Bounty Hunter

Construction: The Stab should be done first to familiarize yourself with birdcage construction with little risk. Use light (4.5-lb density) "C" stock for the front ribs. After pinning the leading edge to the plans, glue in the center and the two tip ribs and push the main spar up against them before pinning it down. Install the rest of the ribs and pin the trailing edge to the plans. Glue on the tip blocks and then glue in the 3/32" square sticks first (I usually cut and glue a stick at a time; it's faster) and then the top ribs. The front turbulator spars come next and then the back "spacer" spar, which should fit snugly, but not necessarily where it is shown on the plans, due to building tolerances being what they are. Not much sanding is required, just enough to knock the fuzz off and to make the leading edge entry point smooth. Predoping the frame work with one coat makes covering easier. Jap tissue is a must, since the framework can't take anything heavier. Red or orange is the best color for visibility. Use only enough dope to fill the pores of the paper (so you can't suck air through it) to save weight and again, because the framework is fragile. The construction does not rely on the covering for torsional strength, anyway.

Wing construction is similar to the stab. The lightest possible wood should be used in the tips. Braces aren't necessary for the dihedral joints since the tips are out of the way and braces mean added weight. Generally 6.0-lb balsa is best for the wing except for the tips, of course. An extra coat of dope on the center section is a good idea, too, since it is splattered with fuel.

Keys on the wing and stab are a good idea. They not only increase the reliability factor, they reduce the amount of rubber bands necessary to hold the flying surfaces on tight, an important consideration on such light structures.

Fuselage: Wood in the fuselage should be about 5.5-lb balsa, except for the longerons which should be about 8.0-lb stock. It's a good idea to glue together the wing and stab platforms, the vertical fin and the pylon so they'll be dry when their moment arrives. The right fuselage side should be pinned directly to the plans on a flat surface. The left side should also be flat with the inside facing up. On these, glue the 1/8" sheet filler at the nose which fits between the longerons.

The next step is to glue the pylon on top of the right side, lining the top of the pylon up with the plans to obtain the correct incidence angle. The vertical fin and the middle longerons come now also and then the other side of the fuselage, with one last check to make sure everything is flat on the table.

When it's all dry, we're ready for the stab platform, the engine mounts, etc. The firewall should be reinforced with fiberglass cloth or silk. If mounts other than Cox are used. it's a simple matter to make the modifications, just so the thrust line and center of gravity are unchanged. I prefer to sand the fuselage before mounting the hooks so they won't get in the way. It isn't necessary to cover the fuselage; about five coats of fuel proof dope will take a season of hot fuel and sun.

Rigging: This is the place where the destiny of the model can be determined—a goer or a basket of sticks. Alignment of all parts should be checked from every direction and keyed in place. The center of gravity should be checked, also check to see if both tips of the model balance. If there are any warps, they should equal about 1/8 inch wash-in (trailing edge lower than leading edge) on the left main panel. I've seen other people fly their Bounty Hunters with fantastic warps and get away with it, but I can't. While we are on the subject, you'll find the birdcage construction reasonably warp-free and very stable once it's set.

The dethermalizer pop-up angle should be 45 to 55 degrees in order to be sure of getting it down out of those boomers. For testing it is a good idea to cut the angle to about 30 degrees in case it pops close to the ground. To avoid a possible traumatic experience at the field, assemble the whole thing and go out to the garage and set the needle valve. This check of the fuel system serves to relax you, and, if you build like I do, all sorts of junk shakes loose first time the motor runs anyway, so it's easier to make repairs at home.

Flying: A calm day is best for testing since strange flight characteristics can't be blamed on the weather and overlooked. Test glides should establish that there is no tendency to stall or dive. The Bounty Hunter will endear itself to you right here. It should just float around in a slight left turn. Small corrections can be made with clay on the tail and larger corrections with the angle of the stab (by shimming with match book covers). The ideal glide circle is about 150-ft diameter. Stab tilt is the only way to make it turn. The model will turn toward the high side of the stab. Usually about 3/4 inch tilt is sufficient.

First power flights can be made with nearly full power on mild fuel and about four second motor runs. Hand launches should be straight into the wind at about seventy degrees. I always V.T.O. into the wind to get extra altitude, but that is up to the individual flyer.

The best power pattern is a wide left spiral at seventy degrees to the horizontal—like a good Starduster. In fact, trimming is similar to that design. Care should be used not to let the angle drop below seventy degrees since the ship just can't go fast enough to make up the difference. Cure looping tendencies by shimming the leading edge of the stab up or with a certain degree of rudder tab or both. If the left tip seems to be dipping, bring it up with a trim tab on the tip (bend the tab down on the left tip).

Thrust adjustments are ineffective. It doesn't take too much rudder tab though, so go easy. Many Bounty Hunters fly with no offsets at all, except a little stab tilt. Once the ship is going well under power for 15 seconds (about 2 turns) cut the motor run back to about ten seconds. This way the ship will be low enough to observe the glide closely. Fine bits of clay for close trim will add seconds and even minutes to the potential of your Bounty Hunter. A stop watch is helpful here. I boosted the after-sunset time of one of mine by 1/3 by checking each flight with the stop watch when I couldn't see any difference. The secret is in very close trimming and strict attention to details like balanced props, 14.5 second motor runs, hot fuel. By carving my own props (actually modifying commercial props) I have realized a 35 percent increase in thrust over the normal contest props. The consistency of the Bounty Hunter leaves time for such refinements and techniques to be employed.

Good luck with your Bounty Hunter and happy hunting!

BOUNTY HUNTER
27 x 43 AM 965