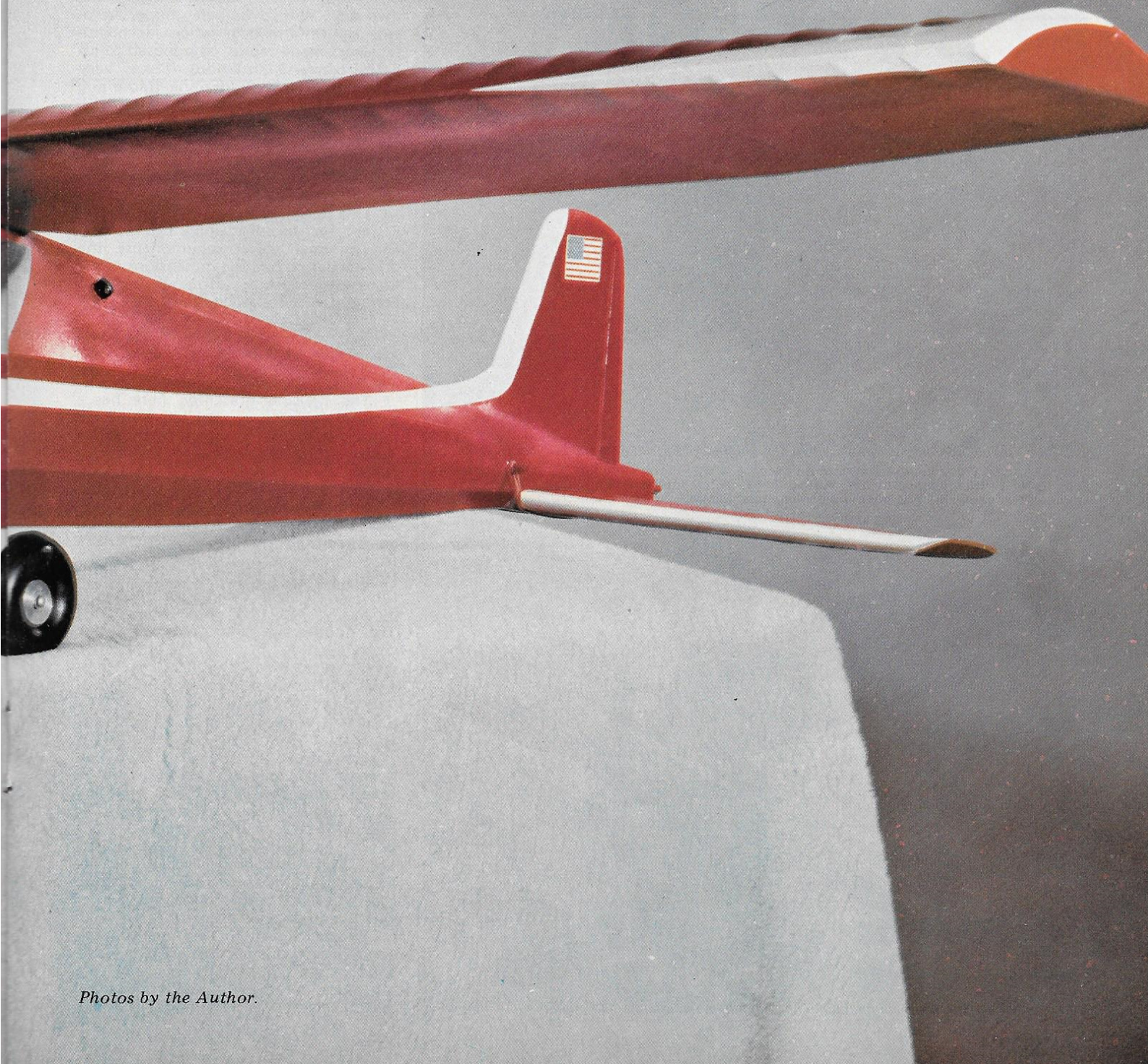


SPORT

Bug Revisited



The Rudder-Bug bites again! Dr. Walt Good's original design is right at home with today's intermediate fliers or sport buffs. Story begins on following page. / by Gabriel Bedish



Photos by the Author.



TOP & ABOVE: The lines resemble those of many contemporary trainers. Simple paint scheme adds flavor to the design. BELOW: Author holds digital three-function version of the Bug. By anyone's standards, the Bug is not a small compact in size.



"The Royal Rudder-Bug" is an extremely easy to build rugged radio control design. . . . Designed by Dr. Walter Good, one of the countries [SIC] best Radio Control flyers, you are assured of an all around performer." Thus read the introduction to the Berkeley kit of 1954. The claims weren't very startling then (and still aren't); yet the model finds itself in vogue even today as a practical sport model. The Bug, like the automobile which shares that nickname, is a design that time has not withered, nor custom staled.

The model presented here is more than an update of this trend setter. It's yesterday's excellent engineering made painless by today's construction techniques. It's ironically ahead of its time, because it fills the need for a large, it-will-last-forever weekend flyer. Now, as then, it is a plane that doesn't disappoint. It's as sport modeling as Sunday.

True, it was a contest design in its own day. With a Berkeley Super Aero-trol rig (in the days when kit manufacturers made radios, as opposed to today's converse situation) it was very competitive as a rudder-bug (more bug than rudder, usually). The later R.E. Varicomp miraculously gave rudder and elevator, and the Rudder-Bug became a multi. The final stage of this evolution occurs 20 years later—the Bug can now be built with full house.

This is, by no means, a small model. Except for the surprisingly light weight and minimal power requirements, the original design had the dimensions of today's pattern ships (after all, it was a competitive aerobatic design).

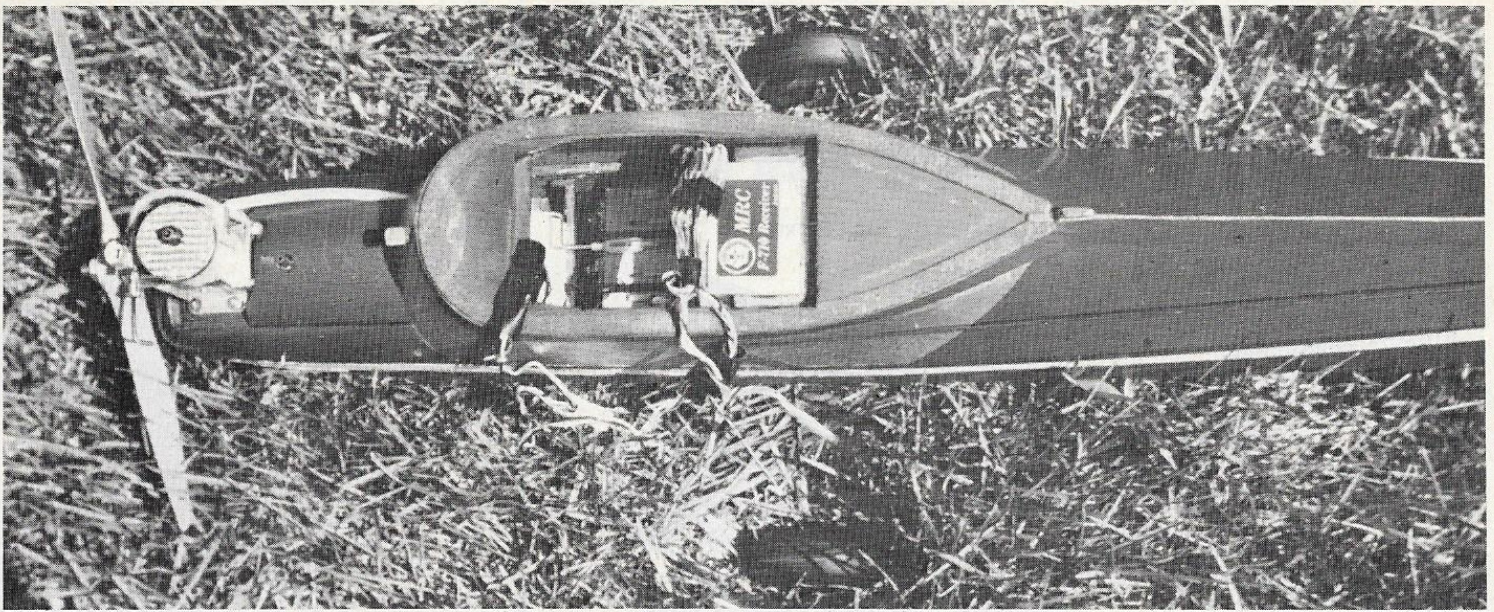
Wingspan	62 in.
Wing area	600 sq. in.
Fuse length	42 in.
Engine	14-23
Weight	4½-5½ lb.

The revision presented here has a slightly increased vertical tail, and a tad more length in the fuse behind the wing. Today's 29-35 engines seem the best for current flying styles.

One major revision has been tolerated in this twentieth anniversary version of Dr. Good's design. The airfoil has changed from the original Clark Y to a somewhat unorthodox U.S.A. 27 (that's right, folks). The efficiency of this airfoil will really surprise you, especially with the light wingloading. The unobtrusive and predictable stall characteristics of the flat-bottomed wing are retained. You'll be amazed at what this airfoil can do for duration. If you wish to build the model a la Berkeley, simply draw a straight line along the bottom of the rib patterns.

Our prototype revised Bug was flown rudder only with an Orbit single-tone system on 27.225 MHz. A McCoy 29 rounded out the package nicely. The original had an inverted engine, but we opted for sanity over absolute replication. Even with only rudder function, the model still shows its competition breeding, and can be quite the stunter with adequate control throw.

The plane will fly very well on any combination of controls, so it makes a good vehicle for any radio (it may be a bit much for pulse). Rudder/elevator/motor was our favorite mode, although



Digital installation is compact, but certainly not cramped.

aileron do add some class (not much of a roll rate, but lots of class). A cheap and dirty way to get the best of all possible worlds is to install all the servos; then unplug the necessary servos to get the flight mode you want at the moment. Flying it on the same day in each of the four configurations will add to the appreciation of this classic's outstanding flight characteristics.

CONSTRUCTION

It would be nice to say, as did the Berkeley kit, that the model is "extremely easy to build." Twenty years ago, the relative meaning of "easy" was different, perhaps. The skills required are basic; however, you can't get old-timer looks without putting a lot of little sticks under the covering. The external appearance of this model should definitely be considered "organized lumpy," especially along the leading edge of the wing. So put all those little pieces of wood in. Here are a few guidelines to help make sure that all the lumps wind up organized.

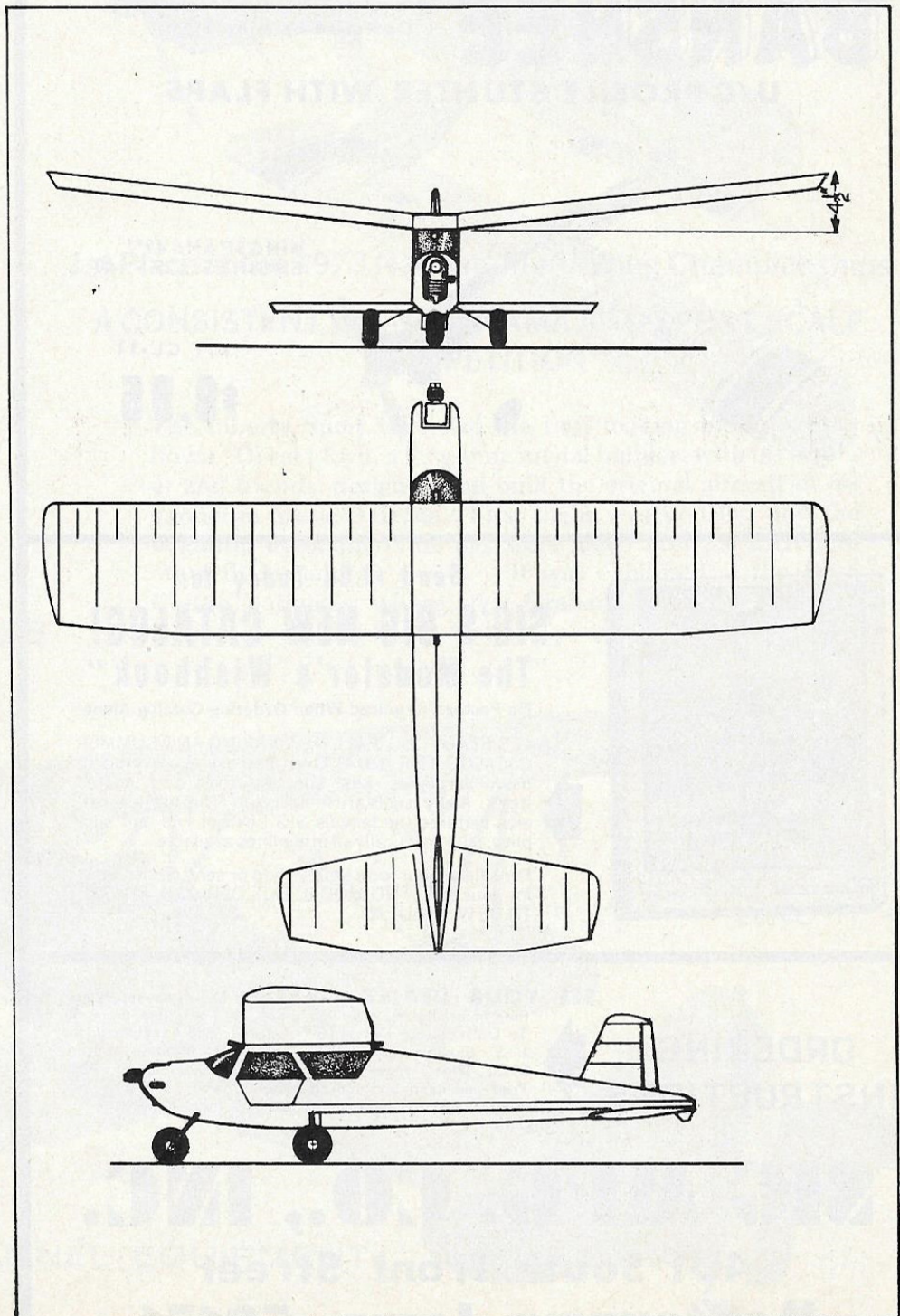
Wing: Build the outer panels first; then build the center section (the three WC ribs). The center section should incorporate the WD dihedral braces. Attach the outer panels by sliding them onto the prongs formed by the dihedral braces.

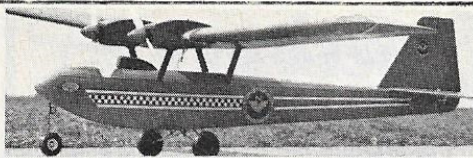
Fuselage: Don't panic—it's built flat on the boards. The 1/4 x 1/2" longerons are overlaid on the top view, with the 1/2" sheet cabin floor and the 1/4 x 1/2" cross braces positioned accordingly. Then glue on the top section of each former, build up the cabin area, and add the 1/2" sq. top stringer. Unpin this assembly from the board and add the corresponding lower formers and bottom sheet. Round out the fuse with the 1/4" sq. false stringers. Install the firewall and engine mounts and it's done.

Empennage: The only thing to note here is the obvious deletion of an eleva-

Text Continued on page 101

Plan on page 56





TWIN TUB Kit 74.95

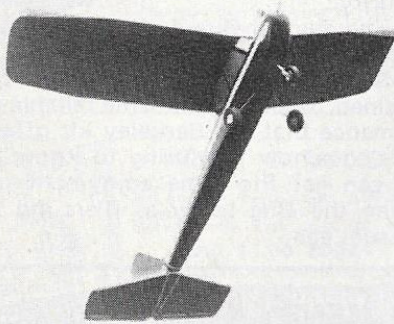
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RUDDER BUG

(Continued from page 53)



tor hinge if you're building the rudder only version.

Covering: The wonders of transparent MonoKote on this open framework must be seen to be appreciated. The original, to preserve the vintage image, was done in nylon and dope. Whatever the preference, the bottom of the U.S.A. 27 airfoil should be ironed (doped) by increments from the TE to the LE, working back and forth spanwise.

FLYING

Set up the control throws on the conservative side for the initial flight tests. The model, while large in size, can be a brisk stunter with a lot of control surface deflection. Hands off flying (a common occurrence in the 50s, since you had to leave the transmitter behind in

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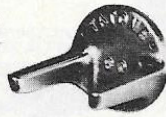
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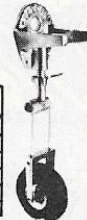
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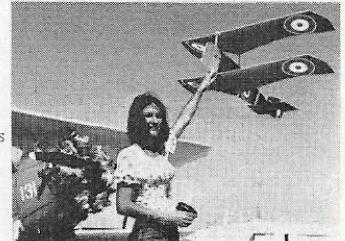
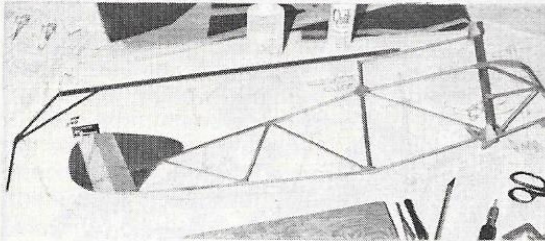
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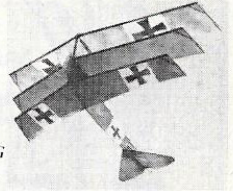


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