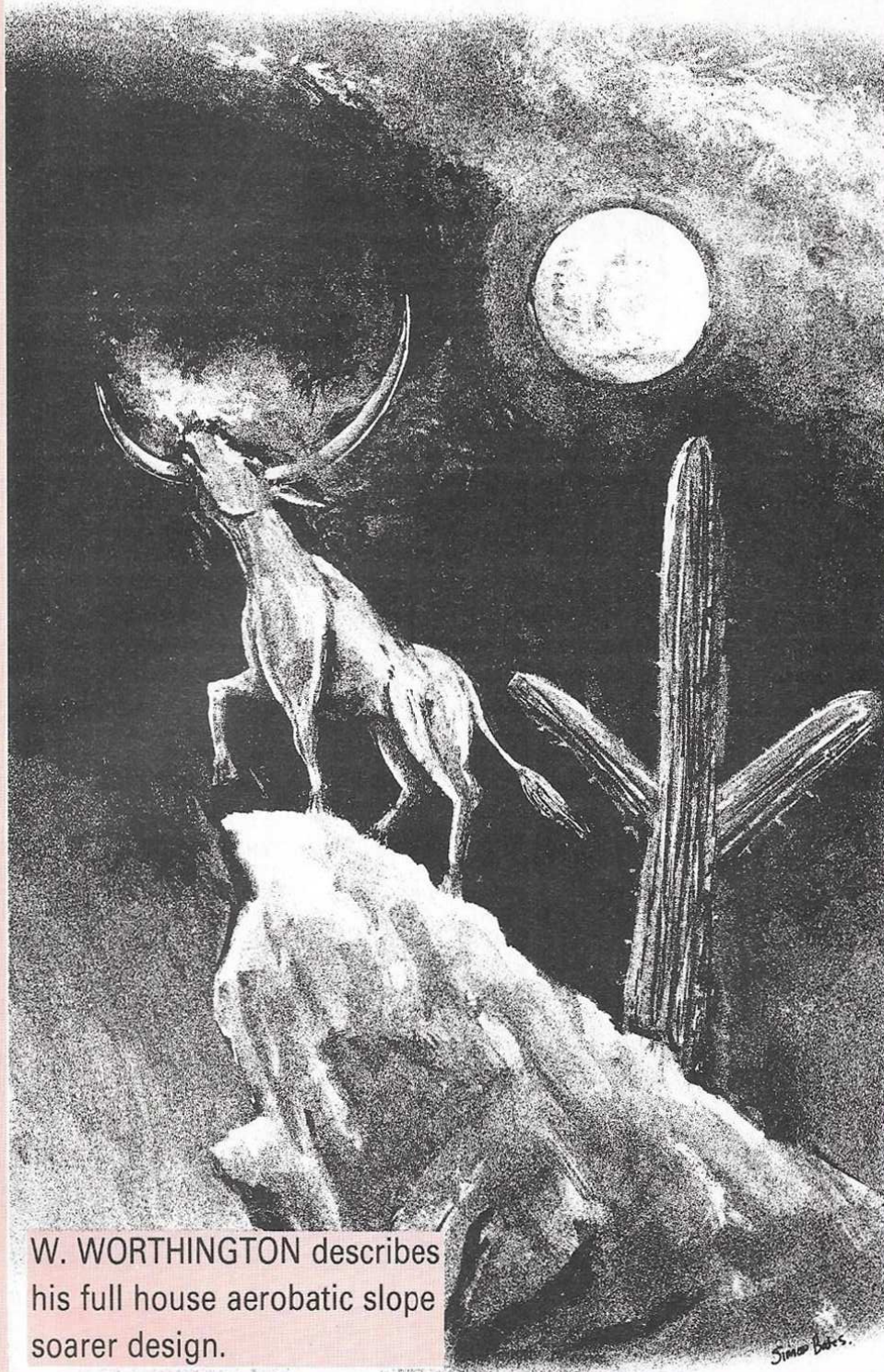
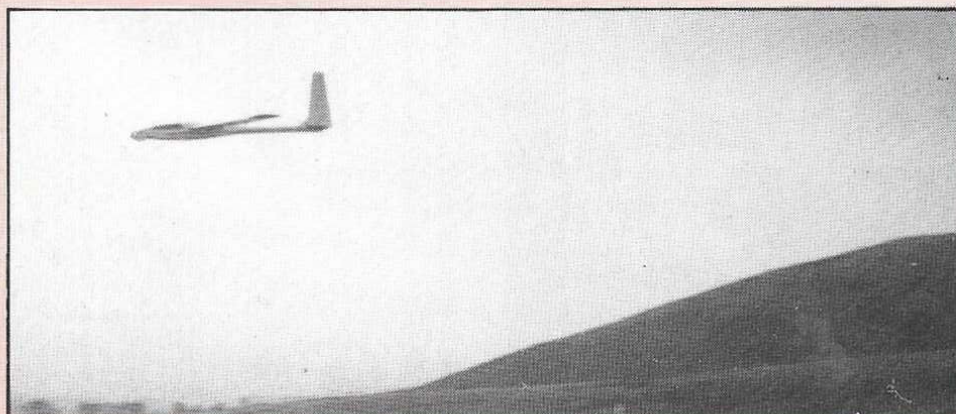


MAVERICK



W. WORTHINGTON describes his full house aerobatic slope soarer design.



Maverick was designed to create a glider with a different appearance, yet still be quick and easy to build and strong enough to withstand sport flyers' landings. In the air, the performance is good enough for it to keep up with all but the most specialised models. Two wings are shown on the plan, an intermediate wing with which, if the weight is kept down, the model can match 100 inch class soarers. Alternatively, the aerobatic wing can be fitted for a sparkling slope performance.

A thick wing section was chosen for two reasons, it allows the use of conventionally sized servos for the ailerons and it gives a very smooth and easily recoverable stall. The fuselage is very strong, even though it's very thin just in front of the tail. I'm very pleased with the way the combined hatch and wing fairing turned out, it looks very neat and allows easy access to the radio. One word of warning, do make sure the hatch has a secure fixing (proper catches, not just elastic bands) or the battery and receiver will involuntarily eject during negative-G manoeuvres.

A foam wing was used on the prototype and, as already indicated, a conventionally sized servo was installed in each wing panel to directly drive the servos. Proper leaf and pin hinges were used for maximum security at the high speeds Maverick can reach, while the overall model was covered with Solarfilm. All up weight of the prototype was about 3¼lbs.

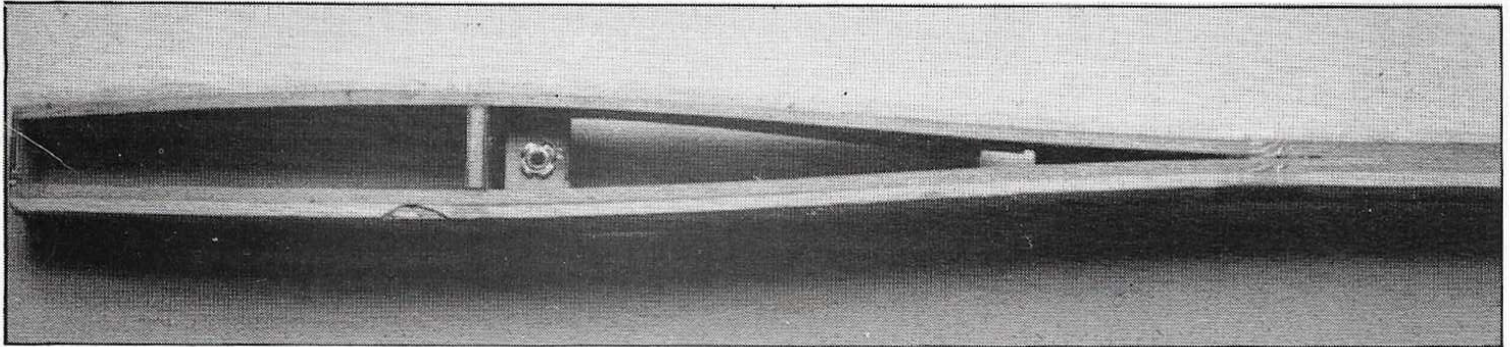
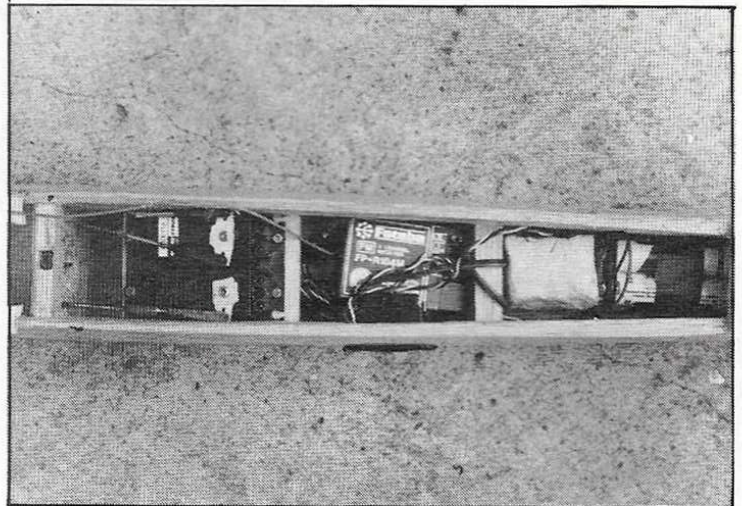
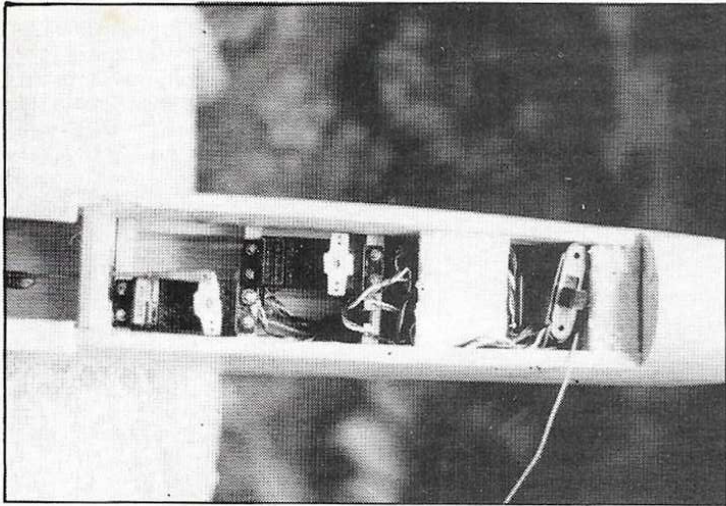
Construction

Medium balsa was used throughout except where detailed. Start by cutting the two fuselage sides, preferably from a single sheet of four inch wide balsa as it's more economic and the two sides are more likely to be matched in density and grain than if two separate sheets are used. Mark them left and right (it's better to be safe than sorry) then add the fuselage doublers. Cut formers F1 and F2, then fix the ¾in. sq. spruce longerons in place, making sure the glue is kept clear of the rear fuselage. When dry, the former F2 can be epoxied in place and the fuselage sides and former turned upside down on a flat surface to dry. Make sure it's properly aligned before the epoxy starts to cure or it will be impossible to build a straight fuselage. After the epoxy has cured, F1 can be epoxied in place and similarly allowed to dry. Now the rear of the fuselage can be pulled in, first running P.V.A. glue along the unglued sections of the spruce longerons to fix them together, but pull the sides in and hold them together with clamps or sellotape before the glue dries.

When dry, the fuselage can be completed by adding the top and bottom sheeting, nose block, the 1in. and ½in. balsa fills and the ¼in. ply wing bolt plate. Now it's time for the canopy-wing fairing to be built.

This can be a little fiddly so wait until you're in the mood (building wise). Cut out the canopy sides and F3, glue the ¼in. strip to the sides and epoxy F3 into position. Sit the canopy structure on top of the fuselage and pull the canopy sides in so that they line up with the outer edge of the ¾in. doubler and then epoxy the balsa stays into place. Sand the top and bottom edges of the canopy level and glue the top sheet-

In flight the distinctive lines of the Maverick are obvious.



ing into place. When the canopy is dry it can be spot glued to the fuselage and the whole thing shaped to an oval section. After this the canopy can be removed and the 1/16in. ply facings added to canopy and fuselage along with the 1/16in. dowel pegs.

Tail Surfaces

Tailplane, fin and rudder are all 3/16in. balsa sheet just needing rounded edges with elevators and rudder sanded down to a sharp edge. The fin is epoxied to the tailplane with the addition of 1/16in. dowel pegs running right down into the fuselage

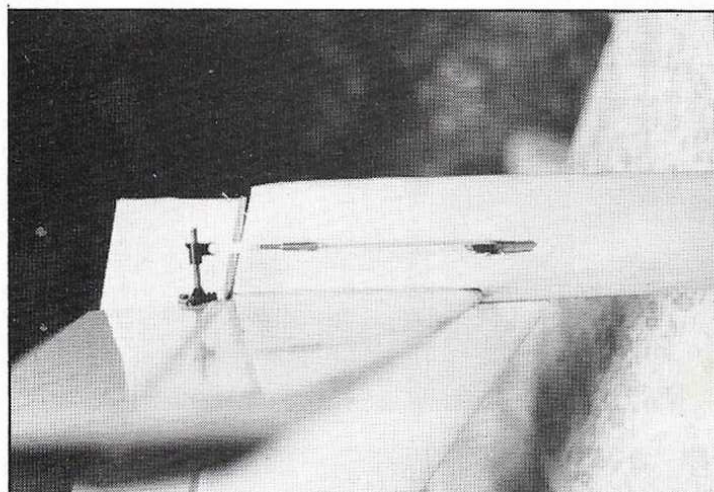
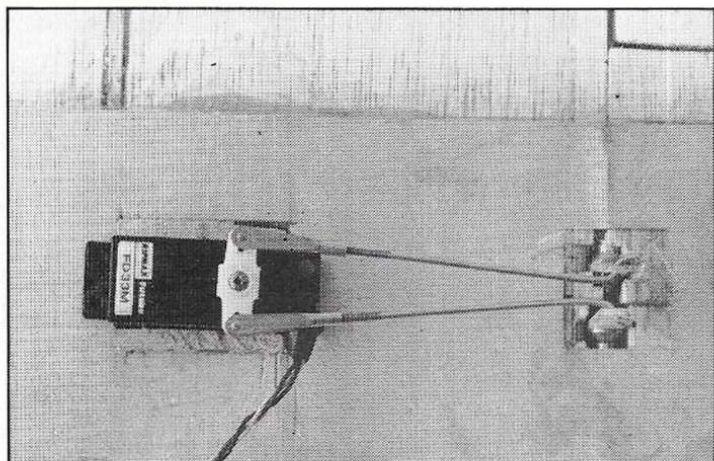
Top of the page, two photos showing the radio installation. Above, the basic fuselage construction.

for extra support. Fill in the bottom of the stern post with scrap balsa.

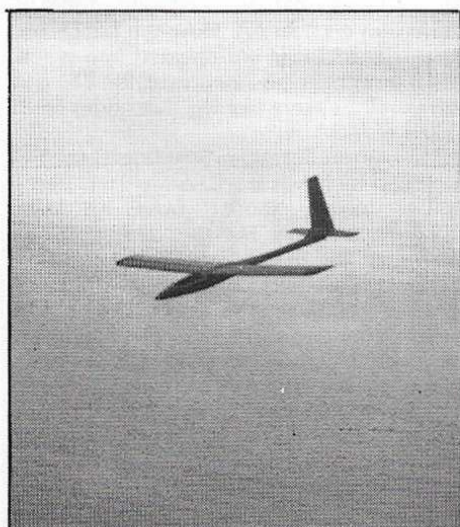
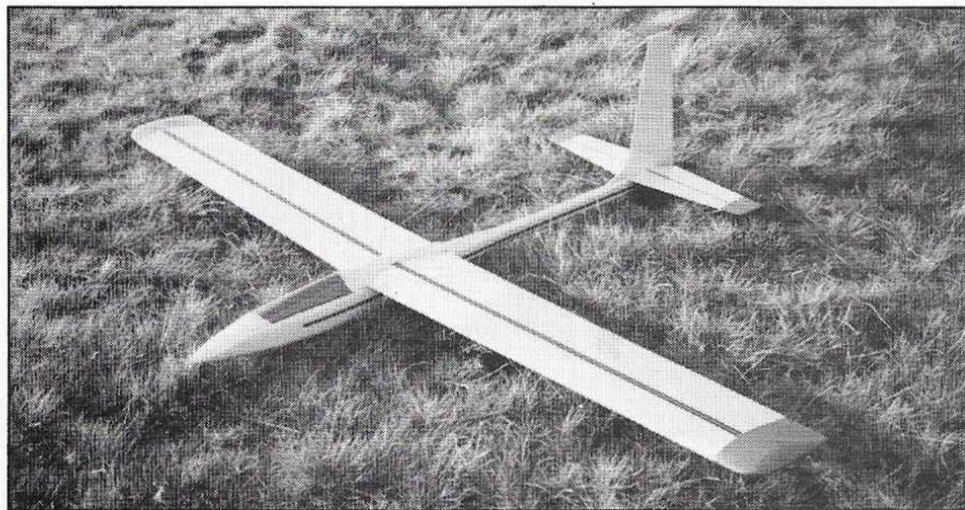
Wing Construction

The construction is basically the same for both aerobatic and intermediate versions. All the wing ribs are cut from 1/8in. balsa using the sandwich method from the rib templates R1 and R14.

Pin two 1/2in.sq. hardwood rails to the board as shown on the plan. Mark a centre line down both the leading and the false trailing edge and pin these to the rails, then



Above left, the aileron servo and linkage. Left, the elevator linkage and, above the designer with his distinctive model.



mark each rib with a centre line. Each wing rib is then glued into place, making sure the centre lines line up. If you're building the intermediate wing, angle the root rib F1 with the dihedral template. Fix the top $\frac{1}{16}$ in. balsa sheeting, $\frac{1}{4}$ in. sq. spruce spar and cap strips. When dry turn the wing over, pin down and fix the bottom spar, $\frac{1}{16}$ in. balsa webbing, bottom sheet and cap strips. Make the other panel in the same way, making sure of course that you produce a left and right one.

The trailing edges vary according to the type of wing. For the intermediate version the wings are fitted with a fixed piece of $1\frac{1}{2}$ inch trailing edge stock. For the aileron version, cut the ailerons to length and hinge them to the panels. Cut out the servo box, add the wing tip blocks and then shape the leading edge and tips before the wing panels are glued together.

Radio Installation

Installing radio gear into the Maverick couldn't be easier as there is plenty of space, especially towards the nose. It is always better, for several different reasons to use a straight pushrod on both elevator and rudder, however, there is enough room to install any method you prefer.

Flying

Initially all control movements should be set as per plan. C of G position should also be set as plan, when you are used to the model move C of G position rearward until Maverick flies inverted with just a touch of down elevator.

Maverick will fly most manoeuvres well and will take around three pounds of ballast without complaint. Have many hours of fun with your Maverick.