

Odd BALL

Contest Winners

This contest brought in many entries of interest from all parts of the country. Many hours of careful scrutiny resulted in the final choice of the winners. Some of the entries were chosen for one feature which in our opinion may be a lasting contribution to the field of model rocketry.

Presented here are drawings and instructions for the first four place winners, and a list of the other six entries comprising the top ten spots.

1st "Bat"

The BAT is a glider of para-wing design by David Swoboda of Minasha, Wisconsin. His plans included a 3-engine cluster booster using a BT-60 body tube 18" long. However, a Ranger or a Cobra (or a Bertha) will launch this glider. Here are the instructions for building your BAT.

The pattern group must be enlarged from the present half-size. By using dividers, you may wish to lay out the enlargements directly on the wood. If you draw the enlargements, draw them on stiff paper, and include grain direction and all dotted lines, as well as the part number. Lay out the parts on the wood, cut out and sand them smooth before assembly. Place the half-wing pattern's centerline to the folded edge of the PM-2. Cut carefully around the perimeter and notches of the pattern. Unfold the PM-2 and you have a delta-shaped wing with 1/8" x 1/2" notches down it's centerline.

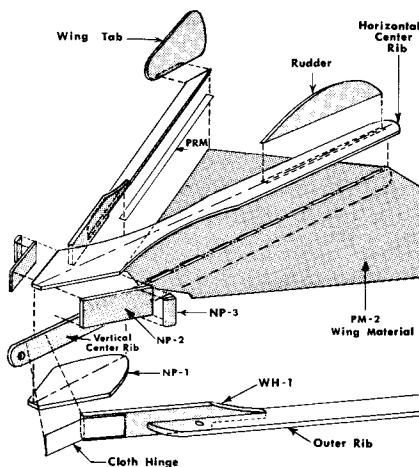
Lay the horizontal center rib on a flat surface (with the dotted lines facing you). Lay the wing material on this piece so the center of all notches line up with the centerline of the horizontal center rib. Hold the plastic in place and apply glue along all exposed parts of the horizontal center rib along the centerline. Apply a thin line of glue to the top edge of the vertical center rib. Place the vertical center rib rear edge even with the rear edge of the plastic material and over the centerline pressing down firmly to make good contact with the parts of the horizontal center rib thru all the notches and at the front end. Hold this part in place until the glue has set.

Glue one outer wing rib to part #WH-1 as shown. Repeat this step with the other outer rib and WH-1. Cut two 3/16" x 6-5/8" strips of PRM-1. Lay one strip along the leading edge of one side of the wing material. Repeat this step with the other strip and the other leading edge of the material.

Apply glue to the centerline of the NP-1 nose piece and put it in place on the bottom front of the vertical center rib. Follow this with part #NP-2, one on either side in the locations shown. The parts #NP-3 are finally placed at the rear outside edge of each piece of NP-2.

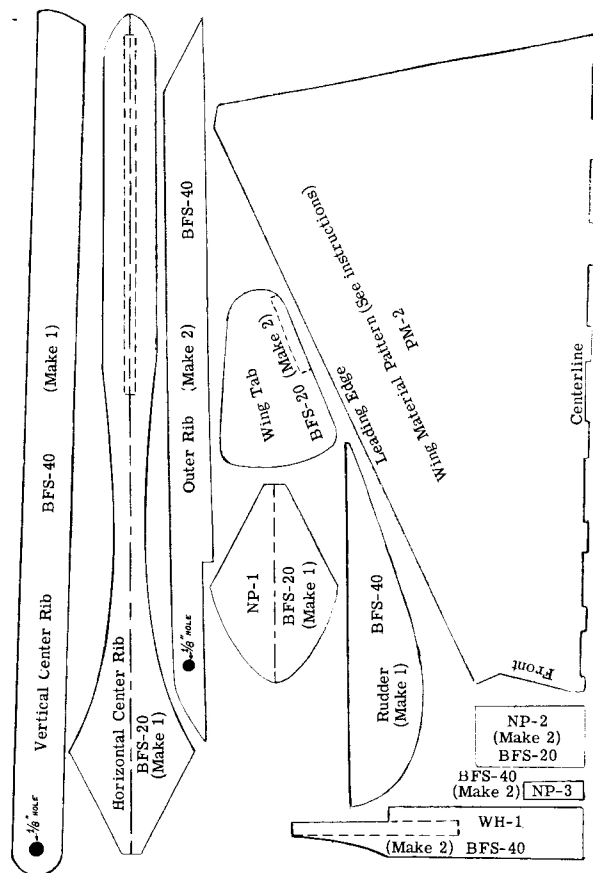
Dave specified a piece of TH-1 for hinging the outer rib-wing holder assembly to the vertical center rib. We found a piece of plain cotton cloth cut 1/2" x 1" made a more durable hinge. Glue the cloth hinge in place with white glue by first gluing it to the front of the WH-1, then fitting the WH-1 into place (in extended position) and gluing the remaining hinge material to the vertical center rib.

Apply a line of glue to the inside bottom edge of one outer rib. Carefully align the inside edge of the PRM strip with the inside edge of the outer rib as viewed from the top and press into the



PARTS LIST

- | | |
|---------------------------|--------|
| 1 Sheet balsa stock | BFS-40 |
| 1 Sheet balsa stock | BFS-20 |
| 1 Sq. ft. 'chute material | PM-2 |
| 1 Sheet paper reinforcing | PRM-1 |



glue spread along the bottom of the outer rib. Repeat this step with the other wing panel and outer rib.

Apply glue to the root edge of the rudder and place it into position on top of the horizontal center rib. Apply glue to the proper section of a wing tab and place it on the tapered end of an outer rib. Repeat this step with the remaining wing tab. Be sure the tabs and rudder dry in a vertical position.

Drill a 1/8" hole thru the vertical center rib as shown and thru each of the outer ribs at the points marked. Tie a knot in one end of a shock cord and thread the cord thru one outer rib, then, thru the vertical center rib and finally thru the other outer rib. Test the tension and pull tight enough to give positive but not violent action to each wing section as it goes into place. Hold the shock cord in place with a finger on the top side of the outer rib while you tie a knot in the cord snug against the underside of that rib. Clip off the excess shock cord and apply a drop of glue on each hole of the outer ribs only. When the glue has dried test the wing action again. Note the shock cord will equalize the tension on both sides by being able to move freely thru the hole in the vertical center rib.

After all parts have dried thoroughly, brush on a coat of sanding sealer on the wood surfaces only. Lightly sand the model and brush on a color coat of your choice.