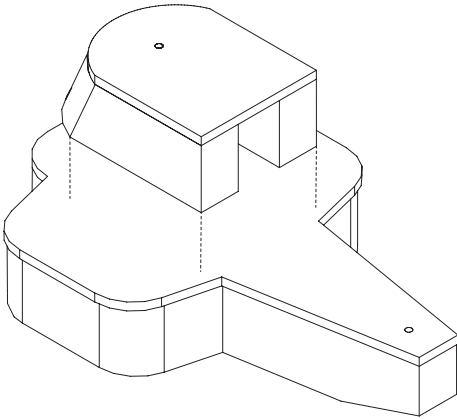
Pattern layout (Plywood):



3. Take the plywood part (d) and join it to the Styrodur-part (a) with a waterproof glue. Leave to dry.

4. The Styrodur-parts (b+c) should be glued together with a waterproof glue. Leave to dry. Then cut a ca. 65x20 große slot with a Fretsaw. Saw plywood part (e) and glue it lined up to the rear. When dry, file the sloped front cleanly at 65°

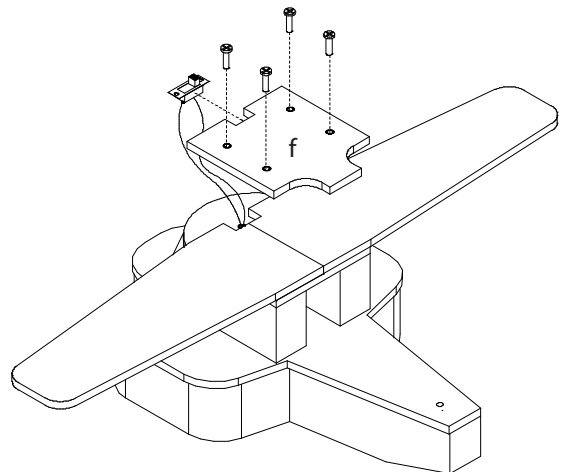
Instructions



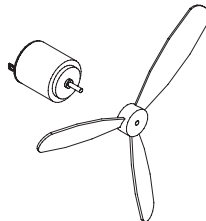
5. Assemble and glue the parts together as shown. Leave to dry thoroughly.

6. Take the wings (g+h) and glue them in place as shown. Make sure that the slot for the switch faces forward and that the wings line up with each other (See diagram).

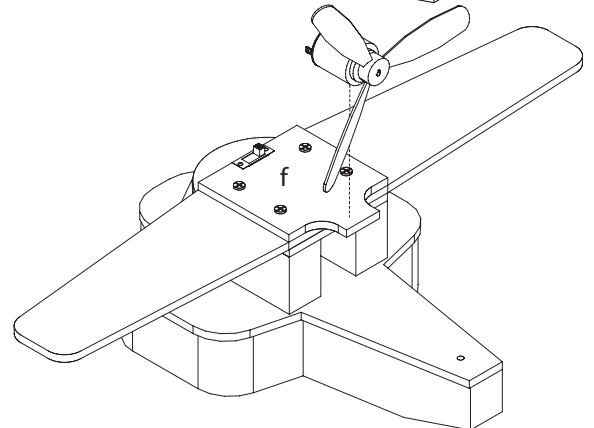
7. Cut from the electric cable (9) a 120mm long piece, and remove ca.5mm of insulation from each end, tin the ends and solder one end to the outer connection on the slide switch (7) Then cut a 80mm piece of cable, remove 5mm insulation from the ends, tin, and solder it to the middle connection on the switch. Insert the switch (7) in the slot in part f, glue it in place and guide the cable through the hole in part e, then underneath



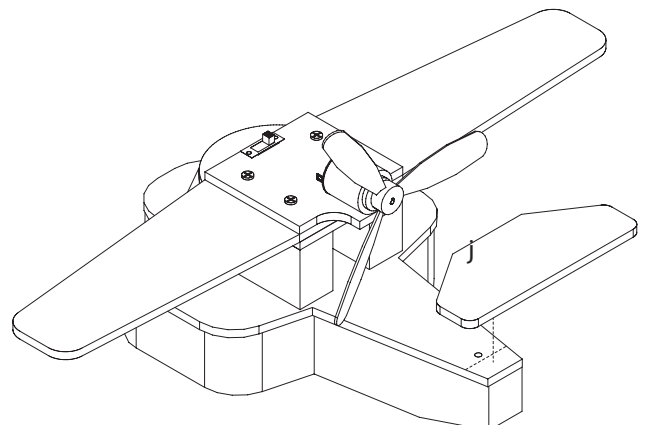
Fix part (f) onto the wings (g+h) using the screws (4) so that the wings are in line with each other.



8. Slide the propeller (10) on the motor shaft (6) and glue it on part f with a hot glue

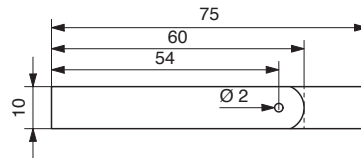


9. Glue the tailplane (j) in place as shown in the diagram.. see broken line Make sure that is central. Leave to dry well.

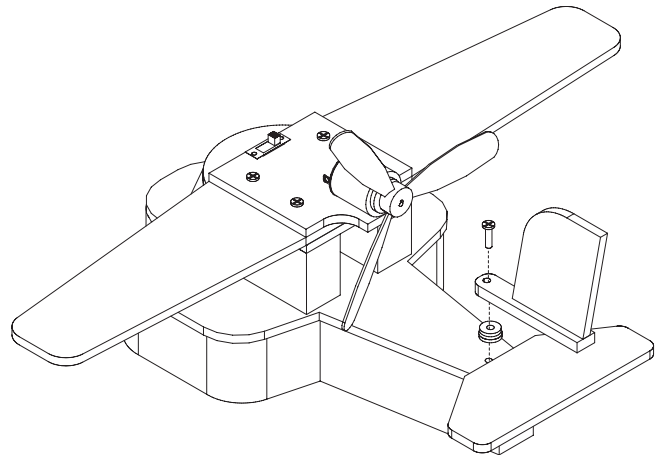
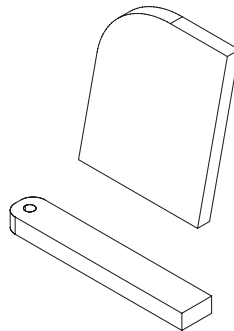


Instructions

9. Take the wooden strip (3) and cut it to 60mm long and round the ends. Drill the 2mm hole. Glue the tail fin (i) on the wooden strip (3) glue it in the middle of the strip lined up with the back.



Lay the distance piece (11) under the tail fin as shown and screw(4) the fin in place so that it can be adjusted from one side to the other.



10. Paint the seaplane as you wish. We recommend a coat of clear varnish to finish to ensure that your model is water resistant

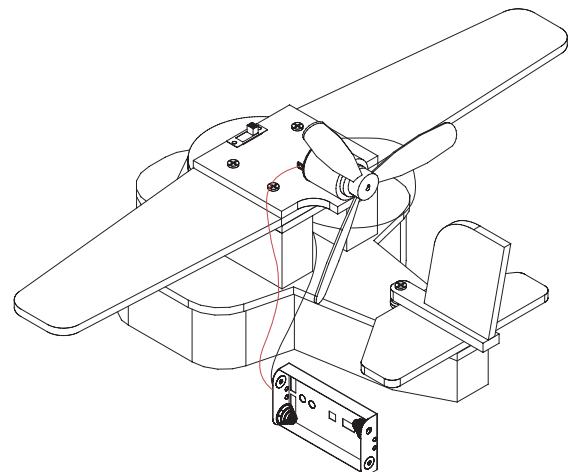
11. Join/ solder the black cable from the battery holder (8) to the 80mm long cable from the switch (7) Solder the red cable from the battery holder (8) with the plus pole of the motor(6). Then solder the long cable from the switch (7) to the minus pole of the motor.

Fucntion control:

Place the batteries in the holder and switch it on.

The propeller should now blow the airstream backwards so that the seaplane travels forward. The direction can be set by adjusting the tail fin. If all goes well the battery box can be placed in its opening.

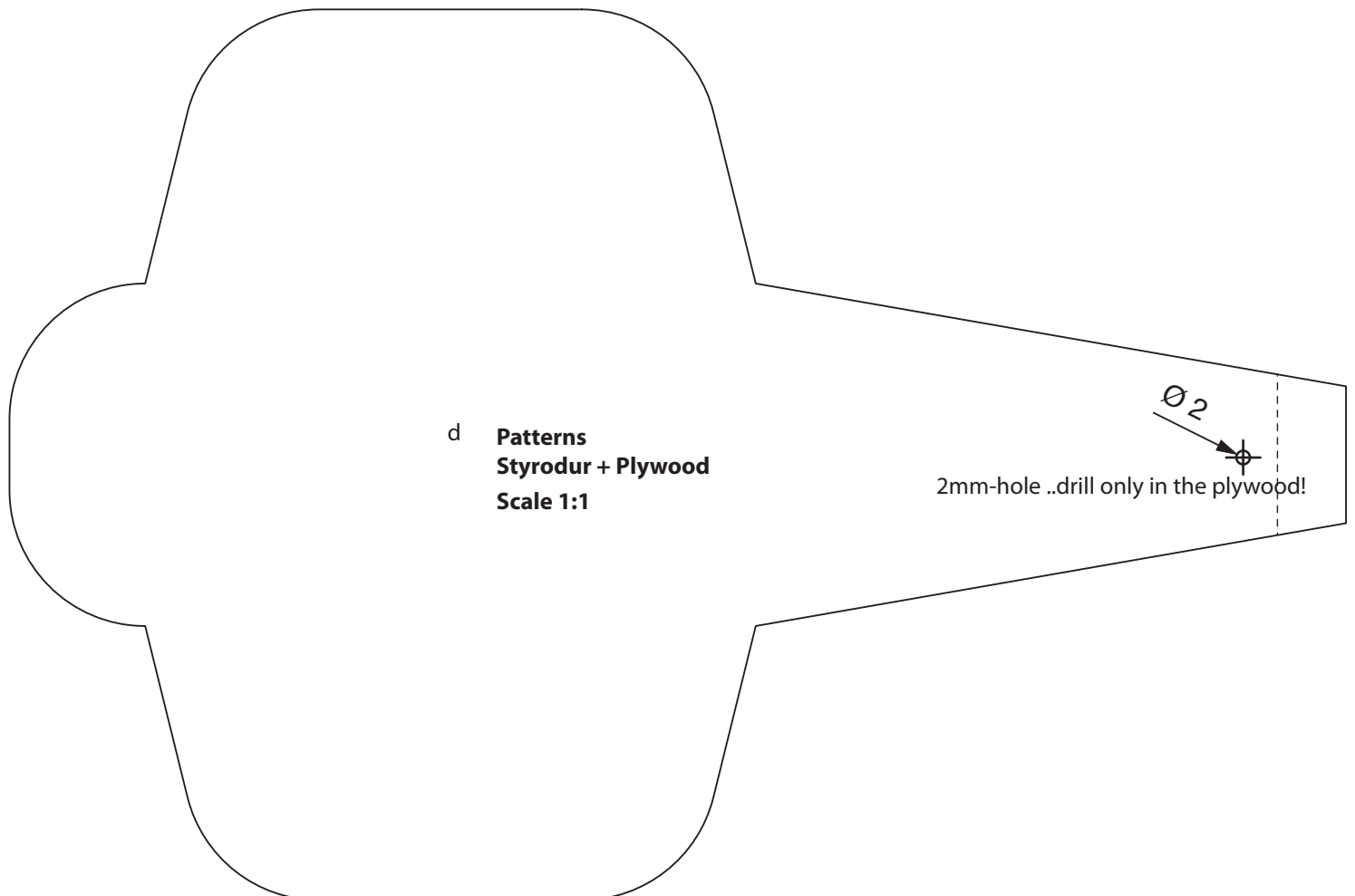
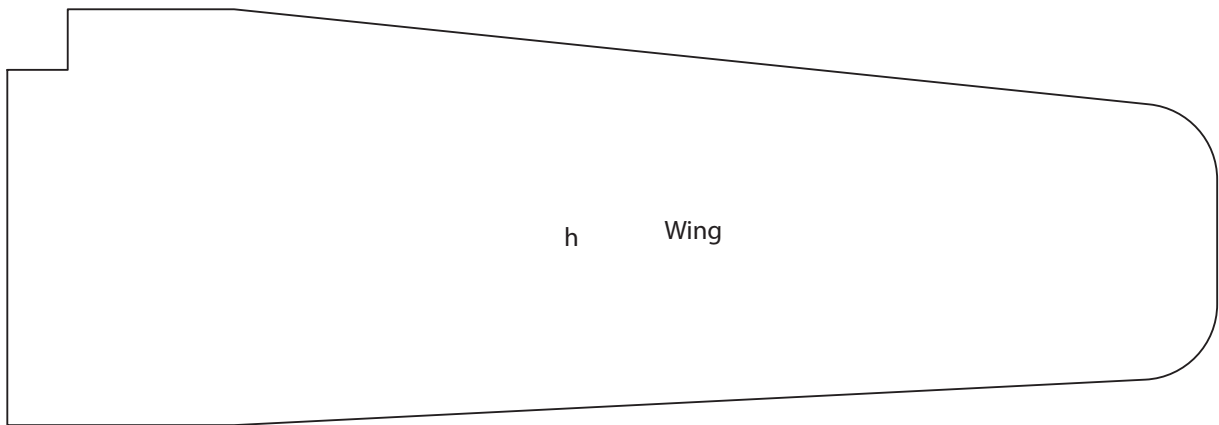
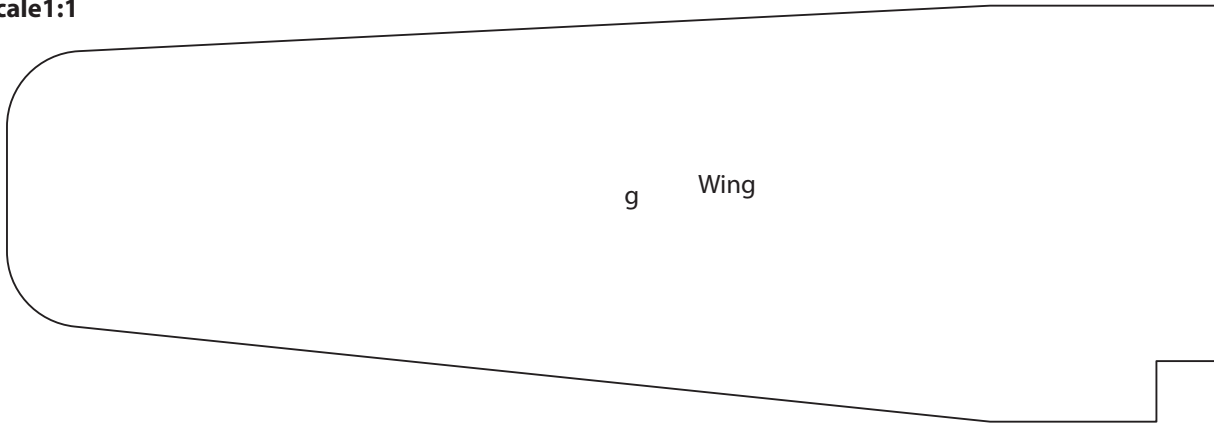
Ready!



Instructions

Wings + Base

Scale 1:1



Instructions

Pattern
Cover, Roof, Fin
Scale 1:1

