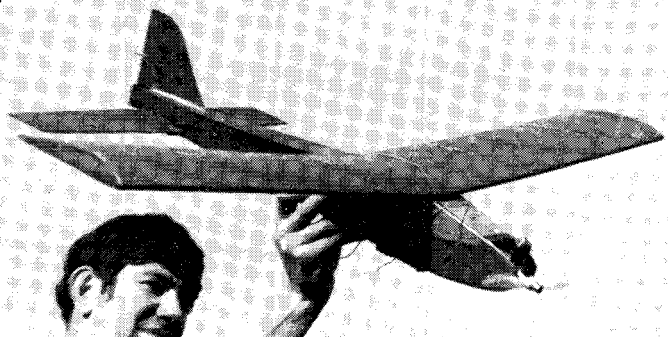




Your FULL-SIZE plans

A 36 inch rough field flyer
for single channel radio
designed by HARRY PURSER

SNIFE

NOT BEARING any resemblance to the KeilKraft Snipe, this model is nevertheless a direct descendant thereof! The original free flight version had been flying around for about four years with an E.D.46 when I acquired my MacGregor single channel gear. Against advice from learned R/C types, the equipment was fitted to the dear old Snipe, which flew reasonably successfully despite the low power. The changes began when it flew through a fence and shattered the wings. A stronger, smaller set were constructed (Mk. 2) and again flying was good but the fuselage gradually came apart. Hence the present one was constructed (Mk. 3). Purely functional (both sides can be cut from one sheet of balsa) and very simple, this fuselage is as near unbreakable as any I know. All sheet tail surfaces completed the model which was now powered by a Cox .049. Strong by comparison to the original Snipe f/f wings, the new ones were well and truly bent during removal from a tree, dictating even stronger construction for small field work. The present set were designed making Snipe Mk. 4. Mine are tissue covered, but despite dozens of prangs have not even holed (I am now fully convinced that full depth spars will require some beating for strength). Almost like new, the twelve month old original has had more flights than I could possibly recall. For those who are endowed with more patience than I am, elevators are shown on the plan for use with a Compact or similar escapement. I tried this with some used and abused R.S. Navigator gear which skipped sufficiently to almost always give a control which was definitely not required, i.e. spiral dive to right, either left or up elevator would be handy—I usually got right, *bang!*

An ordinary 'left, right, left', Conquest escapement was then fitted with the original MacGregor gear, and I find the model very easy to fly. It can even be 'control lined' (flown round the operator in tight circles at about eight feet altitude). Now for the construction: It is recommended that the whole model is built using a P.V.A. or similar glue (except where detailed) and that all parts are cut out and marked before commencing construction.

The mainspar is built first, carefully glueing the halves onto the plywood dihedral brace. Next attach the $\frac{1}{4}$ in. square leading edges to the lower wing sheets. When these items are set, the leading edge, trailing edge and centre section sheeting (note grain) are pinned over the drawing. The completed mainspar is now securely glued onto the rear of the lower sheeting (adequate support must be given until set), the ribs added and also the leading edge dihedral brace. When set, this structure may be removed from the board, the leading edge carved to shape (following the rib contour) and the upper leading edge, trailing edge and centre section sheeting may be added. Note that the sheeting on the left wing should end on the centre line of rib W.1 to allow

mating with the right wing, which is now built exactly as the first around its mainspar over the plan. Add the $\frac{3}{4}$ in. soft sheet tips, tape reinforcing and sand the whole structure smooth.

The tailplane is made from good quality $\frac{1}{4}$ in. balsa sheet as shown. Add the braces to the tailplane to give that extra strength and help to resist warps. Moving surfaces are hinged, using thread stitching or tape, whichever is preferred. Add the wire yoke(s) either by bolting as shown or even cementing in position. The original model was fitted with the yoke cemented to the rudder with no sign of this coming adrift, but *careful* adequate cementing using a good balsa cement is a must.

When building the fuselage, note that the right hand doublers and 3/16 in. square front members are set a shade back for right sidethrust. Add doublers to nose and tail (grain vertical), escapement rails and all braces and gussets to sides as indicated. Note that F 4 is built up over plan. Join sides on formers F 2, F 3 and F 4 and leave until set. Drill F 1 to take 8 BA engine bolts, insert these and solder wire across the slots to prevent their turning. Firmly glue the completed former F 1 in position and join sides at tail, using rubber bands to hold sides in position until set. Add 3/32 in. sheet floor, cross members and fin platform. Also the two ply cheeks to the inside of the extreme nose. Carefully done, that nose is fuel tight! To construct a hatch cover for the battery compartment, pin two pieces of $\frac{1}{4}$ in. square parallel to the nose doublers at the same level. Plank between sides with 3/32 in. sheet balsa taking care not to glue planking to the actual sides, only to the two $\frac{1}{4}$ in. square pieces. When set, add a small lip to hook under the nose top sheeting ($\frac{3}{4}$ in. back from F 1). This hatch is quite rigid and is held in position with a rubber band at the rear.

The fin may now be glued in position, not forgetting the 3/16 in. gussets shown. It is recommended that the fuselage is now covered.

Bend and fit all wire fittings as shown and drill holes and glue dowels in place. Undercarriage plates are made up of three strips of 1/16 in. ply glued together and position as shown in the side view.

The wings and tail surfaces are covered with heavyweight Modelspan tissue or nylon (preferably) using clear dope as the adhesive. Nylon is essential for the fuselage. Apply three coats of clear dope to whole model, paint as required and thoroughly fuel-proof, particularly around the nose. Two coats overall will not add sufficient weight to cause concern, but a fuel soaked model is utterly unreliable.

Mount the escapement on a 1/16 in. ply former using two 6 B.A. bolts. This former should be a tight sliding fit in the rails. There is adequate room for up to five 1½ volt pencils in the battery compartment and most types of relayless receivers behind F.2. Fit a suitable switch where preferred and be

sure all wiring is well supported. Be careful to pack receiver and battery compartments with as much foam rubber as space permits, particularly in front of the components.

Now to the flying field! Assemble the model using rubber bands, including undercarriage (to front wing dowels). At the moment of truth it will bend back, not chew up half the fuselage as permanently-fitted ones are so often inclined. Balance where indicated and test glide (over long grass if possible). A flattish, fairly fast glide should result—if not, adjust tail-plane incidence accordingly. Wait for calm conditions before trying power, as, if the model is trimmed nose up under power it could well be off downwind very quickly. Use almost full power to begin with and be gentle with that rudder. Power trim must now be adjusted if required by adjusting side and/or downthrust. Biased blips are plenty to hold a turn, although once in a steady turn the model will stay that way for quite a time. With the rudder shown, holding a signal on will give a quick entry to a spiral dive-and-loops and very barrelish rolls are possible. Keep the model up wind at all times until the motor cuts then make a square circuit of reasonable size with a final turn into the wind leg from twenty to thirty feet high and fifty yards downwind of you and it should (?) land at your feet. I sincerely hope that your model gives as many pleasurable hours of flying as mine has.