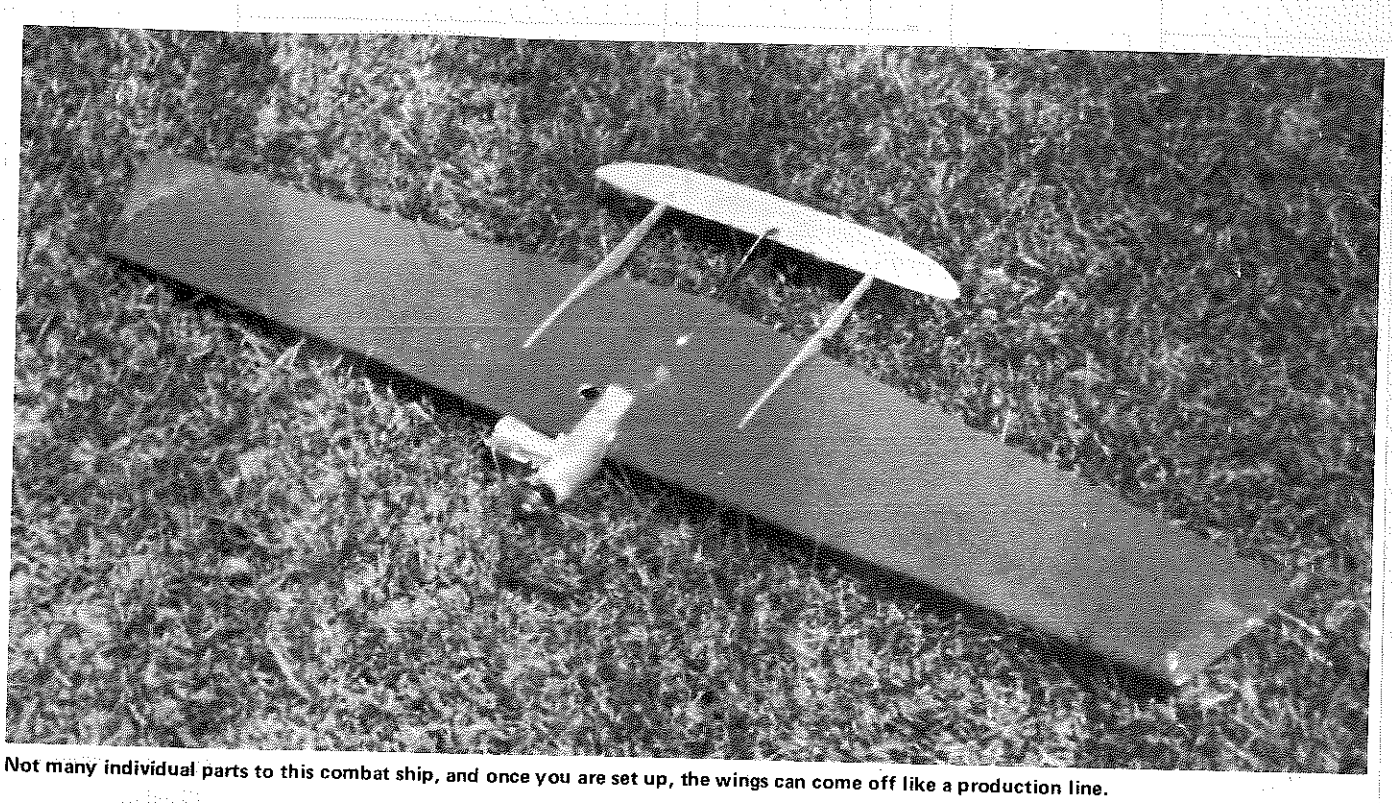


Not many individual parts to this combat ship, and once you are set up, the wings can come off like a production line.

BUMBLE BEE for COMBAT

This is one combat ship that will go down . . . up in history. At the Oshkosh Nats it got away from Phil and flew O.O.S. directly overhead! Aside from that, this foam wing ukie builds and flies fast! By PHIL CARTIER.

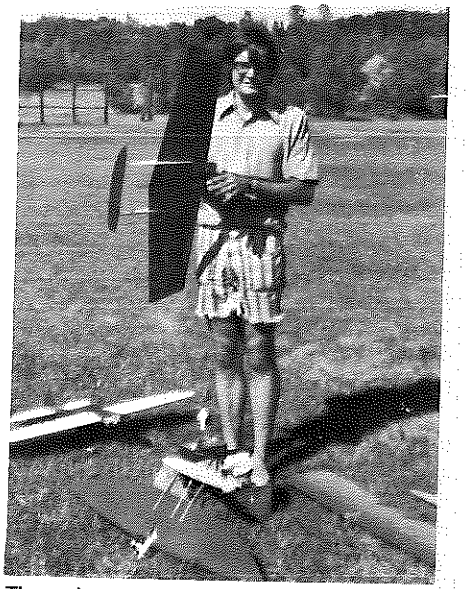
● This plane is not the ultimate combat ship, but it does have a few things going for it, such as speed, maneuverability, ease of building and light weight. The speed depends mostly on the engine-prop-fuel combination that is used, but speeds of over 110 mph with a streamer are easily obtainable. Of greater importance is the less than usual loss of speed in tight maneuvers, even when propped for a high level flight speed. The relatively high aspect ratio wing is used to decrease drag build up in the turns and is combined with an airfoil that has good drag characteristics. The foam wing provides easy building. There is less than half the usual number of pieces in a typical balsa combat plane. The foam also contributes to an extremely light but strong structure. The total airframe weight is usually 7 or 8 ounces. When combined with a Supertigre G21 .35 the final weight is about 17 ounces.

"Now, to the cellar, slave!" Speak thusly to your trusty helper and prepare to cut the wing cores. Our R/C brethren have developed some good techniques for this which I have freely adapted. The basic essentials are a low voltage, high amperage power source, a cutting bow, low table and foam. I use a model train transformer and .020 music wire in the bow. If you don't like to fiddle around, buy a hot wire outfit. I can't afford to.

Begin by tracing the root and tip templates onto 1/8 inch ply; cut them out and sand smooth. Make them precisely symmetrical in outline by drawing around the template on a sheet of paper, flipping the template over and checking how well the outlines match. Sand where necessary and repeat until the outline of the template is symmetrical. Careful initial cutting will minimize the work necessary to get good, symmetrical templates. Apply the guide numbers and other markings to both sides of each template. Drill two holes on the centerlines for use in mounting the templates to the foam.

Square up one corner of the foam block. Most large lumber supply houses carry a bead type styrofoam of about 1.8 pounds per cubic foot which works well. Tape and block the foam to the work bench, taking care not to bend it. Add shims, if necessary . . . don't force it to lie flat. Most commercial blocks are warped. If the block is bent straight before cutting the core, the resulting wing will have a bend in the middle.

Pin the templates to the foam, using large finishing nails. Make sure centerlines are parallel to work bench top. Line up the leading edges of the templates about 1/16 inch from one edge. Start cutting at the leading edge, going quite slowly and using the guide numbers to keep the wire lined up. Cutting speed should be about 1/10 inch per second. When cutting the matching core, pin the reverse sides of the templates to the foam. This will keep the



The author with some of his combat ships. Solarfilm will go on foamwithout damage.

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