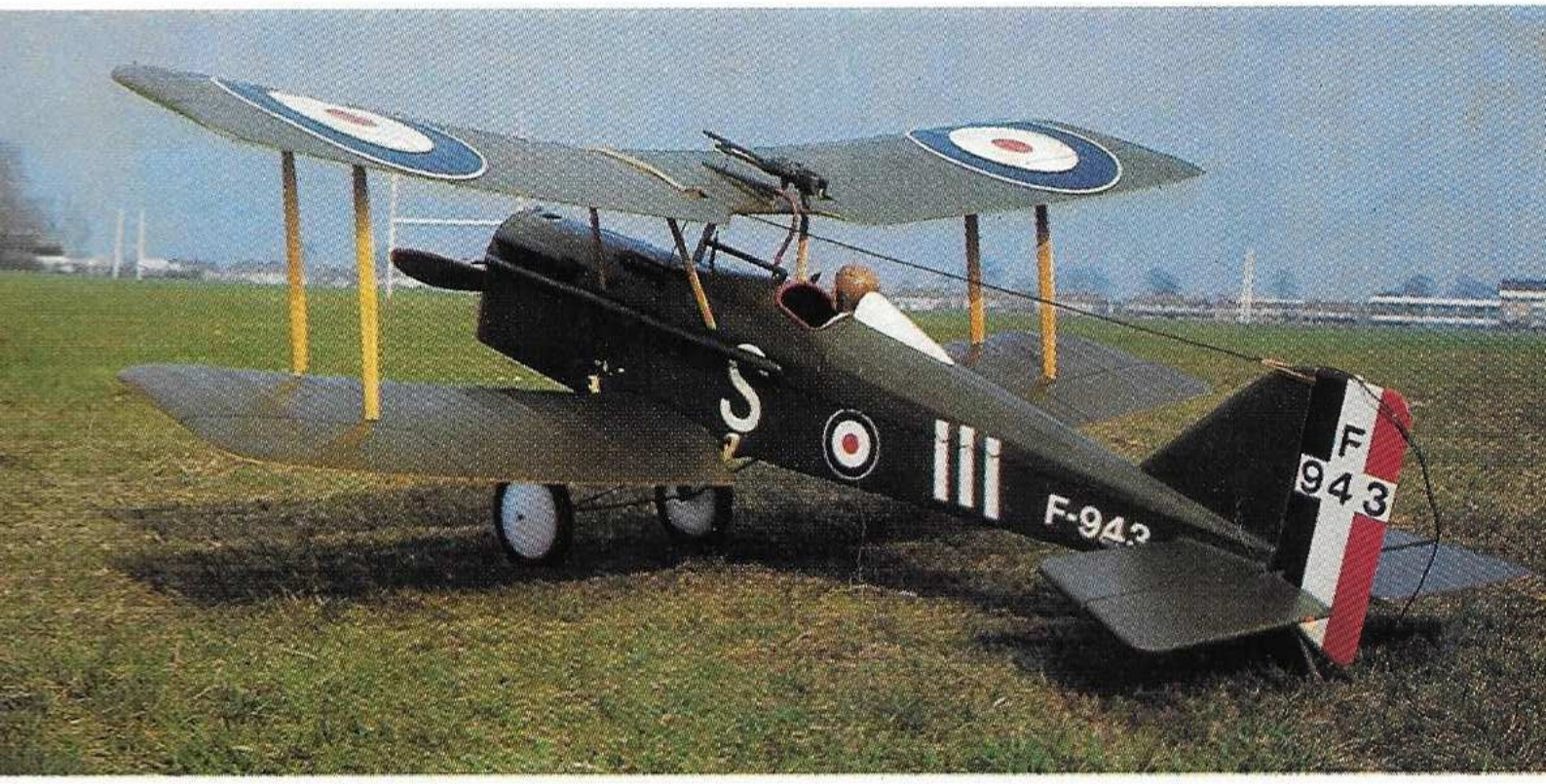
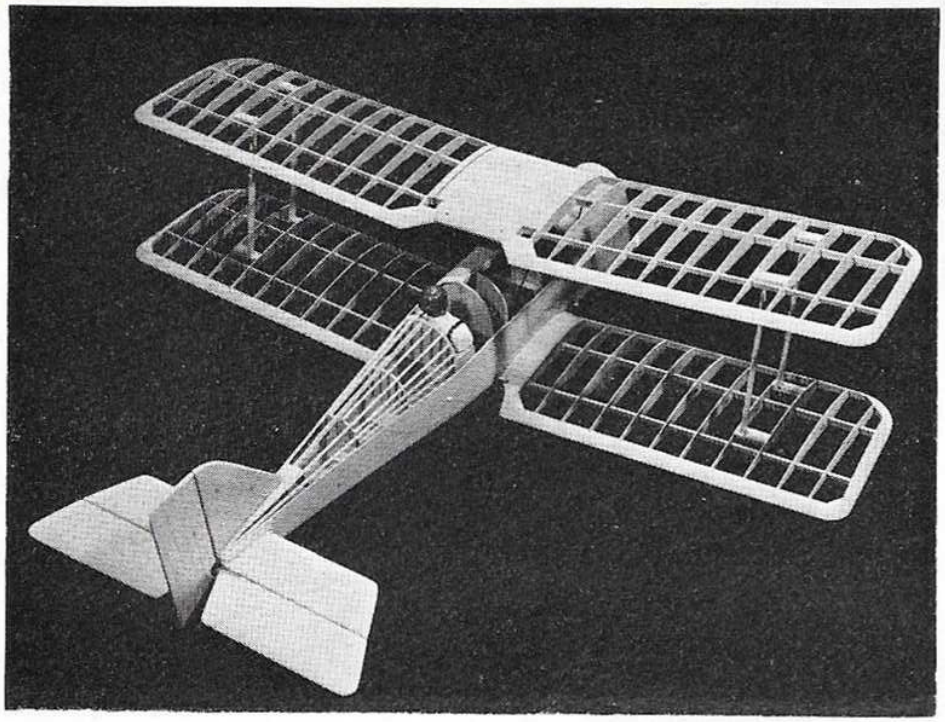


KeilKraft's S.E.5a — test-report



RM TEST REPORT

the model on the cover

built and flown by
GORDON WHITEHEAD

KeilKraft's SE.5A

KEILKRAFT have entered the small scale dogfight in style with their latest kit—a 39½in. span near-scale model of the *S.E.5a*. The *S.E.* has always been on my r/c scale short list, so I was very pleased when R.M. permitted me to review the kit of this famous first-war scout.

One is immediately intrigued by the very striking box-art, and the contents of the kit are equally impressive. A full description of these was given in the January R.M. Trade News, so here it suffices to say that I found the kit complete to the last washer. I had to provide nothing—except for a spot of extra 1/16in. sheet for a personal mod—and, of course, glue and paint. A minor disappointment, however, was the preparation required before construction. All the balsa ribs and formers needed cutting out, since the die-cutting had only gone half-way through. Similarly, the ply parts required fretting out. Despite this, it took me less than an evening to separate everything—in one sitting.

Building comments

The fuselage is an all-sheet slab-sider with stringered rear decking. I deviated slightly from the specified assembly sequence so as to provide the reader with some semi-assembled views, but the order in the instruction booklet is best. Alignment of the pre-formed centre section struts is aided by a card template, drawn on the plan. I found it best to make two of these, pinning one each side of the fuselage, which simplified the transverse alignment of the struts.

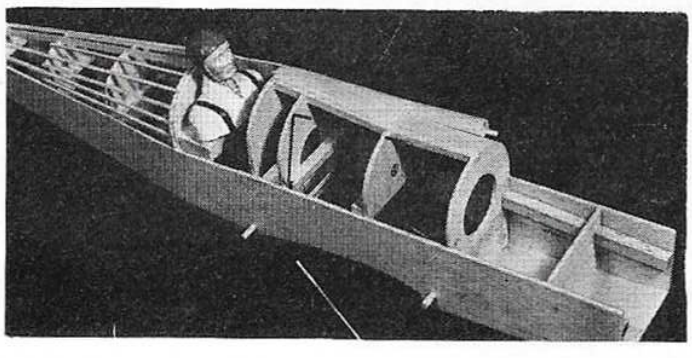
No Vickers gun detail is provided but, with reference to photos of the real thing, I modified the forward decking, and fitted one—as will be seen in the photos. The stringers supplied are of small section, and mine were soft, so I replaced them with 3/32 × ⅛in. balsa to help finger-proof the rear end.

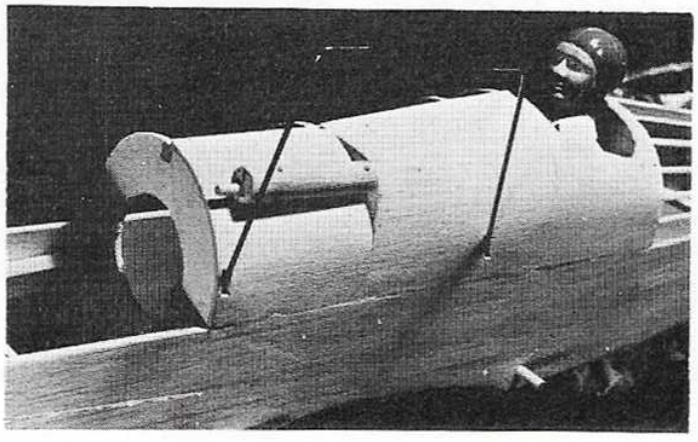
The cowling is assembled from sheet balsa, and the moulded louvres secured with epoxy. Cowl location is by a rear peg, with a 6BA bolt into an aluminium strap. The engine is mounted on a paxolin plate, screwed to bearers but—horror of horrors!—no silencer installation is shown. In fact, the O.S. 15 silencer is acceptably unobtrusive under the dummy cylinder block, and its variable outlet position was surely conceived for such an eventuality. No obvious cooling measures were detailed, so I cut scale-like slots under the tank bay, to let as much air out as possible. (I hate having an engine die due to overcooking).

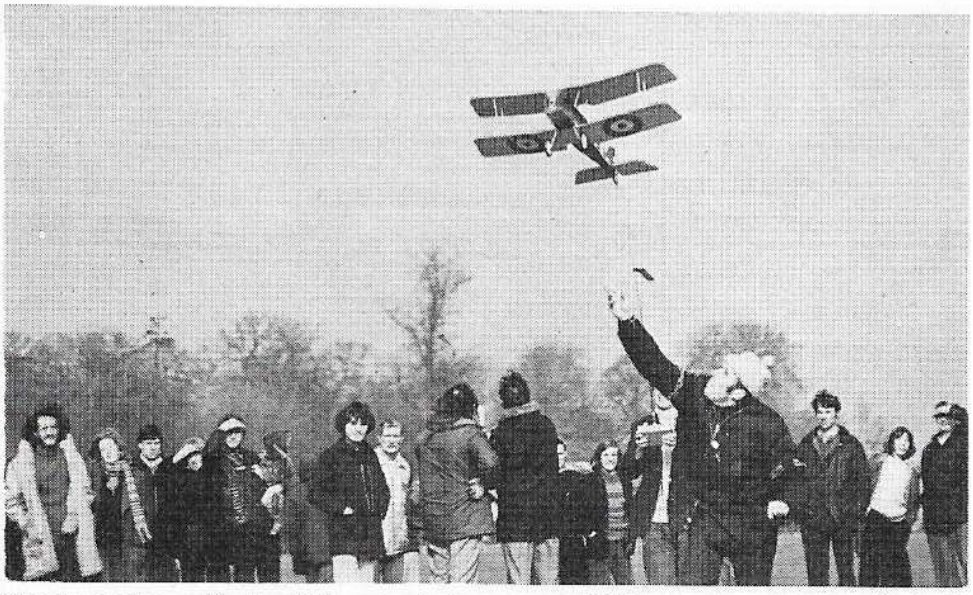
The wings follow traditional construction methods, and the instructions completely cover their fabrication. As is usual with the bottom-spar arrangement used, the wings bow upwards slightly when the covering is tautened with doping. Provided no twist is allowed to develop, however, no flight penalties are incurred.

The top wing centre section is shown as devoid of all sheeting but I did not like the idea of the tissue on

The Vickers gun in these part-built views is Gordon's addition—not shown in the kit.







"Ready, steady—go!"—the *SE5a* gets nicely airborne from a hand launch here, but has been known to take off from a short grass strip.

the top side having to support the wing fixing bands. I therefore sheeted between the outer ribs, and completely sheeted the top side—which provided support for the Lewis gun as well as the bands!

The tail surfaces are made from $\frac{1}{4}$in. balsa sheet, which merely require sanding to section. The elevators are joined using $\frac{1}{4}$in. dia. aluminium tubing, epoxied in place.

Covering and finishing

I covered the model in the tissue supplied, and by the method detailed in the instructions. I gave the fuselage an extra coat of sanding sealer, rubbed down to smooth the sheet areas further, however. The lower surfaces were sprayed with a semi-transparent coat of cream, and the upper surfaces with olive drab. The radiators, engine blocks, exhaust pipes and guns I painted with Humbrol 'Gunmetal'. The 92 Squadron transfers were then added and the panel lines and ailerons were drawn on, using a felt-tip pen, as was the stitching, after which the whole model was fuel-proofed. I found a very useful reference for all this in *Aircraft Profile No.1*, which has a 5-view colour plate of the very machine modelled in this kit.

Installation

There is plenty of room for up to three-channel equipment, and if the 4oz. tank supplied is used, I would certainly recommend having throttle control—but *not* at the expense of elevator. Routing of the push-rods is not shown but proved to be simple. Sufficient hardware is included for 3-channel operation, and the clevises, horns and so on are ideal for the job.

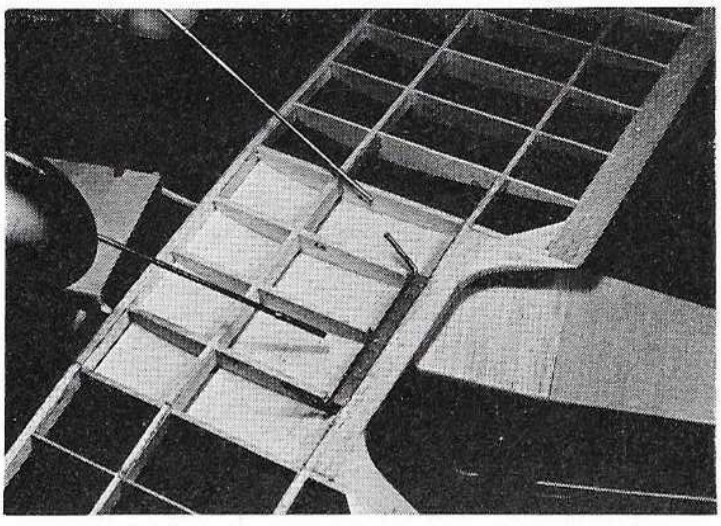
My equipment slotted in, with three servos abreast, and the receiver behind the tank. A 225 nicad was taped to a ply plate and, in an effort to keep the c.g. well forward, the latter was screwed to wood blocks under the tank. In order to avoid having to remove the lower wing for battery charging, a remote charging socket is to be recommended.

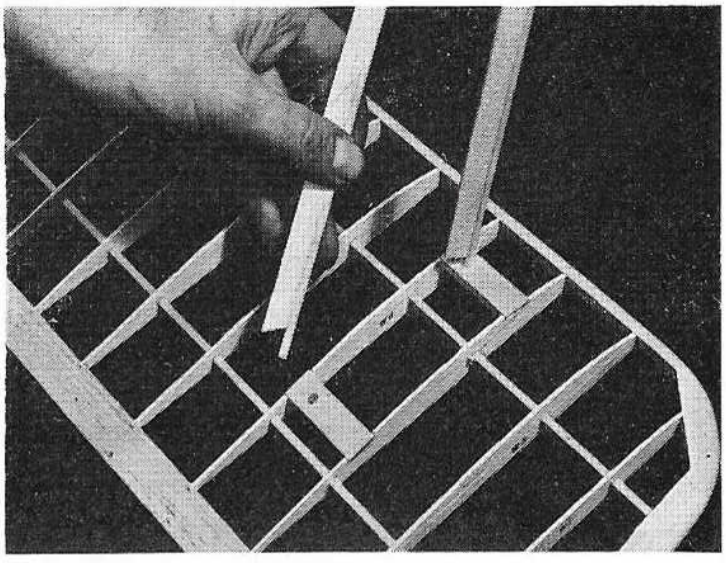
The final all-up weight (with 4oz. noseweight and empty tank) came to 54oz. This produced the relatively low wing loading of 14oz./sq.ft. so no problems were anticipated with flyability. The need for that lead in the nose was probably due to my extra coat of sealer, and, since the instructions say that the elevator control is quite sensitive, it will pay to make sure that the c.g. on *your* model is no further back than shown!

Flying . . .

My O.S.15 had been installed with its silencer outlet joined by silicone tubing to a scale-length exhaust-pipe of $\frac{3}{8}$in. dia. aluminium tube, so a power loss was to be expected. The hardest part of preflight preparation was in selecting the propeller. There was no specific guidance in the instructions, except to select an experienced assistant. Well, I'm pretty experienced, but was still uncertain! I therefore tried three sizes, experimenting in the back garden—8×6 nylon, 9×4 nylon and 10×3½ TopFlite wood. The 10in. prop gave the best static thrust, and the 9×4 next best. The 8×6 was poor on the deck, but I felt could possibly be better in flight. I selected the 9×4, due to its better

Methods of fixing u/c struts and interplane struts.





crash-resistance, for the first takeoff —and took off for the flying field.

This was the first *S.E.5a* to be seen in our area, so its arrival did not go unnoticed, and tanking up and starting was a warm operation because I was surrounded by onlookers! There was very little wind and, on the first takeoff attempt, airspeed was not attained due to the drag on our grassy strip. Off with the 9×4 and on with the 10×3½. This time the acceleration was better but she still didn't quite make it before reaching the longer grass at the edge of the strip. Ah well . . . nothing left now but to give 'er a chuck. A willing helper was found who, with a gigantic heave, catapulted the *S.E.* into her element. Poetry in motion, it was—and the model looked good, as well!

No trim adjustments were necessary, the *S.E.* climbing steadily away with a nice air of realism. I experimented with the rudder control—it was quite a change to get back to rudder/elevator—and she handled like a well-bred trainer. Response to controls was smooth and pleasant; I had kept the throws fairly limited as recommended in the instructions. (In the absence of specific details, I used the outermost hole on the elevator horn, and adjusted the rudder throw for ½in. each side of centre).

After these intial experiments, I flew the model around, savouring the authentic vintage atmosphere it exuded. After about ten minutes (the 4oz. tank is good for twenty!) I looped her, using a dive to build up speed. Next came a stall turn . . . ragged—but then, I wasn't used to her. Next a barrel roll . . . *phut*!—the motor conked, so I glided her in. By keeping the nose down, I was able to maintain the good control response on the glide, and the landing would have been all right but for that long grass, which tipped her up.

For the next flight I disconnected the long exhaust pipe, but kept the 10×3½ prop in place. She'd been so stable, right from the first launch that I did the honours myself this' time, gripping the tranny in my left hand . . . smooth as silk again. The all-sheet fuselage give confidence, and single-handed flying in rough pasture should be easily accomplished.

This second flight was every bit as enjoyable as the first, though removing the exhaust extension only improved power slightly. This time, spins were attempted—unsuccessfully—and the engine cut again during another barrel roll (perhaps a touch of pressure would help here). The landing was a picture . . . she trundled along for ten yards, once again up-ending on reaching the longer grass.

Summary

The K.K. *S.E.5a* is a lovely little plane and will rightfully become very popular. It is certainly not overpowered with the .15 and, I should think, would be on the marginal side with a .10—and probably pleasantly lively with a .19. Further flights have verified her viceless nature and, provided one has passed the basic trainer stage, Keil's *S.E.5a* will give you many hours of pleasing, nostalgic, entertaining flying.

Manufacturer/Distributor: E. Keil & Co. Ltd., Wickford, Essex.