MR. SLICK

BY VIC HUSAK

PHOTOS BY CHUCK KANAULE

For a number of years now, multi pattern ships have been taking on a sameness of design that is so predictable it appears that R/C multi design is in a rut. "Mr. Slick" is an effort to break away from the "run-of-the-mill" multi design, in at least a couple of areas. Trike gears are nice, but for sheer pleasure, watch a tail dragger during a nice takeoff and landing. It's not so cut and dried a procedure, requiring a little more finesse on the part of the pilot.

Also, I've always been a strong advocate of the larger-than-usual multi ship. They may fly a little slower, but visually they look better flying through the maneuvers and are easier to follow. However, with the new breed of .60's such as Webra Black Heads, Veco .71's, H.P.'s, O.S. Max, Enyas, etc., that give such tremendous power output swinging props like 11-8 and 12-6 wide blades, the large multi ship need not suffer from slowness. One of my "Mr. Slick" ships mounts a Webra and has retracts in it, and this bird is no turtle! It can honk along almost as fast as some of the smaller .60 powered bombs seen screaming around these days. Yet, the maneuvering capabilities of this big bird are really great.

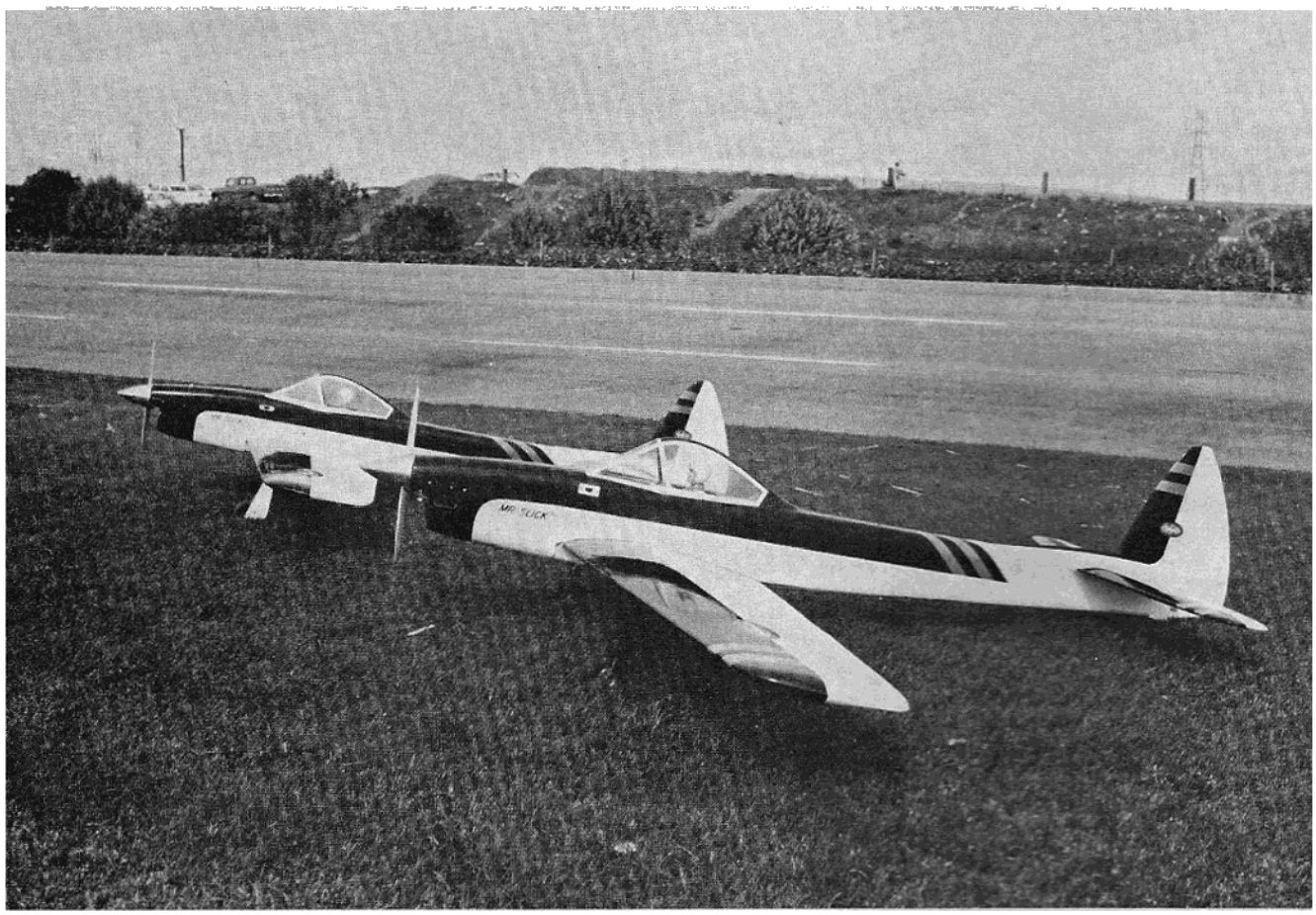
Another area I've tried to work into with "Mr. Slick" is that of a more scale-like appearance. Comments about the looks of this bird are nothing but good. Admittedly, it resembles a lot of different full-size aircraft, and yet, no one in particular.

So, give your multi stunt ship aspirations a shot in the arm, and fly "Mr. Slick." It will convince you that this is the welcome change you've been looking for.

A couple of items of information: don't be afraid to use a 12" diameter prop. As span goes up, prop diameter should increase to keep engine-to-aircraft efficiency high. Additionally, if you'd like to install a set of retracts, go right ahead. This ship can handle the additional weight with no performance penalties.

CONSTRUCTION OF THE FUSELAGE

Twin 'Mr. Slicks' . . . . both by Vic Husak. Ship in foreground has Orbit radio, Veco .61, CAS retracts. Model in background has PCS radio, Webra .61 power.



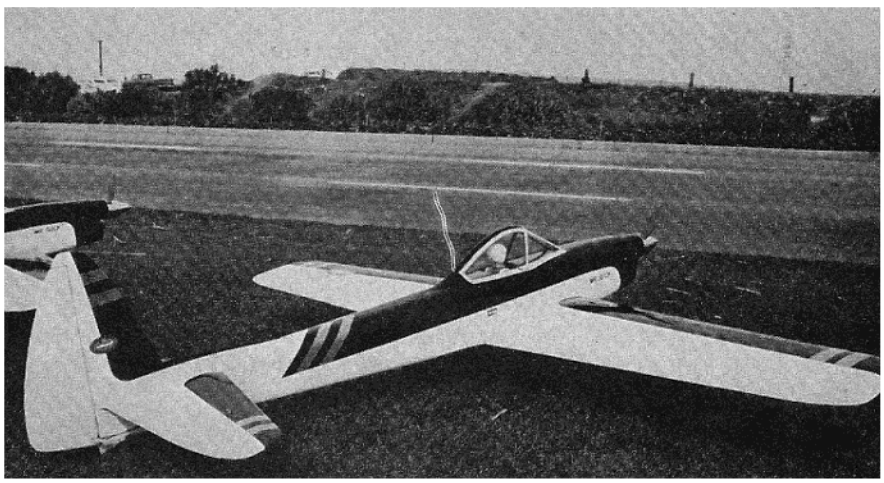
Since the fuselage sides are longer than usual, splicing of two 1/8" x 6" x 36" sheets is required. The plan shows the outlines of the sides. Make up both sides at the same time, being sure that one is laid out as the right side, and the other as the left side. Add the longerons along the top and at the bottom of the sides; then cement F-6 in place along the bottom of the sides. Leave 3/16" gaps between F-6 and the front and rear lower longerons. (These gaps will be taken up by F-5 and F-7 after fuselage sides are joined). Now, cut out the 1/16" x 4" doublers D-1 through D-6. Their shapes can be taken right off the plan. Cement the doublers in place, add the splice doubler and the 1/4" x 1/2" braces. Cement F-3 and F-4 to right side, making sure they are perpendicular to the side; then, carefully locate and cement the left side on them squarely over the right side. Be sure top and bottom edges of the sides are aligned properly. Taper the upper and lower longerons at the rear of the sides so that when the back ends are brought together, the longerons match nicely and yet allow a 3/8" gap between the sides behind the ends of the longerons. (This gap to be taken up by the 3/8" x 1/2" rudder post later). Join the longerons at the back end, making certain the structure is dead true, then epoxy F-2 in place and add rear cross-braces. Now the nose block is added. The block should be 1/8" wider across the rear face than the front face. This tapers the sides of the block, when viewed from the top, so that when the front ends of the fuselage sides are brought to the block, a good match will be achieved.

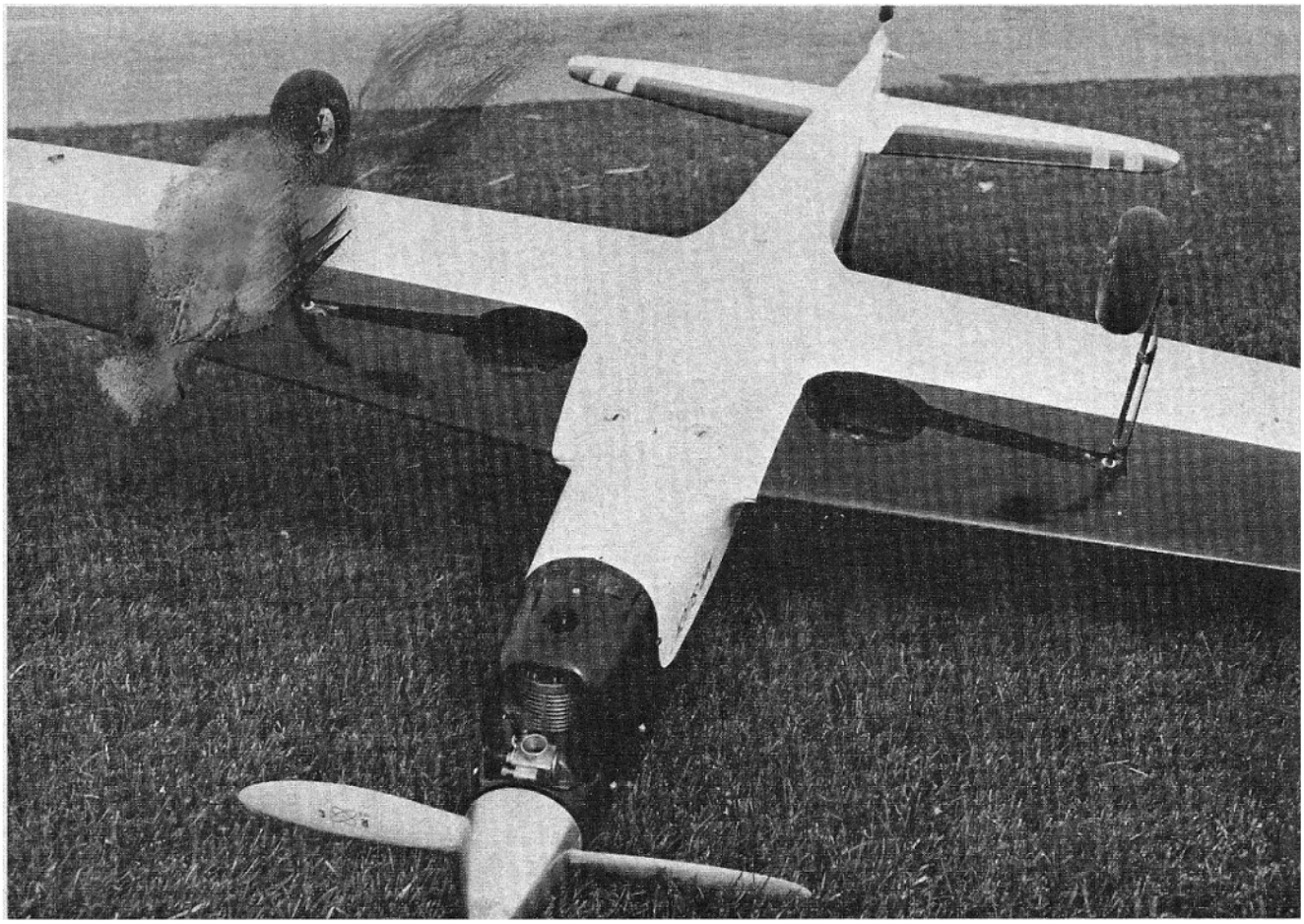
Next, add F-5 and F-7, the top and bottom 3/4" nose blocks, the 1/2" top sheet and 1/4" bottom sheet to complete the fuselage assembly. Carve, shape and sand the entire assembly to match the cross-sections shown on the plans. F-1 is cemented in place at the front of the nose block and the nose is shaped around it.

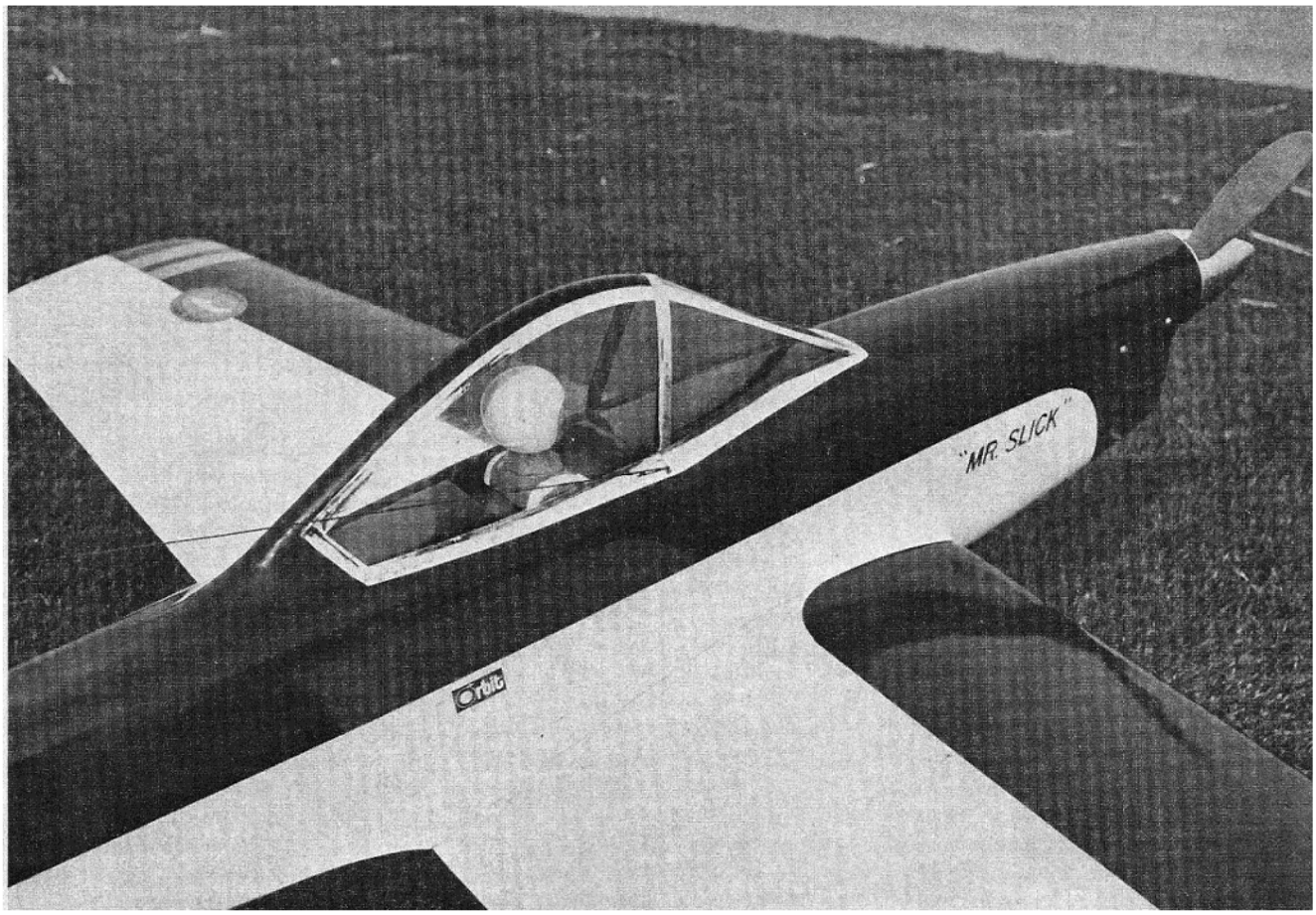
Draw on each side the wing chord outlines and the parting lines, as indicated on the plan. Carefully cut out the wing chord areas; then saw along the parting lines with a Zona Saw and lift out the bottom fuselage section. This section will later be cemented to the bottom of the wing. Hollow out the engine compartment and cut cowling on the parting lines shown. Cut out cockpit and add F-8. Make up and roughly shape canopy top assembly and cement in place on fuselage top

Author, Vic Husak, holds Mr. Slick prototype with retract gear. Ship in foreground has solid landing gear. A successful design effort to break away from 'run-of-the-mill' multi types.

Three-quarter rear view of Mr. Slick. Note exceptionally long fuselage.



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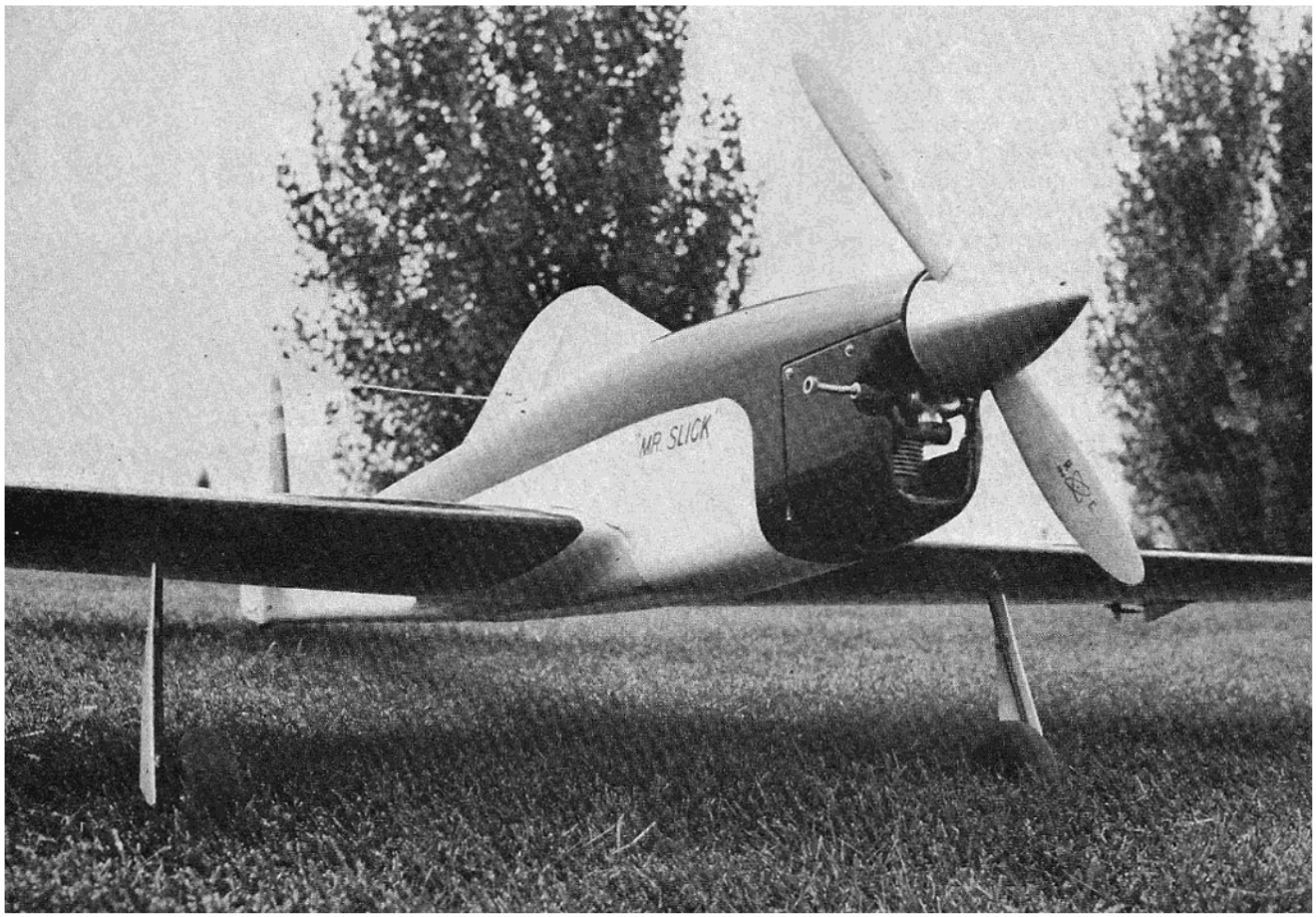
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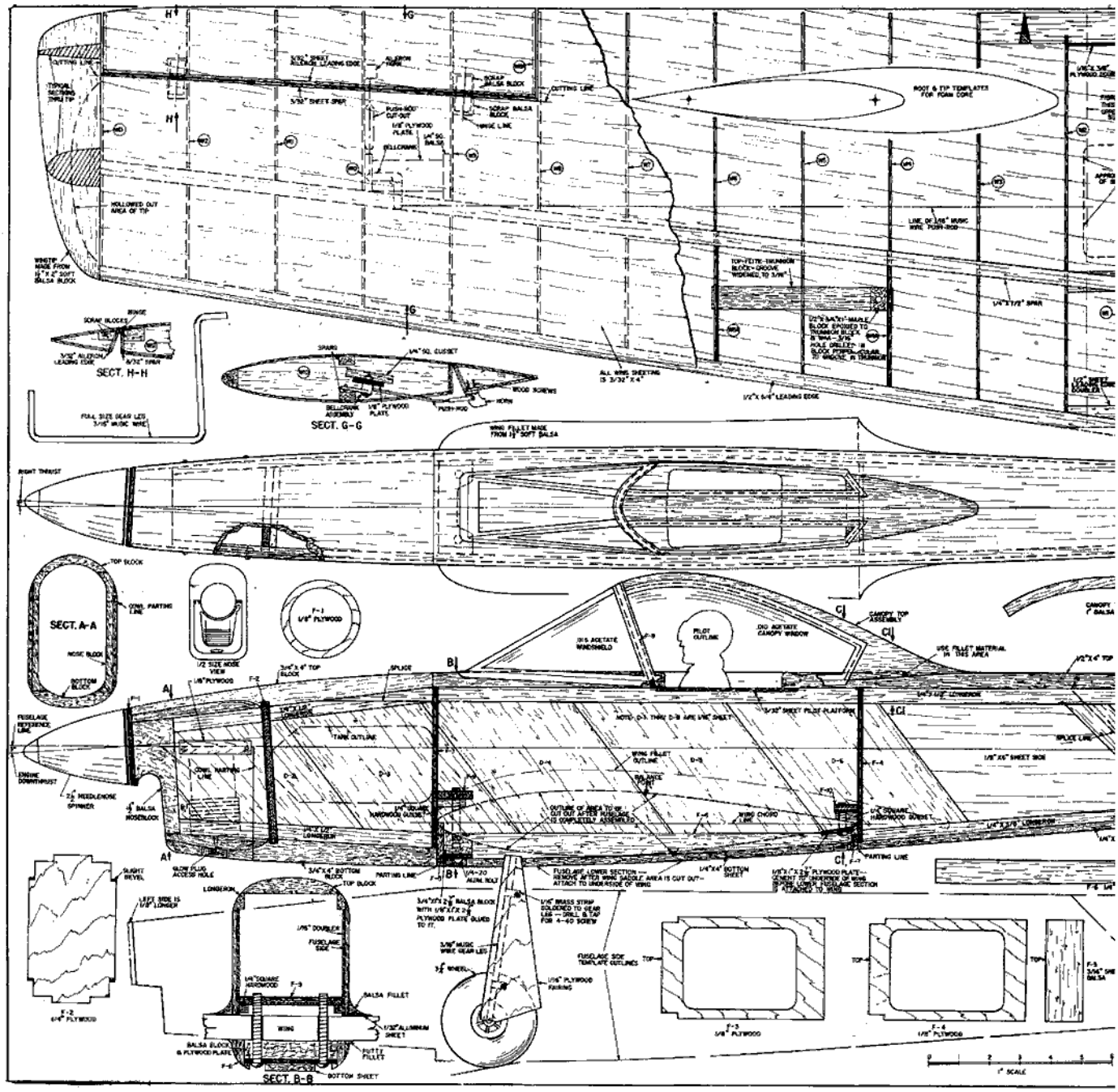


and against F-8. When dry, finish shaping and sand the canopy top, and add fillet material. Add the wing mounting bolt bearers F-7 and F-9, using plenty of epoxy glue around them and the 1/4" square hardwood gussets. Notch out the back end of the fuselage at the bottom, and add 3/8" hardwood block, which will mount the tailwheel bracket. Epoxy is, of course, used here.

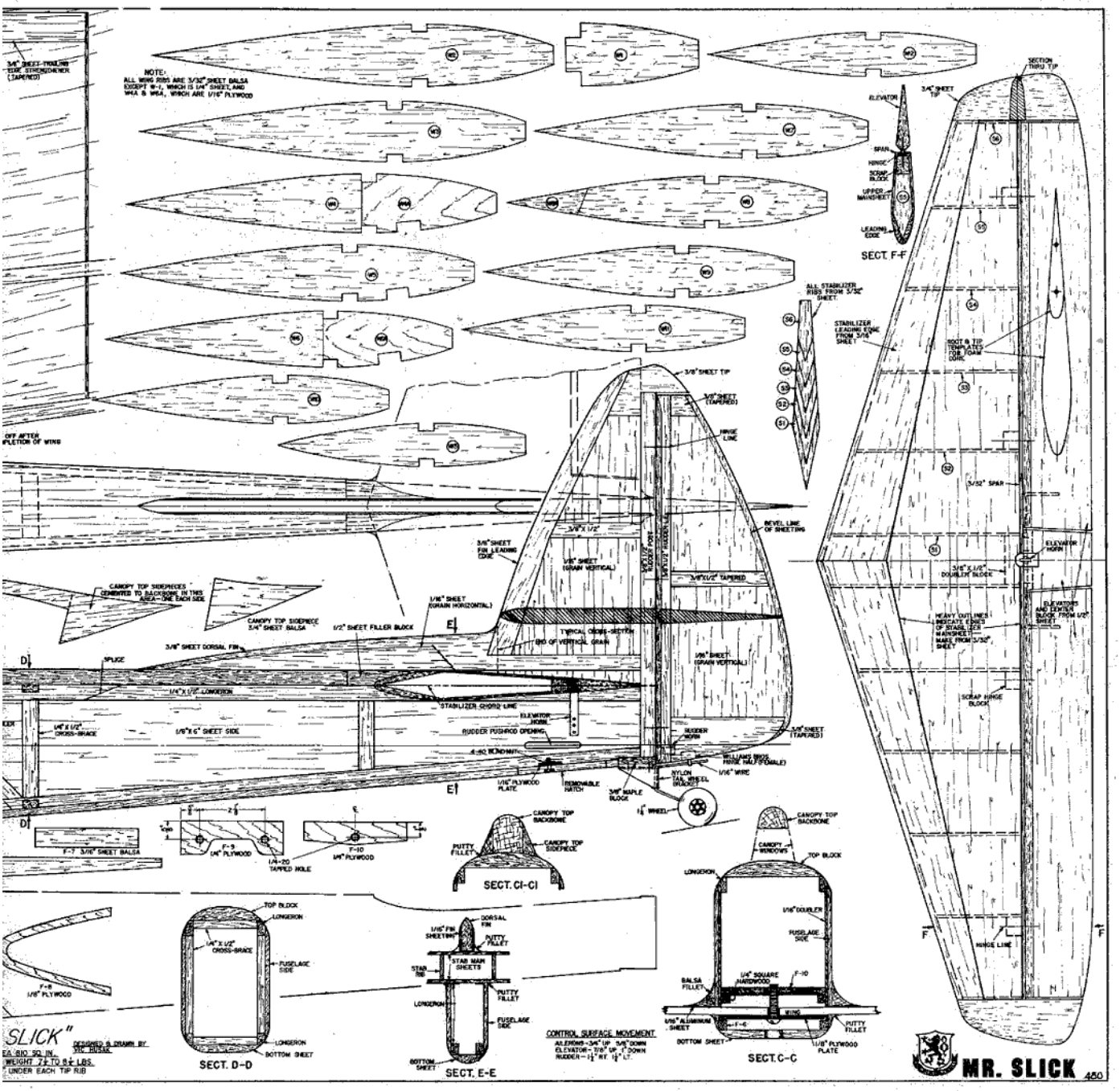
CONSTRUCTION OF STABILIZER AND FIN-RUDDER

Stab construction is a very simple sheet and trapeziodal rib sandwich structure, which I used on the larger "King Altair" design a few years ago. It's very strong, simple, and light.

Cut out two identical 3/32" main-sheets, per the heavy outlines shown on the plans. Lay down one sheet, add ribs S-1 through S-6 and lay the second sheet on the ribs, in perfect alignment with the bottom sheet. When dry, add scrap hinge blocks, rear spar, upper and lower 3/16" sheet leading edge sheets, and the tips. Now, shape and sand the entire stabilizer assembly, and epoxy the elevator horn to the rear spar. Make up the elevators and center block, and cement the center block over the horn. The stab assembly is now cemented securely in place to the fuselge. Be sure alignment is correct. Then add the 1/2" sheet filler blocks. The fin is built per the plans and is sheeted with 1/16" sheet, with the grain running vertically to the point shown and horizontally from that point forward along the dorsal fin. Shape and sand entire fin-dorsal structure. The rudder post fits into the 3/8" notch at rear of fuselage. Check alignment carefully. The rudder is built up as shown on the plans to create an extremely light structure, or it can be made from 1/2" sheet.

CONSTRUCTION OF THE WING

The wing should be built in a jig for perfect trueness. Lay down 1/4" x 1/2" lower spars, add ribs W-1



through W-13, pinning and blocking up each rib as necessary to keep chord lines of the ribs parallel to the working surface. Add the top spar, spar doublers, then the leading edge. Next, add the trailing edge strengthener, shave down the top of the leading edge to blend with the rib contours, and add the top sheeting. When dry, remove the structure from the jig.

Add the landing gear trunion blocks and associated hardwood block, epoxying at all rib joints. Add the aileron horn plywood mountings and associated hardware between ribs W-9 and W-10. Shave down the bottom of the leading edge and sheet the underside of the wing, making sure that the panels are not twisted. Add the wing tips; then shape and sand the entire wing structure and fibreglass the center section. Next, mark off the cutting lines on each panel for the ailerons and cut them out. Add scrap hinge blocks to the main panels and cap exposed rib end areas with a 3/32" sheet spar.

The front of each aileron is trimmed off another 3/16", beveled as shown on plans, and the inboard end of each aileron is trimmed off 3/16". Then rib W-8A is added, scrap hinge blocks are cemented in, and front of the aileron is capped with 3/32" sheet.

Now the wing is fitted to its saddle in the fuselage, the wing fillet blocks are added, and the lower fuselage section is cemented to the bottom of the wing, while the wing is attached to the fuselage. Contact cement aluminum sheet to underside of fillets, then carve and shape fillets per the plans.

Finishing is left to your own tastes and methods - - - just keep it light. Mount the engine, locate servos, receiver, battery pack as to your liking. Completed model should balance at a point 50% back from the leading edge at root rib location.

Good Luck. □

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