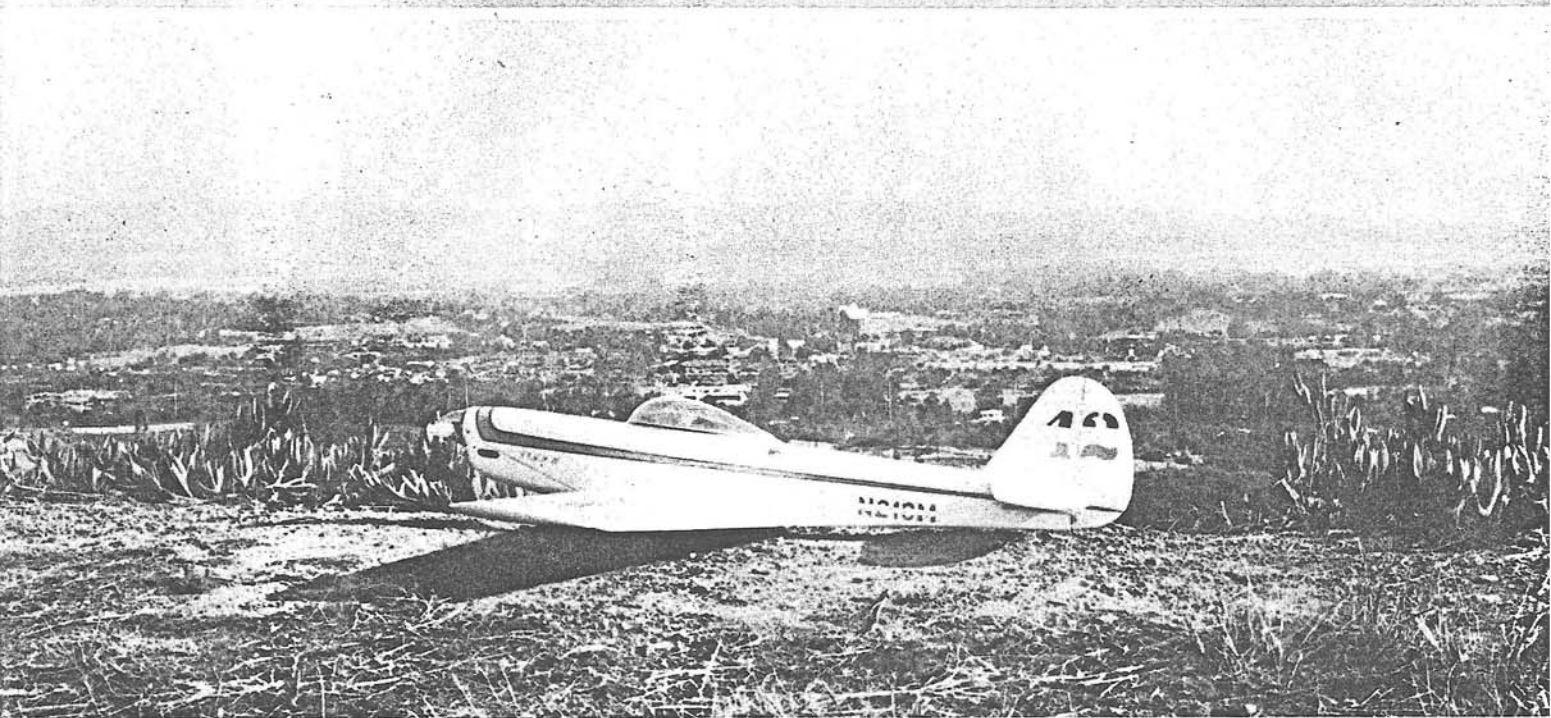


X-P400Q 'SNAFU'



Carl Maas' Pylon Burning Quarter Midget For All-Out Competition.

Remember the term?

I did, shortly after watching "D" who, while admiring his brand-new first-time plane, leaned over to brush that speck of dirt off his wing and had his Zippo fall from his shirt pocket through his wing. Welcome to our hobby, "D", and meet our man, Murphy, who is alive and well! Fortified with this rare gift of creativity, we commenced designing a Quarter Midget racer. Actually, Snafu began to have a great deal of bench flying shortly after Don Dewey (alias the Sierra Madre Monk) proposed the RCM Quarter Midget rules from his Monastery.

The plane is patterned after the Curtiss X-P40Q, which came into existence near the end of WW II. Unlike earlier models, this one dropped the traditional high turtle back and went to a bubble canopy. This appeared as early as their "G" series. Changes continued until, finally, a clipped-wing, bubble-canopy version emerged. This was the X-P40Q. Only three were

built, and of these, two were destroyed through ground testing. In 1947, Skip Ziegler entered the remaining '40Q in the National Air Races in Cleveland. It proved to a formidable opponent until Ziegler was forced to eject close to the ground. The canopy struck and killed a woman, while remaining sections went into a New York Central railroad siding. Thus, ended the existence of the X-P40Q.

A good racer should have certain qualities. I feel that Snafu offers a low-cost, high-performance aircraft. It meets minimum requirements and builds in under thirty hours. There is ample room to make gear installation easy and field servicing excellent. Using normal building techniques, you should be able to turn out a very clean 2½ - 2¾ pound bird. Okay, put down your hot grape Kool-Aid and let's build it.

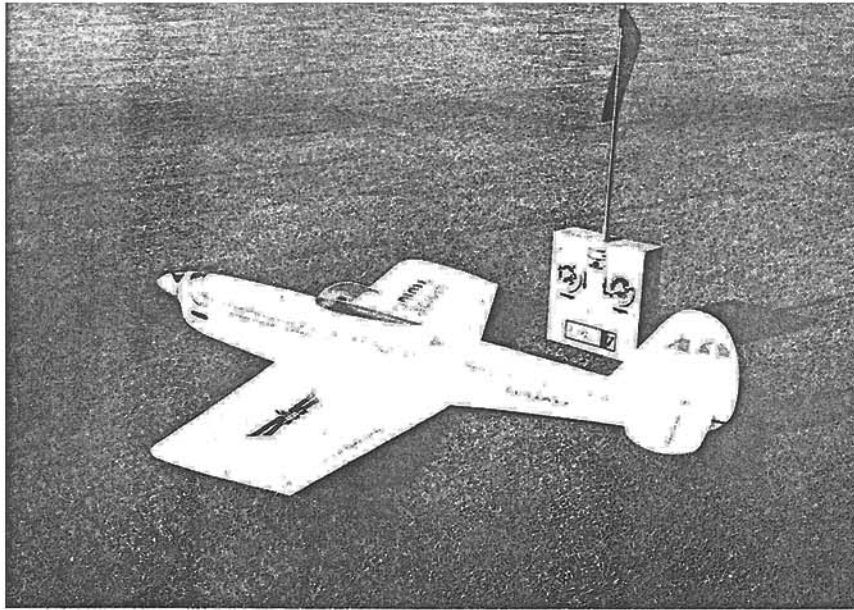
WING:

For those who wish to do so, you may build it by drawing a set of ribs

Patterned after the rare and ill-fated Curtiss X-P40Q of the 1947 Cleveland National Air Races, the 'Snafu' is a low-cost high performance aircraft that builds up in under thirty hours. Foam cores and A.B.S. cowls available.

via the method described in the June issue of Dewey's gospel. To keep building time to a minimum, cut yourself a foam core, or head over to your local foam cutter and bribe him to do it for you. Many articles have been written on this type of construction, so I think general comments will suffice. The cores are covered with 1/16" balsa, using one 6" and one 3" piece. This gives you only one glue joint to work with. Be certain to sheet your core in the foam block as it makes a great jig, and the wing really will fly better without a twist.

Before gluing on your sheeting, allow me to pass along a word on cements. Dick Riggs indicated that he had a wing on his Formula I bird fold due to heat causing the cement to gas and eat the foam after it was painted. Being a German, I had to check this



out by tossing a covered core into a very warm car: "It ate the whole thing!" as they say on the tube. Dick's solution was to use a #3 shellac as a sealer over the foam prior to using the cement. Do it, because number one, it works; and number two it will allow you to put dark or warm colors on your ship without worrying about that left turn.

Once your wing is covered, glue on the tip blocks and leading and trailing edges. Join them together with Hobby-poxy II and, upon their drying, make your cutout in the wing to receive your hardwood spar-landing gear block. Slip it into place and mark the bottom angle. Cut this to fit flush with the wing skin, and then groove it 3/32" down the middle on a table saw. Drill a 3/16" hole through the leading edge of the wing back into the spar, but not through it. Epoxy it into place. The center hold down and aileron housing is made of any hardwood carved and sanded to shape. Use your table saw here, also. Groove it, bend up your aileron horns and, after lightly greasing them, epoxy them into place. When this is dry, work them loose.

You should glass or Celastic the center section to the outlines shown on the plans. The ailerons are cut to the taper shown by removing from the front edge of the aileron rather than the rear. If you use a commercial hinge, one end may have to be cut in order for it to fit in the aileron at the outboard point. Your lower center fill block may be added after the mating of the wing to the fuselage.

FIN AND STAB:

Cut these from 3/16" balsa. Lightly draw a line down the center of each piece. Using this as a guide, sand to the shape shown. Note the grain on the stab tips. Form your elevator linkage up and silver-solder your horn in place. Be sure the elevators are equal.

FUSELAGE:

This constitutes most of the building process. The prototype had 1/16" balsa sides which have been replaced by 1/32" ply. Alex Henderson, a close flying buddy, has been using the 1/32" ply concept on many of his models, the result being that his planes have taken unbelievable punishment without structural failure. Begin by drawing a centerline down the 1/4" sheet and secure it to a flat board. Cut out all formers and glue F-2 through F-5 to the 1/4" sheet, aligning the formers' centerlines to the line on the 1/4" sheet. Cut out the 1/32" ply sides and contact cement the 1/32" ply doubler in place. If you wish to use 1/16"

balsa sides in lieu of the ply, three-quarters of an ounce may be saved.

Glue all 1/2" tri-stock into position. The 1/2" tri-stock in the nose will have to be sawed at several points in order to allow for the bend. Add all 1/8" x 1/4" bracing, glued edgewise, as well as the 1/16" stab support and the 1/8" square bottom strip. Mark all former locations. Cut the 1/2" fill block to shape and glue it in place between F-1 and F-2. Glue and clamp the sides to the formers and top 1/4" sheet.

The control rod holes should have been drilled before installation. I used outer nylon housing with 1/16" diameter wire inside. Place these into position and epoxy. Glue on the 3/32" sheet bottom. If you add your servo rails, your control system should be ready to install. Remove the fuselage when dry. Add F-1, and then round the fuselage to shape using a sharp knife and one rough file. Sand to final configuration.

The cowl is made of A.B.S., fiberglass, or balsa. Tack glue, if balsa is used, or attach if other method is applied, and fair it into "just-about-there" shape. Your engine mount and engine can now be installed. All engine cutouts and the firewall air dump should be made in the cowl at this point. Use elastic to reinforce. Bolt on your spinner and sand to final shape. The cowl attaches as shown on the plans, or you may use your own method. Glue in the wing hold down block. Your leading edge hold down should have been drilled. If it wasn't, drill it at this time by removing the cowl. Locate wing into position and drill the proper sized hole for an 8/32" tap. Tap and secure with an 8/32" bolt.

FINAL ASSEMBLY:

Finish by gluing in your fin and stab. Give the entire thing a coat of Francis resin, and then scuff it up with 100c



open coat. Repeat the process and sand to a smooth finish. Don't go through the resin! Paint your cockpit floor and attach the canopy with Duco or C-77 cement. Mask off your canopy, place some Saran Wrap (or whatever) on the top of your wing, and bolt it to the fuselage. Form all fillets around the canopy, wing, and tail surfaces. Slik or White Lightening will do nicely and sand easily. Shoot some primer on (K & B is great) and sand it off. Paint it.

PRE-FLIGHT AND FLYING:

Be sure to go to the flying field with a known quantity. This means having an engine that is reliable and all items in readiness. Servos should be shut off, control surfaces set to proper deflections, balance correct, and the tank located properly to the carb and air tight (check it in water) so that all you have to think about is flying. Nothing is worse than trying to fly a new plane, run in a new engine, and remember to pull two clicks back on your throttle because it is throwing the arm a little too far. O.K., head out to the field and do it to it.

Hold a little right rudder and advance the power. It will run and climb out wherever you put it. If your ship was built accurately, it should require very little trim. All settings are general guidelines. I honestly believe you have to set any ship up to your own feel. It is just a pure pleasure to watch it — comparable only to observing the "Monk" swimming. The ship, if propped with an 8/6, will prove great for Sunday flying.

Plans, of course, are available from RCM. For those who wish to expedite building time, foam cores and A.B.S. cowls are available for \$4.95 and \$1.50, respectively, plus postage. Write to C & D Supply, 5224 Woodwind Lane, Yorba Linda, California 92686. See you at the races. □

**By H.E
RCModeler
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