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*Build yourself a
19½ inch span, rubber
driven flying scale
model of the Danish*



KZ Lark

designed by J. A. Fleming

THIS 19½-INCH SPAN model was built to provide information for the design of a ¼th scale diesel-powered version and with a larger than scale tailplane flies quite well.

The original KZ III Lark was produced in Denmark in 1947 and has generally better lines than the majority of modern light aircraft. It was described in AEROMODELLER for November, 1952, which contained a 1/72nd scale drawing. The following details will be of interest. Spanning 31 feet 6 inches it is 21 feet 7 inches long and cruises at 106 m.p.h. Full load take off run of this two-seater is 77 yards with a landing run of 55 yards.

Now for the model. All parts are from 1/16 inch balsa with the exception of the 1/32-inch sheet nose covering and laminated balsa nose. Fuselage sides are built first (outlined in tint on the plan) from hard 1/16-inch square. Note the integral mount for the tailplane and rear motor peg. While both sides dry, the fin and rudder and tailplane are cut out and the wing commenced. Wing trailing edge is one strip of ⅜ x 1/16-inch and the main spar a strip of ½-inch square. Pin these and the ⅜ x 1/16-inch leading edges in place and add ribs and wing tips. When dry, remove from the plan and add ¼-inch spacers for the wing struts, crack along the centre line and add the dihedral brace. Note the diagonal strips of 1/16-inch square between ribs R2 and R1. Cover with coloured tissue of your choice, waterspray and dope before adding to the fuselage.

Now remove fuselage sides from the plan and the only difficult part in the construction will be the sharp curve in the sides from F3 to F1. Steam from a kettle will assist here. Only four formers are necessary, with fairings for the top, bottom and sides. Ensure that F3 to which the 18 S.W.G. undercarriage is sewn, is of hard balsa. The dotted lines on F3 are cut away when the fuselage is complete. With F3 and F4 in place, add the cabin roof and the remaining top, bottom and side formers. Now cut away the dotted line on F3 and cement in place the tailplane, fin and rudder. Cement the wing in place and add 1/16-inch square fuselage stringers. The top fuselage stringer ends at the point on R1 where diagonals join. Side stringers are faired at the front into the basic fuselage side and at the rear end at the leading edge of the tailplane. The space between formers F1 and F2 is covered with 1/32-inch sheet and on the upper fuselage this extends back as far as F3 before being trimmed as shown on the side view. Drill a hole for the nose plug in the hard balsa nose block accurately. A 5-inch diameter propeller gives a reasonable flight though a 6-inch propeller is recommended. Sew the secondary undercarriage leg to the lower fuselage stringer. Scale-type legs are simulated by thin card, on the main legs ⅜-inch wide, on the secondary (centre) legs 3/16-inch wide, while the rear legs are ⅜ x 1/16-inch strips sanded to aerofoil shape.

Use the front windscreen template as a guide before cementing the celluloid in place and with the side windows in place, the fuselage is ready for covering. Waterspray and use only one coat of dope—do not use coloured dope. Two give the final touch to the model, add dummy exhausts and ink in with Indian ink the control surfaces and cabin door. Registration letters are cut from black tissue and doped in position. Finally, add the wing struts, but do not cement the nose block in place until the required amount of downthrust and sidethrust has been decided from the first test flights.

Balance the model where shown, adding ballast at the nose or tail as necessary and test glide. Trim with the four strands of ⅜-inch rubber installed, but do not wind the motor until a stall-free glide is obtained. Now insert temporary packing behind the top of the noseblock to prevent nosing-up under power, also slight right side thrust and you are ready to pile on the winds. Remember that small models like this perform best in near-calm conditions and—*Happy Flights!*

