



# GREAT EXPECTATIONS

By ERNIE WRISLEY ...

• Great Expectations is a "West Coast Bostonian." What is a West Coast Bostonian? Well, it's a simple little gumband event cooked up by Walt Mooney that can be held indoors or out. Here are the rules:

1. Maximum wing span, 16 inches.
2. Maximum wing chord, 3 inches.
3. Maximum length, thrust button to furthest point aft, 14 inches.
4. Maximum prop diameter, 6 inches.
5. Biplanes OK, but total wing area is 48 sq. in. maximum.
6. Model must have at least two 3/4-inch wheels.
7. Minimum weight without rubber is 14 grams.
8. Model must have at least 1 sq. inch of windshield forward and the same amount of side window area on each side. Biplanes with cockpit must have 1 sq. in. windshield only.
9. Model must be designed so as to contain an imaginary cargo box 1-1/2x2-1/2x3 inches.
10. The model must R.O.G. from the same position it comes to rest in when it is hand launched from a height of 5 feet. In other words, if you elect to build a short-coupled flimsy gear, and the plane tips up on one wing, that is the position you must R.O.G. from for your official flights!

This model fits both these rules and Embryo too. The design came into being in March 1980. I got the name from the rather pregnant shape of the fuselage! At Walt Mooney's first Bostonian West contest, it placed 2nd indoors with a flight of 47 seconds. Next came the Flitemasters semi-annual, where G.E. placed first in Embryo, outdoors. At the Scale Staffel Annual outdoor meet we again placed first in Embryo. On July 4th, at The Scale Staffel's Bostonian contest, the model's first flight was over 5 minutes! This flight

was disqualified as the model did not have an American flag displayed on her hull! Quickly, I stuck a postage stamp on her snout, and just as promptly, lost the model O.O.S.! That one "airmail" flight netted me 3rd place. A new version was built and loaned to my son Randy for the Flitemasters West team challenge. Even my R/C oriented kid managed to place 2nd! The model is fast building, and its record proves its good flying, too. Just follow the simple directions and in a few days you can be flying yours!

## CONSTRUCTION

Start with the fuselage. Select flexible 1/16 square for the longerons. I didn't find it necessary to soak mine before bending, but it can be done. Build one side on top of the other to insure uniformity. Install the uprights, following the wood sizes indicated on the plan. Once the structure is dry, remove it from the board and separate the sides down to the tail-post. Leave it glued together to help keep things aligned. Cement the cross-braces in, starting at the station under the wing's T.E. Next glue the cross-brace in at the wing's L.E. Pull the nose in and cement the 1/16 sheet in place, top and bottom. When the fuselage is square, add the remaining pieces. Bend up the landing gear and thread wrap it to the landing gear brace. Epoxy the unit in place, as it will take some abuse. The nose block must be fitted carefully. Indoors, the model uses a long motor and we don't want the block falling out. The Peck-Polymers thrust button can be installed with 3 degrees downthrust to start. Sand the lumps and bumps off, then cover the fuselage with light-weight tissue. Cut the tissue away and cement the cellophane windows in at the locations shown.

## WING

Make a template of the wing rib. Cut

8 "A" ribs from 1/32 sheet. Cut 4 "B" ribs from 1/16 balsa. Pin the 1/16 square L.E. and 1/16 x 1/8" T.E. down on the plan. Cement the "A" and "B" ribs in and allow to dry. Crack the L.E. and T.E. at the center section. Raise the L.E. 3/4 inch at each tip and the T.E. 7/8 inch. Don't omit the washout, as it helps the model to circle tight without tip-stalling. Add the 1/16 square spars now, while the wing is still on the board. Once the cement sets, pull the wing off the board and sand the structure to shape. When covering, don't forget to stick the tissue to the bottom of each rib so the undercamber is preserved.

## TAIL SURFACES

Make a template and cut out the stab ribs. Pin the L.E. and T.E. down and install the ribs. Use hard balsa here for strength. The rudder is 1/16 square balsa and likewise built over the plan. The tip rudders are cut from soft 1/32 balsa and cemented to the stab after covering.

## ASSEMBLY

Cement the stab to the fuselage. The rudder is cemented to the stab. Hold the wing on the fuselage with a drop of 30-second contact cement applied at each corner of the center section. If you plan on flying the model outdoors, add a coat or two of thinned-out nitrate dope. If you are flying indoors, don't dope at all. I use a length of 1/8-inch aluminum tube for a motor peg. Slip the wheels on and it's about ready to fly!

## FLYING

Test glide your G.E. and add clay to the nose or tail to achieve a smooth glide. Start with a loop of 3/32 rubber about 10 inches long for first flights. Eighth-inch rubber has proved best for maximum duration outdoors. Both of my G.E.'s have flown left under power and left in the glide. Have fun with yours, that's what free-flight is all about!