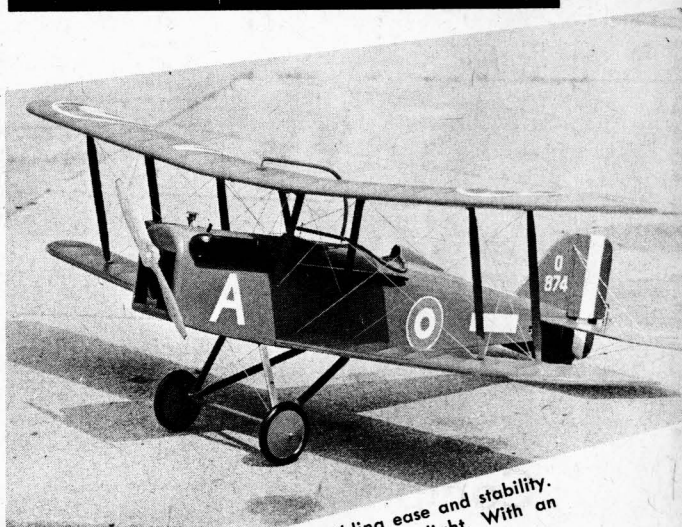
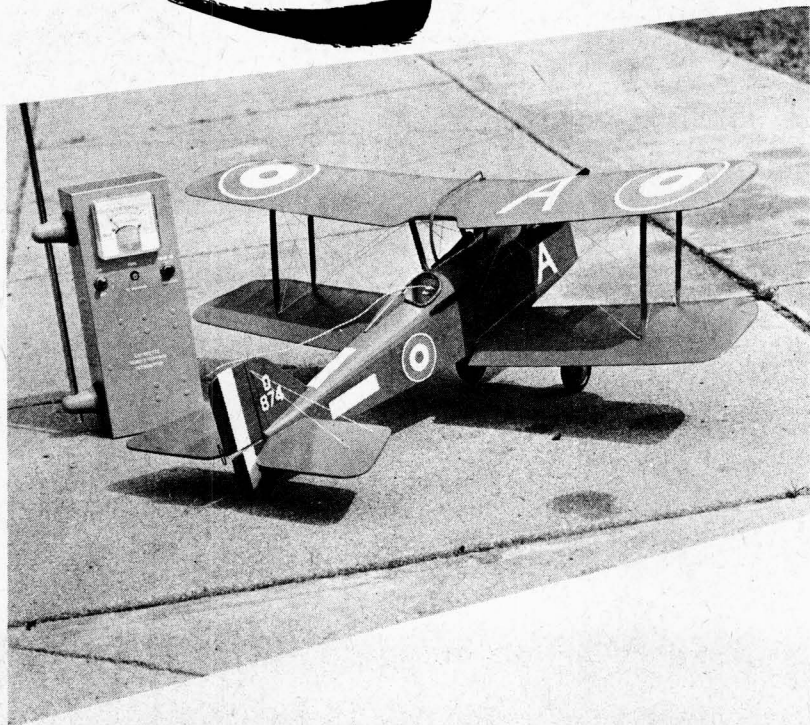


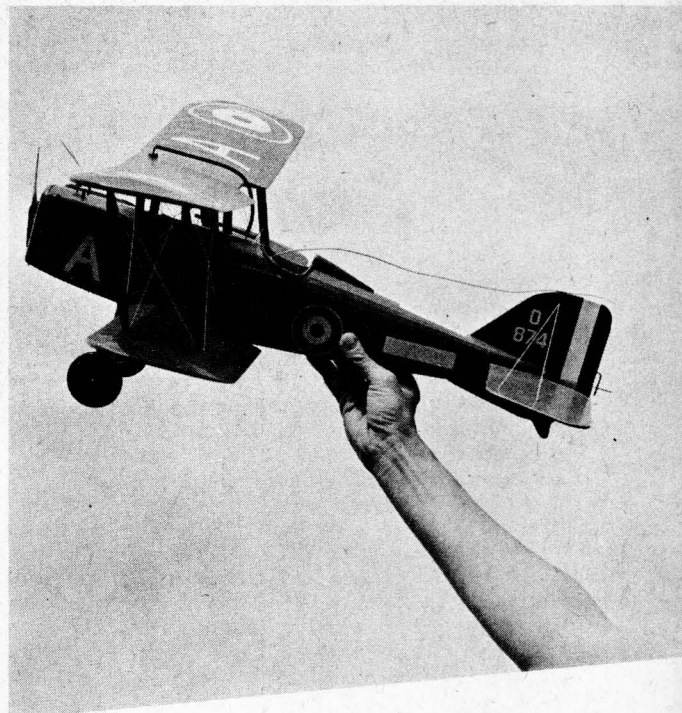
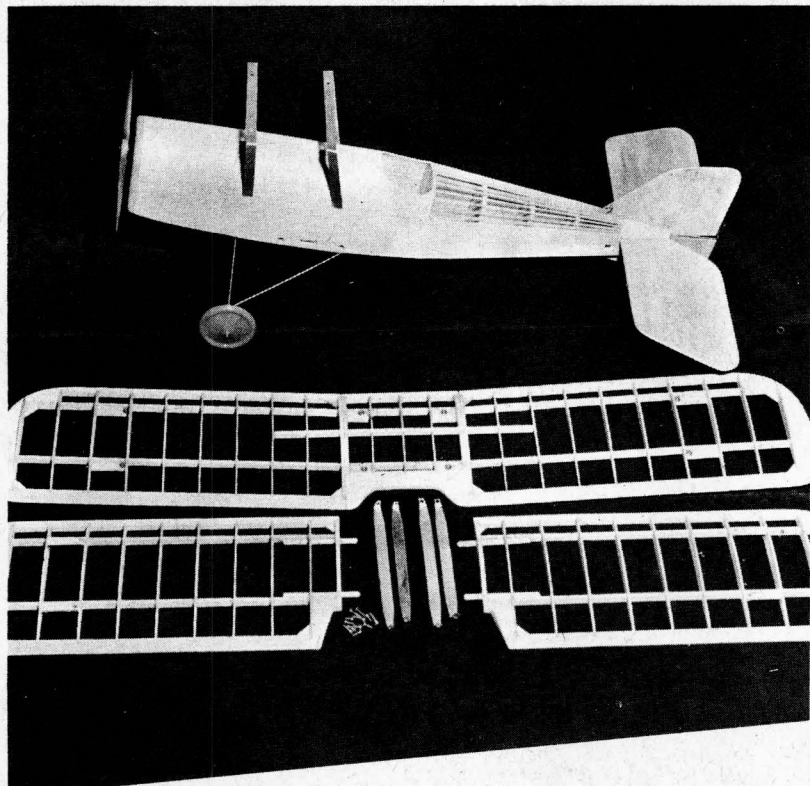
Major Edward Mannoek's

# OPWITH S.E.5.A.



Above: Basic platform ideal for building ease and stability.  
Left: R.C. equipment should be modern and light. With an .020 flight is realistic. Powerplants to .049 optional.

Radio in a World War I is tops in realism!  
Span is 26½", takes single channel equipment.  
Designed for inverted .020 - .024 engines.

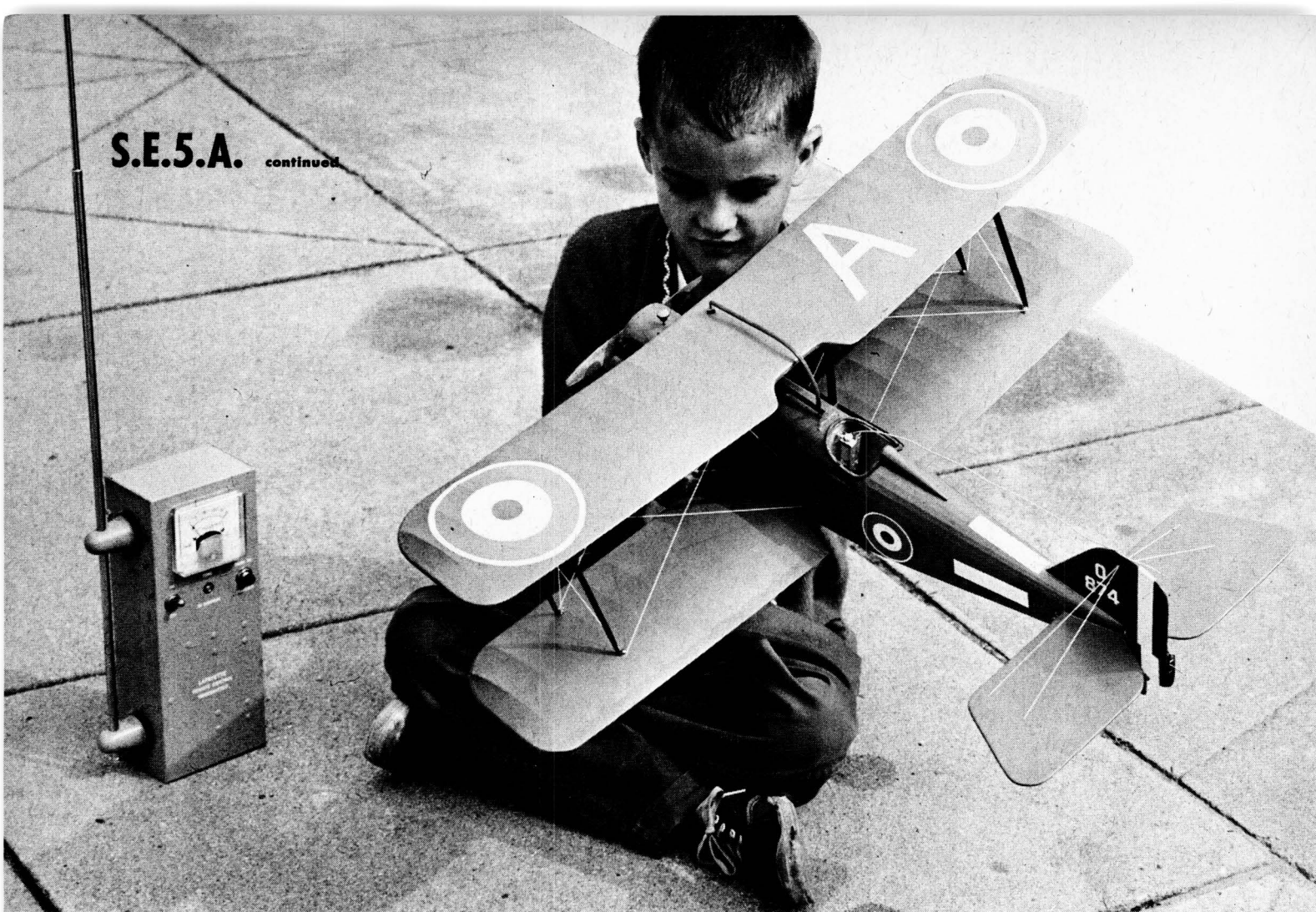


Above: Design does well in calm to moderate wind conditions. Penetration of a scale biplane is retarded, so fly accordingly.  
Left: Note struts, clean rugged structure, dowel wing pegs.

**FULL SIZE PLAN FOR THE S.E.5.A. AVAILABLE:**

#101—Timely Plan Service

## S.E.5.A. continued



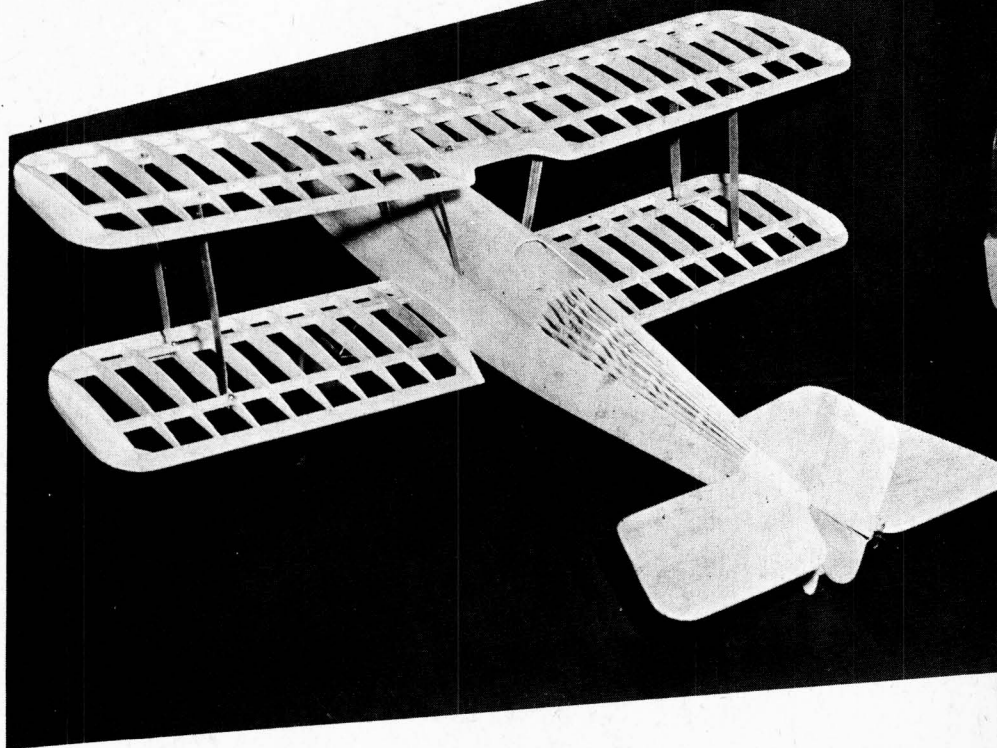
Above: Author's son Ronald ponders the days of "yesteryear". Old bipes are spectacular, a thrill in the air. Project is not difficult. Right: Wings bolted in place, (but not sanded yet Paul →) Rubber retains the lower wings.

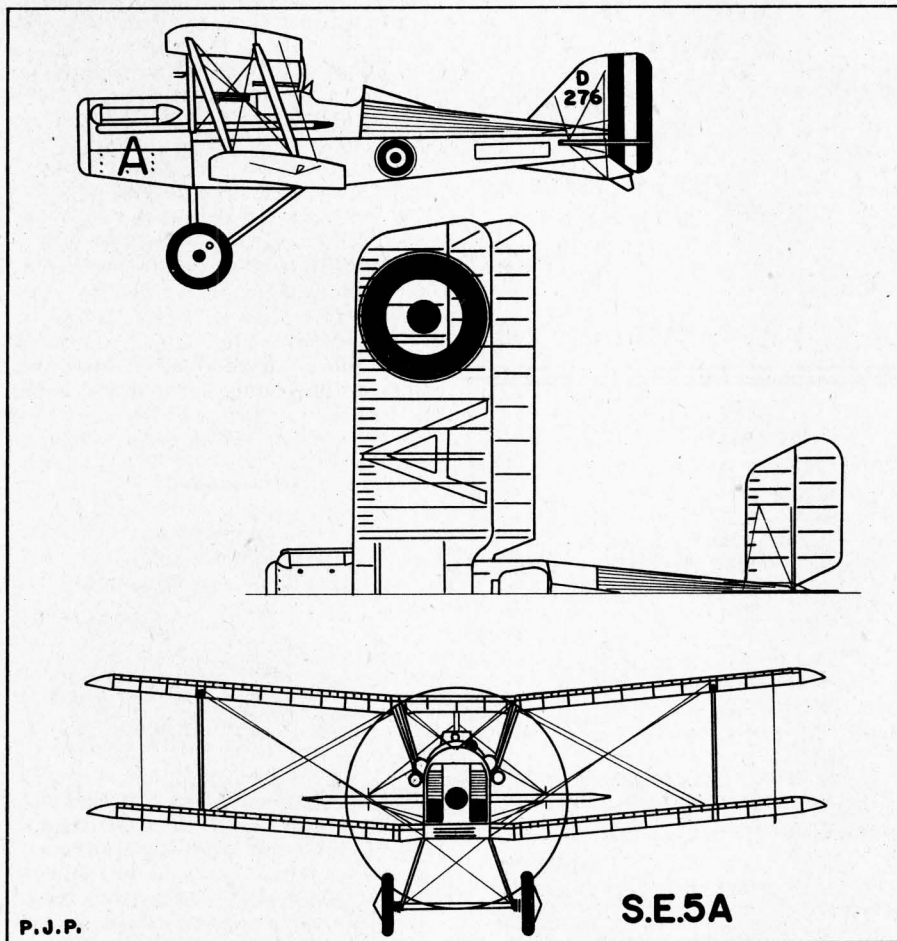
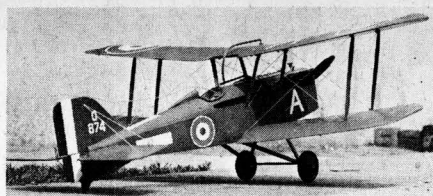
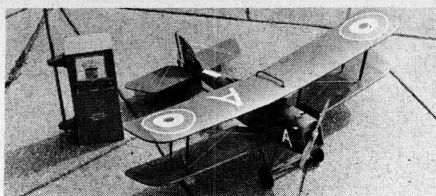
by Paul Palanek

► The S.E.5. has been and always will be, a model builders favorite. Not only because of its World War I association, but because of its dramatic outward appearance, and planform well suited to the modelers needs. It should be remembered, that the S.E.5. was until the advent of the Snipe, the finest fighting scout the Allies had, during the last two terrible years of warfare in France.

The first prototype S.E.5. flew from The Royal Aircraft Factory in December, 1916. A structural weakness in the wings caused a crash in which, the great test pilot, Major Frank W. Gooden lost his life. With some modifications, the first squadron was equipped in March of 1917 and the rest is history.

In scaling and detail we tried at best to adhere to Major "Mick" Mannock's machine D.276 as flown in No. 74 Squadron of the R.F.C. Major Mannock was a top scoring British Ace, with 73  
(Continued on Page 49)





## S.E.5.A.

(Continued from Page 12)

credits. Our machine scales 1" to the foot, giving a total of 26½" span, with an area of 252 sq. in. For power we used a Cox .020 with good results. However, power to .074 is recommended. The R/C components consists of, Babcock Mark III magic carpet receiver, and, a Lafayette Radio simple escapement. Before installing the R/C gear, good balance and free flight characteristics must be established.

Plans are presented 1/3 size, and should be enlarged as necessary. We recommend you start construction with the wings. All ribs are 1/16" balsa sheet, except the dihedral and root ribs, which are of 1/8" stock. The leading edge is 1/4" sq. and the trailing edge should be shaped from 3/16" x 1/2" stock. Each wing tip carries 1/8" dihedral. In laying out the spars, use 1/8" x 1/4" medium hard balsa. All strut fastening blocks are 1/4" hard sheet balsa, with a 4-40 nut anchored at each strut position. Pre-dope the structure and cover with medium grade silkspan paper.

Construct the tail surfaces from 1/8" medium grade sheet balas. Fasten the rudder yoke wire in place, using cloth as a binder, as on the rudder hinge. Apply two coats of clear dope and sand lightly, then set aside until later.

Fuselage construction is of a simple box design with sides of 1/8" sheet. Formers A, B and C are of 1/8" plywood, while the rest are of balsa. If a Cox .020 is used, motor bearers will not be needed. Beam mounts may be installed for larger engines.

Assemble the fuselage sides and formers mentioned. Stringers, 1/16" x 1/8" are used to form the cockpit aft. The nose block is fabricated from 1/4" sheet. Note here, that the cabane struts are .040 aluminum fastened to the fuselage strut members and are carried over the top and across the fuselage, forming a triangle. This technique affords firm mount for the wing. The escapement position is in the cockpit area, the batteries are just aft of the engine and the receiver is mounted above the gear, in the fuselage center.

A sheet of 1/16" plywood is fastened to the inside bottom of the fuselage walls, to reinforce the lower wing root position. The front and rear gear is

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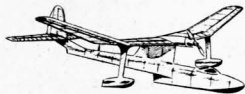
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shaped from 1/16" wire. The gear spreader is rubber shock mounted at final assembly. The bottom and top of the fuselage is covered with 1/16" sheet. Cover the stringer sections with Silkspan. Two access areas are made of 1/16" sheet, to assist in the placement of batteries and the receiver.

Much of the model is now complete, and the balance of work deals with its assembly, painting, scale trim and balance. The tail surfaces can be cemented in place with zero degree settings, for the stabilizer and fin. During this assembly, be certain the torque rod operates freely in its tubing bearing. Check the lower wing assembly with special attention given to the dowel positions and rubber band joiner. The four interplane wing struts are made from .020 aluminum, with a 1/4" flange at each end. A hole, 3/32" in diameter is drilled in each flange, to receive a 3/8" long, 4-40 aluminum bolt. This method is also used in fastening the upper wing to the cabane struts.

At this point, apply the necessary two coats of pigmented dope using the following color scheme: All upper surfaces olive drab, under side of wings and stabilizer cream, struts varnished wood, cylinder blocks, exhausts, and guns are black. All decals should be installed as indicated on the plans.

After the added trim, such as guns, dummy engine, exhaust, etc., assemble the model complete with stretch thread rigging and control wires. Install the engine with 2 degrees right, and 3 degrees downthrust. The model without R/C gear, should balance at the point indicated on the plan. Our most successful prop size was a 6-4 Tornado.

We found that the manufactured tank on the Pee Wee provides ample fuel for proper engine run. From here out, the model is treated as you would any free-flight. Try to achieve a good flight pattern, paying careful attention to those realistic R.O.G.'s.

Now for the R/C installation, wiring and final adjustments. The escapement is of the rubber motor type, with its rewind anchor point, at the rear port side of the fuselage. For the torque rod, use 1/16" diameter wire. Be certain the torque rod operates freely in its tubing bushing. The escapement is mounted just below the cockpit.

Secure the batteries and receiver as indicated, shock mounting the receiver in place. Shifting of the batteries may be necessary for proper balance. Bear in mind that many other receivers can fit the confines of the fuselage. Citizen-Ship, CG Electronics, Min-X and many others may be used.

The Babcock Mark III receiver uses a 9V battery. Disconnect one of the snaps to serve as a switch.

At this point, we are set for a calm day, and the wild blue yonder. Test fly with caution, allowing the model to gain altitude, before checking the control response. An .020 or .024 will provide realistic scale type performance, with a craft grossing 10 ozs. If higher power is desired, use a larger engine. Happy landings!