

Build the Gee Bee Eightster



This picture gives you a pretty definite idea of the appearance of the Gee Bee Eightster model, as built according to the plans presented here.

Every model builder knows of the famous Gee Bee ships, those short, stubby speed planes that have made flying history. This month we present the latest creation of the Gee Bee line—the Gee Bee Eightster transport — with directions for building both a flying and a solid model of this fascinating ship. If any of you have questions about building this model, send them, with a stamped, self-addressed envelope, to this magazine.

By Avrum Zier

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THE plane we are going to construct this month needs little introduction to the mass of model builders. Almost everybody has heard of the well known Gee Bee planes, those famous short and stubby ships. This month we are going to introduce to the model builders a replica flying model of their latest creation—the Gee Bee Eightster. The Eightster is not a speed job, as you would imagine a Gee Bee to be, but is a transport plane. The plane is expected to reach a speed of 255 m.p.h. It is powered with a Pratt & Whitney "Hornet" engine that develops 700 horsepower. The plane is designed to have a range of 800 miles, and the wing span is 47 feet, 9 inches.

To begin with, remember that you have your choice of either a solid model or a large flying model. The solid model is constructed from the three-view layout given on Sheet 1. The large flying model is constructed from the following sheets.

FUSELAGE

CUT out all the necessary formers. These are cut from 1/16" sheet balsa. After all the formers have been cut to shape, insert the four longerons (1/16" square balsa placed on the top, bottom, and sides). Once they have been glued in place, you can proceed to place the other longerons on. Glue former 1 to former 2. Former 1 is used to hold the cowl in place. When placing the stringers on, make sure to fair them into the bottom of the formers 4, 5, 6. After all the stringers have been glued in place, sand the entire fuselage with very fine sandpaper.

Obtain a very soft piece of balsa wood and carve the outside to the shape of the block shown directly in front of former 6 (Sheet 2). After you have carved it to fit perfectly, hollow out the inside and glue it to former 6 as shown on plan. (Glue sheets 2 and 4 together.)

WINGS

CUT out all the necessary ribs as shown on plan. Glue together Sheets 3 and 5. By tracing over the wing, you

will have obtained a right wing with which you can construct the other side of the wing. The spars are 1/16" x 1/8". The leading edge is first pinned to the plan. Then tack down the trailing edge. Insert the ribs as shown, and apply some glue. The trailing edge is cut out of 1/16" sheet, having the grain running as shown on the plan. Unless you wish to have movable ailerons, you should not cut the gap in the ribs as

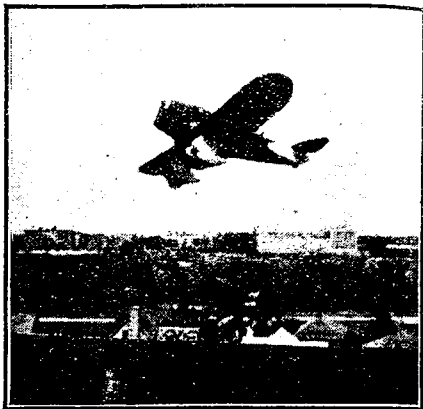


A side view of the Gee Bee Eightster, the latest of the Gee Bee line of aircraft. Every one of you can build a flying or solid model of this transport.

shown on the plan. If you do want the ailerons to move, you should construct the aileron separately and later attach it with small pins. The wing is attached to the body as shown. Merely glue the last rib to the formers 4, 5, and 6. After the wing has been removed from the plan, give it a smooth sanding. Cover both sides and set it away. Notice that the wing contains an extra brace, which is used to connect the wire going from the wing to the body. If you intend to paint the model, it would be advisable to outline the color scheme before the wings are permanently attached.

TAIL UNIT

THE steps necessary for the construction of the tail unit are shown clearly on the plan. The spars used are 1/16" dowels. Unless you wish to have movable elevators, you should use one dowel for the spar. After the complete tail is made, sand it to a smooth finish. Notice that the cross-sectional



In the air! The model looks like the real ship, about to start on one of its future 800-mile flights. There's power in every line!

shape of the rubber is the same as that of the elevator.

You may find it difficult to attach the rudder unless you follow the plan very closely. The stringers protruding out from former 10 should pass over to the spar of the rudder where it is glued in place. In covering this section, be sure to fair the rudder into the body. The stringers will act as a fillet. The stabilizer is first glued in place, and then comes the rudder. Be very careful not to throw the tail unit off line.

LANDING GEAR

THE landing gear consists of two pieces, the strut and the pants. The strut is constructed as shown on the side view. Notice that at the lower left hand side a special piece is inserted. Streamline this part and set it away.

Obtain a piece of balsa that has the dimensions appearing on the plan. The pants may be made in two pieces or in one piece. In both cases, hollow out the inside and insert a wheel so as to revolve freely. (Refer to the plan, Sheet 2.)

Attach both parts, and with the aid of glue, fillet the strut into the pant and set away to dry. Note that the pants have two wires running through to the wing. Mark out the color line with pencil.

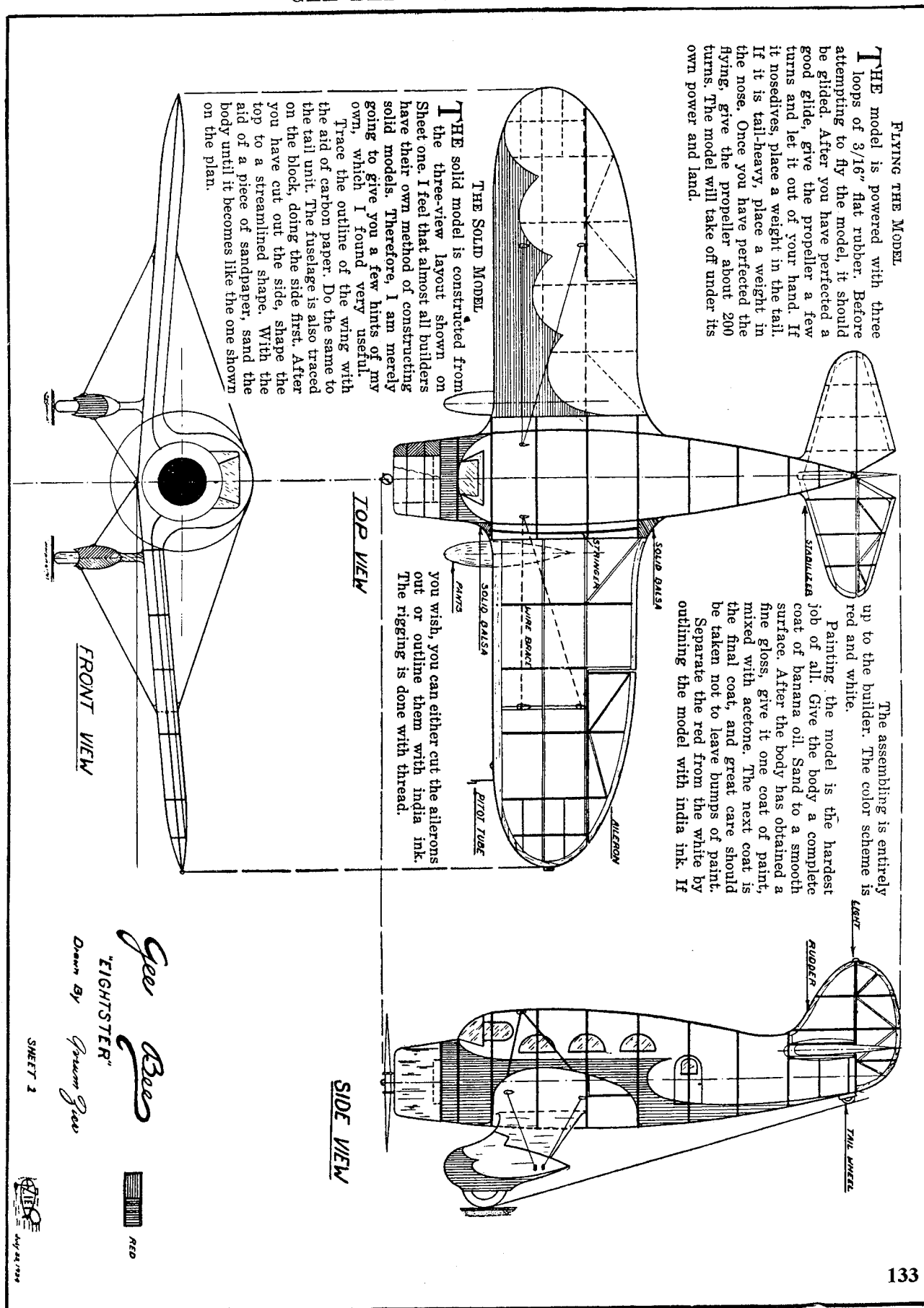
COWL

THE construction of the cowl is simple. Merely obtain three pieces of wood, glue them together, and sand them to the shape shown on the plan. Cut out the inside so that a 1 1/2" motor can fit into the opening.

The 1 1/2" motor should be cut out in the back so that a motor stick can easily slide into place. Attach your wire fittings to the motor stick and set away to dry.

Do not glue your cowl to former one. After the motor stick has dried, place the motor in its place and slide the cowl on.

Cover all the parts. You will find it much easier if all the painting is done before the complete model is assembled. Paint in the windows with black ink.



FLYING THE MODEL
THE model is powered with three loops of 3/16" flat rubber. Before attempting to fly the model, it should be glided. After you have perfected a good glide, give the propeller a few turns and let it out of your hand. If it noses over, place a weight in the tail. If it is tail-heavy, place a weight in the nose. Once you have perfected the flying, give the propeller about 200 turns. The model will take off under its own power and land.

THE SOLID MODEL
THE solid model is constructed from the three-view layout shown on Sheet one. I feel that almost all builders have their own method of constructing solid models. Therefore, I am merely going to give you a few hints of my own, which I found very useful. Trace the outline of the wing with the aid of carbon paper. Do the same to the tail unit. The fuselage is also traced on the block, doing the side first. After you have cut out the side, shape the top to a streamlined shape. With the aid of a piece of sandpaper, sand the body until it becomes like the one shown on the plan.

The assembling is entirely up to the builder. The color scheme is red and white. Painting the model is the hardest job of all. Give the body a complete coat of banana oil. Sand to a smooth surface. After the body has obtained a fine gloss, give it one coat of paint, mixed with acetone. The next coat is the final coat, and great care should be taken not to leave bumps of paint. Separate the red from the white by outlining the model with India ink. If you wish, you can either cut the ailerons out or outline them with India ink. The rigging is done with thread.

Gee Bee
"EIGHTSTER"
Drawn by Avrum Zier
SHEET 1
RED