

Bounty Hunter

Likes hot 049 or 051 size powerplant; VTO's with a passion; designed to take advantage of latest advances in model engineering and to fit the new short-run rules. Over 50 already tested in contest warfare!

BY DICK MATHIS

This ship lives up to its name. It does everything but accept the trophies. It's no one-man design either, since many others are winning with it in sizes up to 1,000 square inches and all over the Southwest.

The "Bounty Hunter" is an unusual bird, but there are good reasons for its differences. And, unlike most well-known designs, the reasons were considered before the first ship was built, not afterward. It isn't just a re-designed version of an old standard.

Have you ever considered when the "big" designs of today were first introduced? The Starduster, the Ramrod and the Satellite were all conceived before 1959, which is six years ago. That was before the unlimited weight rules, before the super-hot Cox Tee Dee .049, before exotic fuels like K&B speed fuel and Wysong's "This-is-it" were generally available, before pressure fuel feed became popular and before really good "contest" balsa was accessible to everyone.

These are big changes and it would appear that a new idea or two might take advantage of the increased power, reliability and the potentially lighter weight. But, no! It seems that everyone is content to stick with the same old stuff, or minor modifications, and just see how much higher models will climb. If any manufacturer comes up with a hotter engine we will be faced with re-entry problems.

There is a human, not aerodynamic limit beyond which altitude in the climb hurts rather than helps. A hot Starduster got so high in nineteen seconds that a good thermal could take it out of sight in less than three minutes. The timer isn't the only one who can't see it. What about the frantic retriever chasing a speck overhead? To avoid this problem, many excellent flyers purposely cut their motor runs short. (New rules enforce the short run.) Would you fight Zorro with your X-Acto knife if you had an axe at your disposal? That's what these guys were doing.

Why don't we put some of that excess climb into a better glide? The two best ways would be to use higher aspect ratios and high lift-drag airfoils or to use more wing area. Of the two choices, the latter is preferable since it makes the whole thing easier to see. Also, there seems to be more possibilities for a fine glide in reducing the wing loading (weight divided by area equals wing loading) and the only practical way to reduce wing loading now is to build bigger ships.

This is easy to see, since we have about three ounces of "inert" weight consisting of the engine, prop, tank, timer, screws, hooks, fuse rubber bands, fuel and the fuel tubing. This weight we can't easily (See pg. 80)



Working toward a PhD degree, Bounty Hunter designer Dick Mathis teaches freshman sociology at the University of Texas. Credits the East Dallas Exchange Club, sponsors of the Southwest Championships, and Maurice Teter, noted Exchange and long-time air-model leader, with helping him along, not only in modeling, but in his college career.

AMERICAN MODELER

Bounty Hunter

(Continued from page 40)

reduce. If we build a 200 square-inch ship that weighs 2-oz. without the hardware it will total in at 5-oz. But a 400 square-inch ship that weighs 4-oz. will only total 7-oz. We all know it's easier to save weight when the area goes up and still have strength. Anyway, it boils down to this: a 100 percent more wing area in the ship, but only 40 percent more weight using the same construction!

Enough for the past, the Bounty Hunter is a "new breed", "people engineered" design that uses effectively all the newest developments in the hobby industry. Its wing is 391 square-inches projected. The stab area is 40 percent of the wing. Weight comes in usually between 7 and 8-oz ready to launch. The airfoils are thin by today's standards, being 8 and 6 percent for the wing and stab respectively. The sections are not "Lindy" but from the 1958 Zaic Yearbook by Curtis Stevens. The swept wingtips are in line with Don Foote's theories on thermal hunting. The high thrust line is for handling power consistently.

Over fifty Bounty Hunters have been built by others, including one nice one by a ten-year-old. Much of the success of the design is due to comments and

suggestions from these people about modifications to improve flying and building. There is nothing more difficult than designing a ship that will work well for others and that can easily be built by others. The design has proven itself in this respect and I am prouder of that than its tremendous list of contest wins.

Making a big ship light enough to really be hot and at the same time keeping it strong enough to allow handling in high winds is a good task. The Bounty Hunter is one design that won't wrap itself around your arm in high winds.

The secret is in attention to structural design. While the birdcage construction may look complicated, it is easiest and fastest according to those who have tried it. I was prompted to use it first because I dislike cutting out ribs. It's supremely light and really rigid. It works for all sizes, too.

Construction instructions are on Hobby Helpers' full size plans.

NOTE: Dick Mathis teaches freshman sociology at the University of Texas. Working toward a PhD. Has BA in history from Arlington State College. Working this summer at the University's Population Research Center. Has three year National Defense Fellowship which will allow full effort on studies. Wants to finish PhD in 1967, do more college teaching, some research, eventually go into business as a con-

sultant in urban planning. Other hobby (apart from model airplanes) is tennis. Was high school district champion at Arlington High for three years. Plays tournament tennis. Dick says, "I owe a considerable debt of gratitude to the East Dallas Exchange Club (sponsors of the Southwest Championships) for their financial aid throughout my college career, and particularly to Maurice Teter, a leader in the club." Dick is 24 years old, single, a native Texan. Thinks modeling has had a very good influence on his life. The Bounty Hunter is available in kit form. Send \$4.95 plus .30 postage to Model Aircraft Labs, 106 Lee Street, Irving, Texas. Full size plans are also available as part of Group Plan #965 from Hobby Helpers, 1543 Stillwell Ave., New York 61, N.Y. (\$1.10).