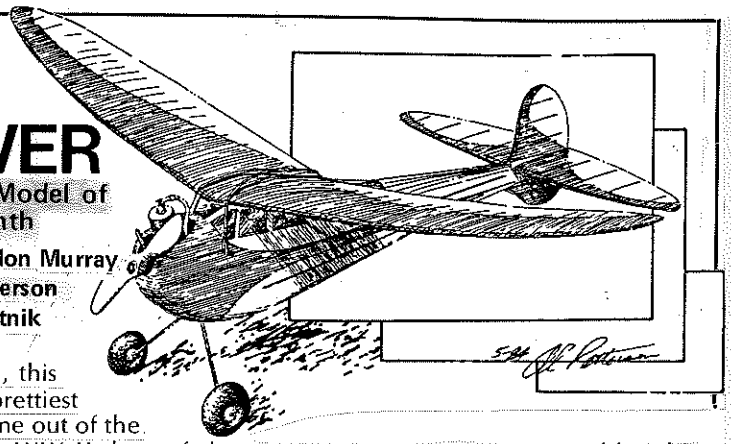
THE ANSWER

OLD TIMER Model of the Month

Designed by: Gordon Murray
Drawn by: Al Patterson
Text by: Al Novotnik



• In our opinion, this was one of the prettiest gas models to come out of the Golden Era, pre-WW-II days of the hobby. From no matter which angle it was viewed, the *Answer* had pleasing, graceful, and functional lines. It was designed by Gordon Murray, and published in the August 1940 issue of *M.A.N.* "Scotty" Murray later joined the Canadian RAF and was fatally shot down in the European theatre.

The *Answer* was particularly known for its unusual wing . . . you could almost call it "single surfaced". It was constructed of 1/4-inch sheet, curved to an airfoil, and filled in with constant 1/4-inch depth ribs, cut "indoor" style from 1/16 sheet balsa.

Because of the somewhat unusual construction method used on the wing, we are reprinting the instructions in full.

The construction of the wing is really very simple. The first step is to cut the outline from soft quarter-inch sheet balsa. Four sheets, 2 inches wide and 36 inches long will suffice for this step. You will note that the leading and trailing edges are in one piece, joints coming at the tip and at the center section.

Cement the sections together and let dry thoroughly. Next cut wing rib templates from the pattern. These may be cut from any scrap sheets but should be at least 1/8 thick. Place one of these at the center section, another nine inches out on the wing and another four inches from the tip. This step is shown clearly on the isometric. The one-third/two-third line on the template is matched with the corresponding line on the wing plan, and these templates are pinned in position over the plan.

To achieve best results, next soak the wing outline in hot water and bend it over the jig, using pins and cement to hold it in shape. Although the wing templates will not be used in the finished wing, cement the wing to them in the forming step. They may be easily removed later. The assembly should be allowed to dry thoroughly.

The wing ribs are cut from 1/16 medium sheet balsa using a wing rib template cut from 1/16 plywood to form both the top and bottom curves. On the sheet of 1/16 balsa from which you are cutting the ribs, draw a vertical line about 3 inches from the end of the sheet. Place the template on the balsa sheet, matching the one-third/two-third line on the template with the line you have already drawn. Cut the top curve of the rib, move the template down 1/4-inch and cut the bottom curve. Move template down another 1/4-inch and cut another rib. This process is repeated until all 36 ribs are cut.

Place the ribs on top of the outline, upside down, making sure that the one-third/two-third line corresponds to that on the plans. Hold each rib in place and cut off at the leading and trailing edges until it is of proper size. Turn the rib over and cement into place. This process is carried out for the entire wing.

Repeat the entire process to complete the other half of the wing. When both halves are complete, they should be joined. Bevel these halves at the center section to form 3 inches of dihedral at each tip. Cement this joint thoroughly, applying several coats.

Sand the leading and trailing edges to a streamline shape as shown on the typical wing section. Cover the center joint with a strip of 1-inch gauze, top and bottom and cement thoroughly.

As a final step, cement one of the wing rib templates at the intersection of the two halves on the bottom, to act as a stiffener. Trim this section on the bottom as shown on the lateral view of the fuselage.

Cover the bottom of the wing first with light bamboo paper using cement as an adhesive. Be sure to cement the paper to each rib. In covering the top it is only necessary to apply cement sparingly to the leading and trailing edges. Water dope the entire wing when covered and after drying apply three coats of dope to the wing, top and bottom. You will find that the wing warps up slightly. From this point on keep doping the TOP of the wing giving it sufficient coats until it warps up giving a dihedral of 5 inches on each tip.

Whether the same curved dihedral effect can be achieved using plastic films is questionable. You may have to build in more dihedral to begin with. Our first thought would be to put in the three inches at each tip and then after the film has been applied and shrunk, set the wing on tip supports, push down in the middle, and shrink out the resulting wrinkles with a heat gun. Watch out for unwanted twisting warps during the process!

The *Answer* was used as a Class A or Class B ship. With 310 square inches in its 44-inch span wing, it met the 1940 AMA gas model rules; up to a .19 for A, and up to a .30 for B. The text also states that, "When *scaled up* 1-1/2 times, the *Answer* proved to be fully as fine a performer as a Class C ship. . ." We're not sure if that's enough "evidence" to make it SAM legal in Class C. Better check it out if you intend to get serious about it.

Oh yes, the text says the ship will balance at 40 to 50 percent behind the leading edge, depending upon the motor used. It was suggested that you leave the wing alone, and go for the glide by shimming the stab up or down. Left rudder and left wing wash-in are also suggested, to achieve a left turn in power and glide for a smooth transition. The tail setup provides for easy conversion to a DT.

Dust off the Bantam .19 and go for it! •

884 - O.T.