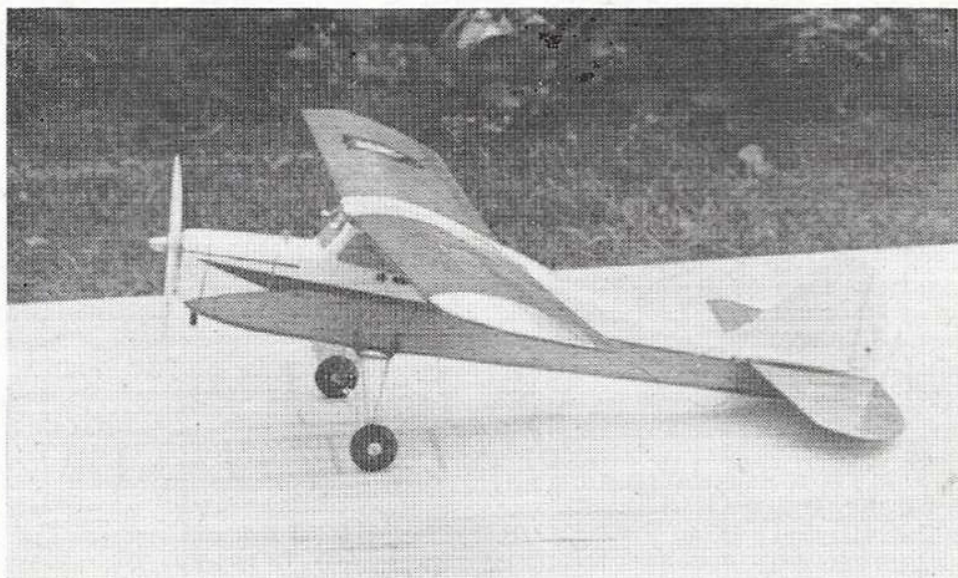


**hours more
fun from
your single
channel
flying!**



Build this attractive "tiddler" for .049 power

ECLIPSE

BY

ALAN E. WING

SEEMINGLY UNLIKE most other modellers who write about their designs, I'm not able to report that this model flew "straight off the board." In fact, several alterations had to be made before an efficient model was developed. I hope that this will encourage the prospective builder, rather than put him off—because I'm a firm believer, myself, in the "Never buy the Mk. I" axiom. The final version, shown here, is a very suitable aeroplane for the beginner to single-surface flying, and adequate power is to be found in any of the .049 engines available—such as the Cox "QZ," Babe Bee or Golden Bee, or the Enya .049 or McCoy .049. Anything with more oomph than these motors will produce a very aerobatic, and touchy machine, not recommended unless you are very expert or want a short modelling career. . . .

The radio compartment, while not exactly vast, is quite adequate for today's miniature superregen receivers, and most of the superhet ones, too. Recommended escapement of the "bang-bang" type—either a Conquest or the Futaba rubber driven escapement—as these require less room than the compound types, and are also lighter. I suppose one *could* fly it with one channel of proportional, but don't blame me if it turns out on the heavy side, as I have only flown with escapements!

This is a really "sweet little ship"—and I'm sure you will agree with me when you have flown her. C'mon then, let's get the building board out. . . .

CONSTRUCTION

For most modellers, the idea of requiring instruction on building such a simple little machine will be superfluous, to say the least, but for newcomers (and, let's be thankful, they are always with us) here are a few tips.

Wings

These are built on a dihedral board—a couple of pieces a flat board hinged in the middle so that they can be set at the appropriate dihedral angle for the wings. Select light to medium straight-grained sheet balsa, $\frac{1}{16}$ in. and 4 in. wide. Cut this to the required length and width and pin it to the board. To this, the leading and trailing edges (hereafter to be known as "l.e." and "t.e.") are butt-joined. The bottom spar is next positioned, followed by all the wing ribs. Scrap pieces of $\frac{1}{8}$ in. sq. are then glued between the ribs and the trailing edge, and likewise pieces of $\frac{1}{4} \times \frac{1}{8}$ in. strip between the ribs and the l.e. This makes a very strong wing and saves notching the l.e. and t.e. to take the ribs—a job that is fiddly and one that I hate doing!

Glue the top spar and the tip gussets in place, and then the top sheeting is added. Finally apply some fibreglass matting and resin to the centre section, as no braces are used.

Fuselage

Cut the sides and doublers, and glue the latter in position. Join the sides together with formers F3 and F4, checking with a set-square, to make certain that you have left it so that it *will*. (Set square!) When dry, add the tail post, pulling in the sides, making sure they bend equally at the F4 position. (This is where the selection of your timber shows up!) Now pull in the front sides, fitting the nose former, F1, to give the correct plan view. Next glue in position the plywood strengtheners for the undercarriage (u/c) and wing dowels. The top and bottom sheeting is added next—the grain of the $\frac{1}{16}$ in. top sheeting being *across* the fuselage, and that of the $\frac{1}{8}$ in. sheet bottom, *along* the fuselage. Finally add the nose blocks and open them out as required to suit your particular engine and tank.

Tail unit

Select medium-soft sheet balsa for the tail surfaces

cutting to the outlines shown on the plan. (You can put the balsa under the plan and prick the shapes through with a modelling pin, if you don't happen to have any carbon paper to trace them with.) Fit the anti-warp pieces in the tailplane (these are *let in* to the tailplane, not stuck onto it, by the way!). The parts should now be sanded silky smooth all over, and their edges rounded off nicely—though the trailing edges need not be brought to the traditional “knife-edge” on a model of these diminutive proportions.

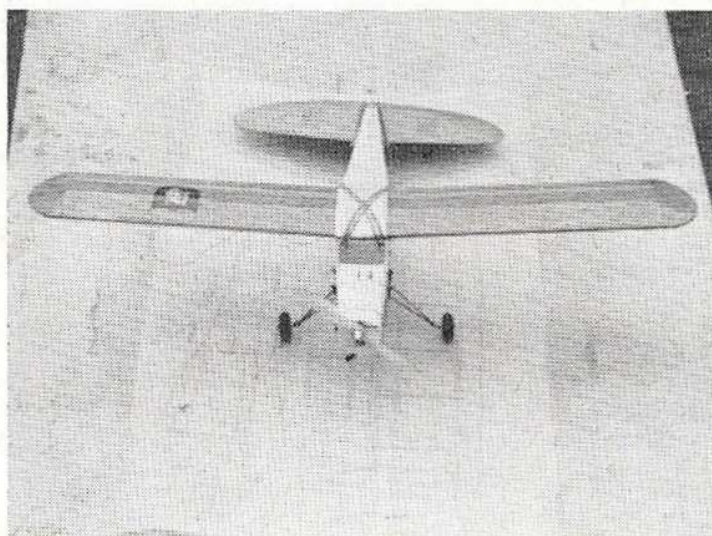
The rudder may be sewn in place, or fitted with tape hinges (*a la* control liners) as preferred.

Finishing

This is what can make or mar a model, in my opinion, so be sure to sand the whole airframe down very thoroughly—the $\frac{1}{8}$ in. sheet fuselage sides will take it okay. Next give two coats of sanding sealer, sanding—of course—between coats. When the second coat of sealer is dry, sand down once again and carefully wipe off all the sanding dust. Colour dopes add quite a lot of weight and should therefore be kept down to a minimum, so with this in mind, select your coloured tissues and dopes—or instant-finish trim—and apply as required. The whole machine may now be fuel-proofed and left to dry thoroughly before getting fuel anywhere near it.



ECLIPSE



As I said earlier, the radio compartment should take your particular receiver without any trouble. It is a good idea to make a removable former, about 1in. for'ard of the escapement former, so that you can pack the receiver in foam rubber, without the chance of its

moving back and jamming up the escapement mechanism. (If anything like this can *possibly* happen, in a single-channel model—*it will*, believe me !)

Flying

Before going out to your flying field, check that all the wing and tailplane surfaces are free from warps, and on no account have the centre of gravity (the balance point) any further back than is shown on the plan. And, of course—need I say it?—make sure that your radio and escapement are functioning absolutely faultlessly.

You can test glide this little job—something one usually cannot do with anything much larger to any useful purpose—and this should be done over some grass, not tarmac. Aim at a straight, flat glide, without any slight stalling tendency, but not too steep either.

Start the power flying with the engine set a little rich, and gradually lean out the engine on each successive flight, as you become used to the model's behaviour. You can expect the rudder action to be rather less effective on the glide—especially on the down-wind leg of your landing approach, so don't let this worry you, you'll get the hang of it all very quickly. Well, that's another *Eclipse* in the air, and lots of happy flying hours ahead for you. . . .