MICRO-DUSTER

BY P.A. COLLINS

We take a break from the Peanuts this month to present something a bit different—an .010-powered version of Sal Taibi's famous Starduster, complete with full-size plans. A real screamer!

"Suzy" doesn't seem to have much interest in the Microduster, but we bet our readers will. This little ship fits right in with the .010 event that "Free Flight" columnist Bob Stalick has been promoting lately. You'll have a hard time finding a model that delivers more performance for the dollar.

It's easy to see why Cox .010 powered free flight is catching on. These little airplanes are simple, quick to build, relatively cheap, and most of all, they're fun. And with that little engine screaming out front, boy do they perform!

The Microduster is a 65 percent reduction of Sal Taibi's classic 1/2A Starduster. It is "scale" in all but a few details. Wing area is 110 square inches, and the flying weight is 2 ounces or less.

CONSTRUCTION

Construction follows established methods so I'm not going to get real detailed here. In general, watch the weight and build it straight.

I like to get the wing out of the way first. Lots of ribs to hack out! Use a template and it will go quickly. All ribs are 1/20 balsa except at the joints and at the tips. The end plates are cut out and glued in place slightly oversize, then sanded to shape. Stabilizer construction is similar.

The fuselage is built just like the larger Stardusters. Pin the right-hand side to the building board and glue the longerons and formers into place (1/16 square at the pylon and 1/16x 3/16 aft). Select some fairly stiff 1/16 sheet for the pylon. Once it's glued in place, the remainder of the formers and the left-hand fuselage side can be added.

The wing rest is next. Score it down the middle, crack and glue it to conform to the bottom of the wing. Use a template when you glue the wing rest to the pylon to insure alignment. Carve and hollow the engine mount cheeks and glue them in place. Add the firewall, fin, and stab mount.

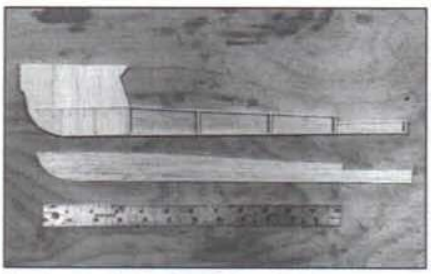
COVERING AND FINISH

Cover the wing and stabilizer with tissue and apply four or five coats of butyrate dope thinned 50 percent. Dope the fuselage until it is well sealed. A coat of epoxy paint (K&B SuperPoxy or similar) on the forward fuselage and wing center section will protect the finish from high-nitro fuel.

As an alternative to the dope-and-tissue route, you can use Model Research Labs' .0015-inch thick clear mylar. This material is adhesive backed, paintable, and is much more puncture resistant than tissue. Write to MRL, 25108 Marguerite #160, Mission Viejo, CA 92692.

DETAILS

An eyedropper tank is ideal for this type of model. It allows you to monitor the fuel supply and gives better control of the engine run. Rather than use the entire dropper, you can easily cut it in half. With a triangular file, make a small notch where you want to make the break. Carefully snap the eyedropper in two at the notch, then fire-polish the end with a propane torch. Gloves and eye protec-



Fuselage construction is as light and simple as possible—1/32 sheet sides with 1/16x3/16 framework. Pylon is 1/16 sheet with 1/16 square sticks on either side. Pick your materials carefully; ship shouldn't weigh over 2 ounces ready to fly.

Close-up of the engine and eyedropper tank installation. Tank holder is a loop of .025 music wire.

Tail assembly with the D.T. deployed. Dark lines on the fin are soft wire embedded into the wood for the trim tab.

tion are mandatory for this operation!

INITIAL ADJUSTMENTS

Steam out any warps from the flying surfaces and check that the fuselage is true. Balance at the point shown on the plans (approximately 70 percent). Tilt the stabilizer so that it is nearly parallel to the left inboard wing panel as viewed from the rear.

At this point you are ready to test glide. The model should glide in a smooth left turn with no stalling or diving evident. Shim the rear of the stab to correct stalling or diving. Change the stab tilt to adjust the turn rate. The model will turn towards the high side of the stab (left in our case).

FLYING

The Microduster should be flown to the left under power. The first few flights should have an engine run of 3-4 seconds to observe the flight pattern. Make power pattern adjustments with the rudder tab (small increments only, please). As you work out the bugs, gradually increase the engine run to 10 seconds.

I think you will be surprised at the performance of these tiny models. Don't forget to light the D.T.! **MB**