

THERE is no reason why Slope Soaring should be limited to aeromods in the few highlands we have in these Isles or to our counterparts in the Alps of Europe. Hoverking is good on any hillock or slope when the wind is favourable.

On its second outing Pete tells us: "Launched from a 100 ft. hill, the model remained into wind for $2\frac{1}{2}$ minutes, soaring beautifully before turning downwind." Which emphasises that this design incorporates the prime essential of a slope soarer, the ability to hang nose into wind without losing height.

Those who have yet to see a slope soarer rise and fall with each change of wind current, have thrills in store. With the sole exception of the flat Fen-lands and eastern areas in Lincolnshire, it is possible to find a soaring site within easy distance of each town in the British Isles.

Hoverking also lends itself well to a powered sailplane. A small diesel or gloplug motor can be mounted on a pylon high enough to allow propeller clearance, and positioned between the nose and wing leading edge.

Constructional Notes—

Fuselage: Select hard $\frac{1}{4}$ in. \times $\frac{1}{4}$ in. balsa for the longerons and spacers. Pin the longerons over the side view, joining them with scarf joints at least 1 in. long. Cut and cement all the spacers except those at the wing position, which are added after the $\frac{1}{4}$ in. sheet has been slotted for the wing tongues and fixed. Now cut the $\frac{1}{4}$ in. sheet for the nose box and fix in place. Repeat the operation for the second side, building directly over the first side. Remove both sides together and sand the outlines before separating.

Pin the sides upright over the top view on the plan. Cut all the spacers and fit those at the wing position first. The $\frac{1}{4}$ in. sheet for the nose box is cemented into place as the

fuselage is drawn together. Use rubber bands to hold in place until the cement is dry. Similarly, the rear of the fuselage is brought together and the remaining spacers are added, together with the sheet which supports the fin outline.

The wing tongues should be cut from $\frac{3}{16}$ in. plywood and cemented firmly in position.

Build the fin outline, cut out the fin ribs and cement them to the spar. Add the fin outline and slot the complete assembly into the sheet on the fuselage. Add the $\frac{1}{4}$ in. sheet lower fin and the $\frac{3}{16}$ in. square sloping spacers.

Slot a piece of $\frac{1}{8}$ in. square spruce into the spacer in front of the wing T.E. and join its other end, halfway up the fin outline. Support this spruce longeron with $\frac{3}{32}$ in. sheet triangular firmers. Finally laminate the nose block and fix in place.

Mainplane: Cut the ribs from $\frac{3}{32}$ in. medium sheet and the two end ribs from $\frac{1}{16}$ in. ply. Slot eight of the ribs to take the boxes, which are made of $\frac{1}{8}$ in. plywood and bound with thread. Attach four ribs on to each wing box. Notch and shape the $\frac{1}{4}$ in. hard T.E. and pin in place over the plan. Add the ribs to the $\frac{1}{4}$ in. square spruce spar and the T.E., altering the ribs at the tip at the same time to conform with the taper. Complete by adding L.E. top spar and wing tip. When dry, cut the spars to the correct angle so that they fit flush when the $\frac{1}{16}$ in. ply dihedral keepers are cemented in position. Finally, add the wing diagonal bracing.

Tailplane: Repeat the procedure as for the wing, adding the centre section sheeting whilst still pinned to the plan.

Covering: The original model was covered with heavyweight rag tissue and coloured with black Aerolac on the fuselage and fin with yellow wings and tailplane. This provides

light-weight colouring which is completely waterproof and not affected by damp weather.

Trimming: When trimmed in calm weather the model should have a long, very fast, shallow glide with no tendency to keep the nose up. When hand launched on flat ground into a moderate wind, the model should float, but if the wind momentarily stops or slows it should put its nose down and take a long time to pull out. Unless the model is trimmed like this it will stall when soaring instead of climbing at the slightest puff of wind. It is naturally trimmed to fly straight.

Having trimmed the model over flat ground, try a launch from rising ground, try a launch from rising ground. Launch with the nose slightly down, and put plenty of effort into the actual throw. An over-powerful launch should result in a slight soar, followed by a smooth nose-down approach to a landing. Launching at too slow a speed is indicated by a fast sink without much forward motion.

FULL SIZE PLANS (SEE 1/6th SCALE REPRODUCTION BELOW) ARE AVAILABLE PRICE 3/6 POST FREE FROM THE AEROMODELLER PLANS SERVICE

HOVERKING

A 72 INCH SPAN
SLOPE SOARER BY
P · GILBERT

Member Pharos M.A.C. . . . Age
18 . . . Works at Admiralty re-
search Lab. . . . Designed
"Thunderking", 1949 Nationals
winner . . . Now keen on Wake-
fields and F.A.I. rubber jobs.



