

Designed by KEITH HUMBER to suit .19 cu.in. two strokes, this aerobatic biplane spans 41 inches and suits four function R/C.

Two objectives were held in mind as Foxy Lady was designed — first I wanted a simple to build sports biplane with a different appearance and secondly it was

*Keep it simple is Keith's watchword and this simple to form undercarriage is an example of this.*

to be suitable for scaling up and down to suit engine sizes from .15 two stroke to .90 four stroke. An option appeared during construction, that of introducing a gull

*The rudder linkage is different but not too complicated.*

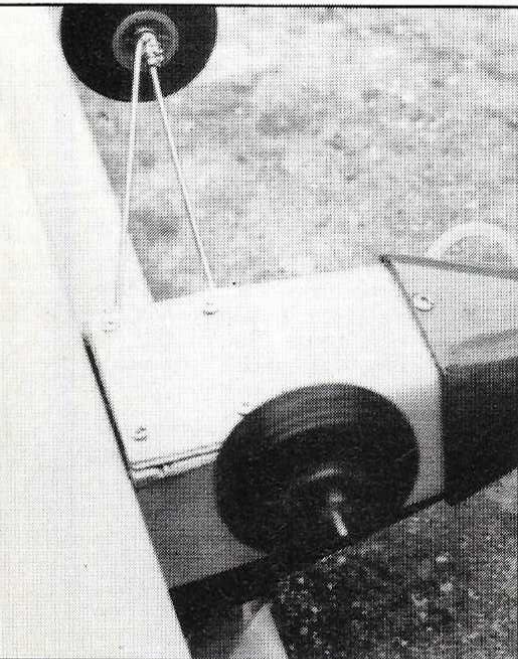
form to the upper wing (a la Cobra racer) to reduce interference drag between the wings. On the smaller versions the wing spacing remains the same, which seems to help with the sharp stall into various manoeuvres such as flick rolls and spins.

A Fox .19 (hence the name) more than adequately powers the subject of the plan, in fact it flies like a much larger model with a sparkling aerobatic performance. Most members of the local model flying club have had 'hands on' experience of Foxy Lady and all felt quite comfortable with her characteristics directly upon taking over the transmitter. Surely a good recommendation for such a model.

As an added bonus the Foxy Lady to this size will fit fully assembled into most cars. Constructionally, the lack of struts makes special jigs etc., superfluous, she is rigged zero-zero, unusual for biplanes but it works on the Foxy Lady. The twin fins are a cosmetic touch and only one rudder is hooked up to simplify construction. Two could be linked up, alternatively if you want to avoid the bellcranks, et al, another fin could be fitted in the centre like the Miles Messenger.

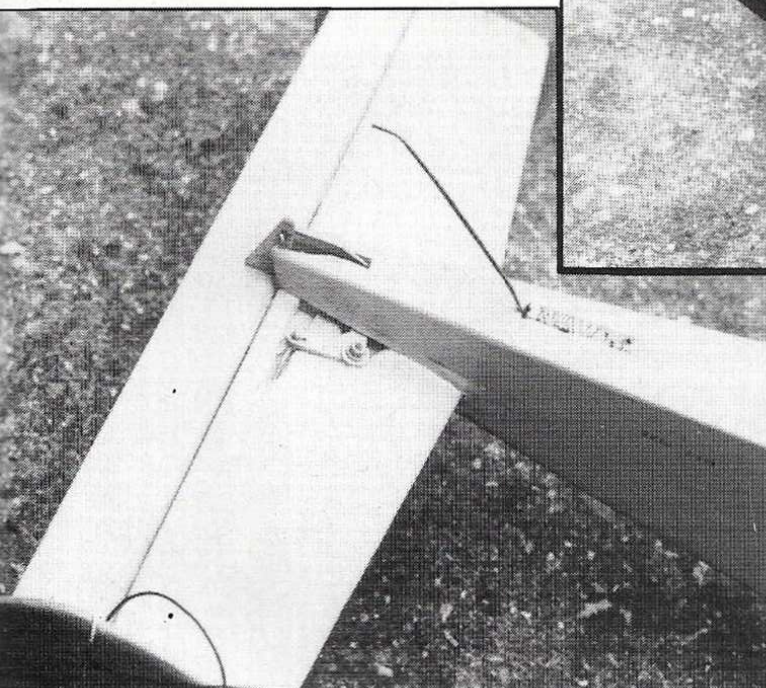
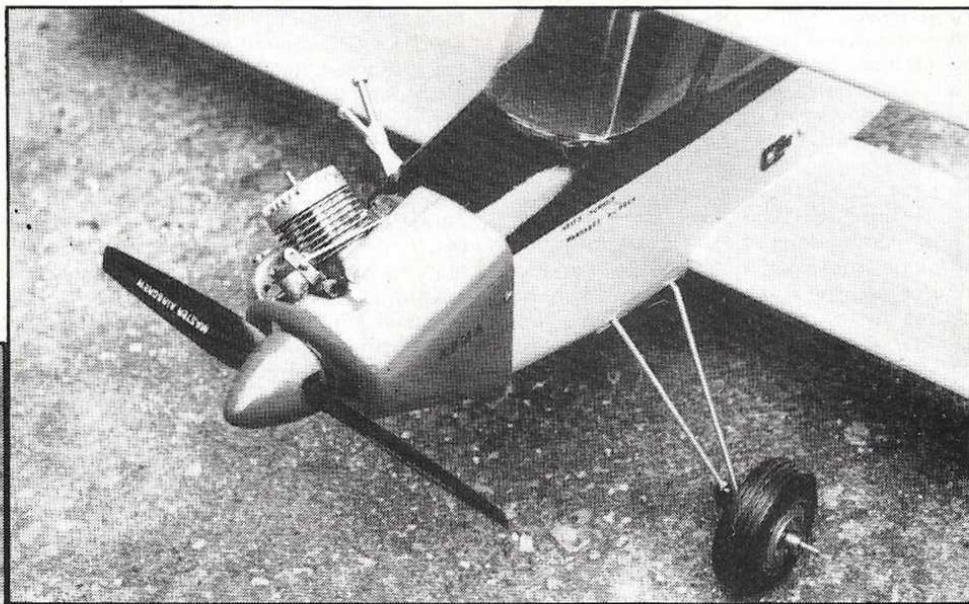
**Construction**

I usually start with the wings, to at least get them out of the way. The ribs are cut from 1/8in. sheet and then framed up over the spruce main spars. Leading and trailing edges are then cut out from 3/8in. med

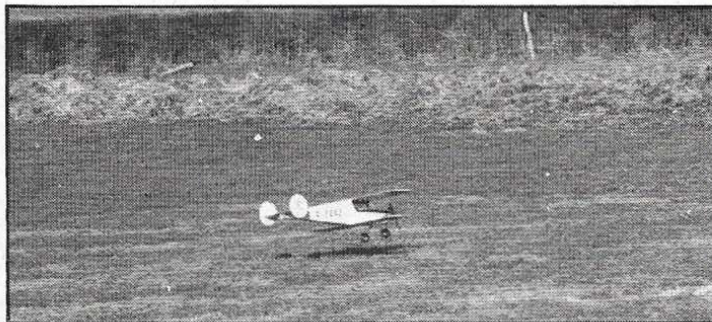


sheet except for the built up lower wing trailing edge, then the ply reinforcing plates at the centre section are fixed in place. Next the upper leading edge sheeting is added and the cap strips applied to the ribs of the spar. The tips are made up with radial ribs shaped in situ.

Ailerons are cut from soft  $\frac{3}{8}$ in. sheet shaped to section and then readied for fitting. The aileron horn is epoxied into place and then the hinges prepared. Split cane or similar is mounted onto a shaped block



*Above, the 45° installation reduces the apparent height of the engine in side and plan views. Left, the bellcrank to the rudder can be seen recessed in the tailplane.*



mounted between the aileron horns to form the rear wing mounting.

The fuselage is very simple to build with 1/8in. sheet balsa sides and 1/16in. ply doublers. Windows are optional, the prototype has them and seems plenty strong enough. Formers are cut from 1/4in. and 1/8in. ply and 1/8in. balsa, then the sides and formers are assembled upside down on the board.

Two laminations of 3/16in. balsa form the tailplane, these are hollowed out for the rudder pushrod and bellcrank, which are of course fitted before the laminations are glued together. The tailplane is fitted when it's completed, the top rear fuselage is glued in place. Fuselage top and bottom are sheeted in with 1/8in. balsa, from the cabin forward this changes to 3/8in. An undercarriage mount of 1/4in. ply with slots formed from 1/8in. ply to accept the undercarriage wires.

The cowl is framed up on two 1/8in. ply formers with 1/8in. sheet and planking. Further 1/8in. ply inlays to take the screws

used for fixing the cowl to the 1/4in. ply firewall. A SLEC engine mount was used on the prototype, cut down to suit the cowl.

With the wings and tail fixed to the fuselage and correctly aligned the fins can be cut from 1/4 inch sheet, shaped and fitted. On the prototype, Mylar is used for hinges and the horn is made from a piece of 8 gauge brass tube flattened and drilled for the 16 gauge pushrod. Push over the dowel and epoxy securely to the rudder after covering.

I used 2 1/4 inch wheels on the prototype but anything from 2in. to 2 3/4in. diameter will do. The wing breakaway plates are cut from 1/8in. ply and epoxied into place. Use a captive nut and simply replace them when necessary.

Installing the radio should present no problems. I used quite large servos so space was limited but they all went in. A 4oz. Powermax slant tank mounted on its side fits perfectly into the fuselage. Solar-tex was used on the original.

**Flying**

After the necessary checks — c.g. position and control movements — the Foxy Lady could be best hand launched into her maiden flight. By my standards the model has no vices, though you may have to play around with the ailerons to get the roll response right by your own standards.

Finally, my thanks go to Tony Baker for taking flying photographs and the flyers of the Solent Heights for their encouraging comments about the flying.



*Above, access to the servos is via the lower wing opening, while the receiver can be reached through the upper wing housing.*

