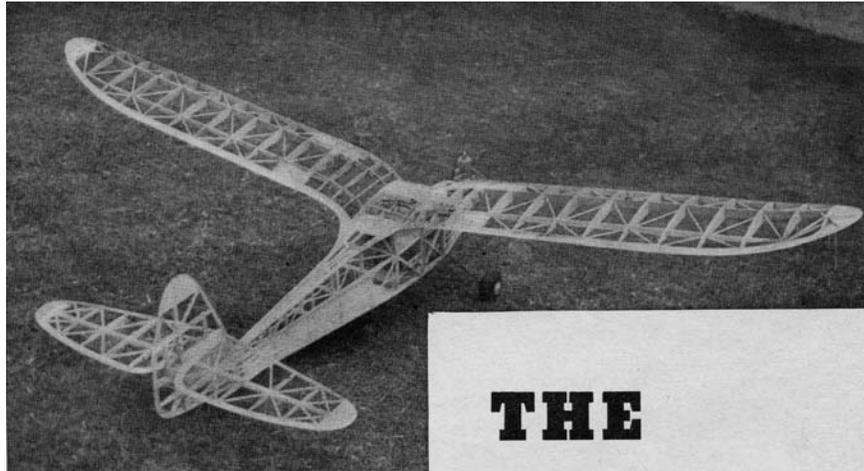
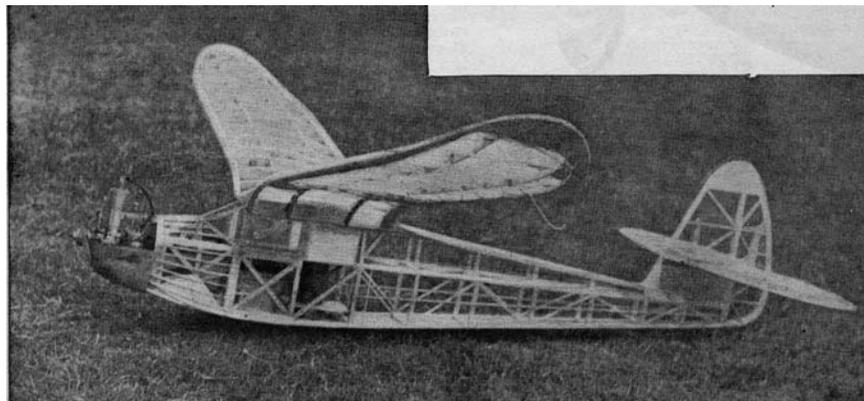


The Mystery Man Part Two

By Elbert J. Weathers



The skeleton views of the Mystery Ship show the beautiful construction. This ship is a tough customer in competition, having won \$99.75 in prizes and cash. Going to press, we hear that it just took second in the Pacific Coast Championship. Timed flight was 14:33, total flight was 20:00 on a 20-second motor run. There were 350 entrants representing the cream of the Coast Modelers.



PART one, last month, presented the fuselage, tail surfaces, and take-off dolly, and beginning here, the remaining details to complete the model will be explained.

Probably the most complicated and important item is the center-section construction. It is a throwback to the flying scale model construction where a considerable part of the

assembly had to be checked by measuring up from the work board.



GULLED CENTER SECTION AND WING

First make the special spars as shown in detail. Place these in position on your full-size sketch and cement ribs CW-1 in place. The slots cut out to get the ribs over the wire reinforcements should be replaced before covering.

Next cement the remaining pairs of ribs on, making sure that each pair is the same distance from the work board. It is vitally important that both sides be alike.

The wing construction is of accepted practice, except for the upcurved tips, which require special leading and trailing edges and sawed-out spars of 1/8" sheet basswood. The tip leading edges are carved out of blocks, and the tip trailing edges are cut out of 1/4" sheet balsa and boiled to let them bend easily.

It is advisable to leave the first rib of each frame lightly cemented so that it may be moved slightly if necessary while matching the wings to the center section.

Assemble the wings on the center section with pins and braces, including the tubes and dowels as they will be finally. Check this line-up to perfection and cement the tubes and dowels in their respective positions, then add the 1/8" sheet fillers. When dry, drill 1/16" lock-pin holes through the tubes and dowels, inside and against the second ribs, then cement 1/16" aluminum pin guide tubes over the holes, to the tops of the ribs, and finish with 1/16" sheet cover support plates. This is shown in detail on the wing root perspective drawing.

Take the fuselage assembly from under the table and cement on the nose block, front formers and stringers, then carefully mount and cement the center section.



TIMER INSTALLATION

The 1/16" CW-1 rib must be cut out partly and the 1/8" sheet fillers cemented in between the spars and trailing edge.

An Autoknips photo-timer accepted for model use was adapted for the original model.

The two phosphor bronze contact brackets are mounted on a 1/8" sheet platform, which is cemented in the proper place for the timer "creeper" to engage the longer contact bracket. Solder the timer wires to the brackets. The timer is cemented in place with two 1/16" sheet braces and lots of cement.

Next, add the 1/16" fillets. A, B, C, D, and E as shown in detail.

Remove the timer winder and cover, the flat center section with 1/16" sheet. The top of the gulls are covered by cementing fitted 1/8" sheets between the ribs. The bottom of the gulls are covered with 1/16" sheet in the same manner. Sand all wood covering to a smooth finish and prepare the frames for covering.

Pin and cement the fiber and dural skids to the bottom, and attach the celluloid windows.

COVERING

With the following list to refer to, the model is covered partly with special Chinese-made bamboo paper, and partly with Flightex:

Fuselage: bottom from nose block to rear— ; Flightex; remainder—paper.

Wing panels: bamboo paper, all except tips; cover remainder from W-2 with Flightex.

Gulled center section: all Flightex.

Tail surfaces: all paper, except tips. Cover from last rib out with Flightex.

FINISH

Give the model three coats of nitrate dope after first shrinking the cover with water. Follow with two to three coats of color lacquer of your choice. The original is red, white and blue. Rub the finish down between coats. Paper masking applied with masking tape will give a clean-cut paint job. Color separation lines of the original are included on the drawings and will save time in figuring out an effective color scheme.

Install the motor and prop, and the model is ready to test.

FLYING

When ready to fly, the model should balance with the nose down very slightly, balancing being done on fingers about one third of way back on wing chord. Use a propeller of known ability in flying it, one having about an 8-inch pitch and 14-inch diameter. (Such a propeller will have a thickness at hub of about 1/2 to 9/16 inch.) Be sure that take-off gear functions without any tight spots on rods so the model can leave gear without a hitch.

To test-hop, set the tab in fin in neutral position and adjust timer for about twenty seconds. Open up engine to a little over half throttle and give model a push, and if it is being flown at any time in any breeze at all, be sure that it is allowed to leave hands directly into wind. Otherwise it may be whipped into ground before sufficient altitude is obtained, by wind sweeping under one wing. The model should travel about twenty feet on the dolly and suddenly rise off when

flying speed is attained. The model can be adjusted for circling on the glide if necessary by tab adjustment in fin. The original model was flown on a fifty-second motor run on one of its early test flights before its full ability was realized, and in this time it became faintly visible directly over-head, and against a clear sky! Therefore no more than thirty-second engine run is recommended, and if the Mystery Man ever flies away before you realize what has happened, you will at least have a related part of it to remember it by.

In conclusion, the contest record of this ship to date might be of interest. Up to the time of this writing the Mystery Man has made exactly twenty-nine flights since its first test hop in the latter part of October, '38, the small number being due to the fact it was used only for contest flying. The total merchandise value earned so far amounts to \$43.75, with cash awards totaling \$56. It might be added that by being careful with the ship and not flying it oftener than necessary, the paint job and covering are practically unmarred.

In the recent big yearly Pacific Coast Championship Meet held at Bakersfield, Cal, the Mystery Man, out of a field of 350 contestants, placed second with a flight of 14:33 official time, and just short of twenty minutes total time, using a twenty-second engine run. As a result, the ship earned for the writer \$50 cash, plus merchandise awards.

Incidentally, metallic cement is recommended for installation of the following parts:

Gulled Wing Center Section

Piano wire along spars.

Timer.

Timer switch.

Wing Panels

Aluminum tubing for wing-panel pins in stubs.

Small tubing on both sides of large tubing for lock-pin fittings.

Wing skids.

FULL SIZE PARTS FOR MYSTERY MAN

SEVERAL RIB PATTERNS
ARE SUPERIMPOSED

