

Maestro Malmström strikes again!

Ray produces another sparkling sport design in this profile control-line model of

OLE TIGER

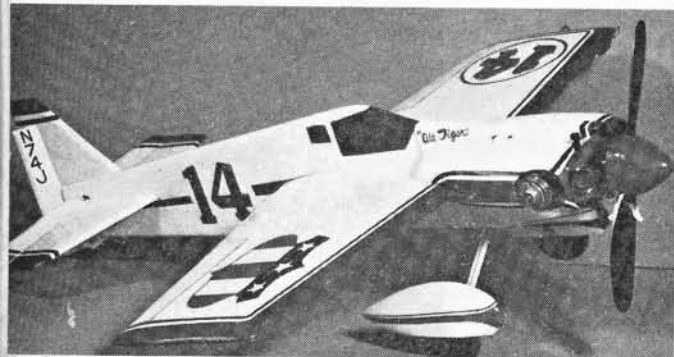
for .049 (.8 c.c.)-.06 (1 c.c.) engines



AMERICAN MIDGET RACING aircraft have always been popular subjects for aeromodellers—Art Chester's *Goon* and *Jeep*, Bill Falck's *Rivets*, Steve Wittman's *Bonzo*, have all appeared in model form. Now we proudly present, simplified to profile type, a model of perhaps the sleekest, and certainly one of the four fastest midgets ever built—Bob Downey's *Ole Tiger*. In its colour scheme of white with red and blue trim the model is a real eye-catcher, and if you follow carefully the instructions and building sketches you should have no difficulty in building and flying this fascinating little job. (See also, this month's *R.C.M.&E.*)

Start by cutting the basic fuselage shape (A) from medium $\frac{1}{4}$ in. sheet. Cut out the engine/undercarriage mounting piece (B) from $\frac{1}{4}$ in. ply. Bend the undercarriage wire to shape using a vice, insert into the slot in piece B and firmly bind with thread and cement. Assemble piece B to the fuselage shape A. Cut out two side pieces (C) from $1/16$ in. ply and cement firmly both sides of the nose. Drill holes to suit the engine you intend to use. You may have to enlarge the cut-out for some engines. You can do this with a fretsaw or file. The plan shows the Cox .049 Medallion installation. This particular engine is most suitable, both from the power and easy-starting points of view. Performance will obviously be 'pepped-up' by motors of 1 c.c. Araldite a 'KK' $7\frac{1}{2}$ c.c. team race tank in the position shown on the starboard side.

Now is the best time to construct the wheel fairings. Start by bending a 20 s.w.g. piece of wire to the shape shown, then bind with fuse wire and solder to the undercarriage leg. Bind and cement two balsa blocks to the ends of this wire. Wheel fairing piece D from $\frac{1}{4}$ in. sheet fits over these blocks and is firmly cemented to them. A 'KK' $1\frac{1}{2}$ in. diam. plastic wheel is then slipped on the axle and retained with a small soldered washer. Fairing pieces E are then cemented either side of piece D. Carefully carve and sandpaper the fairing to shape. Repeat for opposite leg. We have slightly modified the fairings to give more wheel clearance for take-offs from short grass. You can use smaller diameter wheels and add to the scale appearance if you intend to operate from tarmac. Construct the tailplane and elevator from the plan, using tape, nylon or silk for the hinges. Give the tailplane two coats of clear dope, sanding between coats and pinning flat on a board while the dope dries. Make sure the two parts of the elevator move freely before cementing the completed tailplane firmly into the tailplane slot. Add the filler piece. Cut the fin from $\frac{1}{4}$ in. sheet and give two coats of clear dope. Note the rear portion of the fin is cut away and re-cemented at an angle, offsetting it $\frac{1}{4}$ in. to the right. (Model viewed from the rear.) Cement fin to fuselage. Check that tailplane and fin are at right angles. Construct tail-wheel as shown and insert dowel rod firmly into $\frac{1}{8}$ in. diam. hole drilled in the lower rear end of the



fuselage. Cement and add tailwheel fairing pieces **H** and **J**. Give fuselage and wheel fairings two coats of clear dope. The engine should now be bolted in position. Two 1/16 in. thick metal or plywood washers should be placed between the engine lugs and fuselage on the front mounting bolts as shown. This points the centre line of the engine slightly to the right (model viewed from the rear), and when flying, this adjustment helps to maintain line-tension. Connect engine to fuel tank with a length of neoprene tubing. Cut the wing from 1/4 in. sheet. (The wing chord requires two pieces of 1/4 in. sheet be joined spanwise, unless you are using 6 in. wide 1/4 in. sheet, which is fairly costly!) Sandpaper the wing to correct section. Cut out the recess for bellcrank mounting piece **F**. Cut bellcrank from 1/16 in. ply, drill and attach the control rod (18 s.w.g.) and two lead-out wires (22 s.w.g.), but do not bend the ends of these wires at this stage. Assemble the bellcrank and control-wires to piece **F** as shown. Note carefully the distance washer between wing and bellcrank, and do make sure that the bolt holding the bellcrank is screwed *tightly* into the ply piece **F**. This is most important. The wing may now be pushed through the fuselage wing slot and firmly cemented in place. Add starboard wing-tip weight. Check that wing is at right angles to the fuselage, using a set-square. Cement the 1/16 in. ply control horn into the small slot cut in the left-hand elevator. Further secure the control horn by a small nylon, silk or tape patch as shown. With pins, lock the bellcrank at neutral and bend the end of the control rod and insert it into the hole in the control horn, checking that the elevator is also at neutral. Secure the control rod with a small soldered washer. Make the lead-out wire guide from 1/4 in. sheet and 1/32 in. ply. Drill, and slip on to the lead-out wires. Cement guide on port wing tip. With the bellcrank and elevator still locked at neutral, form the hooks on the end of the lead-out wires. Remove pins locking bellcrank.

The 'cheek' cowlings are made up from 1/4 in. sheet and block as shown. Carve, and sandpaper carefully to shape. Note that the port cowling has a drain hole cut in the undersurface. The sketch of the starboard cowling shows the cut-outs and recesses to fit the Cox 049 Medallion, to afford access to the controls and cylinder head for battery clip connection and priming. These will differ slightly for variant engines. Incidentally, if you are *really* in a hurry to



get your 'Ole Tiger' airborne you can omit these cowlings, but as they are so characteristic of this type of aeroplane they are well worth the little extra time and trouble. It is up to you! Complete the cowlings by adding front pieces **G** and sanding to shape. Give cowlings two coats of clear dope, and cement in position, sliding them onto the wing leading edge and flush with the fuselage. The propeller spinner is made from 1/4 in. sheet (pieces **K**), 1/32 in. ply (disc **L**) and block (piece **M**). Assemble, carve to shape shown, sandpaper and give three coats of clear dope. Now bolt the propeller onto the engine drive shaft. Fit the spinner over the front of the propeller using an impact adhesive, such as Evo-Stik or Humbrol Universal adhesive. *Ole Tiger* is now ready for painting and trimming. We used Humbrol enamel in the handy tinlets. This does not require additional fuel-proofing. The colour scheme, trim and insignia are detailed on the plan. *Ole Tiger* is then complete.

Before flying, balance your model by suspending from a length of thread tied to a pin, which is firmly pushed into the top of the fuselage at the indicated Balance Point. The model should hang level. A small amount of tail weight will probably be needed and the position of this weight is shown on the plan. Sheet lead is ideal and must be firmly attached with impact adhesive. A slight nose-down trim is O.K. but avoid any tendency to tail heaviness. With the balance correct, you are all ready for the first exciting test flight. Choose a calm day, operate preferably over grass, and fly on 30 ft. thin steel or nylon lines. We know you'll find your *Ole Tiger* a thrilling and colourful little job to fly—so we'll be seeing you at the Air Races! **FULL SIZE PLANS** 