

To my way of thinking, aside from the de Havilland *Mosquito*, the Martin *Marauder* is by far the cleanest, most aesthetically pleasing, most modern looking medium bomber of World War II. With those large, long engine nacelles sticking far forward of the wing leading edge, it makes an ideal rubber band powered subject, allowing plenty of room for the rubberband to flop around and cause very little C.G. shifting even if it knots up in the back of the nacelle.

I chose to model the earlier version of the *Marauder*. The real plane was fast and too hot to handle for some, but oh boy, could it run away from a Japanese *Zero*! Perhaps as a model it would be a handful, but oh, how the prospect excited me!

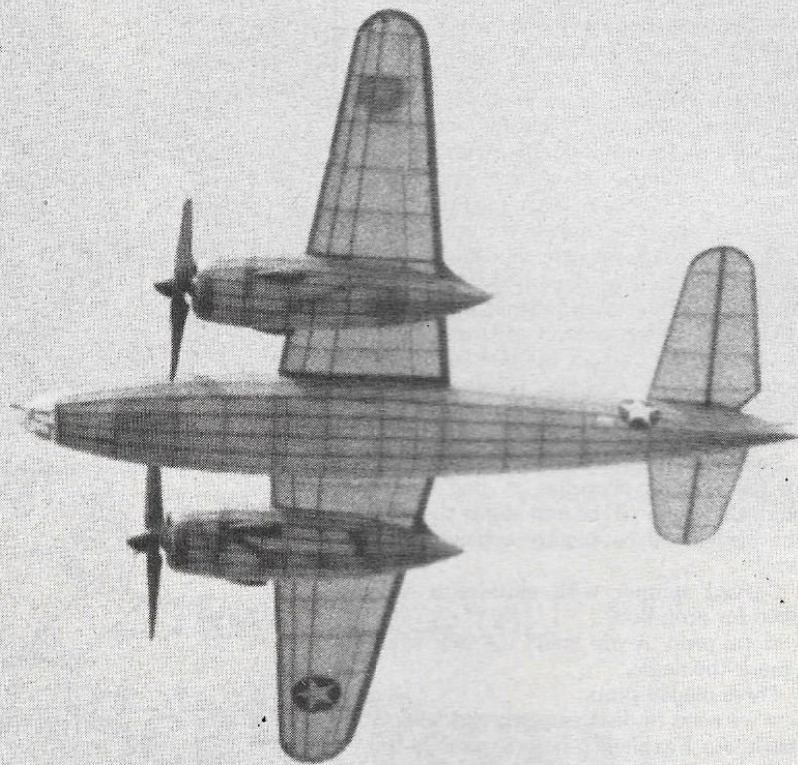
Let's begin construction with the fuselage. Being perfectly circular made it easy to lay out and plot the bulkhead sections and to plot stringer locations. I prefer to use the keel method of construction. Use a cardboard jig to hold bulkheads in alignment while gluing. Add in the remaining stringers, left and right, at the same time to ensure symmetry. I left the top of the fuselage open above the stringer between F5 and F8 so that the entire wing and engine assembly could be lowered into place. When the fuselage is completed, tissue cover (green above the color separation stringer, grey below) using water thinned Elmer's Glue, 50/50.

The wing and engine nacelles were built integrally with dihedral added in. First, tissue cover the engine nacelles, next the fillets, then the center and outer wing panels. If you look at the plans, balsa strips are added to wing/nacelle and wing/fuselage junctures to facilitate covering. After covering, the wing assembly is glued to the fuselage, then the top bulkhead pieces between F5 and F8 plus the profile piece. Stringers are glued in place and finally covered to match the rest of the fuselage. Water shrinking is done at this point, pinning the plane down — wings especially — till dry, to guard against warping. Give wings and fuselage a coat of 50/50 clear dope/thinner mixture. The engine nacelles need two coats.

The horizontal and vertical stabilizers are built unconventionally. First, build the com-

a Rubber Scale . . .

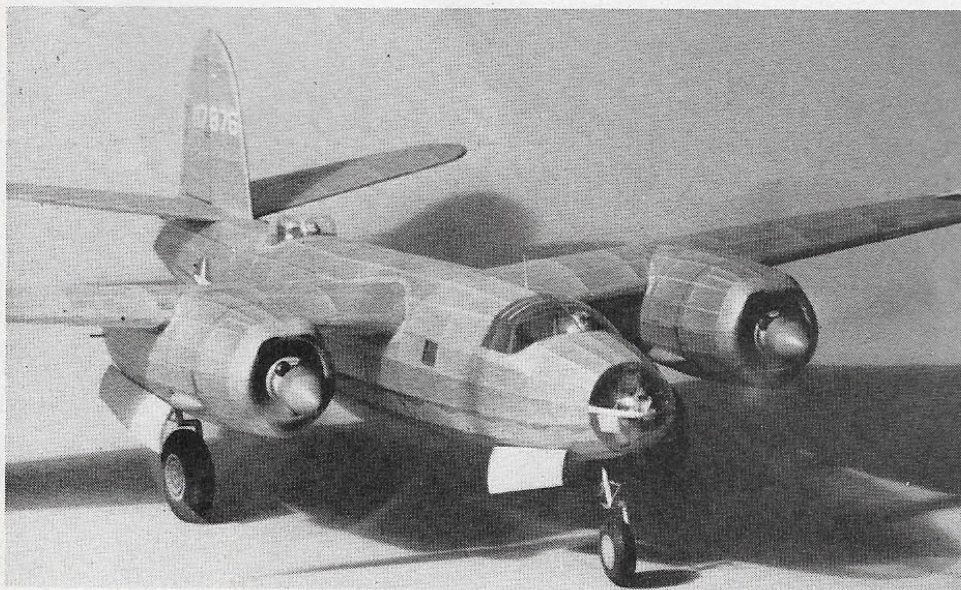
B-26 Marauder



Capture the flavor of one of WW II's most distinctive machines. A reliable F/F twin.

By Pres Bruning

PHOTOGRAPHY: PRES BRUNING

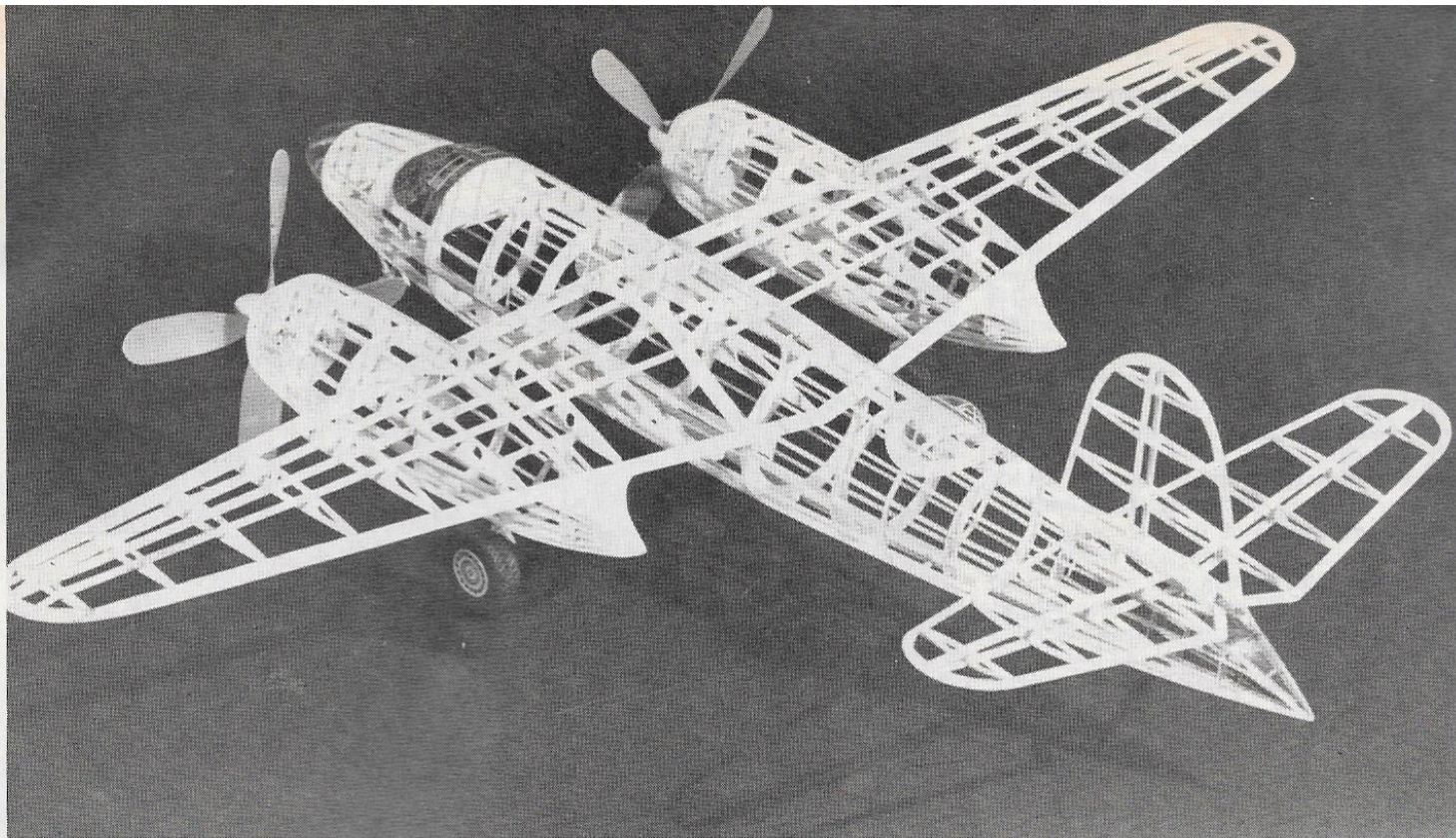


Always an impressive sight, the Martin B-26 *Marauder* had equally impressive performance. Even though known as a hot plane to handle, the author tackled the project and came up with this fine version.

plete outlines of the surfaces, and then position them $\frac{1}{8}$ inch above the plan before adding ribs in $\frac{3}{8}$ inch wide strips cut from $\frac{1}{32}$ inch soft sheet balsa. Remove and shape the entire assembly using a wide sanding block. Sand from the center of the rib to the trailing edge and to the leading edge and from the centerline to the tips producing a symmetrical airfoil section. Check the shape with templates. Now with a $\frac{3}{32}$ inch sanding strip, sand in $\frac{1}{32}$ inch deep grooves in the ribs, top and bottom, at the locations indicated on the plan. Glue in flat spar strips from the centerline to the tip of the horizontal stabilizer. This, of course, is done after the dihedral is set. Cover with green tissue on top, grey below.

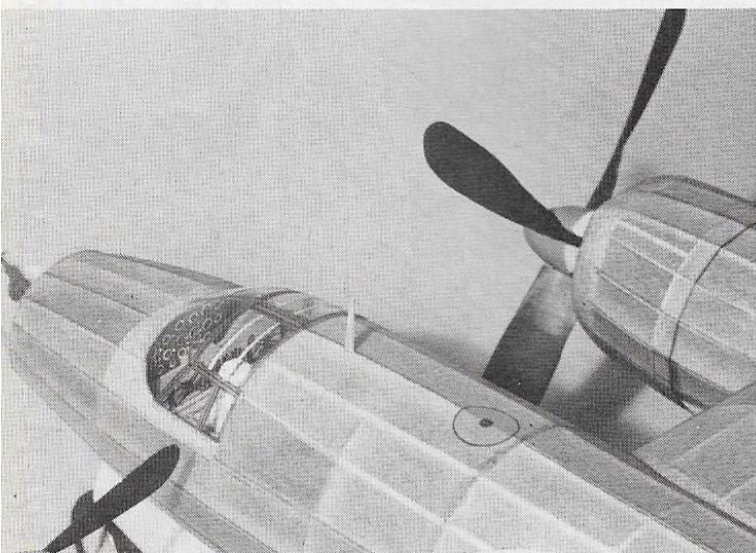
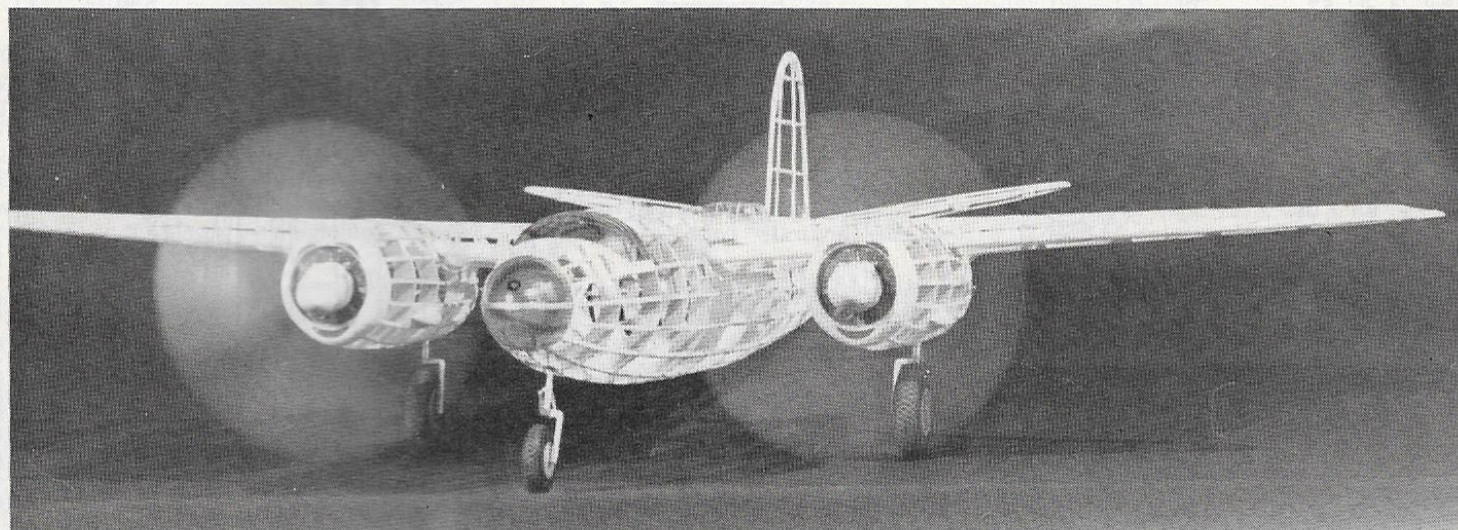
The same approach is used in building the vertical stabilizer. The root rib is shaped to fit the top surface of the horizontal stabilizer. Cover with tissue before joining to the horizontal stab. Then glue the vertical stab to the rear of the fuselage. The framework should need only one coat of 50/50 dope.

Canopy, nose, tail, and top turret blisters are carved from balsa, sealed with Hobby-

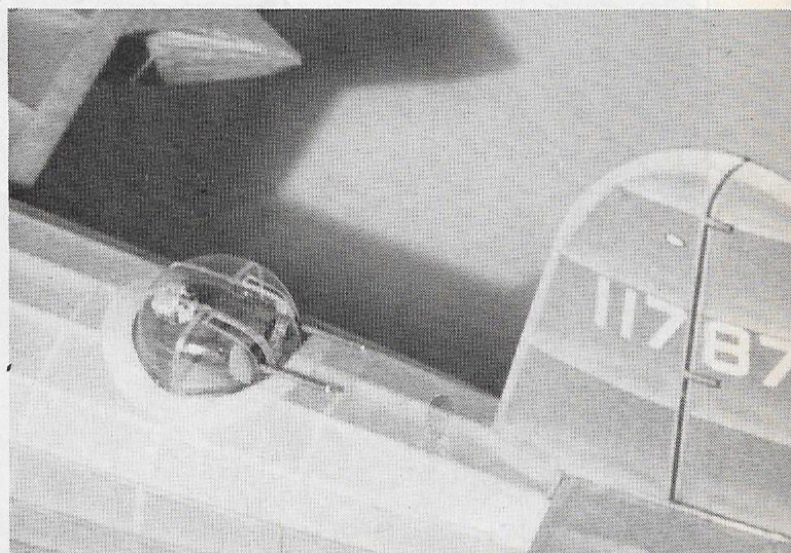


Contest grade balsa is essential throughout the airframe (**above**). The author's plane came out weighing 2½ ounces without rubber. To offset torque

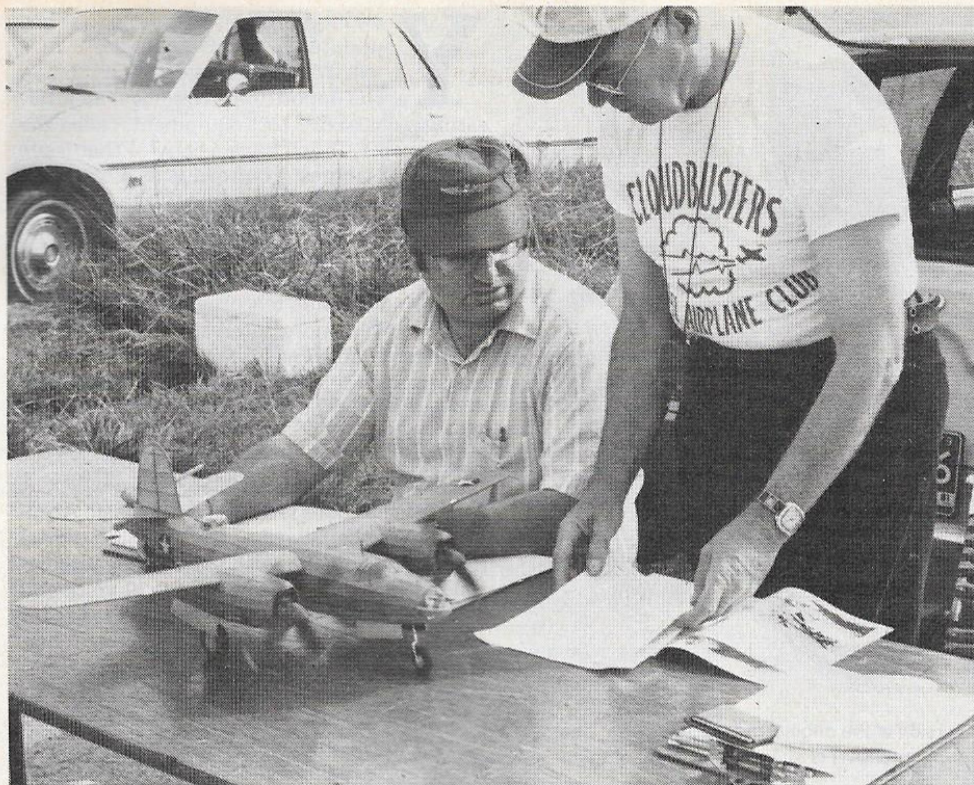
effect, the right engine (**below**) has some downthrust. This set-up allows both props to rotate in the same direction without adverse effect.



The canopy framing was achieved by applying rubber cement transfer tape to Jap tissue, cutting appropriate strips, and then putting them in place.



All clear plastic parts come from vacuum formed acetate sheet. The mold is carved from balsa and then sealed with Hobbypoxy and sanded smooth.



If you build yours like the author did his, your visit to the judging table should be very pleasant indeed. The landing gear which help scale points, are removable for better flight performance.

poxy "Stuff" and sanded with fine sandpaper. I vacu-formed these from thin transparent plastic. All canopy framing was done by applying rubber cement transfer tape to the dull back side of green Japanese tissue, and then cutting strips to the appropriate widths, peeling the backing off and applying like tape on the plastic before gluing the blis-

ters in place. Rubber cement tape the nose blister only for easy replacement in the event of damage due to a nose down crash landing. The landing gear is a plug-in type for removal when flying in Flying Aces events (hand launched). The gear doors were cut from styrofoam cups painted with latex paint.

For propellers, I used "Starflyer" commer-

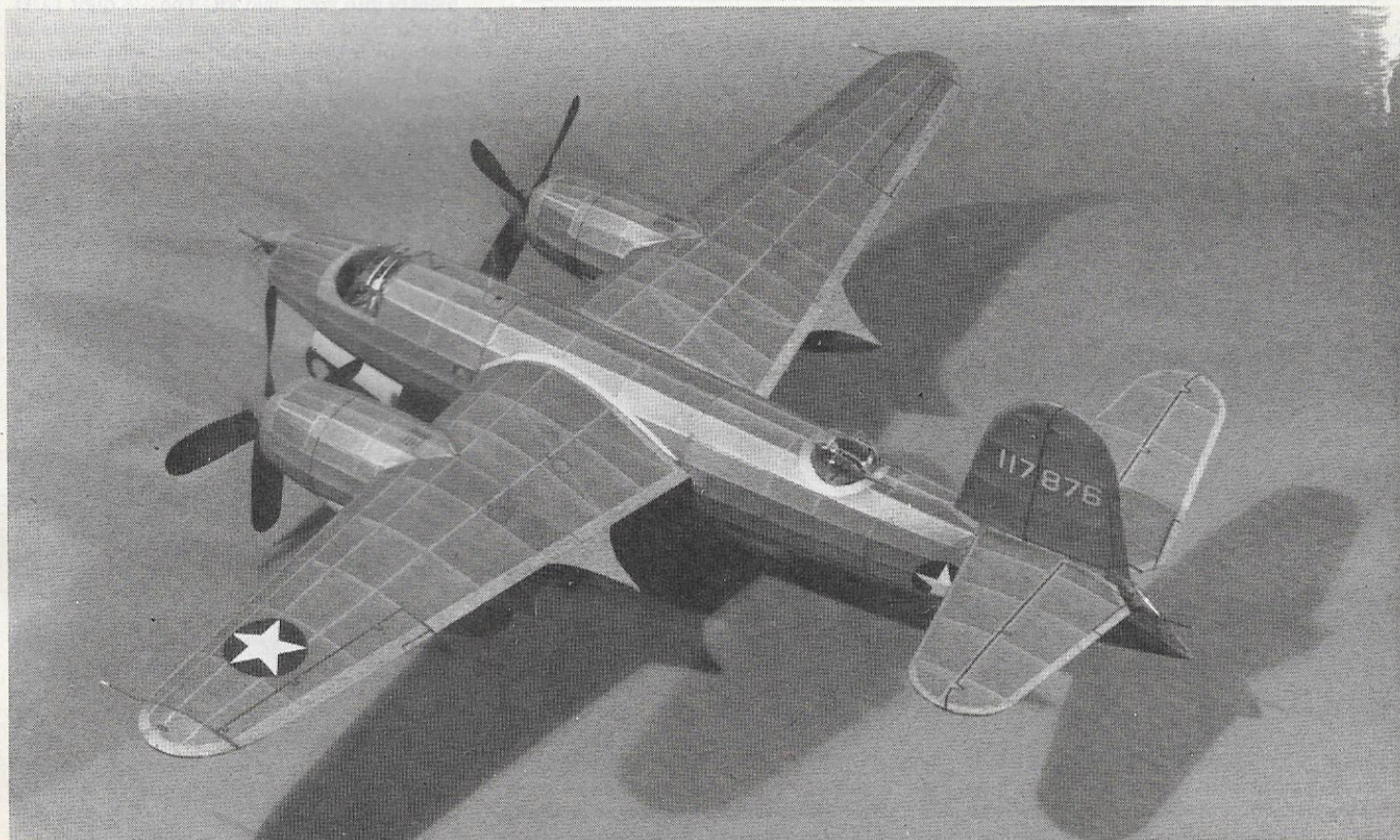
cial plastic props, egg-crated them together and glued to form four blades, stiffening the joint with 5-minute epoxy.

The spinners were formed from balsa chucked in an electric drill, clamped in a vise using a wood screw to center the balsa. Shape with a wood file and sand smooth checking the shape with templates.

Ralph Kuenz did some experimenting on his twin engined A-26 *Invader*, both props turning the same way. To offset torque, down thrust was added in the right engine only. The results were quite favorable. So I tried the same thing with the *Marauder*. I'm happy to say it works great. Launching to the left, the plane spirals in a flat tight climbing turn. At the top of the climb, she rolls to the right leveling off and then turns to the left a second time climbing flatter and levels off into a nice slow glide, a sight to behold. Keep construction light. Use contest grade balsa. Mine turned out to be 2½ ounces without rubber. I use one loop of 6mm, Pirelli, 24 inch long in each nacelle. Braiding the motor is unnecessary as there is little to no C. G. shifting. Hope your *Marauder* puts in many satisfying missions. (C)

References

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The props on the *Marauder* are commercial plastic ones which were glued together to get the four blades on each. Five minute epoxy stiffens hub.